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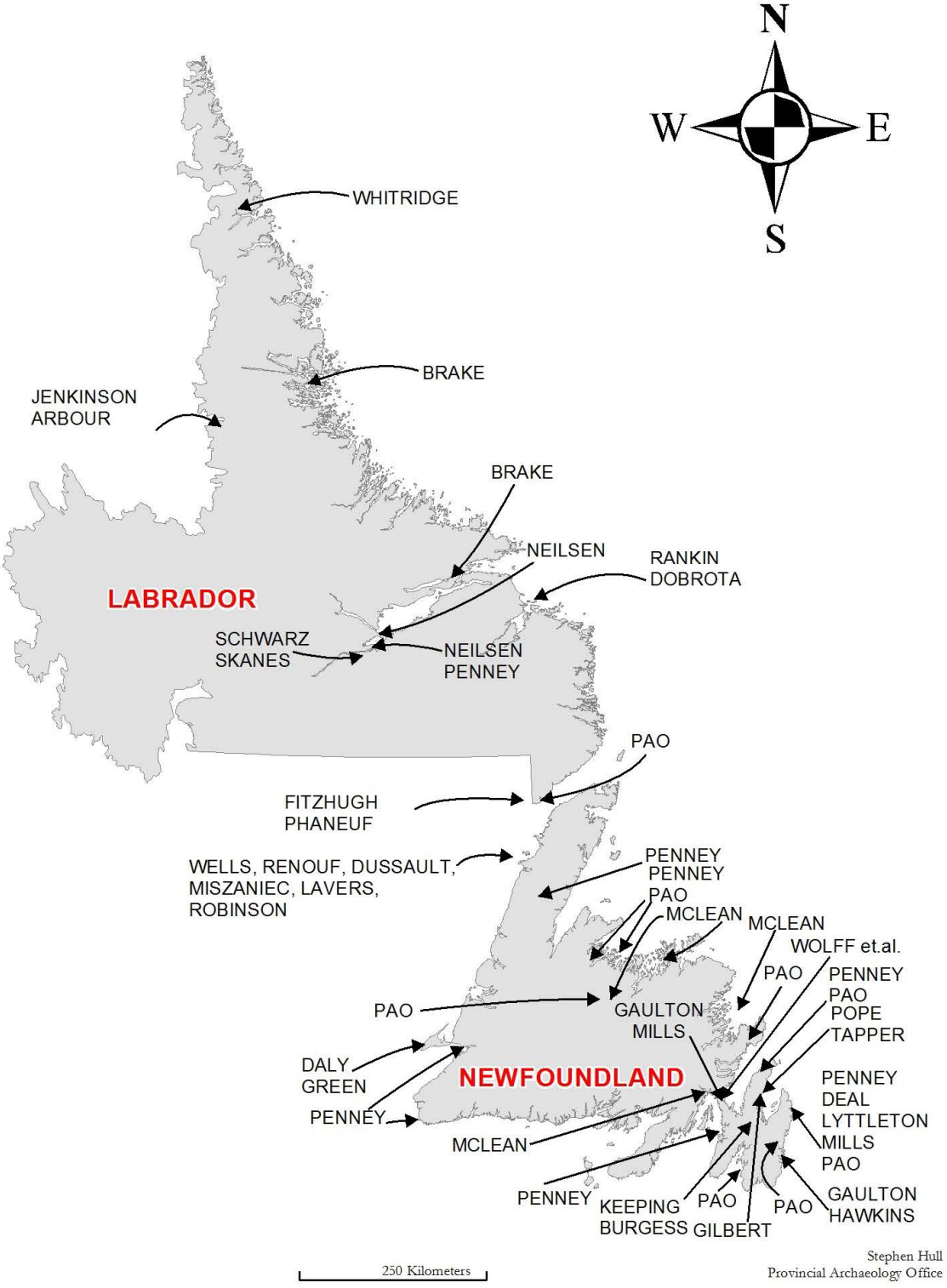
March 2014 Volume 12

Stephen Hull
Editor

Cover: Bifaces from Muskrat Falls 2013.
(Schwarz & Skanes, Page 157)

ARCHAEOLOGY IN NEWFOUNDLAND AND LABRADOR 2013



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The Rooms Provincial Museum 2013

Elaine Anton
Collections Manager, Archaeology & Ethnology
The Rooms Provincial Museum Division

The entrance corridor cases of the new exhibition "From This Place Our Lives on Land and Sea" at The Rooms.

The opening of two new exhibitions in 2013 on the fourth floor of The Rooms Provincial Museum at the beginning of July was the culmination of years of work for members of the Museum staff, including the Archaeology & Ethnology Unit. The Exhibition "From This Place Our Lives on Land and Sea" opened in The Husky Energy Gallery. Designed in conjunction with our in-house curators and guest curators from the Aboriginal communities it explores themes of mobility, production, contact, spirituality, place and identity in Newfoundland and Labrador. "Here, We Made A Home" opened in the Elinor Gill Ratcliffe Gallery and explores stories such as land, outport life, our connection to world events and life in town. For more information on either exhibition, visit www.therooms.ca.

Special thanks go out to our archaeology colleagues who assisted in providing content, feedback and artifacts for use in the exhibitions. Your time, effort and willingness to work with us were very much appreciated.

In addition to working on the exhibitions, 2013 was dedicated to the design and customization of a new database system for our collections as well as preparing existing data for transferring into the new system. We will be going live with the KE Emu software program in the spring of 2014. This will provide us with a powerful in-house database management tool to use, and will also have a web interface to access collections as data becomes available.

Some statistics for the Archaeology & Ethnology unit in 2013 include:

- Over 90 requests received for information, loans, research visits, and photograph use.
- 13 different researchers including MA and PhD students used the archaeology collections and lab space.
- Over 20 museums throughout the province dis-

Preparing artifacts in the Archaeology & Ethnology lab for the exhibition "From This Place Our Lives on Land and Sea".

played archaeology artifacts from our collections through our Community Loans program. As well our artifacts are on loan to the Canadian Museum of Civilization, the National Art Gallery, several Parks Canada locations and two museums in Northern France.

- Archaeology artifacts were transferred to The Rooms via the PAO through 13 submissions from Archaeologists representing over 9000 artifacts from 30 sites.
- Three volunteers provided over 50 hours of their time in helping us to house these artifacts for inclusion into the collections and various other projects.

Anyone wishing to look at our collections for research can contact Elaine Anton, Collections Manager for Archaeology & Ethnology at (709) 757-8076 or by email eanton@therooms.ca

Nunatsiavut Archaeology Office Fieldwork 2013

Jamie Brake
Torngâsok Cultural Centre

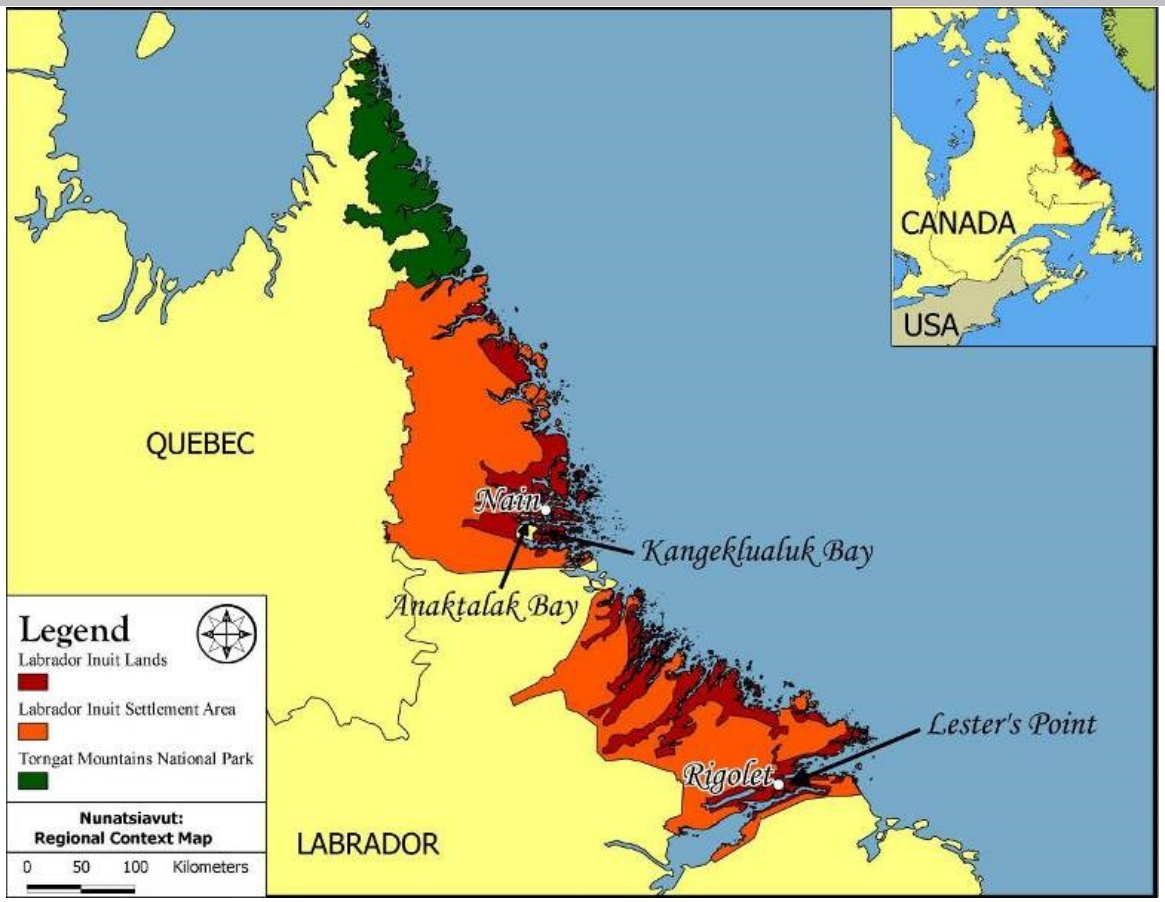

Figure 1. Map showing locations mentioned in the text.

Introduction

The 2013 field season was a shorter than normal one for the Nunatsiavut Archaeology Office (NAO), but nonetheless, it was extremely interesting. I took parental leave and worked half time hours from the island portion of the province for roughly nine months, including most of the summer. In June I participated in the fourth annual Nunatsiavut Heritage Forum, held in Rigolet, and had a little time at the end of the conference for a quick field trip near that community. My family and I returned to Nain in September, which allowed for some fascinating outdoor work in the region which is detailed below (Figure 1).

In 2013 the office reviewed a total of 109 referrals including applications for archaeological permits, general research, use of Labrador Inuit Lands, mineral exploration and quarrying activities. This does not include requests to review documents related to a new exhibit which opened this year at the Rooms Provincial Museum, which consumed considerable time last year.

Late in the summer the NAO position that was created in 2012 became vacant when staff member Vicky Allen decided to move on to other things after approximately a year in her position. The job was recently advertised and the interview process is now underway. We hope to have it filled before the beginning of February.

In the following pages fieldwork near Rigolet, in Kangeklualuk Bay, Anaktalak Bay and Nain (Figure 1) which took place in 2013 is discussed. As in previous years, the 2013 work adds to our collective understanding of Labrador history and it provides us with

Figure 2. Looking east across GbBo-12. The two people are standing on the eastern corners of the feature and foundation stones can be seen near the centre of the photo as well.

Figure 3. Looking south towards the Lester's Point cemetery.

information that is essential for historic resource management.

Rigolet Area

The fourth annual Nunatsiavut Heritage Forum was held in Rigolet from June 3rd-6th, 2013 under the theme "Building on our Roots". Once again it was a great success and provided a chance for heritage organizations throughout Labrador to work together and to determine priorities for the coming year. Keynote speakers this year included well known archaeologist William Fitzhugh of the Smithsonian Institution, Hudson's Bay Company Archivist James Gorton and highly respected Labrador genealogist Patty Way. Anyone interested in learning more about the Rigolet conference, or those that took place in previous years can contact the NAO for copies of forum reports.

After the conference was finished, there was time on the 7th of June to visit the site of an 18th century Inuit winter settlement at Double Mer Point (GbBo -02). The reason for doing so in 2013 related to plans by the Inuit Community Government in Rigolet to extend an existing boardwalk all the way to the point, and there were plans to begin work near the archaeological site early in the summer. The purpose of the site visit was to provide the Community Government with advice on how far back from the site the boardwalk should be constructed. NAO archaeologists Victoria Allen and I were accompanied in the field that day by Scott Neilsen (Labrador Institute) and William Fitzhugh (Smithsonian). Four test pits were dug approximately 40 meters behind the sod houses at GbBo -02. The area seemed far enough away to pose little to no risk to archaeological resources and the total lack of cultural material in the test pits supported this suggestion. The area was flagged and a recommendation was provided to the Inuit Community Government in Rigolet.

After finishing up at Double Mer Point we had time to make a quick trip across the Narrows to explore Lester's Point where forum participants had indicated a Methodist church had once stood. We landed near a rather old looking standing cabin and just past that we came to the stone footing of a substantial structure which must be the remains of the church (Figure 2). Photos and GPS points were taken and a few minutes later we discovered a little cemetery approximately 30 meters from the foundation stones in a small clearing at the edge of the forest bordering the grassy shoreline (Figure 3). Finely carved wooden grave markers, some standing, some having fallen, indicate use during the early twentieth century. Parts of the fence were observed near the markers and a large portion of a broken earthenware vessel was seen in a tree throw. Nothing was disturbed at either site. Both locations have been given Borden numbers (GbBo-12 and 13) and have been named 'Lester's Point Methodist Church' and 'Lester's Point Cemetery' respectively.

According to Armenius Young (1931:64-65), Albert Holmes, a missionary from Newfoundland, started construction of the church at Lester's Point in 1887 and this was the first church built in Hamilton Inlet.

Kangeklualuk Bay

In late September a point of land on the northeast end of Kangeklualuk Bay, about 20km southwest of Nain, was visited. There are currently eleven registered sites on the point and an application to construct a cabin in very close proximity to a couple of these prompted a brief visit to acquire more precise location data, digital photos and to see the condition of the sites today compared to when they were first recorded. The point was surveyed by archaeologists in 1996 as part of an assessment prior to the development of the Voisey's Bay mine and was considered to have high archaeological potential (JWEL 1997).

The southern portion of the point was visited on September 20th and four known archaeological sites were observed.

HcCk-16: A single tent ring with a sleeping division and associated possible cache at this location which attest to Inuit use of the area appeared to be in pristine condition and seemed not to have been disturbed in any way since being recorded in 1996 (Figure 4).

HcCk-17: Originally recorded as a twentieth century Innu site represented by evidence for three separate tents. One very overgrown tent ring was observed here in 2013 as well as a very recent pile of glass bottles that had been used for target practice. The two other tent features were not seen in 2013 and may be overgrown.

HcCk-18: This site was originally recorded as "…a single probable fox trap anchor" (NG Archaeological Sites Database). The rocks making up the trap anchor that was observed in 1996 have been recently

Figure 4. Looking southeast towards HcCk-16 on September 20th, 2013.

Figure 5. Looking south at HcCk-19 on September 20th, 2013.

reused and there are now several little rock piles in the area where there used to be one.

HcCk-19: On the west side of the point just past a wide, sandy blowout, a recent tent ring was recorded by archaeologists in 1996. The tent ring was seen to be in the same condition as it was nearly 20 years prior (Figure 5). An inspection of the blowout just east of this site that looks so promising, as was done in 1996, did not result in the discovery of any cultural material whatsoever.

MacMillan Station

"MacMillan Station" (HcCm-03) was the research headquarters for the second Rawson-MacMillan Subarctic Expedition for about a year beginning in the summer of 1927. Chicago Field Museum anthropologist William Duncan Strong was a member of the expedition. He was the first professional archaeologist in northern Labrador and made some important contributions to the understanding Labrador history at that time. He was also involved in the clandestine removal of human remains from marked graves in a cemetery at the former Moravian mission station at Zoar (Brake 2012a; 2012b). In his expedition journal he affectionately refers to the little cove where the research base was located as 'Mosquito Bight' (Brake 2013a).

Long known and remembered by local residents, MacMillan Station was first recorded by archaeologists in 1995 during a pre-Voisey's Bay mine assessment. At that time the remains of a Ford Model T truck, with a kit to convert it into a snowmobile were recorded and were referred to as the "most remarkable feature of the site" (Thomson 1996:5). The vulnerability of the site and of the snowmobile in particular, was noted at that time and in subsequent years.

In the spring of 2011 I visited the site and was amazed by the condition of the portion of the Ford that was sticking out of the snow at the time. In 2012 a road from Strange Lake to Anaktalak Bay and a port site near MacMillan Station were proposed which would put the site at additional risk. From 2012-2013 a plan to recover what is left of the machine was developed and fieldwork was undertaken at HcCm-03 this past fall. This involved the establishment of a grid over the area where snowmobile parts were scattered, detailed mapping and systematic recovery of parts associated with the Model T. Long term storage in a warehouse here in the community of Nain has been arranged with Jens Haven Memorial School. Parts that could be safely transported by boat were collected in the fall and one return trip is planned for late January, when the sea-ice conditions are good, to pick-up the last two pieces of the machine, including the chassis/body and attached parts, and the engine/transmission unit. Both were flagged and prepared for winter pick-

Figure 6. Inuit from Nain with Labrador's first snowmobile in circa 1927. Image courtesy of the Peary-MacMillan Arctic Museum, Bowdoin College.

Figure 7. Underside of the snowmobile on October 19th, 2013. Note the condition of the metal, and of the chassis in particular.

Figure 8. Looking east at the snowmobile. One of the intact tracks is visible on the ground just left of the machine and the doors are just to the right of it in the photo.

Figure 9. Model T hubcap. One of two recovered in October 2013.

Figure 10. Looking northeast at the snowmobile on October 25th – note that most of the mapping was complete at this point and a number of artifacts had already been collected. The engine is up on logs ready to be picked up after freeze up.

up last October. We have arranged for conservator Jennifer Hadley to travel to Nain to treat the salvaged material after the rest of the machine has been recovered.

After collection and treatment has been completed the next phase of the project will involve working towards restoring the machine. A pleasantly surprising amount of interest and excitement was generated through a series of radio interviews and an article in Labrador Life (Brake 2013a) on the project and Model T enthusiasts have been in touch from across the continent. Knowledgeable local people, Members of the Model T Ford Club of America and the Model T Ford Snowmobile club have been particularly helpful. A professional machinist has even been in touch to offer his services and advice. At this point all indications are that it is entirely possible to restore the snowmobile to working order. Some resources which would allow this goal to be pursued in a serious way are already being sought, and additional requests for funding will be submitted in the coming months. What better way to display this significant and unique piece of Labrador history than to restore it to working order and use it after all these years?

Nain

During the fall of 2013 the Sustainable Communities Initiative research project was underway in the Inuit Community of Nain. An important aspect of that work involves the use of ground penetrating radar (GPR) to map permafrost extent and depth. After seeing the GPR unit being used around town I made some enquiries with Scott Hatcher, the operator, who kindly provided an opportunity to test this equipment for archaeology in the Moravian mission complex area of Nain. Although there is a history of using GPR for archaeology on the island portion of the province (for example see Renouf et. al. 2013, Wells et. al. 2012 and Wolf and Urban 2013), this is the first time that this technology has been used for archaeology in Labrador.

Up until sometime in the 1980s there used to be three cannons, next to the road near the mission complex, pointing out towards Unity Bay (Figure 11). There is a local story that these were buried under the flag pole near the church because of concerns that they would be taken out of the community. Since a

Figure 11. Cannons in front of the mission buildings at Nain. Photo taken by Brian Williams and permission to use it here was kindly provided by Fran Williams.

cannon should be very detectable using GPR, and because it would be great to find them we thought this would be an interesting area to test this equipment.

On the 2nd of October Scott Hatcher and I met at the administration building in Nain and walked to the flag pole with the GPR unit. Scott operated it around the flag pole itself and over other flat areas just north of the flag pole along the shore. His preliminary thoughts are that the cannons are not buried in the areas where we looked, but his final analysis of the data we collected that day has not yet been completed.

After finishing up our brief search for buried cannons we walked over to the main part of the Moravian mission compound. The Moravian establishment at Nain dates back to 1771 and was the first successful mission station on the coast. Today Nain is the oldest permanently occupied settlement in Labrador (Penney 2009:8), as well as the most northern community in the province. The oldest standing buildings at the site date to the 1920's and were built following the great fire which took place on August 27th, 1921 and resulted in

Figure 12. Scott Hatcher preparing to use ground penetrating radar on the foundation directly behind him. View northeast.

the destruction of much of the station (Moravian Missions, 1921:75).

Two of the buildings on the site today, a mission house, and the church, are provincially recognized Heritage Structures. It was between these two buildings that we conducted our second GPR experiment. In this area there is a very substantial, largely overgrown stone foundation. The current mission house was actually built directly on top of the southern portion of this foundation, and we thought it would be a good place to try out the GPR unit as this is an obvious archaeological feature in the middle of a historically significant part of Nain. Although analysis of the data collected that day has not yet been completed, Scott feels that this test might yield interesting results in terms of stratigraphy and the composition of the soil.

Two important things have already come out of our brief efforts that day. First of all, the Nain Mission Compound site has been registered and given a Borden number (HdCk-39). Amazingly, this important archaeological area had not previously been designated, despite its well-known existence and significance (Figure 13). Secondly, a bit of detective work involving a look at relevant Moravian records resulted in confirmation that the large foundation referred to in the previous paragraph is the remains of a large mission house that was constructed around 1830 (Figure 14). A comparison of a recent photo of the southernmost corner of the standing mission house with a historic photo of the circa 1830 mission house shows both structures sitting on the same foundation stones (Figure 15 and Figure 16). This information is quite useful since the older structure is shown on Moravian ground plans for Nain, some of which have scales and which also show the cemetery. The oldest part of the oldest cemetery really hasn't changed and is a good control point. Now that we have a second control point, which is within the compound itself, figuring out precise locations of other structures and features should be relatively straightforward. GPR might prove to be a useful tool for finding things like the original mission house, several churches that previously existed on the site, store buildings, a palisade and so on. The permafrost work that brought the unit to Nain is meant to continue in 2014 so there may be additional opportunities through partnership to examine the po-

Figure 13. Map showing the location of HdCk-39 in the Inuit Community of Nain. The GPR track within the site is on top of the foundation of a large of a large mission house built around 1830.

Figure 14. Large mission house in Nain (Labrador Inuit Through Moravian Eyes 2001a). This building was constructed circa 1830 and the photo was taken around 1901.

Figure 15. Looking towards the southernmost corner of the standing mission house.

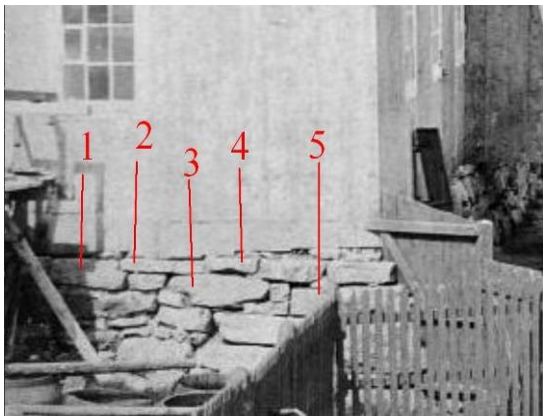

Figure 16. View of the southernmost corner of the large mission house built circa 1830– this picture was taken between 1884 and 1902. (Labrador Inuit Through Moravian Eyes n.d.)

tential of this technology for use in archaeology in northern Labrador during the coming field season.

Conclusions

NAO Fieldwork in 2013 involved visits to 9 archaeological sites, 3 of which had not previously been recorded by archaeologists. Although the 2013 field season was shorter for the NAO than prior ones, it was one of the most exciting so far. I look forward to having the vacant position filled, which should happen before the PAO Review becomes available online.

The *Model T Snowmobile Project*, which was designed to save a unique and invaluable piece of Labrador history, will continue in 2014. This will include final recovery in the winter, conservation and endeavors towards restoration. An adaptive reuse plan for the Hopedale mission complex developed by the Torngâsok Cultural Centre will involve archaeological assessment at that site, which is recognized as having national historic significance. It is hoped that low impact work to map historic resources at the Nain Mis-

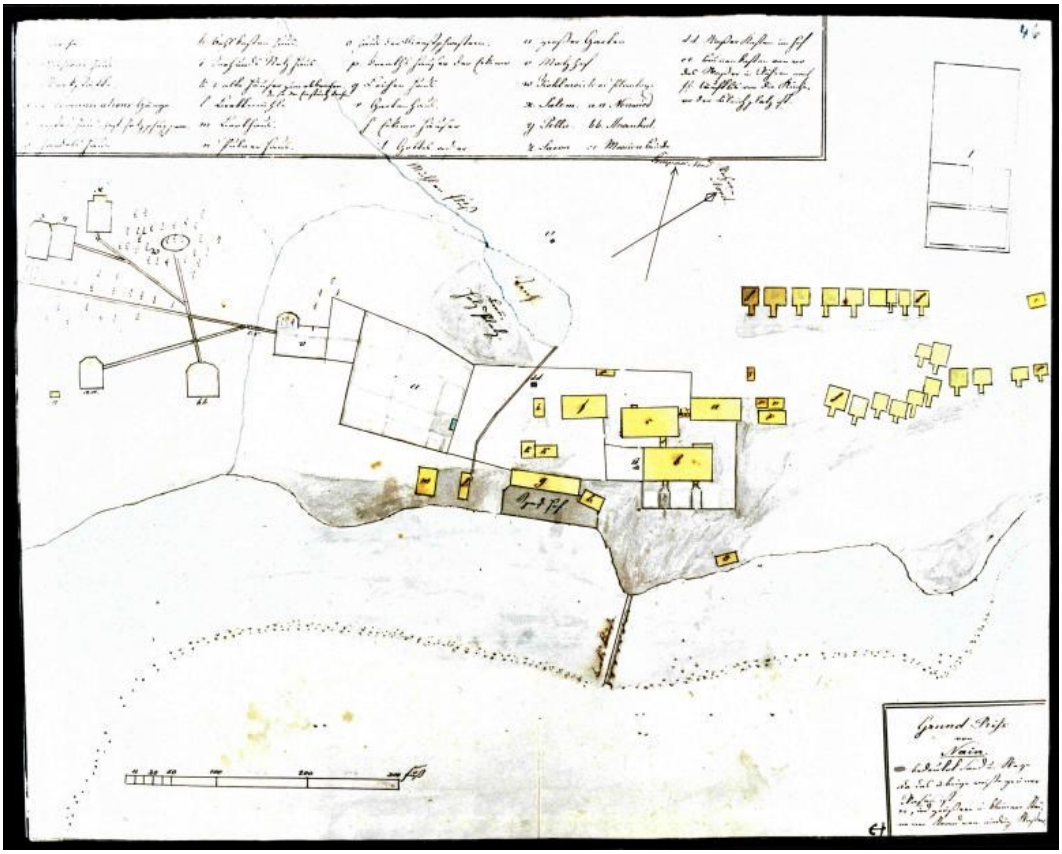

Figure 17. Example of a Moravian ground plan of Nain (Labrador Inuit Through Moravian Eyes 2001b). This one, which dates to the 1830s (Hans Rollmann personal communication), shows the circa 1830 mission house and the cemetery in relation to other community buildings and features like an older mission house, a boathouse, sawmill, store buildings, blubber yard, Inuit houses, gardens, etc. It also has a scale.

sion Compound site involving GPR will take place in 2014 as well. The community of Hopedale has expressed interest in attempting to use GPR to locate and protect old burials in and near early cemeteries in that community, and it could certainly prove useful at the mission site there as well.

A couple of things which do not directly relate to the 2013 field season, but which do come out of work completed in that year should probably also be mentioned here. The first relates to a quartzite source in the former community of Nutak, and the second is an NAO initiative that I am particularly enthusiastic about called the *Aerial Drone Project*.

Nutak Quartzite is discussed in my submission to the PAO Review for the 2011 field season (Brake 2012b). At that time I mentioned comparing the material collected from the source location discovered that year to archaeological collections, particularly the one from a nearby Dorset site (HiCk-02). Steven Cox, who originally recorded that site described the collection as being unusual for Dorset and suggested that a quarry might be located nearby (1977:171-172). During the time I spent in St. John's on parental leave I was able to spend a little bit of time at the Rooms Provincial Museum and had a chance to view material from that site. Material from the source location discovered in 2011 is visibly identical to material present in the collection from HiCk-02. Cox (1977:1) describes similar material being found at a nearby Intermediate Indian site as well (HiCk-01) which would be a good collection to examine next.

The *Aerial Drone Project* is about to begin in the next few weeks. Shortly before Christmas a positive response on the project proposal was received from the Tasiujatsoak Trust Fund Committee. This project involves acquiring a kit to construct an unmanned aerial vehicle (UAV) which will be used for archaeological fieldwork and resource management in the region. The use of this kind of technology for mapping archaeological features in Peru has made international head-

lines in recent months (for example Reuters 2013). A Peruvian Ministry of Culture archaeologist is quoted in the article just cited as saying that UAVs are "a vital tool for conservation".

The UAV will be built and tested with Jens Haven Memorial School students through a partnership between the school and the Torngâsok Cultural Centre. This will form part of a science and engineering after school program and the build will take place over a period of approximately 2 months. When the UAV is finished, it will be tested in the school gym.

A remote controlled camera mount with a gimbal (a support which can pivot around an axis) will allow a Hero 3 GoPro camera to be attached and to remain level at all times during flight, even in windy conditions, and despite motor vibrations. This in turn allows for high quality photos and video. Open-source software which will allow for preprogrammed waypoint flights has already been acquired.

This project will allow the Torngâsok Cultural Centre and Jens Haven Memorial to work together to provide opportunities for students to learn about, and to develop an interest in science and engineering, archaeology and computer programming. It will also provide opportunities for students to help manage sites which contain valuable information on Inuit history and culture. It will therefore offer a chance for students to learn about using new technology for documenting and protecting their own cultural heritage for future generations. It will also allow the Nunatsiavut Government to make use of inexpensive, cutting-edge technology for resource management in the region.

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Garden Hill: The Crash of USAAF C-54

Lisa M. Daly, Memorial University of Newfoundland
Shannon K. Green, Historic Aviation Committee of Newfoundland and Labrador

Figure 1. The Garden Hill crash site in 1994. Note the amount of material on site, including at least one engine. Gale 1994.

United States Army Air Force C-54A 42-107427 left LaGuardia airfield in New York on 12 November 1944 for Harmon Field, Stephenville, Newfoundland with a crew of 18. The aircraft was expected to arrive at Harmon Field at 0558 GMT. The weather was forecasted to be excellent for the majority of the trip, but a complex weather structure would have made the last part "sloppy" with some light to moderate turbulence. The pilot checked the weather often before and throughout the flight, but the aircraft was still blown off-course by high velocity winds. The pilot also failed to make proper use of normally functioning radio navigational aids to check the position of the aircraft prior to and during descent. The aircraft collided with the side of a hill at what is locally known as Garden Hill on the Port-au-Port peninsula. The high energy crash resulted in nine of the eighteen crew perishing on site, and three expiring in the hospital within a few days (Barnes et al. 1944). Private First Class Joseph Kara told investigators that there was no warning prior to the crash. Once survivors gathered together, Kara walked away from the crash and into the woods, where he met a Newfoundlander who brought him to the nearest building, a post office (Barnes et al. 1944; Leonard Simon, former base barber, pers. comm). About an hour after daylight the rescue plane found the site and shortly thereafter ambulances and trucks arrived (Barnes et al. 1944).

The site was known but relatively undisturbed until recently. In 1994, The Western Star featured an article expressing concerns about risks to the site with the construction of a highway linking Mainland and Cape St. George (Gale 1994). The site is located a short hike from the highway, with clear signage indicating its location. Since the 1994 article (Figure 1), the site has been nearly stripped of all recyclable metals, and many of the major components, such as the engines (Figure 2). The site is frequently used, as indicated by the remains of recent camp fires and makeshift

Figure 2. Examples of what remains on site. No aluminum, copper, or other recyclable materials were found. Photo by Shannon K. Green.

Figure 3. Evidence of recent campfires and a makeshift bench on site. Photo taken from behind a landing gear by Shannon K. Green.

Figure 4. Propeller blade at the Stephenville Regional Museum of Art and History. Note the tip of the blade has been removed. Photo by Lisa M. Daly

benches (Figure 3). Researchers visited the site in June of 2013 and took GPS readings and pictures of the remaining wreckage. In August of 2013, Gary Rideout, retired Air Force, visited the site and his pictures indicated further disturbances with more pieces being moved (pers. comm).

Although there is little remaining at the site, the Stephenville Regional Art and History Museum does house a propeller blade from the crash. This was recovered by a local resident who used the thin metal at the tip of the blade for the construction of spinning wheels. The blade has been sitting outside his house for a couple of decades until it was donated to the new museum (Figure 4). This piece has been photographed and catalogued as part of the collection.

Due to the poor preservation of the crash site, very little information can be garnered through archaeological investigations. Rather, this site shows how at risk aviation sites are, particularly when they become accessible. More information can be recovered about this site through document research and the recollections of local people. Already the information in the crash report has been supplemented, and even corrected, by interested locals.

Acknowledgements

Thank you to T&M Associates Ltd. for providing transportation, Ken and Hazel Thibeau for lodgings and for introducing us to the site, and the Stephenville Regional Museum of Art and History for allowing us to share the information we found with the community.

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In Defense of Newfoundland: The Fate of Hawker Hurricane 1359

Michael Deal
Memorial University of Newfoundland

A Royal Canadian Air Force (RCAF) Hawker Hurricane aircraft of No. 125 Squadron crashed near Cochrane Pond, Newfoundland, on 15 October, 1942. In the days to follow, military officials investigated the crash and many local inhabitants visited the site and collected souvenirs. In the turmoil of the war years, the site location was soon forgotten. Aviation enthusiasts searched for this site for many years, until it was accidentally relocated during a lumbering operation in the area in 2013. On 24 July, 2013 Byron Ruby (Ruby Lumber) took the author to the site, along with Darrell Hillier (aviation historian) and Dave Hebbard (Eastcoast Productions) (Figure 1).

Figure 1. Documenting the wreck of Hawker Hurricane 1359: Darrell Hillier (left) with metal detector, David Hebbard (centre) and Byron Ruby (right).

The Hawker Hurricane is best remembered for its role in the Battle of Britain in 1940. The total production of this aircraft (all models) was 14,231, including 1,451 that were built at the Canadian Car and Foundry Company (popularly known as "Can Car") Limited of Montreal, at their production plant in Fort William (now Thunder Bay), Ontario (Donald 1998:32). The Canadian-built Hurricanes were single-seat fighters, powered by a 1,300 hp Merlin engine, and armed with 12 .303 in (7.7 mm) machine guns.

In 1942 German U-boats were having great success in disrupting Allied convoys to Britain and coastal shipping in the Gulf of St. Lawrence. The incident best remembered is the sinking of the Sydney to Port aux Basques ferry SS *Caribou* by U-69 on 14 October, with the loss of 136 crew members and passengers. Eastern Air Command (EAC) stepped up its activities in the Gulf, and between May and October of 1942 alone EAC aircraft flew around 1600 sorties, and they accounted for half of the U-boat kills in the northwest Atlantic by the end of that year (Greenhous and Halliday 1999:86-89). U-69 was sunk on 17 February 1943 by the British destroyer HMS *Fame*.

Figure 2. Pilots of RCAF No.125 Fighter Squadron, with Hawker Hurricane XII aircraft at the Torbay air base (2 October 1942). Source: Library and Archives Canada (PA-133271), Ottawa, Ontario. www.heritage.nf.ca/law/torbay_base_rcaf_pilots.html.

Figure 3. Hawker Hurricane 5501, No. 125 Squadron, Torbay, after "nosing up" into a snow bank, 29 January, 1943. www.pinterest.com/pin/330310953890193950/

On 20 April, 1942, No. 125 (Fighter) Squadron was formed in Sydney, Nova Scotia, and operated out of Sydney and Torbay, Newfoundland, for the air defense of the northeast coast of North America. In June 1942, Hurricane fighters and Harvard trainers from this squadron were deployed to Torbay (Figure 2). According to the Squadron diary, No. 125 Squadron had at least 18 Hawker Hurricanes during its existence, all built at Can Car (two Mk Is, seven Mk I/XIIAs, and nine Mk XIIs) (Darrell Hillier, personal communication 2014). Before being redeployed overseas at Digby, Lincolnshire, and renumbered No. 441 Fighter Squadron, on February 8, 1944, the Squadron had completed 519 sorties, with the loss of five aircraft, one pilot and one airman (RCAF 2012; Figure 3). Their first casualty took place on 27 August, 1942, when Hurricane 1360 crashed near Hopeall, Trinity Bay, with the loss of Sgt. D. B. Ruggles, of Kenora, Ontario.

According to the official accident report (Robinson 1942), Hawker Hurricane 1359 crashed near Cochrane Pond while returning from a dusk patrol. The probable cause was engine failure due to a glycol leak or an air lock in the fuel line, but the engine was too badly damaged in the crash to make a definitive assessment. The pilot, Flight Sergeant J. W. Gil-

Figure 4. Wing flap found among the wreckage of Hawker Hurricane 1359, near Cochrane Pond, Newfoundland.

martin, tried to restart the engine by changing tanks, pumping the throttle and using the primer. When this failed he bailed out at 2000 feet. He landed, uninjured, and laid out his parachute as a signal. A local man, William Linegar, witnessed the crash from his boat on nearby Cochrane Pond. He said that he saw puffs of smoke coming from the aircraft before it crashed and exploded. Linegar then went ashore and found the downed pilot an hour later. They walked to the burning wreck and found a road nearby, where they were met by an Air Force search party.

The purpose of our visit to site was to officially record the location as an archaeological site, to determine the condition of the wreck and extent of the debris field, and to evaluate the risk of disturbance by local development. Artifacts on the surface were photographed and their locations recorded with a handheld GPS device. A metal detector was used to determine the extent of the crash site. The GPS coordinates on metal detector hits indicate a compact crash site, which is consistent to Mr. Linegar's statement that the aircraft "took a nose dive" before it crashed. Based on our GPS readings the site covers an area of about 1200 m^2. Photographs taken by the crash investigators indicate that originally there was an extensive amount of wreckage, but there is very little left today, beyond a burned area and a few pieces of wreckage (mostly fragments of aluminum and engine parts; Figure 4). No sub-surface testing was done at the site, but four surface-collected artifacts were taken back to the MUN Conservation Lab for processing and identification.

Hurricane 1359 was one of more than a dozen Hawker Hurricanes to crash in Newfoundland during World War II (Deal 2006). One of these aircraft, Hurricane Mk. XII 5708, was recovered by Ken Beanlands and other aviation enthusiasts in 1972 and restored to flying status (Deal 2013:55; Figure 5). Our work at the Cochrane Pond site was part of an ongoing project to improve the inventory of downed WW II aircraft in the province.

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Figure 5. Hawker Hurricane Mk. XII 5708 after restoration, and redesignation. Photograph courtesy Ken Beanlands.

Micromorphology at an Inuit Summer Camp: Huntingdon Island 5 (FkBg-3), Sandwich Bay, South Labrador

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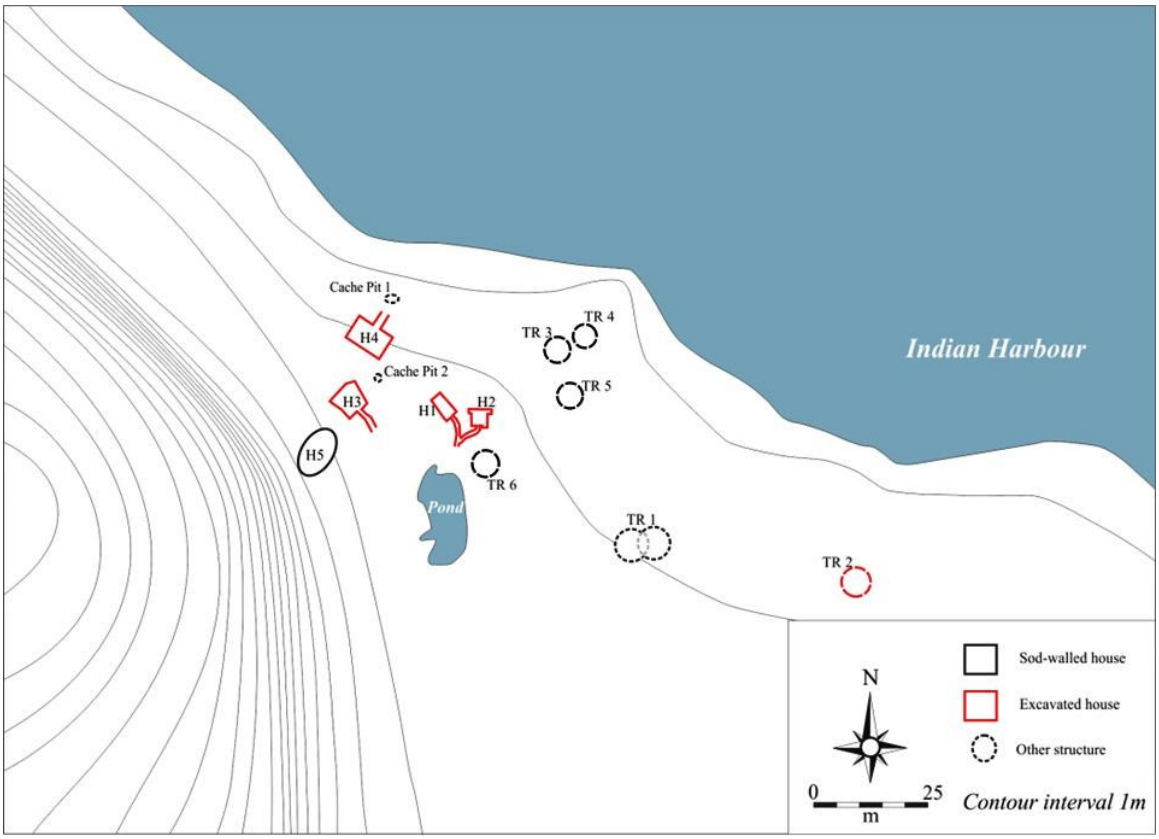

Figure 1. Map of FkBg-3, Indian Harbor, Sandwich Bay, courtesy of L. Rankin.

Introduction

Huntingdon Island 5 (FkBg-3) is an Inuit summer and winter site consisting of 5 sod houses, 4 of which were excavated in previous years, and a minimum of 6 tent rings, one of which was shovel tested during a previous excavation season (Rankin 2010; 2011; 2012; Murphy 2011). The focus of the 2013 season was to excavate two of the associated tent rings, tent rings 1 and 4, and to carry out soil sampling for my MA project in order to gain a better understanding of south Labrador Inuit summer occupations (figure 1). The excavation was carried out by Dr. Lisa Rankin's field crew (Robyn Fleming, Michelle Davies, Kyle Crotty, Katie D'Agostino, Tyrone Hamilton and Corey Hutchings), soil and vegetation survey, soil sampling and soil layer mapping with a total station were done by myself and my field assistant, Noah Scheck (Simon Fraser University).

Tent ring 1 is the largest arrangement consisting of two conjoined rock rings. Excavation has revealed several internal structural elements. A hearth is located between the two rock rings, which contained charred faunal and plant remains, and a rock cluster found adjacent to the hearth is an associated cooking area. The entranceway is most likely found at the southeastern extremity, with a post hole located immediately south of it. A workbench is placed against the northern wall of the eastern rock ring. A cluster of

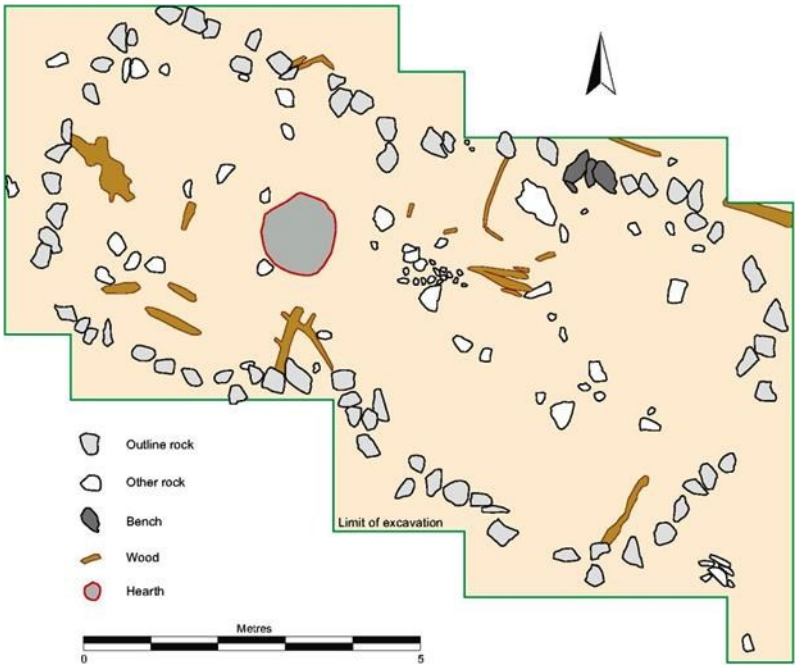

Figure 2. Tent ring 1, floor plan (FkBg-3), courtesy of L. Rankin.

Figure 3. Tent ring 4, floor plan (FkBg-3), courtesy of L. Rankin.

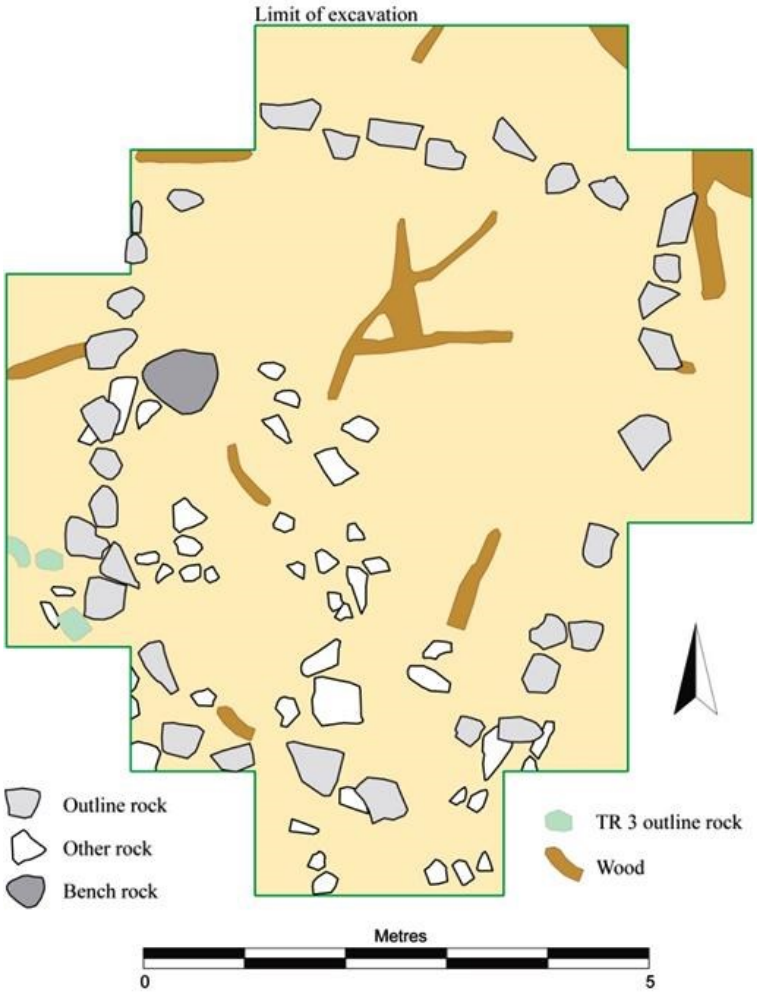

Figure 4. Soil layer mapping using a trowel to support the total station rod, picture taken by the author.

Figure 5. Collection of a core for thin-section, picture taken by the author.

Figure 6. Northeastern view of Huntingdon Island 5 (FkBg-3), picture taken by the author.

burned faunal remains was also identified adjacent to the south wall of the western rock ring, in proximity to the hearth. Based on its considerable size and internal structure, the tent ring is most likely contemporary with houses 3 and 4, which belong to the communal house phase (figure 2).

Tent ring 4 presented only one identifiable internal structure, a workbench placed adjacent to the western wall, and was a lot smaller in size. Tent ring 4 is believed to date from the pre-European trade phase, contemporary with houses 1 and 2 present on the site (Rankin, personal communication; figure 3).

Soil and vegetation survey

Soil profiles exposed by the excavation and shovel testing have revealed a shallow, weakly developed regosol, with a fibric Of horizon underlain by an organic Ah horizon, followed either by yellow-gray sand or a layer of rounded cobbles and pebbles. These layers have been mapped using a total station (figure 4). Cores preserving intact soil structures have been collected in two cruciform patterns inside tent ring 1 and a random pattern inside tent ring 4 (figure 5). Additionally, test pits have been opened against the edge of the initial test pit dug inside tent ring 2 and a section of a path that transects the tent ring. Two cores were collected, that will show the difference between the microscopic structures of the path and the backfill relative to an undisturbed area.

During the survey I have identified and sampled 3 areas of vegetation growth for the paleoethnobotany section of my analysis. In an increasing distance from the water line on the north shore, they are: a coastal area consisting of grasses (*Carex spp.)* and shrubs, a low-diversity meadow, consisting of crowberry (*E. nigrum*) and reindeer lichen (*C. rangiferina*), and a sphagnum wetland, consisting of red and green sphagnums, Labrador tea (*R. groenlandicum*) and cloudberry (*R. chamaemorus). Picea glauca* is the only tree species growing on the island (figure 6). This data will be used to better understand the environmental and taphonomic context of summer dwellings as well as aid in the identification of plant species that have archaeological significance during paleoethnobotanical analysis.

Data gathered will be used in my MA research, which studies soils associated with the summer component of Huntingdon Island 5 (FkBg-3) on the basis of micro-structure, micro-inclusions and geochemistry,

in order to reconstruct the *taskscape* associated with the tents. Additional samples collected from inside the winter sod houses during previous excavation seasons have been processed and will be used for comparison as well.

Preliminary results

Paleoethnobotanical analysis on samples from tent ring 1 indicate that summer tent samples rank intermediate to low comparative to background and sod dwelling samples based on seed and plant remain densities. Even though returns are low, all features associated with cooking and burning yielded burned plant macroremains and seeds, particularly burned leafs and seeds of crowberry (*E. nigrum),* bearberry willow leafs (*S. uva-ursi)* many burned *Picea* and *Abies* needles, as well as high counts of sclerotia coming from the fungus *Cenoccocum graniforme,* which suggest that roots were also being burned (McWeeney 1989).

Higher seed densities have been obtained from areas located in proximity to where the skin walls would have been and immediately outside the rock rings. Higher densities have also been found in the area adjacent to the westernmost wall. The lowest densities were recovered from the easternmost extremity. These finds support the interpretation of the southeastern section as the entranceway and suggests that a sleeping platform was located against the westernmost wall.

Feathers have been recovered from the westernmost wall section as well as the area immediately south of the entranceway, along with some evidence of burning. Bird bones recovered from the hearth tentatively link these finds to the tent occupations. Their location indicates that the area outside the entryway was an additional activity area, as it is suggested by historical photographs and ethnographic descriptions from north Labrador and the Central Arctic (Lee and Reinhardt 2003).

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Basques and Inuit at Hare Harbor-1 and the Inuit Hart Chalet Site on the Quebec Lower North Shore

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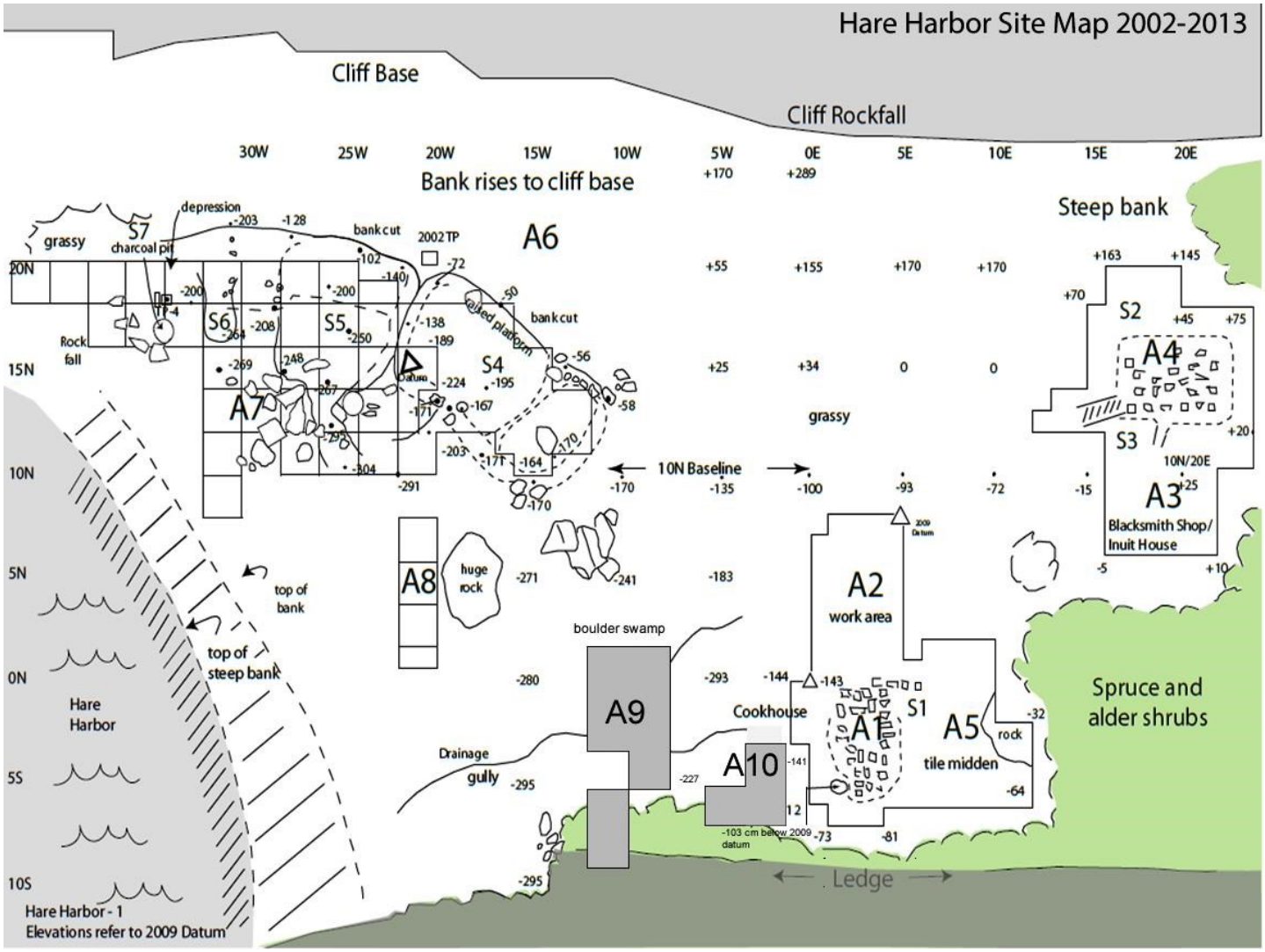


Figure 1. Hare Harbor-1 site map showing 2013 excavations at Areas 9 and 10.

The Gateways Project has investigated Basque and Inuit archaeology, and to a lesser degree, the prehistory of the Quebec Lower North Shore from Blanc Sablon to Cape Whittle (Fitzhugh 2006). Since 2001 most of our attention has been directed at a 16/17th century Basque site (EdBt-3) at Hare Harbor on Petit Mécatina Island, midway between Harrington Harbor and Tête à

Figure 2. Overview showing S1 grassed-over cook-house in foreground, Area 10 in mid-ground, and Area 9 excavation in the distance. View northwest. (wf 3827)

Figure 3. Area 9 showing slab hearth feature and surrounding midden. View north. (wf 0092)

Figure 4. Slab hearth in A9 2S/10W showing burned brown hearth sand. View north. (wf 3745)

la Baleine, about 150 miles west of the Strait of Belle Isle (Fitzhugh et al. 2011). What began as an exploration of 16th century Basque activities in the Gulf to complement research conducted in Red Bay (Grenier et al. 2007) became more interesting when we discovered part of the Basque occupation dated to the late 17th or early 18thcentury, and that the site included an Inuit component dating to the same period.

This year research was directed at the central area of the site (Area 9), a marshy area between the terrace front (Area 8) and the cook-house (Area 1), and Area 10 between A9 and A1 (Figure 1, 2). Despite having our 2013 excavations periodically flooded, we completed 10 2x2 m. units, seven in A9 and three in A10. Underwater excavations were conducted at the shallow northern end of the largest ballast piles where we recovered chaffing bowls (réchauffoirs) and a killik anchor in 2012. At the end of the season several days were devoted to further explorations at the Hart Chalet Inuit winter village site near the mouth of the Bradore River, at Lourdes de Blanc Sablon.

Land Excavations

When Area 9 was tested in 2012 (Fitzhugh et al. 2013a,b) it produced artifacts in a 50-60 cm deep deposit full of charcoal-soil and fire-cracked rocks, and its earthenware and burned flint flakes suggested it was detritus from a domestic hearth. Broader excavations in 2013 revealed two focus areas within A9: a 2-meter diameter hearth and a surrounding midden (Figures 3, 4). The hearth was a circular arrangement of fire-burned cobbles resting on burned schist slabs. Much of the hearth deposit consisted of brown sand (burned schist) with small pockets of charcoal and calcined bird bone. The hearth contained earthenware and a few nails but little else. In the wet soil south of the hearth we found more plain and glazed earthenware, including cup and porringer fragments. Earthenware glazes included white, blue on white, yellow, and green varieties. Thin stemware glass was present in small quantities; sheet lead, iron nails and spikes, and poorly-preserved iron knife fragments were common, as well as pieces of baleen and rotted whale bone. Tiles were ubiquitous, but if a shed roof had been present if lacked the thick midden of broken, cast-off tiles we found north of the cook-house floor, and there was also no stone floor pavement. A9 appears to have been a domestic hearth. Also unlike the cook-house, there were no fragments of Inuit soapstone vessels, and no glass beads, stoneware, or clay pipes.

Area 10 (Figure 5) was dominated by a cluster of large boulders a few meters west of the cook-house and adjacent to the site's outcropping south ledge. The three 2x2 m. units excavated here represented two time periods. Large fragments of stoneware, marmite cooking pots, and porringers were recovered as well as blue seed beads, an oval blue-and-white striped bead,

Figure 5. Area 10 midden excavation among boulders, with the cook-house beyond. View east. (wf 0096)

an iron adze, green bottle glass, nails, and several Inuit soapstone vessel fragments. All except the porringers duplicated finds from the S-1 cookhouse floor. However, a small 50-cm. diameter hearth surrounded by several strips of baleen was found on sterile soil beneath the materials described above (Figure 6). This hearth was identical with a series of small slab hearths found beneath the S-1 roof tile midden north of the cook-house. We believe these hearths and the large hearth in A9 date to the late 16th century and represent the earliest Basque occupation at Hare Harbor. A small broken piece of a porcelain cup or bowl, possibly of Chinese manufacture, was also found here (Figure 7).

Underwater Research

The three underwater units excavated this year were 2x2 m. and were located at the shallow north end of Stone Pile 6 only ten meters from shore (Figure 8). Unit C3-3 extended east from last year's C3-2 square where three chafing dishes were found. Unit C3-4 was set directly east of the C3-3, and C3-5 extended C3-4 to the north, providing an excavated area of 12 m^2.

As in previous years we found the underwater cultural strata correlated closely with activities onshore. The first layer overlying the natural sediment is an accumulation of peat that had, in its upper part, a thick lens of woodchips. The division between peat and wood chips was defined more clearly in previous excavations at deeper depths. All five C3 operations presented a slight division between the two layers, but here this division was never as evident as in the units in 10 meters of water and deeper. Mixed within this organic stratum are numerous ballast stones, ceramics, bird and mammal bones, nuts, lead buckshot, and the constant presence of coopering materials. In 2013, C3-4 brought a surprise: a layer of pebbles sandwiched between the organic layers that may represent a dump of chalupa ballast. Lying on top of the organic stratum is a semi-compact layer of sandy silt. Numerous roof tiles, some earthenware, and rope fragments are found mixed between the ballast stones, which are present in great number in the lower part of this level. This is covered by a post-Basque sandy stratum where only occasional fragments of tiles are found.

Unit C3-3 Layer 1 in C3-3 averaged 30 cm in thickness and was a post-Basque deposit of loose sand containing occasional living and dead shells. Roof tiles are found in this layer along with a few small pebbles, with larger ballast stones present mostly in the lower

Figure 6. Small slab hearth and baleen found at base of A10 midden. (wf 3830)

part of the layer. Artifacts were concentrated at the interface between L1 and L2 (Figure 9). Layer 2 ranged in thickness from 50 to 70 cm and was composed mostly of organic material, mainly wood chips and flakes of different sizes, logs, sticks and bark mixed with pockets of peat and roots, and a small whale caudal vertebra (Figure 10). Most of the ballast stones were within this stratum, which consisted of two stratigraphic sub-units without a clear break between them. In the upper half we observed branches, logs, bark, and large wooden flakes, fragments of roof tiles, occasional pieces of rope in a very fragile state, and small pockets of medium-size codfish spines and fins in anatomical position. The lower half contained peat and roots as well as small pockets of medium-size codfish bones also in anatomic position, lead buckshot, wooden and ivory beads (Figure 11a,b), ceramic sherds of numerous types (Figure 12a,b), two whale bones, bird and mammal bones, a caribou antler, and at least three different shoes.

Layer 3, the same as Layer 5 in unit C3-4, is less than 5 cm thick and consisted of pure grey clay. The presence of this layer is new to the underwater site and may have resulted from a rock-fall event from the cliff that nearly reached the shore and dislodged clay from uplifted marine sediments along the northern side of the harbor.

Layer 4, the deepest, was composed of fine compact gray sand with rare angular rocks from 5 to 10 cm in diameter. This compact layer was excavated to a depth of 20 cm and here, as elsewhere underwater, never contained traces of human occupation and is a pre-Basque natural marine deposit.

Unit C3-4 When observing the C3-4 north wall stratigraphic profile (Figure 13), two differences are seen compared to C3-3. First, L1 and L2 occur as two separate layers while in C3-3 it formed only one layer.

Figure 7. Porcelain cup or bowl fragment from A10 midden. (wf 3757)

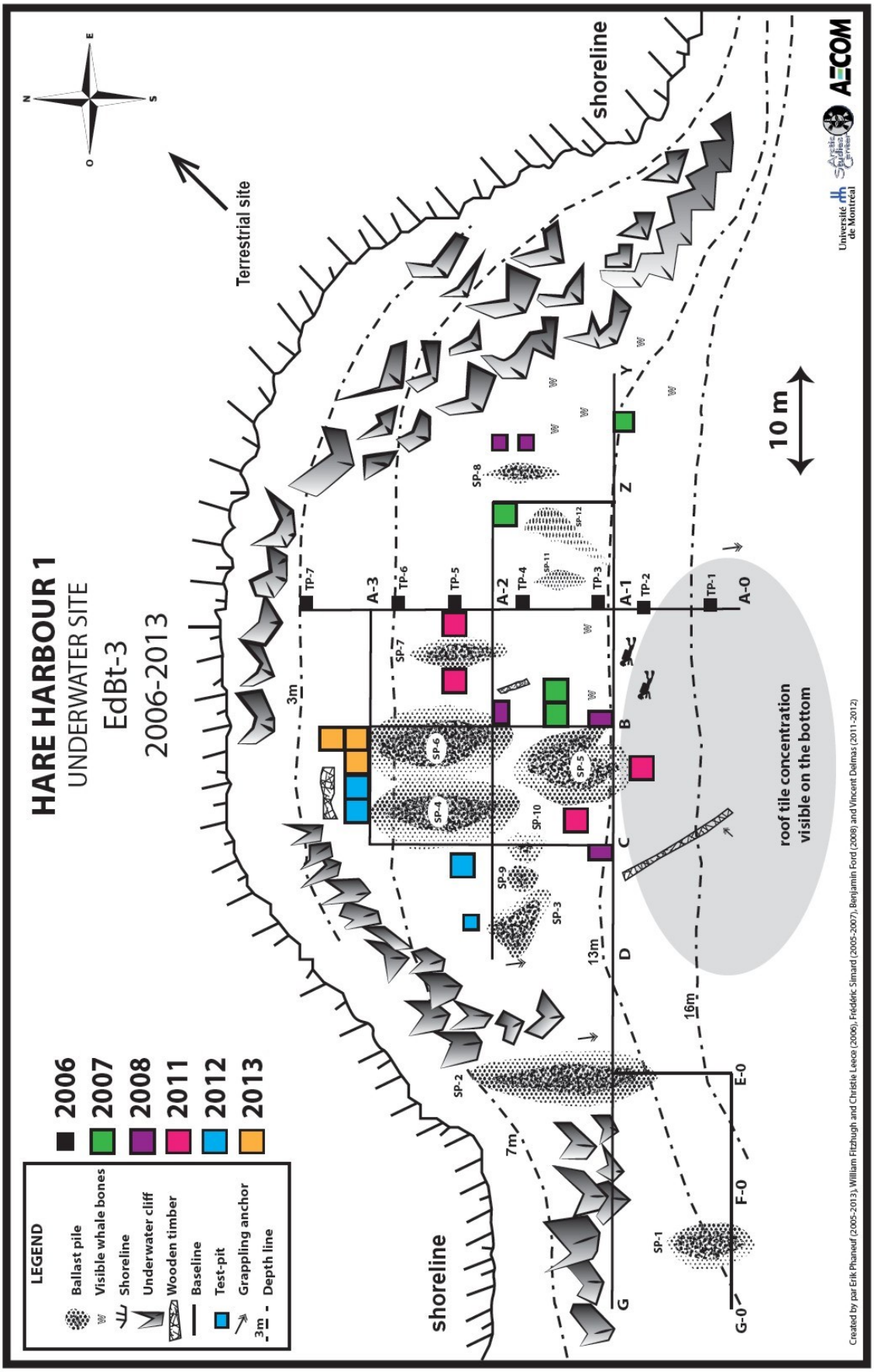


Figure 8. Map of underwater excavation area. 2013 units shown in orange.

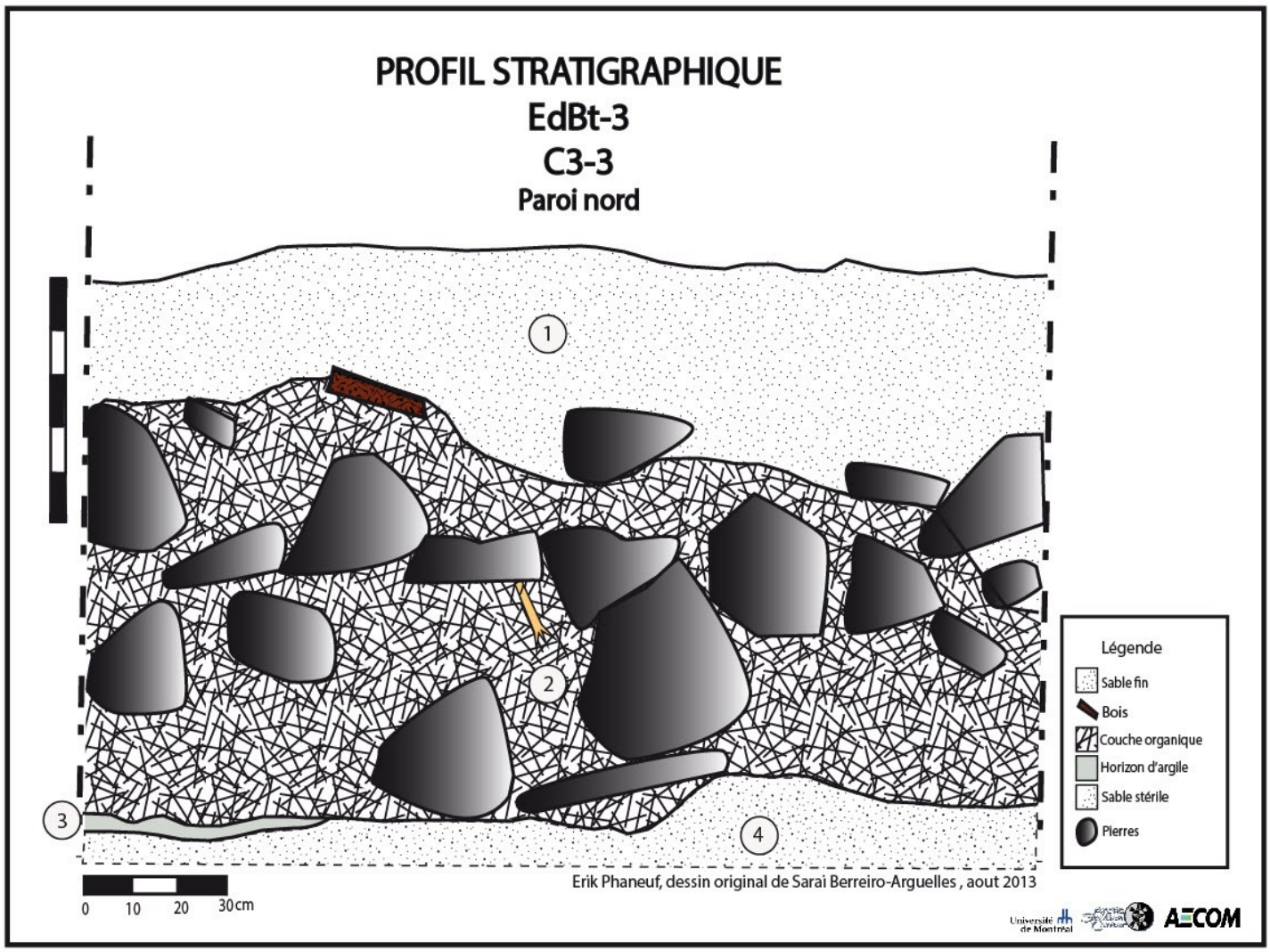


Figure 9. North profile of C3-3.

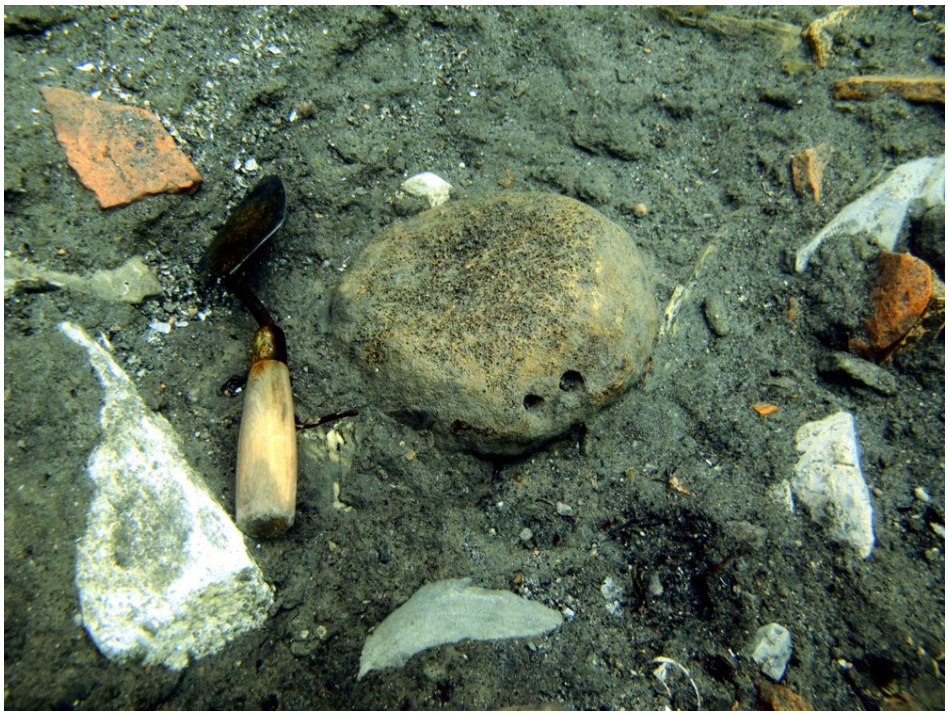


Figure 10. Caudal vertebra from C3-3, with roof tiles and ballast stones.

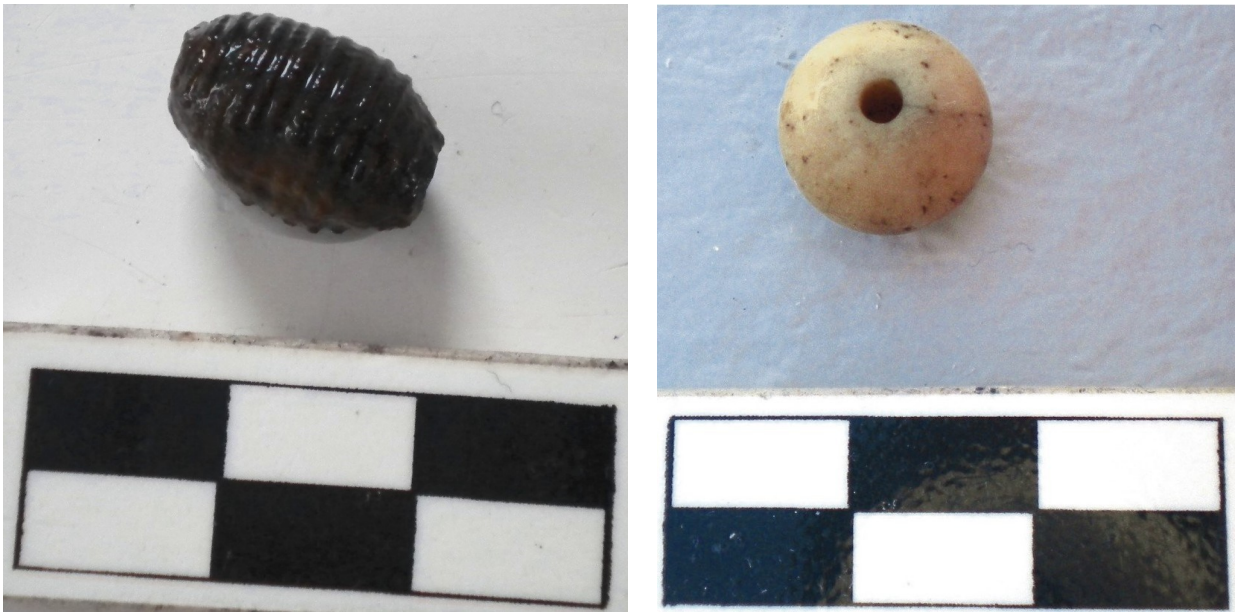
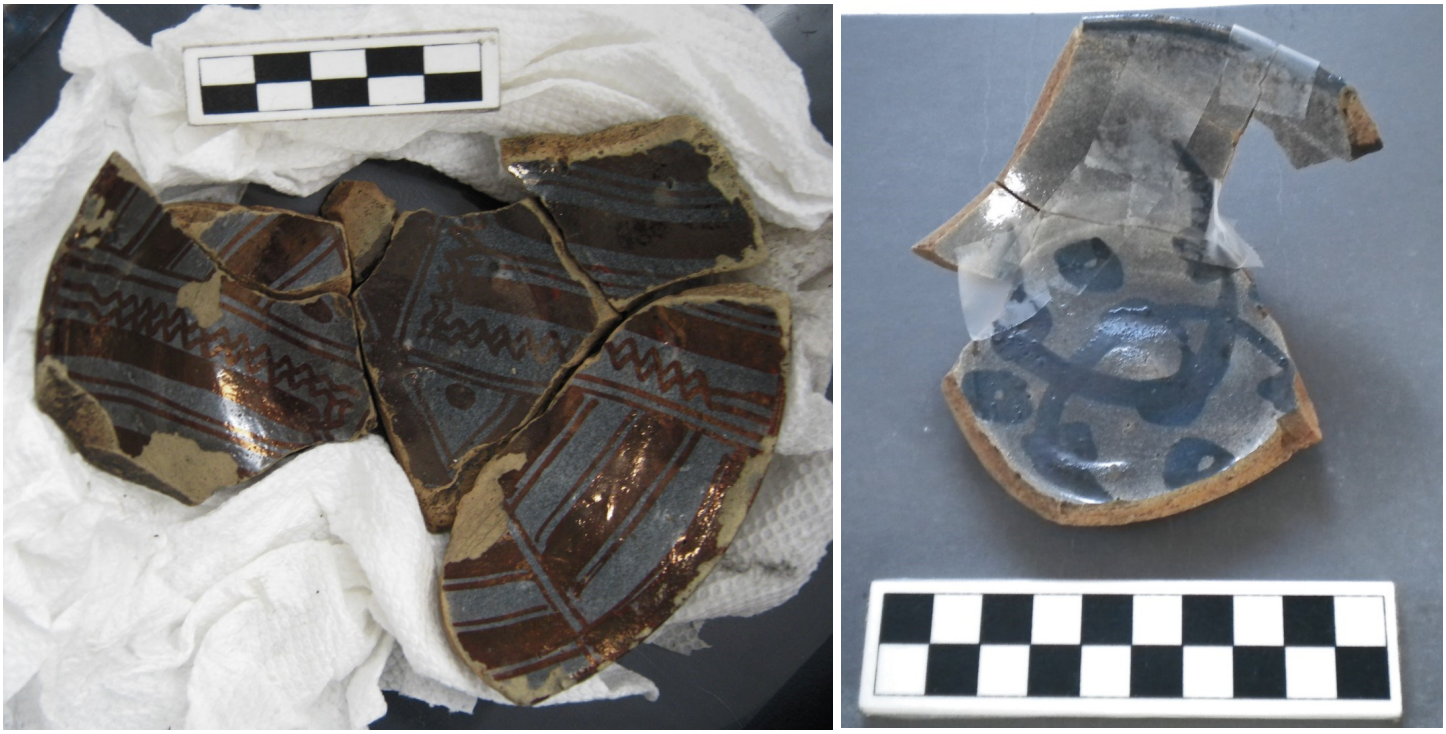


Figure 11a,b. A serrated wooden bead and an ivory bead from C3-3 organic L2.

Figure 12a,b. Muel lusterware porringer and a faience porringer from C3-3 and C3-4.



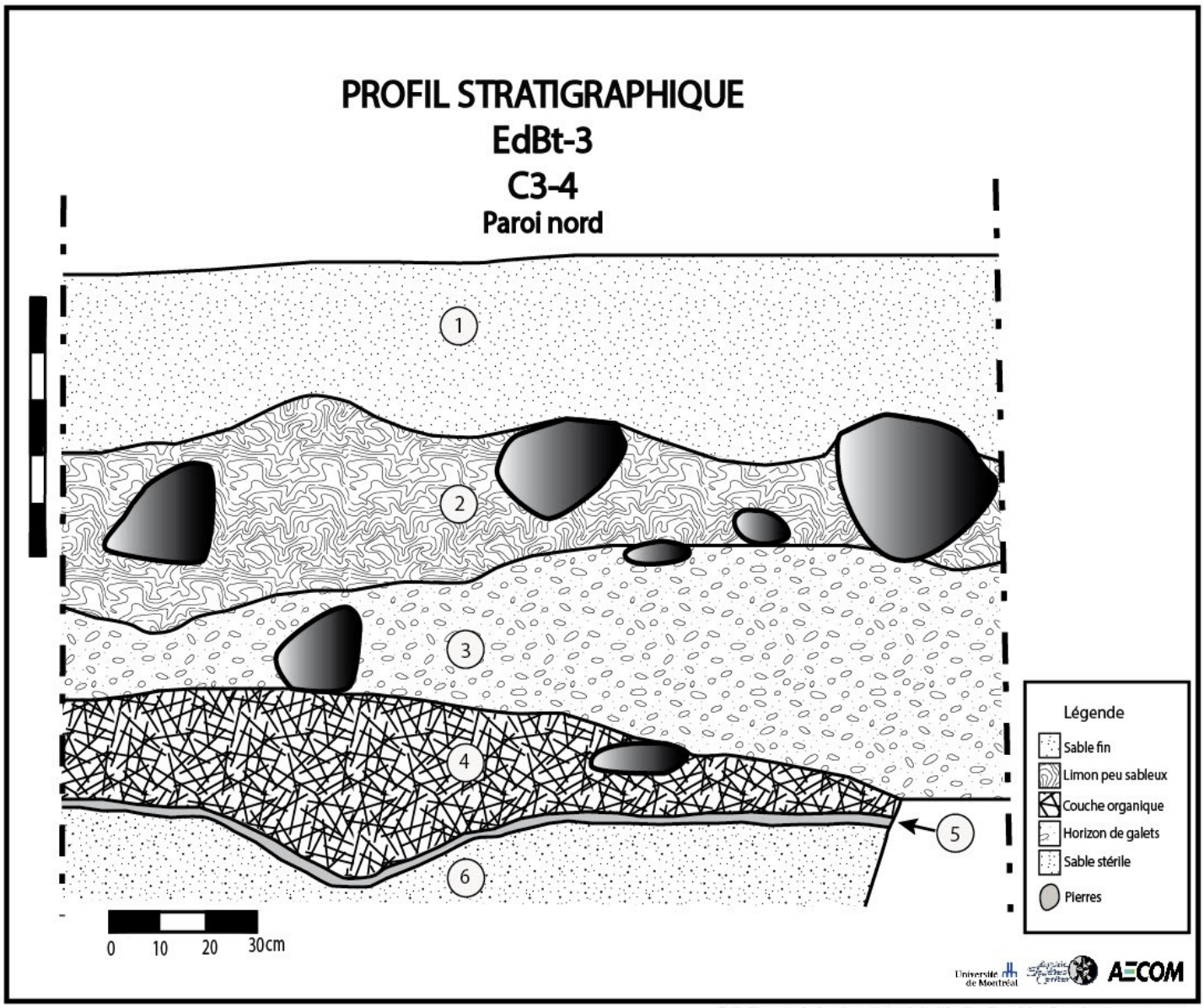


Figure 13. Profile of north wall of C3-4.

L2 is a semi-compact silt matrix from which we removed more than 50 ballast stones. Artifacts are found within this matrix with a higher percentage at its lower interface. Layer 3 is this year's surprise. Throughout the entire unit, L3—a matrix of beach pebbles—disappears between the C3-3 and C3-4. Averaging less than 20 cm in diameter, these flat rounded stones are present in a stratum more than 50 cm thick. One interesting feature of this layer is the presence of silex/flint nodules of European origin. Layer 3 may represent chalupa ballast (Figure 14, 15). On the eastern profile (Figure 16), Layer 3 is sandwiched within the organic Layer 4. This is not observed on the northern wall. In C3-4, the organic layer rests again on a thin L5 made of pure grey clay separating the L4 organic layer and the L6 pre-Basque sandy deposit.

The east wall profile shows ballast stones within L2 and L4. Other than L3 (the chaluupa ballast deposit, which seems to be a single dumping event), SP-6 seems to have resulted from multiple episodes of ballast dumping. While primarily found within the organic layer, ballast stones also appear within L2. So far, attempts to determine the origin of these rocks have failed. The exposed limestone rocks are pitted with pholade shellfish tunnels, whereas the buried stones are free of burrowing effects. These limestone rocks in

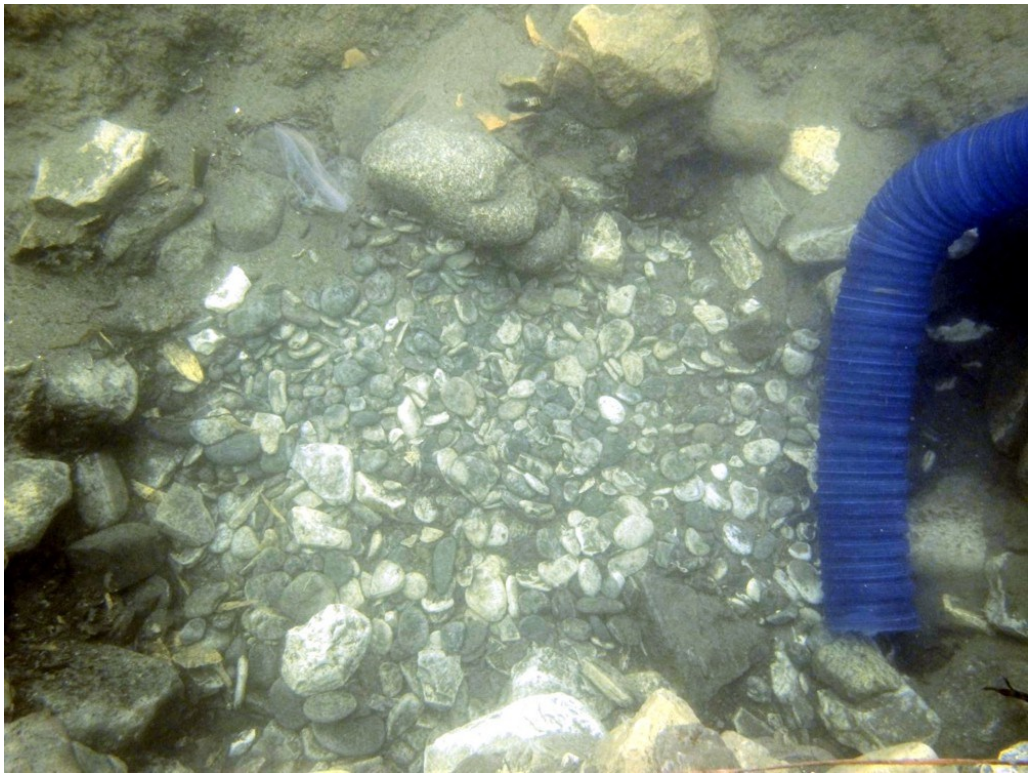


Figure 14. Chalupa ballast covering the whole surface of C3-4.

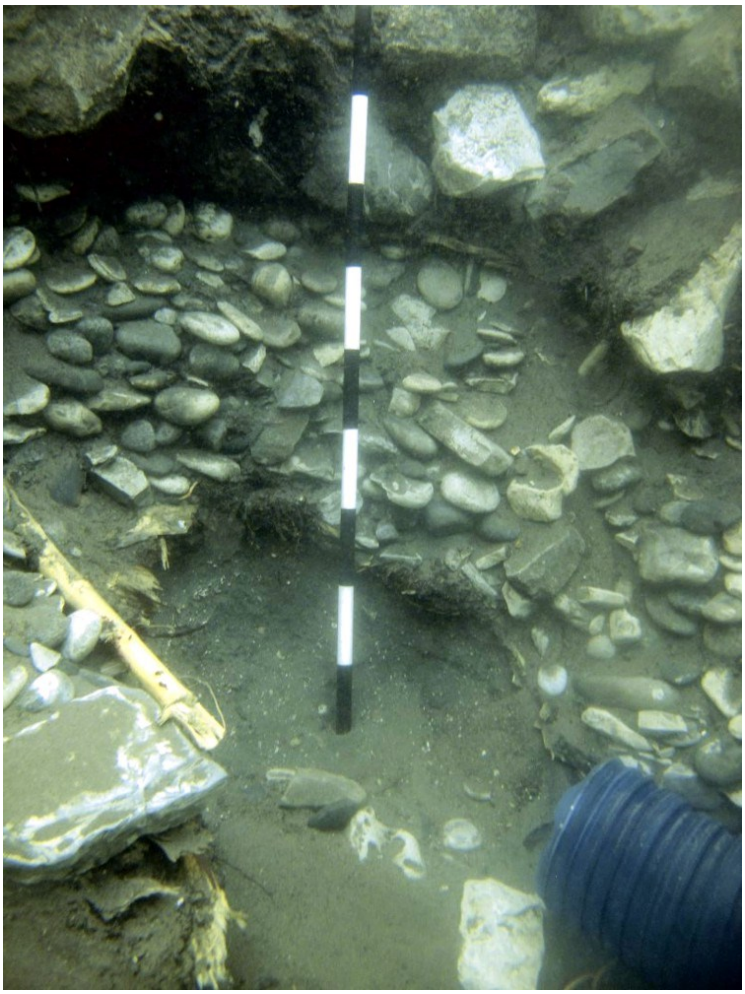


Figure 15. Northeast corner of C3-4 showing rounded chalupa ballast layer.

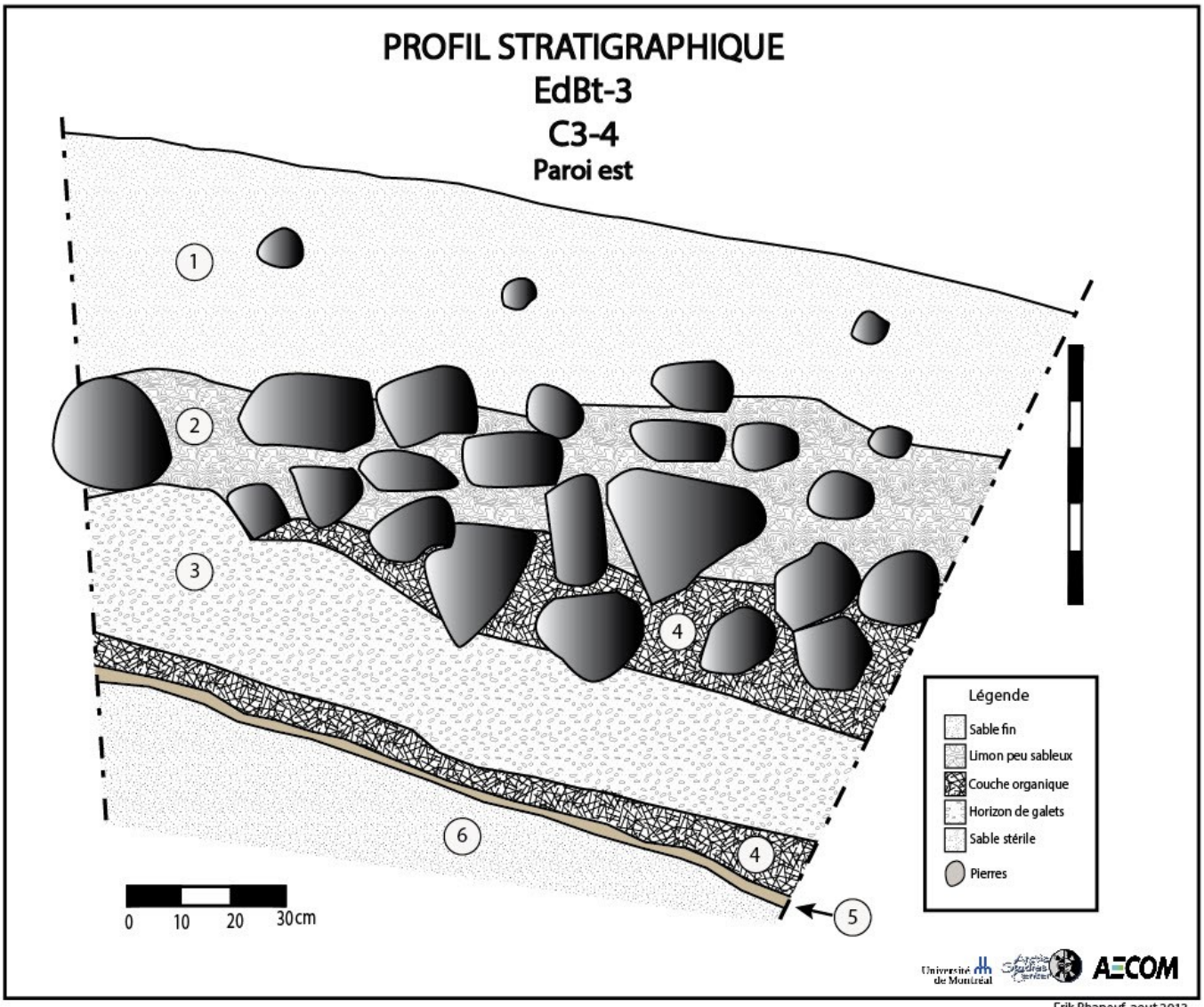


Figure 16. Profile of east wall of C3-4.

the organic layer are partly decomposed and always have a soft, chaulky surface. Many artifacts are found within the ballast matrix. Nearly one hundred stones were removed from L2 and L3. All were manageable for one person to carry, but some were nearly a meter in length (Figure 17).

Artifacts in L2 and L4 were similar to those found in C3-3. This year we found fragments of a lusterware porringer (Figure 12a) recovered from C2-2 in 2012. More frequent this year than in previous seasons were small lead birdshot pellets and the irregular pieces created when birdshot is made by dripping molten lead into water (Figure 18). L5, the semi-compact, sandy pre-Basque layer observed throughout the site, was also seen here.

Unit C3-5 This unit north of C3-3 confirmed previous observations in this part of the site. Many ceramics were found in its two cultural layers, and numerous fish and bird bones came from the lower level with wood chips, coopering artifacts, peat, and moss. The west wall stratigraphy (Figure 19) shows the northern extension of the chalupa ballast deposit. The ballast stones from SP6 were also present but did not form the main matrix. Some stones rested directly on the pre-Basque layer without any organic material in between.

Underwater Conclusions

The 2013 field season completed the excava-

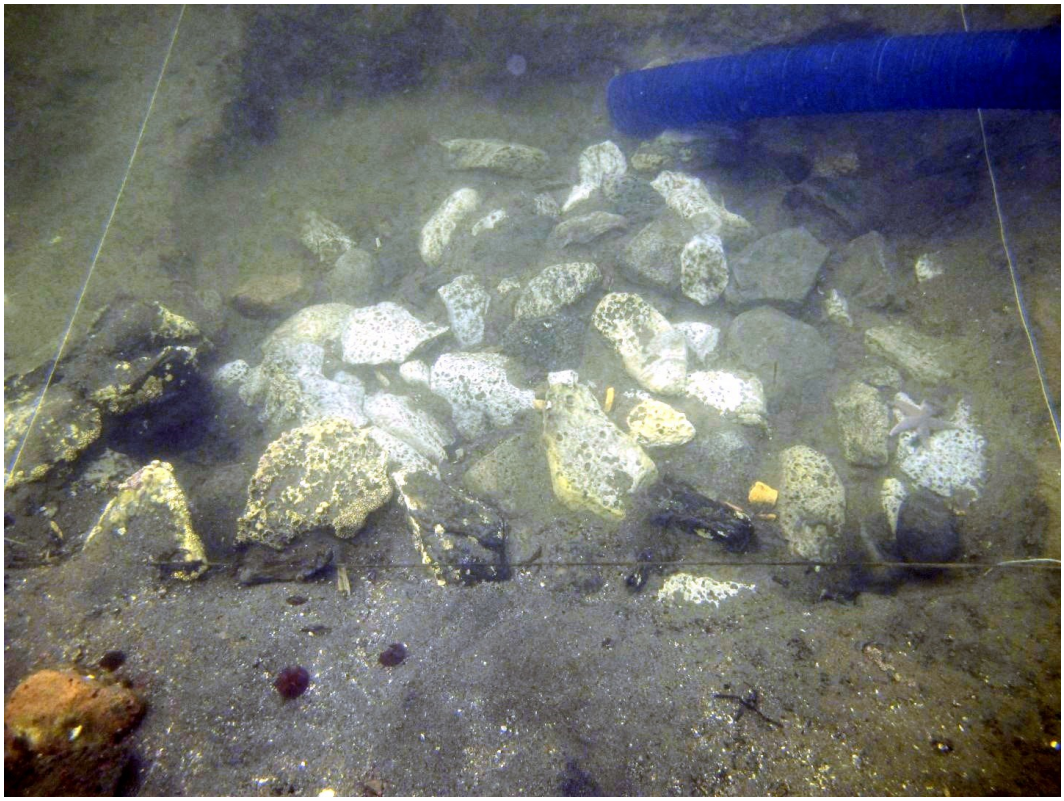


Figure 17. C3-4 after first day of excavation; note the ballast from SP-6.

Figure 18. Birdshot and melted lead droplets from L4 in C 3-4.

tions begun in 2012 to explore deposits between the ballast piles and the shore. As previously, we found fine and common cooking ceramics, bones, and an organic layer composed of peat and roots resulting from initial site land clearance as well as wood debitage from log squaring, possibly for construction of a fishing stage, chalupa building, or timber produced for shipment to Europe. Further analysis may offer a clearer picture of activities at the Hare Harbor site and narrow down its occupation dates.

The underwater site not only supplied crucial information about daily activities and commercial operations; it presented a completely different aspect from what has been revealed on land. Charcoal production, Inuit coeval occupation, and smithy and cook-house activities that so prominent on land are silent on the underwater record. One of the few activities evident both on land and underwater are land clearing. Fishing and whaling, so characteristic of Basque sites in Labrador, Newfoundland, and the Gulf, are known primarily from the underwater remains. Coopering and boat repairing are also well-defined in the underwater

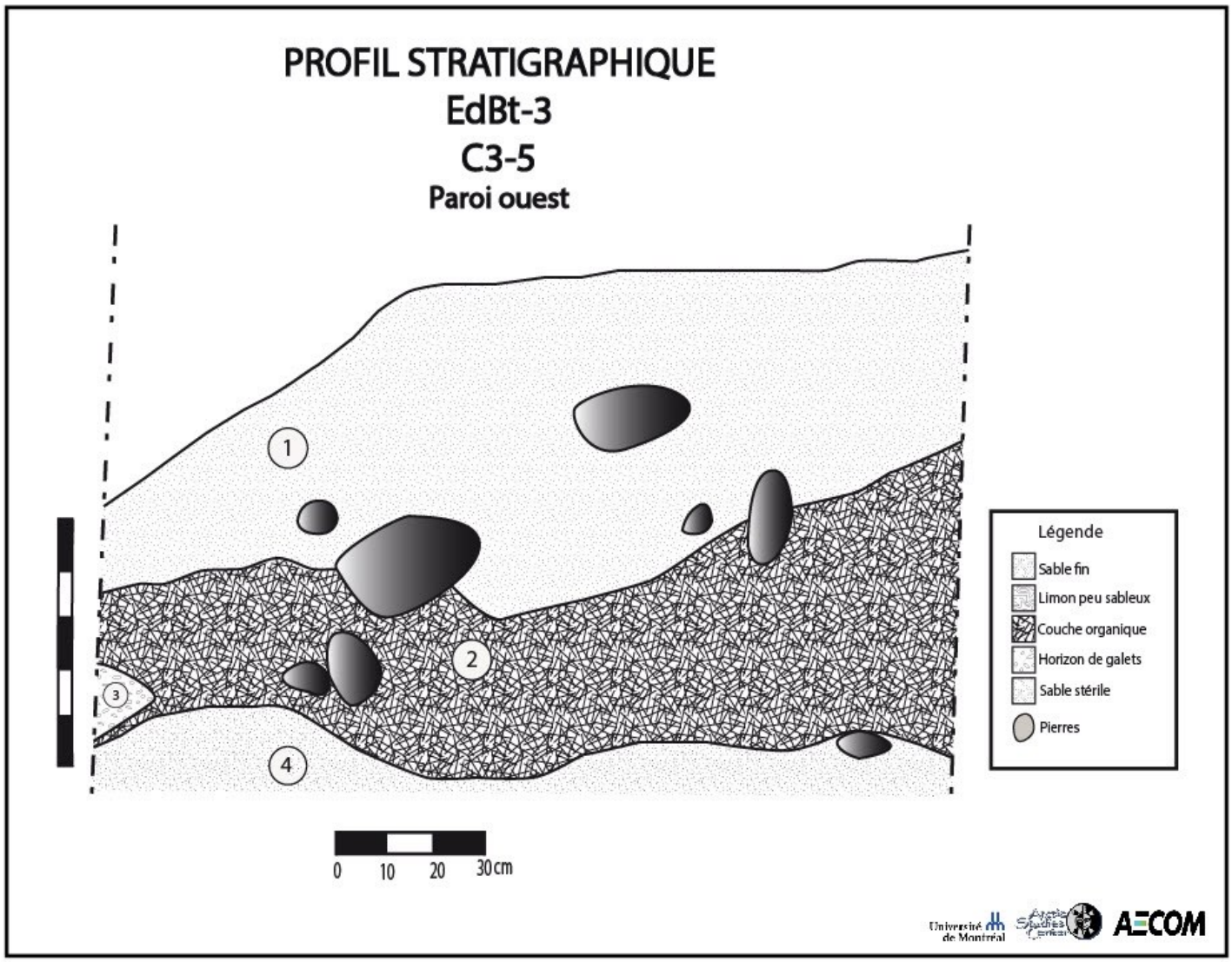


Figure 19. West profile of C3-5.

collection, and, of course, cooperage materials and similar types of artifacts are found in both contexts. The Petit Mécatina excavation demonstrates that both land and underwater research complement each other and are invaluable in reconstructing a fuller picture of the economy and activities of the site.

Hart Chalet Excavations

After finishing at Hare Harbor we returned to the Hart Chalet Inuit village site (EiBh-47) on Bradore Bay. Time did not allow full excavation of House 1, the easternmost of three sod and earth dwellings; but we completed a 1x8 m. trench from the entry to the rear (north) wall (Figure 20). Previous work at the site had produced diagnostic Inuit artifacts (ivory needle-case, whale bone sled runner, iron arrowhead, stone bead) and large amounts of roof tile, iron nails, and food bone. We hoped to obtain a date of occupation, expand the artifact inventory, and determine the size, shape, and construction of the houses.

The Hart Chalet is a small one-room cottage on the wooded shore less than a kilometer west of the Bradore River. Today's landscape is very different from just fifty years ago when a photograph by René Levesque shows the site as a clearing surrounded by low spruce, larch, and willows, with most of the shore clear of vegetation. Now the site is completely bushed in with spruce and tamarack. On the path from the cottage to the shore we found flakes of Ramah chert, so the Inuit had chosen to live well above the current beach and its marshy foreshore. When the chalet was

Figure 20. Hart Chalet House 1, showing entry passage, rectangular sod walls, and axial trench. House 2 at upper left, and House 3 in spruce out of the picture left of H2. View north. (wf 0120)

built in the late 1960s a lane wide enough for a car grazed the east wall of House 1. Construction of the cottage damaged the outer part of the H1 entry passage and its external midden, and according to the Harts, a large quantity of tile and nails were removed. Today all three Inuit houses are either partially or completely grown over with 30-40 year old spruce.

Test pits in the grassy clearing around the cottage reveal evidence of prehistoric occupation in the form of chert flakes and fire-cracked rocks in the upper, sandy soil horizon. This inorganic level is overlain by a buried humus level representing the original ground surface, and above this one finds sterile sandy/gravelly soil that the Inuit removed in the process of excavating the pit for House 1 (Figure 21). Above this back-dirt is a charcoal-rich midden layer resulting from the Inuit occupation containing animal bones and artifacts. Above this lies the modern grassy sod and humus.

The 1x8 m. trench was too narrow to reveal much of the interior, but it confirmed that the house was an Inuit winter dwelling, even though certain features of typical Labrador Inuit architecture were missing. First, there is no slab pavement in the entry or the house interior; rather, the presence of small nails suggested a floor of wood planks. Second, no cold trap or step-up was present between the entry passage and the house interior. Third, while a rear sleeping platform was present it lacked the vertical slab-rock retaining wall usually present at the front edge of the platform; instead a log or plank retainer may have been used. Although not excavated, there are indications of side benches along the east and west walls and clusters of rocks in the SE and SW corners suggest the locations of fireplaces or lamp stands. This house also differs from the Petit Mécatina and Little Canso Island Inuit dwellings in lacking a slab-paved entry and floor, perhaps indicating closer contact with Europeans and availability of wood planks. Also unusual was the small number of finds from the house interior: only a few nails a few pieces of roof tile and earthenware were found.

Test pits were excavated outside each of the three houses to test midden depth and faunal preservation. Pit 4 and 4A outside the west wall of H1 produced many nails and bones, as well as an iron arrow

Figure 21. Hart Chalet H1, TP4 showing stratigraphy resulting from H1 construction back-dirt and subsequent bone midden. View northeast. (wf 0142)

point, stoneware and earthenware sherds, a blue seed bead, and other finds. Another in the H2 entry revealed a large whale bone roof or floor member. The walls and interior of this house had been grown over by spruce trees, but in the middle of the floor we found an open test pit excavated years ago by Clifford Hart. A H3 test produced nails, tile, and caribou bone. Tests south of the cottage porch revealed a shallow wood-lined ditch running down-slope from the porch into the woods; it is unclear whether this feature is associated with the Inuit occupation or the Hart cottage.

Artifacts recovered from House 1 and the test pits are consistent from feature to feature: large numbers of nails and roof tiles; various types of stoneware and earthenware; fragments of iron knife blades and points; worked bone, bottle glass, and glass beads. Nothing especially diagnostic came to light this year, but what was found resembled finds from other Inuit sites on the LNS. Further refinement of dating will have to await analysis of the ceramics. The bone assemblages from Little Canso Island and Hart Chalet include seal and caribou, with smaller amounts of birds and small mammals—all consistent with cold season occupation. Unlike Hare Harbor, little charcoal was found in the cultural deposits at Little Canso Island and Hart Chalet.

Salmon Bay

Local residents of Middle Bay told us about a sod house site that Françoise Niellon and Allison McGain investigated some years ago. We located the site near the Route 138 bridge over the Salmon River, a few miles west of Middle Bay, in a clearing in the spruce forest 50 meters from the riverbank and a few hundred yards south of the east end of the bridge. The site consists of two ca. 8x10 m. rectangular structures with foundation walls of stone or brick about 30cm wide, standing 30-40cm above ground. Each structure has a 1x1 m pit excavated one meter deep in the center of the building and a large hearth platform in front of the rear wall. No entry passage or other features were present to suggest Inuit construction. On the wall of one of the houses we found a blue glaze transfer print sherd and fragments of brick. The houses seem to be a 19th C. European fishing, trapping, or trading settle-

ment.

Belles Amours Point

At the request of Anthony Dumas, we revisited a site that René Levesque had surveyed on the east side of Belles Amours Peninsula (Levesque 1968). This site consists of a dozen or so structures constructed in old boulder beaches about 200 meters from shore. Some of the structures are cache pits associated with round or oval boulder pithouses, one of which is nearly rectangular, 4x8 m, and has a internal boulder divider reminiscent of 17th C. Labrador Inuit spring/fall dwellings known on the central Labrador coast. These structures show enough variation to represent several cultures dating perhaps as early as 2-3000 years ago. Many of the structures were damaged when they were mined for boulders when electric and telephone poles were erected through the middle of the site area. Levesque produced a sketch map of the site and reported finding stone tools in some structures. Highly visible and easily accessible by road traffic, many of these structures are intact and should be given high priority for future research, protection, and potential restoration.

Conclusion

The 2013 field program concluded more than a decade of work at the Hare Harbor site and further defined the Inuit occupation of the Quebec Lower North Shore. At Hare Harbor our excavations in Areas 9 and 10 strengthened evidence for an early Basque component. Underwater research revealed stratigraphy and finds similar to what was recovered during the past several years. We learned that the underwater midden accumulated together with the growth of the largest ballast stone piles, suggesting multiple episodes of ballast dumping alternating with midden deposition over a period of years. Investigations along the shore adjacent to the anchorage produced no evidence of tryworks, or burned rocks or tiles. However, test pits showed roof tiles mixed with marine clay between and beneath the rock-fall boulders and debris, supporting evidence for an avalanche event during the Basque occupation. Evidence from land suggests an event during or after the a Basque occupation while underwater stratigraphy of marine clay at the bottom of the organic levels suggests an event before the Basque occupation. These data suggest the possibility of two events at each end of the Basque/Inuit occupation.

Data from Hare Harbor-1 continues to point toward a brief occupation by late 16th century Basque whalers who utilized small hearths, often with baleen paving, followed by a second occupation toward the end of the 17th century by Basques who used grey stoneware as well as marmite cooking vessels and clay pipes, who established a cook-house and blacksmith shop and conducted an intensive cod fishery. During this latter occupation these Europeans were joined by Inuit who established winter quarters and had access to copious amounts of the same European materials found in the cookhouse and blacksmith shop. These Inuit built a winter house of sod, stone, whalebone, and charcoal and their activities created much if not all of the midden found in Area 8. The precise nature of the relationship between the Europeans and the Inuit is difficult to decipher, but the large amount of European materials found in the S4 Inuit dwelling suggests direct access to finished products rather than scavenging abandoned Basque occupations. The presence of Inuit soapstone vessels and beads in the cook-house, whose construction is of European and not Inuit design, suggests Inuit women operated this facility for the Basques.

Our work at the Hart site refined knowledge of this large three-house village. Further work needs to be done here, and at the two Belles Amour Peninsula Inuit winter houses, to clarify their dates and relationships with Europeans. Excavations at Hare Harbor, Little Canso Island, Belles Amour, and Hart Chalet make it clear that for at least several decades, if not longer, in the 17th and/or early 18th centuries, Inuit had a substantial year-round presence on the Quebec Lower North Shore from Blanc Sablon at least as far west as Petit Mécatina. These sites, the stone houses of Belles Amour Peninsula, and the Courtemanche Fort on Bradore Bay excavated by Levesque (but still not reported), could be important attractions for economic planning and future tourist development.

Acknowledgments

This year's underwater work was directed by Erik Phaneuf and included University of Montreal students Marijo Gauthier-Bérubé, Sarai Barreiro Argüelles, and David Légaré. Land work was conducted by William Fitzhugh, Rebecca Mayus of Notre Dame University, and Wilfred Richard, who served as expedition photographer. Perry Colbourne captained the *Pitsiulak* and supported the dive team operations. As in previous years we received gracious hospitality from the Evans-Vatchers and others in Harrington Harbor, from Florence and Clifford Hart, who gratiously allowed us to excavate at their chalet cottage and provided much-appreciated hospitality, and from Louise Colbourne and the

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Archaeology at Ferryland, Newfoundland 2013

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Figure 1. Post 1696 timber-framed house, looking east.

The 2013 field report begins on a sombre note. This is the first year that Dr. James A. Tuck did not return to Newfoundland to participate in the ongoing archaeology at Ferryland. Jim became interested in the history of Ferryland in the late 1960s, conducted two field schools in the mid-1980s, and was instrumental in securing federal and provincial support for the project beginning in 1992. Under his leadership and direction, the two decades of subsequent archaeological research revealed one of the best built and preserved early English settlements in the New World – the results of which helped rewrite the early colonial history of Newfoundland and Canada. Although enjoying a much deserved retirement, Jim's presence was truly missed.

Our plan for 2013 was to continue investigations on two informative, yet challenging areas of the site. The first was a large terraced area directly south of the main living chamber (or hall) of Lord Baltimore's "Mansion House" and east of the stone kitchen which served residents of the same house. The second area was south of the Pool road, directly opposite the Colony Café, where excavations in 2011-2012 exposed the remains of a late seventeenth- to early eighteenth-century timber-framed house, below which lay evidence for earlier occupations from the Kirke and Calvert periods, and pre-colonial activities by European migratory fishermen and Native Beothuk. In each location there were specific research questions we hoped to answer: why was such a large (approximately 10m by 15m) area dug out of the hillside and levelled off behind the Mansion House in the 1620s and what ac-

Figure 2. White seed beads with 5 cent piece, for scale.

Figure 3. North 6 profile showing 500 years of occupation at Ferryland.

tivities took place here during the Calvert and Kirke periods?; what are the dimensions of the late seventeenth- to early eighteenth-century timber building, what social and economic role(s) did its residents play in Ferryland society and what is the nature and extent of the underlying occupations?

Starting mid-June, half of the crew began excavating the remains of the timber-framed house, exposing the preserved sills and floor joists, the latter still contained many upright nails indicating the placement and position of wooden floorboards (Figure 1). Not far from the large stone fireplace and brick hearth at the east end, we uncovered several iron objects including a fireplace poker, pot hook, and iron knife. Other areas inside the house revealed clay tobacco pipes and ceramic cooking vessels produced in the West Country of England, decorative tin-glazed earthenware, bottle glass, and wine glass fragments, a copper buckle, a small silver coin, and many small 'seed' beads (Figure 2) once adorning the clothing of someone who lived here. Of particular note was the large number of firearms-related artifacts scattered throughout the floor of the house, including many gunflints and thousands of small lead shot. Perhaps the residents of this house were avid hunters. It's equally plausible that the occupants imported quantities of flint and shot for sale and distribution to others living in Ferryland.

Upon completion of excavations, the house measured 32 feet long by 16 feet wide (9.75m x 4.87m) excluding a small flagstone-floored 'room' behind the fireplace. This is the most complete and substantial post-1696 dwelling found thus far at Ferryland. As suggested from previous archaeology reports, we believe it may be the home of prominent merchant-planters James and Mary (Kirke) Benger, who claimed title to the lands around the inner harbor not long after the deaths of George, David II and Phillip Kirke in 1696-97. Regardless of whether or not this is the former house of the Benger family, archaeology has revealed valuable information about the daily lives and activities of its former residents. The challenge now is to preserve the integrity of the building's main structural elements for interpretative purposes, while still allowing for continued investigations into earlier cultural strata.

This task was made obvious directly north of the Benger house, whereby after excavating and recording the associated deposits, earlier strata from several colonial and pre-colonial occupations were revealed (Figure 3). The Kirke period deposits are represented by a thick midden accumulated during the last quarter of the seventeenth century, possibly associated with the nearby house of Phillip Kirke (to the northeast) or a planter's house to the west described by Doug Nixon in 2000. Among the finds were significant quantities of North Devon sgraffito-decorated plates and bowls, one of which was inscribed with a date of (16)67 (Figure 4). This may be part of a commemorate plate, a special order ceramic vessel commissioned to celebrate an important life event such as a birth or marriage.

Deeper still were deposits of forge refuse originating from the nearby blacksmith shop built by George Calvert's men in 1622 and occupied until ca. 1650. Hundreds of pounds of slag as well as nails, scraps of iron, and copper and brass fragments were recovered. The lowermost cultural layers, at 175 cm below the surface, are represented by thin organic lenses separated by deposits of beach sand. The first of

Figure 4. North Devon sgraffito plate fragment dated (16)67.

these pre-colonial layers contained the remnants of a possible slipway, in the form of a series of horizontally laid logs, as well as fragments of European earthenware from Brittany and Portugal; below which is a black, greasy deposit containing a mix of European ceramics of the same provenance noted above, as well as lithic debitage produced by the Beothuk.

With clear evidence for 500 years of intensive occupation, this area will play an important role in promoting the Colony of Avalon's primary goal of public education. Its proximity to the present road affords visitors a close up view of the ongoing excavations, allowing for a fuller understanding of the nature of archaeological investigation and the necessity for careful recording techniques.

Figure 5a. (above) Straight pin, brass book clasp and blue seed bead;
Figure 5b. (below) large melon bead and mid seventeenth-century pipe bowl.

In conjunction with the work undertaken opposite the Colony Café, the other half of the field crew was excavating parts of the anthropomorphic terrace behind the Mansion House. Our initial efforts focused on exposing the remaining refuse deposits produced by those living and working in the kitchen during the Calvert and Kirke eras. Most of the midden was concentrated to the east of a cobblestone walkway that allowed easy access from the kitchen to the second floor living and dining chambers of the Mansion House hall. In addition to the usual ceramic, clay pipe, glass, and bone fragments was a large melon bead, a small blue 'seed' bead, a gold gilt glass bead, a few tin-plated straight pins, and a brass book clasp (Figure 5a-b). The book clasp was a particularly informative piece as it tells us that someone living in the immediate vicinity was in the possession of a book and was therefore literate – an uncommon skill amongst most seventeenth-century servants. One interpretation is that the (somewhat secluded and private) terraced area was frequented by the Calverts and later the Kirkes as much as it was by the servants who worked and lived in the adjacent kitchen. Alternatively, the kitchen may have served as a dwelling for a member(s) of the Kirke family during a later period; or perhaps, the servants of the Calvert's and Kirke's were better provided for and/or educated than most.

At the northern extent of the terrace excavations, the crew uncovered a wood-lined root cellar 7 feet square by 5 feet deep (2.2m x 2.2m x 1.5m). This late eighteenth- to early nineteenth-century feature had been rapidly filled as evidenced by the large quantity of angular rocks with little surrounding clay matrix. The root cellar may be contemporaneous with the reuse and modification of the Calvert era kitchen, as discussed in the 2011 and 2012 field reports (Gaulton et al. 2012; Gaulton and Tuck 2013). In places, the cellar

Figure 6. East 59 profile showing the early builder's rubble associated with the construction of the Mansion House and the overlying fill layer deposited to level the land.

Figure 7. A milk pan fragment, case bottle glass, clay tobacco pipes and tin-glazed lobed dish fragments found during the terrace excavations

truncated portions of a 1.5m thick layer of re-deposited clay and rock which overlay a 30-45cm thick construction layer consisting of chipped slate and roof slate fragments. The field crew further exposed the early construction layer to the south, where it terminated against a nearly vertical 1.8m cut into the subsoil (Figure 6). To the north, the construction debris (and the 1.5m deep overlying fill layer) continues for 3.6m (12 feet) until it reaches the lowest courses of the Mansion House hall.

We propose that the large cut into the subsoil was created while digging and preparing ground for the construction of the Mansion House in approximately ca. 1625 (Tuck and Gaulton 2013). The 12 foot wide space behind the hall of the Mansion House, likely running along the entire 36 foot length of the building, would have allowed for the erection of scaffolding to build this two story stone structure and also served as a work area for masons, slaters, carpenters, and other tradesmen. The remains of intensive stone-working activities are evident by the thick layer of chipped slate and roof slate fragments. Once the building was finished, the work space was quickly filled in with 1.5m of re-deposited clay so as to bring the area behind the hall up to the height of the nearby kitchen, thereby providing ready access between buildings. Where did the large amount of earth necessary to complete this filling episode come from? The hillside directly to the south, finally explaining part of the reason why the large 10m by 15m area behind the hall of the Mansion House and east of the kitchen was dug out.

The final area tested on the terrace was 10 metres east of the root cellar, where evidence for a mid to late seventeenth-century refuse deposit was recorded the previous year. Three excavation units were opened with hopes of learning more about the source and nature of the deposit. Perhaps these artifacts originate from a structure up on the terrace, or were dumped here from one of the nearby structures below (and to the north) such as the 'Kirke house' or associated tavern (Gaulton 2006). Some of the recovered fragments such as milk pans and tin-glazed lobed dishes are suggestive of a domestic occupation, whereas others, like clay pipes and case bottle glass, are ubiquitous on seventeenth-century sites (Figure 7). Interestingly, there were two coins found in the three excavated units and a third recovered in an excavation unit in 2012. The first was an Elizabethan silver sixpence dated 1563 and the two others were copper farthings. Small denomination coins are not uncommon among tavern assemblages, as are clay pipes and bottle glass; however, the lobed dish fragments are identical to those recorded at the Kirke house. For now, the available evidence seems to suggest that this refuse originated from one of the nearby buildings to the north but further investigation is needed to confirm or refute this hypothesis.

In 2014, we hope to return to these two very productive areas: first, to expand excavations up on the terrace and; second, to explore the extent of the earlier occupations below the Benger House.

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Further Investigations at Sunnyside 1 (ClAl-05)

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Figure 1. Exposed chimney collapse (Feature 1), looking west. Feature 2 (possible root cellar) is partially visible in the background.

Back in 2010, our brief field season at Sunnyside 1 (ClAl-05) was productive and informative; however we were left with just as many questions as answers. With the help of the Provincial Archaeology Office, we returned in the fall of 2013 in hopes of better understanding this seventeenth-century occupation. The next phase of research had two specific goals. The first was to further expose the large wall rock/rubble feature (Feature 1) first tested in 2010 so as to determine if it is a chimney collapse and fireplace, and if yes, what is its size and orientation. Positive proof of a fireplace and its placement in relation to the surrounding landscape would be an important step in delineating the remaining architectural remains. The second goal was to expand excavations on the associated midden southeast of Feature 1 to ascertain more about the nature and duration of occupation, and the possible cultural affiliation (French or English) of the European descendants who once dwelled here.

From September 30th to October 4th, the authors and several volunteers (mostly MUN archaeology graduate students and professional staff) attempted to achieve these goals. As demonstrated below, the 2013 field season although very brief was successful in many ways. The results of this ongoing research will provide the impetus for a larger, multi-year archaeological investigation into the origins and development

Figure 2. Partially excavated fireplace and hearth, looking north.

of European transhumance and winter housing in Newfoundland and Labrador.

After removing 3½ years of overgrowth from the site, locating our datum points and re-establishing and extending our grid, half the crew began exposing Feature 1 while the remainder started excavation on a 1x5m E-W trench in the midden area perpendicular to the N-S trench excavated back in 2010. Feature 1 was exposed to the north, south and east but the western extent was not fully explored due to its proximity to Feature 2 – an earth-walled 'cellar' adjacent to and running west of Feature 1. Once this clearing operation was completed and the extent of the chimney collapse recorded (Figure 1), we began removing rocks from the uppermost part of the feature in an effort to locate the fireplace. Many of the rocks used in the construction were red sandstone/siltstone with one or more square sides, likely acquired from several nearby outcrops exposed along the shore's edge (See King 1980). A full day of rock removal was rewarded with encouraging evidence for the outline of a fireplace. Excavation proceeded in this area for the remainder of the week and by the last day of fieldwork, the remains of a fireplace and hearth area were partially exposed (Figure 2).

A rough estimate for the fireplace/hearth opening is 7ft (2.1m) wide. If the sides (or arms) of the stone fireplace are 1½ - 2½ft wide then the width of this stone feature should be in the vicinity of 10 - 12ft (3-3.6m). Further investigation is needed to uncover the remainder of the fireplace so as to determine its full length and width. What we can say at present is that it opens up to the south and we believe it encompasses the entire north end of the building. It is therefore reasonable to suggest that the house was oriented north-south along its long axis and the main entrance situated on the east side where the majority of domestic refuse was deposited.

Figure 3. Relief-moulded, Jonah/Raleigh type clay pipe.

The hearth area inside the fireplace contained a black, greasy matrix of charcoal and artifacts upwards of 15cm thick at the back of the hearth and tapering out to

Figure 4. Root Cellar in North Side, Twillingate. This cellar was built by Wilfred Nell c. 1888 and currently owned by Hayward Dove. Photograph taken in 2008 by Otto Sansome. Source: Memorial University Digital Archives Collection, Intangible Cultural Heritage Collection (http://collections.mun.ca/cdm4/item_viewer.php?CISOROOT=/ich_nature&CISOPTR=873&CISOBOX=1&REC=19Otto)

5cm thick at the front. As expected, there were many seventeenth-century objects in this deposit. Iron nails, flint flakes and clay pipe fragments were the most numerous but there were also significant quantities of small lead shot and bits of calcined bone, some of which are unidentified mammal and avian species. The pipe bowls in the hearth re-confirmed the occupation date of 1650-80 and the presence of several decorated Jonah/Raleigh type pipes demonstrate that the former residents had a variety of pipes from which to smoke (Figure 3). Some of the iron artifacts found in the hearth were in an excellent state of preservation owing to repeated heat exposure. This allowed for the identification of small metal objects such as tacks once fastened to chests and other such furniture. It is also worth mentioning that all cultural strata (both in the hearth and nearby midden) were wet screened using a ¼ inch mesh, allowing for much greater recovery. Several soil samples were collected from the hearth for further examination using finer sieves located in the Department of Archaeology at Memorial University.

A recent tree fall at the western end of Feature 2 also allowed for a preliminary investigation and interpretation of this associated structure. An exploratory trench was dug N-S across where the upturned roots had exposed the rear wall and, to a lesser degree, a narrow section of the floor to this cellar-like feature. This investigation exposed a dark brown organic linear depression with defined corners at the north and south ends. The organic deposit measured 1.15m (almost 4ft) long, about 6cm deep and ended sharply where the earthen walls began to rise upwards to a height of 75cm. The deposit continues to the east into the unexcavated portion of the feature. Tentatively, the dark organic deposit has been interpreted as the remains of a wooden floor.

An interior width of approximately 4 feet along its short axis is reasonable considering that its length appears to be upwards of twice that dimension. Although no other structural remains or iron nails were found in the exploratory trench, we can tentatively suggest that Feature 2 was built by mounding sods, rocks and loose soils against low wooden walls. As there was not much of a discernable organic overburden inside this doughnut-shaped feature, it probably had a wooden roof, perhaps even covered in snow. Earthen cellars, known in Newfoundland as "root cellars" were ubiquitous in rural areas and in some com-

Figure 5. Heart-shaped padlock found in the midden.

munities are still used to store vegetables and other perishables in a dark and cool environment. Often times the cellars were created by digging into the side of a hill, or even a slight rise in the forest floor. A wooden frame, sheathed on one side and roofed over, would be constructed into the resulting depression and then soils and sods banked over the entire structure. Subterranean cellars effectively keep the winter food supply from freezing. For illustrative purposes, see Figure 4 for a modern photograph of a nineteenth-century root cellar still in use in Twillingate, Newfoundland.

The entrance way into Feature 2 was intentionally positioned at the west side of the massive fireplace (Feature 1) which would have provided at least some radiant heat to help keep provisions chilled but unfrozen. If our interpretation is correct, this would be the earliest root cellar recorded in the province!

In conjunction with the work undertaken at Features 1 and 2, other crew members spent the week excavating the 1x5m E-W trench. The wet, boggy conditions encountered at the eastern end, combined with the large number of artifacts, made for slow digging. Several iron objects were uncovered including a boat pintle, a partial iron heel tap and a heart-shaped padlock (Figure 5). The base of a tin-glazed bowl or porringer (Figure 6), as well as fragments of a previously recorded Portuguese redware storage vessel and glass case bottle was also found. Overall, the artifact assemblage remained much the same as that recovered in 2010 – lots of iron nails, clay pipe bowl and stem fragments, flint flakes, crudely-worked gunflints and tinder flints, but very little in the way of ceramics or glass. The large quantities of ceramic and glass storage vessels found on seventeenth-century fishery sites on the outer coasts of the Avalon Peninsula are simply not present at Sunnyside 1.

The dearth of evidence for certain artifact types may reflect the nature of occupation. If this is a winter residence, as proposed in earlier reports and presentations, then the archaeological record should manifest the different subsistence practices, daily activities, and perceived needs of these people during the

Figure 6. Base of a tin-glazed bowl or porringer found in the midden.

winter months (Mills and Gaulton 2010, Gaulton and Mills 2011, Gaulton 2011, Mills 2013a-b). The hectic spring/summer seasons during the cod fishery necessitated large quantities of imported provisions and beverages both for Newfoundland residents and the large influx of migratory fishermen who frequented the same locations. Come fall, some of the resident planters would move inland to seek shelter and to hunt, trap, and cut wood. This seasonal movement (by land or by sea) required people to transport only that which was deemed necessary, while the rest of their possessions were kept at the primary summer residence. With access to wild game and more time to hunt and trap, it seems that clay pipes and tobacco, flint and ammunition were transported in significant quantities to these winter quarters; whereas large numbers of ceramic vessels filled with butter, lard and other preserves were not. Recognizing this divergence in the quantity and variety of artifact assemblages between summer and winter residences may be the first step in identifying the more isolated and/or ephemeral winter occupations. However, it is important to note that these results are preliminary and based on one partially excavated site.

As of the writing of this report, the artifacts from the 2013 excavations have been cleaned and catalogued and the iron objects are in the early stages of conservation. Several of the soil samples from the hearth area were analyzed by MUN students in Dr. Michael Deal's ethnobotany course over the fall semester, for which we are awaiting the results. All of the artifacts will undergo a thorough analysis in the coming months, after which we will have more to report. Although much more excavation is needed, and the results are preliminary, it appears that Sunnyside 1 has the potential to enlighten us about the origins of a lesser known part of Newfoundland culture but one which was commonplace in rural communities until the early twentieth century (Smith 1987a-b).

Steve and I would like to thank the following organizations and individuals who helped make the 2013 field season possible. First and foremost, the Provincial Archaeology Office, Department of Tourism, Culture and Recreation, deserve thanks for their continued financial and logistical support. The Town of Sunnyside, Mayor Robert Snook, council members, and local residents Susan and Vikas Khaladkar have offered assistance on many occasions for which we are grateful. Our 2013 crew, consisting of Art Clausnitzer, David Craig, Catherine Hawkins, Sarah Ingram, Adrian Morrison, Donna Teasdale, Maria Lear, Pamela Rideout and Jessica Wheller provided the strong backs, sharp eyes, and eager minds necessary to facilitate our goals. We are indebted to Dr. Michael Deal and graduate student Adrian Morrison for their willingness to examine the Sunnyside 1 soil samples. Thank you to Sunnyside resident Cordell Gilbert for allowing us to use his driveway, making our trek to the site shorter and easier. Last but certainly not least, a big thank you and acknowledgment to Dr. James A. Tuck who first recognized that Sunnyside 1 was likely the site of a winter house.

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Excavations at the Cupids Cove Plantation Provincial Historic Site (CjAh-13), 2013

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Baccalieu Trail Heritage Corporation

In 2013 the Cupids Cove Plantation Provincial Historic Site opened to visitors on May 18th and remained open until October 11th. A certain amount of digging was conducted around the outer defensive wall in the first half of July to prepare that area for stabilization and landscaping. However, our main excavations for the season began on July 22nd and continued until October 25th. During this period our work focused on two areas (Area D and Area E) both of which first had been investigated in 2012.

West of Terrace (Area E)

The Spracklin House is a 19th century building located on the low ground at the entrance to the site. Survey work in 2012 identified a low mound, previously obscured by brush, on the low ground about 20m south of the Spracklin House (Area E). In 2012 some of this brush was cleared away and a 1m x1m unit was opened on the mound and later expanded south and east into a 2m x 2m unit (Operation 113). Although Operation 113 was not completely excavated, it revealed that at least a portion of the mound was composed of rubble in a soil matrix containing both 17th and 19th century artifacts. In 2013 more of the brush was cleared allowing us to have a better look. The excavation was also extended east from Operation 113 for 2m (Operation 117) and north for 1m (Operation 118) creating a total excavation unit measuring 4m from east to west and 3m from north to south (Figure 1).

Figure 1. Operations 113, 117 & 118 on the low mound in Area E. Looking east.

When the brush was removed, we could see that the mound covered a larger area than we originally had believed. In 2012 we estimated that the mound extended west from the bank leading up to the main part of the site for about 6m and north from the bank for about 11m (Gilbert 2013:82-83). On closer examination, we could see that the mound actually extends west for about 12m. Over most of its area, it runs north from the bank for about 10m but, near its western edge, it extends west beyond the bank and south for about 14m (Figure 2). The mound rises, on

average, about 40cm above the low ground on which it stands.

Clearing the brush also revealed several features. A stone feature, possibly the remains of a wall, runs from south to north near the bank in the south-east corner of the mound. Fifteen feet (4.57m) west of, and running parallel to, this feature is a ridge that extends north from the bank for about 3m. Between these two features a section of bank has been dug away creating a hollow about 3m deep and 4.57m wide from east to west.

Based on our excavations in 2012, we speculated that this mound might be a stone surface laid down over rubble and topped off with recent fill. However, further excavations have caused us to alter this interpretation somewhat. Although some of the stones appear to have been intentionally placed, much of this surface seems to consist of rubble composed of a mixture of building and field stones. Several distinct layers can be distinguished overlaying the rubble. Immediately above the rubble is a silt deposit, averaging about 15cm thick, containing 17th and 19th century artifacts, that appears to have accumulated over the course of several centuries. Above this is a roughly 10cm thick deposit of road gravel which is probably no more than sixty or seventy years old. The first attempt to widen and raise the road that runs through Cupids and past the Spracklin House seems to have taken place in the 1940s and it is unlikely that residents of the town would have had access to this type of fill prior to that time. The gravel is quite near the surface over much of the excavation but dips down to about 25cm below surface in the southwest where it is overlaid by a deposit of what appears to be garden humus.

In 2012 we dug down into the rubble in the northwest quadrant of Operation 113 and found a combination of 17th and 19th century artifacts. The presence of 19th century artifacts seemed to indicate that the rubble had been deposited during that period but things were not quite as they first appeared. When we expanded the excavation in 2013, we discovered that the area we had dug into the previous year was located inside a pit that had been dug into the mound. While this pit appears to have been dug and filled in during the 19th century, the mound itself may well be older. In 2013 we concentrated our efforts on taking Operations 113, 117 and 118 down to the top of the rubble deposit and we have not yet dug into the rubble elsewhere on the mound. However, the soil matrix around the rubble appears to contain exclusively 17th century artifacts and it may be that the rubble is of 17th century origin.

Obviously, more work will be required before we can determine the exact nature of the low mound in Area E. It seems clear that it is more than just a rubble deposit and, as we speculated in 2012, it probably was created, at least in part, to raise this area above the low ground that surrounds it. Even today the low ground in Area E is prone to flooding and it must have been much more so prior to the infilling that took place in the 19th and 20th centuries. Over the past hundred or so years, much labour has been expended in an attempt to control the waters of the West Brook that originally flowed out of Cupids Pond, to the west of the site, and into the Salt Water Pond that lies between the site and Cupids Harbour. In the 20th century its course was diverted so that most of it now flows into the Horse Brook roughly 1/2 km to the west. Today just a small underground steam drains into the Salt Water Pond where the West Brook once flowed past the plantation. However, it may be that the mound originally was located on or very near the river mouth formed where the West Brook emptied into the pond. At some point it appears that a building was erected on the mound. The building stone scattered amongst the rubble, the stone feature and ridge extending north from the bank, and the hollow dug into the bank between these features all suggest the presence of a structure. Further excavations will be conducted on the mound in 2014.

Structure 9 (Area D)

Prior to 2010 an old clapboard garage stood on the low ground at the edge of the bank just east of the Spracklin House. When the garage was torn down in 2010, we discovered a number of flat stones underneath it that appeared to have been intentionally placed there. The stones were located within an indentation that seemed to have been dug into the bank. A 5m long ridge ran from west to east along the southern edge of this indentation and was adjoined, at its eastern end, by another ridge which extended north from it at a right angle along the eastern edge of the indentation for 7m (Gilbert 2013:80). When we probed these ridges with a chaining pin, they appeared to consist of solid rock beneath about 10cm of silt. In 2012 we dug test pits south and east of these ridges and uncovered

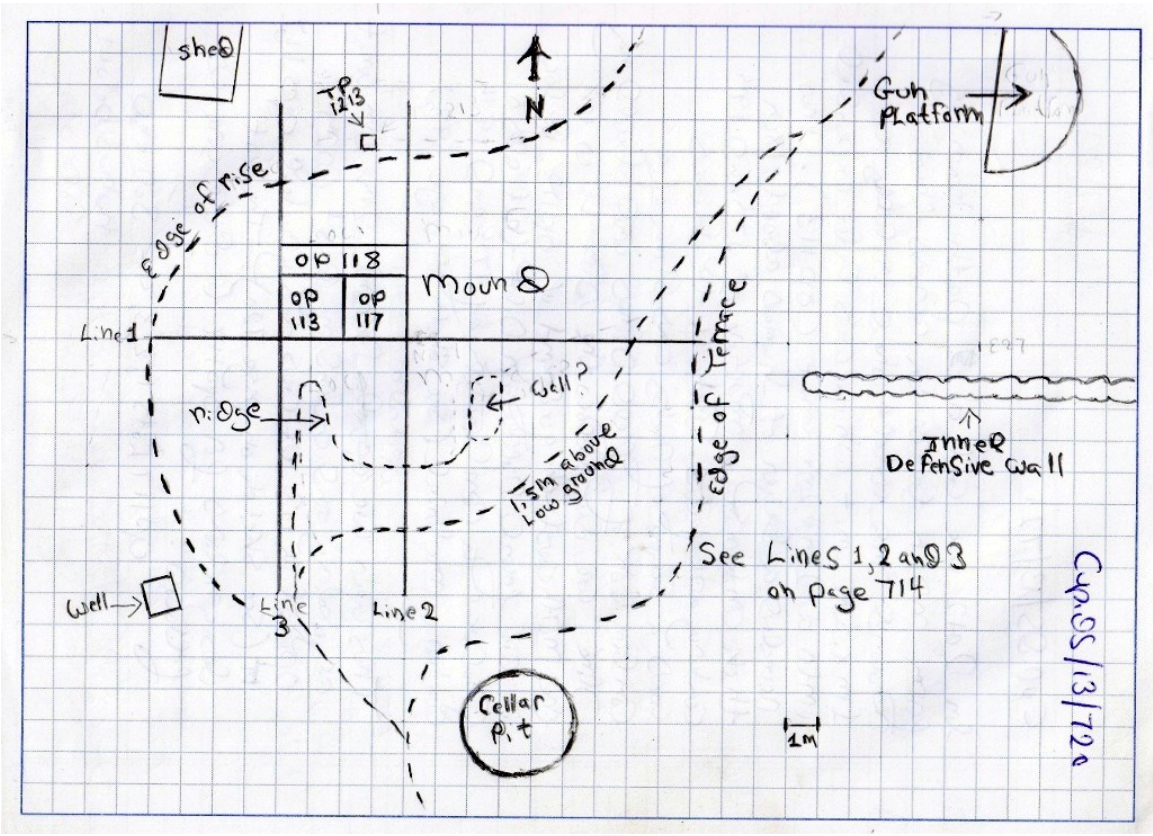

Figure 2. Field drawing showing the location of Operations 113 ,117 & 118.

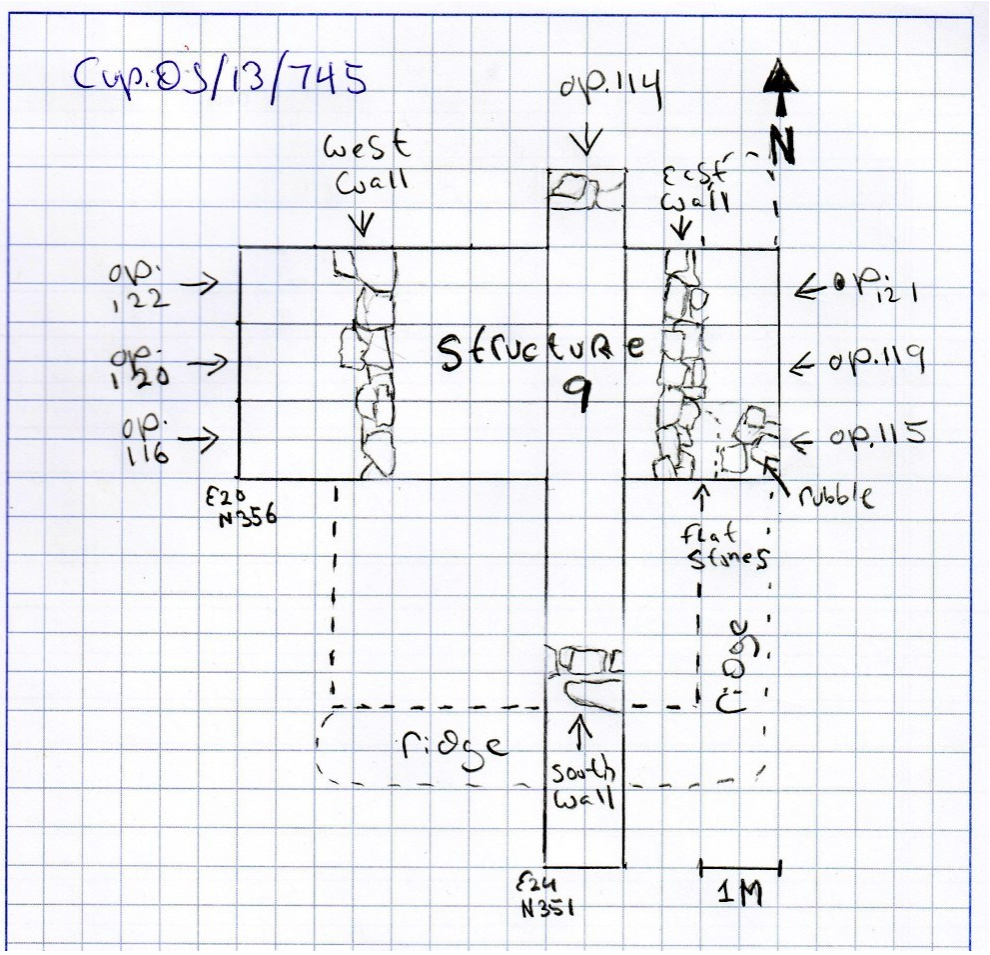

Figure 3. Field drawing showing the outline of Structure 9.

Figure 4. Structure 9 looking northeast at the end of the 2013 season.

17th century artifacts. It seemed that some sort of stone structure was located in this area and that it might be of 17th century origin. Given that they appeared to be composed mostly of stone, we speculated that the ridges might be the remains of the southern and eastern walls of this structure (Structure 9).

In 2013 we returned to Area D to have a closer look. First a 1m wide trench was established running from south to north across the east-west ridge and into the area where the flat stones were located. Initially this trench ran north for 4m but it was soon extended north for 9m, terminating about 1m south of the fence that runs from east to west between the site and the road. To our surprise, the east-west ridge did not mark the location of a wall. Instead it consisted of rubble that appears to have been deposited in the 17th century. However, the base of a stone wall was discovered immediately north of the ridge and running parallel to it. Stones, many of them intentionally placed, extend north from this wall for 19ft (5.78m). Beyond this, at the north end of the trench, is what appears to be the base of another stone wall also running from east to west.

Having located the south wall of Structure 9, exposed a 1m wide section of the interior, and located what may be the north wall, we extended the excavation east and west in an attempt to find the eastern and western sides of the building. A 1m wide trench (Operation 115) was established extending east from Operation 114 for 2m and cutting across the north-south ridge. Another 1m wide trench was established directly opposite Operation 115 running west from Operation 114 for 4m (Operation 116). These revealed sections of two stone walls, 11ft 5 inches (3.48m) apart, running along the east and west sides of Structure 9. The excavations in this area were later extended north by another 2m (Operations 119, 120, 121 & 122) exposing 3m long sections of both the east and west walls and more of the stone surface within the structure (Figures 3&4).

Operations 116, 120 & 122 extended west beyond the west wall of Structure 9 for about 1.25m. Digging here revealed several layers of fill, in all about 40cm thick, deposited against the outside of the wall. These deposits were the same as those found in test units dug around the Spracklin House in 2008 and 2012 (Gilbert 2013:81) and were clearly laid down in the 19th century, prior to the construction of the Spracklin House, in an attempt to raise the area above the high water mark. Given that Structure 9 was par-

Figure 5. 17th century artifacts in the rubble east of Structure 9.

tially buried by this fill, it must have been abandoned for some time prior to the construction of the Spracklin House. Unfortunately there was nothing in the deposits west of the wall to give us a better idea of when Structure 9 was built and occupied. While the fill layers did contain some 17th century artifacts, these were clearly secondary deposits dumped here from elsewhere on the site. Beneath the fill, at the base of the wall, there was only sterile grey clay that originally probably was submerged at high tide.

Excavations around the south and east walls of Structure 9 were more rewarding. The rubble that formed the east-west ridge just south of the south wall contained exclusively 17th century artifacts. Some of this rubble extended north over the remains of the south wall suggesting that the wall had either collapsed or been dismantled sometime in the 17th century. The area above and to the east of Structure 9's east wall was even richer in 17th century material (Figures 5&6). Immediately east of this wall the land begins to rise rapidly and 2m east of the wall it is 1.7m above the low ground on which Structure 9 is located. As mentioned above, we originally assumed that the indentation in the bank where Structure 9 stands had been dug out to accommodate the building. However, we were surprised to find that, rather than being natural, that portion of the bank we dug into was composed of rubble containing exclusively 17th century artifacts. Rather than the bank being dug out to accommodate Structure 9, it now appears that at least part of it was formed by rubble that accumulated outside and up against the south and east walls of the structure. This rubble also extended west over the remains of the east wall, leaving little doubt that the building had come down sometime in the 17th century.

Although we as yet do not know its exact purpose, it appears that Structure 9 originally was some sort of harbour-side facility, possibly a dock or wharf. Today Structure 9 lies 30m south of the Salt Water Pond on the south side of Cupids harbour but this is a result of infilling over the past two centuries. In the 17th century the structure would have been right on the water's edge. Even today, when the tide is unusually high, salt water sometimes flows in through the culverts and floods the area to the west of the structure. A 1.6m wide ridge runs from north to south on the high ground, about 8ft (2.4m) east of and parallel to Structure 9. It may be that this ridge marks the loca-

Figure 6. Early 17th century clay pipe bowl found in the rubble just east of Structure 9.

tion of another wall related to Structure 9. In 2014 we will extend the excavation east into the bank beyond Structure 9 and across this ridge.

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The Year of Slate: Archaeological Fieldwork at Kamestastin, spring 2013. Permit 13.03

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Introduction

With a thump the skis of the single engine turbo otter hit the snow and ice covered surface of Kamestastin as we arrive for another season of archaeological fieldwork and family country time. Across the ice surface where the plane touches down, we can make out the partly blown over tracks of many female caribou migrating north to their calving grounds and those of the following wolves. To the accompaniment of ptarmigan calling to each other in the surrounding hills we haul our gear off the ice and shovel away the hard packed snow blocking the cabin door. Not long after, the stove is roaring, the cabin warm and the first tea made. An unorthodox start to an archaeological field season but this is how most of the yearly research at Kamestastin and its neighbouring lakes has begun. This year "we" includes Snowden Piwas, Antonia Tshakapesh, their baby daughter Angel, Chelsee Arbour, and the family of Anthony Jenkinson and Madeleine Benuen. Archaeological research at Kamestastin began in 1999 when the Tshikapisk Foundation, allied with the Smithsonian Institution's Arctic Studies Center under the auspices of Innu Nation and with support from the Innu communities of Shetshatshit and Natuashish, started a long-term archaeological and cultural-heritage research initiative prior to the construction of the Kamestastin Center (Loring 2001). The Tshikapisk Foundation is a community based Innu non-profit or-

Figure 1. Large slate ulu uncovered during excavation at Tshetshuk (GlCs-25), spring 2013.

ganization that was created as a vehicle through which Innu values, history, skills and traditions could be asserted in response to drastically declining Innu social health following permanent settlement in coastal areas of the Québec/Labrador Peninsula (Jenkinson and Loring 2012). Under the Tshikapisk mandate, which seeks to provide a broad array of opportunities for Innu (especially young people) to experience and celebrate Innu cultural values through experiential education initiatives and access to "the country", an archaeology program at Kamestastin was conceived as a means of engaging Innu in the production and interpretation of their history and heritage, and to provide both young people and community representatives with practical experiences of and knowledge about sites left by Innu ancestors. Ongoing archaeological investigations in the Kamestastin region prior to 2012 had produced evidence of *Tshiash Innu* [1] (Maritime Archaic) occupation spanning a period of 2500 years – 5790 +/- 40 B.P. - 3230 +/- 40 B.P (Loring 2008, 2009; Loring and Jenkinson 2009; Loring, Jenkinson and Pastiwet 2009; Jenkinson and Loring 2012; Arbour et al. 2013).

During the spring 2012 field season, two sites were extensively excavated – Shak Selma (GlCs-22) and Tshetshuk (GlCs-25). Excavation at the former revealed a tool assemblage made entirely of quartz, debitage of smoky crystal quartz, white quartz, and an opaque dark grey chert. Ramah chert was absent. The assemblage and lithic raw material suggest that it may represent evidence of the earliest occupation of the interior (circa.7000 B.P.); however this is not yet clearly demonstrable. Heavily quartz dominated assemblages are common throughout the Northeast and often times reference the early occupation phases of people in the Québec/Labrador Peninsula (Bolian 1980; Robinson *et al.* 1992; Robinson 2001; Plourde 2000; Chrétien 2003; Samson 1978). Detailed analysis of such collections has the potential to shed light on the character of tool and resource use of these early occupants of Nitassinan. It may also illuminate the relationship of the more far flung, related populations to Innu ancestral groups occupying and hunting over the less well known areas of Nitassinan interior barren lands (Holly 2013). Excavation at Tshetshuk (GlCs-25) revealed a small habitation with a hearth and two main activity areas, and in association a number of formal tools fashioned from a variety of different raw materials (Arbour *et al.* 2013). New AMS dates from this site were recently obtained and will be discussed later on in this paper. The spring 2012 season also laid the foundation for collaborative research with Innu families who frequent the Kamestastin region – work which continued during community visits in the fall of 2012. The visits to Natuashish and Shetshatshit occurred in November of that year, during which a number of public talks took place describing and inviting feedback on research activities at Kamestastin during the previous spring. Specifically, daily open community information sessions were held for anyone interested, an elder's day was organized and a number of classes at secondary schools in both communities were visited with the express purpose of youth engagement. At the same time, many extensive discussions took place with representatives of the Innu Nation and the Tshikapisk Foundation on the objectives and future directions of this project.

Our plans for the 2013 field season were by necessity loosely defined, as one never knows what the snow and ice cover will be upon arrival nor how quickly travelling conditions will deteriorate. In the course of the coming weeks, we would be joined at Kamestastin by many Mushuau Innu families arriving from Natuashish for spring goose hunting in the tundra lakes between Kamestastin, Mistanipi and Napeu Kainiut. Spring in this area allows swift and easy skidoo travel over the ice and, depending on the persistence of snow off the ice, overland.

Except for isolated banks, the snow cover on land mostly vanishes well before the ice on the lakes becomes unfit for travel. Even after the *uantauatshiu* (the strip of open water along the shore) appears, the lake ice usually remains solid – providing easy access to the many ancestral Innu archaeological sites which lie around or close to the lake. For a while, ramps of snow built up over the winter are the go-ashore points.

[1] The term *Tshiash Innu* was first used by the Tshikapisk Foundation/Arctic Studies Center collaborative in order to avoid unnecessary confusion and disassociation during cultural-heritage programs at Kamestastin, and as a reference to the cultural connections between the earliest Amerindian peoples of Labrador/Québec and the present day Innu. We also believe that the traditional tripartite division of ancestral Innu cultures (Maritime Archaic-Intermediate Indians- Point Revenge) favored by many archaeologists, presents Innu history as a series of separate population extinctions ("disappearances") and successive new migrations, whereas we see population continuity, rapid cultural adaptation and change (McGhee and Tuck 1975; Tuck 1975; Madden 1976; Loring 1992; Pintal 1998). For archaeologists our *Tshiash Innu*, "old Innu from long, long ago", can be equated with the Maritime Archaic.

Figure 2. Anthony Jenkinson and Dr. Stephen Loring crossing the *uantauatshiu* in the spring of 2012.

Later, even these become waterlogged and unusable forcing us to cross the *uantauatshiu* in a canoe.

But before any of that and while conditions are good for inland travel with skidoo hauled kamutiks/ *utatnuna*, we must provide ourselves with sufficient firewood to last until June. If fall visits are planned, we also have to amass enough firewood for then as well. This avoids having to get wood by boat: in the windy fall and on a large lake with virtually no sheltered coves, collecting firewood can be an exercise fraught with peril. Once we have provisioned ourselves with fuel and food, the snow begins to gradually withdraw from the land. It will linger in the wooded areas but on open terraces and in the tundra it goes quickly. For the first three weeks of our time at Kamestastin, Chelsee stayed with Mushuau Innu families on the west side of the lake, meeting people, and over copious amounts of tea listening to stories, learning the proper way to engage with animals, and talking about community news, life in *nutshimit* (the interior or country) and signs of changing weather.

Once the snow cover melts, the exposed winter -frozen dark ground thaws quickly, particularly if the thin but insulating vegetation mat is first scraped away. As a general rule, this means that sites occupied during wintry cold weather months, often positioned in the lee of wooded slopes where drifting snow tends to accumulate, are freed of snow cover and frost later. Exposed westward facing areas which are more likely to have hosted summer occupations tend to become accessible earlier. Exact alignment of sites can sometime void these rules of thumb. For example site proximity to large snow banks accumulated over the winter may result in flooding as snowmelt drains onto and floods otherwise snow and frost free sites. The reverse was true for the two main sites tackled during Kamestastin fieldwork in the spring of 2013: Uitshitshemushish (GlCs-26) locus 3 being a sheltered winter or fall camp became accessible for excavation in late May while Tshetshuk (GlCs-25) became snow free

Figure 3. The Nui's cabin at sunset, west side of Kamestastin lake, spring 2013.

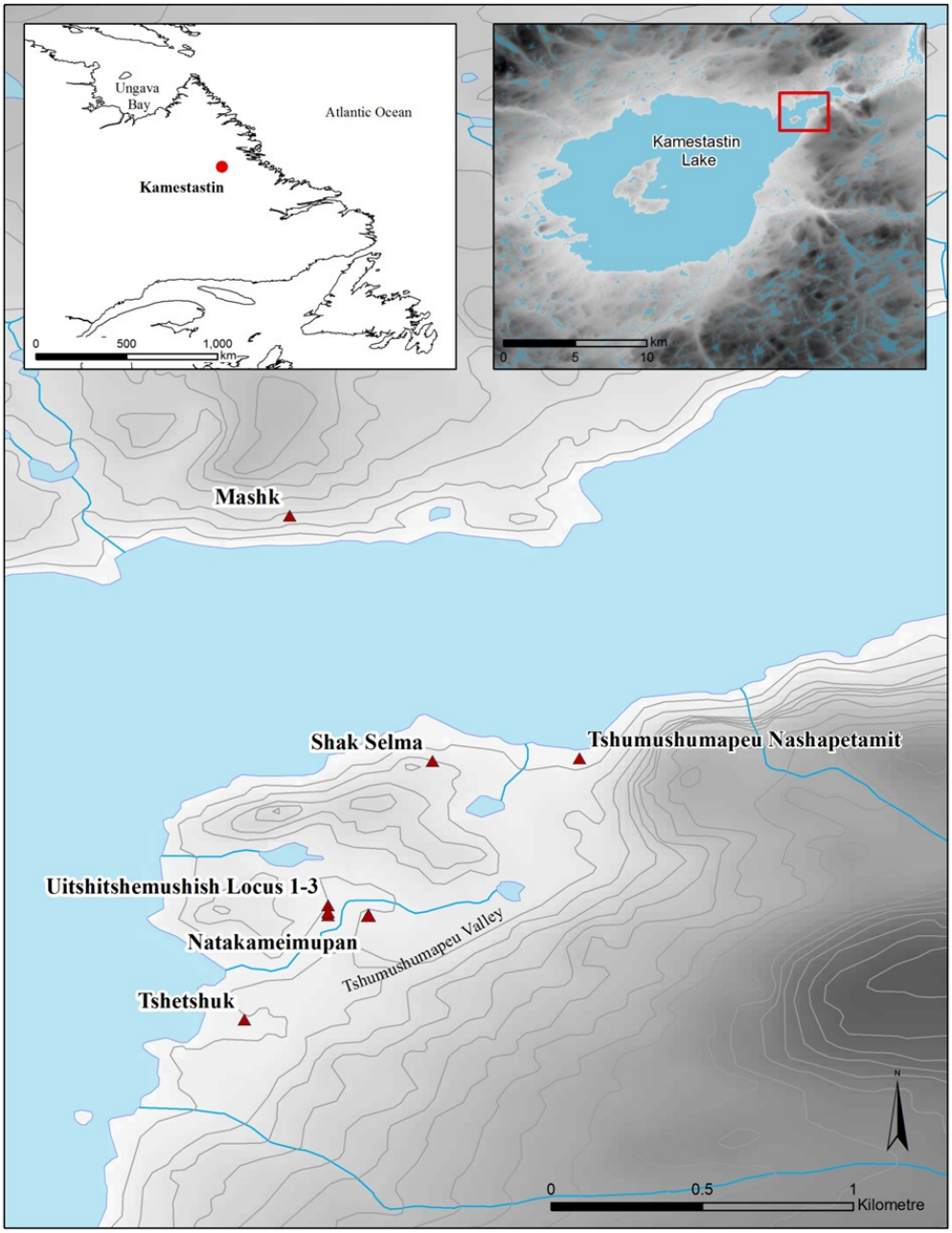


Figure 4. Distribution of sites mentioned in text.

much later (in the second week of June) despite being a likely warm weather occupation situated in a much more exposed location. The team also continued with the mapping project that was begun in 2012[2], and conducted an evaluation of the heavily eroded Mashk site (GlCs-17).

Point collection via Total Station

The Tshumushumapeu valley lies roughly 2.5 kilometers from the mouth of the Kamestastin River and is home to the largest number of early Archaic sites discovered thus far in the Kamestastin area. The small size of the field crew and the nature of fieldwork at Kamestastin – with constraints associated with snow fall, thaw and ice stability – necessitated a more long term, cumulative view of mapping objectives in this valley – specifically production of a detailed map of the area with the myriad small find-spots and activity areas at this important location fully plotted. With

[2] This mapping project focuses on detailed point collection in the Tshumushumapeu valley and the site concentrations therein (Arbour et al. 2013).

hard-earned knowledge of the challenges associated with mapping the Tshumushumapeu valley, the 2013 crew set out again this spring to collect data towards a baseline map of the area. The main mapping objective of 2013 was to map each known site and its surrounding area, while also working on the larger and longer term objective of on-going collection of topographic data for high resolution landscape mapping (the latter to be conducted whenever time and circumstances permitted). Both objectives were achieved, although as mentioned landscape mapping of the Tshumushumapeu Valley will likely take several seasons to complete. Making things more difficult was the unpredictability of the weather, as well as the uncharacteristic and unusually abrupt changes in the ice (likely associated with a milder than usual winter). This latter and somewhat unexpected factor obliged us to take a pragmatic approach to the landscape mapping which we now conceive of as the cumulative gathering of data over several seasons. The Tshumushumapeu mapping project and the major site excavations take place on the opposite side of the inlet to both the Tshikapisk camp and the airstrip which lies atop an esker. They are dependent on a varying but limited time budget when the land is mostly snow free but the ice and the inlet are still safe to cross. Trying to do all the landscape mapping at the same time wasn't a practical approach and could have jeopardized the excavation portion of the field season.

Uitshitshemushish – GlCs-26

Nestled amongst small hills of glacial till, this site is situated about a kilometer inland from the lake on a well-drained terrace beside a marsh. A small brook drains this marsh, passing by the site. Downstream the water discharges into Kamestastin not far from Tshetshuk (GlCs-25), the lakeside site at which investigations began in 2012. This particular spot is fairly sheltered from both wind and snow drifting off the main lake, with a near 360° vantage of the surrounding landscape despite being located close to the valley floor. The main caribou migration route runs along the mountains to the east, fish resources are in close proximity downstream and the wooded area to the southeast would be home to porcupine, spruce grouse, snowshoe hare and fox during most of the year. Atop the hills on whose flanks this forest grows, arctic hare would, then as now, have been present. Identified during the first archaeological surveys of

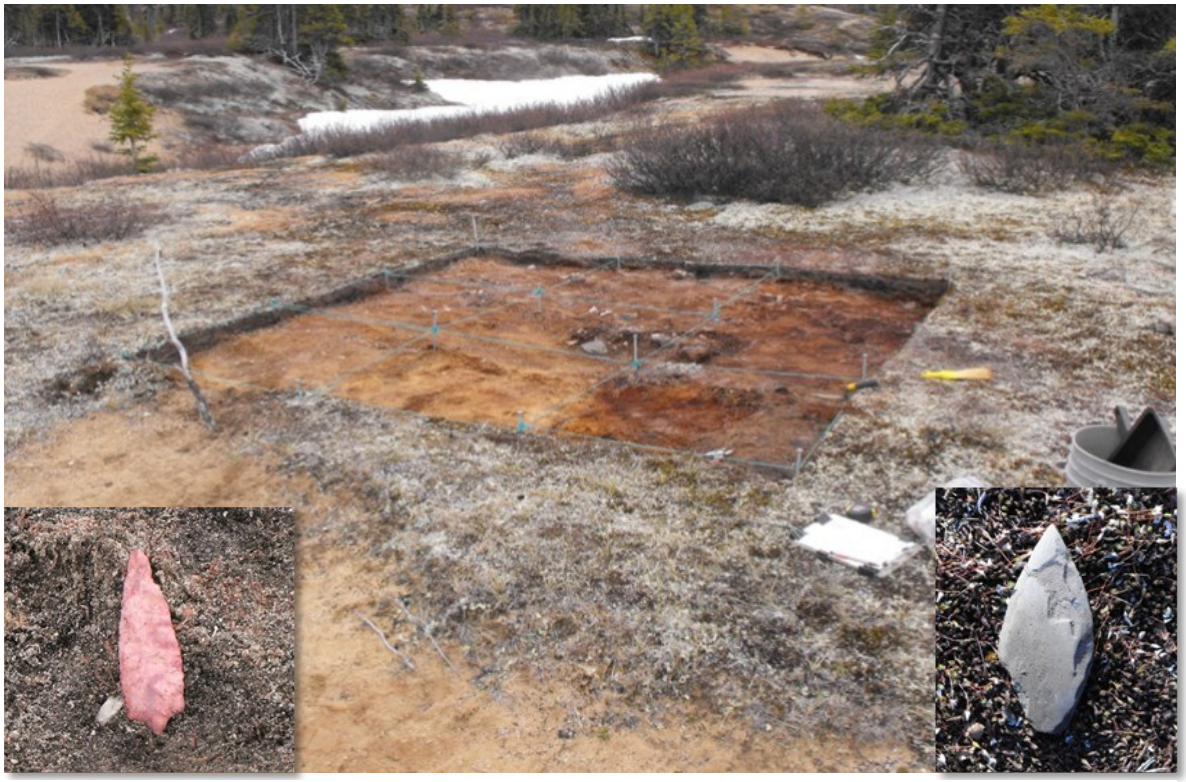


Figure 5. Uitshitshemushish locus 1, excavated in 2010. View to the south. Left insert: nipple based projectile point made of salmon coloured chert. Right insert: ground slate point.

Kamestastin, Uitshitshemushish initially presented as an abundant quartz scatter mixed with some flakes of Ramah chert and grey green slate. This debitage was also strewn over an area of sandy erosion near the bank edge which fronted the terrace. Tests of the bank below the quartz scatter demonstrated that it hosted a slumped component but one which had somehow maintained its integrity beneath a thick vegetation and root mat. This we recorded as Uitshitshemushish Locus 2. An earlier excavation (Jenkinson 2011) tested a thinly vegetated area about 7 meters back of the quartz scatter. The 2nd meter square unit came down directly on a hearth packed with calcined bone and out of which a ground slate point protruded. The excavation of this area (Uitshitshemushish locus 1) eventually encompassed a 3m by 3m square and neatly described a roughly oval hearth surrounded by abundant quartz debitage in varying densities with Ramah chert present only in scant amounts. One unit produced a nipple based projectile point of salmon coloured chert lying amongst white quartz debris (Figure 5). A sample of wood charcoal from the hearth returned a date of 5590+/-40 radio carbon years B.P. (Beta 282311).

Caribou paths cut across the Uitshitshemushish terrace, and in most of these quartz and Ramah lay exposed. One such path revealed a quartz concentration about 3 meters from the south eastern corner of the 9 square meter excavation conducted in 2010. In the spring of 2013 it was decided to open some meter square units in this area (Uitshitshemushish Locus 3). In total, 13 1x1m units were opened, revealing another hearth feature - although one of a very different appearance to that in locus 1. Specifically, this hearth was composed of only two rocks between which the fire had been built – a fairly discrete feature in itself but identifiable as a fireplace by the presence of fairly sizable charcoal deposits. Abutting this hearth was a shallow pit full of organically enriched sand and abundant calcined bone fragments. This crushed bone material seems to have been originally deposited in a shallow pit after a depression had been scooped out alongside the hearth. Cryoturbation and root action of plants attracted by nutrients in this deposit are likely responsible for the spill over. This has left calcined bone scattered beyond the concentration in the shallow pit identified during excavation as the original point of deposition.

In association and slightly to the west of it were two slate ulus, both holed for the attachment of handles (Figure 6). In one of these a clean straight fracture had occurred - likely along the line of where the distal edge of the handle met the uncovered portion of the ulu blade. The blade portion was present but the part which would have been covered by the handle was missing. In the other example, the ulu was mostly complete and was made from a type of *banded* slate that has not previously been noted in Kamestastin assemblages. Despite the differences in raw material, both examples bear striking similarities to the ovate holed ulus found at the Koliktalik 1 and Adlatok 1 sites which have been associated with the Naksak complex of northern coastal Labrador (Fitzhugh 1978). The former site also produced dates within the 6000 B.P. range (ibid), which could suggest that locus 3 may be roughly contemporaneous to locus 1 – or at least so to within a few hundred years. Other ground slate fragments lay close by and almost all of them refitted to produce a slate assemblage of 8 pieces. One of the resulting pieces found had been re-

Figure 6. Holed ovate slate ulus *in situ* uncovered during the 2013 excavation at Uitshitshemushish.

ground to produce a small tool with an oblique working edge (feature f, Figure 7), of which an almost identical example was unearthed elsewhere within the locus 3 excavation (feature g, Figure 7). Interestingly, rather than being of arbitrary configuration and dimensions it was clear that the desired shape and size of one example of this latter slate tool had been carefully reproduced through the scoring, controlled breakage and subsequent grinding of a piece of a fractured slate ulu. This was evident both because the ulu fragments from which it had been extracted were found nearby and because an almost identically shaped and fashioned "twin" also features in the locus 3 assemblage. Finally once its constituent pieces had been refitted, the slate ulu exhibited another noteworthy feature: roughly beneath where a postulated wooden, bone or antler handle may have been attached a scored mark had been cut into the slate surface nearly parallel with the blade. This may have served the function of better securing the handle, perhaps by the insertion of a sliver of material to lock the handle in place against an opposite and equal score in the inside of the handle. Additionally, recycled material from this piece had been used to produce the smaller slate tool. The presence of a single red slate celt at locus 3 also suggests links to Tshetshuk (GlCs-25), where previous excavations from 2012 produced a strikingly similar piece (Figure 8). Recent radiocarbon dates for that site, as well as the overall character of the assemblage, place it within the timeframe of the Naksak complex – to be discussed further below. The assemblage at locus 3 and the links to other known sites at Kamestastin of the same character suggest that it may fall within the 6000 B.P. range, although the slate ulus found at both sites show marked differences in raw material and appearance.

Figure 7. Artifact assemblage from Uitshitshemushish locus 3. Top from left to right: a) red slate celt, b) banded slate holed ovate ulu, c)half of ovate holded ulu in grey green slate, d) ground grey slate fragment, e) ground grey slate fragment, f) ground grey slate fragment with oblique working edge, g) ground grey slate fragment with oblique working edge, h) potential holed ovate grey green ulu fragment re-worked, part of the hole still present, i)ground beige slate tool fragment, j) quartz biface fragment, k) quartz biface fragment, l) quartz endscraper fragment, m) medial section of quartz biface and n) distal portion of small Ramah chert biface.

Charcoal was collected from the hearth at locus 3 this season (2013) and AMS dates are currently pending. The hearth and surrounding area also contained a fair quantity of calcined bone, as well as a significant concentration of small (< 2cm) fragments of quartz. The entire hearth contents were collected and brought back to MUN where in the coming months Chelsee will process them via flotation. Hopefully the AMS dates will help to elucidate possible ties linking locus 3 to locus 1 and Tshetshuk.

Despite the fascinating quantity of slate ulus and ulu fragments revealed at this site, the complete assemblage contains little slate debris in comparison with the overwhelming dominance of quartz – much of the latter shows clear signs of reduction sequencing. Ramah chert debitage is present in small quantities but there are very few indications of Ramah tool production present in the units opened. It seems likely

Figure 8. Red slate celts discovered at Kamestastin. Right side: uncovered in 2012 at Tshetshuk (GlCs-25). Left side: found at Uitshitshemushish locus 3 in 2013.

that this site was a camping place where animals were hunted and processed by a relatively small group of people. The lack of plentiful slate and Ramah debitage suggests that tools were manufactured elsewhere but sharpened on site as necessary, while the numerous quartz cores and abundant quartz debitage point to local quarrying of this material. Considering its sheltered location, Uitshitshemushish may have been a cold season camp that offered a respite from harsh winds and weather.

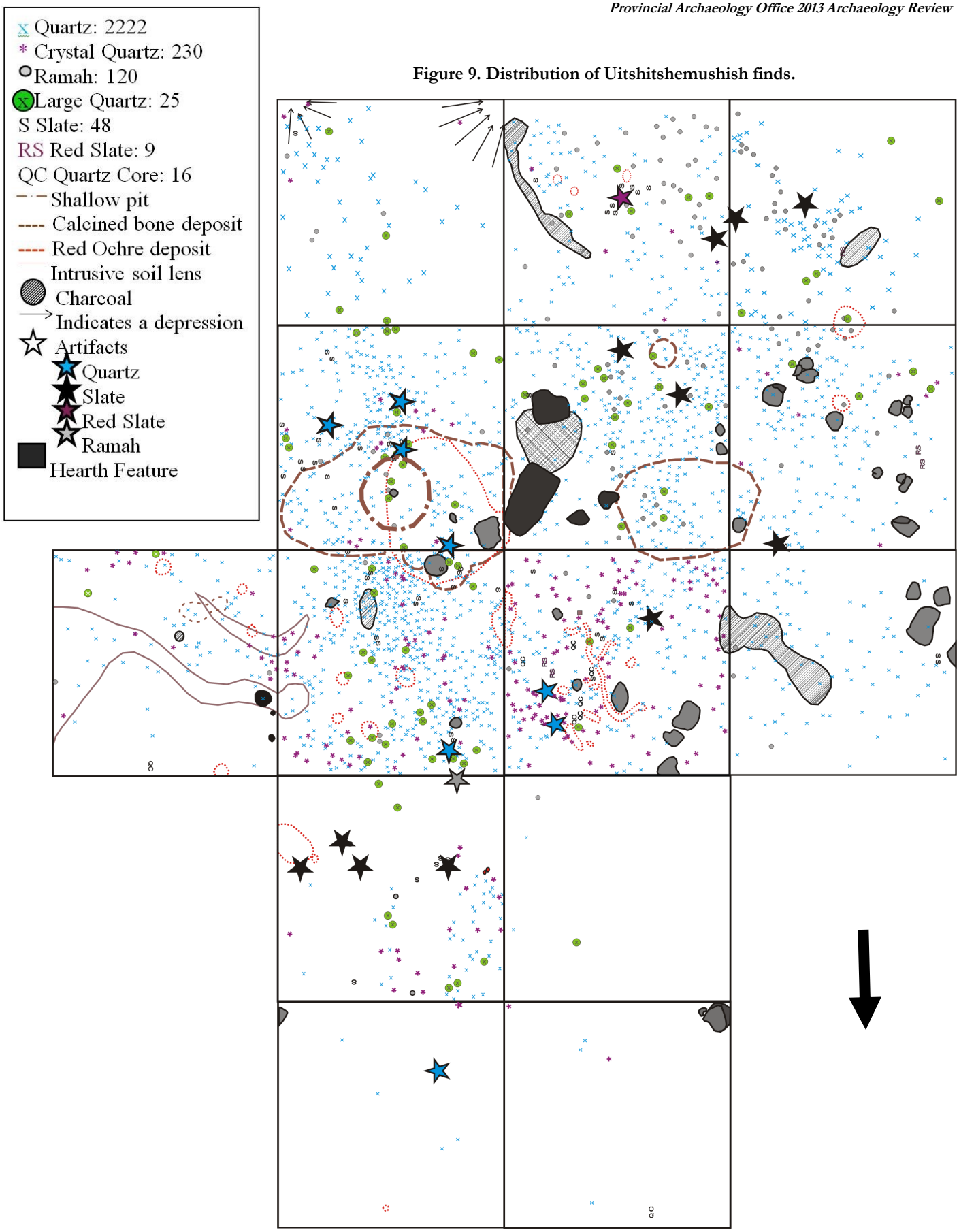
Tshetshuk – GlCs-25

Once the ground on the lakeside terraces began to clear of snow cover and thaw, drain and dry out we turned our attention from Uitshitshemushish locus 3 to the Tshetshuk site, a component of which we had excavated in 2012. Located roughly 40m back from the southeast shore of Kamestastin, the Tshetshuk terrace sits north of a small stream flowing into the lake from the northeast and roughly 1 km away from the more inland site of Uitshitshemushish locus 3. Discrete surface scatters of Ramah chert, quartz, and various other coloured cherts and slates extend along the expanse of a plateau of low elevation, suggesting the presence of several sites in the immediate vicinity. Previous excavation revealed a small hearth in the eastern section of the site, surrounded by large quantities of quartz debitage, smaller quantities of Ramah chert and grey-green slate debitage, as well as rare finds of red slate and red quartzite flakes. This assemblage suggests strong cultural ties with the northern Labrador coast (Fitzhugh 2006; Hood 2008). Three separate dates were acquired from the hearth and surrounding area, all of which fit comfortably with dating from site analogues on the north coast – 5900 +/- 20 (UCIAMS 124970), 5910 +/- 15 (UCIAMS 124969) and 5940 +/- 15 (UCIAMS 124960) all uncalibrated dates. So far these are the earliest dates acquired for the Kamestastin area and perhaps for interior occupation of the Quebec/Labrador peninsula. The original 2012 excavation uncovered two activity areas – one in the northwest and the other around the hearth in the east-southeast. It was suggested (Arbour *et al.* 2013) that additional investigation would be needed in order to assess whether these two areas overlapped temporally.

In the spring of 2013 we decided to open additional units over the northeast activity area identified in 2012. The new units revealed an additional hearth, from which charcoal samples were taken in order to address questions as to the contemporaneity of the two areas. This second hearth was surrounded by quartz and slate debitage, as well as by much smaller quantities of Ramah chert. Unlike hearth 1 uncovered in 2012, no calcined bone was noted at the time of excavation. Two slate artifacts were uncovered, one near the 2nd hearth that seems likely to be a degraded, and extremely fragile, ulu (Figure 11).

Another large and almost intact example was located roughly 3m away from the first. Though most of it was present, this ulu had separated laterally along its planes of cleavage into three pieces (Figure 1). Unlike the 2012 excavation, Ramah chert and quartz artifacts were in scant evidence in this second activity area - a single small biface fragment of Ramah chert was found near the 2nd hearth and two unifacially worked utilized flakes of quartz and Ramah lay near the large slate ulu. Unfortunately, excavation of Tshetshuk was cut short this spring season when worsening ice conditions and an unusually rapid transition to pre-break up ice decay restricted us to the northern side of the outflow narrows – limiting this year's excavation to 4 1x1m units. Regardless, we hope that dates from the charcoal samples collected from the newly revealed hearth (results expected shortly) will better illuminate the relationship between the two activity areas uncovered thus far. Additionally, when added to the Tshetshuk assemblage the 2013 material may provide us with a better understanding of the types of activities occurring there. Quartz debitage appears on the surface of the more heavily vegetated parts of the Tshetshuk terrace closer to the lake shore. The results

Figure 9. Distribution of Uitshitshemushish finds.



of limited test pitting suggest that the two elements defined so far may not be the only cultural remains at Tshetshuk. Based on the number of discrete surface scatters and the variability of the material, a full investigation of the expanse of this stream side terrace has the potential to produce evidence of several further separate components.

Another avenue of inquiry pursued at Kamestastin this spring involved the bulk sampling of hearth contents from nearby sites in the Tshumushumapeu valley – specifically Uitshitshemushish (GlCs-26, formerly known as GlCs-04 area 1) locus 1 and 3 and Natakameimupan (GlCs-27, formerly known as GlCs-04 area 2). Previous practise had been to collect smaller samples of hearth contents, usually those with obvious deposits of calcined bone. We were encouraged to change our approach by the surprising discovery in 2012 of the shell, mouthpiece and spines of sea urchin in the contents of hearth 1 at Tshetshuk. In the coming months the bulk samples collected this 2013 spring season will be processed via flotation at the MUN labs. This exercise may help shed light on the question of whether the practise of transporting sea urchin inland was a general one or whether it suggests activities and predilections particular to the occupants of Tshetshuk. And of course we also want to be sure that other unexpected animal remains do not escape detection.

It would be nice to able to claim that the 2013 spring excavation at Tshetshuk was wrapped up in an orderly fashion but the truth is that an unusually abrupt worsening in the ice conditions led to what was essentially a mid-excavation abandonment. We grabbed our equipment and high-tailed it for the other side of the lake outflow, not to return to the narrows south side until later in the summer. Despite the rushed close, the Tshetshuk area was not put at risk. Everything exposed had been recorded, photographed, "shot in" with the total station and, with the sole exception of the fragile degraded ulu, collected prior to our somewhat hasty departure. A much colder winter this 2013/2014 augurs well for a more normal break up schedule this spring.

Mashk (GlCs-17)

Lying on the slumping edge of a steep bank which drops to the northern shore of Kamestastin a short distance from its outflow, this site was first noted several years ago as a sparse quartz scatter around two larger fitting pieces of quartz. In subsequent years further erosion exposed a small nipple based point of grey chert and the medial section of a quartz biface. The nipple base point was collected at the time of discovery, but the remaining surface scatter and the quartz biface fragment were not. The 2012 survey led to the collection of the biface, a move prompted by evidence of increased terrace erosion. As the site is undergoing active erosion with elements tumbling down the scree slope beneath it, it was felt that we ought quickly to determine whether intact portions of the site remained.

In the spring of 2013, the site was tested in order to assess whether any additional material remained in situ. Unfortunately only very small additional amounts of scattered quartz debitage were found. The sediment consisted of highly disturbed silt and glacial pebbles commonly associated with erosion events/cascading sediment. In total we opened about 2.5 square meters of the area adjacent to the find spots, including approximately 1.5 meters beneath a relatively stable patch of krumholz vegetation. None of the areas investigated produced any cultural material so the provisional conclusion is that no intact elements of this site exist. It seems likely that the bulk of the site, if not all of it, has been destroyed by surface erosion and bank slumping. Notwithstanding present appearances the site will be monitored to determine whether subsequent erosion reveals any further material.

July 2013 activity

In July a team under Dr. Colin Larocque of Mount Allison University travelled to Kamestastin to install an array of instruments associated with a project tracking possible changes in the growing season of trees. We (in this case Marcel Ashini and Anthony Jenkinson) were offered an opportunity to accompany the Mount Allison team into the field. We hoped to use the summer time trip into Kamestastin to pedestal and remove two previously exposed artefacts that had proved too fragile to collect at the time of excavation: the first was an unusual item identified during previous work at the Tshumushumapeu Nashapetamit site (GlCs-01 Area VI, Jenkinson and Loring 2012), which appeared to be the remains of an antler or bone ladle or scoop (Figure 12). To protect this object it had been reburied and would therefore have to be carefully excavated again. The second item was the badly degraded

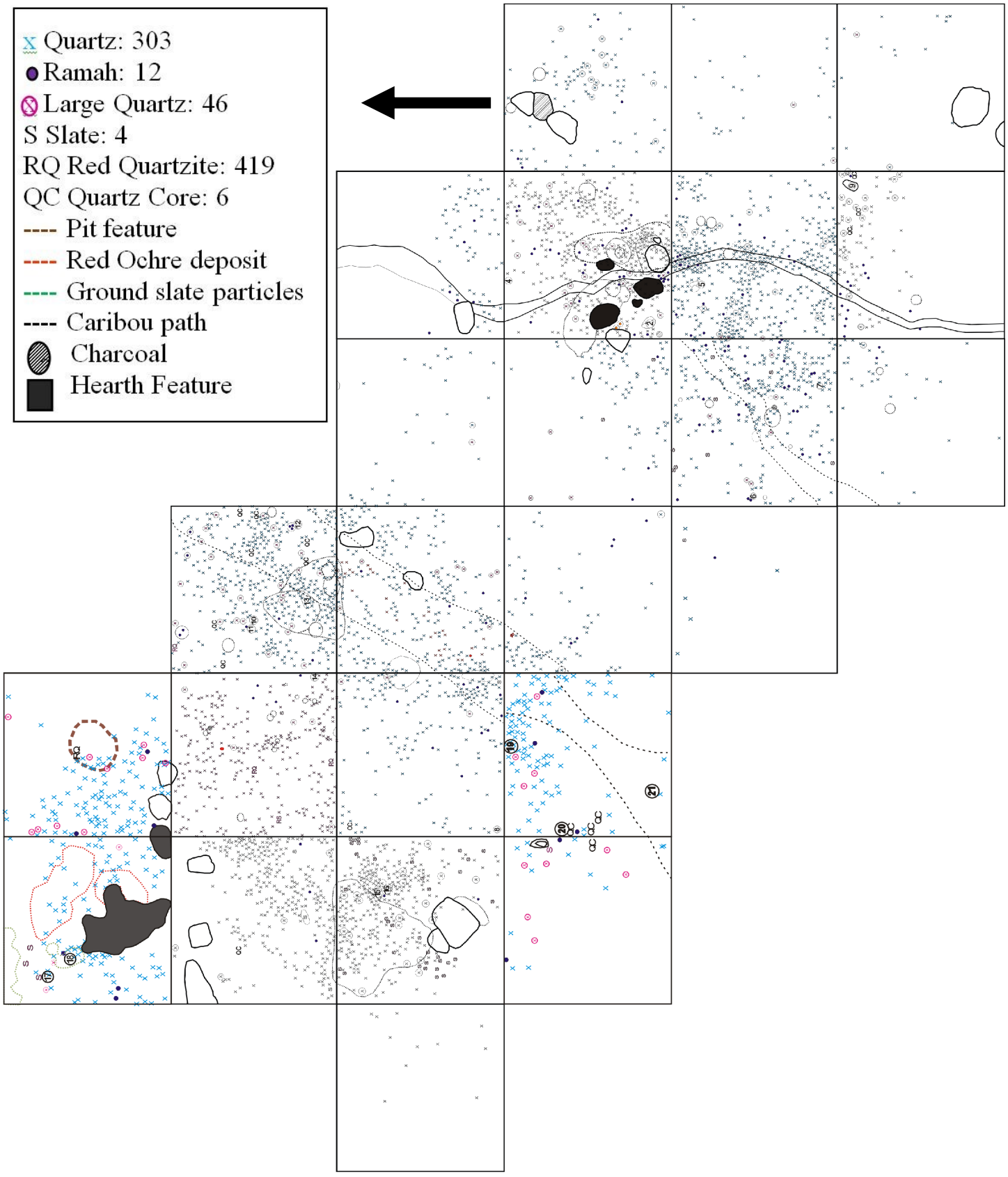


Figure 10. Distribution of finds at Tshetshuk. Coloured portion and material counts represent the 2013 excavation.

Figure 11. Badly degraded ulu fragment from Tshetshuk.

Figure 12. Possible antler/bone scoop from Tshumushumapeu Nashapetamit.

slate ulu previously mentioned in the account of the 2013 excavations at Tshetshuk (Figure 11). Unfortunately for us the exercise of attaching the instruments to the selected trees took only 4 hours which, including 30 minutes paddling each way, gave us a scant 3 hours to accomplish these tasks. In the event we barely managed to complete the block lifting of the ladle like implement in the 2 hours we allowed ourselves, armed with the advice that the Mount Allison team would take only a little over an hour to install the array. So three hours after the floats of the Cessna Caravan had touched down at the Kamestastin outflow we were back at camp only to learn that the MAU crew were still busy with the installation and wouldn't be finished for another hour. Not that it would have made any difference as the wind was picking up and we could not have tarried longer on the south-side if we wanted to return to camp by canoe. The antler or bone item was subsequently taken for examination by Donna Teasdale, the conservator at Memorial University in St John's, and has now undergone preliminary analysis and conservation. This analysis reveals that minerals have almost totally replaced the organic material of which the specimen originally consisted, leaving only a stained and shaped shadow of the piece. Unfortunately, so little of the original composition of the object is left that it is impossible to test whether the material is antler or bone. The most we are able to determine is that it is assuredly organic in nature and either antler or bone, but definitely not wood.

Research during July of 2013 on the coast was another interesting component of this year's work in Mushuau Innu territory. Chelsee visited the community of Natuashish to hold public talks on the completed field season. During the three weeks spent on the west side of Kamestastin prior to the digging season, a number of people mentioned that they were pleased with the November 2012 visit and expressed an interest in a summer talk on the fruits of this year's endeavours. These talks are designed to foster dialogue and provide a forum for community feedback, and the summer 2013 visit was successful in this respect. The reception of this year's research was quite positive, and a number of people who had previously not been aware of the project had the opportunity to weigh in on the future direction of work at Kamestastin, as well as on how the work could be best oriented towards community heritage initiatives. Time in Natuashish was also spent developing relations and engaging in more in-depth conversations about life in *nutshimit*, principally with older Mushuau Innu but also with Innu people of other age groups. Originally, the focal point of these conversations was the earliest period of Innu ancestral occupation and in particular their associated quartz industries. From this fairly archaeologically oriented stance, many discussions developed into much richer narratives linked to memories, knowledge and oral traditions that surround stone tool making and the place of various sorts of workable rock in Innu value systems, including those involving quartz. A visit to Shetshatshit for similar public talks and in-depth discussions was unfortunately not attempted due to time constraints on the part of Chelsee, but upcoming visits to both communities are planned for late spring of

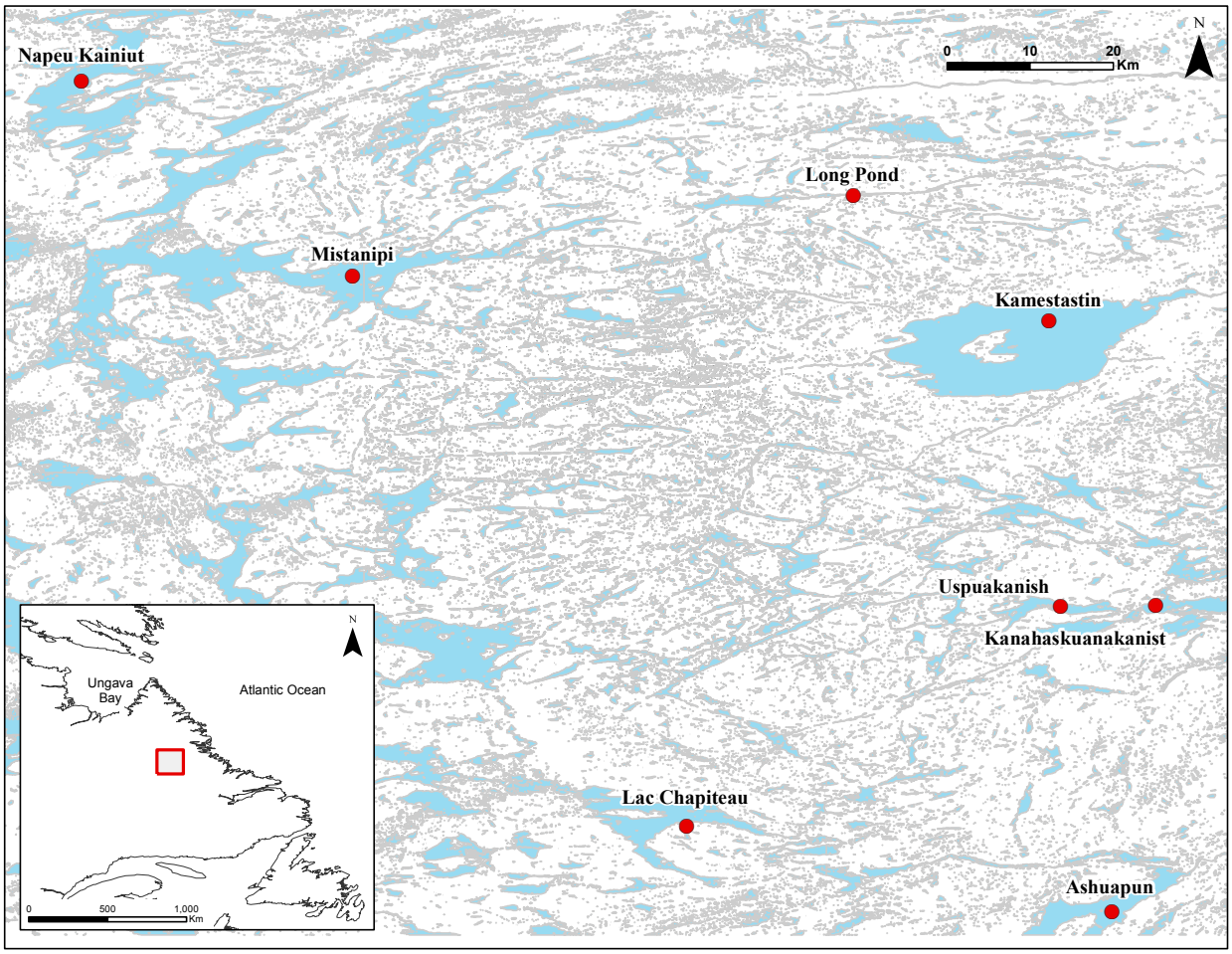


Figure 13. Places mentioned in text.

2014.

Next Steps

Looking forward, tentative plans for the upcoming season grew out of a number of previous community archaeology projects centered at Kamestastin as well as the important cultural and land reconnection work undertaken by Gerry Pasteen, Mary Lucy Dicker and others in Natuashish. The goal is to engage young people by offering them opportunities to live, work and travel in *nutshimit*. A main aim of this is to promote healthy living, cultural self-confidence and Innu learning through interacting with members of the most knowledgeable generation who grew up in the interior, other Innu hunters, and archaeologists on various aspects of Innu history and life in the interior. Part of this project will focus on locating previously unrecorded archaeological sites of all periods during a 5 week trek from Ashuapun to Kamestastin. The purpose of this journey will not be simply to travel from Point A to Point B but to spend extended periods at and around the principal points on the route, including portages, likely camping places during different seasons, burial sites and other notable features as well as the principal lakes and waterways themselves. The proposed exercises would build on the numerous country experiences and learning initiatives which have been organized by Natuashish individuals keen to ensure the transmission to younger generations of Mushuau Innu knowledge of the country/interior lands. They will also be largely directed by persons who grew up in the interior tundra lands and who possess memories and stories of the places visited en route. The surveys we have conducted outside the immediate Kamestastin area have so far been confined to Border Beacon/ Ashuapun and the route to Lac Chapiteau/Shaputuau, as well as a preliminary survey of the Kanahaskuanakanist – Uspuakanish area and a quick fly in/ fly out visit to Long Pond (Figure 13).

Once considered an archaeological unknown, ongoing investigation in the interior of the Québec/ Labrador peninsula over the last thirty years has provided further insight into the last several thousand years of occupation (Archéotec 2000a , 2000b, 2002, 2003; Biggins and Ryan 1989; Brake 2009; Cérane 1989, 1992. 1993, 1996, 1997a, 1997b, 1998, 1999, 2000; Chevrier 1978; Chevrier and Moreau 1975; Fitzhugh 1972, 1986; Groison 1983, Groison and Mandeville 1975; Jenkinson 2011; Jenkinson and Loring 2012; Loring and Jenkinson 2009; Loring 1985, 2002, 2005, 2006; Loring *et al.* 2009; McCaffrey *et al.*. 1989; McAleese 1992, 1993; Neilsen 2006; Plourde 1991; Samson 1979a, 1979b; Schwartz and Schwartz 1997; Schwartz 2000; Simard 1974, 1975; Somcynsky 1992, 1993, 1994, 1997). An important research question surrounding the body of data recorded at Kamestastin is whether the story from there is broadly representative of people living in the interior or whether it is in anyway anomalous. If we get the necessary support, the bulk of projected work in 2014 will likely focus on survey in areas not so far subjected to close archaeological scrutiny and will thus provide the opportunity to better situate the Kamestastin data in a regional context.

Season's end

And so with the sound of rushing melt water cascading off the surrounding hills and the tinkling of candling ice, another field season at Kamestastin comes to a close. The caribou have passed through. Wolves have gone to their dens. The ptarmigan have fallen silent, are paired off and attending to their nests as are the geese. Late every evening companies of ducks whistle overhead in low level runs over the camp. Most of the bears, which had been insistent in their visiting, have ambled off over the hills. The bulk of our gear has been transferred up to the esker where the plane will pick us up, and has been nailed inside kamutik boxes to discourage investigation by the last patrolling bear. The budding alder spreads its leaves, heralding the hatching of the first wave of mosquitoes. In a day the flanks of the mountain opposite turn from dark brown to green. Most Mushuau Innu families have returned to the coast. Time for us to leave *nutshimit* (the interior) and head for *uinapeikut* (the coast.)

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Figure 14. Snowden Piwas, Antonia Tshakapesh and Angel at Uitshitshemushish, Kamestastin 2013.

Survey of Whaling Shipwrecks in Conception Harbour, NL

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Introduction

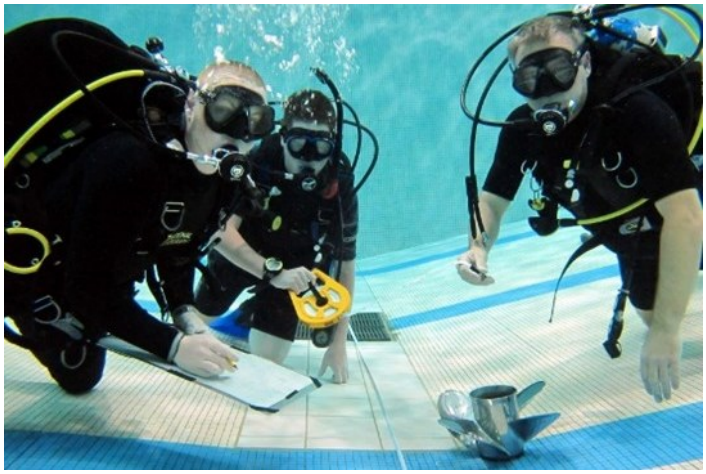
In 2013, the town of Conception Harbour, the Northeast Avalon Regional Economic Development Board (NEAREDB) and the not-for-profit organization, Shipwreck Preservation Society of Newfoundland and Labrador (SPSNL), entered into a collaborative project to improve the adventure tourism facilities along the waterfront section of the town. The project included rebuilding the town's wharf for pleasure boats, as well as documenting and interpreting the 3 whaling shipwrecks, which currently lay along the shoreline southwest of the town's wharf, by erecting storyboards and interpretation plaques on the site. The objective of the overall project was to promote the waterfront of Conception Harbour as an adventure tourism destination for divers, kayakers, pleasure boaters and tourists. The objective for SPSNL was to conduct historical research on the whaling ships, to complete underwater surveys of the three shipwrecks, produce maps of the wrecks, gather information for wreck divers, and summarize all this information for a storyboard to be erected on the shoreline beside the wrecks and on the town's website.

In order to survey and map the wrecks, volunteer members of SPSNL participated in Nautical Archaeology Society (NAS) Introduction and Part 1 courses in Underwater and Foreshore Archaeology (Figure 1). The courses were organized by SPSNL and taught by NAS Senior Tutor Chris Phinney (from the not-for-profit organization Save Ontario Shipwrecks). NAS courses are designed to provide basic avocational education in archaeological principles and methods, as well as practical experience in conducting non-invasive underwater surveys (NAS 2008). In completing the course, the participants acquired an understanding of archaeological dating techniques, principles of deposition, site formation processes, archaeological legislation, and underwater 2D survey skills, which enabled them to properly record a submerged site and prepare the final results for interpretation.

Site History and Historical Research

Local knowledge in Conception Harbour indicated that the whaling ships were last owned by Captain Johan Borgen, who was in charge of the Hawke Harbour Whaling Company. Historical research in the Newfoundland & Labrador Registry of Companies in St. John's revealed a contract (dated 12 Sep 1956) in

Figure 1. SPSNL members taking part in NAS training in underwater archaeology.



which the Hawke Harbour Whaling Company purchased the Hawke Harbour whaling station in southern Labrador, along with six steel whaling ships, which were the *SS Charcot, SS Southern Foam*, *SS Sukha, SS Sposa, SS Soika* and *SS Sluga*. At that time, *Sluga* was a wreck aground in Hawke Harbour, Labrador, and it remains there today. In September 1959, the Hawke Harbour whaling station was destroyed by fire and the *Charcot, Southern Foam, Sukha, Sposa* and *Soika* were all brought south from Labrador to Conception Bay, Newfoundland (Dickinson and Sanger 2005). Soon after, all five whaling ships were berthed at a wharf owned by Captain Borgen in Conception Harbour. The ships appear to have remained berthed there until approximately 1968, when two of the ships were towed away for scrap. According to local knowledge in Conception Harbour, those two ships sank, or possibly were scuttled while under tow, somewhere in Conception Bay. That left three ships at the wharf in the late 1960s. By the early 1970s, two of those ships sank in shallow water beside the wharf and one ran aground on the beach beside the wharf.

Table 1. Shipyard specifications for five whaling ships owned by the Hawke Harbour Whaling Company.

Ship	Built	Length Overall (m)	Length Between Perpendiculars (m)	Beam (m)	Gross Reg. Tons
Charcot	1923	35.7	33.4	6.6	212
Sukha	1929	37.3	35.4	7.3	251
Southern Foam	1926	39.5	37.5	7.5	295
Sposa	1926	41.7	39.6	7.6	316
Soika	1925	41.7	39.6	7.9	313

Figure 2. The bow of Shipwreck #1 by the shoreline.

The identities of the three whaling shipwrecks at Conception Harbour were unclear at the beginning of this project. The daughter of Captain Borgen indicated that her mother told her the ship aground on the beach was the *Sposa*, and she was unsure of the names of the two sunken ships. Dickinson and Sanger (2005) also identified the ship aground at Conception Harbour as the *Sposa*, although they provided no evidence to support this identification.

SPSNL hosted a workshop for historical research on the three remaining shipwrecks. Through this workshop, the shipyard plans for *Southern Foam* were obtained. SPSNL member Warren Bush obtained the commercial construction agreements with material purchasing orders for *Sposa, Soika, Southern Foam* and *Sukha* from an English shipyard archive (Smith's Dock Co. 1926a,b, 1929). The four ships were built in the 1920s by Smith's Dock Company at Middlesbrough on the River Tees in Yorkshire, England. Lloyd's Register (1958, 1985) provided dimensions for the *Charcot*, which was built in 1923 by Kaldnæs Mekaniske Verksted in Tønsberg, Norway. Shipyard dimensions of the whaling ships are provided in Table 1.

The site

The three whaling shipwrecks are located in Conception Harbour, Newfoundland & Labrador at the southern end of Conception Bay. The site is located on Kitchuses Road and the wrecks are accessible from a parking area on

the shoreline. The geographic coordinates for the site are 47° 26' 40.93" N, 53° 12' 21.06" W (WGS84).

Since the identity of the three shipwrecks was unclear at the start of the project, we referred to the wreck aground on the beach as Shipwreck #1, the wreck immediately behind it underwater as Shipwreck #2, and the third wreck just west of Shipwreck #2 as Shipwreck #3.

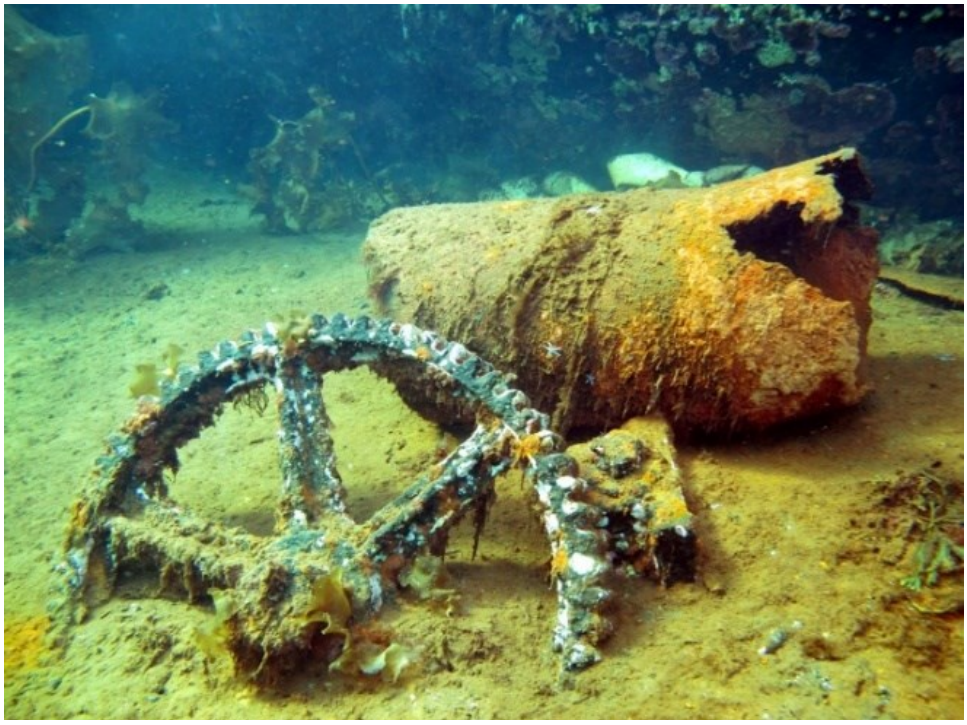


Figure 3. Debris field adjacent to Shipwreck #1.

The bow of Shipwreck #1 can easily be seen rising above the waterline and resting on the rocks less than 5m from shore (Figure 2). The hull of Shipwreck #1 slopes downward to where the stern rests on the sea floor 9m below the water's surface. The superstructure of this vessel has largely collapsed. Little evidence of the superstructure can be seen on the sea floor below and it appears to have been carried away by the turbulence of the sea and wave action. The steel of the vessel is heavily corroded with rust and pitting giving way in large sections exposing much of the internal framing. This is the only one of the three whalers whose propeller is still on the shaft. It is speculated that the other two wrecks had their propellers removed during salvage activity.

Along the starboard side of Shipwreck #1 is a debris field that is composed of steel fragments, pipes, and gears that appear to belong to deck machinery, such as windlasses or capstans (Figure 3). There is also a mast towards the bow, laying horizontal on the sea floor and pointing out into the harbour.

Figure 4. Stern of Shipwreck #2.

Behind the stern of Shipwreck #1 lies the remains of Shipwrecks #2 and #3. Both vessels are in 9m of water, oriented with their bows toward the southwest with shipwreck #3 being the most westerly of the wrecks. The stern of Shipwreck #2 is situated so that it touches Shipwreck #1 just aft

of amidships (Figure 4). The vessel is on its port side in fine, soft sediment. Overall the structure of this vessel is quite complete. Starting aft, the steering gear is intact with chains still fitted to the quadrant. The roof of the superstructure has shifted equilaterally to become not quite parallel to the sea floor. The lifeboat davits on the port side are still in place, albeit swung downward (outboard), while those on the starboard side have collapsed to the deck. Much of the roof structure including piping for various purposes is present in its original location but the more fragile components such as skylights have been broken and destroyed. The roof of the captain's cabin has been torn away from the supporting bulkheads and is open for those who are curious to view the interior. The gangway that once led from the flying bridge to the harpoon-gun shooting platform can still be found in the foredeck area but with sections missing. Moving forward, the windlasses and capstans that would have been used to wrangle whales are in place and the yoke that once supported the harpoon gun sits empty.

Shipwreck #3 lies to the west of Shipwreck #2 and southwest of the stern of Shipwreck #1. The vessel is on its port side in fine, soft sediment. Shipwreck #3 lies quite intact on the sea floor. The aft is equipped with steering gear. Moving forward, the superstructure is intact with the smaller and more fragile fittings being lost from the installation. The top section of the funnel has been lost possibly buried deep in the sand alongside the vessel. Ladders are strewn across the decks that were once used to access the captain's cabin. The vessel's mast lays out from the wreck with the crowsnest half-buried in the sediment. The whaling capstans are also in place and the catwalk to the harpoon platform remains with sections missing. On the bow, the harpoon gun rests within its yoke.

Table 2. 2D and 3D survey measurements of the three shipwrecks.

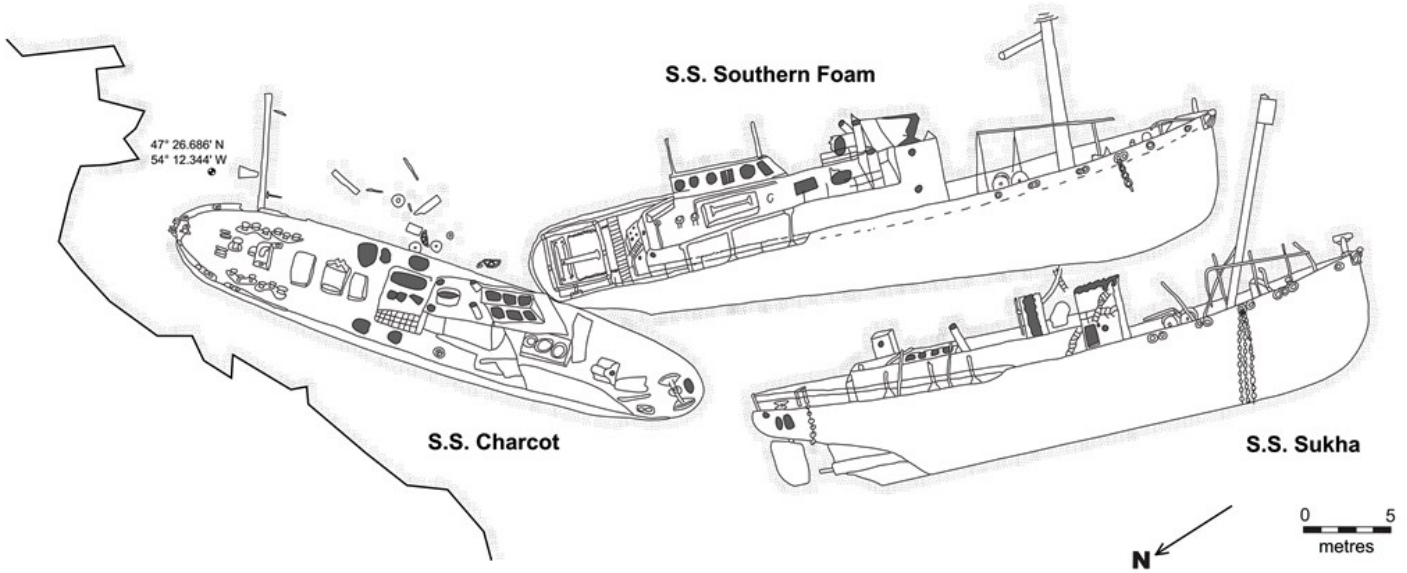
Shipwreck	2D Length Overall (m)	3D Length Overall (m)	Variance (m)
#1	36.41	36.17	0.24
#2	39.40	40.02	0.62
#3	37.40	37.77	0.37
		Average	0.41

Survey Methodology and Results

SPSNL used two different types of survey methodology on the wrecks to gain experience and assess their advantages and disadvantages. We employed both 2D survey and 3D survey methods following NAS (2008; chapter 14).

The 2D method was used to survey and map the debris field adjacent to Shipwreck #1, using a 20m baseline and offsets to determine the various artifact

Figure 5. Map of Conception Harbour whaling shipwrecks.



positions. Each wreck was then directly measured using survey tape and then tied into the baseline using bearings and distances. Freehand sketches were done underwater of each shipwreck, noting all significant superstructure, deck machinery and components. After some trial and error, we realized that the steel wrecks were creating magnetic disturbances and leading to erroneous compass bearings in their vicinity. This led to difficulties in producing an accurate map of the relative positions of the shipwrecks using just the 2D survey results.

Table 3. Comparison of shipyard and shipwreck lengths overall.

Shipyard Measurements		Shipwreck Measurements		
Ship	Length Overall (m)	2D Length Overall (m)	3D Length Overall (m)	Ship-wreck
Charcot	35.7	36.41	36.17	#1
Sukha	37.3	37.40	37.77	#3
Southern Foam	39.5	39.40	40.02	#2
Sposa	41.7			
Soika	41.7			

We also used 3D survey methods, which included establishing survey control points on the wrecks and in the surrounding sediment. The 3D method of survey is based on trilateration (NAS 2008). Distances were measured with tape measures from control points to each other and to physical parts of the wrecks. Depths to points were measured with a digital diving computer. Distance and depth data were entered into the program "Site Recorder" (version 4.25.9.0, 3H Consulting Ltd, Plymouth, England). Site Recorder is an underwater archaeology site mapping program, which uses 3D measurements and depths to map out the control and detail points, based on a 3D least-squares best fit of the data.

The resulting measurement of the wrecks using the 2D and 3D survey methods are presented in Table 2. The smallest variation between the overall length measurements was 0.24m and the largest 0.62m with an average of 0.41m. These results are satisfactory considering the methods being implemented, the working environment and the distances being measured.

Based on the sketches, 2D and 3D survey measurements, and available shipyard plans, a map of the three shipwrecks was drawn to scale (Figure 5).

Limitations

The primary limitations for conducting these underwater surveys were the water visibility and temperature, and the kelp growth on the site. When measuring distances underwater, the inability to see the other person holding the end of the tape made it difficult to determine when a person had arrived at the point they were measuring. As well, it made it difficult to ensure that the tape was running in a straight line and was not bending around kelp or the wreck structure. To overcome these obstacles a system for line-pull communication was devised and additional measurements to strategic locations on the wrecks had to be taken. Occasionally measurements had to be taken multiple times to ensure their accuracy. The density of kelp on the site also posed significant challenges to the survey work. The kelp growth while conducting the field work during the summer months was especially thick, and necessitated its removal from some sections of the survey area. Without some kelp removal, accurate recording and interpretation of the wrecks would not have been possible, as diagnostic features would not have been accessible.

Shipwrecks #2 and #3 were inclined 45° or more to port, with the port gunwales buried in the sediment. This made it virtually impossible to take beam measurements, which would have aided in identifying the shipwrecks.

Charcot was built in Norway, so there was difficulty in locating and acquiring original shipyard documentation.

Interpretation and Discussion

Since beam measurements could only be obtained from one of the shipwrecks, SPSNL relied primarily on the "Length Overall" measurement to acquire a positive identification for the wrecks.

The shipyard dimensions and the shipwreck measurements are shown in Table 3. Comparing the shipyard and shipwreck lengths overall, we concluded that the *Charcot* was the closest match for Shipwreck #1. Likewise, *Southern Foam* was a close match for Shipwreck #2, and *Sukha* was a close match for Shipwreck #3. Both *Southern Foam* and *Sukha* are sunken into soft sediment on the bottom, and appear to have deformed in shape very little. Their current lengths are

within cm of their original shipyard lengths. However, the current length of the *Charcot* is about 0.5m longer than its shipyard length. This may be due to some deformation of the hull shape, as the wreck is aground on a rocky bottom with about half of the ship's length above water. *Charcot* also shows greater structural deterioration of both the hull and superstructure than the other two wrecks.

In the future, SPSNL hopes to explore for and locate the wrecks of the *Sposa* and *Soika* on the bottom of Conception Bay, using multibeam sonar surveys.

Project Outcomes

Through this project, SPSNL has met its goals of advancing education and promoting public awareness of shipwrecks and their importance to the province's history through these outcomes:

1. offering the NAS training course in underwater archaeology and providing experience in wreck survey methods to divers and non-divers,
2. compiling historical information on the ships and creating a shipwreck map to be included on the storyboard erected at the site,
3. partnering on improvements to the tourism facilities at the shipwreck site (e.g. upgrades to the parking area, installation of new picnic tables and a fire pit),
4. promoting the shipwreck site as an adventure tourism destination in partnership with the town of Conception Harbour on the town and SPSNL websites,
5. creating and distributing a divers' guide to enhance the awareness and appreciation of wreck divers visiting the shipwrecks, and
6. obtaining media coverage of the identification of the shipwrecks and the successful partnership between the town of Conception Harbour and SPSNL.

Acknowledgements

SPSNL thanks our volunteer members who donated their time and energy to the historical research, training, shipwreck surveys, data analyses and report writing. We also thank the town of Conception Harbour, NEAREDB, and the members of the project steering committee and construction crew for their dedication and cooperation. We thank the financial sponsors of the project, including the Atlantic Canada Opportunities Agency, NL Dept. of Innovation, Business and Rural Development, Ocean Quest Adventures, K&D Pratt, and Kayak Newfoundland & Labrador. This shipwreck survey was conducted under a research permit from the Provincial Archaeology Office.

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Excavation at Admiralty House, Mount Pearl (CjAe-134)

James Lyttleton
Memorial University of Newfoundland

Introduction

This a brief overview of the archaeological fieldwork carried out by the MUN Archaeology Field School under the supervision of Dr. James Lyttleton at the Admiralty House Museum in Mount Pearl, NL. The museum is located on 365 Old Placentia Road, just west of the junction of Old Placentia Road and Commonwealth Avenue. This field school, which ran for six weeks, from 24 June to 2 August 2013, was a collaborative effort between the Department of Archaeology, Memorial University of Newfoundland and the Admiralty House Museum. The objective of this year's field school was to locate and investigate any subsurface remains of a naval installation that was in operation on the site from 1915 to 1924. Inspection of archival material including maps and aerial photographs revealed a complex of buildings that for the most part no longer stand. The most prominent structures originally on site were three 305 foot masts that supported aerial transmission wires for the most part no longer stands (see figure 2). Two of the largest buildings though can still be seen on the site: the barracks that housed naval personnel and a generator house which contained three generators that powered the receiving and transmission equipment.

Figure 1. Officers and crew pose for a photograph at the main entrance to the wireless station. To the left can be seen the barracks with its chimneystack. A covered pedestrian walkway can be seen extending from the front of the barracks towards the generator house in mid ground (Courtesy of the Admiralty House Museum).

Historical Background

The naval authorities built a wireless station on this site in late 1914 / early 1915 for the purposes of intercepting secret German naval transmissions and tracking ships in distress. The complex in Mount Pearl was the last of thirteen such stations built around the world during the Great War (1914–18). During the first two years of the conflict, German submarines posed little threat to shipping off the eastern seaboard of North America. It was thought that U-boats were not capable of crossing the large expanse of the Atlantic. This placid state of affairs though changed in July 1916 with the arrival of a German mercantile submarine, the *Deutschland* in Baltimore, Maryland, a port in then neutral America (Prim and McCarthy 1995, 17–8). In October 1916, *U-53* under the command of Kapitänleutnant Hans Rose arrived in Newport, Rhode Island and subsequently sunk five vessels in international waters in the vicinity of Nantucket lighthouse, including the Newfoundland passenger ship, the SS *Stephano*. As a result, the port of St. John's was closed to night-time shipping, and remained so until the end of the war in November 1918 (Prim and McCarthy 1995, 19).

Given its strategic position, straddling the transatlantic shipping routes, naval planners in London

envisaged that Newfoundland would play a significant role in monitoring shipping communications on the easterly approaches to North America. Under naval supervision, the Marconi Wireless Telegraph Company was contracted to erect three masts and a series of buildings to house equipment and staff. All the power, transmitting and receiving equipment, the workshop, stores and offices were to be contained in one building – the building now known as the museum annex building (Anon. *c.*1914, 2). This and other buildings on the complex were to be constructed of wood framing in Deal Fir or Pitch Pine, with the roofs to be covered with hemlock boarding and cedar shingles 'in the most approved manner adopted locally' (Anon. *c.*1914). The external faces of the walls were to be covered in similar boarding shingles (Anon. *c.*1914). Potential sites under consideration for the location of the wireless station were chosen in consultation with the Newfoundland Government, with choice governed by the nature of the ground, the security of the station from possible bombardment by enemy cruisers, proximity to civilian settlement for labour during construction, and a fresh water supply (Anon. *c.*1914, 3; Hutchens & Ross 2007, 79–80). The wireless station was constructed under the direction of Lt. Burrows and Lt. Quick, who were naval engineering specialists, and became operational on 15 September 1915 (Parsons & Parsons 2009, 177–78). While the station was initially operated by the Marconi Company on behalf of the Admiralty, the following operating staff was to be provided: an engineer-in-charge who received the naval rank of sub-lieutenant, four operators who received the rank of Warrant Telegraphist, three engine drivers, one engine fitter and one cook steward. The engine fitter and engine drivers were be provided from the navy, holding the ranks of Warrant Engineer and stokers respectively (Anon. *c.*1914, 4). Once the Admiralty had finally taken over the running of the station there was to be an officer-in-charge, one warrant telegraphist along with a number of other telegraphists of different grades (Anon. *c.*1914, 4). The need for such an installation was clearly illustrated by a series of U-boat attacks that took place off the coast of Newfoundland later in the war, in the waters of the Strait of Belle Isle and the Grand Banks. The SS *Primaire*, the SS *Thracia* and the SS *Bayard* were sunk in March 1917; followed by the SS *Gothland* in July 1917; the SS *Erik* in June 1918; along with the Elsie Porter and the Potentate in Au-

Figure 2. Aerial view of the Royal Navy wireless station on Old Placentia Road, Mount Pearl, NL *c.*1915. Highlighted are areas 1 to 3 that were subject to archaeological investigation (Courtesy of the Admiralty House Museum).

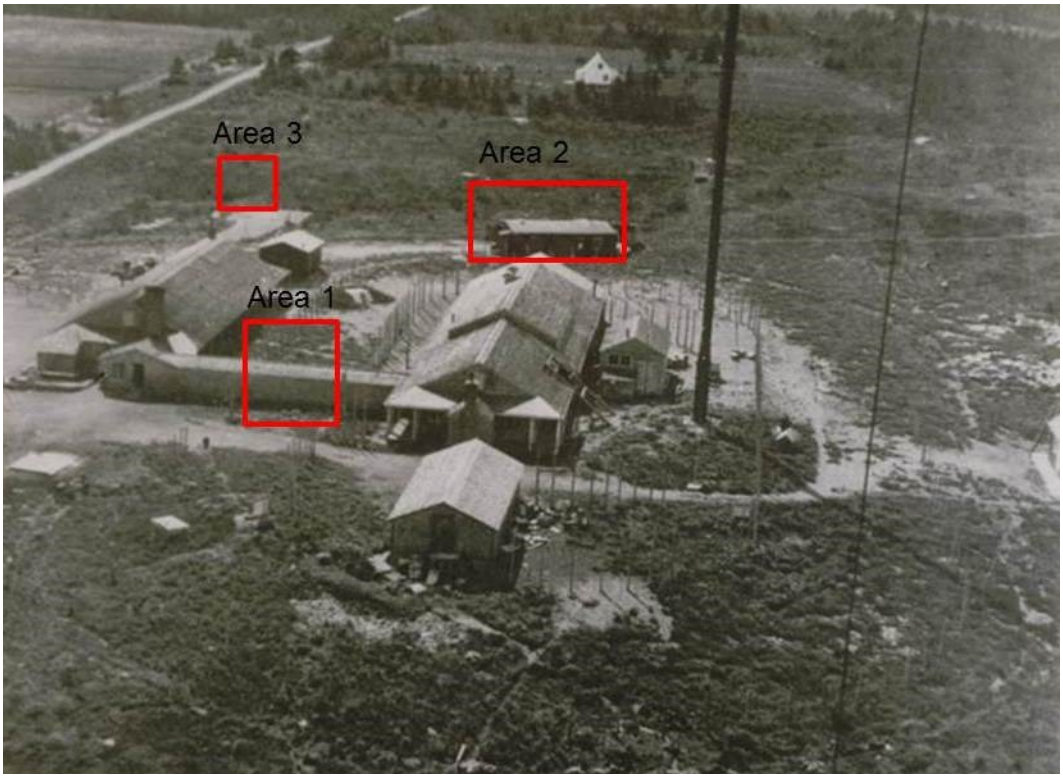

Figure 3. Aerial view of the Admiralty House Museum and grounds today with areas of archaeological investigation highlighted (extract from www.bing.com/maps).

gust 1918 (Prim and McCarthy 1995, 21). The final U-boat attack occurred with the sinking of a ship in September 1918 owned by the Bowring Brothers of St. John's (Prim and McCarthy 1995, 44–5).

Following the cessation of hostilities, the Royal Navy and the Dominion Government of Newfoundland continued to maintain the wireless station until 1922 when it was reduced to a care-and-maintenance operation (Hutchens & Ross 2007, 79–80). It was finally closed in 1924 and in the following year the contents of the wireless station were auctioned off; by 1926 the property was sold to a farming family – the Parsons (Hutchens & Ross 2007, 79–80; Parsons & Parsons 2009, 179). From then until the 1960s the property was a farm, with the barracks used as a boarding house for farm employees and their families, while another building was converted into a barn (Chaulk Murray 2002, 75). The Newfoundland government, however, still retained the right to use the masts on the site for broadcasting. In 1939 a transmitting station on the site was established to broadcast VONF, a public radio station located in the Newfoundland Hotel in downtown St. John's (Hutchens & Ross 2007, 79–80; Parsons & Parsons 2009, 180). The masts continued to fulfill this civilian role until CBC (the new state broadcaster following Confederation) decided to build another transmitter nearby in 1955 (Hutchens & Ross 2007, 79–80; Parsons & Parsons 2009, 180). In the 1960s, the property again changed hands, and passed into the ownership of the Newfoundland Housing Corporation who utilized the barracks as offices. In 1990 that agency moved out and the site was acquired by the City of Mount Pearl (Parsons & Parsons 2009, 180). Given the site's wartime history, it was decided to refurbish the barracks as a museum, which was opened by the Duke of Edinburgh on 23 June 1997 (David Lithgow, pers. comm., January 2014).

Fieldwork

Field school students working at this historic period site, gained practical, hands-on experience in all phases of field excavation and laboratory techniques. Archaeological testing and excavation focused on areas of the museum in an effort to understand more about the layout of the wireless station. Certain areas were selected in the vicinity of the museum, though choice was constrained by the limited amount of undisturbed ground available for investigation. The naval property

Figure 4. View of nineteenth-century drain exposed in Area 1. No trace of covered walkway associated with the early twentieth-century wireless station was found even though it was clearly depicted in this area in archival photographs.

has been intruded upon by housing development, roads, a parking lot and garden landscaping in recent decades. Shovel testing was carried out at 5m intervals in two areas of the museum grounds (**Areas 2 and 3**) where archival and topographical evidence suggested a stronger likelihood for the survival of archaeological features and artifacts associated with the wireless station. Individual units measuring 0.50m by 0.50m were dug by shovel and cleaned by trowel. The soil removed from these units was screened using a quarter-inch mesh to recover archaeological artifacts (ceramics, glass, and metals). The distribution and density of artifacts of modern provenance was assessed to identify areas of activity associated with the naval installation. In areas where testing proved positive, further excavation would follow to reveal the nature and extent of sub surface archaeological deposits. This would have involved the laying out of square units measuring 1m by 1m and the removal of layers in a stratigraphic sequence. Full excavation was commenced immediately in **Area 1** (*c.*10m north of the present day museum) where a covered walkway was readily identified on an aerial photograph of the site taken *c.*1915 when the wireless station was in operation.

Area 1

Site of covered pedestrian walkway between the barracks and the generator building

A 4m by 3m grid was laid on the site of a structure recorded on a *c.*1915 aerial photograph – it was a covered pedestrian walkway between the barracks and the generator building. The structure no longer stands, though its location is clearly indicated on aerial photographs. Excavation involved the removal of layers in square units measuring 1m by 1m in a stratigraphic sequence in an area measuring 4m by 3m in extent. This cutting, which was subsequently increased to 4m by 4m in size, did not reveal any surviving traces of the covered pedestrian walkway. The only indications that a building stood on this site was the relatively large number of machine cut nails found in the topsoil (*c.* 500 in total). However, an archaeological feature was uncovered – a stone lined drain, measuring 0.6m in width, 0.3m in depth and 3m in length. The drain was of relatively simply construction – a ditch lined on either side with a single coursing of dry stone, and covered by slabs. Investigation of the fill within the drain did not produce any artifacts that could be used to identify the provenience of the fea-

ture. The crude nature of its construction, though, suggests that the drain was the handiwork of an individual farmer draining the land rather than that of personnel working for a large organization like the Royal Navy. According to the instructions provided by the Admiralty to the Marconi Wireless Telegraph Company who were building the station, drains were to be of 4" stoneware socketed pipes, installed in consultation with the local sanitary authority (Anon. *c.*1914). If so, this crudely constructed drain more likely predates the construction of the wireless station, and is evidence of nineteenth-century land management in Mount Pearl, an area that saw land clearance for agricultural activities from the 1830s onwards (Hutchens & Ross 2007, 67–70). The drain is also orientated N-S, at an angle slightly askew to the barracks building, but still towards the direction of the Old Placentia Road. The possibility arises that this drain may have served a house that originally stood somewhere in this location.

Area 2

Site of ancillary building SW of generator building

In order to identify the location of an ancillary building recorded on aerial photographs taken of the site between 1915 and 1922, shovel testing was carried out at 5m intervals in this area. One aerial photograph taken in the latter year illustrates this building lying *c.*20m southwest of the generator house – presently used as an annex building by the museum. This area is currently occupied by a garden, and is covered by a grass lawn, flower beds and small trees. It was decided to test an area 25m NW-SE by 20m NE-SW to ascertain if there were any archaeological deposits or artifacts associated with the ancillary building. Twenty-three pits, measuring 0.5m by 0.5m, were dug by shovel and cleaned by trowel. The stratigraphy uncovered consisted of silty and clayey sands underlain by grey coarser grained gravels. Complicating an analysis of this stratigraphy was information from museum personnel that the topsoil was introduced to the site during garden landscaping in the mid 1990s when the site was being redeveloped as a museum (David Lithgow, pers. comm., August 2012). Besides a small number of modern artifacts recovered in the topsoil, there were no structures, features or artifacts recovered from the test pitting. This result was quite surprising given the photographic evidence that an ancillary building did stand in the area – a timber building with a shingled roof measuring *c.*12 by 4m in extent. There were no traces whatsoever of any concrete, brick, timber, or mortar that would have been associated with such a

Figure 5. View of test pit 0E 25N, Area 2 with length of copper alloy wire exposed. Such wiring was used as part of an earth system for transmission masts on the site.

building. It is suggested that this portion of the property was subject to bulldozing at some stage in the twentieth century, obliterating all traces of the building, along with other features and deposits associated with the wireless station. Lengths of copper alloy wire, however, were found during the testing – in test units 0E 25N, 10E 5N and 10E 20N (see figure 5). For the construction of the wireless station, the Marconi Wireless Telegraph Company required 25,000 feet of bare copper earth wire. This wire was to be placed under the topsoil to facilitate the need for earthing (Anon. 1914 – under schedule no. 15711). A diagram of the earth system to be installed at the wireless station illustrates multiple parallel lines of this wire extending across the whole site from each of the antenna masts across the whole site (Anon. 1914 – plan no. 16009). The copper alloy wire uncovered in the above mentioned test units may be associated with such an earth system, though whether associated with the Royal Navy, or later with VONF and CBC, remains unanswered.

Area 3

Earthworks SW of barracks building

In order to assess the nature and provenience of a series of irregular earthworks or mounds located amongst trees to the southwest of the original barracks building, shovel testing was carried out at 5m intervals in this area. It was hoped that the investigation of these features would reveal a dumping ground for the wireless station, and provide a collection of artifacts associated with the naval occupation of the site. Twenty-two pits, measuring 0.5m by 0.5m, were dug by shovel and cleaned by trowel. The testing revealed that the irregular earthworks consisted solely of loose stone rubble. The composition of the mounds suggests that they are the result of land clearance from agricultural activity in the area. A length of copper wire found in area 3 – test unit 10E 25N – represents the remains of the earth system used for transmission masts on the site. But besides this, no traces of archaeological structures, features or deposits were uncovered during the course of testing. A relatively small number of artifacts were recovered from the topsoil. Seven concrete pillars, placed in a linear arrangement, were also visible in this area – they measure 0.20m by 0.20m in plan, with heights varying above the surface of the ground. These pillars supported iron L-sectioned posts that presumably supported wire fencing – their scale and nature suggesting contract work for the government rather than fencing erected by the Parsons family for their farm. The natural subsoils were largely similar to what was encountered in Area 2: silty and clayey sands underlain by grey coarser grained gravels, with the exception that bedrock also occurred in a number of areas. As part of the field school training program to train students in recording procedures and techniques, it

Figure 6 Trench 3a in Area 3. One of the concrete pillars is partially exposed along with a pit of modern provenience. To the left, running along the length of the trench can be seen copper wire that was part of the earth system that originally covered much of the site for transmission masts.

was decided to open two cuttings in area 3, **trench 3a** and **trench 3b**.

Trench 3a, measuring 4m by 2m in extent, was opened around one of the concrete pillars to ascertain if a foundation trench had been dug around it. Removal of humic topsoil revealed a layer of natural subsoil and natural bedrock. No foundation trench was detected around the pillar suggesting that it was pile driven. Removal of the humic soil also exposed a length of copper wire that extended in a N-S orientation across the trench. This is the remains of an earth system once used for the transmission masts. Another feature was uncovered at the southern end of trench 3a – a deposit of mid brown silty sand. Excavation of this revealed an irregular-shaped pit measuring 0.82m by 0.64m in extent, and 0.38m in depth. A shard of a ceramic beer bottle (stoneware) and two miscellaneous iron artifacts was recovered from the fill of this pit. There is the possibility that this pit is associated with pre-wireless station activity such as an earlier farmstead in the area. Such a feature could be contemporary with the stone lined drain uncovered in Area 1. This pit was subsequently truncated, creating a larger sub rectangular pit measuring 1.16m by 1.08m in extent, and 0.40m in depth. Seven pieces of refined earthen whiteware, a small iron cog and an iron wedge were recovered from the fill of this extended pit. **Trench 3b**, measuring 2m by 2m in extent, was opened around an eighth concrete pillar that was partially exposed during the course of test pitting in the area. No foundation trench was detected around the pillar suggesting that it was pile driven. Besides the pillar, no other structures, features or artifacts of early twentieth century date were visible in this trench.

Conclusion

This summer's MUN Archaeology field school in the grounds of the Admiralty House Museum did not reveal any subsurface features that could be definitively associated with the naval wireless station that was in operation on the site during the Great War. Excavation in **Area 1** revealed the remains of a stone lined drain that predated the construction of the wireless station. This feature was probably associated with a homestead or farm in the nineteenth century, and provides visible testimony of the earliest European settlement in the area. Testing in **Area 2** did not reveal any traces of an ancillary building known to be standing in that part of the wireless station complex. Subsequent land clearance and landscaping in the mid and late twentieth century may have removed all sub surface traces of this building. However lengths of copper alloy wire were uncovered in a number of test units which are probably the remains of an earth system installed for the transmission masts. Testing and excavation in **Area 3** did not reveal any features except for a pit that produced a small collection of modern ceramic and metal artifacts – a feature more likely to be associated with civilian activity in the area rather than the operations of an early twentieth-century naval installation. Lengths of copper alloy wire were again uncovered in the area, representing the remains of an earth system for the transmission masts, though whether installed by the Royal Navy in 1914/15 or by later civilian broadcasters, VONF and CBC, remains unknown.

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PAO Field Work Report – 2013

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As per the terms of PAO Permit 13.43, a brief survey was conducted on the northeast shore of Red Indian Lake across from Millertown. A probable housepit near Anderson Point was briefly investigated (DeBd-07). This research indirectly relates to a TOR developed by the PAO in 2012 for assessing some possible cultural depressions reported for this area.

The northeast shore of Red Indian Lake has considerable historical significance. Late 18th and early 19th century contact between the Beothuk, the British military and Euro-Newfoundlanders occurred there for many decades. Local historian AW Taylor, in researching the history of Millertown and surrounding area, including "Indian Point," noted a number of possible cultural depressions on this section of lakeshore.

Anderson Point Pit

Considerable documentary and archaeological work done on Red Indian Lake by Howley, Speck, Locke, Taylor (Garth), Marshall, Devereux, Thomson and Sproull-Thomson, Schwarz, Holly and more recently by Penney and McLean provided indirect support to A.W. Taylor's provisional interpretations that some of lakeshore depressions were "cultural." That work also served as the basis for the PAO developing the aforementioned TOR for assessing some of these pits, all of which guided this research.

During a brief visit to the site area in summer 2007, I noted the heritage potential of Anderson Point. However a significant amount of pulp wood from historic logging activity was scattered throughout the area. The lakeshore was clearly disturbed by seasonal flooding, yet vague depressions could be seen. In 2013 Mr. Taylor and the author cleared most of the debris from one area in question and undertook a brief surface survey with limited test pitting. A cobble lined floor and walls strewn with considerable wood debris were encountered (see photos). No artifacts *per se* were recovered, though wood and lithic samples were collected for further analysis.

Little can be said at present about the Anderson Point depression, but it does resemble those previously investigated in the area. Pits with low cobble walls and/or internal cobble-lined features have been previously noted in the archaeological record for the Exploits River basin. They have been interpreted as Beothuk, Mi'kmaq and European, depending on circumstances.

This depression is clearly on a stretch of Beothuk-settled lakeshore as recorded in the 1820s and earlier by various primary sources, including the Beothuk woman "Shawnadithit." Pre-contact use of the area is also indicated by random finds of Recent Indian and Maritime Archaic tools from various "interior" lakeshore sites. Further field work at Andersen Point will likely confirm the depression function and cultural affiliation.

Anderson Point Pit

In addition to the Andersen Point research, a second brief survey was conducted on nearby Two Mile Island in the Exploits River between Millertown and Badger. Locke, Thomson, Holly and Reynolds had recorded a variety of cultural depressions and rock features here over the past forty years. Some of these previously located features were re-recorded and three additional (cultural) depressions were photographed and mapped. Based on size and shape two of these may be housepits, while a smaller one suggests a cachepit. Future field work will help to determine the nature of these features.

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Burnside Heritage Foundation Inc. Archaeology – 2013

Laurie McLean
BHF Archaeologist

The Burnside Heritage Foundation Inc. conducted five archaeological projects in 2013. They are summarized below, organized per Permit Number. Laurie McLean was the permit holder in all of the projects.

Figure 1. Piper's Hole 1 (ClAn-03)

Piper's Hole, Placentia Bay (13.18)

Laurie McLean and Corey Hutchings surveyed the north and south shores of Piper's Hole over six days between May 31 and June 7. Most of the area was surveyed through walking, assisted by speedboat when necessary. Ten new sites were recorded. They consist of five unknown aboriginal, three historic/aboriginal and two historic localities. Piper's Hole-1 (ClAn-03), one of the historic/aboriginal sites, is a possible Beothuk occupation, based on the recovery of a headless wrought iron nail and 33 non-diagnostic lithic artifacts. The four other historic components include the alleged homestead of John Barrington, a prominent late nineteenth-century Mi'kmaq resident. The Piper's Hole shoreline has suffered extensive erosion that has impacted the archeological record. Nine of the 10 new sites yielded surface finds, four of the localities produced artifacts from test pits. Thirty-one of ClAn-03's 33 stone artifacts were found on the surface of a blowout and eroding banks. In total, 49 of 53 lithics found in the survey were collected from the surface of eight sites. Nine of 14 historic artifacts were taken from sites' surfaces.

Remains of a late nineteenth century pulp mill at the mouth of Black River (ClAn-02) were re-visited and were found in good condition. The re-visit identified the remains of a concrete out-building and other features associated with the mill. A substantial rubble pile that appears to have resulted from dredging the river mouth was identified on the opposite side of the river.

Dildo Run Survey (13.21, 13.21.01)

Laurie McLean was assisted by MUN archaeological graduate student David Craig and Boyd's Cove resident Gerald Pearce in surveying the southwestern end of Dildo Run, Notre Dame Bay. Twenty-seven islands and islets were examined, with nine new sites identified on four islands. The new sites consist of four Palaeoeskimo, one tentative Palaeoeskimo and four unknown aboriginal localities. These results and those from another Dildo Run survey conducted in 2012 show clusters of sites where the channel intersects with the Bay of Exploits and Summerford Arm (McLean 2013). The sites represented by non-diagnostic lithic artifacts could include a Beothuk camp seen by George Cartwright in 1770. While diagnostic Beothuk objects were not recovered from the new sites, the absence of settler material implies relatively safe conditions for late-period Beothuk visits.

The Inspector Island (DiAq-01) site was re-visited and a new Beothuk housepit was identified 49.91 metres from the previously known closest

Figure 2. Arrow points to West View Island, location of DiAq-15-18, found in the 2013 survey. Photo is taken from a low cliff behind DiAq-19, another new site.

housepit there. A test pit dug in the proximate central hearth area yielded a wrought iron nail, an iron concretion, calcined bone, charcoal and fire-cracked rock. A fragment of hematite was found in a second pit dug in the housepit interior. Inspector Island may have been one of the Beothuk camps seen by Cartwright although it seems slightly north of the described location, "…contiguous to the east side of Little Coal Hall…" (Cartwright 1772:4).

The stone retaining wall erected in 1987 along the island's 70-80 cm high eroding south shoreline is mostly intact, although the exposed upper 20 cm of the earthen wall of a Beothuk housepit immediately behind it is deteriorating. Excavation of the endangered part of Housepit 2, followed by rebuilding the retaining wall, are advised here to salvage and protect the eroding feature. Eroding shorelines are widespread throughout the study area, but DiAq-01 contains the only deteriorating cultural context. The Causeway site (DiAq-04), found in the 2012 survey has an eroding culture layer. This site was re-visited during 2013 and 7 flakes were found.

Survey Of South Samson Island (13.22)

Laurie McLean, assisted by Gerald Pearce and former South Samson Island resident Wilf Perry, surveyed South Samson Island from June 22-24. Although the island is accessible via a short boat ride from Cottlesville, it is an exposed location and the high smooth bedrock shoreline surrounding much of it suggests frequent heavy seas often make landing and departing from here impossible. This at least partially explains the dearth of archaeological material on South Samson Island. Tests at three requested cabin locations and other parts of the western shore were sterile. Similarly, the eastern shore tested sterile, except for a waterworn retouched flake found on the beach of a small, protected cove (DiAr-18) midway along its length.

In situ Dorset Palaeoeskimo artifacts were found in a small unnamed cove on the island's southern end (DiAr-16). Thirty-three stone items were recovered from four test pits on a narrow metre-high terrace overlooking the beach. Four-hundred metres east from this cove, three waterworn flakes were found in two test pits dug on a bank in another small cove (DiAr-17). Given the small amount of precontact and Beothuk material on South Samson Island, the three waterworn objects are tentatively interpreted as Palae-

Figure 3. Endblade fragment and endblade preform found in a South Samson Island-1 (DiAr-16) test pit.

oeskimo, probably associated with the DiAr-16 locality.

South Samson Island's historic settlement was located on the island's north end, opposite the south end of North Samson Island. This area now harbours a cluster of well-maintained cottages and summer homes. Substantial wagon roads linking the former homesteads are still visible. The community graveyard has been restored as well. The eroding bank and large meadow of a vacant property, formerly Brown's Fishing Room, at the east end of the former community was tested. A headless wrought iron nail from a test pit is similar to Beothuk items, but no additional artifacts were recovered. The large meadow was littered with 25-30 shallow test pits that had been dug by a nearby cabin owner in conjunction with a metal detector. The crew was shown a small bucket of metal objects typical of a nineteenth century-early twentieth-century domestic site. The owner reported finding a Newfoundland coin in his test pits. This person had been told by the previous owner of his property that a large stone artifact had been found there. The earthen bank surrounding the cottage had been removed by the owners, revealing a long profile. The crew was give permission to examine the extensively landscaped area which is sterile of cultural material. The Farmer's Head Beothuk burial site (DiAr-03) was re-visited during the final day of the survey. There is no sign of the former rockshelter or associated cultural materials at the site.

Bonavista Bay Research (13.23)

The author was given a permit to continue monitoring archaeological sites, conduct small-scale excavations at the Beaches (DeAk-01) and survey the coastline surrounding Burnside, Bonavista Bay. The Burnside Heritage Foundation Inc. interpretation centre was open from July 1 until late October and received over 500 visitors. The author also provided information to private boaters he met at the Beaches site

Figure 4. Part of the eroding bank in front of Area B at the Beaches (DeAk-01). Sections of wooden retaining walls/breakwaters are visible in the left and upper left sides of the photo.

(DeAk-01). The number of private boats landing here for picnics, etc. has significantly increased over the past few years. There has been no sign of illegal digging at the site, but it is possible that some of the persistent disturbance along the eroding bank is attributable to people looking for souvenirs.

Planned excavations of part of the Beaches' 150 metre-long eroding bank were not possible due to insufficient staff/funding. The author made a number of visits to the Beaches, assisted by volunteer Anita Johnson-Henke on one trip. The 18 year-old, 90 metre -long wooden retaining wall built by the Burnside Heritage Foundation is collapsing and is not offering much protection to the site's eroding bank. Newer sections of wooden retaining wall, totalling 40 metres in length, provide better protection, but the oldest part of this barrier, built in 2004, is in need of repair. This section has been protecting the remaining six Beothuk housepits at the site and the southernmost housepit requires immediate attention, namely salvage excavation and/or repairs to the retaining wall to avoid losing it to erosion.

Large chunks, up to one metre in diameter, had eroded from the 15-metre-long unprotected piece of Area B's bank. This portion of the Beaches contains Dorset Palaeoeskimo and Beaches Indian components, potentially offering information about the succession of the latter over the former. The Area B bank requires immediate mitigation to salvage endangered archaeological resources. Flakes were collected from the eroding bank and two pebble beaches bordering the site to the east and south. No diagnostic objects were recovered.

The author made two trips to the Bloody Bay Cove quarry where 11 archaeological sites have been identified. Burnside Heritage Foundation Inc. excavations since 1989 have recovered over 400,000 lithic artifacts from the quarry and have identified numerous utilized outcrops and associated reduction stations used since the Maritime Archaic. The visits in 2013 provided the opportunity to analyse a large monolithic feature at the Charlie site (DeAl-11) that suggests spiritual significance in addition to providing stone for manufacturing tools. One or some of the people who visited the Charlie site to chip stone from the bedrock carved a male fertility symbol from a 4.5 metre-high upright boulder that appears to have separated from the bedrock ridge six to 10 metres away. The large fragment has been appropriately chipped on its eastern and southern sides to enhance its anthropomorphic qualities. Large flakes removed from this monolith and other impractical locations in Bloody Bay Cove are analogous to lithic material from other quarries where outcrops were utilized based on their proximity to ceremonial or sacred locations. Some lithic sources associated with prominent landforms become encoded with a meaningful sense of place within a community's cultural landscape (Carr and Bozhardt:134).

The Charlie site monolith is quadrangular with sides 3.6 to 1.6 m long at its base. It sits on sloping bedrock and is surrounded by quarry debris - large flakes, cores, large crude bifaces and granite hammerstones that constitutes as much as 50% of the Charlie site's 2500 m^3 talus slope. It has been chipped to a height of 3.8 m on its northeast corner, requiring the knapper to stand on a ladder or scaffold to reach the upper levels. Its north and west sides are smooth and partly lichen-covered. They have not been worked and the object's special significance is not apparent from these sides. This suggests that the artifact's creator initially perceived its symbolic potential from a southern or eastern perspective.

The monolith appears to be part of a larger ceremonial/ritual section of the Charlie site (DeAl-11). Previous excavations at the base of a worked two-metre high ridge 10 metres east from the monolith uncovered a thick charcoal layer near the bottom of a 1 x 2 m trench (McLean 1999:18). This feature is similar to small hearths/charcoal deposits with no obvious function at Neolithic mines and quarries. The hearths/charcoal deposits may possess ritualistic importance, possibly associated with purification of mines and tools (Topping 2010: 28). This suggests that the people responsible for the charcoal layer at the foot of the frequently utilized rhyolite outcrop modified the nearby monolith. This charcoal layer was dated to 1380 $\pm$ 70 BP (Beta-120557) indicating that late Palaeoeskimos and Recent Indians obtained supplies of stone from the upper part of the site (McLean 1999:20). Earlier Palaeoeskimos and Maritime Archaic took stone from outcrops located as far as 40 metres to the west and up to 35 metres downslope.

This large effigy is unique in Newfoundland and Labrador, but similar megaliths are numerous throughout mainland North America (Ball and Waggoner 2010; Brown, R.S. et al: 1986). The wooden

male doll recovered from a Beothuk child's burial on Big Island, Piley's Tickle presents the closest analogy from Newfoundland (Marshall 1996:398). The possibility of Beothuk ancestors producing the monolith fits within the time frame set by the radiocarbon date of 1380 ± 70 BP.

The identification of a ritualistic/ceremonial component at the Charlie site (DeAl-11) has implications for other unusual features within Bloody Bay Cove including a worked six-metre-high cliff on the north edge of the Bloody Bay Cove Summit (DeAl-09) and numerous discrete activity areas at this site. Many users of the summit's outcrops walked past the Charlie site's outcrops, and the monolith, in order to access those located up to 150 metres beyond. These people probably enjoyed the sweeping view of the coastline available from the summit. The Bloody Bay Cove Overhang (DeAl-18), a small rockshelter that housed one reduction activity during the 5000 years the quarry was utilized, is another provocative feature and many of the extra-large artifacts that have been found in Bloody Bay Cove, including a 233 mm-long biface, probably had spiritual significance as well. Interpretation of the ceremonial/ritualistic significance of the Bloody Bay Cove quarry is only slightly beyond a preliminary stage, but promises to be an enriching exercise.

Figure 5. Charlie site (DeAl-11) fertility symbol.

A new site was reported at Brimmes' Head (DeAj-07), Lower Flat Island. A grey-green chert-like vein runs horizontally through sandstone/shale bedrock on the island's southern tip. This silicified material provided an alternative to the more popular Bloody Bay Cove rhyolite that could be obtained 16 km to the southwest. The beach above the bedrock shoreline is littered with waterworn cores and flakes of the green-grey material. Ten cores, 13 flakes, two retouched flakes and a retouched/utilized flake were collected. A thick, round piece of heavily retouched glass suggests a Beothuk component. A root cellar and associated debris from the nineteenth-twentieth century settlement are present on the moss/grass inside of the beach.

Re-Identifying Two Fire-Cracked Rock Features and a Possible Longhouse Hearth at Aspen Island-2 (DfAw-05) (13.50)

The author and Grand Falls-Windsor outfitter Don Pelley were assigned the task of re-identifying two fire-cracked features, sometimes referred to as poorly-defined housepits, and a 40 foot, or 15 metre-long, hearth thought to be possibly associated with a longhouse or drying house/smoke house (Locke Field Notes:np). These features were originally identified by an

Figure 6. Brimmes' Head (DeAj-07).

Figure 7. Brimmes' Head (DeAj-07), vein of chert-like material.

Figure 8. Brimmes' Head (DeAj-07, worked boulder on beach.

Figure 9. Vestigial hearth/Feature 11 at DfAw-05.

avocational archaeologist in the 1960s and the long hearth was re-visited in 1988. A 2012 re-visit of DfAw-05 found three Beothuk housepits on a cobble ridge, but could not find the specified features which occur on a level section below the ridge (McLean 2013).

The 2013 survey met with much more success. A 60 x 25 m area of the site's lower terrace was tested by digging 35 x 35 cm pits three metres apart. Features 5 and 12 were found through this approach. Feature 5 is a 16 x 3-5 m concentration of fire-cracked rock with caribou bone and bird bone clustered in its central area. Small amounts of charcoal are present as well. This feature appears to be a former long hearth or midden rather than a Beothuk housepit. Feature 12 is a much smaller entity located six metres south from Feature 5. It yielded fire-cracked rock, a microblade and three small flakes from a test pit and a 24 cm high eroding bank. A small amount of Dorset material had previously been associated with Features 5 and 12 so these artifacts were not a surprise.

Feature 11, the long hearth, was found at beach level at the foot of an 80 cm high eroding bank. Part of the hearth is covered by a 2.2 x 2.1 section of bank that had broken free from Aspen Island, but its maximum dimensions of 2.6 x 0.8 m (2.08 m^2) represent 17% of the original hearth, assuming its dimen-

Figure 10. One of the storage pits re-identified at DfAw-05 in 2013.

sions to be 15 x 0.8 m. Exposed tree roots along this shoreline show that up to 4.6 m of the island has eroded away. The presence of two underwater fire-cracked rock clusters up to 18 metres beyond the hearth suggest that an even wider tract of bank has been lost. These clusters and a third FCR concentration 1.1 m southeast from the hearth graphically depict its destruction through erosion. A polished abrader and an intrusive wire nail were recovered from the hearth. This feature requires immediate excavation to salvage its remaining information.

The systematic surveying of Aspen Island-2 identified a previously unknown deposit of caribou bone 18 metres from the shoreline. This new feature, # 15, is tentatively interpreted as a Beothuk butchering area or a cache. Another new feature, #14, was found 9 metres north of the hearth and 4.5 metres southwest from Feature 12. It consists of a 3 x 1.5 m pile of mostly unburned cobbles protruding through the beach surface. Its function is unknown. Its proximity to the long hearth and the extensive evidence for other hearths throughout the site suggest it could be a stockpile of boulders destined to be heated in Beothuk fires.

The implementation of this survey during mid-October meant the summer's vegetation had died back, facilitating surface analysis of the site. This permitted re-identifying four storage pits along the eastern sides of Housepits 1 and 4 on the upper ridge. A new housepit, Feature 13, was found 17 metres northeast of Housepit 1 within forest. This is a five-sided foundation with walls between 5.9 m and 2.2 m long.

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Archaeological Monitoring at Yellow Belly Brewery & Public House, St. John's, NL.

Stephen Mills
Independent Consultant

In April, 2013 an excavation beneath the sidewalk at the corner of Water Street and George Street in downtown St. John's became the focus of an archaeological monitoring project. (Figure 1) Yellow Belly Brewery and Public House needed to expand their brewing capability by adding a subterranean room on the east side of the property, beneath the sidewalk of George Street. This expansion required an excavation some 14m (46') long by 4m (14') wide and between 2.75m and 4.25m (9-14') deep. The building was built circa 1847-1848 making it one of the oldest in St. John's and one of few in downtown St. John's to survive the Great Fire in 1892. It has Provincial & Municipal designations as an historic structure. Situated in the heart of the historic downtown commercial and residential district this property was recognized as having a high potential for archaeological resources. Furthermore, previous archaeological assessments uncovered intact features and cultural material nearby.

Figure 1. Yellow Belly Brewery and Public House.

Yellow Belly Corner was closer to the harbour in early times; however, infilling activity has pushed the water's edge about 250 feet to the south. The location appears on maps of St. John's as early as 1728. At various times the locality was know as Gallows Hill, Burstheart Hill (or Burstheart), Kent's Cove, and Nobles Cove with the actual street corner alternately known as: Brennans, McCourts, Rankins, Steads, Strickland's and now Yellow Belly Corner. (Gerald Penny and Associates 2005: 4, 13, 23 & Schedule F; 2010:34-37) One map, drawn in 1751, shows a brook (later known as Yellow Belly Brook) flowing through the area, emptying into Beck's Cove. (Ibid:10) The same map shows a series of fishing stages along a narrow path that later became the Lower Path and eventually Water Street (Figure 2).

The William Noad map of St. John's (drawn in 1849, amended 1852) is the first plan to identify the building that would become the Yellow Belly Brewery and Public House. (Noad 1849) (Figure 3) This plan shows Yellow Belly (# 775) as one of five buildings owned by Duggan and Mahon and leased as a shop to a Robert Prowse. The same building appears as a gro-

Figure 2.Detail from 1751 map of St. John's showing Yellow Belly Brook and the project location at the arrow. (Bramham & Hylton 1751, City of St. John's Archives)

Figure 3.Detail from the 1849 William Noad map of St. John's showing the Yellow Bellow Brewery &Public House. (#775) (Source: City of St. John's Archives)

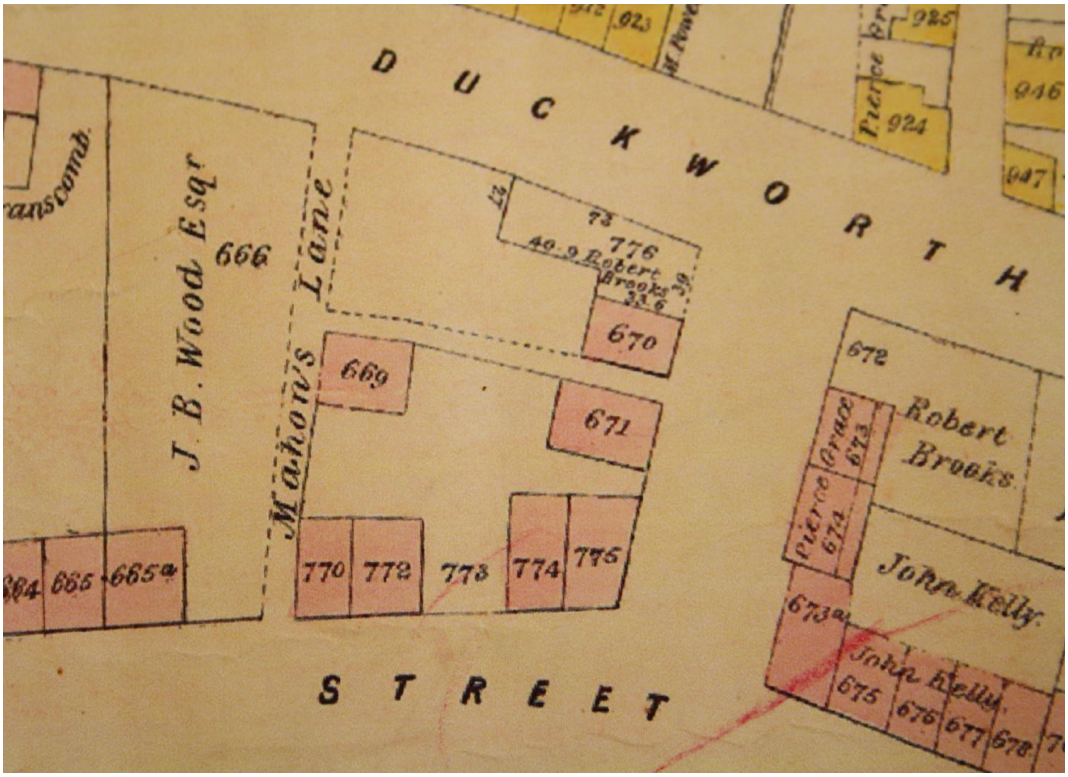

Figure 4. The building's foundation exposed.

Figure 5. Infilled subterranean doorway.

cery on the 1880 and 1914 insurance plans for the city. (Goad 1880, 1914)

There were four "great" fires in St. John's: 1779, 1817, 1846 and 1892; each destroying virtually all the buildings around Becks Cove. The Yellow Belly building was built within a couple of years after the 1846 fire and it was one of just a few buildings on Water Street to survive the Great Fire of 1892. One of the most dramatic changes to downtown following the Great Fire of 1892 was a re-alignment, or straightening, of Water Street while George Street was extended eastwards to Beck's Cove Hill before turning south to Water Street. In the first decade of the 20th century the building was extended northwards incorporating a portion of the foundation of the building that once stood directly behind Yellow Belly to support the new Yellow Belly extension. The footing for that extension was exposed during the monitoring project.

A 2m-deep test pit, 1.5m square, was mechanically dug near the center of the impact zone to systematically record the stratigraphy prior to the main excavation. Five strata (Events 1-5) were recorded in this test pit, each deposit is consistent with those encountered throughout the project trench. Each of these events measured about 1m in depth, extending virtually the entire 14m-long trench. Modern service lines caused some disturbances in several strata.

Several structural features were exposed during this project, including the foundations of the main building and its northward extension and the subterranean entrance to the basement. (Figures 4 & 5).

Over 250 artifacts were collected, processed and entered into a digital database. Ceramic was the largest single class of artifacts recovered, followed by glass and clay tobacco pipes. Miscellaneous finds included two copper alloy artifacts: a coin and a broken spigot, a gun flint and several oyster shells. The ceramic collection included Creamware, Pearlware, Refined White Earthenware (RWE), Flow Blue RWE, Coarse Earthenware (CEW), Coarse Stoneware, English White Salt Glazed Stoneware and Chinese Porcelain.

CEW vessels included two Iberian storage jars, a Bristol-Staffordshire slip-trailed bowl or platter, a South Somerset porringer and two unidentified pots. Precisely dating coarse earthenwares is difficult as these utilitarian vessels had been made for many centu-

Figure 6. Left: a circa 1770 black transfer-printed Creamware sherd from Yellow Belly; right: a tea pot with a similar compass design. (Source:www.my-antique-world.blogspot.ca)

ries throughout much of Western Europe. That being said, the Yellow Belly coarse earthenwares are consistent with vessel types found in many 17th - and early 18th -century sites in Newfoundland, including several in downtown St. John's. At least two mid-18th-century Buckleyware vessels were also represented as is a Midlands Purple vessel.

Stoneware vessels consist of two mid-18th-century English White Salt Glazed examples including a bowl decorated with a Scratch Blue design; a brown salt-glazed jug with a capacity of about 2-3 gallons; an 18th-century Westerwald tankard; and several 19th-century bottles, pots and jugs.

At least 16 Creamware vessels are represented. Creamware was the most popular refined earthenware produced in the third quarter of 18th-century Europe and is commonly found on North American sites from that era. Creamware tableware sets were sought after by the working class, the upper class and even monarchy. Early tableware forms were usually undecorated, with later varieties having hand-painted and transfer-printed designs. (Hume 1969: 124). Although the Yellow Belly Creamware collection is dominated by tablewares, including plates, platters and bowls, a teapot and two chamber pots are also represented. Most of these were undecorated; however, several moulded, transfer printed and painted vessels were also present. One unique find was a palm-sized tea pot sherd with a black transfer-printed nautical design. (Figure 6)

Whereas Creamware dominated dining tables from the 1760s and 1770s, Pearlware swept the ceramic marketplace after its introduction in the late 1770s lasting until at least the 1820s. (Hume 1985:129 - 130) If the findings at Yellow Belly are any indication, Pearlware was no less popular in St. John's; at least 40 vessels were represented including bowls, platters, plates and cups, mostly decorated with hand-painted or transfer-printed floral or chinoiserie designs. Other designs included classical scenes and even one bowl sherd featuring a deer. Two varieties of hand-painted shell edged rim designs were present: in blue and green. One particularly nice find was about a quarter of a Pearlware jug decorated in a hand painted polychrome floral design. (Figure 7)

Glass vessels included a tumbler, goblet and bowl and at least ten alcohol bottles. Nine of the bottles are squat cylindrical or true cylindrical forms dating from the 1730s to about 1850. (Wicks 2003: 20-21) One of these was from a champagne bottle. The tenth bottle is a "case bottle" and could well be among the oldest finds from the site. It had a capacity of approximately a quart (750 ml.).

Surprisingly few tobacco pipes were encountered (N=14). This could be due to the nature of the excavation as digging with a backhoe is not the best way to recover small artifacts, such as pipe stems. One English-made pipe bowl, from the top of Event 3, is of a style common from 1690 to 1710. Two late 18th-century bowls were also found as were 10 stem fragments with bores ranging from 4 to 6/64ths of an inch.

It is evident from the matrix of Events 2 and 3 that these are re-deposited strata. The soils were very mixed, there were many rocks and a few bricks and, importantly, artifacts of varying ages were found

Figure 7. Left: Pearlware jug sherds with a hand painted floral motif from Yellow Belly; Above: similarly decorated pearlware jug, circa 1800. (Source: www.hanesandruskin.co)

throughout both deposits. These deposits were likely produced as soils were removed to create the cellar of what was to become the Yellow Belly building. That process effectively raised the surface of the surrounding area at least two or more meters and possibly also played a role in burying and/or relocating Yellow Belly Brook. Historical cartographic evidence has the street level of this end of George Street sloping towards the harbour at Becks Cove. Although the surface was raised in the 1840s, and possibly also somewhat levelled, there was still a noticeable slope towards the harbour.

As the date of the building's construction is known (circa 1847) and there is no evidence for changes in the building's two above-ground doors, the modern street level must be at or very close to mid-nineteenth century Water Street and the upper end of Becks Cove (street). This is not to say that someone passing by Yellow Belly brew pub is walking on the same surface as a nineteenth-century pedestrian. The virtual absence of artifacts post-dating 1850 suggests the historic surface was removed, likely during modern sidewalk and road construction and replaced with modern levelling fill (Event 1).

The only discernable evidence for a post-1850 deposit (aside from the modern fill in Event 1) was Event 5, a localized deposit of brick bats and rubble recorded at the top of Event 2 near the center of the trench. This brick and rubble was probably used to fill a depression on the east of the building, probably shortly after the Great Fire of 1892. Similar fill-related deposits of structural debris, noted in other excavations in downtown St. John's, have been linked to the Great Fire and the clean up in its aftermath (Mills 2003, 2004).

It is most unlikely that Events 2 and 3 were redeposited from far away. Many of the ceramic artifacts were of considerable size and many of the glass bottle fragments were mostly intact. The relative condition of

these artifacts suggests these cultural layers did not get moved again after being deposited on the site. The artifact-laden Events 2 and 3 probably came from the excavation for the basement of the Yellow Belly building. These artifacts were therefore likely discarded by area residents before the Yellow Belly building was constructed.

The William Noad map of St. John's (drawn in 1849 and amended in 1852) is remarkable in that it identifies the owners and/or occupants of the buildings and also their occupations. These craftsmen (for the most part) and their families often lived above their shops. It is reasonable to presume that similar businesses and habitations were located in the downtown area before the mid nineteenth century; possibly well into the eighteenth century. They were the merchants, craftsmen or ship's personnel who made their livelihoods on the shores of St. John's harbour. The social scaling of the artifacts from the Yellow Belly monitoring project indicate that those Water Street residents maintained a quality of domestic life similar to their counterparts in England, Ireland and the colonies along the North American eastern seaboard. Another important discovery from this monitoring project was the sheer presence of a rich deposit in such a busy part of downtown St. John's. The discoveries from the Yellow Belly project certainly justify the requirement of similar monitoring projects in downtown St. John's.

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2013 Archaeological Investigations, Upper Lake Melville, Labrador

Scott Neilsen,
Memorial University of Newfoundland—Labrador Institute

In 2013 I had two separate archaeology permits. Although the amount of fieldwork was less than it has been in other years since moving to Labrador, the results were certainly no less interesting. The first permit, 13.34, was to continue the archaeological work at the significant Intermediate period site, FjCa -51, in Sheshathshiu. This work went on over the course of the summer, between July and October, as time and weather permitted. The second permit, 13.52, was to visit the vicinity of the Intermediate period site FhCb-04, which I excavated as part of my masters research in 2004, to collect a biface and assess other potential features, which had been reported by employees of the Innu Nation (figure 1). The highlights of this fieldwork are reported below.

Figure 1. Showing locations of archaeology sites FjCa-51 and FhCb-04.

Sheshatshiu Archaeology Project, permit 13.34

Fieldwork was undertaken by myself and summer student Zachary Michel, with assistance from occasional volunteers: Anthony Jenkison; Jodie Ashini and her SIFN summer cultural youth workers; staff from the Torngat Secretariat; and Morgon Mills and his summer students from the Labrador Institute of Memorial University. The goal of the 2013 field season at FjCa-51 was to begin excavation of the features uncovered in 2012. Excavation work was continued in the 24 excavation units in the southwest portion of Area 14. This location was designated feature area 1 (FA-01), and contains the remains of two circular hearths and a third, more ephemeral hearth – all in close proximity. The working assumption is that the partially deconstructed hearth pre-dates the two circular hearths, and was partially deconstructed and incorporated into the southern most circular hearth, centred in unit S23W19 (figure 2).

All units in FA-01, except those con-taining the three features, were excavated to sterile. Numerous photographs of the two circular hearths were taken, and will be used to construct a 3D image of the location. In addition to the grid string visible in Figure 2, an additional string was erected bisecting the two circular hearths northeast to southwest. This string was used to guide the excavation of the southern most circular hearth, removing the portion of this fea-ture to the east of the line. The goal of this approach is to view the stratigraphy of both the circular hearths, to try and understand if they were constructed at the same time, and to learn if these two features post-date the remains of the third feature (Figure 3).

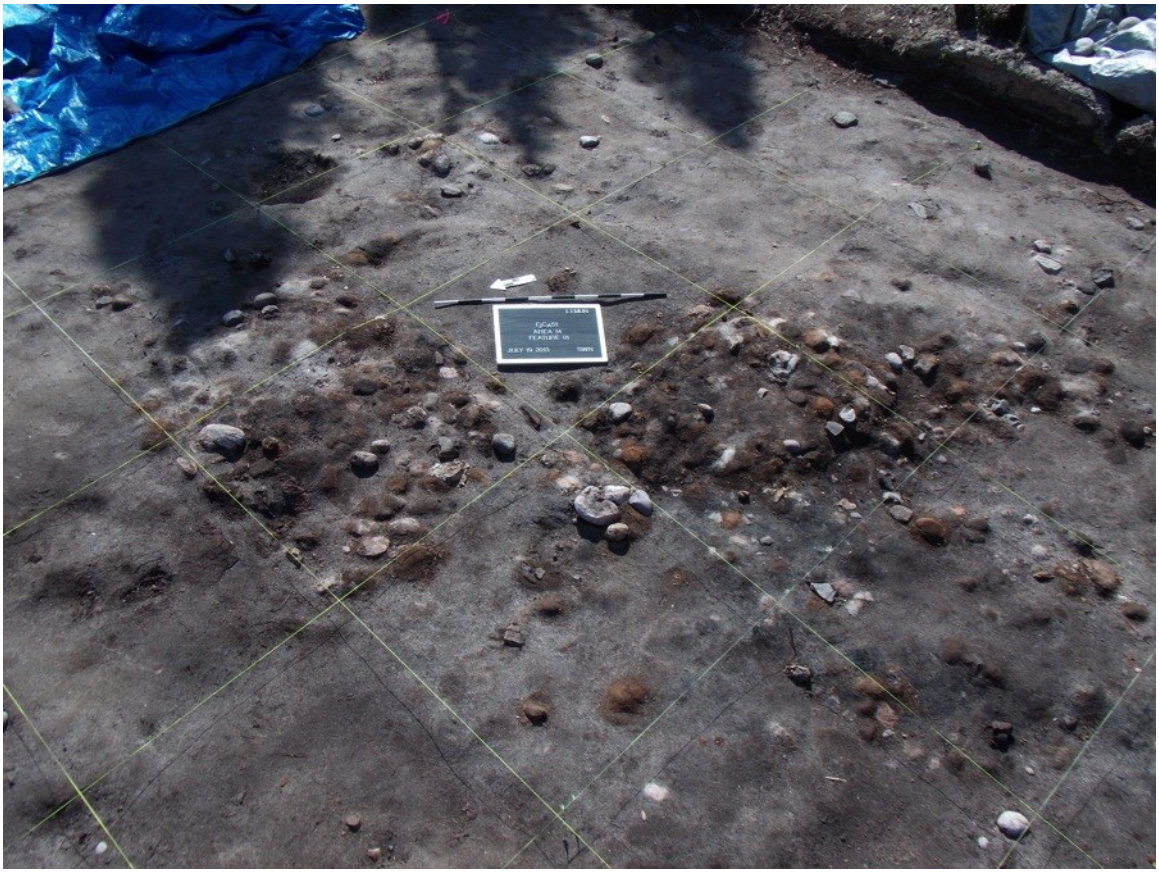


Figure 2. Showing FA-01, with the two circular hearths focused in the centre. The third hearth, which is thought to predate the circular hearths, can be seen in the bottom right quadrant of the image.

Figure 3. FA-01, with southern feature bisected, plus a close-up of the feature stratigraphy. Note the coarse sand in the centre of the feature, separating the layer of rounded cobbles at the base, from the layer of FCR, ash and charcoal at the surface.

Figure 4. Additional features identified in association with the two circular hearth features in FA-01. Left image shows two small post-holes aligned in the centre of the frame – both of which are in close proximity to the northern most circular hearth. Right image includes a small stone, unifacial scraper just above the north arrow, as well as the circular arrangement of rocks and red ochre next to the photoscale.

In the process of excavating the surrounding square and bisecting this hearth additional, associated, features were identified (Figure 4), more debitage and tools were collected, charcoal was sampled, and the majority of the soil and other contents of the feature were collected for analysis in the lab. All the tools recovered at this location to date are associated with processing activity. Most of these tools were recovered from within the circular hearth, while the debitage is spread over the hearths and in the units surrounding them. Of the two unifacial "scrapers" recovered from the hearth feature, one is quite spectacular, and closely resembles the "mitshikun" utilized by Innu today (figure 5).

By the time excavation of the surrounding squares and the bisection of the southernmost circular hearth were complete the forecast was predicting snow and freezing temperatures. Given this, it was too risky to attempt to bisect the second circular hearth, so the area was covered and prepared for winter. Preliminary results, as seen in Figure 3, seem to support the idea that the southern circular hearth is overlying an early feature at the site. This should be confirmed after the northern most circular hearth in FA-01 is bisected and then the remain-

Figure 5. Modern Innu "Mitshikun" lying alongside the chert "scraper" from image 4.

ing portion of the southern hearth is removed, to determine if the layer of cobbles at the base of the feature, which begins near the feature centre, extends beneath the circular hearth, and connects to the location of feature three, as seen in Figure 2. If it does not, out hypothesis will be revised.

In addition to working on this excavation, summer student Zachary Michel spent time sorting charcoal samples from the 2009, 2010 and 2012 field season, in preparation of their submission for dating. Currently, 19 charcoal samples, from areas 3, 4, 5, 6, 7, 9, 10, 11, 12, 13 and 14 (which is from the above feature) have been submitted for AMS dating. I anticipate that additional GIS work and soil floatation will occur this coming spring, and we are currently preparing a funding application, which, if successful, will allow us to return to a full contingent for the 2014 field seasons, with the intention of completing the excavation of Area 14, and developing a plan for the community to deal with the remaining, undisturbed resources at FjCa-51.

None of this work would be possible without the continued support of the Sheshathshiu Innu First Nation, the Labrador Institute and Department of Archaeology of Memorial University, and the Provincial Archaeology Office.

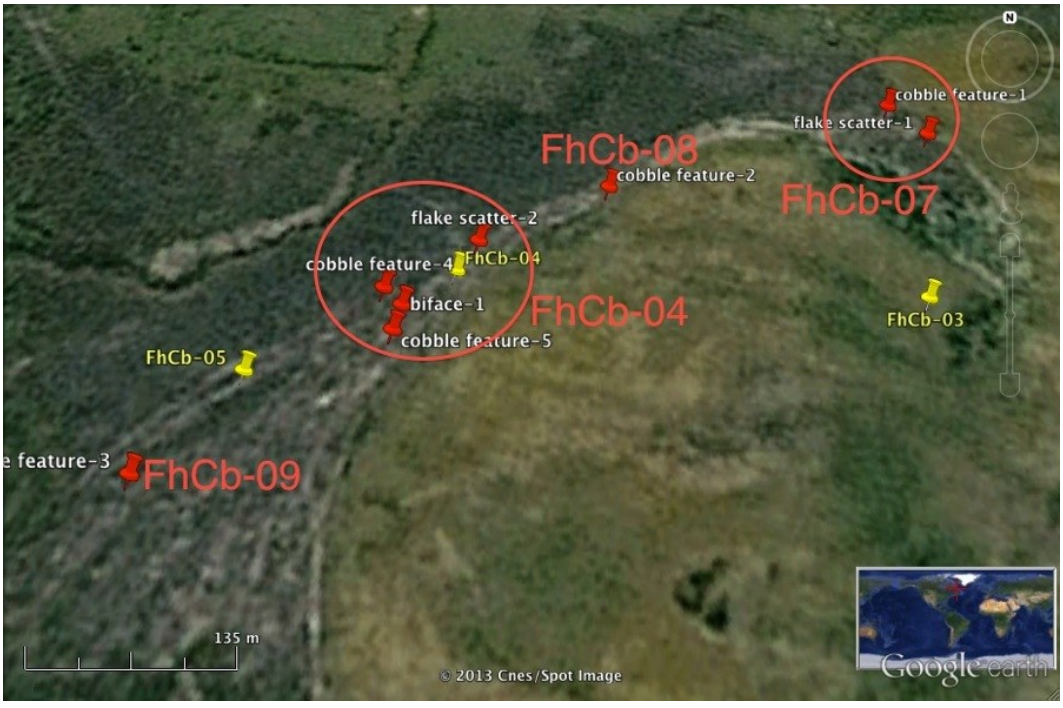
Thank you.

Follow-up investigations at FhCb-04, permit 13.52

Anthony Jenkinson and I did the work under permit 13.52 on October 11, 2013. The goal was to collect one quartzite biface and observe and record the locations where flake scatters and potential cobble features had been identified by Innu Nation Construction Monitors, during a landscape training session that was undertaken to prepare them to identify locations with an elevated potential for archaeological resources.

During their training session they walked to the point where FhCb-03 is located. On this walk they observed cobbles poking through the surface vegetation, flake scatters and one biface. They collected GPS points and flagged each location. Upon returning to Sheshatshiu they informed me of their observations and provided GPS data and photographs of the locations where potential resources were identified. I contacted the PAO and submitted a permit application to go out and collect the observed biface and record the information necessary to update existing site forms, and prepare forms for any new site locations. Half of the locations identified were in vicinity of FhCb-04, and have been recorded as part of that site. Three other locations were more isolated, and have been recorded as new sites (Figure 6). Each of the resources identified is discussed briefly, below.

Figure 6. Google earth image showing location of previously recorded archaeology sites (yellow) and the new archaeological resources identified by the Innu Nation Construction Monitors.



FhCb-04

Dr. Fred Schwarz originally recorded this site as part of the investigations for the Lower Churchill Project, in the late 1990s. I then excavated a portion of the site in 2004, as part of the research for my Master's degree in archaeology. At this time we did not conduct a detailed testing program and I noted the likelihood that additional buried resources were pre-

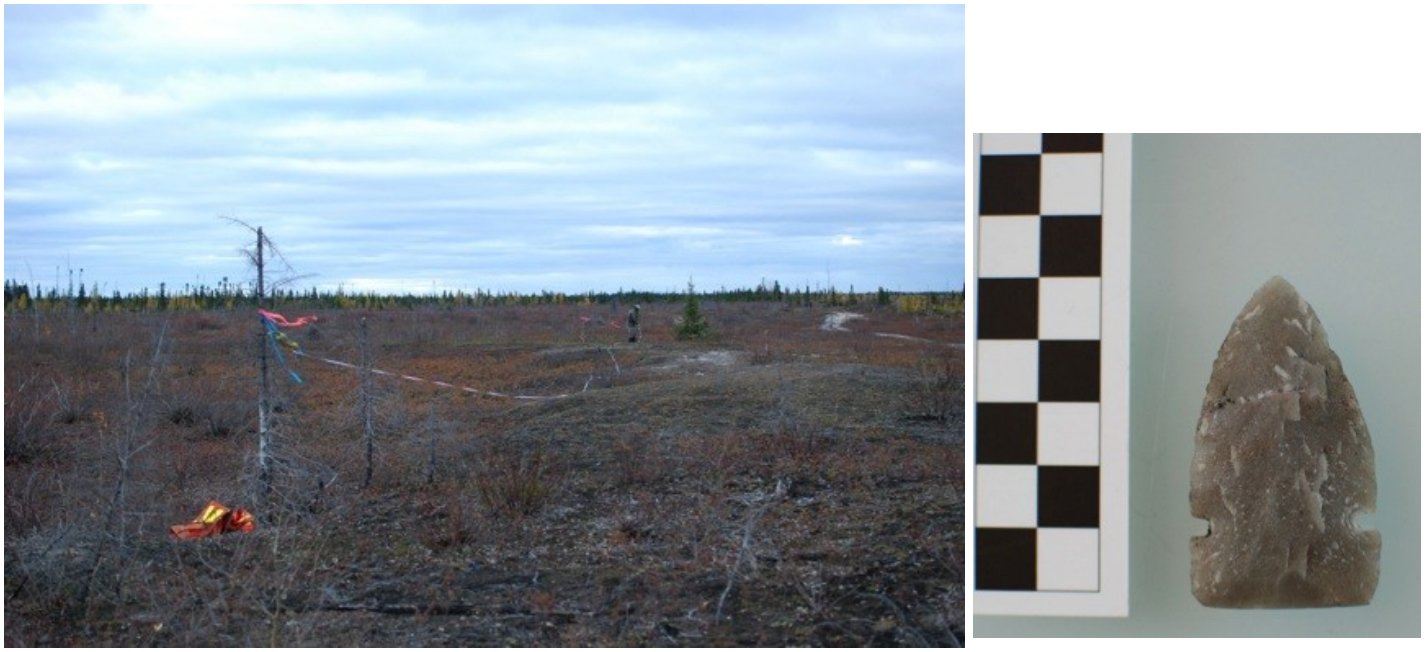


Figure 7. Looking east, showing Biface-1 findspot (orange vest), in relation to FhCb-04 excavation (person and tree); and close-up Biface-1, FhCb-04.

sent. Charcoal collected in 2004 was radiocarbon dated to 2810+/-70 BP (beta-198378).

The Innu Nation Construction Monitors identified four archaeological components within 50 m to either side of the 2004 excavation area. Based on their proximity, their same elevation, and similar features these components were recorded as part of FhCb-04. These included the biface location, two cobble features and one flake scatter.

Biface 1

The artifact was found laying on the surface approximately 50m southwest of the FhCb-04 excavation area. No other artifacts or features were noted in this immediate location. The biface has similar attributes to "Meadowood" style points from sites in North West River, Labrador, and further south on the Quebec North Shore and elsewhere (Figure 7).

Cobble Feature 4

This feature consists of a grouping of cobbles visible through surface vegetation/soil (possible hearth feature), located approximately 20 m northwest of biface find spot. The grouping of cobbles covers an area approximately 1 m^2, and certainly appears to result from human agency as opposed to natural factors.

Cobble Feature 5

This feature consists of another grouping of cobbles, this time just there cobbles, located approximately 16 m southwest of biface find spot. This feature is associated with a few small pieces of quartzite and chert debitage on the surface, too. It seems very likely that there are additional buried resources associated with these three find spots, and there may even be additional resources visible on the surface in this location. A detailed pedestrian survey is warranted here at some point in the future.

Flake Scatter 2

This feature is made up of a scatter of "Saunders" chert debitage visible on the surface, with the potential for additional buried resources. Some flakes appear to be weathered, i.e. exposed for some time, while others are not (Figure 8). These specimens are similar in appearance to flakes and artifacts which were excavated at FhCb-04, approximately 30 m to the southwest. This component is also at the same elevation as the excavation, and I have recorded it as a new component of that site, FhCb-04. The flakes were left in situ; they generally fit within the category of "Saunders" chert. When I was recording the flake scatter, I noted a cobble poking through the surface here as well.

Figure 8. Flake scatter 2, east of FhCb04 excavation.

Based on evidence recorded during this site visit it seems likely that these resources are associated with FhCb-04. It is possible that they relate to contemporaneous use of the location by more than one family, or that it was a spot that people returned to repeatedly for resource procurement. Additional investigation is warranted here.

FhCb-07

This site is at the eastern extent of the "Ushpitun" landform. This location is higher elevated than the FhCb-04 location, by approximately 2 m. It seems likely that this site and FhCb-03 (which I was unable to locate) pre-date the FhCb -04 site and others at that elevation, by a few decades.

The Innu Nation Construction Monitors identified a flake scatter at this location, and Anthony and I identified an additional cobble feature while we were recording the flake scatter. There were test pits visible in this area, which must be associated with the Lower Churchill Project investigations from the late 1990s. The fact that these resources were not identified then, further demonstrates that judgemental shovel testing, and even shovel testing on a grid, is not always able to identify the extent of the resources present. Assessment of a location such as the "Ushpitun" landform is likely best served by a combination of grid shovel testing (5 m or less), detailed pedestrian survey, and geophysical investigations.

Flake scatter 1

This scatter is made up of grey quartzite flakes visible on surface, and there are likely buried resources present as well. The ground is hummocky here, and slopes abruptly to the south to a lower elevation. This is the highest location on the ancient landform, so it may be that this site predates FhCb-04. The fact that one of the quartzite flakes is cortical, could indicate

Figure 9. FhCb-07, Location of flake scatter 1, marked by flag at surface, and close up of one quartzite flake.

Figure 10. FhCb-07, cobble feature 1 location. View easterly, towards terrace edge (left image). Flat cobble (anvil stone?) on surface at FhCb-07, cobble feature 1 (right image).
(Note proximity of ATV track to Anthony)

that the quartzite cobble was collected in the vicinity (Figure 9).

Cobble Feature 1

This is a large cobble feature, which is only partially visible through the moss and vegetation covering it (likely a hearth feature with additional buried resources) (Figure 10). Here, it is the mound that gives the feature away, as opposed to the cobbles poking through the surface, as in the other locations recorded. This may indicate the feature was used more intensively than the others, or perhaps more than once.

Figure 11. Trail at western limit of the Ushpitun landform. Note the size of the trail, which has resulted from the recent use of side-by-side ATV, as opposed to a four-wheeler. These vehicles are larger, and there is an increased potential for them to tear up the vegetation and soil.

Based on the presence of the large cobble feature and the quartzite flakes approximately 30 m to the south I predict that there is relatively large unexcavated component at this location. There appears to be a bit more soil overburden here as well, but still not much. I was unable to locate FhCb-03, so I cannot determine if the two sites may be related. This site appears to be

Figure 12. View westerly towards FhCb-04 (next to isolated spruce tree, just left of photo centre), from between FhCb-07 and FhCb-08 (marked by flagging in centre of image). Note location of trail along the terrace edge.

Figure 13. Image shows location of FhCb-04 excavation in 2004, and the re-growth that has occurred since that time.

associated with the east facing terrace-shoreline, as opposed the other sites, which have a vantage over the cove to the south. I do not feel that this site is the same as the "Ushpitun" sites. The is no evidence to support this now, but my initial impression is that this site is a bit older and was a more intensive, i.e. longer occupation than the "Ushpitun" sites. For this reason, it was not given the same site name designation.

Comment

The Innu Nation environmental monitors have set an excellent example for anyone who encounters artifacts in the country. The artifacts they located and brought to the attention of regulators, highlight the significance of the "Ushpitun" landform during the Intermediate period, and the likelihood that there are additional archaeological resources buried here. Given this, I feel the entire landform should be afforded some protection. Currently, it is used as an ATV and snowmobile trail, and people pick bake apples in the bogs. There is a well-used trail running along the southern edge of the landform, between the terrace(s) (former shoreline) and the boggy areas (Figure 11 and 12). The trail does not appear to cross any archaeological resources; so the best course of action may be to encourage the trail users to stay on the trail. There is evidence that ATVs and snowmobiles have left the trail at times. To date they have not impacted any of the archaeological resources, but if this continues, it is only a matter of time before something is disturbed. Signs placed at either end, and along the trail, indicating the archaeological significance of the landform, and requesting that drivers stay on the existing trail, may help with this.

I feel that it is also important to note that this location was heavily shovel tested in the past, and not all the resources present were identified. This is not a comment on the archaeologists doing that work, as I was one of them, but on the inadequacy of shovel testing, particularly when looking at small sites. It is my experience that these sites can fall between shovel tests, even at a 5m grid. A stated above, this can be mitigated, to some degree, by utilizing a combination of survey and testing techniques, such as detailed and controlled pedestrian surveys; geophysical investigations such as magnetometry (this landform is an excellent candidate for this); and limiting the distance between shovel tests to 5m, and less. Furthermore, the discovery of these resources indicates that it may be useful to monitor forest and brush fires in Labrador, and to consider surveying areas with known sites, if that region reports a forest fire. For, that was the difference at in this location, between 2013 and 2004. In 2004 the areas was vegetated with caribou moss, Labrador tea, sheep laurel, etc. This was not the case in 2013, as a brush fire had moved through this location in the last year or two, resulting in the surface being devoid of moss, which, if present, would certainly have hidden the biface and the majority of the cobbles (Figure 13).

These results also show the potential for significant, buried archaeological resources in undeveloped locations to the north of the existing Happy Valley community, and further demonstrate the need to conduct archaeological investigations in advancement of any development projects in the area.

Gerald Penney Associates Limited – 2013 Archaeological Activities

Gerald Penney, Blair Temple & Robert Cuff
Gerald Penney Associates Limited

In 2013, GPA conducted archaeological investigations under ten Archaeological Investigation Permits: two for St. John's, one for Labrador, and the remainder for work elsewhere on the Island.

Bell Street, St. John's – Permit #13.01.

During the spring of 2013 archaeological monitoring of construction excavations, which began in 2011, concluded at the Bell Street Condominium Project (CjAe-30). Phase 2 excavations continued on the east side of Bell Street, and under the street itself. (Phase 1 construction excavations on the west side of Bell Street were completed in 2012). Pre- and post-1892 features were mostly structural. Early to mid-19th century infilling and/or leveling activity were identified along the eastern side of Bell Street, as well as its junction with Henry Street. Some evidence of historic sanitation infrastructure (sewers) was recorded, but like most features at the site they were in generally poor condition. Twentieth century building destruction was observed throughout, and proved to have had an extensive and negative impact on the area's historic potential.

Figure 1. Bell Street near Henry Street where evidence of early to mid-19th century infilling and levelling was identified.

Convention Centre Extension, St. John's – Permit #13.02.

In June and July 2013, monitoring of construction excavations continued at Civic Centre Extension (part of CjAe-17), on Waldegrave Street, between Water Street and New Gower Street. Few features were identified and the entire project area appears to have been extensively disturbed by 20th century activities with no *in situ* deposits remaining.

Torbay – Permit #13.16.

In May and June 2013, GPA conducted a Stage 1 Historic Resources Overview Assessment at a property previously impacted by the construction of the Torbay Bypass Road. Our services were requested by legal representatives of the landowner's family and a HROA identified evidence of (continued) land use.

Two sites CjAe-136 and CjAe-137 are part of the same group of related features, but are now physically separated by road construction. Both sites are composed of numerous stone features, typically stone "walls" and mounds marking property boundaries, or stone mounds constructed as the result of land clearing for gardening. These features are consistent with historic agricultural land usage in the Torbay area, some dating the 19th century. Material evidence of 20th century refuse disposal was also identified at a number of locations.

Placentia Lift Bridge – Permit #13.04.

In May and June 2013, GPA monitored excavations prior to construction activities for the replacement the lift-bridge at Placentia. Adjacent to the cur-

rent bridge, a boat-house and its concrete base were removed. Its proximity to the former Fort Frederick suggested the presence of historic resources, but none were identified. The extant Fort Frederick monument was moved to an area away from construction activity. Construction activities progressed with no impact on archaeological resources.

Figure 2. Testing at DiBa-12.

Hant's Harbour – Permit #13.48.

In the fall of 2013, GPA conducted a Cultural Landscape Assessment at Hant's Harbour, Trinity Bay. In recent years, local individuals had re-discovered numerous stone features in the woods on the eastern side of the community, and to the north at the former settlement of Little Islands. There was some debate as to their age, cultural affiliation and function. We were contracted by the PAO to record and document these features and their surroundings, and through field investigation, documentary research, and oral interviews suggest their probable age and cultural origin.

Features are located in three discrete areas along the eastern shore of the community, all of which were recorded and measured using a combination of handheld GPS and total-station recording. A southern concentration of features (DaAh-4) formed a terraced hillside, in an attempt to create suitable land for agricultural purposes. There is a strong possibility that this was the result of Government sponsored relief work in the mid-19th century. There are several features that have no apparent function, and may simply be stone intended for construction, or stockpiled neatly. A central collection of features (DaAh-03) is also agricultural in function. Again, the hillside is roughly terraced, particularly along lower elevations. Two cellar pits and the remains of at least three structures were recorded. Residents of this part of Hant's Harbour (Custer's Head) recall this area as having long been used and maintained as gardens. The similarities between these two sites are striking, including extensive use of stonework and terracing. They differ in that the southern group exhibits far less evidence of having ever been used for agriculture; there is also no living memory or oral history of such use.

The northern series of features is the largest (DaAh-2) and extends over a distance of at least 500 m along the shoreline north of Hant's Harbour. The area is the location of the abandoned community of Little Islands, settled from about 1840 to 1905. Features and landscape modifications are located throughout, most associated with this occupation. Evidence of gardening is apparent while some features of uncertain function were identified. A local suggestion that some of these features are pre-contact is unlikely as no comparative evidence for such construction exists, and no pre-contact cultural material was identified during test pitting in association with any feature. All features and artifacts from the assessment date to the 19th or 20th centuries.

Indian Brook Arm, Springdale – Permit #13.53.

In September 2013, GPA conducted a Stage 2 Historic Resources Impact Assessment at the site of a proposed residential subdivision on the north side of Indian Brook Arm, at the southern end of the town of Springdale. An earlier investigation by the PAO (Reynolds 2013) had encountered two new sites (DiBa -12 and DiBa-13) on a natural terraced hillside, both of which would be impacted by the subdivision development.

Testing at DiBa-12, immediately above a small beach, exposed a quantity of lithic debitage including a Dorset Paleoeskimo endblade and microblade fragments. The majority of the debitage was a fine grained, light blue to light brown mottled chert, a different raw material than the endblade. Much of the site was mixed with historic material, but a portion appears secure. On the upper terrace at DiBa-13, evidence of a sparse late historic occupation was found scattered throughout the entire hillside. The proximity of the pre-contact finds to the proposed development caused avoidance mitigation to be recommended for DiBa-12.

Newfoundland-Labrador/Nova Scotia Maritime Transmission Link (EMERA) – Permits #13.51 and #13.54.

In October and November 2013, GPA conducted two separate field investigations for Emera Newfoundland, as part of the Newfoundland/Nova Scotia Maritime Transmission Link. This included Stage 2 assessments at Indian Head (Stephenville) and Cape Ray; and Stage 1 assessments of tower locations along the proposed transmission line from Cape Ray, north to Bottom Brook, and east along the Burgeo Highway to Granite Lake (the portion from the Burgeo Highway to Granite Lake to be completed in 2014).

Figure 3. Partial endblade and mircroblade fragment from DiBa-12.

Figure 4. Dense tuckamore at northern end of the HDD test area, Cape Ray.

Indian Head, the proposed location for a grounding site, was identified as high potential during a previous assessment. During our field investigation no historic resources were encountered, other than a clearing and debris related to recent domestic logging. The Cape Ray project area is proximate to pre-contact site (CjBt-01), one of the most significant Dorset sites in Newfoundland (Fogt 1998). The Cape Ray areas tested included the proposed siting

of Horizontal Directional Drilling apparatus near the shoreline (the HDD area) and a Land Cable Easement (LCE area) to the north and east. No historic resources were encountered in the HDD area despite extensive testing. The Dorset site is to the west of the test area and appears to be confined that that area exclusively. The LCE to the north of the road to the Cape Ray lighthouse was found, during an extensive walkover, to be quite boggy and unsuitable for habitation/testing. The LCE south of the lighthouse road passes within 35-40 m of a previously identified historic-era site (a cellar pit and telegraph or flag-pole base). Testing of the LCE area proximate to this ethnographic site did not encounter any additional historic resources.

Field investigations for transmission line tower locations were conducted 12-18 November 2013. A total of 13 Project Areas (PAs) were investigated: (West Coast) PA 1 Red Rocks; PA 2 Little River, Doyles; PA 3 Grand River, South Branch; PA 4 Grand River, North Branch; PA 5 Crabbes River; PA 6 Middle Barachois River; PA 7 Robinsons River; PA 8 Fischells Brook; PA 9 Bottom Brook; (Burgeo Road) PA 10 "Overbrook"; PA 11 "Longstretch"; PA 12 Silver Pond; and PA 13 South West Brook Crossing. Only four of the PAs were less than 50 m above sea level (PAs 1, 2, 3 and 9), while only PAs 1 and 9 were less than seven km from the coast.

Surface observation of detritus and/or ruins of recent historic (20th century) occupation and use were identified at PAs 1, 2, 4 and 7. There was evidence of recent domestic cutting in most project areas (particularly PAs 3 and 6) and of historic commercial cutting of white pine at Bottom Brook (PA 9). In surveying the Burgeo Road (PAs 10-13), no evidence of occupation or use predating the 1980s construction of the highway and transmission line were encountered.

Figure 6. Southern side of Robinsons River, PA 7.

Labrador-Island Transmission Link (NALCOR) – Permit #13.47.

From September to November 2013, GPA conducted Stage 2 HRIA investigations over the course of three expeditions, at 17 PAs throughout the island for the Muskrat Falls/Lower Churchill transmission line. Project areas extended from c. 1 km inland from Shoal Cove on the Northern Peninsula, to Harbour Main Pond on the Avalon Peninsula: (Northern Peninsula) PA 1 Shoal Cove; PA 2 Western Brook Pond; PA 3 Ten Mile Narrows; PA 4 Leg Pond; PA 5 River of Ponds; PA 6 Six Mile Pond; PA 7 Outside Pond; (Central/Interior) PA 8 Birchy Lake; PA 9 Badger [Exploits River]; PA 10 Lemotte's Lake; PA 11 Rattling Brook; PA 12 Tote River; PA 13 Dead Wolf

Figure 7. Terra Nova River, PA 14.

Brook; PA 14 Terra Nova River; PA 15 Southwest Brook; (Avalon Peninsula) PA 16 Goose Pond; and PA 17 Harbour Main Pond.

Only five of the 17 PAs are less that 16 km from the coast (PAs 1, 4 and 15-17), while only three are at less than 50 m above sea level (PAs 1, 5 and 15). By these criteria PA 1 (Shoal Cove/Corridor Ponds) was a good prospect for pre-contact and/or early historic use and three days were dedicated to this field investigation. Here, special attention was paid to landforms that – based on the area's relative sea-level history – were formerly part of the pre-contact shoreline.

No pre-contact remains were identified at any PA. Pre-contact materials had been identified at Birchy Lake and Badger, although none were identified in 2013. Surface observation of detritus and/or ruins identified recent historic (20th century) occupation and use at PAs 1, 3, 5, 8, 10, 12, 13 and 16. There was evidence of recent domestic wood cutting in most project areas (particularly PAs 1, 2 and 10) and of older commercial cutting of white pine at Birchy Lake (PA 8) and Tote River (PA 12) and pulpwood cutting at Dead Wolf Brook (PA 13).

Happy Valley-Goose Bay – Permit #13.28.

In June 2013, GPA conducted a Stage 2 Historic Resources Impact Assessment at the site of a proposed subdivision, informally referred to as "west of Hefler", in the Town of Happy Valley-Goose Bay, Labrador. The project area had been investigated as part of a previous Stage 1 assessment of the undeveloped area on the northern periphery of the town (Neilsen 2013). Two areas of "elevated potential" were identified within the project area and were the focus of sub-surface testing. No pre-contact historic resources were identified during extensive surface and sub-surface testing. The remainder of the subdivision project area was considered "low potential"; surface survey found no pre-contact historic resources. Evidence of recent historic land use and presence (i.e. garbage dumps, camps, partying, and general debris) post-dating the construction of the military base at Goose Bay (mainly from the c. 1970s to the present) was observed throughout.

Figure 8. Late 20th century debris surrounding a rectangular pit, Happy Valley-Goose Bay.

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Historic Carbonear, Summer 2013

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Objectives and Survey Activities 2013

The season marked a third year of survey in the Carbonear area, organized by the Memorial University Archaeology Department, in cooperation with the Carbonear Heritage Society. The survey program was designed to explore the early European exploitation and settlement of the Carbonear area. In 2013, our team of six included three Memorial graduate students, a recent honours graduate and an undergraduate lab assistant. We spent the month of June in the field and recovered archaeological evidence from seven new sites, also revisiting one, previously identified. The season brought us real success when we identified an early 18th-century context at Crockers' Cove. Even though this early-modern context proved to be limited in extent, it was rich in artifacts and in implications for the history of Carbonear. We learned a great deal at certain other sites, about fishing stages, soil formation and the economic trajectory of Carbonear in the 18th and 19th centuries. Once more we had great support from residents of Carbonear, who not only gave us access to their properties but who shared memories, historic photographs and artifacts which they have curated.

CkAh-30, Bristol's Hope Beach.

The 1986 survey of Conception Bay identified Bristol's Hope 1 (CkAh-01) as 17th-century deposits on the Thomey property, in Bristol's Hope, the community immediately southwest of Carbonear (Pope 1989). In 2013, we briefly revisited Bristol's Hope Beach and had the opportunity to resurvey the beach south of the stream and culvert, previously tested in 2012 (Pope 2013a). Hilary Hatcher (Lock) retrieved a whole oval bottle base of an early 18th-century wine bottle which had eroded from the beach, following the severe storms of 2012-2013 (cf. Wicks 2003). Bristol's Hope has produced interesting early-modern material when it has been surveyed. Limited settlement until recently may mean that early evidence is more accessible archaeologically than in Carbonear itself, with its intensive 19th-century development.

Water Street, Carbonear

CkAh-32, Coal Wharf Beach lies east of Water Street, down the lane which formerly served the Rorke Fish and Coal Company wharf. The beach is just north of the Hopkins Property (CkAh-15) surveyed in 2011 (Pope 2012a). Surface survey produced English and Anglo-American CSW and white REW, all probably late 19th- or 20th-century. We noted a large amount of rusty iron schooner and car parts, some eroding from the bank of fill, west and above the site. Coal Wharf Beach, does not appear to be of archaeological significance, except in the sense that the active beach likely represents part of the original shoreline.

CkAh-33, Magic Cuts is a small wood frame structure on the east side of Water Street, formerly the offices of the Rorke Fish & Coal Company, now a hair salon. The area below the backyard escarpment has been disturbed, perhaps during construction or reconstruction of the access

2013 Carbonear Site List

Borden	Location & Site	Notes
CkAh-30	Bristol's Hope Beach	surface find of late 17th-early 18th-c. bottle glass
Water Street, Carbonear		
CkAh-32	Coal Wharf Beach	19th- & 20th-c materials
CkAh-33	Magic Cuts	some stratified early 19th-c tobacco pipes etc.
CkAh-34	Moisey's Rock	traces of 18th- & 19th-c fishing and farming
North of Carbonear Proper		
CkAh-35	Crockers' Cove 1	a late 17th- & early 18th-c context
CkAh-36	Crockers' Cove 2	19th-c materials in secondary deposition
CkAh-37	Crockers' Cove 3	a well-preserved 19th-c. root cellar
CkAh-38	Earle Property	18th &19th-c materials in secondary deposition

lane to the Rorke coal wharf. The grassy meadow, north and east of the Magic Cuts salon is of some interest, as another example of terrain gardened through the 19th century and into the 20th, much like the adjacent Hopkins Property (CkAh-15) (Pope 2012a). Finds included white and patterned REW, a sherd of 18th- or early 19th-century Bristol-Staffordshire marbled slipware CEW, numerous pipe stems and pieces of coal. One shovel test was particularly interesting. As well as REW, brick fragments, slate fragments and decaying lead sheet, rolled up, the test yielded over 30 pipe stems, many uncovered together in clusters, suggesting dumping of refuse from the adjacent structure. There seems to be an undisturbed early 19th-century yard here, between about 35 and 50cm dbs. Such a context is rare, as far as we have seen in Carbonear, where most archaeological contexts have been disturbed.

Figure 1. Bryn Tapper, Mélissa Burns, Hilary Hatcher and Shannon Halley, descending to Moisey's Rock (CkAh-34). The Feature 45 notches are visible in the foreground left.

Figure 2. Complete large spurred "TD" pipe bowl, English, 1820-1860, from Moise's Rock (CkAh-34), Test 30, near the Feature 11 lilac tree and the Feature 28 angular berm.

CkAh-34, Moisey's Rock, is a prominent tabular rock on the shore of Carbonear Bay. The site consists of meadows or former gardens, some steeply sloped, as well as loose field stone scree, together with Moisey's Rock itself. We identified a number of historic features including several arrays of holes or triangular notches in the waterfront bedrock, probably made to split the rock to open up a ledge which could be used for timber framing or to serve as sockets for posts. At Feature 45, the close arrangement suggests support of a slipway, to ascend the steep rock slope (Figure 1). We also recorded several sublinear field rock scree deposits, which serve as boundaries between several distinct garden areas, pathways, raised lazy beds for potatoes, rocked-up flat plateau areas, as well as a rectangular niche around a prominent ancient lilac tree -- brought from England and planted by the great-great grandfather of the current landowner. Tests around this niche uncovered CEW; REW, including Creamware, painted Pearlware, and blue transfer-print; green bottle glass and dark wine bottle glass; clay tobacco pipe stems, bowl fragments and a complete large spurred TD pipe bowl, dating c. 1820-1860 (Figure 2). Tests around the flat rocky plateau area

produced CEW with yellow slip/ glaze, a sherd of CEW possibly South Somerset, a sherd of English CSW, possibly Derbyshire or English brown, hand-painted REW Pearlware, blue and brown transfer -printed REW, colourless bottle glass, some clay tobacco pipe stems and bowl fragments, as well brick fragments and some wrought nails. Many tests showed a dark black rich organic loose soil under the sod, then a dark brown organic, slightly pebbly soil above sterile. Several areas show clear evidence of soil building from the 18th century. Surface survey of a recent dump area, on a steep deposit of field stone scree at the west side of the site, produced a selective sample including possible 19th-century materials, such as CEW, CSW, blown in mould beer bottle glass, as well as much recent glass and REW.

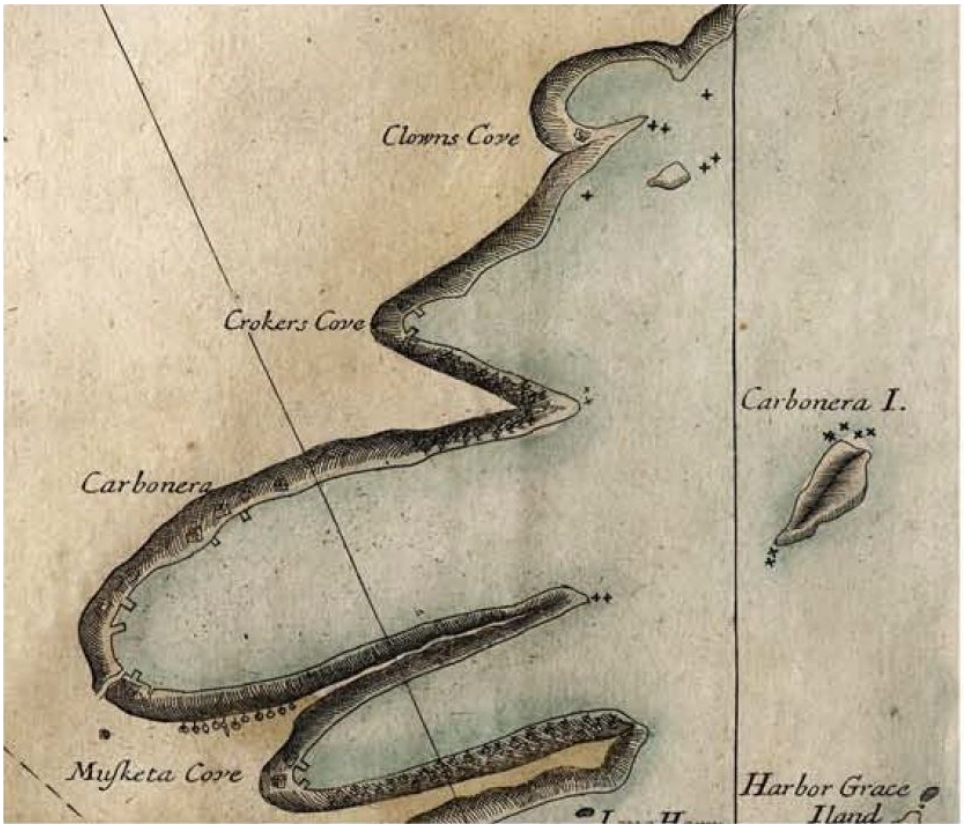

Figure 3. Detail from Henry Southwood, *Harbour Grace*, 1689, showing "Carbonera" and "Crockers Cove". Map image courtesy of William Gilbert.

Moisey's Rock is not only a beautiful park-like site, its rich soils hold promise for the interpretation of homestead agriculture in the 18th and 19th centuries. Part of the original settlement here has been buried by the rebuilding of Water Street east but enough remains for public interpretation. The various modifications to Moisey's Rock are also of interpretative significance as examples of the design and construction of fishing stages.

North of Carbonear Proper

Crockers' Cove: Historical Background.

Crockers' Cove appears in Sir John Berry's Newfoundland planter census of 1675 and in subsequent 17th-century censuses. Berry (1675) lists two planter families:

"Bartholomew Keys & wife" with a son and daughter, 2 fishing servants, a boat and stage.

"Roger Butt & wife" with 2 sons, 2 daughters, 4 fishing servants, a boat and stage.

In later censuses, Bartholomew Keys is listed as "Caines" (e.g. Poole 1677). Caines is no longer a common family names in Carbonear, although one resident of Crockers' Cove says that he recalls local fishermen speaking of "Keynes Rock" as a trap berth. The Butts, on the other hand, have a continuous history in the area. The generous will of Roger Butt survives from 1693 and identifies him as resident of Crockers' Cove (Butt 1693). The Butts are still associated with Carbonear and even with Crockers' Cove, in particular. A senior resident of Crockers' Cove recalls that the Butts always lived on the northeast side of the cove. This is intriguing, because Henry Southwood's 1689 map of Harbour Grace in the late 17th century also depicts the Carbonear area and shows two plantations in Crockers' Cove, one on each side of the cove, each with its own fishing stage (Figure 3).

Surface survey of the promising eroding bank along the northeast side of Crockers Cove, below the prominent white house, site of the former Butt property produced a few sherds of plain white REW and some blue 20th-century pharmaceutical glass but there was no other visible material of any interest; the area appears to have been heavily filled and there are few indications of earlier buried strata. This somewhat undermines the thought that the Butt property is the site of the east side planter occupation shown in South-

wood's map of 1689. However, our excavations appear to have identified the site of the plantation on the southwest side.

CkAh-35, Crockers' Cove 1, is a property on the south side of Crockers' Cove, at the end of Burnt Head Road. Shovel tests in the lawn area south of the house proved quite productive. At about 70 cm, Shannon Halley uncovered a buried topsoil, which produced several 17th-century pipe stems and what Paul Berry of the Currency Museum of the Bank of Canada has identified as a silver Peruvian coin of the 1680s (Figure 4). We considered this very promising and subsequently opened up a 2x3m excavation. We also put in shovel tests west of the house and east of a standing fireplace/BBQ yielding a mix of 17th- 18th- and 19th-century artifacts. Tests in the higher meadow area, above the bank to the south, produced REW, bottle glass, clay tobacco pipe stems and nails, including a wire nail at some depth. All artifacts found could be 19th-century. It was possible to put in shovel tests approaching 1m in depth, though the soils uncovered were often rocky. The higher level seems to be a 19th-century garden area, as the top layers are reasonably rich soils, overlying rocky fill in the zone nearer the house.

Figure 4. Heavily clipped, Peruvian silver coin of the 1680s, recto and verso. The "R" on the verso, just right of the cross is the initial of the mint assayer Miguel de Rojas Paramo, who was active in Lima between 1685 and 1691 (Paul Berry, National Currency Collection, Bank of Canada, pers. comm.)

We laid out a 2x3m test area in Crockers Cove 1, east of the house, as E2S3-E4S0 (Figure 5). As excavation progressed we used hoes to skim the surface, cleaning the backdirt out by shovel. Excavation of Event 27, likely the remains of winter sanding, produced REW and porcelain, various kinds of modern glass, plastic, and metal car parts. But we also recovered pipe stems and, in E2S3 Event 27, Hilary found a good neck and mouth sherd of a Portuguese Red Earthenware bottle or oil jar. We then hoed the Event 28 black rocky soil (on the east) and the parallel Event 29 brown rocky soil (on the west) down from their surfaces at about 50 cm dbs. Materials recovered seem to be consistently mid 19th-century, except for a few large sherds of 17th- or 18th-century South Somerset CEW. We stopped hoeing when we encountered a wide scatter of large tabular rocks in E2S3, E3S3 and E3S2. We then cleaned around these with trowels and after recording, pulled them out and took out the rem-

Figure 5. Crockers' Cove 1 (CkAh-35), Area A, Operation 24 (E2S3-E4N0), with Melissa Burns taking notes, in the rear, and in the foreground, Hilary Hatcher and Shannon Halley shoveling loose soil and Bryn Tapper hoeing the Event 29 surface.

Figure 6. Thumb-decorated rim sherd from a South Somerset milk pan, from Crockers' Cove 1, Operation 24, Event 29 (CkAh-35: 766)

nant Events 28 and 29. These events yielded 19th-century materials but mixed with some good earlier finds in secondary deposition, including a large thumb-decorated rim sherd of South Somerset milk pan (Figure 6).

Under the Event 28 and 29 fills, we felt we were on or close to the deep Event 33 cultural layer that Shannon had identified in her shovel test. We were still not down to this early cultural layer, when Melissa Burns uncovered a mid-20th-century mayonnaise jar complete with rusting lid, at the edge of Event 29 in E2S2. This was a precursor to a late trash deposit which we called Event 30, consisting of whole Javex bottles, Mason jars, marmalade jars, beer bottles and broken household glass fruit bowls. These surrounded a circular metal drum or tank, over 1m in diameter, standing vertically in the west baulk of E2S2: probably a simple septic tank, surrounded by the trash deposit. Melissa later found a clear interface, between Event 30 and the underlying Event 33 dark cultural soil which the 20th-century disturbance confined, essentially, to three of our test squares

Event 33 was a dark, granular, cultural soil, with a few lenses of orange beige clay, a lot of charcoal, some small beach pebbles, especially angular stones and small rocks. As we dug we kept thinking that we were coming down on a dark cultural layer but this proved illusory and lenses of darker cultural deposits were inter-leaved with lighter brown deposits, all with plenty of charcoal and iron nails. It was almost as if Event 33 was a levelled destruction layer over an undulating subsoil, so that the levelling introduced artefacts from the overlying Event 33 cultural level into the underlying Event 35 subsoil. The few sherds of REW founded in the upper few cm of Event 33 became rarer as we got deeper in the level. We recovered various materials of c 1700, small lead bird shot including sprue from casting, clay tobacco pipe bowls and stems, green window glass and dark green wine bottle glass, several sherds of Portuguese Redware CEW and of a Rhenish Brown CSW bellarmine bottle, a sherd of blue-decorated Chinese Porcelain, with the mouth of a heavy Spanish CEW olive jar, as well as some TGEW (one sherd of which looks Portuguese), a sherd of shiny blue Westerwald CSW, some engraved/ground clear vessel glass and another fragile silver coin, heavily clipped, again late 17th-century Hispano-American. Some finds, particularly the window glass, the Chinese Porcelain and the Portuguese TGEW are typical of planter rather than migratory occupations (Pope 2012b). We also recovered a worn gun flint as well as three large spalls of Newfoundland rhyolite or chert, suggesting a Beothuk or other prehistoric presence.

Crockers' Cove 1 can be interpreted as a rich working floor of c. 1700 to 1710, which continued in use, perhaps less actively, until covered with fill about 1850. Under this muddy working floor lies some materials from the second half of the 17th century. It would be reasonable to see the materials of c. 1700 (the Hispano-American coins, TGEW and bottle glass) as remnants of an active planter re-occupation of Crockers' Cove, after the French attack of 1697, or perhaps after the subsequent battles of 1705 or even 1709. The South American coins are not as anomalous as might seem on first thought, as they would have been in circulation in Spanish ports like Bilbao, with which Newfoundland planters had active trading relations in the 17th and 18th centuries (Pope 2013b). The underlying Event 35, loose beige clay with angular stones did not seem like a natural sterile subsoil, at first, except for the colour. Hoeing the surface of Event 35 yielded a Plymouth-style pipe of perhaps 1665 to 1680 (Figure 7 and cf. Allan's type 7B, image CP44 in Allan 1984: 283 -286). Given that there were flecks of charcoal in the upper part of Event 35, this find encouraged us to

Figure 7. Plymouth-style clay tobacco pipe bowl of 1665-1680, from Crockers' Cove 1, Operation 24, Event 35 (CkAh-35: 456).

think that we were dealing with a fill. But when we descended 20 to 25cm into this soil we determined that this was in fact a sterile glacial soil, into the top surface of which a few artifacts had been pressed. Early materials, like the Plymouth, could be read as traces of the settlement of Crockers' Cove, in the mid to late 17th century. The frequency with which other early materials (e.g. a Portuguese Red CEW bottle) turned up in 19th-century fills, suggests that much of the site was cut and filled in later centuries, as has usually proved to be the case in Carbonear.

Crockers' Cove 1 turned out to be the first undisturbed stratified early-modern context that we have identified in the Carbonear area, during the Archaeology of Historic Carbonear Project, aside (perhaps) from the fireplace feature at the Rorke Stores (CkAh-16) (Pope 2012a). Unfortunately, given the disturbance created by the septic installation on the west side of the test, the proximity of Burnt Head Road on the north and east sides, together with the disturbance detected by tests to the south, it is not practical to think of further excavation of this part of the site, however interesting it proved to be for a few square metres. Further research elsewhere on the site might be productive, although tricky, given the terrain. Should Burnt Head Road be re-developed in the future, archaeological mitigation of the portion skirting Crockers' Cove 1 would be appropriate.

CkAh-36, Crockers' Cove 2 is the former Simms property at the very end of Water Street east, just northeast and also behind and south of a two-storey wood-frame workshop. Local informants report that the workshop was owned and used by Mr. Simms, a carpenter and boat builder. Tests in the lane northeast of the workshop and around the back and southwest side yielded some TGEW and some large pipe stems but mostly REW, tobacco pipe stems and some glass. This site has likely yielded most of the archaeological information it held.

While at Crockers' Cove 1, Peter visited Mrs Marilyn Gear, the neighbour between Crockers' Cove 1 and Crockers' Cove 2 . She showed him some of the objects found in her garden, including miniature porcelain dolls, a spoon for dolls, a large leather but-

Figure 8. Crockers' Cove 3 (CkAh-37), Feature 1, dry masonry, timber and sod root cellar: Melissa Burns above and Genevieve Duguay at right, view to south.

ton, clay tobacco pipe stem and bowl fragments, many exhibiting large bores: 10/64ths etc, including a clay tobacco pipe bowl, with the heel impressed "LE". Llewellin Evans was a pipe maker of Bristol, active 1661-1689 (Walker 1977: 1131).

CkAh-37, Crockers' Cove 3 is the large open lot south west and south of Crockers' Cove 2. Here we recorded a prominent dry masonry root cellar, which is at least 90 years old (Figure 8). Historic photos shared by residents of Crockers' Cove attest to the continued agricultural orientation of Crockers' Cove in the period before World War II. Shovel tests uncovered a rough stone pavement and some early materials including dark green bottle glass in Hilary's Test 2, CEW in Shannon's Test 5 and a Mulberry clay tobacco pipe bowl fragment from Bryn Tapper's Test 6. The finds were, however, primarily 19th- and 20th-century materials: REW, brick fragments, pipe bowl and stem fragments, window glass, dark green bottle glass, nails and burnt wood. Feature 10 was an array of large rounded and tabular rocks, possibly a rock wall, in Bryn Tapper's Test 3. Above Feature 10, Bryn recovered a mix of 17-18th century looking pipe stems but mixed with some REW. The soil between the rocks of Feature 10 is a rich, dark brown, organic soil, clearly suggesting a cultural occupation, even though no artefact was found in it. Below this our guest digger Adrian Morrison recovered REW, glass, and pipe stem fragments, emphasizing again that our early finds at Crockers' Cove 3 are in secondary deposition. Crockers' Cove 3 is, nevertheless, of architectural and historical interest because of Feature 1, the standing remains of a dry masonry root cellar. Archaeological testing confirms that the site has been in use for a long time, although no stratified remains uncovered pre-date the 19th century.

CkAh-38, Earle Property, where Dr Phil Earle is building a house overlooking Conception Bay, is a beautiful treed area, on Freshwater Road just north of Crockers' Cove. Most of the property has been extensively re-landscaped but there remains an area of field stone scree east of the bottom of the driveway. Here Phil Earl recovered the large rim sherd of Buckleyware CEW which he donated to us. Surface survey recovered a large sherd of South Somerset CEW and a 19th-century dark glass beer bottle. Shovel tests in the escarpment below the planned house site uncovered a good depth of garden soil up to 30 cm topsoil and 50cm of good subsoil. All tests showed REW and/or clay tobacco pipe stems. The remains from the Earle Property seem to reflect traces of kitchen and other household materials, likely moved with compost, in the course of 18th- and 19th-century gardening activities. The Earle Property has also likely yielded much of the archaeological information it held.

General Conclusions

The 2013 Carbonear survey significantly extended our program of field-testing the various ideas about the historic occupation of Carbonear, proposed in the 2010 historic assessment of Carbonear (Penney Assoc. 2011). We have finally succeeded in identifying a 17th- 18th-century planter occupation and -- as we had come to suspect -- it is in the smaller communities, outside of Carbonear proper, like Bristol's Hope, Clown's Cove and Crockers's Cove, in which early-modern contexts of settlement survive archaeologically. The restricted area of the Crockers' Cove 1 site means, however, that we do not have an early planter occupation in the Carbonear area (other than Bristol's Hope) which might be further explored as a counterpoint to the important civil fort of c. 1697-1710, identified by Roy Skanes on Carbonear Island (Skanes 2011, 2012).

Acknowledgements

The principal investigator thanks our enthusiastic field and lab crew, as well as the property-owners and local informants who welcomed us to their communities. He extends a special thanks again to Ron Howell of the Carbonear Heritage Society and to the private donor who has so generously supported the Archaeology of Historic Carbonear Project.

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Indian Harbour, Norman's Island and Double Mer Point, Labrador

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Memorial University of Newfoundland

In 2013, I conducted excavations at three sites in Labrador, two near Cartwright in Sandwich Bay, and one at Double Mer Point, near Rigolet in Hamilton Inlet. The work in Sandwich Bay was part of the Memorial University CURA project "Understanding the Past to Build the Future" (website: *www.mun.ca/labmetis*). The work in Hamilton Inlet was undertaken at the behest of the community of Rigolet. The field season ran for seven weeks from late June to early August, with a crew of twelve people. Crew members were Robyn Fleming (crew chief), Corey Hutchings, Lindsay Swinarton (Laval University), Tyrone Hamilton (MUN), Amelia Fay (MUN), Andrew Collins (MUN), Michelle Davies (MUN), Kyle Crotty (MUN) and Katy D'Agostino (University of Southern Denmark). Many thanks are due to our boat drivers Peyton and George Barrett of Cartwright, and Richard Rich of Rigolet. Most of the season was spent in the Sandwich Bay area, but a small segment of the crew spent the last part of the season at Double Mer.

Figure 1. Locations of Indian Harbour (FkBg-03) and Norman's Island (FlBg-07).

1. SANDWICH BAY

In the Sandwich Bay area we excavated two tent rings at the early historic period Inuit site of Indian Harbour (FkBg-03) and a sod-walled house at a site on Norman's Island (FlBg-07) (Figure 1). Artifacts were processed as in previous years at our lab in Cartwright by MUN (Grenfell) students Chelsea Morris and Kellie Clark, who were funded by the NunatuKavut Community Council. During the course

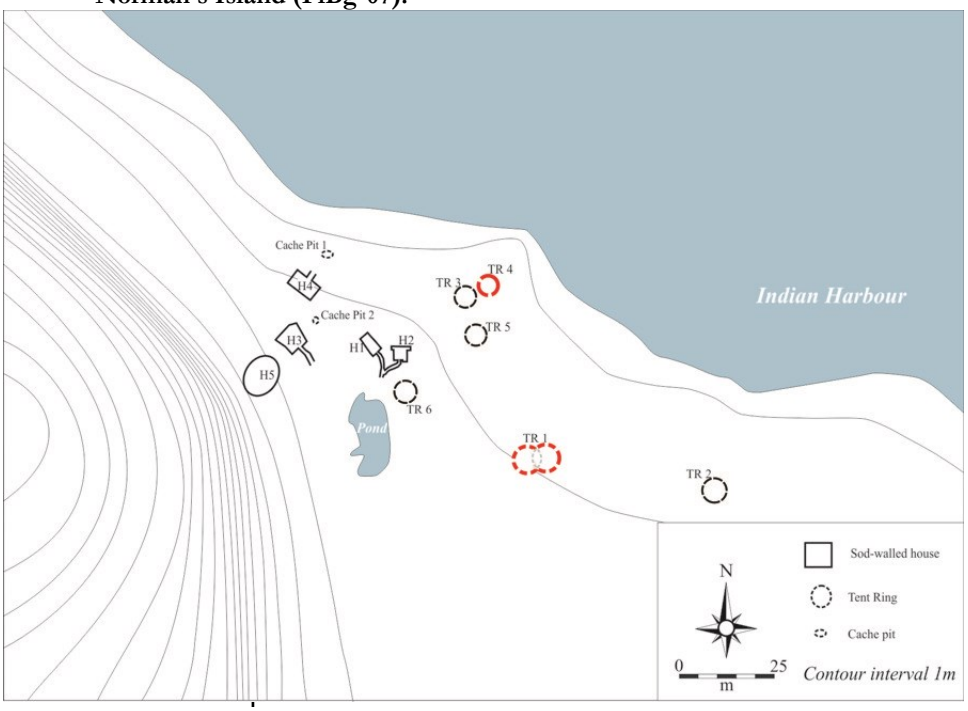


Figure 2. Map of Indian Harbour site (FkBg-03).

Figure 3. Indian Harbour Tent Ring 1 after excavation (Photo courtesy of Paulina Dobrata).

of the excavations there were numerous visitors to the sites, including local residents.

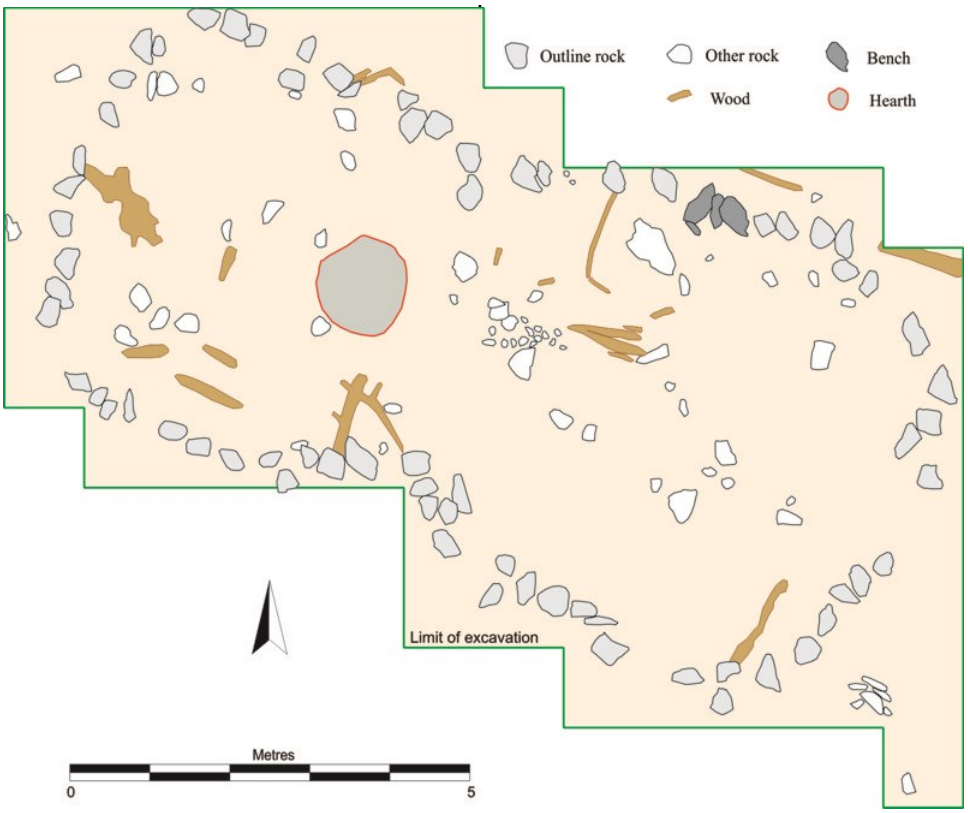
Indian Harbour

To complete our investigations of the site at Indian Harbour, started in 2009, we excavated two tent rings. The bulk of our work in the Sandwich Bay area has been directed to the excavation of sod-walled, probably winter, structures. We have excavated a tent ring at Snack Cove I, and in 2010 we tested a tent ring at Indian Harbour that proved quite productive. However, our total sample has a strong seasonal bias. In order to partially rectify this, we returned to Indian Harbour in 2013 to excavate two more tent rings (Figure 2), in the expectation that it would help to establish that the Inuit occupation of Sandwich Bay was year-round, or multi-seasonal, lending support to the hypothesis that the Inuit resided there on a permanent basis, and were not simply there for brief trading trips.

While Tent Ring 1 had appeared on the surface as though it might be two overlapping circular tent rings, upon excavation this situation was less clear (Figures 3 and 4), and further analysis will be required to determine the exact nature of the structure or structures. There is a hearth near one end which might be consistent with a single structure, but indentations near the middle of the side walls could also hint at two overlapping structures. Most of the items found in Tent Ring 1 are of European origin, although there are also several items of chipped stone and fragments of unidentified leather.

Tent Ring 4 was a smaller, more circular feature (Figure 5). There was no trace of a hearth, but one half of the structure had a concentration of rocks, in contrast to the other half which was bare. Artifacts from Tent Ring 4 are again predominantly of European origin, including a large number of glass beads, but also include two whalebone sled shoes and one other piece of modified whalebone. This structure and its contents are thus more typically Inuit and in all likelihood date to the 18th Century, providing further evidence for the multi-season Inuit use of this locality in the historic period.

Figure 4. Plan of Indian Harbour Tent Ring 1.



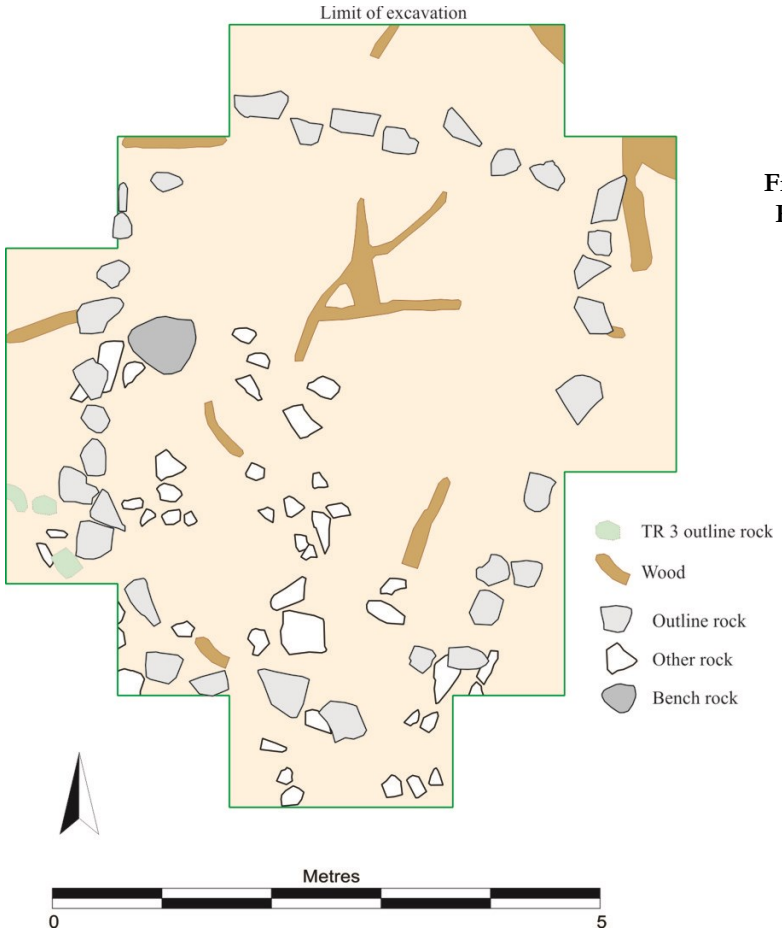


Figure 5. Plan of Indian Harbour Tent Ring 4.

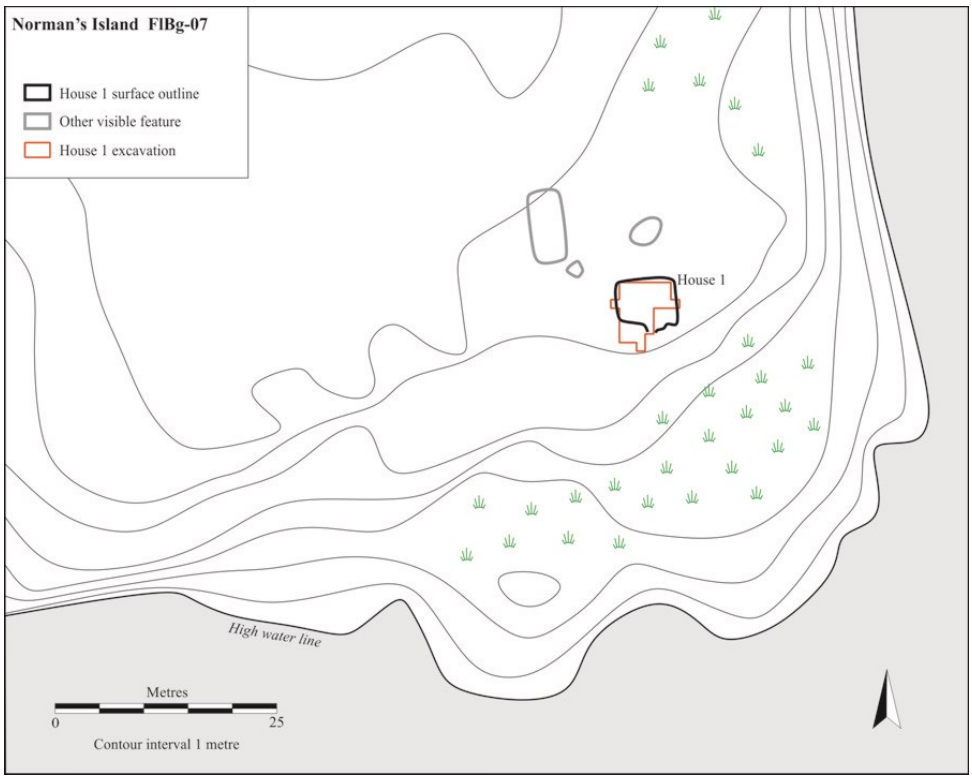


Figure 6. Map of Norman's Island site (FlBg-07).

Norman's Island

The site at Norman's Island consists of four features on a small point of land at the southeastern tip of the island (Figure 6). Initially recorded as a 'historic' site in 2001, testing of House 1 in 2010 by Laura Kelvin uncovered a small area of paved floor, leading to the suggestion that it might be an Inuit sod-walled house.

At the north end of the site is a rectangular feature (about 3.5 x 8m) that appears to be a walled garden; a pit about 1m in diameter is found just outside the southeast corner. Some ten metres to the east is an indistinct ovoid feature that may be a cellar or storage pit. About five metres to the south of this lies the remains of what prior to 2013 was thought to be the small Inuit sod-walled house. The shape is rounded, and the house is bounded on the south side by a large bedrock outcrop. The walls are higher and thicker than those of the 'garden' feature. The house is an irregular L-shaped structure, measuring roughly 6.5 by 6m. Upon excavation there is little reason to believe this is Inuit, and it is more likely to be associated with the fishery of Captain Norman, for whom the island is probably named (Figure 7).

The interior of the house is lined and floored with crushed mussel shell brought up from the beach, presumably to assist with drainage. Paving stones are present on the floor, but they were used sparingly and are associated with the entryway and hearth area. Among the items recovered were numerous hair pins, a brooch (Figure 8) and several parts of leather shoes.

As the CURA project research in southern Labrador comes to a close, the

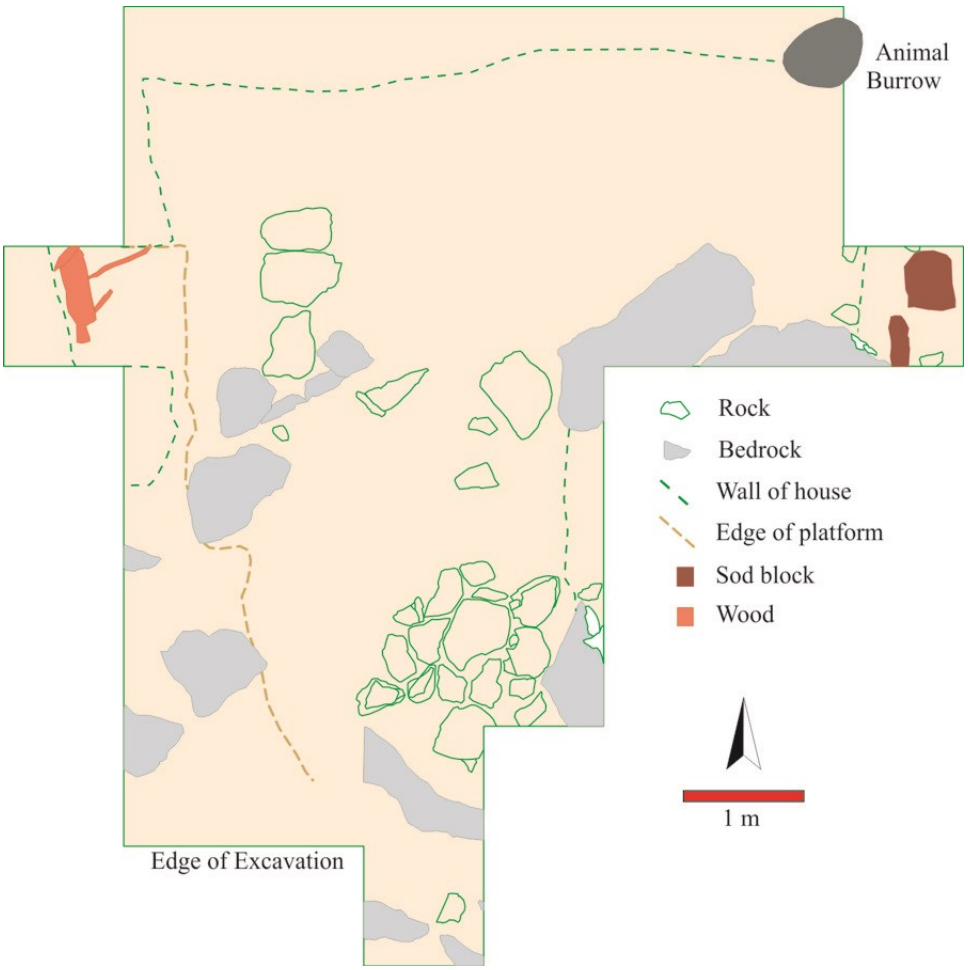
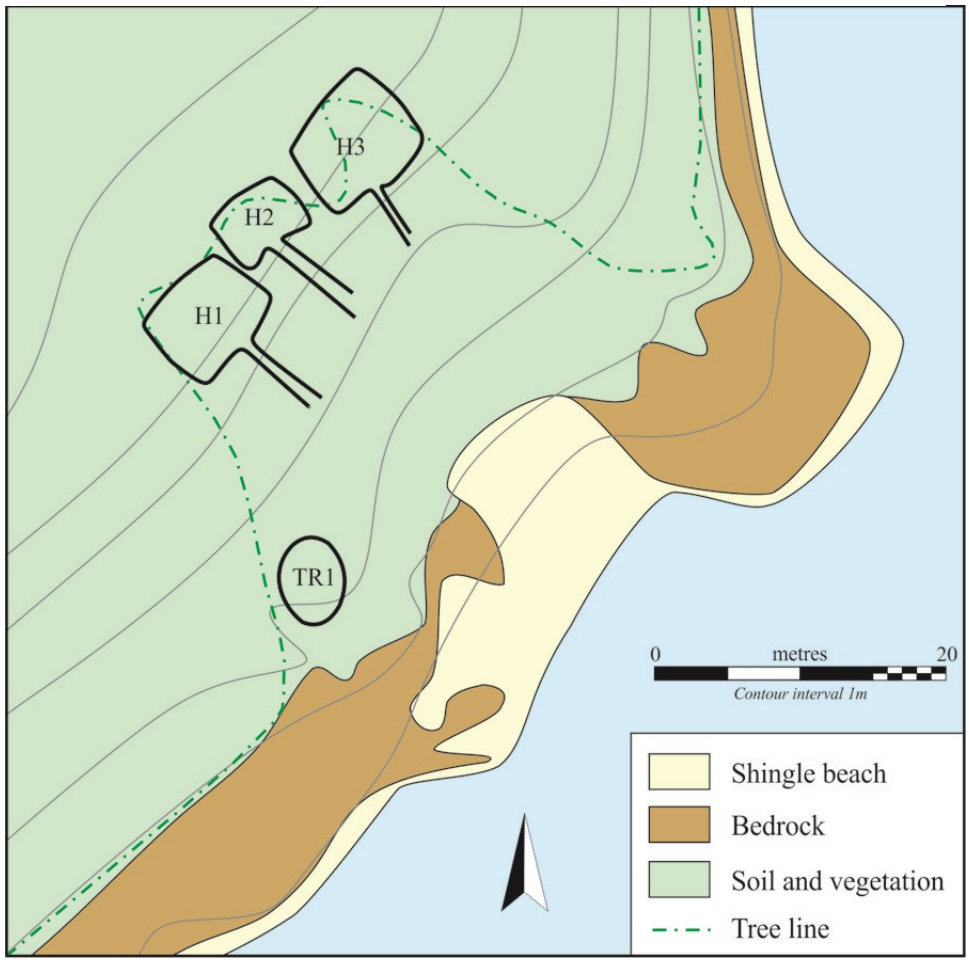


Figure 7. Plan of Norman's Island House 1.

Figure 8. Brooch from House 1 at Norman's Island.

Figure 9. Location of Double Mer Point site (GlBo-02).

Figure 10. Map of Double Mer Point site (GlBo-02).



house at Norman's Island points out the fact that we have achieved most of our major initial aims. Among our other goals, we have excavated Inuit, Metis, and fisheries-related house structures to the extent that we can now specify the differences between them and how to tell them apart.

2. DOUBLE MER POINT

The site of Double Mer Point is an early historic period Inuit site located on a point some six kilometers to the northeast of the modern community of Rigolet (Figure 9). Initially tested by Richard Jordan in 1973 and 1975, it consists of three Inuit sod-walled winter houses and one tent ring facing a small stretch of shingle beach (Figure 10). Our work at Double Mer was in response to a request from the people of Rigolet, who are hoping to incorporate the site into their development plan for the community and the long shoreline boardwalk that links the town with the site, and which is already a significant recreational and tourism feature.

During a brief exploratory field season in August 2013, we excavated a total of nine 1m by 1m test pits. In each house we placed one test pit in the entrance passage and two in the interior. Among the materials recovered are numerous European items such as ceramics, glass, glass beads, kaolin pipes, roof tile fragments, and a variety of articles of metal (Figure 11). Also recovered were a smaller number of traditional Inuit items including soapstone and modified whalebone. With continued support from the community, we will return to Double Mer in 2014 for a more extended field season to expand our excavations in the sod houses.

Figure 11. Selection of artifacts from Double Mer Point site: gun flint, glass bead, kaolin pipe, iron fish hook, fragment of whalebone object, bottle fragment.

Introducing the Newfoundland and Labrador Archaeological Society

Tim Rast
NLAS President

MISSION STATEMENT: *To promote an understanding of archaeology in Newfoundland and Labrador and protect archaeological resources by fostering research, stewardship, education, and the exchange of ideas and information between professionals and the public.*

The Province of Newfoundland and Labrador has one of the richest and most complex archaeological records of any place in Canada. For 10,000 years, generations of people have been coming from every direction to make a living, raise their families, seek their fortunes, meet one another, sometimes disappear, and sometimes thrive. Today we have a healthy population of archaeologists and archaeology projects in the Province, a Provincial Archaeology Office, a strong Department of Archaeology at Memorial University of Newfoundland, many independent and contractual researchers, and numerous community projects and avocational archaeologists spread across Newfoundland and Labrador, who are all working to uncover traces of the preceding cultures. Despite this, we have been without a Provincial archaeological society since the 1980s when the Association of Amateur Archaeologists of Newfoundland and Labrador was formed but eventually disbanded (Mathiesen 1984, Allston 1986. In the spring of 2013, we were one of only three Provinces in Canada that did not have an archaeological society or association that linked students, professional archaeologists, and the public.

On April 6th, 2013, a small group of volunteers organized an informal brainstorming session at Bitters Pub & Restaurant that was attended by sixteen people representing a wide cross-section of the local archaeological community, ranging from MUN faculty and students, provincial government archaeologists, the private sector, consultants, collections managers, as well as policy planners. There were people at the table with experience across the Island and Labrador, as well as those with national and international backgrounds. We unanimously decided at that time to pursue the creation of a Newfoundland and Labrador Archaeological Society that would be open to everyone. We continued to meet throughout the spring, on a monthly basis, and after a short hiatus for the summer field season we resumed meetings in August.

The group composition changed and grew following the first meeting and over the course of the year more than two dozen people contributed their time, energy, and guidance to the creation and growth of the society. By the end of May, we incorporated the Newfoundland and Labrador Archaeological Society, Inc., with founding directors: Catherine Jalbert, Lori White, Corey Hutchings, Stewart Wilson, and Tim Rast.

The Newfoundland and Labrador Archaeological Society held its inaugural Annual General Meeting at Queen's College, MUN, on November 4th, 2013. At that time, the NLAS held its first public talk, "The MUN Archaeology Field School at the WWI site of Admiralty Station, Mount Pearl" by Dr. James Lyttleton, which was also archived on the NLAS YouTube channel. During the AGM members voted to accept a constitution and the Society's first Executive Committee and Board of Directors were announced:

President: Tim Rast
Vice-President: Catherine Jalbert
Treasurer: Lori White
Secretary: Sarah Ingram
Director: John Erwin
Director: Scott Neilsen
Director: Corey Hutchings
Director: Chris Wolff

Much of the work that NLAS volunteers have undertaken so far has been the groundwork necessary

to create a new organization. We have opened a bank account, created a logo, drawn up membership forms, registered a Domain name, and formed working committees. Other jobs have been meatier, like writing a Mission Statement, drafting a Code of Ethics, and writing a Constitution and Bylaws.

Before heading into the field last summer we created a Facebook page and Twitter account which were our first forays into the public sphere. The Facebook page has been tremendously successful, with over 330 followers already, giving us the second largest Facebook presence of any provincial society in Canada, next to the decades strong Ontario Archaeological Society. We've created a YouTube channel to archive and broadcast our talks and events to members, and through the generous support of the Canadian Archaeological Association, we have a host for our website and e-mail client. Our e-mail is set up now and we are currently working on designing the website.

The Newfoundland and Labrador Archaeological Society's first face-to-face public event came at the invitation of The Rooms, who invited us, along with other archaeological organizations within the Province, to participate in International Archaeology Day, an initiative of the Archaeological Institute of America, on October 19th, 2013. This gave us an opportunity to meet with people, begin our membership drive and start fulfilling our mandate. Based on the success of our involvement with The Rooms at International Archaeology Day, we were invited back to schedule two speaking engagements at The Rooms in April 2014.

Our plans for 2014 include drafting a business plan, building our website, applying for charitable status, and seeking provincial funding. We'll continue our membership drive and plan to create exciting and diverse events and content for members through the year. We are really just getting started. If you would like to become a member, learn more about the NLAS, or volunteer on a committee here's how you can get in touch with us:

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Figure 1. The Newfoundland And Labrador Archaeological Society's First Public Event Was Held At The Rooms In Celebration Of International Archaeology Day On October 19, 2013. (Photo Credit: Lori White)

Figure 2. The Newfoundland And Labrador Archaeological Society Logo Displays A Green English Wine Bottle Positioned Stratigraphically Above An Earthy, Ochre-Stained Maritime Archaic Harpoon Head, With The NLAS Acronym Cut From The Artifacts Like The Missing Pieces Of A Puzzle.

Newfoundland and Labrador Archaeological Society

CODE OF ETHICS

Members of the Newfoundland and Labrador Archaeological Society (NLAS) agree to promote the advancement of archaeology by supporting the organization in its aims to stimulate the interest of the general public in archaeology and to discuss and disseminate archaeological information and ideas according to the NLAS's ethical principles:

Regarding Stewardship and Accountability:

(i) Members acknowledge an archaeological research permit is required by any person carrying out explorations or making excavations on any land (terrestrial or underwater) for the purpose of seeking archaeological objects. Members have a duty to encourage and support the permitted identification, recording, protection, and effective management of archaeological materials, collections, and established or suspected archaeological sites in Newfoundland and Labrador. Members shall respect the rights of landowners, tenants, lessees, and archaeological permit holders.

Regarding the Value of Archaeological Objects:

(ii) Members shall respect the archaeological objects of all societies and acknowledge the scientific, educational, and cultural significance that such irreplaceable resources hold for all people. Members will not support archaeological objects being bought, sold, traded, or bartered as commercial goods, as it is unethical to establish a commercial value on any archaeological site or object that may lead to its destruction, dispersal, or exploitation.

Regarding the Law:

(iii) Members will act in accordance with the applicable Provincial, Federal, and Aboriginal heritage legislation*****, and encourage non-members to do the same. It is illegal to disturb, collect, or remove archaeological objects through survey or excavation without obtaining an archaeology permit. In the spirit of these legislations, a Member agrees to make any archaeological finds (terrestrial and underwater) in his or her possession available for analysis and study by permit-eligible archaeologists.

*****Links to legislation regarding archaeology in Newfoundland and Labrador:

Government of Newfoundland and Labrador

Government of Canada

Nunatsiavut Government

Provincial Archaeology Office 2013

Reynolds, Ken, Stephen Hull and Delphina Mercer
Provincial Archaeology Office (PAO)

Fieldwork conducted by the PAO spanned the entire Island and a small part of Southern Labrador.

O'Donnell's, St. Mary's Bay

In early June 2013, Dr. Barry Gaulton contacted the Provincial Archaeology Office (PAO) reporting a possible site at O'Donnell's, St. Mary's Bay based on information from Mr. Bill Hickey. Mr. Hickey sent Dr. Gaulton photos of artifacts from the possible site and indicated that he had found the artifacts with a metal detector on the southeastern shore of Big Mussel Pond. Among Mr. Hickey's photos was one that showed a possible cultural alignment of stones.

The PAO contacted Mr. Hickey and visited the site during the first week in June. Prior to going to the site, Mr. Hickey showed us the material he had collected including a piece of lead, several iron nails, a gunflint, a knife, the heel of a shoe or boot, part of a kaolin pipe and several pieces of ceramic (Figure 1). We then departed for the site by ATV for part of the distance and then we walked along a dirt path and the shoreline of the pond.

The site is in a small clearing on the southeastern shore of the pond (Figure 2). It is not certain if the clearing is cultural or natural. The main part of the site appears to be set back from the pond approximately 70-80 metres. At the back of the clearing was a linear arrangement of rocks. These rocks may be part of a structural wall or collapsed chimney. We dug several testpits in this area.

Most of the testpit artifacts (Figure 3) were found near a mound of rocks. None of the artifacts was collected. It has been suggested that this mound maybe part of a collapsed chimney. The artifacts found in the test pits included several square iron nails and an undecorated pipe bowl with a small portion of stem. The bowl had a heel but there was no maker's mark.

During our site visit, Mr. Hickey stated that he had used his metal detector in several other areas nearby and had found other sites including in a cove locally known as Nails Cove (Left side of the map in Photo 5 above). Mr. Hickey stated that he had found square nails at Nails Cove. Gerald Penney Associates Limited referenced this site in their 2007 report *St. Mary's Bay – Indicated Historic Resource Potential* as a place with historic resource potential:

> *Appears in the 1836 census, as a set with O'Donnells and Admirals Beach, occupied by a single family. Other than proximity to O'Donnells there is no firm indi-*

Figure 1. Part of Mr. Hickey's collection from the site. Lead and pipe fragments, gunflint and knife.

Figure 2. Mound of rocks is behind the tree stumps in the foreground, to the right of the red shovel handle.

Figure 3. Testpit artifacts found at O'Donnells.

> *cation as to where Gleesons Cove may have been, but tradition at O'Donnells is that a site locally known as "Nails Cove" was settled by an Irish family named O'Neill who lived there before O'Donnells was settled (pre-1800). Ryan and Ryan (2000) indicate that the site is well known locally, a grassy meadow outside Mussell Pond Point, where one and a half acres of land were cleared and with some visible ruins at surface. Obviously, local knowledge would help, but from their description it is likely a small cove one km north of Mussell Pond Point.* Penney 2007: 24.

The Borden number for Big Mussel Pond 1 is CgAj-03 and for Nails Cove 1 it is CgAj-04.

Northern Peninsula & Labrador

In June, PAO staff delivered artifacts to a number of community museums and Visitor Information Centre's across the Island on behalf of The Rooms. Along with delivering artifacts to Trinity, Norris Arm, Deer Lake, Woody Point, Cow Head, Bird Cove Cape Ray and Port aux Basques we made several site visits and conducted some minor field investigations.

We spent the first three days of our trip delivering artifacts. Our first site visit was to Deep Cove which is a former winterhouse location for the community of Anchor Point which is just north of Deep

Cove on the Great Northern Peninsula. The local development organization has reconstructed the former community including several houses, a barn and the school house in miniature. They have surrounded the whole former community, which contains the remains of several collapsed buildings, with a 1.5 km long boardwalk and interpretive panels (Figures 4 & 5). The Borden number Deep Cove is EhBe-10.

The morning after our visit to Deep Cove we crossed the Strait of Belle Isle for a short trip to Labrador. Heading off the ferry we immediately headed to Red Bay. The Red Bay Come Home Year Committee planned to use an area between the cemetery and boat shed as a picnic area during Come Home Year. The Committee planned to put in an access road extending from the existing cemetery access road to the boat shed. They wanted to put in picnic tables, benches and a couple of fire pits. Parks Canada supported the project and was interested in using the area for programming space. The Town had no concerns with the project. The location is outside the UNESCO boundaries, but within the buffer zone. The archaeological potential of the area was not high but given the significance of Red Bay the PAO decided to have the area tested (Figure 6).

We dug 15 test pits in the centre of the proposed road and in the picnic area. No historic resources were encountered.

We also checked on the condition of the Cemetery site, EkBc-03. This site was partly excavated in 2003 by PAO staff members to collect material that erodeed out into the dirt path that surrounds it. Charcoal recovered at that time returned a date of 7440+/-60 BP (Beta 182001) (Note: The cemetery shown in figure 6 is not the Cemetery site).

The site is in good condition with minimal erosion caused by vehicles driving around the cemetery. There was a small amount of quartzite in the pathway which was mostly flakes and various pieces of shatter. However, we did collect two white quartzite biface tips (Figure 7) and the medial portion of a third biface. This site still has a small intact area of a few square metres which could be excavated.

Figure 4. Interpretive panel at Deep Cove showing map of the former community and the reconstructed houses.

Figure 5. Reconstructed miniature buildings in Deep Cove. Collapsed buildings can be seen in the foreground left and the background right.

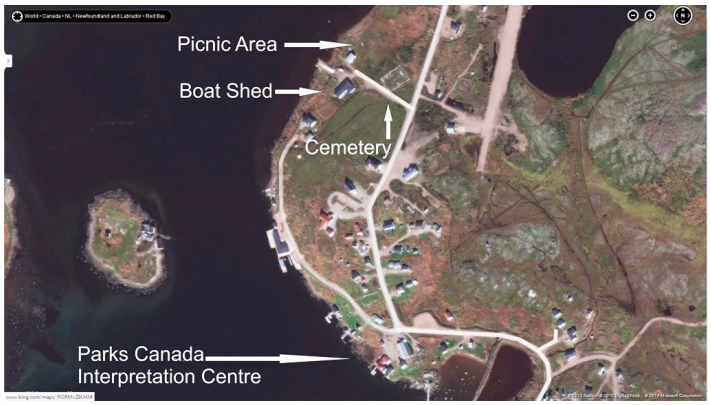


Figure 6. Showing area to be tested in Red Bay.

Figure 7. Quartzite biface tips recovered from EkBc-03

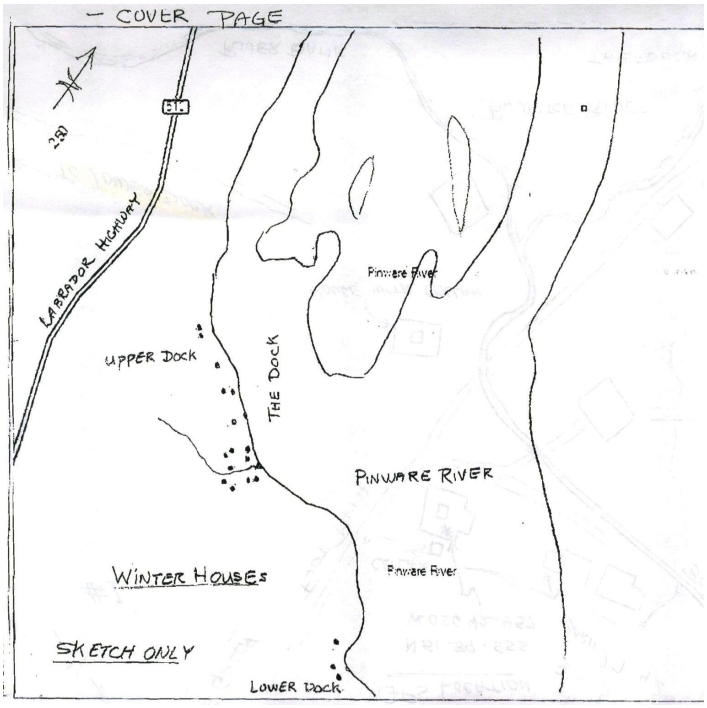


Figure 8. Hand drawn map showing location of 'The Dock'.

In 2013 the PAO received a land use application for a quarry near the Pinware River. During our assessment of this application we learned from a local resident that the area near the proposed quarry had been used as a winterhouse location for the people from Pinware. After we finished up in Red Bay we then headed to this location on the Pinware River to check on the condition and presence of this winterhouse location.

Based on our informant's information there were two areas near each other that were used for winterhousing known as the Upper and Lower Dock; together they were known as The Dock. The community was used up to the 1940s and was once home to approximately 20 families and contained several houses, root cellars and a school house. We managed to confirm the location and existence of the Upper Dock. We were not able to get to the Lower Dock but having confirmed the location of the Upper Dock, there is no reason to suspect that the Lower Dock did not exist. (Figure 8) We did not testpit but noted some minor erosion along the river edge where we saw several parts of a cast iron stove and one or two pieces of ceramic. We were also able to identify the foundation depressions for several buildings.

Hant's Harbour

Early in 2010 a local informant in Hant's Harbour approached the PAO with a photo of a rock mound located next to a local walking trail. In June of 2010 the PAO had an opportunity to examine the rock mound which we believe dates to a 19th or 20th century European occupation. (More information on this work can be found in the PAO Review for 2010). This same individual again approached PAO staff during the summer of 2013 about more rock features in Hant's Harbour.

In the area of Track 1 2013 (Figure 9) we were shown several stone mounds and large stone walls. Several testpits were dug near some of the walls and stone mounds. No historic resources were found. The most substantial of the walls was at least 1 metre wide, ½ metre to a full metre in height and ~30 metres long . All of these features are believed to be related to the European occupation of the area, but they do seem to be very large ; they almost seem to be beyond the effort required for land clearing for something like agriculture (Figure 10 & 11).

Figure 9. Track logs showing areas surveyed in 2010 & 2013 by PAO staff.

After we finished exploring the features at Track 1 we took a few hours to explore the similar fetures at Track 2, which again were the result of a European occupation.

Figure 11. One of several stone mounds in the area of Track 1 2013.

Tors Cove

In 2006 the PAO were alerted to the presence of an abandoned cemetery in the community of Tors Cove. We returned to the site in 2008 and did notice that the site was continuing to erode, but very slowly. In November, we returned to the site with Dr. Vaughan Grimes, the physical anthropologist at MUN, and one of his students, to check on it's condition. We found that the site was continuing to erode very slowly. We noted and collected some human remains that had eroded from the bank. These included several skull fragments, a clavicle, several vertebrae, a foot bone and a tooth.

Figure 10. Showing the height of a wall and the size of some of the rocks used in construction.

Exploits River

In 2013 the PAO continued its on-going reassessment of Beothuk sites on the Exploits. This year the emphasis was on attempting to relocate the single stone-lined house reported at the Old House site (DfAx-04) and the three house pits associated with the Four Mile Rapid site (DfAv-01). A visit was also made to the Nimrod's Pool area of the river, just above the town of Grand Falls-Windsor. This area was the subject of PAO sponsored directed research undertaken by Laurie McLean in 2012. Based on McLean's visit further work at the Aspen Island 2 site (DfAw-05) was developed by the PAO and later carried out by McLean in 2013 (see this volume). During the revisit of Aspen Island in the spring before the regrowth of vegetation occurred, a previously recorded house pit

Figure 12. House 3 at Aspen Island 2 (DfAw-05).

(House #3 at Aspen Island 2) was relocated and recorded using GPS (Figure 12).

The Old House site (DfAx-04) was originally discovered by Don Locke, an amateur archaeologist responsible for locating the majority of Beothuk house pits on the Exploits River during the winter of 1983/84. DfAx-04 was relocated by Callum Thomson and Don Locke in 1988; it is located about 10.5kms above Nimrods Pool. This house pit is located on a rocky ridge on the north side of the river and is composed of a rock walled construction (Figure 13). What appears to be a stone-lined pit measuring 1m² abuts the downstream wall of the house. The interior measurement of the house was 2.55m by 2.50m or 6.3m². There are only three other known houses on the Exploits River which were built using this construction method; two are found at Aspen 2 (Dfaw-05) while the third is reported by Locke from Fatal Island located about 3km above the town of Badger. This third house pit has yet to be confirmed. A number of cobble beach depressions are recorded for the Bay of Exploits and further west in Notre Dame Bay. The study of these interior and coastal sites could be a rewarding research endeavor.

Four Mile Rapid (DfAv-01) site is approximately 2.3kilometre below the town of Grand Falls-Windsor boat launch area and about a km upstream from the rapids from which the site got its name. Again this site, with 3 house pits, was discovered by Locke in November of 1967 and relocated by Thomson and Locke in 1988. In 1992 Fred Schwarz relocated what he thought was one of the house pits from this site. In September of 2013 the PAO also relocated only a single house pit which we believe is due to the amount of vegetation covering the site area (Figure 14). The PAO is confident, based on comparing the site information within both Locke's and Thomson's field notes with observations in the field, that the Four Mile Rapid site has been relocated. This site is the only known remaining house pit location below Grand Falls-Windsor.

Springdale

While in Central Newfoundland in June, 2013 the PAO investigated the historic resource potential of a proposed development project overlooking Indian Brook Arm. During a non-intrusive walkover of the area both precontact and historic sites were discovered, and as a result an historic resources impact assessment was required on portions of the proposed project area (see Penney this volume).

Triton Island

During the summer of 1928 the anthropologist Diamond Jenness on behalf of the then National Museum of Canada undertook a cruise of Notre Dame Bay looking for Beothuk habitation and burial sites. Over the last number of years the PAO has attempted to verify the locations of Jenness's sites by revisiting the areas shown in his photographs which were published in the January 1934 Canadian Geographical Journal and recreating them. Triton Island was visited by the PAO in September of 2013 and the following photograph verifies the location of the site visited by Jenness's site (Figures 15 & 16).

Bonavista Peninsula

In July the PAO made a two day visit to the Bonavista peninsula to inspect some significant fossil

Figure 13. The Old House site (DfAx-04).

Figure 14. Four Mile Rapid (DfAv-01) .

Figure 15. A Diamond Jenness photograph published in the January 1934 Canadian Geographical Journal.

Figure 16. Photo taken by Reynolds showing the same view as the Jenness photo.

Figure 17. Signs notifying the public that significant fossil sites in the area are protected under the Historic Resources Act (Town of Trinity Bay North).

sites and to meet with staff of the town of Trinity Bay North regarding the placement of signs notifying the public that the significant fossil sites in the area are protected under the *Historic Resources Act* (Figure 17 courtesy of the Town of Trinity Bay North).

The PAO also revisited a winter house site (DcAi-21) located in the inner reaches of Trinity Harbour to check on its condition. The site, tentatively dated to the late 18th century, was found to be in excellent condition (Figure 18). This is a site with high research potential.

Colonial Building

For the last few years renovations have been ongoing at the Colonial Building, both on the inside and outside. The PAO has been monitoring this work, particularly the outside work which really increased this year. We understood from historic records that there were no other buildings built on the land the Colonial Building currently occupies. In fact, that land was considered to be little better than a swamp in 1846 when building construction began and therefore we were not overly concerned with the exterior renovations. In a letter to the British Colonial Secretary written on 18 May 1846 from Major Robe, Commanding Officer of the Royal Engineers (part of the committee selecting the site of the Colonial Building), he describes this swamp:

The ground selected is in the very centre and lowest part of a springy marsh or swamp which, I believe, forms the source or head of all the wells and springs that supply the town in the district included between King's Road and Fort William, having their extreme outfalls into the Harbour at Brooking's and the Ordinance wharves. This swamp never completely dries up, and it acts as a well-saturated sponge from which a constant soakage is spread out over a large surface of gravelly sub-soil and through that it percolates, in a manner much more pure than any artificial course could convey it, to supply all the wells and springs in the district so described. The water thus obtained is of the very best description, soft and firm for all domestic uses, and it supplies

Figure 18. Possible late 18th century winter house site (DcAi-21) located in the inner reaches of Trinity Harbour.

Figure 19. The yellow rectangles are brick/stone drains found during construction. The green rectangles are PAO tractor excavated test trenches, the red rectangles are brick/stone drains found in the PAO test trenches.

all the inhabitants, not only within its range, but a very large portion that reside beyond its influence, at a considerable distance from the springs: any building, therefore, or other obstruction, placed on the swampy ground, or any attempt to dry it up by drainage for that object, would in my opinion, be very detrimental, inasmuch as it would tend to diminish, if not cut off altogether; the supply of water to these wells and springs.

Considering this information we should not have been surprised when we found numerous stone and brick lined drains both on the Colonial Building property and in adjacent Bannerman Park during the renovations to install new water, sewer and electrical lines (Figure 19). Given that the area was a swamp and we know the builders of the Colonial Building complained about the water they were finding in the basement these drains were likely built around the same time as, or just after, the construction of the building.

The first drain to be found was constructed of red brick walls and had a stone cap. This feature, like several of the others that were uncovered still had water running in it.

The next drain uncovered had stone walls and a stone cap. Given the different construction materials they may have been built at different times or it may suggest there were no hard rules when constructing drains; they just had to be functional. (Figure 20)

The drains we have uncovered so far are roughly 1 metre wide, nearly 1 m deep and usually covered by up to at least 1 metre of soil. There is one exception to this. In late October we were notified by construction crews in Bannerman Park who were building the Bannerman Park Skating Loop that they had come across another drain. This latter drain was just 10-20 centimetres under the surface. More information on this work and these drains can be seen on the blog Inside Newfoundland and Labrador Archaeology.

References

Penney, Gerald
2007 *St. Mary's Bay – Indicated Historic Resource Potentia*l

Figure 20. Photo of the interior of a drain with stone walls and a stone cap.

Impacts of Sea-Level Rise on the Archaeological Resources of Port au Choix and L'Anse aux Meadows national historic sites and adjacent areas, northwest Newfoundland: Reducing uncertainty in risk assessment modelling through improved archaeological site information

C.E. Robinson, T. Bell, M.A. Storey, and A. Pollard-Belshiem
Memorial University of Newfoundland

Coastal archaeological heritage is potentially vulnerable to increased erosion and flooding resulting from future sea-level rise (SLR) and storm surges. As all sites cannot be protected, it is essential that heritage managers know which sites and landscapes are most at risk so they may then prioritize resources and decision-making most effectively. Desk-based modeling of coastal vulnerability is one type of assessment tool that can provide the necessary information to inform management decisions about coastal heritage resources. A recent application of this tool in Newfoundland revealed that 20% of archaeological sites in select study regions are potentially at risk over the next 15–50 years (Westley *et al.* 2011). These preliminary results triggered the development of a new project - Coastal Archaeological Resources Risk Assessment (CARRA) – by a government -university collaboration of heritage managers and researchers, informally known as the Committee on Coastal Change and Heritage (3CH).

The overall purpose of the CARRA project is to inform management decisions that address the impacts of SLR on Newfoundland and Labrador's heritage and archaeological resources. Over the next two years CARRA will address its research objectives through completion of the following four tasks:

1. Refine existing coastal archaeological risk assessment modeling approach;
2. Make recommendations on archaeological resource prioritization in the face of potential future loss or damage;
3. Inform specific adaptation actions with respect to at-risk archaeological resources;
4. Develop case studies on management options and responses to at-risk coastal archaeological resources in Atlantic Canada that will be transferable to other regions of Canada.

The initial archaeological risk assessment model by Westley *et al.* (2011) covered three study areas: Port au Choix, L'Anse aux Meadows and Bonavista Bay. These three areas, plus Terra Nova National Park and the Strait of Belle Isle, will be re-assessed using higher resolution datasets to establish the sensitivity of the approach for coastal and archaeological vulnerability mapping. One data refinement involves the application of newly acquired LiDAR topographic data to the development of a digital elevation model (DEM). Others involve SLR, and coastal erosion projections and

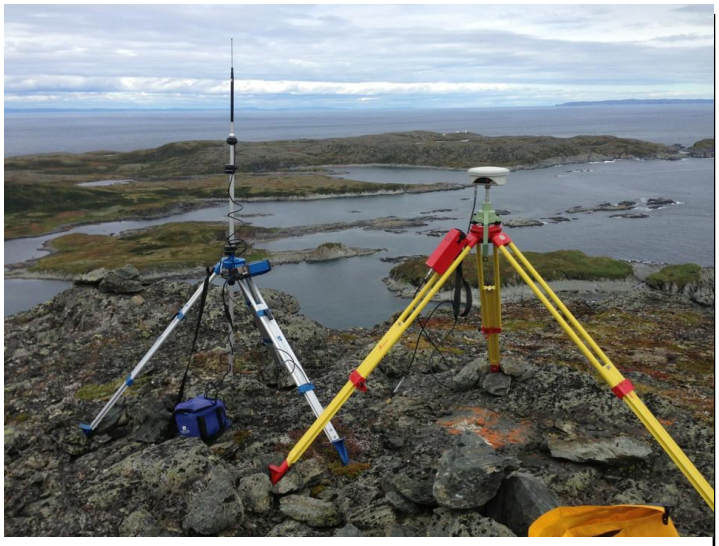


Figure 1. Photograph of DGPS base station (Leica GS09 GNSS) with radio antenna. Photo: CARRA project.

archaeological site georeferencing.

Fieldwork in September 2013 focused on re-survey of archaeological sites and description of their coastal setting in two of our study areas: Port au Choix (PAC) and L'Anse aux Meadows (LAM) national historic sites and adjacent areas. We were specifically interested in confirming the actual location of the site and accurately surveying any known site characteristics (e.g. site boundaries, feature densities), especially for large sites, using a Differential Global Positioning System (Figures 1 and 2). These new data will contribute to a more accurate classification of site vulnerability. Our initial step was to consult the Provincial Archeology Office (PAO) site record forms for the 73 sites identified by Westley *et al.* (2011) in the PAC (45) and LAM (28) study areas, plus any additional sites that lay within the revised study boundaries. Information from the PAO site record forms, in conjunction with any reports produced for the sites, provided guidance on boundaries, archaeological character (*e.g.*, buried or surface features) and mapped features, soil conditions and last known preservation state. Site curators and managers were contacted prior to site visits and, where practicable, consulted regarding archaeological details. Most sites were successfully relocated and mapped.

In addition to mapping the archaeological boundaries, the coastal context of each site was recorded. Observations using bespoke recording forms and photographic survey were made on the proximity of archaeological resources to the active shoreline, the character of the coast (*e.g.* geology and topography), and evidence of active erosion. The 2014 field season will continue this field activity for sites in Bonavista Bay and the Strait of Belle Isle.

Project tasks 2-4 have also been initiated. Tasks 2 and 3 involve literature reviews of common practices in prioritization of at-risk archaeological sites and the strategies employed to protect or mitigate damage of archaeological sites under threat, respectively. For task 4, we plan to assemble a number of case studies in Atlantic Canada on the management of at-risk archaeological sites. These studies will be presented at a special session hosted by the CARRA project at the Coastal Zone Canada 2014 conference in Halifax. Based on formal and informal meetings with archaeologists and heritage managers across the country, there appears to be substantial interest in the vulnerability assessment of coastal archaeological resources and the creation of a Community of Practice to share information and expertise. CARRA will continue to take a leading role in this initiative.

Primary funding for this project is through the Competitiveness in a Changing Climate program of Natural Resources Canada and the Department of Environment and Conservation, Government of Newfoundland and Labrador. To follow progress of the CARRA project you can visit our web site at www.carra-nl.com.

Figure 2 Photograph of rover antenna (Leica GS09 GNSS) with hand held unit (CS09 Controller). Photo: CARRA Project.

Lower Churchill Project Historic Resources Management Program, South-Central Labrador 2012-2013

Fred Schwarz
Roy Skanes
Stassinu Stantec Limited Partnership

Introduction

Nalcor Energy is presently developing the 824MW Lower Churchill Hydroelectric Project in central Labrador. Extensive Historic Resources Assessment to identify archaeological sites within the project footprint, including the reservoir and associated transmission infrastructure, has been undertaken since 1998. Following release of the project from the environmental assessment process in 2011, construction started with an Early Works Program in 2012, followed by bulk excavation at the Muskrat Falls dam site beginning in 2013.

At this point, the Historic Resources Management Program involved ensuring that Stage 1/ Stage 2 assessment was complete, and, where necessary, initiating Stage 3 recovery (in most cases, archaeological excavation) at any archaeological sites situated within the project footprint.

2012 Historic Resources Management Program

In 2012, Nalcor Energy commenced construction of early works infrastructure associated with hydro development for power generation at Muskrat Falls, Labrador. As part of the permitting process, Nalcor required Stage 2 Historic Resources assessment of the proposed works.

2012 Stage 2 Archaeological Testing Program

Stassinu Stantec commenced Stage 2 Assessment in July 2012 and completed the 2012 Historic Resources Management field program in October 2012.

Most testing locations yielded negative results. However, extensive testing along the portage trail and terrace overlooking the south side of Muskrat Falls led to the discovery of 23 new archaeological sites. Further cultural material was recovered from two previously registered sites, bringing the total of precontact sites along the Muskrat Falls south portage trail to 25.

2012 Stage 3 Recovery Program

The project's construction schedule indicated that an immediate Stage 3 Recovery Program was required at 15 of the 25 identified sites. Eight more sites within the Muskrat Falls reservoir area required recovery in 2013. Interaction of the project on the remaining two sites downstream from the generation project (Figure 1) may be avoided.

Following an archaeological training program for field teams, and initial manual felling of trees, a Stage 3 Recovery Program was implemented at these 15 sites. Additionally, the entire length of the portage trail itself was recorded as continuous video as well as digital images.

Despite encountering evidence for extensive twentieth-century disturbance associated with road-building along the portage trail, the recovery program led to the identification and recording of numerous precontact cultural features at these sites. Features included cobble hearths and pits, and boulder alignments and boulder-filled pits interpreted as the remains of canoe building activities. This complex of sites on the south side of Muskrat Falls is interpreted as a precontact period staging area for seasonal (spring and fall) moves up and down river. Nearly 18,000 artifacts and pieces of lithic debitage were recovered in association with these features. The patterns of lithic raw material use and the lithic artifact styles suggest that the sites recovered in 2012 date to the Intermediate Period in Labrador prehistory (*ca.* 3,500-2,000 BP). Three of the sites also yielded precontact ceramics, which are rarely encountered in Labrador, are rarely found in Late Precontact contexts, and never previously on Intermediate Period sites.

The sites recovered in 2012 were all aligned

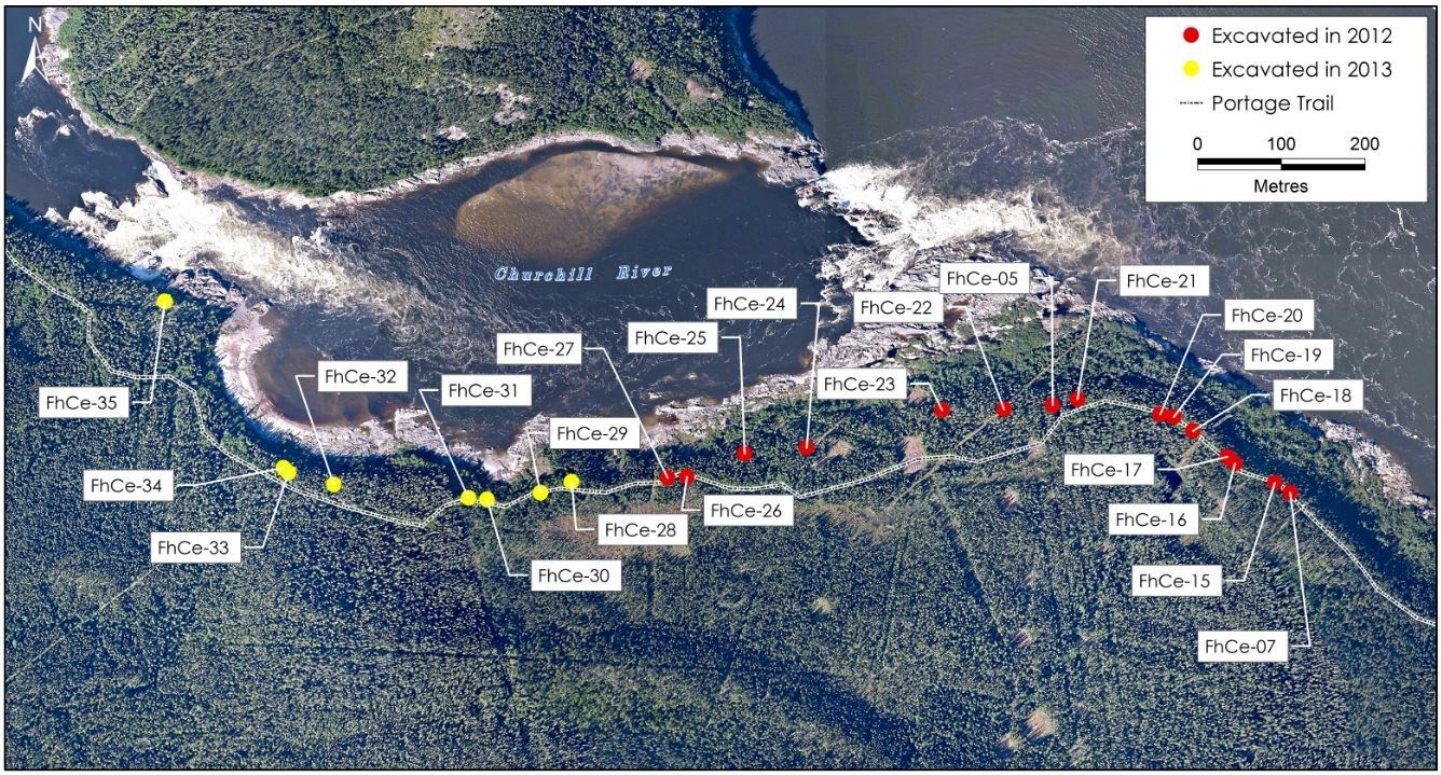


Figure 1. Archaeological Sites on the South Side of Muskrat Falls.

Table 1. Archaeological sites recovered on the south side of Muskrat Falls and the year each was excavated

Archaeological Site	Excavation Year	Archaeological Site	Excavation Year
FhCe-05	2012	FhCe-25	2012
FhCe-07	2012	FhCe-26	2012
FhCe-15	2012	FhCe-27	2012
FhCe-16	2012	FhCe-28	2013
FhCe-17	2012	FhCe-29	2013
FhCe-18	2012	FhCe-30	2013
FhCe-19	2012	FhCe-31	2013
FhCe-20	2012	FhCe-32	2013
FhCe-21	2012	FhCe-33	2013
FhCe-22	2012	FhCe-34	2013
FhCe-23	2012	FhCe-35	2013
FhCe-24	2012		

along the terrace overlooking the falls and the river, in most cases 5m or less from the terrace edge. Aside from several smaller outliers, the larger sites form two principal clusters at the lower falls: one small cluster consisting of FhCe-16 and FhCe-17, and one very large central cluster consisting of FhCe-20, FhCe-21 and FhCe-05. The sites further to the west (FhCe-22 – FhCe-27) form a spaced series of small campsites.

The features most frequently encountered on these sites were diffuse firecracked cobble hearths. Except for Feature 1 at FhCe-05 (Figure 2), these were not the dense cobble pavement type associated with the central Labrador coast, nor the sand mound variety found in the Quebec interior. An unusual burnt-pebble pavement-like hearth was recovered at FhCe-17, and several sites contained possible small pit hearths. However, the majority of the hearths from Muskrat Falls are oval firecracked cobble features which are generally consistent in size with those reported from sites on the central Labrador coast, the Strait of Belle Isle, and the Quebec interior.

Sometimes these hearths were isolated single features (e.g. FhCe-07, possibly FhCe-20, and FhCe-23), but often they were found in pairs (e.g. FhCe-17, FhCe-05, FhCe-22, FhCe-24, and FhCe-25), oriented at an angle to the edge of the terrace, either close enough together to belong to a single multi-family dwelling, or widely-separated enough to suggest separate single-hearth dwelling structures. When situated close together, the diffuse rock clusters often blended, giving the impression of a rather foreshortened "linear hearth". FhCe-16 was the only possible candidate for a true extended linear hearth recovered in 2012 at Muskrat Falls, although disturbance factors mean that this is not conclusive.

In any case, the frequency with which hearths formed pairs at these sites is striking, although not unprecedented for post-Archaic occupations in Labrador -Ungava. Paired hearths, for example, appear to be common on Intermediate- and Late-Precontact sites in Quebec. Although paired hearths are not generally remarked upon in Labrador, hearth pairs have been recorded from widely separated locations, including Sheshatshiu in central Labrador, Kamistastin in the north-central interior, Daniel Rattle and Thalia Point 5 on the north-central coast, and possibly also in the Strait of Belle Isle area. This may well be a common pattern in the social structure of the post-Archaic, whereby families travelled and harvested seasonally in pairs.

The frequency of hearths recorded along the south-side portage around Muskrat Falls indicates that the sites recovered in 2012 were principally campsites which saw a wide range of domestic activities such as cooking and food preparation. However, some features showed evidence of more specialized functions. For example, the boulder alignments at FhCe-17 and FhCe-21 are interpreted as features related to canoe-building. Boulder-filled pits are associated with boulder alignments at these same two sites, and may be related in some fashion to the same activity. The results of consultation with Innu elders suggest that this interpretation is indeed plausible, and the Historic Resources Management Team looks forward to further consultations with elders as the research continues. Also noteworthy is an unusually- deep elongated pit at FhCe-21 may have had a specialized cooking function or may have been a smudge pit or pottery kiln.

The lithic debitage scatters associated with these campsites (Figure 3) are primarily of quartzite, available locally and all along the Churchill River and upper Lake Melville, as well as rhyolite, known to be available in cobble form further upstream along the Churchill River. Less common but still present in quantity is Saunders chert, available from an as-yet unidentified source likely in the interior of northern Labrador. Also found were quartz, potentially available locally, Ramah from the Torngat coast of northern Labrador, smoky vitreous chert that may derive from sources in western Labrador or on the south coast, and a limited number of artifacts (though no debitage) of what appears to be Mistassini quartzite. Sites vary widely in the relative importance of these materials, with one (FhCe-05; see Figure 2) dominated by Saunders chert, and two (FhCe-15 and FhCe-25) by quartzite.

The tool types represented in the 2012 collections (Figure 5, Figure 6) reflect a wide range of domestic tasks, including hunting, hideworking and food preparation, as well as tool manufacture. At several sites there appears to be an emphasis on tool blank preparation and tool sharpening. Local quartzite was clearly being worked, seemingly more to fashion blanks, preforms and finished tools, rather than to generate expedient tools for domestic tasks. Bifaces and projectile points were relatively common, and

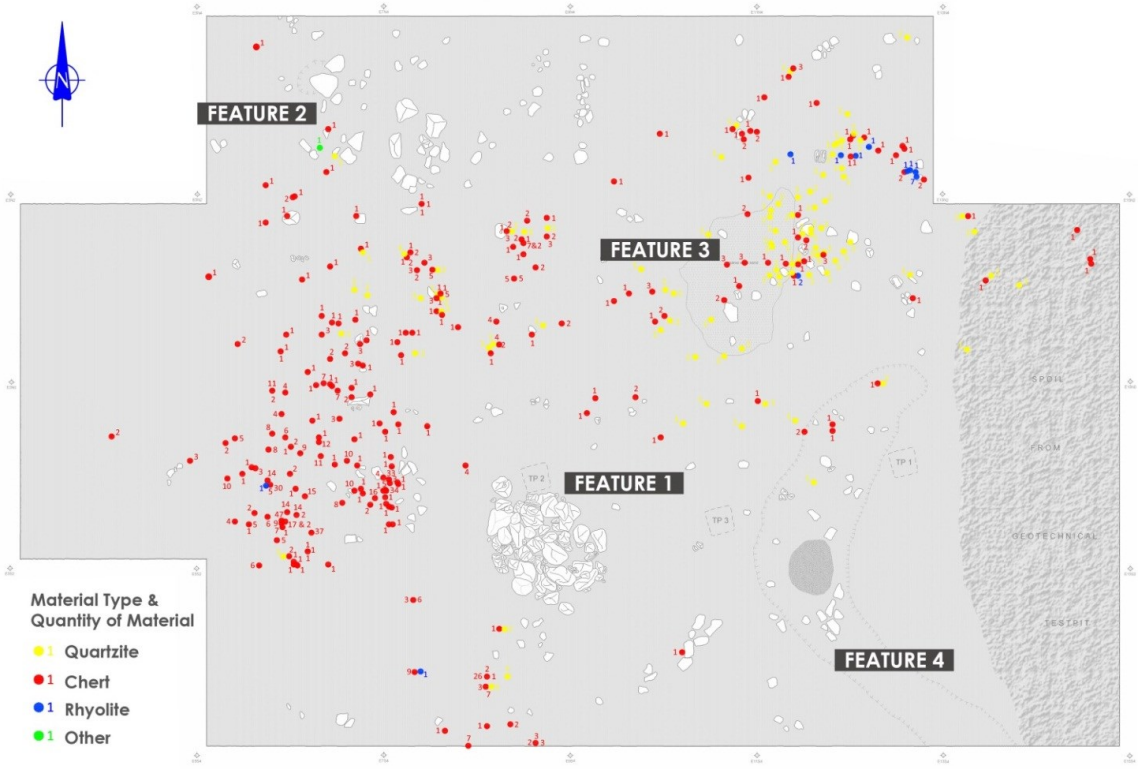


Figure 2. Site Plan, FhCe-05, South Side Muskrat Falls.

Figure 3. Aerial View, Site Plan, FhCe-05, South Side Muskrat Falls.

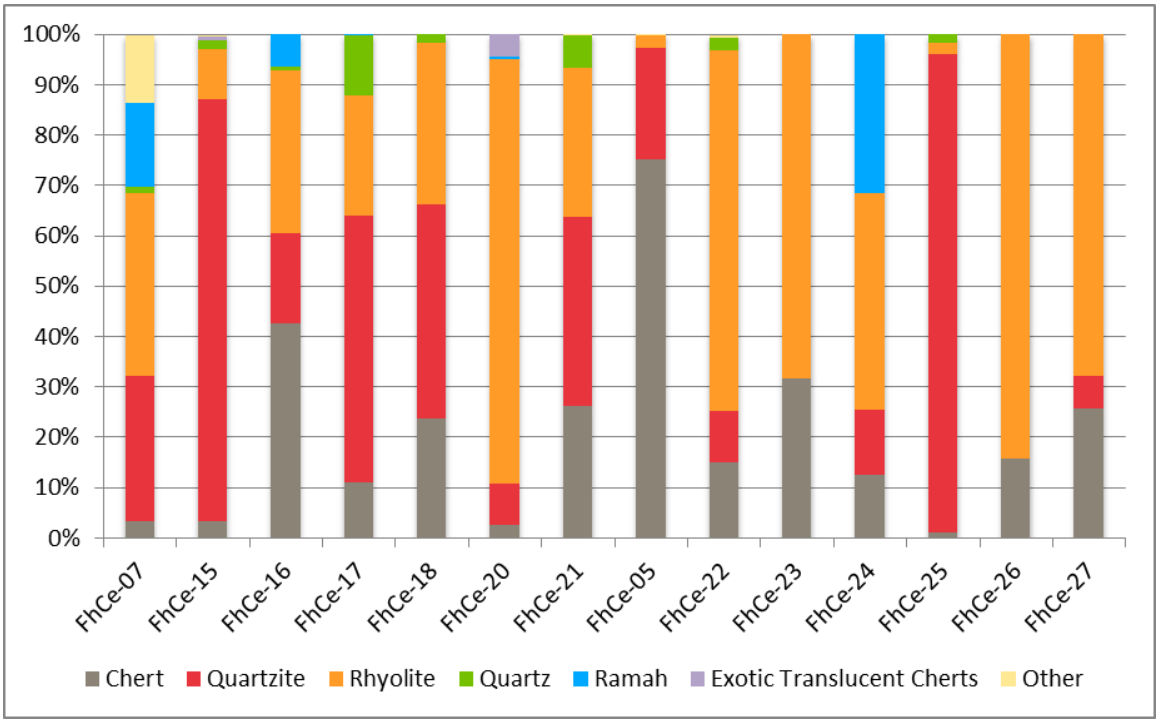


Figure 4. Lithic Debitage Recovered from the Sites Excavated in 2012. (Sites are ordered from east to west.)

fashioned from a wide variety of raw materials. In addition to the lithic artifacts, thick, low-fired grit-tempered ceramics were found at three sites. Interestingly, two of these sites also contained boulder alignments and boulder-filled pits, so there may be an association with ceramic use and canoe-building.

In terms of the seasonality of occupation and extrapolating from ethnographic patterns of land use, we might expect precontact settlement at Muskrat Falls to be oriented to two seasons in particular: the early fall, when families that summered in upper Lake Melville were beginning to move up the Churchill River to fall and winter harvesting areas in the deeper interior to the west; and the early-mid spring, when families that had wintered in the interior west or southwest of the Churchill River had almost completed their move to spring-summer gathering and fishing locations in upper Lake Melville.

The tentative interpretation of this group of sites is that the majority of the sites, particularly the canoe-building sites and those with lithic assemblages dominated by rhyolite sourced from further west along the Churchill River, may represent early-spring occupations, while others, most likely including FhCe-05,

Figure 5. Selected Bifaces from Sites Recovered in 2012 at Muskrat Falls.

Figure 6. Selected Projectile Points from Sites Recovered in 2012 at Muskrat Falls.

with its chert-dominated assemblage and its classic cobble-pavement hearth, may represent fall occupations.

Overall, this complex of sites on the south side of Muskrat Falls that were recovered in 2012 is interpreted as a staging area for seasonal moves up and downstream. Since the southern portage around the falls is a lengthy one, and portages would be required in both directions at different seasons, it is likely that canoes were cached at either end of the portage. It is hypothesized that while this location was used in the fall, it was used most intensively in the spring during the seasonal move downstream along the Churchill River to upper Lake Melville.

2012-2013 Winter Protection Program

The ten sites not scheduled for recovery in 2012 required protection from potential project interactions, particularly over the winter of 2012-2013. A Winter Protection Plan was developed which involved three levels of protection: continuous highly-visible field marking around site perimeters, point field marking defining a 50m buffer zone around each site, and an Information Advisory describing site locations and field marking measures provided to Nalcor and all

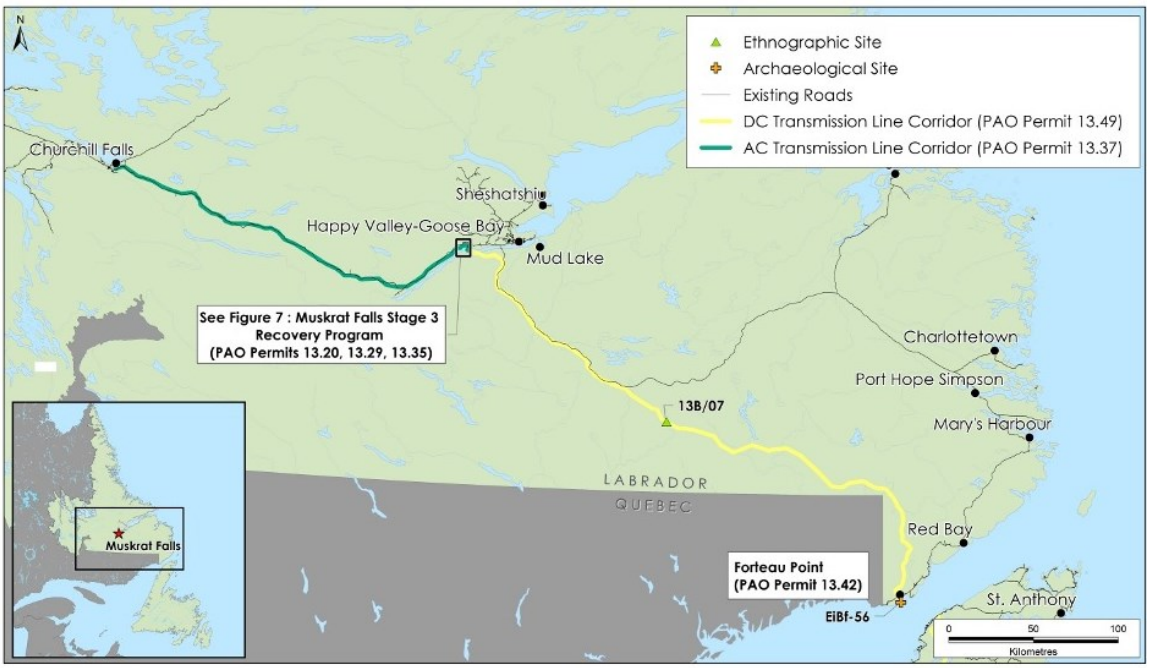


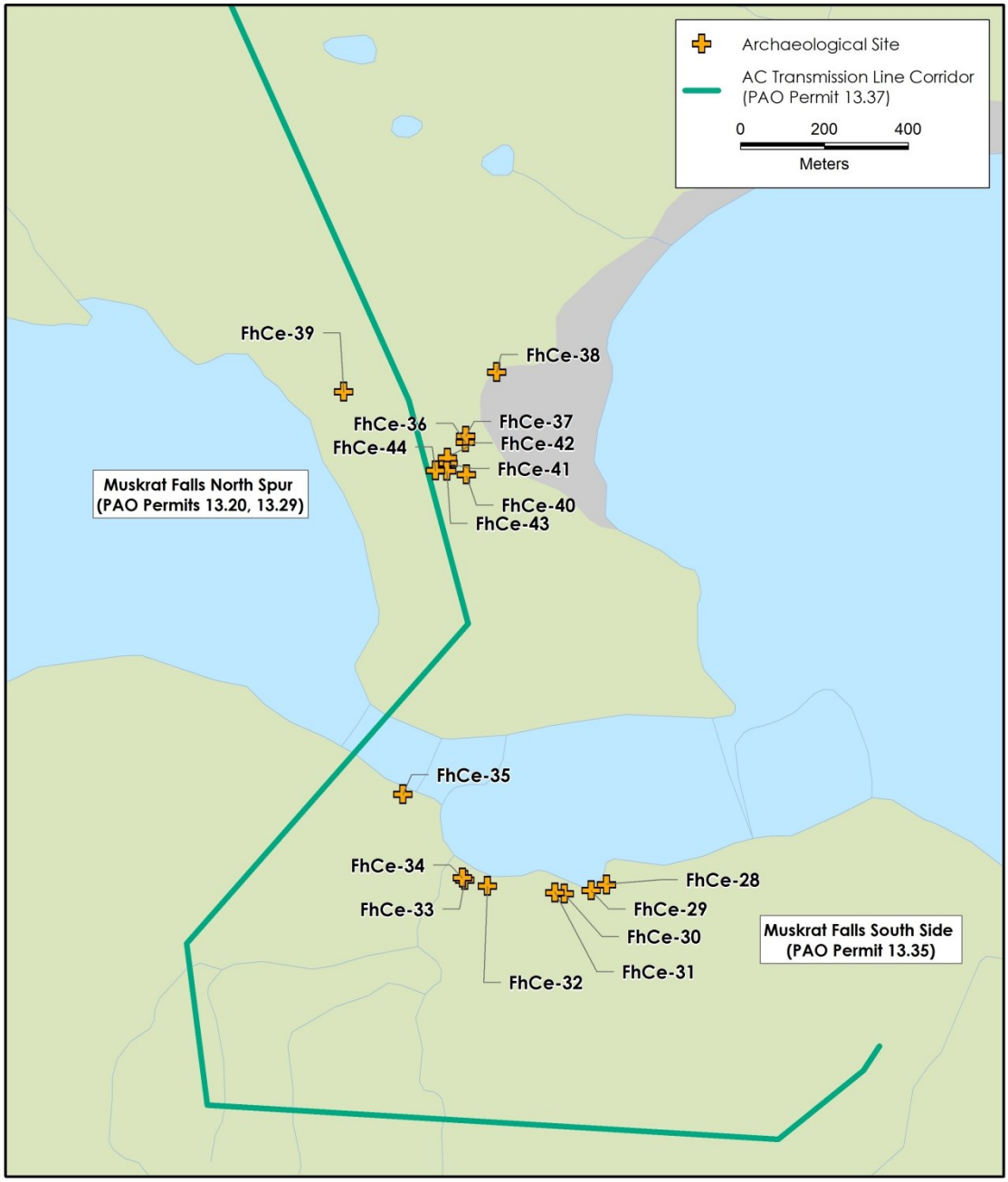
Figure 7. 2013 Stage 2 Assessment Program

contractors. The advisory included illustrations of archaeological features and materials to ensure that these would be recognized in the event of accidental discoveries. This plan proved effective, and site integrity was maintained for all ten sites. Eight of these were subsequently recovered in 2013.

2013 Historic Resources Management Program

The 2013 Historic Resources Management Program for the Lower Churchill Project extended across south-central Labrador from Churchill Falls to the Strait of Belle Isle. The work was undertaken under six distinct Archaeological Investigation Permits issued by the Provincial Archaeology Office (PAO), and involved all three stages of archaeological resource management activity, including Stage 2 Assessment and Stage 3 Recovery, as well as archaeological monitoring activities. Analysis of field data from 2013 and report preparation are currently in progress.

Figure 8. 2013 Stage 3 Recovery Program



2013 Stage 2 Archaeological Testing Program

Stage 2 assessment (Figure 7) was focused primarily on transmission corridors and infrastructure, extending from Muskrat Falls to Churchill Falls, and from Muskrat Falls to Forteau Point at the Strait of Belle Isle in southern Labrador. Previous archaeological assessment along these corridors was undertaken in 1998, 1999, 2000, 2006, 2008, and 2011. Assessment in 2013 was aimed at completing testing at those high-potential locations not completely assessed in previous years. Stage 2 assessment of 28 locations along the high voltage alternating current (HVac) transmission corridor between Muskrat Falls and Churchill Falls yielded negative results, and most locations proved to be unsuitable for settlement or preservation of archaeological remains. Stage 2 assessment of 30 locations along the high voltage direct current (HVdc) transmission corridor between Muskrat Falls and the Strait of Belle Isle was largely negative as well, although one relatively recent winter/spring-season ethnographic campsite (designated 13B/07Ethno 1) was recorded on the eastern shoreline of an unnamed tributary of the St. Augustin River.

An extensive areal subsurface testing program at Forteau Point led to the discovery of a single surficial find, a flake of white/grey chert. The find was registered with the Provincial Archaeology Office and assigned registration number EiBf-56, although extensive testing to delineate the site failed to identify any additional cultural materials.

2013 Stage 3 Recovery Program

The 2013 Stage 3 Recovery Program involved archaeological excavation of sites on both the south side and the North Spur of Muskrat Falls (Figure 8).

South Side of Muskrat Falls

It was anticipated that construction at the Muskrat Falls generating station site would interact with eight of the ten archaeological sites on the south side of Muskrat Falls which had not been recovered in 2012. The objective of the 2013 Historic Resources program on the south side of Muskrat Falls was to complete the Stage 3 recovery of these eight precontact archaeological sites identified within the Muskrat Falls power generation facility footprint. In all, 734m^2 were excavated at these eight sites.

Four of the eight sites were relatively small, had seen considerable disturbance from mid-20th-century road construction along the portage trail, and yielded few distinct cultural features. However, two sites situated north of the trail were undisturbed and yielded evidence for discrete single-component occupations similar to those excavated in 2012. The remaining two sites were significantly larger than any of the sites recovered in 2012. These larger sites revealed complex palimpsests of hearth features and large artifact collections, and had clearly been occupied and reoccupied repeatedly. The range of lithic artifacts recovered was similar to that encountered in 2012, and one site yielded a small collection of precontact ceramics.

North Spur of Muskrat Falls

During the 2013 season, field investigations were undertaken at the North Spur of the Muskrat Falls site to gather geotechnical and geological data to complete detailed engineering of the North Spur stabilization works. The investigations entailed clearing of access and drill sites, drilling of boreholes and excavation of geotechnical testpits. Historic resources monitoring and subsurface testing was undertaken to limit interactions with historic resources and monitor geotechnical drilling and testpitting activities where necessary. During monitoring of construction for the east side access road, cultural material was observed at the crest of the eastern terrace near the top of the east-side portage trail, and work was halted to allow for immediate Stage 3 Archaeological Recovery. This site was designated FhCe-36. The site consisted of a small cobble hearth measuring approximately 1m in diameter, from which a relatively well-preserved and diverse collection of carbonized fish, bird, and mammal bone was retrieved. In addition, an assemblage of historic-period artifacts, including bottle glass and refined earthenware ceramics as well as clay smoking pipe fragments was recorded in association with the hearth. Other materials recorded in the vicinity include a limited number of quartzite flakes dating to the precontact period and a battered quartzite cobble which had apparently been worked in the precontact period and then, centuries later, integrated into the historic hearth.

As part of the 2013 recovery program, the north portage trail around Muskrat Falls was walked in its entirety and video recorded. In places (notably at the upper end of the eastern descent) pedestrian traffic has compressed the trail-bed in excess of 1.5 m into the underlying sand, apparently reflecting the long-standing and extensive usage of the trail.

Further Stage 2 assessment, including areal subsurface testing across the terrace top, was undertaken to identify any remaining historic resources that may be present on the North Spur. Eight archaeological sites were identified, in addition to FhCe-36, and Stage 3 archaeological recovery of these resources was subsequently completed.

These eight sites contrasted with those encountered on the south side of Muskrat Falls in a number of respects. Notably, none of the sites contained cobble hearth features, and most sites consisted of a dense but localized lithic scatter. Raw materials were less diverse than on the south side, and consisted almost entirely of quartzite. The North Spur quartzite lithic scatters appear to be comparable to FhCe-01, the original Muskrat Falls precontact site, which was identified and recovered in the 1970s. The lack of hearth features suggests that the sites identified in 2013 on the North Spur may represent lithic workshop areas associated with habitation sites that were once located on the terrace edge but have since been lost to erosion.

Looking Ahead: The Stage 3 Recovery Program 2014-2016

Analysis and reporting of the large volume of data that was recovered in 2013 is ongoing.

Commencing in 2014, the Historic Resources Management Program will extend its focus beyond the generation facility at Muskrat Falls to recover and record significant archaeological resources within the reservoir area between Muskrat Falls and Gull Island. These resources include clusters of precontact sites, historic tilts and campsites, and one Hudson's Bay Company trading post.

The Churchill River valley has a long and diverse human history. The Innu, their precontact ancestors, Europeans, Inuit and Metis have all travelled, traded, trapped and hunted along this river. As the Lower Churchill Project Historic Resources Management Program unfolds in the coming years, we anticipate many exciting discoveries that will aid in telling all of the varied facets of this story.

ARCHAEOLOGICAL INVESTIGATIONS AT PHILLIP'S GARDEN 2013: A PROGRAM TO RECOVER CHRONOLOGICAL, ENTOMOLOGICAL, AND FUEL CHARCOAL DATA

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Introduction

The 2013 field season at the Port au Choix National Historic Site was the second in a five year program of research investigating the temporal nature of the occupation of Phillip's Garden, a Dorset Palaeoeskimo site. The primary goal of the 2012 field season was to generate a digital map to document detailed surface and subsurface features including the possible number and location of dwellings on the site (See Figure 1). Previous to this, 63 visible surface depressions on the site were interpreted as potential dwellings based on the partial or complete excavation of 24 (Harp 1976; Renouf 2011:113; Renouf et al. 2013). Five additional buried features of similar dimensions to the known dwellings were identified in 2001 using magnetometry, a technology that records anomalies in subsurface magnetic resonance, bringing the suspected dwelling count to 68 (Eastaugh and Taylor 2011; Renouf 1986, 1987; Renouf et al. 2013). In 2013 we employed global positioning systems (GPS) technology to collect 3-dimensional surface topography readings and applied these to a variety of software that allowed the identification of much subtler depressions than could be identified visually (Robinson 2013). Together with an expanded magnetometry survey testing for buried features, this work resulted in the identification of additional possible dwellings. In the 2012 survey report Renouf et al. (2013:14) described the presence of 158 depressions and features at the site; however, these included features such as mounds and stone structures which may not represent dwellings. Nevertheless, many of the depressions and features resembled excavated dwellings based on their morphology and size. Of these, a total of 117 surface depressions were verified through GPS, including the 24 excavated dwellings, 88 unexcavated depressions and five additional depressions identified in the dense spruce forest at the southern margin of the site (Figure 1) (Renouf et al. 2013:4). Furthermore, 18 depressions and possible tent rings identified through the combined magnetometry surveys brings the possible number of dwellings on the site to 135 (Renouf et al. 2013:14). While these results are compelling, their precise identification cannot be confirmed without excavation.

In the 2013 field season we returned to the site with a series of goals focused on our continued research into site evolution and development. The occupation at Phillip's Garden spans 800 years beginning around 1990 cal BP (Renouf and Bell 2009); however ten of the 15 established dates for the site fall within the middle phase (1550-1350 cal BP), while only three dates come from the early phase (1990-1550 cal BP), and two from the late phase of the occupation (1350-1180 cal BP). A major goal for this season was to collect organic material from a number of depressions

and features that could be radiocarbon dated. We conducted test excavations to gather datable organic material within a sample of the possible dwellings identified in 2012 in addition to dwellings excavated by Harp for which there are currently no reliable dates.

A secondary goal of the season was to conduct small excavations within two midden features to record the presence or absence of articulated portions of seal skeletons. We know that toward the end of the site's occupation, the relative frequency of seal bones dropped in midden features, with an associated increase in the frequency of birds and fish (Hodgetts et al. 2003). Given that this drop in frequency may indicate a decline in the availability of seals, we are interested in determining if there were changes in how seals were processed. Changes in butchering practices can be assessed by examining the frequency and location of cut marks on bones, and by looking at whether articulated portions of the animals were thrown away or whether they were heavily butchered to increase maximum meat recovery. Our excavations in 2013 were focused on developing the most precise and informative methods for recording the degree of articulation among seal elements recovered from middens.

In addition, the field component of two graduate projects was initiated this year. Dussault's PhD research is focused on entomological data, the remains of ancient insect populations within and around Phillip's Garden. The species and abundance of insects within a region reflects environmental conditions such as vegetation, temperature, moisture and climate. On a smaller scale, the presence of humans at a site can result in a distinct localized insect population different from the broader environment. Insect populations associated with human communities can reflect the hygiene of occupants, as well as food preparation and consumption activities (Dussault and Bain 2009; Dussault 2011; Forbes et al. 2013). Dussault will address how the Dorset influenced the insect population on the site, and how the presence of certain species may be used to indicate local environmental conditions in the studied archaeological features. This season Dussault collected soil samples from outside Phillip's Garden for later analysis to identify ancient insect remains that should characterize the past regional insect population. In addition, he trapped insects from the modern population around Phillip's Garden to create a reference collection of the modern population which he will use to compare with the archaeoenotomological remains. To study the ancient insect populations associated with the Dorset, Dussault will examine insect remains identified from soil samples collected in the 2013 excavation of a test trench through a small dwelling, Feature 382. This will allow him to study the spatial distribution of insect species within different areas of the dwelling. Soil samples collected from the test units and midden features will also form part of his data set.

Miszaniec's master's project focuses on the use of fuel wood at Phillip's Garden. The Dorset have an arctic heritage where predominantly sea mammal fat and sometimes small willow were used as fuel (Mobjerg 1999; Odgaard 2003). Driftwood would have been available but its use as fuel was less frequent. While their relative quantities have not been systematically compared, charcoal at Phillip's Garden appears to be much more common than burned fat. This project will examine the species of trees that would have been available for fuel, both from the shoreline as driftwood and from terrestrial sources. During the 2013 field season, Miszaniec surveyed the shore-line around the Point Riche and Port au Choix Peninsulas to record the species available as driftwood, some of which may not be native but carried to the region on ocean currents. He also surveyed the forest around the site to identify modern species. Furthermore, over the winter of 2014 Miszaniec will examine charcoal in all soil samples collected in excavations to identify the tree species selected by the Dorset for burning, and potentially determine if driftwood provided any of the wood selected.

Excavations At Phillips Garden

Test Units

Several criteria influenced the 30 depressions and features selected for unit testing (Table 1). In order to understand the chronological context of material recovered in Harp's excavated dwellings for which there were either unreliable dates or no dates at all, we included tests in his Houses 7, 8, 9, 13, 14, 15, and 19. The lack of dates from these important houses has prevented the temporal analysis of the material found within them. In addition, with only one date from Harp's late phase House 20, we included another test unit associated with this dwelling. Eighteen depressions identified both visually and through the GPS topographic survey and covering the geographic extent

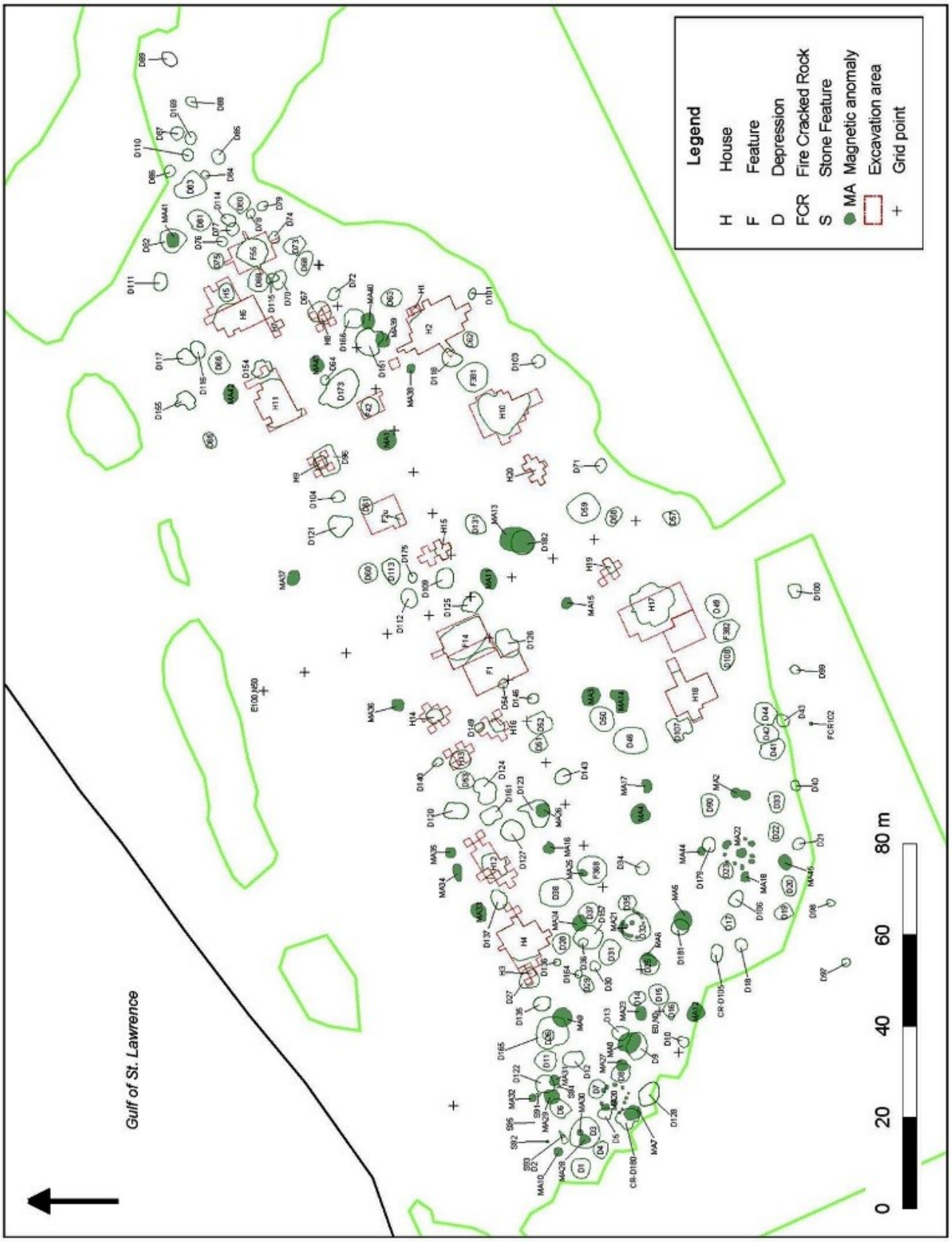

Figure 1. Phillip's Garden plan map showing the location of various features, depressions and magnetic anomalies.

Table 1. Results of test unit excavations in depressions and features.*

Depression/Feature Name	Location (Sub-operation)	Material Recovered	Associated Feature Type, Number and Level (L)
House 7	363D	Charcoal, flake, bone, tools	
House 8	357C	Charcoal, flake, bone, tools	
House 9	342D	Charcoal, flake, bone, tools	
House 13	264C	Charcoal, flake, bone, tools	
House 14	285D	Charcoal, flake, bone, tools	
House 15	313A	Charcoal, flake, bone, tools	Midden F421 L3
House 19	290B	Charcoal, flake, bone, tools	
House 20	310B	Charcoal, flake, bone, tools	Midden F420 L2
Depression 1	192B	Charcoal, flake, bone	Midden F426 L2
Depression 5	197D	Charcoal, flake, bone	Midden F423 L2
Depression 8	201D	Charcoal, flake, bone	
Depression 9	200C	Flake, bone	
Depression 23	221D	Charcoal, flake, bone	
Depression 42	238C	Charcoal, flake, bone	
Depression 49	269C	Charcoal, flake, bone, tools	
Depression 53	264D	Charcoal, flake, bone, tools	
Depression 58	300D	Charcoal, flake, bone	
Depression 68	367D	Bone	
Depression 75	369C	Charcoal, flake, bone	
Depression 77	372D	Charcoal, flake	
Depression 81	377D	Charcoal, flake, tools	
Depression 83	376B	Charcoal, flake, bone, tools	
Depression 166	356B	Charcoal, flake, bone	
Depression 151	356A	Charcoal, flake, bone, tools	
Feature 368	232A	Charcoal, flake, bone, tools	
Feature 381	338A	Sterile	
MA 1 Feature	342D	Bone	
MA 4 Feature	241A	Charcoal, flake, bone, tools	Midden F436 L2
MA 5 Feature	213B	Charcoal, flake, bone, tools	
MA 11 Feature	303A	Charcoal, flake, bone	Midden F436 L3

*House refers to dwellings excavated by Harp, Depressions are those recorded by the visual and topographic survey, Features 368, 381 and 382 are depressions named previous to the topographic survey, MA 1, 4, 5 and 11 refer to buried features identified through magnetometry. Note that MA 5 was identified as a depression in the topographic survey (Depression 181).

of the site were selected for testing. As well, one depression identified using software manipulation of the topographic readings was selected for testing. Depression D166 (See Table 1) was identified using Local Relief Model which takes topographic readings and de-emphasizes the macro-topography (large scale landforms such as beach ridges) and emphasizes the micro-topography (archaeological features). Finally, four buried magnetic anomaly features identified using magnetometry were selected (Table 1).

Radiocarbon dates were obtained on charcoal from 18 of the test units (Table 2). The charcoal samples were selected based on the quality and quantity of the sample and from units that covered the spatial extent of the site. The majority of dates fall within the middle phase which was the period of most intense occupation.

Trench Excavation of Dwelling Feature 382

As part of Dussault's entomological study, an undisturbed dwelling, Feature 382, was selected for trench excavation. Feature 382 was located at the south central part of the (Figure 1). Insect remains in soil samples retrieved from each layer in all units of the 2013 excavation area will be identified and recorded, to allow Dussault to determine if there are different species concentrations in areas including the rear perime-

Table 2. Radiocarbon dates on test units excavated in Phillip's Garden.*

Depression/Feature Name	Lot #	Lab #	Measured Age	Median cal BP rounded	1Sigma younger rounded	1 Sigma older rounded
House 7	7A363D9	Beta 355116	1560±30	1470	1410	1520
House 8	7A357C56	Beta 355115	1670±30	1580	1610	1580
House 9	7A342D10	Beta 355114	1710±30	1610	1560	1690
House13	7A264C15	Beta 355110	1490±30	1370	1350	1400
House 14	7A285A5	Beta 355111	1540±30	1450	1390	1520
House 15	7A313A5	Beta 355124	1640±30	1540	1450	1600
House 19	7A290B6	Beta 355112	1600±30	1480	1420	1540
House 20	7A310B18	Beta 355113	1630±30	1530	1420	1560
Depression 1	17A192B2	Beta 355107	1630±30	1530	1420	1560
Depression 5	7A197D28	Beta 355117	1590±30	1470	1420	1530
Depression 49	7A269C6	Beta 355121	1410±30	1320	1300	1330
Depression 53	7A264D12	Beta 355120	1560±30	1470	1410	1520
Depression 100	(off grid)	Beta 355126	1450±30	1340	1310	1360
Depression 151	7A356A18	Beta 355125	1550±30	1460	1400	1520
Feature 368	7A232A19	Beta 355118	1780±30	1700	1620	1730
MA 4	7A241A8	Beta 355109	1540±30	1450	1390	1520
MA 5	7A213B20	Beta 355108	1570±30	1470	1410	1520
MA 11	7A303A10	Beta 355123	1540±30	1450	1390	1520

*House refers to dwellings excavated by Harp, Depressions are those recorded by the visual and topographic survey, Feature 368 is a depression named previous to the topographic survey, MA 4, 5 and 11 refer to buried features identified through magnetometry. Note that MA 5 was identified as a depression in the topographic survey (Depression 181).

ter, central depression and entrance-way of the house. Soil samples for entomological and wood charcoal analysis were collected in quantities of between two and three litres from each level in each unit, and including the sterile base of the excavation. In addition, samples were collected from features during excavation. This sampling strategy targeted specific features such as pits and post holes while allowing an assessment of the broader distribution of insect remains.

The dwelling appears to have been lightly constructed with a platform on the eastern side and otherwise ephemeral perimeters of stone and gravel on the three other sides. Figure 2 shows the location of architectural features associated with the dwelling (Appendix 1). The central depression was comprised of mostly compressed sand and gravels and there was no well-developed axial feature with any evidence of paving, pits or stone caps for pits. Four post holes were located in association with the dwelling. Three were on the exterior, Features 427 and 428 outside the exterior of the rear (southern) boundary of the dwelling and Feature 431 outside the exterior of the eastern platform to the southeast. Post hole Feature 425 is inside the depression to the southwest of the central depression. These post holes are all stone-lined, fairly well constructed, and approximately the same size (15-20 cm x 20 cm).

Artefacts in the dwelling were mainly confined to the center of the depression. There were a variety of types represented including endblades, scrapers, microblades, cores, preforms, nephrite tools and bifaces. Radiocarbon dates on charcoal sample 7A269D22 returned a date of 1620-1730 cal BP, placing this feature in the early phase of the occupation (Appendix 2).

In summary, Feature 382 was a relatively small and insubstantially constructed dwelling that probably represented a relatively light occupation. Its dimension from west to east cannot be determined; however, its length from north to south is approximately 3 m including the perimeter features. The internal central depression is approximately 1.5 m by 1.5 m. While a range of artefacts was represented they were not in particularly great abundance and the shallow, dry soil with little organic build-up demonstrated a small accumulation of cultural material. Likewise, while there was a little seal bone found throughout the house there were no great concentrations.

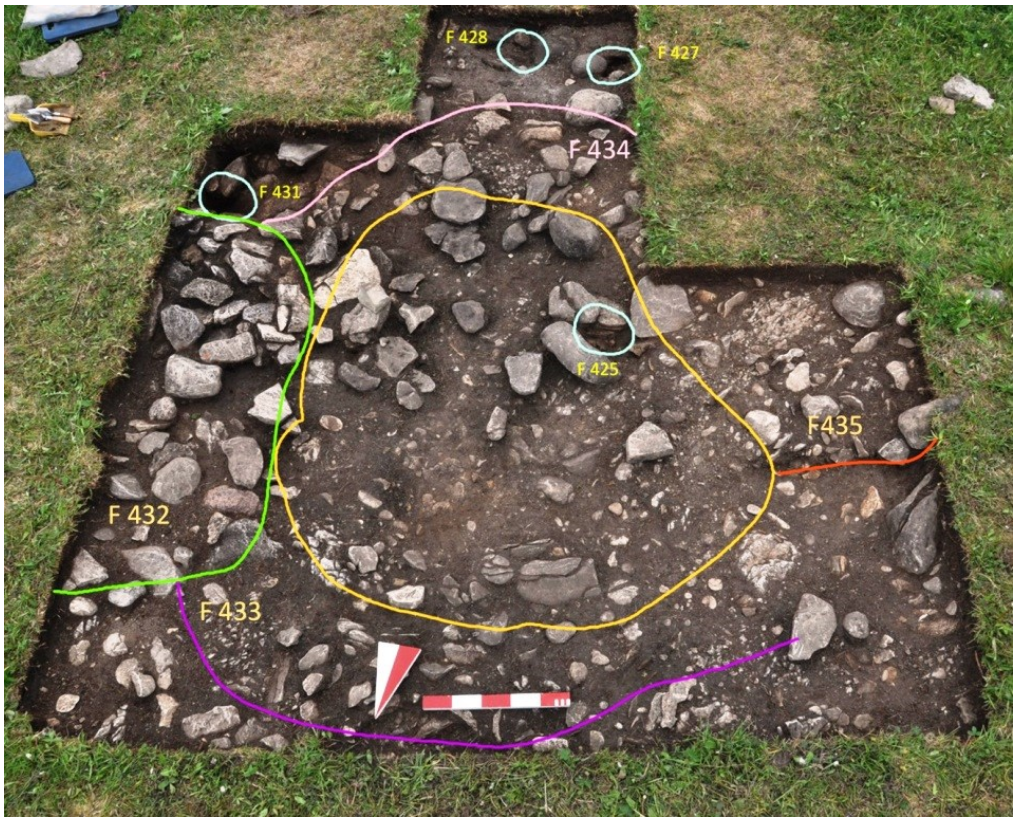

Figure 2. Dwelling Feature 382 at the top of level 4 showing post holes in blue and central and perimeter features. The orange line encloses the central depression, the purple outlines the front perimeter and the pink, the rear perimeter of the dwelling. The outer perimeter of the eastern platform is enclosed in green and the area of the western perimeter is in red. Image: PAC Archaeology Project.

Midden Test Excavations

Small areas within two middens were excavated at Phillip's Garden in the 2013 field season, both located in association with middle phase dwellings, House 12 and House 18. In previous excavations of middle phase houses we noted middens outside the front of the dwellings that were dominated by seal bone remains, in some cases including articulated body parts, most frequently vertebral columns (Wells et al. 2012). This was evident in House 10, midden Feature 388 where the largely articulated vertebral columns of five adult seals were found in close proximity. A similar observation was made in a midden Feature 129 which was excavated in its entirety outside House 18 (Figure 3) (Cogswell et al. 2006). In 2013 our work involved excavating small areas within middens to isolate bone deposits in situ and record their positions photographically. In addition, soil samples for entomological and wood charcoal analysis were collected at a depth of every 10 cm through the midden excavations. The results of this work is described in detail in Wells et al. (2014).

Entomological Data Collection

In addition to the soil samples collected from test units, trench and midden excavations this year, Dussault collected soil samples from outside Phillip's Garden to identify insect control populations. Three small units (25 cm^2) were excavated off-site. Each location was recorded and a sample of approximately 2 L of soil was collected for analysis (Figure 4).

In addition, Dussault trapped insects over a 2 week period to identify the modern insect population and build an insect reference collection which will be used to identify the archaeological remains. The identification of archaeoentomological data is dependent on being able to compare the samples to a known collection of insect species. This may be accomplished with the use of reference manuals, but creating a comparative collection of modern species is the most accurate means of correctly identifying archaeological remains (Elias 1994). Consequently live insects were collected from six traps set up in and around Phillip's Garden. Traps from ecologically diverse locations in the area were selected to ensure the recovery of as many species as possible. The site encompasses a large meadow with a beach to the north and a stunted spruce forest to the south. Two traps were set up just north of the site near between the beach and the meadow: one was established in the middle of the site and one just at the junction between the meadow and the forest at the

Figure 3. Middle phase middens with articulated vertebral columns. Feature 388 in House 10 is on the left and shows two columns side by side. The photo on the right is a vertebral column from Feature 129 in House 18. Image: PAC Archaeology Project.

southern margin of the site. A fifth trap was set up in a treeless barren location east of the site and the final one was set up near Bass Pond, approximately 500 m east of the site. More details is available in Wells et al. (2014).

Data Collection For Fuelwood Charcoal Analysis

A series of surveys around the Port au Choix and Point Riche peninsulas were conducted to assess the tree species in the area, both as driftwood, and as local terrestrial growth. The goal of the coastal survey was to identify the range of modern driftwood species for comparison to the species identified in the subsequent analysis of charcoal from Phillip's Garden. Miszaniec conducted an initial overview survey of the coastline around both peninsulas to assess the species, their distribution and the overall quantity of driftwood. He determined that the Point Riche Peninsula had the greatest accumulation of driftwood; consequently he targeted this area for a more detailed sampling survey (Figure 5).

Three locations on the Point Riche Peninsula were selected for collecting driftwood samples: the area in front of Phillip's Garden and two stretches of beach on the western side of the peninsula. Transects 2 m wide were established from the waterline back to the landward edge of the beach. All driftwood within each transect was sampled including pieces that passed completely through it, as well as those with greater than half their length inside the transect area. Driftwood with a circumference of less than 15 cm and highly decomposed pieces that were difficult to identify to species were not sampled. In addition, driftwood that had been cut or worked, such as felled trees and boat parts for instance, were excluded from sampling. Such pieces are not representative of natural driftwood deposits. Contemporary driftwood accumulations are more plentiful due to commercial logging and increased human activities along the coast (Alix 2005). By excluding pieces with signs of human modification

Figure 4. Collecting soil samples for entomological analysis outside Phillip's Garden to the north. Image: PAC Archaeology Project.

Figure 5. Driftwood accumulation on the western shoreline of the Point Riche Peninsula. Image: PAC Archaeology Project.

the sample is more representative of driftwood produced by natural processes.

Every piece of driftwood within a transect was photographed and its total length and maximum circumference recorded. In addition, the portion of the tree from which each piece came such as the branch, trunk or root, and the presence of any bark were noted. Small samples, approximately 5 cm long with varying circumferences were cut with a bow saw from each driftwood piece. These were wrapped in plastic to prevent drying and transported to Memorial University where an examination of the exposed growth rings and features of the cellular structure will allow species identification (eg. Hoadley 2000).

In addition, an approximately 1 km stretch of the beach along the coast of the Point Riche Peninsula was surveyed and a sample of driftwood with root systems intact was collected. Trees with root systems represent naturally occurring sources of driftwood, and would unlikely to be the result of human felling. In this instance, every tenth piece of this kind was sampled.

A total of 217 driftwood samples was collected including 180 samples from the three beaches sampled using transects, and 37 from the systematic survey which targeted driftwood with intact root systems.

Finally, a brief foot survey of the forested area surrounding Phillip's Garden was conducted to record the modern species present in the region today for comparison to the driftwood examples.

Conclusions

The 2013 field season at Phillip's Garden was focused on gathering data to better understand the temporal nature of the site's occupation. Test excavations in depressions, houses and buried features provided charcoal for radiocarbon dating and soil samples from which archaeoentomological and charcoal data will be extracted. All of the dwellings excavated by Harp (1976) have been radiocarbon dated, in addition to depressions and features covering the spatial extent of the site. Excavations in a small dwelling feature (Feature 382) provided architectural information on a more ephemeral structure than has usually been investigated and small excavations in middens provided details of how discarded material was deposited. Soil samples were gathered from the dwelling and midden excavations to provide data for the archaeoentomological and fuel wood charcoal graduate research projects. Data on modern insect and arboreal species collected during the 2013 field season will support the aims of this research.

Acknowledgements

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Appendix 1
List of Features Identified in the 2013 Excavations.

Feature #	Feature type	Sub-operation	Unit(s)	Level
132	Midden	259A	N-31 E63	2
382	Dwelling	258C, 258F, 269D	N-48 -to-51, E68 to 70	2
419	Midden	303A	N-5 E103	3
420	Midden	310B	N-32 E119	2
421	Midden	313A	N-2 E110	3
422	Soil event	258F	N-51 E69	2
423	Midden	197D	N20 E-16	2
424	Stone enclosure	258F	N-51 E69	2
425	Post hole	258C, 258F, 269D	N-49 E69	2
426	Midden	192B	N89 E-24	2
427	Post hole	258F	N-51 E69	2
428	Post hole	258F	N-51 E69	2
429	Midden	245D		2
430	Soil event	269D	N-50 E70	2
431	Post hole	269D	N-50 E70	2
432	Platform	269D	N-50 E70, N-49 E70	2
433	Perimeter	258C	N-48 E69	2
434	Perimeter	258F	N-50 E69	2
435	Platform	258C	N-48 E68, N-49 E68	2
436	Midden	241A	N-14 E40	2
132	Midden	259A	N-31 E63	2
382	Dwelling	258C, 258F, 269D	N-48 -to-51, E68 to 70	2

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Appendix 2

Radiocarbon Dates from Test Units and Features Excavated During the 2013 Field Season.

Depression/ Feature name	Sample #	Lab #	Measured age	1 Sigma younger-older (rounded)	2 Sigma younger-older (rounded)	Median age (rounded)
Depression 151	7A356A18	B-355125	1550±30	1400-1520	1380-1520	1460
Depression 1	7A192B2	B-355107	1630±30	1420-1560	1420-1600	1530
Depression 100	D100 #4	B-355126	1450±30	1310-1360	1300-1390	1340
Depression 49	7A269C6	B-355121	1410±30	1300-1330	1290-1390	1320
Depression 5	7A197D28	B-355117	1590±30	1420-1530	1410-1550	1470
Depression 53	7A264D12	B-355120	1560±30	1410-1520	1390-1530	1470
Feature 368	7A232A19	B-355118	1780±30	1620-1730	1620-1810	1700
Feature 382	7A269D22	B-355122	1780±30	1620-1730	1620-1810	1700
Feature 429	7A245D117	B-355119	1680±30	1550-1610	1530-1690	1590
House 13	7A264C15	B-355110	1490±30	1350-1400	1310-1510	1370
House 14	7A285A5	B-355111	1540±30	1390-1520	1370-1520	1450
House 15	7A313A5	B-355124	1640±30	1450-1600	1420-1610	1540
House 19	7A290B6	B-355112	1600±30	1420-1540	1410-1550	1480
House 20	7A310B18	B-355113	1630±30	1420-1560	1420-1600	1530
House 7	7A363D9	B-355116	1560±30	1410-1520	1390-1530	1470
House 8	7A357C56	B-355115	1670±30	1540-1610	1520-1690	1580
House 9	7A342D10	B-355114	1710±30	1560-1690	1550-1700	1610
MA 11 Feature	7A303A10	B-355123	1540±30	1390-1520	1370-1520	1450
MA 4 Feature	7A241A8	B-355109	1540±30	1390-1520	1370-1520	1450
MA 5 Feature	7A213B20	B-355108	1570±30	1410-1520	1400-1530	1470

2013 Survey at North Arm, Saglek Bay

Peter Whitridge
Memorial University of Newfoundland

Figure 1. North Arm, looking south.

During the summer of 2013 Peter Whitridge (MUN) led a crew of three archaeology students from Memorial University (Chelsee Arbour, David Craig and Anita Fells) in a survey of historic Inuit and other sites at North Arm (Silluaq), the fjord at the northwest corner of Saglek Bay in northern Labrador (Figure 1). The area was briefly surveyed by Callum Thomson in 1985. He recorded a large number of mostly historic warm weather features (tent rings, blinds, caches) and excavated a cache that produced an unusual assemblage of precontact artifacts, including harpoon heads, an ivory needle case, a variety of slate sealing and whaling harpoon head endblades and knife blades, and an extraordinary assortment of nephrite blades and bits. The goal of 2013 fieldwork was to produce a detailed map of features at the locale (Figure 2) and conduct a more detailed reconnaissance of the area, while ensuring that students Craig and Fells were able to gather MA and BA Honours thesis data. Craig collected landscape visibility data and digital video from all mapped features and along travel corridors, using GPS and GoPro, while Fells made detailed records of a variety of historic and recent inuksuit. Arbour ably supervised total station mapping. Ephraim Merkeratsuk from Nain was hired as bear monitor, per the guidelines for researchers operating in the Torngat Mountains National Park.

Craig and Whitridge arrived in Nain on July 15, and after gathering Arbour, Fells and Merkeratsuk, left for North Arm with Ches and Joe Webb aboard the Robert Bond on July 19. We anchored at Okak Harbour that evening, and arrived at the Torngat Mountains National Park Base Camp and Research Station at St. John's Harbour on July 20. With the help of

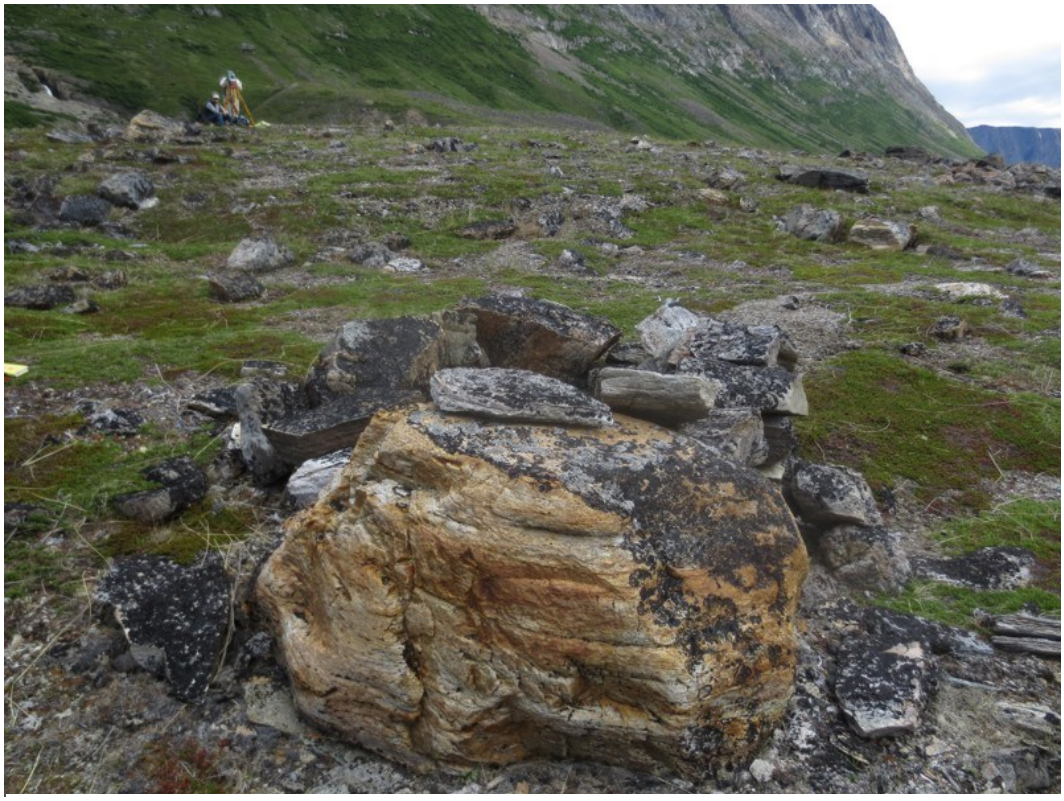

Figure 2. Chelsee Arbour and Anita Fells at total station.

Parks personnel we set up camp inside an electrified bear fence next to Silluaq Lake, a kilometre from the main cluster of historic features on the shore of North Arm. Between July 21 and August 10 we mapped and surveyed the area between the lake and the shoreline, on both sides of the river draining into the fjord, as well as the shore line on either side of the fjord to about 1.5 kilometres from the main beach. We also made three reconnaissance trips several kilometres inland of our camp, along both sides of the valley and onto the high terrace east of the fjord. We left North Arm and returned to base camp aboard the Robert Bond on August 13, and then flew to Nain by Twin Otter from the airstrip at Saglek on August 14. Arbour, Craig and Whitridge flew to St. John's on August 16. We briefly teamed up with Parks Canada archaeologists in the middle of the season, and periodically provided tours of the North Arm locale to groups brought to the fjord by Parks Canada. Whitridge also assisted Parks in selecting camp locations in Southwest Arm at the beginning of the season.

Fieldwork in 2013 provided intensive survey coverage of four loci at North Arm (Figures 3 and 4): a spit on the east side of the fjord, where Thomson had collected precontact material in 1985; the shore and adjacent slope at the foot of the fiord; the narrow terrace and steep talus slope on the west side of the river draining into the fjord; and the zone between the two branches of the river and Silluaq Lake. Only limited foot survey was made of the areas inland of the lake, and on the interfluve between the fjord and Nakvak Brook, but the slim survey results are considered indicative of the poverty of cultural material in these zones.

The eastern spit was relatively sparsely utilized. A small number of caches were recorded, typically associated with burial cairns, along with a tent ring and, in a swale concealed from the rest of the spit, a single carefully propped and heavily lichen-encrusted slab (Figure 5) identical to the "pinnacles" reported by Susan Kaplan on Green Island (the latter appear to be pre-Inuit – presumably Middle or Late Dorset - in origin). Surface finds of a complete soapstone lamp (Figure 6), pot fragments and drilled whale bone point to precontact or early historic activity on the spit. A precontact Inuit settlement to accompany Thomson's precontact cache was not located, although features close to sea level, or on the northern half of the spit – which was covered by recent alluvial sediment derived from the stream flowing down from the fjord wall – could conceivably have been destroyed or buried.

The principal concentration of features at the foot of the fjord included a string of tent rings on or next to the active beach that has been thoroughly disturbed by recent activities at North Arm. Some had been reorganized to hold down more recent tents, and stones have been relocated to erect inuksuk-like cairns. The tent ring camp Thomson recorded here is vaguely discernable but no longer intact. However, on the first terrace above the beach, and close to the beach but

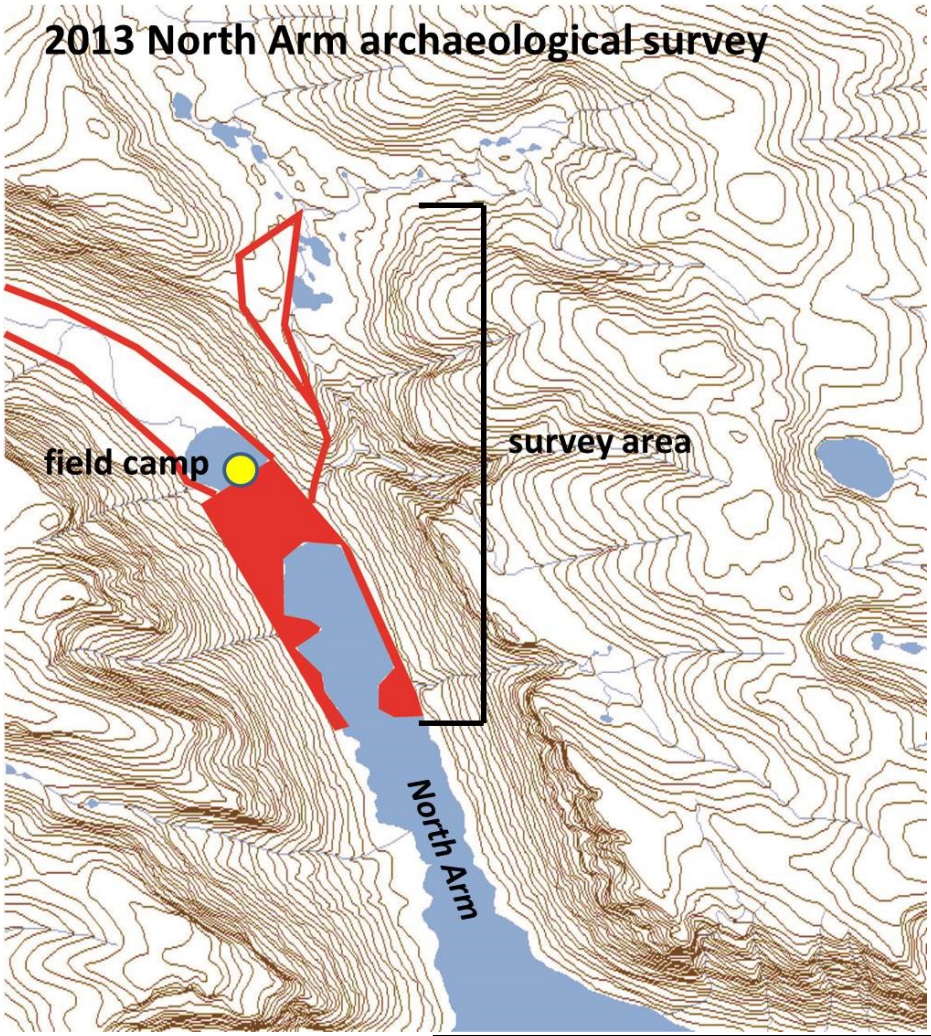

Figure 3. Map of North Arm, with sites and survey areas. North Arm 2013 survey area.

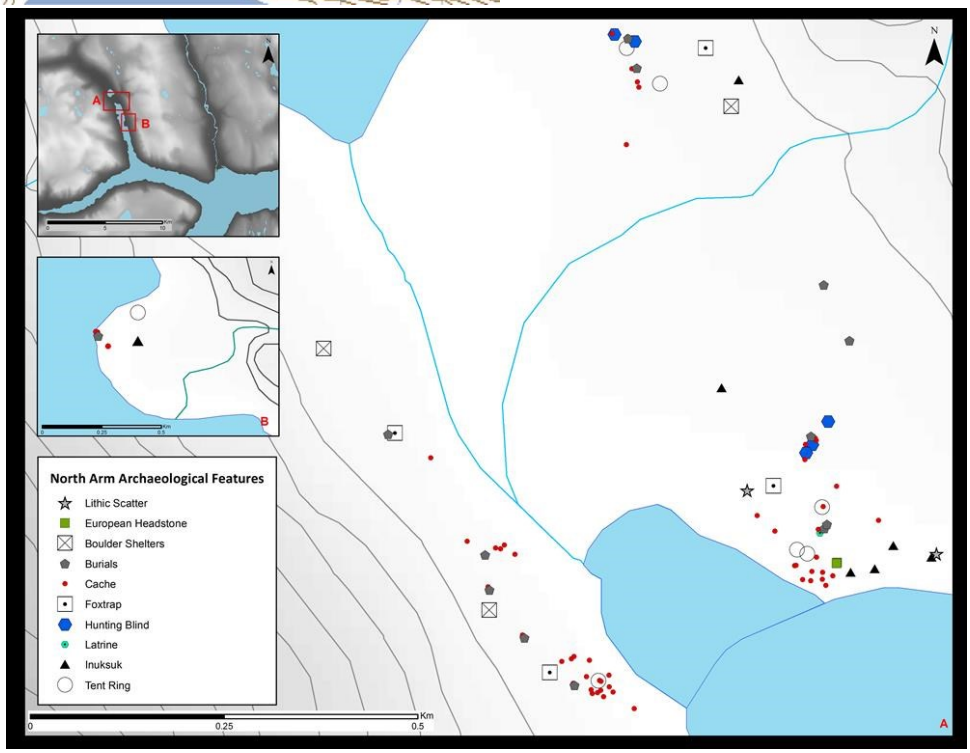

Figure 4. Map of main site cluster.

Figure 5. An almost unphotographable "pinnacle".

Figure 6. Lichen-encrusted soapstone lamp and fragments.

Figure 7. Large 20th c. cache with deep, rectangular cavity.

west of the former row of tent rings, there are more or less intact pre-Inuit lithic scatters, and a series of historic and possibly precontact Inuit features. These consist of very substantial stone caches close to the beach (Figure 7), likely associated with the char fishery that was prosecuted here for centuries, as well as caches and elaborate boulder blinds (Figure 8) on the upper terrace that are presumably related to caribou harvesting. Burial cairns, sometimes associated with caches, occur on the slope above these features and in a ravine that bisects the site. Interestingly, some of the cairns had a directly abutting and symmetrically positioned cache, giving the entire construction the appearance of a stone iglu (house), with the lower cache corresponding to the iglu's tunnel.

On the west side of the stream that drains into the northwest corner of the fjord (Silluaq River?) an eroding bank rises steeply to a narrow terrace that fringes a steep talus slope composed of sometimes massive (house-sized) boulders (Figure 9). A number of boulder caches - like those on the east side of the river probably associated with the char fishery – are scattered across this slope. Some are distinct, but relatively amorphous, boulder piles, while some consist of carefully constructed cavities with an overhanging lip (Figure 10). Presumably the latter, like somewhat similar but more recent features on the east side, are related to the actual air drying of char, whereas the less structured stone piles secured processed fish, other foods, and equipment for later recovery. A number of burial cairns and associated offering caches occurred mid-slope, while in the upper reaches of the talus slope small stone walls next to massive boulders seemed to define camping, caching and sleeping areas (Figure 11). These features ("hunter's beds") are intriguing because of their unusual situation in a steep boulder field. While they could hardly have been very comfortable,

Figure 8. Probable blind with interior cobble seats.

Figure 9. West side terrace and talus slope, with massive boulder landmark at river mouth.

Figure 10. Cache-like structure with overhanging lip.

Figure 11. Dave Craig next to "hunter's bed" on talus slope.

Lake. The gently sloping, turf-covered site area resembles the south side in its assortment of features (blinds, caches, burials, a well-constructed beehive fox trap – Figure 12), but does not appear to receive much visitor traffic and so the features are somewhat better preserved. Some of the blinds here and on the south side are very heavily constructed, with obvious seats for multiple hunters projecting from the inner walls. The features here housed various things for a time – animals, animal products, hunters in wait, the dead – but were not houses proper.

Three day long reconnaissance surveys were made into the near interior. The first followed the east side of the valley to a stream coursing down a steep, but not impassable slope (some hikers followed this route into the valley from Nakvak Brook at the end of our field season). An inspection of the west side of the valley followed the river draining into Silluaq Lake just beyond its turn to the west. Together these reconnaissances turned up only a handful of minor features, suggesting limited traffic along this corridor. An inspection of the interfluve east of the fjord likewise they may have afforded extra shelter in severe conditions, and certainly provide effective concealment from people camped close to the beach. On at least one occasion we were watched by a wolf that only became visible when it descended from the talus to the terrace to inspect us after we had returned to the other side of the river.

Thomson did not survey the north side of the alluvial fan bisected by the stream that flows west into the river draining Silluak

Figure 12. Fox trap.

turned up limited evidence of past land use, although inuksuit (Figure 13) and reports of past winter travel along this "sled route" merit further investigation. A Nunatsiavut Group of Companies bear monitor, Ned, showed us photographs of a heavily constructed blind with seats, much like those we had recorded at sea level, taken on the high barrens between Saglek and Nachvak Fiords.

The results of the season's work were interesting, although lack of evidence for a more substantial precontact Inuit component was disappointing. A better understanding was obtained of a distinct variety of site complex linked to fall fishing and caribou hunting. The features speak to active food production (blinds), processing (open cache-like structures) and storage (amorphous boulder caches), as well as camping (tent rings) and travel (inuksuit, hunter's beds). Burials and early historic or precontact artifact types suggest long term use of the locale. The logical follow-up to this project would be investigation of the site complex at the mouth of Nakvak Brook, in the next valley to the east. Nakvak Brook is widely reported as a principal historic travel corridor into the interior. Near the interior lake that feeds Nakvak Brook, the reported camp site of Qurlutualuk represented a staging point for travel north along the Palmer River valley to Nachvak Fiord, and west to the Koroc River valley, and thence across the peninsula to Ungava Bay. The sites near the mouth of Nakvak Brook were presumably staging points for travel into the interior and back into the fjord. The possibility of documenting evidence of travel and harvesting on the high barrens between river valleys and fjords is also intriguing, and could perhaps be initiated with existing aerial or satellite imagery.

Figure 13. Inuksuk marking "sled route" on rim of fjord.

Caught Somewhere in Time: Continuing Investigation of the Stock Cove Site (CkAl-3)

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[4] Université Laval

Introduction

In the summer of 2013, with funding from the State University of New York (SUNY)-Plattsburgh and the Sunnyside Heritage Association of Sunnyside, Newfoundland, Donald Holly and Christopher Wolff led a crew consisting of two graduate students, Frédéric Dussault (Memorial University) and Andréanne Couture (Université Laval), and an undergraduate student from SUNY-Plattsburgh, Taylor Testa, in the continued investigation of the Stock Cove Site (CkAl-3) at the base of Trinity Bay in southeastern Newfoundland. The focus of our work was to expand excavations we began in 2009 that revealed a rich Dorset occupational deposit overlain by a more ephemeral Recent Indian occupation (Wolff et al. 2010). Our aims were threefold: 1) to expose more of what appeared to be in 2009 the living floor of a substantial Dorset structure to assess its morphology, chronology, and seasonality, as well as to investigate the variety of activities that took place within the structure; 2) to investigate the nature of the Recent Indian/Beothuk presence at the Stock Cove site and its relationship to the nearby Little Passage Stock Cove West site (Holly et al. 2011); and 3) to gather

Figure 1. Excavation area looking roughly southeast.

samples for Dussault's insect research to better understand past environmental conditions at the site.

Methods

The 2009 excavation ended with the exposure of what we posited might be the partial remains of a Dorset structure. In 2013 we returned to the site to re-expose and expand these excavations. After removing the 2009 backfill, we excavated six 1 x 1m units just to the north of our prior investigations (Figure 1). We identified five distinct strata (Levels A-E); the deepest (Levels D and E) are largely cultural in origin and represent thick palimpsests of cultural material spanning centuries of occupation. All formal artifacts, identifiable faunal remains, and scientific samples (e.g. charcoal and soil) recovered *in situ* were had their provenience documented in three dimensions to the nearest centimeter utilizing a local datum that was georeferenced to the site datum. Lithic debitage and small animal bone fragments were collected by 50 x 50 cm quadrant, and all soil was either wet-screened or dry-screened through ¼" mesh depending on weather and soil conditions.

In the course of excavation, soil and entomological samples were taken for Frédéric Dussault's PhD research, which focuses on the analysis of archaeontomological material. Archaeoentomology, the study of entomological remains found in archaeological sites, has been used to investigate a wide array of topics--from the nature of former agricultural practices, to ancient foodways, hygiene and disease, and human-environmental relationships (Dussault 2011; Elias 1994, 2010; Forbes, et al. 2013; Kenward 2009; Rosenberg et al. 2005). Dussault's archaeoentomological work at the Stock Cove site aims to address, in part, the environmental history of the area and the human alteration of the "natural" landscape. As insects have evolved little over the last 2 million years, the recovery of ancient insect remains at archaeological sites can serve as proxy indicators of past environments (Coope 1978; Elias 2010; Kenward 1978).

Soil samples (2-3 liters each) were taken from each stratigraphic layer at the site. Additional discrete samples were obtained from documented features. The combination of sample types will allow for a better understanding of the distribution of the remains inside the excavation units, while the discrete feature samples allow us to target particular features documented during the excavation that might have been missed using only the systematic sampling. Apart from the soil samples collected from the excavation units, reference soil samples were collected from three small 25 x 25 cm units northwest of the main excavation area. The analysis of the entomological fauna found in the different offsite samples will allow for a more comprehensive knowledge of the natural fauna. The archaeological samples will be compared to the reference samples to assess possible modification of the environment by human activity. Such modification may have created new ecological conditions in which different beetle species could thrive.

In addition to the archaeological samples, insects were trapped over the course of the field season to document the modern insect population and build an insect reference collection, which will be used in the identification process. The modern reference collection is the key to identifying the entomological remains found in the diverse samples at Stock Cove. Even though reference manuals and identification keys will be heavily relied upon, the reference collection allows a more direct comparison between the remains found and identified modern specimens (Elias 1994). For those reasons we set traps in different ecological niches found near the Stock Cove site to build a comparative collection of the diverse insects found in the site area.

A total of five traps were set around the archaeological site, at a distances varying from 30 meters up to 250 meters. The traps were located in places representing different ecological niches and in transitional zones of two different niches in order to maximize the diversity of species captured in the traps. One trap was located northeast of the main site area in a mixed forest environment, two to the north near a stream and in a forest clearing, and the last two to the west of the site on a pebble beach and in a wet sphagnum moss bed. Most of the traps captured significant frequencies of insects; only the trap located the farthest west on the pebble beach did not capture any insects, only small arthropods, probably a species of crustacean, which still need to be identified.

Simple pitfall traps were used to capture the insects. Pitfall traps are easy to set up and efficient for capturing *Coleopterans* (ground beetles), the type of insects that are the focus of Dussault's analysis. The traps consisted of a container buried to the rim in the soil. Insects wandering by the trap inadvertently fall

into the container and are retrieved later. The trap is half-filled with a solution of water mixed with a drop of dish soap and a tablespoon of vinegar. The soap is added to the water of the trap to diminish the surface tension of the water, which would cause some insects to "float" or skim on the water instead of sinking. The vinegar is added as a preservative to avoid molding of the insects. Every two days, insects found in the different traps were collected and transferred to jars filled with alcohol. These insects will be pinned and dried prior to archaeoentomological analysis.

Discussion of Results

The richness of the archaeological deposits was comparable in some respects to those recovered in 2009, but denser in places (Table 1). The bulk of archaeological material was recovered from the two deepest strata and coincides with the Dorset occupation of the site. Analysis of this material and its distribution at the site is ongoing and will be published in the near future, however, preliminary work suggests an incredibly high artifact density at the site—perhaps rivaled only by Philip's Garden at Port au Choix. Since 2009 we have recovered nearly a thousand artifacts in just 12 m^2 of excavation. These results are all the more remarkable when one considers that the great bulk of our finds come from two strata (Levels D and E) which together constitute a mere 16-25 cm thick soil lens.

The Stock Cove artifact assemblage from 2009 and 2013 consists of five hundred endblades and microblades, constituting 25.4% and 25.8% respectively of the total tool assemblage. The great quantity of endblades suggests that Stock Cove may have been some sort of prehistoric regional manufacturing center for these artifact types. Endblades of similar style to those recovered at Stock Cove (tip-fluted, ground, flat-based,

Table 1. Frequencies and percentages of formal artifact types.

Artifact Type	**2009**	**2013**	**Totals**	%
Microblades	84	168	252	25.8
Endblades	80	168	248	25.4
Bifaces	55	73	128	13.1
Preforms	34	60	94	9.6
Quartz crystals (unmodified)	61	5	66	6.7
Scrapers	27	23	50	5.1
Cores	26	23	49	5.0
Unidentified/Other	30	17	47	4.8
Projectile points (Recent Indian)	8	11	19	1.9
Slate lances	0	11	11	1.1
Slate fragments	5	0	5	0.5
Hammerstones	0	3	3	0.3
Whetstones	0	2	2	0.2
Burins	0	1	1	0.1
Pièces Esquillées	0	1	1	0.1
Soapstone lamp fragments	0	1	1	0.1
Iron fragments	1	0	1	0.1
Totals	**411**	**567**	**978**	

Figure 2. Sample of endblades recovered at the Stock Cove Site (CkAl-3).

and often finely serrated along the entire lengths of their lateral margins) (Figure 2) are known from various sites in southeastern Newfoundland. With few exceptions they are made of a white patinated chert that is often referred to as Trinity Bay chert. The source of this material is unknown, but it is likely close to Stock Cove based on the abundance of the material at the site. The microblades are almost all made of quartz crystal. Thousands of pieces of debitage have also been collected; preliminary analysis of this material suggests that all stages of lithic reduction occurred at the site.

Several artifact classes, not identified in 2009, were recovered in 2013. These include ground stone

Figure 3. Soapstone lamp fragment *in situ*.

Figure 4. Ground stone lance fragments.

lances, hammerstones, a burin, and a soapstone lamp fragment (Figure 3). The lances (i.e. relatively large, non-toggling, hafted points)(Figure 4) are all made of slate and had one or two perforations located close to the medial point, all made by incising holes from both surfaces in the manner of the Dorset. The precise function of these lances is not known, but they could indicate that a broad range of subsistence activities took place at the site. Robbins (1985), for instance, hypothesized that the residents of Stock Cove may have hunted caribou. This remains a possibility, although no caribou bones or other large terrestrial mammals have been identified at the site to date (Wolff et al. 2011). Alternatively these slate lances may also have been used to spear large fish or hunt other sea mammals in the cove and beyond in the bay. Faunal remains recovered this year and currently under analysis will hopefully shed light on this issue.

Several stone features were identified at the site, but none were clearly identifiable as hearths or axial features as might be found in the interior of a single-family Dorset house. Large red and gray flagstones and cobbles appear to have been purposefully placed at various levels within the excavation units, but also appear to have been cannibalized for other features and/or structures creating a confusing palimpsest of features that may become clearer as a larger area is opened. Our units may represent the interior of a large structure whose boundaries lay outside our excavation plan. Because the habitable space in the area of the site we are working in is relatively limited and perhaps the most attractive place to establish camp in the cove, our worry is that the frequent reoccupation or long-term occupation of the site has created a jumble of recycled stone features and overlapping structures that are difficult to discern from each other. Only a small portion of the site has been excavated, however, and we hope that further research will alleviate these fears and not compound them.

We received three AMS dates from various strata at the site. A charcoal sample was taken at 78 cm below local datum from the deepest stratum (Level E) that contained the richest Dorset deposits and documented features and returned a conventional radiocarbon date of 1440 ± 30 BP (Cal BP 1380 to 1300; -25.8‰ 13C/12C ratio; Beta 362900).

We also were interested in dating a fire event that seems to have extended across the site that appears to closely coincide with the provenience of the majority of Little Passage/Beothuk artifacts recovered at the transition of Levels B and C roughly 15 cm below surface. The upper section of Level C, just below a pervasive layer of burnt cobbles, dated to 250 ± 30 BP (-25.3‰ 13C/12C ratio; Beta 363538), but had many intercepts on the radiocarbon calibration curve. The highest probability (1 Sigma, 68%) is Cal BP 310 to 290. A charcoal sample from the lowest section of Level B just above the burnt cobbles provided a date of 230 ± 30 BP (-25.9‰ 13C/12C ratio; Beta 363539), which also has several intercepts on the calibration curve, including three intercepts at 1 Sigma (68% probability) of Cal BP 300 to 280, Cal BP 170 to 150, and Cal BP 0 to 0. Most likely this suggests that the burning event occurred sometime around Cal AD 1640-1670 (Cal BP 310 to 280).

Historic accounts indicate that the Beothuk were in the vicinity of Stock Cove when the colonist John Guy visited the area in 1612 (Gilbert 1990), and the Beothuk may have continued to reside in Trinity Bay for several decades thereafter. Excavations at the nearby Stock Cove West site (CkAl-10), however, indicate the presence of Europeans in the area by the mid to late 17th century (Holly et al. 2010, 2011). Their arrival roughly coincides with the now documented burn event at Stock Cove. Quite possibly they are related, and served in some way as the impetus for the Beothuk retreat from the area.

Conclusions and Future Plans

Our 2013 excavations continue to reveal that Stock Cove was an intensely occupied site, particularly by Dorset peoples, over millennia. The nature of the site is still being investigated, but the extent and richness of the deposits suggests a substantial Dorset camp. Diverse tool types recovered at the site indicate a wide variety of activities, perhaps demonstrating complex economic strategies or different seasonal occupations that have yet to be teased apart. Ongoing faunal analyses may provide answers toward the latter.

Dussault's early analysis of the insects indicates the site preservation is good enough for the completion of his archaeoentomological study. Additionally, graduate research by Jason Miszaniec of Memorial University on the identification of tree species through the examination of collected charcoal samples provide early hope that, along with the entomological research, the environment of the site during its millennia of occupation will begin to be reconstructed, providing us with better data to understand the conditions during its various occupations.

We plan to focus future work at the site on the assessment of the historical processes (cultural and natural) that contributed to the formation of regional variation in the Dorset record. This will include an examination of the colonization of the site by the Dorset, or perhaps the *in situ* cultural transition from earlier Paleoeskimo peoples at the site. Moreover, we will center much of our research on understanding the reasons behind the abandonment of the site by Dorset peoples and the transition of the site into a Recent Indian occupation.

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