Canadian Archaeological Association
Newsletter
Association canadienne d'archéologie

Spring 2012 www.canadianarchaeology.com Volume 29, Issue 2

The Fieldwork Issue!

Introduction to the Fieldwork Issue

Hello to all CAA members! I hope you enjoy reading about your colleagues' work in all parts of Canada in this issue.

The Spring 2012 Newsletter contains information about archaeological field activities which took place in virtually all parts of the country over the past year(s). You'll notice that some areas, like Alberta, have substantial sections involving submissions for the past four field seasons (2008, 2009, 2010, and 2011). The fabulous work occurring in other regions (I'm looking at you, SK, MN, and NU) isn't represented at all because we're still looking for editors to solicit, compile, and submit fieldwork summaries. If interested, get involved!

For the first time, the CAA Newsletter has a sizeable Parks Canada presence: Daniel LaRoche assembled and submitted reports from Parks Canada's 2011 field activities in its three regions – East (NL, PEI), Central (ON, QC) and Western and Northern (BC, AL, SK, MN, YK, NWT). All are presented in both official languages.

You'll also find a letter by William Ross, the new President of the CAA, regarding Bill C-38. A number of links can be found at the end of his statement.

Alwynne Beaudoin has contributed a new Digging Books review of *Alta Acta* (Donna Leon), a novel touching on a number of archaeologically relevant topics including the excavation, ownership, and display of antiquities.

This issue also has information about field blogs that will soon be up and running on the E'Se'Get (Nova Scotia) and Shíshálh (British Columbia) archaeological projects. The News and Announcements section includes details on two upcoming conferences, and there is information for anyone interested in submitting to the Fall 2012 Newsletter.

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Letter from the CAA President to All Members

Dear Friends and Colleagues:

As you know, Bill C-38 will result in a massive reduction to Parks Canada's archaeologists and conservators. The Canadian Archaeological Association unanimously adopted the following resolution at our Annual General Meeting on May 19, 2012: "We propose that the Canadian Archaeological Association take a strong position against these cuts to personnel and infrastructures and that it seeks the support of appropriate organizations in Canada and abroad."

Our letter to Prime Minister Harper is provided below.

We have sought support from Canadian and international colleagues and have received letters sent to the federal government by the Association des Archéologues du Québec, the Nova Scotia Archaeological Society, Laval University, the Society for American Archaeology and the Society for Historical Archaeology. Some copies of these letters are provided below. We are expecting additional letters.

How can you help? Write, phone or e-mail your local MP and the following officials:

Stephen Harper, Prime Minister of Canada, pm@pm.gc.ca

Peter Kent, Minister of the Environment, minister@ec.gc.ca

James Moore, Minister of Canadian Heritage and Official Languages, james.moore@parl.gc.ca

Alan Latourelle, Chief Executive Officer, Parks Canada alan.latourelle@pc.gc.ca

We must express our outrage to get the government's attention.

Additional information includes material borrowed with the kind permission of Tim Rast. I urge you all to visit http://elfshotgallery.blogspot.ca/. Tim has posted material about the cuts to Parks Canada including several interviews from across the country addressing the severe problems these cuts will cause.

http://elfshotgallery.blogspot.ca/2012/05/what-is-happening-to-archaeology-at.html

http://elfshotgallery.blogspot.ca/2012/05/summary-of-archaeology-cuts-to-parks.html

http://anthropology-news.org/index.php/2012-06-06-parks-canada-archaeology-being-decimated/

Also visit the Canadian Archaeological Association Facebook page for news on this issue: http://www.facebook.com/CanadianArchaeologicalAssociation

As your new president, I would also like to thank William Moss, Quebec City, for assistance in contacting many of our international colleagues.

Please step up and do your part. This issue requires your attention.

We are also not alone, Library and Archives Canada is also being drastically affected – collections are being decentralized and scattered across the country. It is ironic that a government that spotlights the war of 1812, restores the Royal to the navy and air force doesn't seem to care about anything else in the history of this country.

Regards,

William Ross
President

http://canadianarchaeology.com/caa/draconian-cuts-parks-canada

Suggested Links

- Support letter template for membership
- CAA letter to the Prime Minister
- CAA letter to the Prime Minister - French
- Response from Prime Minister's office
- Parks Canada Charter
- Lettre de L'AAQ
- Lettre des professeurs de l'Université Laval
- Details on cuts
- Tim Rast's contribution
- Letter from the SAA
- Letter from the SHA
- Letter from CNEHA
- Letter to Minister Moore from the NSAS
- Letter from the OAS
- Letter from the International Council for Archaeozoology
- Letter from the Manitoba Archaeological Society
- Letter from Julia King (past president - SHA)
- Letter from Robert Waller, Protect Heritage Corp.
- Letter from Peter Pope, Memorial University of Newfoundland

CAA Membership Sign-up and Renewal

ACA Devenir membre – Première inscription et Renouvellement

Your membership in the **Canadian Archaeological Association is due on April 1, of the New Year**. In order to receive your two issues of the *CAA Newsletter*, the *Canadian Journal of Archaeology*, and maintain your logon account for the *Members Only Section* of the CAA Web Site, you are encouraged to establish or renew your membership as soon as possible.

Votre cotisation à **l'Association canadienne d'archéologie est de la première journée de janvier de la nouvelle année**. Afin de recevoir vos exemplaires du *Journal canadien d'archéologie*, du *Bulletin de l'ACA* et de continuer à accéder à la Section des Membres WWW de l'ACA, nous vous encourageons à renouveler votre adhésion ou encore à devenir membre de l'Association canadienne d'archéologie.

Regular/Régulier - $ 75.00
Membership Period is April 1st–March 31st

Student/Étudiant - $ 35.00
Membership Period is April 1st–March 31st

Supporting - $ 100.00

https://canadianarchaeology.com/caa/civicrm/contribute/transact?reset=1&id=1
https://canadianarchaeology.com/caa/civicrm/contribute/transact?reset=1&id=2

British Columbia

Four Years of Collaboration in Tla'amin Traditional Territory

Megan Caldwell (University of Alberta), Dana Lepofsky (Simon Fraser University), John Welch (Simon Fraser University), Michelle Washington (Sliammon Treaty Society), Nyra Chalmer (Simon Fraser University), Julia Jackley (Simon Fraser University), Sarah Johnson (Simon Fraser University), Craig Rust (Simon Fraser University), and Chris Springer (Simon Fraser University)

The Tla'amin-Simon Fraser University Archaeology and Heritage Stewardship Project was initiated in 2007 by Dr. Dana Lepofsky (SFU Archaeology), Dr. John Welch (SFU Archaeology and School of Resource and Environmental Management), and Michelle Washington (Sliammon Treaty Society). This collaborative project has focused on a comprehensive study of Tla'amin history through integrating archaeological evidence, traditional knowledge and archival materials. The Sliammon First Nation live just north of Powell River on the northern end of British Columbia's Sunshine Coast.

2011 – Excavation at Cochrane Bay; Jacob Liddy (UVic Undergrad), Jason Francis (Sliammon First Nation)

Archaeological research has been ongoing in Tla'amin traditional territory since 2008. Over the last four years, the Sliammon First Nation has hosted an 8-week field school in their traditional territory. In general, the field school has consisted of a combination of focal excavations in multi-component village sites, and smaller survey teams exploring key areas of Tla'amin traditional territory. Year 1 (2008) consisted of excavations at Klehkwanum (Scuttle Bay), on the Sliammon reserve, and an extensive survey of the Desolation Sound Marine Park. Year 2 (2009) saw the completion of excavations at Klehkwanum, and an expansion of the Desolation Sound Marine Park Survey. Additionally, we conducted aerial survey of Tla'amin traditional territory to document intertidal features. In Year 3 (2010) our focus shifted from Klehkwanum to a large village site at Cochrane Bay in Desolation Sound Marine Park. Additionally, we began ground-truthing the intertidal features documented in Year 2 and tested at numerous sites along the Georgia Strait side of the Malaspina Peninsula. This past summer, Year 4 (2011), we returned to Cochrane Bay, and began work on Ahgykson (Harwood Island). As well, we completed ground-truthing of the intertidal features.

Our results to date indicate that people have been living in Tla'amin traditional territory for at least 7,500 years. Early occupations likely consisted of temporary camps set up for resource exploitation. Approximately 4,000 years ago there appears to be a shift to more permanent settlement, with extensive terraforming and expansion of these sites through time. Many sites occupied during this period have evidence for continued use through to the proto-historic/contact period (late 18th century). The people living in Tla'amin traditional territory over the last several thousand years had a diet consisting primarily of herring, salmon, deer and various invertebrates. They traded obsidian with people living both to the north and south of them, with obsidian coming from Kingcome Inlet to the north, and Oregon to the south. Wooden stake fish weirs have been dated to the last 600 years, and the many stone fish traps and cleared beaches throughout the territory indicate that management of marine resources was a central focus in Tla'amin lifeways.

In addition to archaeological fieldwork, the project has also held a number of outrearch events, both in Sliammon and Powell River. These events usually involve a number of activities to get the public participating in archaeology and asking questions about the past. Community archaeology events have included class visits to our excavation sites, community barbecue and archaeology days, museum and artifact nights where people can bring in artifacts they have found for identification, and National Aboriginal Day events with the Powell River School District. We have also done a number of presentations at Vancouver Island University

in Powell River, sharing the results of this research with the local community. The project has been featured in the Neh Motl, the Powell River Peak, the Vancouver Sun, the Tyee and Archaeology Magazine, as well as being interviewed for CBC Radio and Shaw Television, and featured on the National Geographic Education website.

The Tla'amin-SFU project continues this summer (2012) with a 4-week ethnohistory and archaeology field school, jointly offered with Dr. Keith Carlson of the University of Saskatchewan. Archaeological fieldwork will be focused on Ahgykson.

More information can be found at:
http://www.sliammonfirstnation.com/archaeology/

http://www.sfu.ca/archaeology/fieldschools/Summer2011SunshineCoast.html

Quantifying Shellfish Cultivation in Ancient Clam Gardens, Quadra Island, B.C.

A.S. Groesbeck (Simon Fraser University), A.K. Salomon (Simon Fraser University), D. Lepofsky (Simon Fraser University), and K. Rowell (University of Washington)

Our project is a novel integration of ecological, archaeological, and traditional knowledge examining the use and productivity of ancient First Nations' clam gardens. Clam gardens are leveled beaches, cleared of cobbles, and characterized by constructed rock walls in the lower intertidal zone. These gardens are a millennia old example of sustainable harvest and engineering techniques that enhance ecosystem productivity. While well known to First Nations of the Northwest Coast, regional archaeologists have only recently recognized these features. Following the lead of other researchers and guided by traditional knowledge, we hypothesized that clam gardens were developed to increase secondary production, specifically the growth rates and survivorship of clams, by increasing (or magnifying) high quality clam habitat.

During our 2011 summer field season we tested our hypotheses through experimental clam transplants as well as ecological surveys at replicate clam gardens and non-walled beaches on Quadra Island, BC, Canada. We out-planted 90 native little neck clams (*Leukoma staminea*) per site at 6 tidal stations in clam gardens (n=6) and non-walled beaches (n=5) during their 2011 growing season. During all of the low tide windows from April to August 2011, we also conducted ecological survey transects. These survey transects measured bivalve community composition, available habitat, and sediment types across clam garden (n=11) and non-walled beaches (n=10). Our preliminary ecological data suggest that within clam gardens, little neck clams exhibit higher growth rates and greater survival rates compared to non-walled beaches. By altering the slope of the shore, clam garden walls appear to increase available optimum habitat and growing potential for bivalves, an important subsistence food resource.

The next step of our research (Spring-Summer 2012) is to analyze the shellfish within the middens associated with the clam garden beaches. We will be quantifying and dating shellfish within column samples to assess clam size at age, growth rates, relative species abundance, and overall bivalve abundance through time. Based on the compelling results of our ecological experiments and surveys, we expect that we will see a shift towards larger clams at a given age and more clams overall correlating to the time when clam gardens were first constructed. Our preliminary surveys suggest that there are two kinds of middens associated with clam gardens in our study area: shallow middens that are composed almost entirely of shells, and deep, highly stratified middens associated with permanent settlements. Our expectation is that we will detect an increase in clam abundance and size on age in the deeper (older) middens that will mark the shift to clam cultivation. We expect that the shallow middens in our study area will be relatively recent and that the clam size on age within these middens will be consistent with our expectations for clams cultivated in clam gardens. By combining diverse kinds of data and analyses, this collaborative research reveals important insights into traditional methods of ensuring food security and sustainable harvest techniques. These ancient methods can be used to inform contemporary conservation strategies.

Alberta 2008

Regional editor Alwynne Beaudoin reports that there were 444 permits issued for archaeological work in Alberta in 2008. Work under permit resulted in the discovery of 795 new sites, and 465 sites were revisited. The provincial inventory of archaeological sites now (as of early 2009) totals 36,020.

Summary of 2008 Archaeological Work at Oil Sands Development Projects in NE Alberta

Eugene M. Gryba, FMA Heritage Resources Consultants Inc.

During 2008, **Eugene M. Gryba** led survey crews in Heritage Resources Impact Assessments of three oil sands development projects in the Boreal Forest of northeastern Alberta. All three projects were located on relatively flat glaciolacustrine terrain situated between the Birch Mountains on the west and the Athabasca River on the east. They included a preliminary baseline assessment of the UTS Energy Corporation Frontier Project (Lease 311) (ASA Permit 08-192), a full HRIA of the UTS Energy Corporation Equinox Project (Lease 14) Mine Development Area and Water Intake Location (ASA Permit 08-265), and an HRIA of the Well Pads Area, Central Facility and Connecting Field Corridor on the Value Creation Inc. Terre de Grace SAGD Project (ASA Permit 08-248).

Figure 1. Testing at Site HjOw-2

A non-random survey and shovel testing strategy was employed at all three projects. Whenever conditions allowed, the potential culture-bearing matrix was sifted through screens with a 2.9 x 6.0 mm mesh to ensure that even tiny pressure flakes would be recovered. A combined total of 5233 shovel tests was realized during the 2008 assessments. This led to the discovery of 51 previously unrecorded Precontact archaeological sites. They include 18 sites (HjOv-12 to HjOv-26 and HjOw-1 to HjOw-3) on UTS Lease 14, 32 sites on UTS Lease 311 (HjOv-27 to HjOv-30, HjOw-4 to HjOw-8, HkOv-1 to HkOv-18, and HkOw-1 to HkOw-5) and one site, HhPa-5 on the VCI Terre de Grace SAGD Project. In addition a previously recorded site, HiPa-1, was reassessed on the VCI lease.

Noteworthy discoveries made during these three assessment projects include a lanceolate Paleoindian point and an Oxbow example at HjOw-1, a possible roughed out microblade core at HjOw-2, a small side-notched arrow point at HhPa-5, a reworked Oxbow point at HjOv-28, a Besant-like point at HkOv-5 and a stemmed (Hanna?) point at HkOv-8. Grey and "salt and pepper" varieties of high quality quartzite comprised the dominant lithic material encountered at most sites. At HjOv-26, a 135 mm x 133 mm x 19.8 mm fragment of a massive biface of salt and pepper quartzite was discovered amidst a scattering of debitage of a similar material. Isolated pieces of Beaver River Sandstone debitage were discovered at HjOw-7, HkOw-3, HkOv-10 and HkOv-11.

Figure 2. Large quartzite biface fragment and associated debitage recovered from a shovel test at Site HjOv-26.

Most sites usually occurred on prominent bluffs or points of land along drainage courses or lake shores, and

particularly in close proximity to open meadows and beaver ponds. On UTS Lease 311, a plethora of sites was encountered in an area pockmarked with small karst-like depressions that were in various stages of becoming infilled with vegetation. With the exception of HjOw-1 and HjOv-26, many sites appear to be relatively small. And, as common with most Boreal Forest sites, the potential culture-bearing deposits occurred within a decimeter of the top of the mineral soil.

Department of Archaeology, University of Calgary: The 2008 Field Season at Cluny Fortified Village (EePf–1)

Dale Walde, Department of Archaeology, University of Calgary

Blackfoot Crossing Historical Park (BCHP) and the **Department of Archaeology, University of Calgary** have entered into a cooperative archaeological research project intended to further scientific investigation of the famous Cluny Fortified Village site (EePf–1), investigate other archaeological resources at the Siksika Nation, and to incorporate the scientific work into an educational interpretive program.

The first season of fieldwork in the project was conducted during the 2007 field season (14 May–28 June) by a field school class under the direction of **Dr Brian Kooyman**. Two trenches, each 1 m wide, were opened during the 2007 field season to assess the One Gun Phase component at the site and to collect flotation samples along the two transects created by the trenches. The first trench, 15 m in length, crosses the fortification trench and one of the pit features before entering the interior of the enclosed site area then ending at the edge of one of the Richard Forbis' 1960 excavation units (Figure 1). The second trench, 1 m to the east of the first and 7 m long, continues into the interior of the site ending near the edge of a large natural depression. Flotation is an extremely time consuming operation and the field crew was unable to complete excavation of the One Gun Phase component during the 2007 field season.

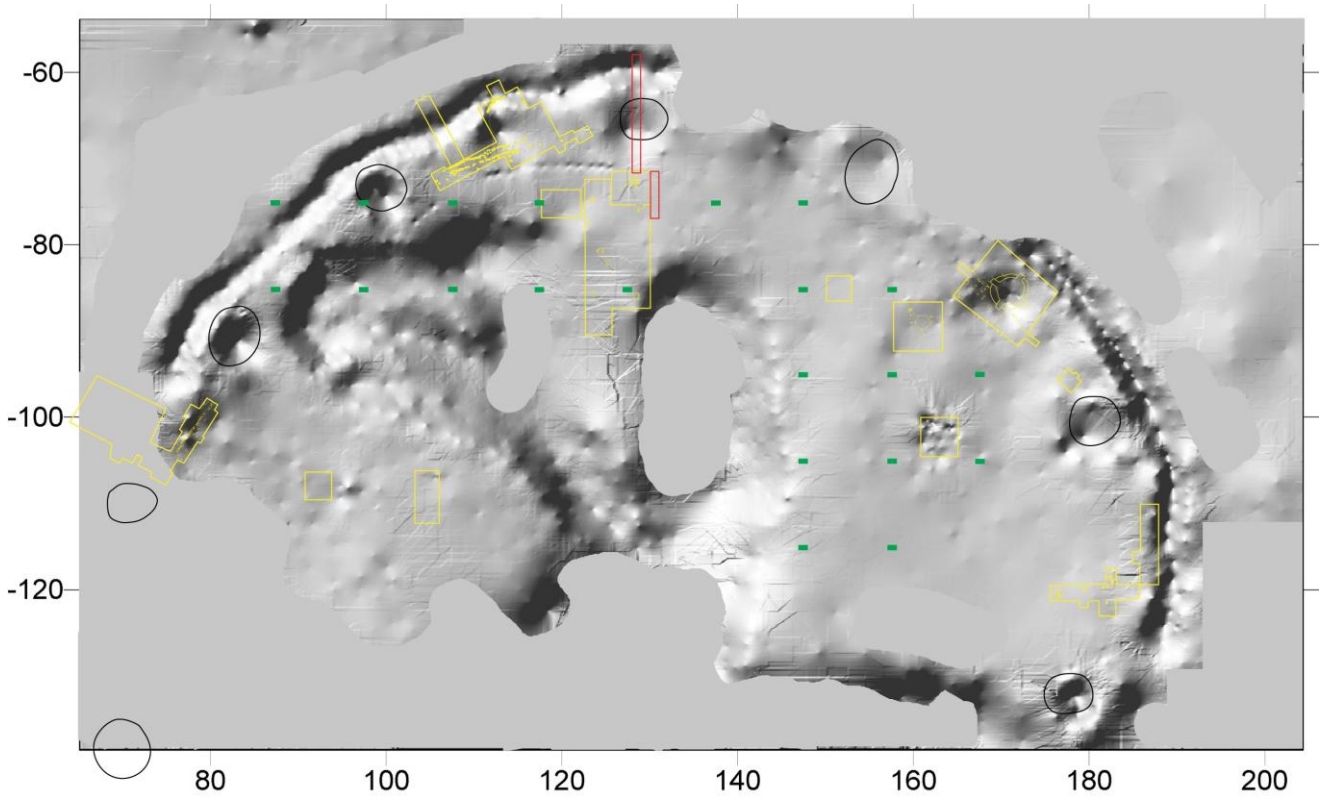

Figure 1. 2008 map of the Cluny site (EePf-1). Yellow outline: 1960s excavations; red outline: 2007 excavation units; green filled rectangles: 2008 test units; black outline: fortification pits identified by Forbis (1977).

The second season of fieldwork was conducted during the 2008 field season (14 May–28 June) by a field school class under the direction of **Dale Walde**. Rain was a constant source of delay during 2008 and only 10 full days of excavation were possible (approximately half the usual field time allowed by the field school schedule). The second season program initially had four objectives: 1. to complete the excavation and flotation of matrix from the One Gun Phase component in the 2007 trenches; 2. to test deeper matrices in selected units in the 2007 trenches for deeper and older components in the site; 3) to initiate a testing program to determine the extent and nature of archaeological resources in and near the enclosed area of the site, and 4) to take advantage of new surveying and mapping technology to create a new, highly detailed map of the site and its immediate area. As the field season neared completion, conversations with BCHP personnel indicated the presence of other nearby archaeological resources and fifth objective—to conduct a short archaeological reconnaissance in the general area of the Blackfoot Crossing Historical Park Interpretive Centre—was added.

The excavation and flotation of the One Gun Phase component in the 2007 trenches was completed, with one exception, during the 2008 field season. Results of preliminary analysis of excavated materials and features in that 22 m^2 area are presented in a report submitted to BCHP (Walde 2008). A report on the analysis of the flotation sample is awaiting completion of laboratory work and will be forthcoming when that work is concluded.

Excavations in the One Gun Phase component of the trenches revealed several very interesting features. A short sandstone "wall" along the north side of Pit 4 is a feature type unique to the site and, indeed, to the Precontact Canadian Plains. That feature was encountered on the last day of excavation and awaits completion of excavation and recording during the 2009 field season. Also in Pit 4, a gravel lining was found in the base of the pit; again, a unique feature requiring further study both within the pit and in other pits in the site. Excavations in the fortification trench revealed the presence of a relatively dense concentration of faunal material, suggesting a secondary function as a trash disposal location.

Following completion of the One Gun Phase occupation level in the 2007 field season trenches an additional twenty–one (21) 1 x 0.5 m test units were opened to assess the distribution of materials within the enclosed site area. A total of 10.5 m^2 were excavated during the test excavation phase of the fieldwork. Those tests revealed the presence of a particularly dense One Gun Phase occupation in the eastern portion of the enclosed area. Features exposed include a hearth, a fire–broken rock dump, a possible hide–scraping station, and a portion of the palisade wall. Careful excavation of features suggests multiple use and may suggest that the site was reused on several occasions. This may alter the current interpretation of the site as a single, very short-term occupation.

Deep testing in the 2007 trenches and in selected 2008 test units indicates the presence of at least three Precontact components underlying the One Gun Phase occupation. These lower components have not yet revealed diagnostic artifacts and are sparsely and intermittently represented in the test units. Survey and mapping of the site and its area was only partially completed during the 2008 field season due to the presence of dense tree and bush cover in large areas of the site. Where accurate mapping could be accomplished, at least two new interpretations of data did become available. Firstly, the course of the fortification trench seems to have been affected by the location of the large pit features at the periphery of the site, suggesting a previously undetected sequence of construction with building of the pit features occurring before construction of the fortification trench. Secondly, extremely detailed survey and mapping in one area of the site revealed the presence of a third palisade. This strongly implies multiple occupation of the site, again suggesting that current interpretations of the site as a single, short–lived occurrence will have to be revised.

A pilot program of public interpretation tours led by student volunteers was instituted and was well–received by members of the public and by the student participants.

A brief reconnaissance by three volunteer students guided by **Leonard Bearshirt** was conducted on weekends following the formal end of the field season. That reconnaissance revealed the presence of a number of interesting circular vegetation patterns and, most importantly, an arrangement of five pits a few hundred

metres from EePf–1 that strongly resemble pit houses. If these are, indeed, pit houses, they would be unique to the Canadian Plains and of extremely high scientific and cultural significance.

The 2008 field season, given its rain–shortened length, was extremely successful in revealing important, new information about the Cluny site and its surroundings. The need for further work at the site and its vicinity is clearly demonstrated.

Reference cited:

Walde, Dale 2008 *The 2008 Archaeological Field Season at Blackfoot Crossing Historical Park*. Blackfoot Crossing Historical Park Archaeological Research Project Annual Summary Report 1. University of Calgary. Calgary.

AMEC Earth & Environmental, Calgary, Alberta

Carmen Olson, AMEC Earth & Environmental

The newly formed Historical Resources Group (September 2007) of the Calgary **AMEC Earth & Environmental** office conducted several HRIAs and an HRIM during the 2008 fieldwork season. Surveys were conducted for oil sands and coal development projects, as well as a pre-development mitigation for a provincial infrastructure project. Fieldwork for these projects included general overview surveys evaluating historical resources potential; the majority of which were pre-impact assessments. Also undertaken were a mitigation, post-impact assessments, and a re-assessment of a previously recorded site.

The 2008 field season began with a mitigation directed by **Brad Somer** at the Marshall Springs locale in Fish Creek Provincial Park, Calgary. Two Precontact sites (one with an historic component) were mitigated, as well as additional testing at a previously recorded site. Additional testing determined there was an undisturbed Precontact component based on the recovery of a Pelican Lake point from a shovel test.

Fieldwork was directed by **Brad Somer** for a proposed SAGD development south of Christina Lake, near Conklin. A total of 11 sites were recorded, 10 were Precontact and 1 was an historic site. Most of the sites were sparse lithic scatters located on the southern shore of Christina Lake and along a tributary to the lake, Sunday Creek. The field crew was enriched by the participation of local assistant, **Russell Tremblay**, a life-long resident of the Conklin area who generously shared his extensive knowledge of hunting, trapping, plant identification and traditional use, and animal sign and behaviour of the area. He also saved the archaeologists' sanity by firing up a smoky smudge to keep the biting black flies at bay.

A second field season of assessment was conducted for an oil sands project in Alberta and Saskatchewan from July to September under Brad's direction. In Saskatchewan, the lands assessed included major water bodies and tributaries of the Descharme River, Axe and Sabine lakes. A total of 134 previously unrecorded Precontact and historic (trapping cabins) sites were identified. Four diagnostic projectile points were recovered as surface finds and from shovel testing. The Alberta assessment recorded 42 new Precontact and historic (trapping cabins) sites on the Firebag River and surrounding environs.

Brad's fieldwork continued in September assessing the east side of the Athabasca River, south of Suncor's tailings pond, in response to a SAGD pilot project. Four Precontact sites along the banks of McLean Creek were recorded.

In October, and concluding the field season for Brad, was the impact assessment for a coal development project north of Fox Creek. Three Precontact sites were recorded along Atikkamek Creek, the Iosegun River and some minor tributary water courses.

AMEC's team lead, **Nancy Saxberg**, directed several fieldwork programs for oil sands projects in the Fort McKay area, north of Fort McMurray from July through to late October. She directed the fieldwork for six permits that were supporting the initial development as well as the expansion of existing oil sands projects.

In July, Nancy conducted an impact assessment for a river water intake pipeline along a tributary creek of the Athabasca River and tributary water courses of McClelland Lake. Four previously unrecorded Precontact sites were identified. Later in September, a second survey was conducted to address study gaps in the area of a

proposed tailing pond and an access road. Two new Precontact sites were identified and a re-visit to a previously recorded dwelling site concluded it was a naturally occurring tree throw and it was recommended that it be expunged from the archaeological sites listing.

Two assessments were directed by Nancy, in August, of an oil sands lease and accompanying access corridor (two separate permits) in the Ells River area west of Ft. McKay. The lease assessment identified four new Precontact sites (two on the banks of the Ells River and two on the eastern shores of a small unnamed lake). The access corridor, however, did not yield any artifacts.

In September, Nancy held two permits to conduct surveys and assessments of a SAGD oil sands lease and the accompanying lease access corridor. The survey and assessment of the lease identified four Precontact sites, three near a small unnamed lake and one on the high north bank of the Ells River. Two Precontact sites were identified and recorded in support of the access corridor permit.

AMEC's Saskatoon office requested Nancy's expertise during the survey and assessment of the Highway 11 twinning project between Rosthern and Macdowell, north of Saskatoon. Because of her extensive historical archaeology experience, and the possibility of the uncovering and disturbance of Riel Rebellion-era structures, she was retained as an historical archaeology specialist for the project.

Altamira Consulting Ltd.

Jennifer A. Thompson and Kristin Soucey, Altamira Consulting Ltd.

In 2008 **Altamira Consulting** discovered several new archaeological sites of note. FbPu-4 is located west of Rocky Mountain House and produced a Hell Gap projectile point. DlOo-39, located on the east side of Highway 41 and south of Highway 1 is a stone feature with a central cairn surrounded by two concentric rings of cobbles. The feature is only 2 m x 2 m which is too small to be medicine wheel.

In May 2008**, Jennifer A. Thompson** of Altamira Consulting Ltd. conducted an HRIA survey in River Lot 36 in the Lac La Biche Settlement. The river lot is one of the original river lots in the Lac La Biche Settlement, surveyed by the Department of the Interior in 1889. A total of 80 river lots were surveyed along the shore of Lac La Biche.

Figure 1. Hell Gap point from site FbPu-4.

Archaeological site GePa-17 was originally recorded in 1975 by E. McCullough. McCullough recorded that the site consisted of a small depression, with a log cabin located 50 m north of a small creek that runs through the rive lot. When the site was revisited in 2008, the cabin was no longer extant. One small depression was located, though it was not in the same location that McCullough recorded. Shovel testing of the depression revealed only one artifact, a French cavalry button dating to between 1876 and 1878.

In addition to site GePa-17, two other previously recorded archaeological sites were revisited (GePa-18 and GfPa-37) and two new archaeological sites were recorded (GePa-52 and GePa-54). Archaeological site GePa-18 consists of a farmyard, with a total of seven historic structures. Site GfPa-37 is a prehistoric lithic surface scatter and a campsite, consisting of a total of 254 artifacts. The site is located on a ridge that overlooks Lac La Biche and covers the whole width of River Lot 36. GePa-52 is an isolated find that is likely associated with GfPa-37, while Site GePa-54 is a surface lithic scatter consisting of 35 artifacts.

In the autumn of 2008, **Kristin Soucey** of Altamira Consulting Ltd. conducted Stage I mitigations at FjPp-50, FjPq-36 and FjPq-37 and Stage I and II mitigations at

FiPp-33, of behalf of TransAlta Utilities Corporation, south of Wabamun Lake. Excavations at FjPp-50 and FjPq-36 consisted of 32 square metres at each site while FjPq-37 consisted of 16 square metres.

Figure 2. French cavalry button found at site GePa-17.

FjPp-50 is an early 20th century homestead site with three large depressions. The two larger depressions are likely cellar features, which were later used as refuse dumps when the site was abandoned in the 1960's. A variety of material culture was recovered including two wood burning stoves, nails, sawn bone and a variety of domestic items including leather shoes with wooden soles, complete medicine bottles, cutlery, tableware and a teapot. Evaluation of the assemblage is currently underway.

FjPq-36 is an early 20th century homestead site. The site consisted of two depressions and a rectangular feature surrounded by a low berm. The smaller of the two depressions, originally thought to be a privy, was a small refuse dump containing a ketchup bottle, a variety of sanitary cans and a silver mint julep cut. The rectangular feature with the berm had been identified by a local landowner as the remains of a barn. The larger of the two depressions is likely the cellar of a house. Artifacts recovered from this context include several women's compacts, a large number of leather shoes ranging from infant and toddler shoes, children's shoes and adult's shoes, table ware, cutlery, coins, an agate cameo and a variety of porcelain doll parts. An intact wooden floor was uncovered adjacent to the south side of the cellar. Research suggests that the site may have been occupied from 1906 onwards. Evaluation of the assemblage is currently underway.

FiPq-37 is an early 20th century homestead site with one large depression representing the foundation of a house and smaller privy depression. The current landowner, a gentleman in his 70's, remembers a large, empty house in this location when he was a small boy. The house and privy were destroyed in a fire that swept through the area in 1930's. Nails and other scraps of metal were collected from the site after the fire. Excavations within the house foundation yielded two sanitary cans. A total of 33 artifacts were collected from the privy including scraps of newspaper, a glass water pitcher and four latex prophylactics. One of the newspaper scraps is possibly from the July 4, 1935 edition of the *Edmonton Bulletin*. Evaluation of the assemblage is currently underway.

FiPp-33 is a large Precontact campsite situated on a long ridge overlooking Wabamun Lake, some 5 km to the north. The Stage I and II mitigations at FiPp-33 consisted of a total of 44 square metres as well as a program of shovel testing and fieldwalking in an adjacent ploughed field. The site, originally thought to be a small campsite, encompasses as area of roughly 4,000 m^2. Three cultural periods are represented including Late Prehistoric (Prairie Side-notched), Late-Middle Prehistoric (Besant) and Middle Prehistoric (Oxbow). The assemblage is dominated by more than 5000 lithics with a small sample of calcined bone and very little FBR. Evaluation of the assemblage is currently underway.

Lifeways of Canada Limited - 2008 Fieldwork Summary

Jessica Langer, Lifeways of Canada Limited

During the 2008 field season **Lifeways of Canada Limited** held many archaeological research permits for work in Alberta. Fieldwork was undertaken in all areas of Alberta including but not limited to: Fort McMurray, Drayton Valley, Edmonton, the Coal Branch, Calgary, Cypress Hills, and throughout southern Alberta.

In addition to field activities undertaken by Lifeways, various staff members also gave presentations outlining results from various projects. **Brian Vivian** presented a papers at the Alberta Archaeological Society Annual General Meeting in Medicine Hat entitled "Detecting

Historic Sites in Calgary"; and at the Calgary chapter of the ASA at their September meeting a talk entitled "8000 Years of Hunting Buffalo in Calgary". **Brian Vivian** and **Janet Blakey** each presented posters at the Society of American Archaeology's AGM held in Vancouver, BC, at the end of March 2008. These posters detailed the final mitigative excavations at EgPn-700 (the Everblue Springs Site) in the Calgary area as well as a survey of Yellowstone Lake in Yellowstone National Park. The Yellowstone Lake poster was also displayed at the AGM of the Archaeology Society of Alberta held in Medicine Hat in May 2008. **Dan Meyer** and **Jason Roe** presented a poster entitled "Excavations at the Upper Lovett Campsite (FgQf-16) from 2005 to 2006" at the Annual General Meeting of the Archaeology Society of Alberta in Medicine Hat in May 2008, and it won the Alberta Consultants Association Poster Award which is presented annually at their AGM. Another non-fieldwork project that Lifeways has worked on in 2008 is the re-analysis of the lithic debitage and tools recovered from EhPm-34, the Balzac Site, in 1981 and 1982. We will have a report on this work submitted to the Archaeological Survey in the spring of 2009.

In the 2008 season, cultural resource investigations under the direction of **Brian Vivian** at Lifeways of Canada Limited include a number of small HRIA and Mitigative Excavation Projects in and around Calgary. Highlights include several HRIAs undertaken in the area of Cochrane where a number of small upland Precontact sites were identified in the area north of Cochrane Lakes and also immediately south of Cochrane and south of the Bow River, where previous permitted studies had failed to identify any archaeological sites. Similarly an HRIA carried out in the area of Priddis south of Calgary also resulted in the identification of a number of small Later Period sites found along the margins of upper Fish Creek in an area where few sites had been previously recorded. Salvage excavations of a hearth at one of these sites indicate that is associated with an early native historic occupation.

More extensive mitigative studies undertaken in 2008 were focused on the East Village Project in the area of downtown Calgary, and the Crestmont Development located on the western margins of Calgary. Backhoe testing in the area of the East Village was successful in identifying two historic dump locations designated as EgPm-332 and EgPm-333 and one Precontact site (EgPm-334). Excavation of EgPm-332 resulting in the collection of a significant assemblage of historic glass and ceramics, complete bottles, and butchered animal bones mixed in with assorted household hardware and rusted metal objects. Temporal indicators suggest this dump was early pre World War I in age, dating to ca. 1905-1914. The extensive ceramic assemblage recovered includes many diagnostic items including items stamped with maker's marks and patterned pieces. Numerous examples of finer porcelain bowls, teacups and spoons of Asian origin were found, representative of the historic Chinese populations in Calgary.

Excavations at EgPm-333 revealed a similar collection of historic glass and ceramics, complete bottles, and butchered animal bones mixed in with assorted household hardware and rusted metal objects. However, chronological markers indicate that this second dump dates to the early 1920s. Indicative of the shift toward modern transportation, numerous parts from an early model car were uncovered including a fender and other substantial parts of the body, steerage mechanism, a brake drum and a wooden spoke iron wheel.

The Precontact site, EgPm-334 was found deeply buried beneath a vacant block and parking lot where once a Safeway Store once stood, on the edge of the original T-3 Terrace. Backhoe tests revealed a stratified site with two occupations buried beneath the substantial overburden, which now covers the block. After mechanically stripping the area, final excavations resulted in the identification of a well-formed arc or partial ring (Figure 1) in addition to a second poorly formed ring and several hearth features. Although no diagnostic artifacts were collected, quantities of fire-broken rock, stone waste flakes, and bone were recovered from both features. Radiocarbon dates place the occupations of EgPm-334 to be between 3,300-3,500 years ago. The dates and character of the site indicate it to be comparable to the buried camps found in the area of Douglasdale (EfPm-104), Carburn Park (EfPm-143), and Quarry Park (EfPm-266); although this is the first time any site of this type has been identified in the core of a city, buried beneath the modern City of Calgary.

Ongoing investigations in support of the Crestmont Development undertook mitigative studies of six Precontact sites identified previously under a 2001 permit. These excavations revealed a series of bison

processing camps characterized by highly fractured bison bone, fire-broken rock, and stone waste flakes. Two of the sites found to contain pre-Mazama components were subject to further excavation. Results revealed another early bison kill site dating to *ca*. 7,200 years ago at EgPn-633, with a small assemblage of projectile points consistent with those collected from the Gooseberry Kill Site (EgPn-625) as reported in 2007.

Figure 1. Large partial ring at the Safeways site, EgPm-334.

Projects undertaken during the 2008 field season under the direction of **Dan Meyer** included: the excavation of HhOv-462 in the Fort McMurray area; monitoring and salvage excavations at DjPp-6, Edmonton; excavation at the Stampede Site, Cypress Hills; the archaeological survey of Buck Lake, Drayton Valley Area; and the excavation of FhQg-5, Yellowhead Mine and Townsite, Hinton-Edson Area.

In late June and early July of 2008, Lifeways of Canada Limited undertook a Stage II mitigation program at HhOv-462, located adjacent to the Quarry of the Ancestors near Ft. McKay. The project was directed by **Dan Meyer**, with the assistance of **John Nuttal**, **Dan Cummins**, **Kendra Drever**, **Candace McMillen**, and **Derrick Foster**. A total of 114.5 square meters were excavated in seven blocks in three previously defined localities. Additional shovel testing located some productive site areas not previously identified. Fortunately, we were able to recover a sample of materials that went beyond simply a larger sample of early stage reduction activities at the site. Although HhOv-462 has the typical heavy background "noise" of early stage reduction typical of sites this close to the Quarry, several areas produced artifacts indicative of later-stage reduction and formal tool manufacture, and even activities more commonly associated with camping. That some different and diverse activities occurred in the different excavation block areas is clear.

Analysis of the recovered materials is still ongoing, and the following review is preliminary. While the vast majority of debitage recovered is Muskeg Valley Micro-quartzite (MVMq), numerous flakes of local quartzite, pebble chert, other unidentified cherts (some translucent), and a Paskapoo-like chert were also recovered. Other items of interest include a nice MVMq endscraper, numerous split pebble chert endscrapers, a graver, numerous large wedges or similar tools of MVMq, several, large, finely made bifaces of MVMq, a single "notched-blade" of MVMq, and four anvil stones. Some blade-like flakes were recovered, but no micro-cores. The excavated diagnostics recovered from HhOv-462 are of the corner-notched to stemmed dart varieties, likely belonging to the Firebag Hills Complex (ca. 3,500-2,600 rcybp). Some artifacts suggest other cultural components may be identified. This program has resulted in significant advancement in our knowledge of the site, and undoubtedly additional laboratory examination and analysis of the large sample of materials will provide further meaningful information about the site and its occupants.

In June of 2008, **Dan Meyer** of Lifeways of Canada Limited undertook monitoring of an excavation program for the replacement of power cables at the Kinsmen Field House in Edmonton. FjPj-6, the Kinsmen Field House Site, was recorded by Kerry Walde and Alan Bryan in 1976. In the disturbance caused by the construction of a water pipeline behind the field house in that year, they noted bison faunal remains in association with flaked cobbles and a few flakes. They suggested the site was deeply buried and perhaps quite late in date given the young floodplain/terrace on which it stood. Despite the heavy past construction in the area, Dan felt that the full extent of the site may not have been established when recorded, and portions of the site may still be extant. He therefore recommended monitoring during construction activities.

In contrast to the possibility of Precontact artifacts, construction exposed a number of disturbed, unprovenienced Historic period artifacts, and exposed

two deeply buried, trash-filled features. No Precontact remains were observed. Salvage collecting and excavation work was undertaken to gather information prior to further disturbance. Although one of the features was a pit about 60 cm deep, the morphology and contents of the features suggest that they were not privy pits, but rather trash pits. Analyses are still on-going, but work on the ceramics, glass, metal, faunal remains, wood, and paper artifacts recovered indicate that these materials were deposited in the early 20th century, most likely around 1910. The context was almost certainly sealed by the great flood of 1915, which deposited a hefty layer of silt and sand in the area. These materials may well be associated with the John Walter homestead located a short distance to the north (John Walter's financial ruin also came about due to the aforementioned flood), or other possible occupants recently identified in this area in historic air photos. In either case, the series of artifacts salvaged provide an interesting glimpse of early 20th century household economy in Strathcona.

In July and August of this year, Lifeways of Canada Limited undertook a second stage of excavations at the Stampede Site, DjOn-26, in the Cypress Hills at the request of the Historical Resources Management Branch. This is a large and deeply stratified site in Cypress Hills Provincial Park in southeastern Alberta. Between the years 2000 and 2005, Dr Gerry Oetelaar of the University of Calgary carried out intensive excavations at the site. Thirty-one paleosols were identified and multiple occupations dating between 3,000 and 8,000 years ago were uncovered. In 2007, Lifeways was contracted by the HRMB to engage in a preliminary stage of excavation and stabilization. The primary objective of the 2008 Phase 2 investigations was to excavate a portion of the existing block down to approximately 3.5 meters below original ground level, and then to stabilize the resulting open excavation in order to expedite possible future excavations to greater depths. An important component of this work was the inclusion of the public in the form of tours of the site and inclusion of volunteers into the excavation program. We also collected soil samples for analysis by Dr Alwynne Beaudoin of the Royal Alberta Museum. The 2008 work program was directed by **Dan Meyer**, with the assistance of **Janet Blakey**, **Jason Roe**, **Kevin Thorsen**, **John Nuttal**, **Amber Allen**, and **Derrick Foster**.

Care was taken to make our study complementary to that that had been previously undertaken by the University of Calgary and by Lifeways. Ultimately, we excavated a complete rectangular tier within the open excavation pit to facilitate later shoring. Units were excavated to the cobble layer (Paleosol 21) on the east, and the equivalent depth below P20 on the west and north, approximately 3.5 m below the original ground surface. Hand excavations removed material from Mazama Ash to 90-110 cm below Mazama, dependent upon the slope and depth of the paleosols. This was roughly the equivalent of 200 ten-centimeter levels.

Figure 2. Projectile points and bone awl collected from the Stampede site, DjOn-26.

These excavations recovered artifacts and features from cultural layers P15, P16, "P16a" or Gryba's Cultural Unit 11, P17, P18, P19, and P19b/20, with the precise designation of some of the deepest units still under investigation. Due to the saturation level and type of soil, matrix screening was a very time-consuming process as anticipated in the absence of water-screening. Overall, the excavations recovered over 6,300 items of material culture including stone tools, debitage, and faunal remains. Artifacts of greater interest include a complete Bitterroot Side-Notched point from P17, the base of a Bitterroot point from P18, two other Early Middle Period style points from P17 and P18, and a bone awl from P18 (Figure 2). Two intact features were recorded, including a shallow basin hearth/processing feature from P20, and a similar feature associated with dense butchered faunal remains in P16a. Although neither of these features provided a charcoal sample suitable for radiocarbon dating, directly associated faunal remains are suitable for dating. Radiocarbon dates have yet to be returned from the lab. Following excavation, site stabilization and

closure procedures matched the program undertaken following last year's fieldwork. Currently, two sturdy, rectangular boxes or walls support the two nested-tiers of excavation, and will facilitate the safety of future work at the site.

The public education component of the 2008 program was very successful in introducing the site and its importance to many visitors to the Park. During the period of excavations, over 400 people visited the site and were treated to informal tours given by **Janet Blakey**, **Dan Meyer**, and/or **Jason Roe** (Figure 3). The Park interpretive staff also arranged three "treasure hunt" programs that used the Stampede Site as the goal of the hunt at the end of the trail. The groups involved in these programs were given a similar but more in-depth tour, and had a discussion on Precontact stone tool technology. We also hosted an hour-long evening "campfire" program at the site, in which the attendees also heard in-depth discussion of the site, the history of research there, and the goals of the excavation program. Seven volunteers were also given an opportunity to help excavate the site. These individuals were primarily members of the Medicine Hat and Lethbridge chapters of the Archaeological Society of Alberta. In addition, a member of the Park interpretive staff also volunteered.

Figure 3. Jason Roe and Janet Blakey conducting public lectures at the Stampede Site, DjOn-26.

A total of 1,233 pieces of debitage and 70 formed stone tools were recovered from the 2008 excavations at DjOn-26. The various toolstones include argillite, Bowman Chert, unidentifiable chert, crystal quartz, Etherington Chert, Feldspathic Siltstone, Gronlid Siltstone, Knife River Flint, various Madison Formation Cherts, Montana Agate, pebble chert, petrified wood, porcellinite, quartzite, sandstone, silicified siltstone, Swan River Chert, Tongue River Silicified Sandstone, and Top of the World Chert. A total of 5,029 individual faunal remains were catalogued from the 2008 excavation program. The large majority, 4,004, of these remains were associated with one of the six excavated paleosols. These remains include 136 identified bison elements, and 67 identified non-bison elements. Non-bison species identified include canid remains (wolf, coyote, and fox-sized), mule deer, white-tailed deer, antelope, and grouse-sized birds. Analyses continue on these materials. Results so far provide further evidence that the Stampede Site is one of the most important known archaeological sites in the Province, worthy of considerable future work.

In September of 2008, the Historic Resources Management Branch (HRMB) commissioned Lifeways of Canada Limited to carry out an archaeological survey and historic resources inventory of the Buck Lake Provincial Recreation and Natural areas: three land parcels around Buck Lake in west-central Alberta to the southeast of Drayton Valley managed by Alberta Tourism, Parks and Recreation (ATPR). The objectives of the study were to provide a detailed inventory of archaeological and historic resources that will allow effective management of the sites in anticipation of future ATPR infrastructure developments, and to recover a sample of cultural materials from buried contexts that will contribute to the refinement of our current understanding of prehistoric culture history and chronology within this part of Alberta. Survey was done under the direction of **Dan Meyer**, with the assistance of **Jason Roe**, **Jessica Langer**, and **Kendra Drever**.

During the field survey and recording, a total of 530 gross hectares of land base was subject to ground-truthing and/or more detailed assessment and subsurface prospecting. Over 1,250 shovel tests were excavated in areas deemed to have high potential for the presence of buried archaeological deposits or to evaluate sites. A total of 299, or 24%, of these tests were positive, yielding cultural materials of stone, bone, pottery, and historic items. This work resulted in the recording of 30 previously un-recorded archaeological sites and the reassessment of two previously recorded sites. Of these 32 sites, 29 are Precontact sites, one is a Historic period site, and two have both Precontact and Historic components. Sites recorded during this study include

FfPq-4, FfPq-5, FfPq-7 through 29, and FgPq-6 through 13.

Historic sites or components encountered include the remains of old hunting cabins, sites affiliated with one of the early logging/sawmill operations that operated on the margins of Buck Lake such as Burrows Mill or the Carroll Brothers sawmill, and a more enigmatic site. FgPg-10 consists of series of pits and possible houses that may be the remnants of Proto-Historic camping/trapping along the lake, or possibly also associated with early Historic logging operations on the lake. Apparently timber from around the lake was floated to the north end where Bucklake Creek exits, and floated from there eventually to mills in Edmonton. Further research this winter will be required to illuminate this topic.

The Precontact sites encountered appear to be, as one would expect in this location, primarily campsites. Of the sites recorded, seven have been classified as small Precontact artifact scatters, five as large Precontact artifact scatters, and the remaining 15 as Precontact campsites. The Precontact components at the two previously recorded sites and the two multi-component Historic/Precontact sites are also classified as campsite remains. The large Precontact sites without faunal remains or fire-cracked rock are likely also campsite remains, but belong to older time periods or occupations of an age precluding the preservation of faunal remains under these conditions, and in which fire-cracked rock technologies such as stone boiling were not common practice.

We recorded a number of sites that fall into the small to mid-sized range, but we also found 11 sites that are particularly large or dense, and bespeak the heavy use made of Buck Lake by Precontact people. Dimensions of some of these sites are over 1 km in length, and others cover upwards of 5, 10, and even 18 hectares of land. Perhaps the most impressive Precontact site we encountered is FfPq-17, or the Bear Point Site. It covers a large area including the lower, modern beach level and a raised but poorly-defined upper beach. Preliminary results indicate that some of the faunal remains recovered during shovel testing are horse. This finding is consistent with the recovery of two potsherds from the lower beach, confirming a Late Period or Proto-Historic occupation. The poorly-defined upper beach landform produced a Middle Period projectile point from a shovel test, indicating that this site is indeed multi-component as one might expect of such a large site. Other interesting items recovered from other sites include an un-notched Late Period projectile point, a re-worked Middle Period point, another piece of pottery, and a stone axe.

The analysis and write-up of these materials is still in progress. The sites recorded and material collected during the Buck Lake field program will, in combination with final reporting, meet the goals of the survey: the recording of a significant, meaningful suite of sites.

Finally, in October of 2008, Lifeways of Canada Limited undertook a mitigation program at a Historic period coalmine and settlement in the Coal Branch. Work at FhQg-5, the Yellowhead Mine and Townsite, included the excavation of several features to be impacted as part of proposed development in the area. The Yellowhead Mine No. 220 was operated by the Yellowhead Pass Coke and Coal Company Limited from about 1910 (prior to the construction of a railroad into the area) until 1921 when fire and other issues forced its final closure. Currently the most comprehensive source of information about the site is Balcom's report for ARESCO on the 1981 excavations. In 2008, Lifeways relocated the features described by Balcom, and was able to identify a few others. Subsequently, several features were mapped in greater detail, and mapping, collecting, and excavation were conducted on a series of water canals, a dump, three privies, and two structures. This work was directed by **Dan Meyer**, with the assistance of **Jason Roe**, **Kendra Drever**, and **Jessica Langer**.

Analyses of the materials are still on-going. Based on the artifacts collected, including numerous domestic and industrial items such food cans, glass bottles, faunal remains, stove parts, wash basins, bed frames, buckets, shoes, and other items, we will be able to make a valuable contribution to our knowledge of the earlier part of Coal Branch history. Sites such as Yellowhead are known primarily from excavations such as the previous ARESCO work, as few archival sources are available on the earlier sites in the area, and few people are alive with direct knowledge of some of these mines and towns.

Under the direction of **Don Hanna** and on behalf of Alberta Culture and Community Spirit, Lifeways of Canada Limited continued a program of re-visitation and re-assessment at reported Medicine Wheel, Effigy and

Vision Quest sites across southern Alberta. Field studies took place in September and October, and 26 sites were re-assessed. Field investigations were largely uneventful and proceeded without serious problems, although the low-angle sun at this time of year posed some difficulty with site photography. One recently reported site was determined to be a modern movie set, three sites are believed to have been destroyed by current land-use, three sites could not be relocated, and eight were determined to represent Medicine Wheel or Vision Quest structures as had been previously reported (Figure 4). The remaining sites, most relatively recently reported, appear to exhibit atypical stone circles and/or cairns or natural stone features that had been identified as possible Medicine Wheels or Effigies. Many of these sites had been reported as a result of wintertime investigations where ground surface visibility is a major factor influencing stone feature identification.

In October Lifeways of Canada Limited, under the direction of **Don Hanna**, conducted a HRIA of proposed ATCO Transmission Line west of the Neutral Hills in eastern Alberta. Three sites (FaOs-7, FbOt-26, and FbOt-27) associated with the Rundle Split Pebble Technology were identified on the western and southern flanks of Nose Hill. These sites all demonstrate a stone tool technology characterized by the expedient production of artifacts from chert pebbles that implicates their inclusion in this broader tradition

Barney Reeves continued to map the sacred landscape of southwestern Albertan stone features during the Ardenville Wind Farm Project for TransAlta. Based on his earlier work, Barney expected to find further evidence of drive lane and stone feature complexes in the unbroken morainal lands to the east of the Blue Trail, as well as another buffalo jump in or adjacent to the project

Figure 4. View of Hutton Medicine Wheel showing central ring and radiating spokes.

area to which these were related. Field studies verified his predictions. The HRIA resulted in the location of twenty archaeological sites, including a large and significant complex of stone feature sites (DjPi-37 [Figure 5], DjPi-39) and a possible buffalo jump (DjPi-41) associated with a major spring and coulee. Information recovered in the course of these studies continues to substantially enhance our knowledge of the McBride Lake Uplands and their role and significance in Southwestern Alberta Archaeology.

Figure 5. A tipi ring at DjPi-37, view north.

Golder Associates Ltd: HhO- 481 - Early Projectile Point/Tool Cache

Laureen Bryant, Golder Associates Ltd.

On behalf of Shell Canada Energy, **Golder Associates Ltd**. personnel conducted staged mitigation at HhOv-481 during the fall of 2008. This site is situated within the Shell Albian Sands Muskeg River Mine footprint. Mitigative studies, directed by **Laureen Bryant**, included Stage I systematic shovel testing and excavation of 16 square metres revealing that site dimensions were much larger than initially thought. Stage I studies resulted in the collection of approximately 10,000 artifacts, including three projectile points/point fragments and a biface. Stage II mitigative excavations were used to expand the excavation block where the projectile points were recovered as well as two other concentration areas that had been identified during Stage I studies. While the Stage II excavations collected approximately 28,000 additional artifacts from three excavation blocks, the most significant find of the study was the identification of a tool/projectile point cache.

Figure 1. The HhOv-481site area, view east.

Eleven projectile points or fragments and five scrapers were collected from one half of an excavation unit (100 x 50 cm). The tool cache is situated in close proximity to the Stage I units where the initial projectile point fragments were recovered. The projectile points have been tentatively assigned to the Fort Creek Fen Complex (*ca*. 9,900 to 9,400 BP) based on morphological similarities. A number of the projectile points exhibit use wear and re-work. A sample of the projectile points collected will be sent for protein residue analysis to determine what animal resources were potentially being exploited.

The mitigative excavations (56.5 m^2) completed at HhOv-481 resulted in the collection of over 38,000 artifacts including; one potential point preform, eight complete projectile points, five point bases, three point tips, five scrapers and two biface fragments. Analysis of the site is ongoing and, although no further studies will

be conducted at this site, the assemblage recovered provides a significant contribution to the local prehistory.

Figure 2. Complete projectile points and point bases recovered at HhOv-481.

2008 fieldwork news compiled and edited by Alwynne B. Beaudoin, with contributions from Laureen Bryant, Eugene M. Gryba, Jessica Langer, Carmen Olson, Martina Purdon, Kristin Soucey, Jennifer A. Thompson, and Dale Walde.

Alberta 2009

In 2009, there were 293 permits issued for archaeological work in Alberta. Work under permit resulted in the discovery of 555 new sites, and 302 sites were revisited. The provincial inventory of archaeological sites now (as of July 2010) totals 36,398.

Beaver River Sandstone Research, 2009

Elizabeth Robertson, Department of Archaeology and Anthropology, University of Saskatchewan

As part of an ongoing study on the material characteristics of Beaver River Sandstone (BRS), **Elizabeth Robertson** of the University of Saskatchewan's Department of Archaeology and Anthropology and her research collaborator, **Robert Blyth** of the Canadian Light Source, visited the Quarry of the Ancestors north of Fort McMurray in September of 2009 to take additional geologic samples of this important archaeological toolstone. They were also able to visit a number of other archaeological sites in the area surrounding the Quarry, concentrating on those that have previously been flagged by their investigators as possible sources of BRS. They found that areas within the Quarry clearly represent the most abundant sources of high-quality BRS, but some outlying sites may, in fact, have very localized patches of similarly high-quality material that were opportunistically exploited by Precontact groups. **Robertson** and **Blyth** are looking forward to investigating this further in the 2010 field season; in the meantime, archaeometric analysis of the sampled BRS is continuing using the synchrotron-based methods available at the Canadian Light Source.

FMA Heritage Inc.

Jennifer Tischer, FMA Heritage Inc., Calgary

Archaeologists from FMA Heritage Inc. conducted a number of interesting projects in a variety of different settings across the province in 2009.

Dale Boland held several archaeological permits in 2009. Construction monitoring was conducted for the Alberta portion of the TCPL Keystone Pipeline which began in October 2008 and included topsoil stripping and grading, open ditch trenching, and backfilling. Two newly recorded bison kill/campsites were discovered as a result of the construction monitoring. While neither of these yielded diagnostic artifacts, faunal material from each returned calibrated radiocarbon dates around approximately 2,000 years BP. Site EfOo-191, produced a unique bone feature comprised of an upright scapula and an inverted skull that may have been tethered together.

An HRIA was conducted for an access road and borrow pits associated with the Southern Pacific Resource Corp. McKay SAGD Project. The MacKay River is crossed by the proposed road, but the study area was largely characterized by saturated or low lying locales and black spruce muskeg. No historical resources were identified or revisited during the assessment. An HRIA was also conducted for Alberta Oilsands Inc. Clearwater West SAGD project, located on the outskirts of Fort McMurray. No cultural material was recovered, but one historic log cabin foundation was newly recorded.

Three previously recorded sites were mitigated for the Melcor Developments Ltd. Valley Ridge, Sweet Lands Subdivision in Calgary, Alberta. The sites are located in the upper bowl of a coulee head at prairie level overlooking the Bow River to the north. Earlier assessments had determined the sites varied from fairly sparse to dense deposits and dated to at least Oxbow Phase occupations. Excavations consisted of 10 square meters at sites EgPm-441, EgPm-443, and 20 square meters at site EgPm-442. Artifact analysis is ongoing, but preliminary analysis indicates that artifacts recovered at EgPm-441 include burnt and comminuted bone fragments, FBR concentrations, and Samantha-like and Besant-like projectile points or point fragments in two activity areas. The remains were very sparse at site EgPm-443, but include a possible wooden peg, small clusters of FBR, bone fragments (burnt, scrap, and identifiable), lithic tool fragments made of exotic materials such as Jasper and Knife River Flint, and a non-diagnostic projectile point tip. Site EgPm-442 consisted of Stage I and Stage II excavations. During Stage I excavation, at least two buried components were identified. The earlier component appeared relatively undisturbed; several articulated butchering units, juvenile and more mature bison remains were identified, FBR concentrations that appeared as pavement were observed, and an assortment of lithic materials including one Pelican Lake projectile point were recovered. The upper, Contact Period component has suffered from mixing, or at least some level of disturbance from the improvements to the land, but preliminary analysis reveals several species among the faunal assemblage, dispersed but numerous FBR, and a metal projectile point. Stage II excavations yielded a second metal point, a Hanna point in deposits superimposed on the Pelican Lake occupation, and a second Pelican Lake point from near surficial deposits demonstrating the mixing and disturbance have affected deeper deposits.

Jean-Paul Foster conducted an HRIA for two padsite additions in the Wayne/Dalum area near the Red Deer River, which included revisits to previously recorded sites; no new archaeological sites were recorded. Other projects included an HRIA for a Class I pipeline west of Didsbury/Carstairs area, and an HRIA for a wind farm near Summerview Ridge at the south end of Porcupine Hills near Pincher Creek. The wind farm project produced some interesting sites which included drive lane complexes, tipi rings, historic sites and possible vision quest structures.

Yvonne Kjorlien conducted HRIAs in east-central and northeast Alberta, including HRIAs for NuNennè-Stantec within the Cold Lake area. An HRIA on the Muskeg River and within the Albian Shell Oilsands lease resulted in three newly recorded lithic scatters along the Muskeg River and the revisit of two lithic scatters near the Cree Burn Lake Site. Mitigation for Spring 2010 is scheduled for one of the reassessed sites. Yvonne was also involved in Traditional Knowledge studies and a Palaeontological Impact Assessment for the KXL Pipeline Project. Between performing HRIAs, HROs, and assisting larger projects, Yvonne also completed the reporting for projects from the previous year.

Jeremy Leyden completed the assessment, mitigation and monitoring of the Keystone pipeline. During the assessment, evidence from organic soil residues of plant use indicated the use of local and exotic species from two late Precontact period hearths, and the possible use of cultigens (including tobacco, maize, beans, squash) from a hearth soil sample at a late Precontact period/Protohistoric period site.. Participants from Siksika First nation assisted on the project to identify traditional knowledge issues associated with several archaeological sites affected by the development. In addition, an archaeological survey of the proposed RoW and deep soil (backhoe) testing of targeted areas was continued for the HRIA assessment of the Keystone XL pipeline. To date, over 46 newly recorded archaeological sites have been identified and over 62 previously recorded sites have been revisited.

Matt Moors conducted an archaeological assessment of the Hardisty West Interconnect, resulting in the identification of a bison pound (FdOt-31) along the pipeline right-of-way near the Battle River valley. Excavation at the site occurred in November 2008 and April 2009 and consisted of a main excavation block of 40 square meters and a shovel testing program surrounding the main block. The main excavation tentatively identified the entrance to the pound itself, while the shovel testing program delimited the boundaries of the pound structure within the pipeline right-of-way. Several intact features were identified, including a post-hole with an upright humerus, a pit feature with three stacked bison skulls (including two

calves and one adult), a hearth, and a second pit containing several broken bison bones. Projectile points associated with the bison pound are identified as Avonlea, primarily the Timber Ridge variety. Due to past disturbances in the site vicinity (including cultivation) drive lanes were not observed.

Due to the high site significance, ACCS recommended that alternative routes for the pipeline be explored by TransCanada Pipelines. Two campsites, FdOt-24 and FdOt-32, were located on the re-route option. Although only limited material was recovered from FdOt-24, site FdOt-32 was determined to be significant as the morphology of the arrowheads was identical to those found at the bison pound. This strongly suggests that site FdOt-32 is one of the campsites that was occupied during the use of the bison pound. Several interesting artifacts and features were found at the campsite; in particular, two different styles of Avonlea pottery were recovered.

FMA Heritage and TransCanada Pipelines worked in conjunction with representatives from the Siksika Nation and the four bands of the Maskwacis Cree Coalition (Louis Bull, Ermineskin, Samson, and Montana) to enable the proper ceremonies to be conducted and to provide an opportunity to members of these groups to participate in the excavations.

Meaghan Porter completed HRIAs on several projects in the province. These projects included a transmission line in the Elk Point area joined by participants from the Kehewin First Nation, a small pipeline tie-in south of the Red Deer River by Drumheller, a subdivision in the Valley Ridge area (identifying three significant sites which co-worker **Dale Boland** subsequently mitigated), a joint HRIA with Stantec archaeologists for a City of Calgary sewer line upgrade, and an HRIA of a sandstone quarry on the Oldman River where several sites were recorded, including a relatively large historic period graffiti site. In addition, a combined HRIA/research project for the Town of Hinton was assessed relative to their Historic Period coal mine (Hinton Collieries Ltd.) in order to facilitate an interpretive program. An HRIA was also conducted for a Class I pipeline in the Sherwood Park/Ft. Saskatchewan area and workshop/campsite FjOh-126 was mitigated with participants from the Saddle Lake and Alexander First Nations. A significant amount of petrified wood was recovered, but unfortunately no diagnostics were found. Meaghan also took part in this season's excavation of NWC/HBC post Fort Vermillion I (1798-1830) directed by **Heinz Pyszczyk** (ACCS).

Laura Roskowski held several different archaeological permits in 2009. Most notable were the excavations at sites HhOv-87 and HhOv-200. These sites, situated on the Albian Lease, north of Fort McMurray Alberta, lie on a linear landform affectionately termed Ronaghan's Ridge. In total 250 meters were excavated, including 230 meters at HhOv-87 and 20 meters at HhOv-200. Based on field counts a total of 117,503 artifacts were recovered from these excavations including tools such as projectile points (N=5), drills (N=2), bifaces (N=20), endscrapers (N=8), and a variety of expedient tools. The diagnostic projectile points recovered suggest that the site was occupied at several different time periods extending from the late Paleo-Indian to the Late Precontact period. Comminuted bone recovered from a hearth feature may yield a radiocarbon date for a portion of HhOv-87. It is anticipated that the recovery of these artifacts will further expand our knowledge regarding the way in which Precontact people moved throughout the landscape and exploited local resources.

Alan Youell conducted a ground reconnaissance of 175 km of the proposed Enbridge Northern Gateway Project pipeline. This field work started on the British Columbia/Alberta border and continued roughly southeast to an area north of the hamlet of Cherhill, Alberta and resulted in the assessment of 20 historical resource sites relative to the proposed developments. These sites include 14 Precontact Period sites, five sites dating to the Historic Period, and one site with an occupation dating to both the Precontact and Historic Periods. The Precontact sites predate the arrival of Europeans and include two campsites, eight artifact scatters, three isolated finds and one lithic workshop. The Historic sites are characterized by structures, features and objects of largely European influence and include three domestic/residential sites, one industrial site and one campsite. The multicomponent site contains both a Precontact and Historic component consisting of an artifact scatter and residential features respectively. In addition, three historic trails and six land use sites were assessed relative to the proposed developments.

FMA's palaeontologists (**Lisa Bohach** and **Emily Frampton**) ran a joint program with Aboriginal

Traditional Knowledge studies at the South Saskatchewan River in the fall of 2009. The area is rich in Iniskims (buffalo stones), which have been secondarily deposited in Tertiary gravel. The palaeontologists guided the First Nation participants to these sites and provided background information on the geology and palaeontology of the area.

AMEC Earth & Environmental

Amanda Dow, AMEC Earth & Environmental, Calgary

The 2009 field season was considerably different from the previous year. The economic recession resulted in some project cancellations and rescheduling but AMEC took the opportunity to strengthen their team and expand their scope of expertise. In March, **Murray Lobb** was hired as a new permit holder (Calgary office) and in the late spring AMEC announced the accession of ARCAS Consulting Archaeologists Ltd. out of British Columbia. During 2009 AMEC archaeologists were employed throughout Canada, including field projects in Saskatchewan, Ontario (**Nancy Saxberg**) and the Northwest Territories (Murray Lobb).

Murray Lobb conducting fieldwork in an aspen stand in the Kearl Lake area

In Alberta, AMEC's archaeologists did get some time out of the office to get their hands dirty. During the late spring **Murray Lobb** supervised a proposed pipeline expansion for the Chevron Ells River Project (HRIA Permit 09-076) northwest of Fort McKay and **Nancy Saxberg** continued a monitoring program at the Rossdale Water Treatment Plant/Generating Station in Edmonton (Permit 09-108). During the summer months **Brad Somer** supervised an HRIA for the Paintearth Coal Mine expansion on the south bank of the Battle River (south of Big Knife Provincial Park) (Permit 09-144), and an HRIA for the Stoney Trail/Nose Hill Drive interchange in NW Calgary (Permit 09-247). In the fall, **Brad Somer** supervised an HRIA for the East Athabasca Highway north of Fort McMurray (Permit 09-231) and **Murray Lobb** led investigations of planned borehole drilling locations for three separate components of the Athabasca Field Program (Kearl Oil Sands Project, Permit 09-195; Firebag Exploration Area, Permit 09-192; Syncrude South Exploration Area, Permit 09-193). Lab work and reporting including submissions within multiple Environmental Impact Assessments is ongoing.

Murray Lobb recording information in a wetland area, northeast Alberta

Murray Lobb presented at the University of Calgary's Chacmool Conference in November (*Blackfoot Land-use on the Piikani Reserve, Alberta)*, **Nancy Saxberg** attended the Conference of the Society of Historical Archaeology in January (Toronto), and both **Murray Lobb** (co-authored with **B.O.K. Reeves** and **J. Blakey** of Lifeways of Canada Limited) and **Nancy Saxberg** (co-authored with Dr. **E. Robertson** of University of Saskatchewan) contributed authorship to a pending publication (*Archaeology of the Oil Sands*, edited by Brian Ronaghan) hopefully scheduled for release in 2010.

Lifeways of Canada

Janet Blakey, Lifeways of Canada Ltd, Calgary

During the 2009 field season **Lifeways of Canada Limited** undertook many exciting permitted field project across Alberta. Fieldwork was undertaken in all areas of the province including but not limited to: Fort McMurray, Edmonton, Buck Lake, Calgary, Whitecourt, Fort McLeod, the Coal Branch, Robb, Oyen, and throughout southern Alberta.

In addition to fieldwork activities various Lifeways of Canada staff members continue to share results the results of various field programs giving both poster and oral presentations as well as invited lectures. In March of 2009 **Janet Blakey** gave a lecture to the Lethbridge Centre of the Archaeological Society of Alberta (ASA) on excavations undertaken on the Stampede Site by Lifeways in both the 2008 and 2009 field seasons. **Jason Roe** ran a flintknapping workshop in March 2009 for the Calgary centre of the ASA, while both **Jason Roe** and **Don Hanna** ran one in April for the Lethbridge Centre of the ASA. In May 2009 at the joint annual general meetings of the Archaeology Society of Alberta and the Saskatchewan Archaeological Association held in Bodo, Alberta, **Brian Vivian**, **Janet Blakey**, and **Kendra Drever** presented a poster entitled *What's New is Old in Town…Investigating Historic Dump Sites in Downtown Calgary* which won the Alberta Consultants Association Poster award (which is awarded yearly at the ASA AGM). **Dan Meyer** and **Jason Roe** also presented a poster entitled *YA-PE-OO The 2008 Archaeological Survey of Buck Lake*. In addition to the poster presentations **Brian Vivian** gave talk outlining more specific details of the East Village Project reported on in the *2008 Fieldwork in Alberta News*, while **Dan Meyer** in association with **Janet Blakey** and **Jason Roe** gave a presentation on excavations at the Stampede Site during the 2009 field season, highlighting new a series of new radiocarbon dates obtained from the site. Despite a spring snow fall **Don Hanna** led a field trip to archaeological sites in southern Alberta for both members of the ASA Calgary centre and the University of Calgary's Chacmool Association.

In the 2009 field season Lifeways of Canada Limited field projects completed under the direction of **Brian Vivian** included a number of Historical Resources Impact Assessments (HRIAs) and assorted Historical Resource Mitigation Studies in the Calgary area. One of the most interesting of these completed this last year was the Stage II Mitigative excavations at EfPi-16. Perched on the edge of the valley overlooking the Bow River south of Carseland, EfPi-16 is a Precontact campsite first identified in 2000 by Don Hanna. Subsequent test excavations demonstrated this to be a well buried multi-component campsite with occupations going back over 4000 years in age. Final excavations completed in June 2009 exposed two intact and well defined hearth features (Figures 1 and 2) along with a collection of stone tools, stone waste flakes, pieces of butchered bison bone, and fragments of fire-broken rock left over from the Precontact camp activities at this location. A radiocarbon date of 320±40 yrs BP (Beta- 261796) from one hearth feature shows the most recent occupation to be associated with the Late Period Old Women's Phase. Diagnostic projectile points from the Oxbow and McKean Phases indicate populations were drawn to this same location in much earlier times. The lack of any obvious shift in the lithic raw materials used here is cited as evidence of the long-term stability of the cultures using this locale over this lengthy period of time. The continued re-occupation of this high vantage point is reasoned to reflect the cultural continuity of these buffalo hunters who became known as the Blackfoot.

Figure 1. Oblique view of Hearth Feature One at EfPi-16, view southeast.

In 2009, Lifeways under the direction of **Dan Meyer** returned to Buck Lake to continue site assessments of sites in Parks lands on behalf of the Historic Resources Management Branch and Parks, Tourism, and

Figure 2. Hearth Feature Two at EfPi-16.

Recreation. The work program focused on shovel testing adjacent to several sites to ensure appropriate buffers between those sites and potential facilities developments, and further detailed shovel testing at some of the larger, important sites for research oriented goals. During this work program, two additional sites were recorded, bringing the total number of sites recorded and tested in 2008 and 2009 to 32 Precontact sites, 1 Historic Period site, and 2 sites with both Precontact and Historic components. In the two seasons combined, within the 530 hectare project area Lifeways crews excavated a total of 2070 shovel tests, 591 or 29% of which were positive, yielding 3287 artifacts including stone tools, lithic debitage, fire-cracked rock, Precontact pottery, and Historic artifacts. From these sites a total of 9 faunal samples were sent for radiocarbon dating, surprisingly six of them failed to yield enough collagen for dating purposes. The three dates supplied all produced essentially modern results, indicating possible occupations in the last three hundred years. Otherwise, the projectile points recovered, including Burmis Barbed, a reworked McKean, Avonlea points, and a possible Windust or Taltheilei form, and pottery suggest use of the beaches around the lake for at least the last 7,000 years (Figure 3). Of the two clear beach landforms present, materials on the upper beach tend to be older, with diminished faunal preservation and markedly less fire-cracked rock, and the lower beach tends to have materials that are primarily Late Period.

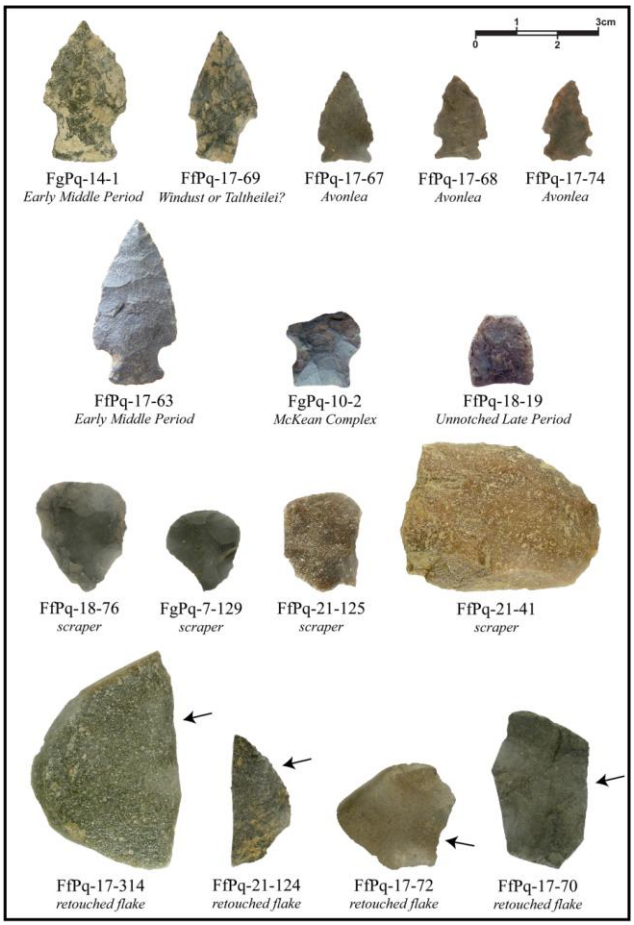

Figure 3. Projectile points and other assorted tools recovered from the 2008 and 2009 field seasons at Buck Lake.

Intensive testing in 2009 focused on sites FfPq-17 (The Bear Point Site), FfPq-21 (Place of the Pines), and FgPq-7 (The Minnehik Site). The Minnehik Site (FgPq-7) occupies over a kilometre of shoreline along the lake. In the site area, a total of 185 shovel tests have now been excavated, 72 of them yielding artifacts. The finds are typical of intensive camping activities along the lake, including six stone tools (three retouched flakes or spalls, two scrapers, and one utilized flake), 92 pieces of debitage, 13 identifiable faunal elements including moose and other large mammal, mid-sized mammal, possibly

hare and other small mammal, and fish (Northern Pike or Whitefish), 217 fragments of unidentifiable animal bone, 80 pieces of fire-cracked rock, and one piece of Precontact or Protohistoric pottery.

The Bear Point Site (FfPq-17) continues to shine as an example of a well-preserved, dense Precontact site with multiple components. Over a 500 x 350 m area including the modern beach and the upper beach, a total of 205 shovel tests have been excavated, with 129 or 63% positive yielding 774 artifacts. Notable finds include horse bones, Precontact pottery, a Burmis Barbed point, three Avonlea points, and the already mentioned point that may be Windust or a Taltheilei form (Figure 3).Other finds at this campsite include six retouched flakes or spalls, one utilized flake, three cores, two bifaces, one drill, one awl/graver, one chopper, one hammerstone, one possible piece of groundstone, 285 pieces of debitage (including quartzite, silicified siltstone, unidentified cherts, agate, a piece of Swan River Chert, and a piece of argillite), five identifiable faunal elements including other large mammals, 161 fragments of unidentifiable animal bone, 296 pieces of fire-cracked rock, and four pieces of Precontact or Protohistoric pottery representing two different vessels.

Place of the Pines (FfPq-21) represents the only known site on the lake with occupations on three different landforms, including the two lower beaches, and a third upper possible beach landform. A total of 221 shovel tests have now been excavated across the site, with 97 positive tests producing a total of 13 stone tools, 106 pieces of debitage, three identifiable animal bones including dog, mid-sized mammal, and large mammal, 128 fragments of unidentifiable animal bone, and 135 pieces of fire-cracked rock. Debitage here as elsewhere along the lake is largely of quartzite and silicified siltstone, but minor amounts of unidentified chert, agate, a silicified sediment similar to Montana Silicified Sediment, possible Top of the World Chert, and two flakes of Knife River Flint have been recovered. Unfortunately, no diagnostic projectile points have been recovered, but the presence of Knife River Flint on the highest landform suggests the possibility of an Early Period component at Place of the Pines.

The archaeological inventory program at Buck Lake has gone a long way towards recording and protecting these invaluable historic resources on public lands around the lake, and has contributed significantly to our understanding of the archaeology of the region.

A similar inventory program was also initiated by Lifeways under the direction of **Dan Meyer** at Pinehurst and Touchwood Lakes in the Lakeland Provincial Recreation Area east of Lac La Biche, also at the request of the Historic Resources Management Branch and Tourism, Parks, and Recreation. These two lakes are characterized by a markedly different geomorphology than seen in the beaches and palaeo-beaches at Buck Lake. At Pinehurst and Touchwood no palaeo-beaches were observed in the project areas. Instead there a series of raised landforms of varying heights along the lake, the result of the formation of the lakes on top of morainal deposits. This has resulted in different topography, with fewer broad, flat landforms suitable for very large groups to camp for long periods of time. Nonetheless, we were able to record a considerable suite of campsites, workshops, short-term resource procurement sites, and Historic sites along the shores of these two lakes. Using the same methodology as employed at Buck Lake, in the 1230 hectare project area Lifeways excavated a total of 1040 shovel tests, 20% of which produced cultural materials, a total of over 1000 artifacts. The program resulted in the recording of 6 previously recorded sites and 29 newly encountered sites. Thirty-one of these are Precontact sites, 2 are Historic Period, and 3 have both Historic and Precontact components. Relative to Buck Lake, the sites at Pinehurst and Touchwood Lakes tend to be smaller and of lower artifact density and diversity. Fewer formal tools were recovered, faunal preservation was poor, and very little fire-cracked rock was encountered. Despite this, the majority of the sites recorded are significant. For example, GfOu-10 is a large campsite running over a kilometre of the shore of Touchwood Lake. Within this area, our initial sampling with 68 shovel tests produced positive results in 29 of them, with 64 flakes, 8 fire-cracked rock pieces, cores, a retouched flake, and 1 animal bone. Nearby GeOu-12 located on an isthmus west of Bare Ass Point covers a 470 x 130m area, in which almost all of the tests excavated were positive, and in which it seems almost every tree-throw had flakes. We excavated 32 tests to try to define site boundaries and assess the site. Twenty of these were positive, yielding 83 pieces of debitage, 2 bifaces, 2 retouched flakes, 3 other tools, 5 cores/core fragments, and 8 fragments of fire-cracked rock. As with Buck Lake, almost all of the toolstones recovered were

locally available quartzites. However, in contrast to the high quality materials available at Buck Lake, those present around Touchwood and Pinehurst Lakes is of overall poor quality, and undoubtedly impacted the number of formal tools manufactured by the users of these sites. Unlike Buck Lake where at least a small scattering of exotic lithics were recovered, the only non-local material identified at Touchwood and Pinehurst consists of a single flake of Swan River Chert recovered from GfOu-13. No appropriate samples were recovered for radiocarbon dating from these sites, and only a single projectile point was recovered. Site GdOu-11 on Pinehurst Lake produced a fragmentary dart point, most likely Oxbow or similar style.

Once again, this inventory of Touchwood and Pinehurst Lakes has produced a useful dataset that will allow the long-term management of these historical resources. In addition, the information will allow better modeling of site locations around lakes in this region, and has provided useful insight into cultural differences and land use patterns at lakesides across the Province.

This year Lifeways crew also returned to FhQg-5, the old Yellowhead mine and townsite near Robb to continue mitigative excavations. The old Yellowhead mine was in operation during portions of the first two decades of the twentieth century, closing prior to the full elaboration of the Coal Branch. Last year's program involved detailed mapping and other recording of site features including a series of trenches associated with the water transportation system and the old rail trestle. The work program included mitigation of a structure previously interpreted to be a powder house, excavation of a cabin and associated privy, the excavation of two other privies, and the collection and excavation of a dump. In 2009, work was completed on the "powder house" and the cabin excavated in 2008. In addition, we excavated two other cabins, three privies, the cook house, another structural depression, and we identified and excavated the remains of what appears to have been the lamp house. Based on archival photographs, a disturbed area of the site appears to have been home to a number of bunk houses. We used a trackhoe to strip this area in hopes of encountering remnant features, but unfortunately found this portion of the site area to be too heavily disturbed.

During the course of the lamp house excavations, we encountered a Precontact component in that area of the site. Astoundingly in the sediments beneath the lamp house, we recovered a quartzite Scottsbluff point (Figure 4). Testing nearby located a lithic workshop area, which we believe was not actually associated with the Early Period, but technologically appears similar to other Early Middle Period sites we have excavated in the area. This small workshop excavation has produced great information related to stone tool technology in the area, and will contribute to our understanding of this area of the foothills.

Figure 4. Scottsbluff Point fragment recovered from the 2009 excavations in the Coal Branch area.

Our work in the "powder house" consisted of removal of the accumulated sediment, recovery of observed artifacts, and mapping and photography of the structure (Figure 5). The presence of a wood stove in the corner of the building contributes to our belief that this building was unlikely to have been used to store explosives for use in the mine. Similarly, our work in the cook house recovered materials which suggest possible other uses for the building. The cabins excavated appear to be related, with one representing a dwelling, and the second perhaps some type of workshop. Remains suggest perhaps a blacksmith shop or similar structure, but final conclusions await further work. Analysis of the recovered Historic artifacts has not yet been completed, but we recovered a fantastic suite of materials which will be useful in interpreting the remains. In addition to numerous cans, bottles, and ceramics, more distinctive items recovered include newspaper, clock parts, light bulbs with patent dates, fruit pits, faunal remains from fur-bearers, a "Swiss-army" knife, chimney glass from miner's lamps, five coins, and two tags that may have been miner's identification tags. Further work on these

FhQg-5 materials will contribute greatly to our knowledge of this early period in Coal Branch history.

Figure 5. Excavation and mapping of the "Powder House" at FhQg-5.

The 2009 field season for **Jason Roe** of Lifeways of Canada was his inaugural year as a permit holder in both Alberta and Saskatchewan. In Saskatchewan, north of Prince Albert, Jason undertook as small HRIA for a housing development which resulted in the recording of one Historic Period site. Back in Alberta four Precontact sites were recorded as part of a pipeline tie in project under the direction of **Jason Roe** just north of Oyen. Jason also undertook two projects in the Robb/Hinton area, the first being a survey project for Hinton Wood Products whereby one new Precontact site was recorded near the Wildhay River. The second in this area, and Jason's largest project in 2009, was a HRIAM in the Coal Branch area which resulted in the recording of 24 new sites (a combination of both Precontact and Historic) and the excavation of FgQe-66 a small but dense lithic workshop. In the fall Jason undertook a HRIA in the Fort McMurray area whereby one Precontact site was revisited. None of this field work could have been done without the dedicated staff at Lifeways of Canada so special thanks goes to **Tam Huynh, Kevin Thorson, Amber Allen, Derrick Foster,** and **Carol Ramsey.**

Don Hanna of Lifeways directed a HRIA on behalf of Alberta Tourism, Parks and Recreation at a proposed new campground location in Carson-Pegasus Provincial Park, northwest of Whitecourt, on the southeast corner of the western lobe of Carson Lake. The planned development encompasses an approximate area of 25 hectares, although only 7.5 hectares were examined. Field studies were carried in August and consisted of pedestrian reconnaissance coupled with systematic and judgemental shovel testing in areas deemed to have high and moderate potential for significant historic resource sites. Based upon previous investigations (Ronaghan and Hanna 1982), the Carson-Pegasus lakes area is known to have a very high density of significant Historic and Precontact sites, with indications of constant occupation over the last 9,000 years.

Seven previously unrecorded Historical Resource sites or areas were identified during the course of our investigations (GbPv-25 to GbPv-31). GbPv-25 is a multicomponent Historic and Precontact site (Figure 6), while five sites are Precontact era (GbPv-26 to GbPv-30), and one is likely Historic in age (GbPv-31). Two of these sites (GbPv-26 and -31) have limited significance and are not likely to be impacted, and no further investigations are recommended for these. GbPv-30 will likely be impacted but the site was deemed to have limited significance and no further investigations were recommended. GbPv-25**,** GbPv-27**,** GbPv-28**,** and GbPv-29 were deemed significant and based on initial plans were all likely to be directly impacted so further work has been recommended at these sites.

Figure 6. Historic cabin recorded at GbPv-25.

Don Hanna of Lifeways also directed a HRIA and subsequent Stage I mitigation excavations in association with a proposed realignment of Secondary Highway 579 (also known as the Harold Creek Road) west of Water Valley. The planned re-alignments to SH 579 will see widening and straightening over a length of 5.6 kilometres within the Little Red Deer River valley. This same alignment was the subject of previous HRIA and

HRIM studies and although hand cleared and borrow tested, the originally planned roadway was never built. Two previously recorded archaeological sites (EiPs-12 and EiPs-13) were expected to be impacted by the newly proposed realignment.

EiPs-12 is a subsurface Precontact era campsite on the low bench or terrace remnant overlooking the confluence of the Little Red Deer River with a small creek. Gryba (1985) described the site as a "small and sparse campsite" and no further investigations were recommended. The site was subsequently assigned an HRV of "4". Re-examination and excavation of additional shovel tests at EiPs-12 resulted in eight positive tests, and the recovery of substantially more cultural materials than had been noted by Gryba, including two possible hearths and a chipping station, lithic tools and debitage, substantial quantities of firebroken rock and small amounts of calcined animal bone. Subsequent mitigative excavations of $20m^2$ at EiPs-12 resulted in the recovery of a large and complex assemblage in close association with three dense firebroken rock features (Figure 7). Recovered materials included more than 197 kilos of firebroken rock, 1079 pieces of lithic debitage, twenty stone tools and 62 grams of faunal material in clear association with the identified hearths. The tightly patterned nature of the artifact distribution at EiPs-12 indicates a single, short-term occupation by a relatively small group carrying out specialized tasks. This is borne out by the relatively high frequency of recovered scrapers and scraping implements (n=14). Based upon the recovery of a well made Avonlea Triangular projectile point, use of EiPs-12 appears to date to close to 1,500 years ago.

EiPs-13 is a subsurface Precontact era campsite and surface Historic era foundation on a prominent knoll-top (Figure 8). Gryba (1985), described the site as a small but dense campsite with historic debris, lithic debitage and tools, fire-broken rock, and bone, and recommended further examinations of the Precontact materials but not the historic occupation. Loveseth (1986) subsequently carried out $20m^2$ of excavation on the knoll-top, recovering a small faunal assemblage, and a large lithic assemblage including projectile points identified as McKean, Hanna, Pelican Lake, and Late Plains, indicating re-use of the area over the last 4,500 years. Unfortunately, compressed stratigraphy made separation of components impossible. Equally unfortunate, historic materials were ignored and FBR was discarded un-counted and un-weighed.

Figure 7. FBR feature recorded at EiPs-12.

In 2009 EiPs-13 was re-identified and the back-filled excavations of 1985 were still discernible. The previously noted foundation consisting of loose sandstone foundation footing blocks and eleven small depressions were still apparent, as were a can and bottle dump off of the eastern edge of the landform. Review of archival NTS maps and aerial photographs indicated that there was a structure present at this location in 1941 and 1951. Given the density of as yet un-investigated Historic and Precontact cultural materials at EiPs-13, further investigations of 20 m^2 were initiated and abundant quantities of both Historic period and Precontact era cultural materials were recovered. Historic materials include a wealth of largely domestic materials, likely reflecting use of a summer-time "line shack" during the 1940s and 50s. Precontact era materials include an array of firebroken rock (9 kilos), 700 grams of fragmentary bone, 287 pieces of lithic detritus and 15 stone tools, including a high proportion of projectile points (n=3, Hanna Stemmed or Corner-notched) and portions of bifaces (n=8). The "unfocussed" nature of the Precontact materials, and the diversity in lithic material types and reduction strategies, indicate a multi-component, multi-use campsite. Based upon the preliminary results detailed above, it seems likely that the cultural remains at EiPs-12 and -13 represent different parts of a complex pattern of land-use, with small specialized activity camps and larger re-used campsite locales.

Figure 8. EiPs-13 site area.

Although Gryba intensively (based on standards of the day) shovel tested the EiPs-12 landform in 1985, the testing failed to identify the main artifact concentrations. Loveseth's investigations that same year ignored the Historic component and focused on the densest concentrations of Precontact materials and EiPs-13. The importance of intensive shovel testing to identify significant single component sites in the foothills was highlighted by our 2009 investigations at EiPs-12. As well, our 2009 investigations at EiPs-13 further underscores the importance of understanding the evolving nature of research directions, mitigative goals, and the development of analytical technologies. For both the Historic and Precontact components of these sites, our mitigative expectations have evolved and changed over the last 25 years. As such, Lifeways 2009 re-visits and re-evaluations of these two previously investigated sites, have contributed to a now better comprehension of these. Our now clearer understanding of the nature of foothills sites, compounded with access to new technologies like AMS dating and obsidian sourcing have greatly enhanced the data gleaned from mitigations here.

Don Hanna of Lifeways also directed mitigation excavations in association with the planned South and West portions of the planned Calgary Ring Road. The South Calgary Ring Road (SCRR) follows the existing Highway 22X corridor, stretching east-west from Deerfoot Trail in southeast Calgary, across the Bow River, to just past the intersection with 85th Street SW. This alignment has been the subject of substantial previous disturbances. Seven Historical Resource sites or areas were identified during the course of HRIA investigations of the SCRR in 2007 (Hanna and Hanna 2009). One site, EfPl-189, was deemed significant and required subsequent investigations.

EfPl-189 was first recorded in 1976 by students from the University of Calgary during investigations for a real estate subdivision. The site was revisited by Goldsmith (2004) in association with widening of the Highway 22X corridor, who described the site as a large campsite and recommended further investigations if the site was to be impacted.

Lifeways of Canada's 2009 investigations included systematic shovel testing program across the main site area, consisting of the excavation shovel tests (matrix screened) regularly spaced on a five to ten metre grid covering the main concentration of surface materials and the vicinity of Goldsmith's positive shovel tests. Although limited in quantity, recovered materials did demonstrate some clustering. Given these results, the three areas of highest density were opened with preliminary excavations consisting of one by two meter blocks to a depth of 30 cm below surface. Two of these areas yielded moderate quantities of cultural materials including three bifacially worked lithic tools. As a result, additional units were placed adjacent to these areas. These additional units consisted of the excavation of a further 11 m^2, for a total of 17 m^2 of systematic excavation to between 20 and 30 cm below surface. These excavations resulted in the recovery of 116 bone fragments (weight=124 grams), 57 pieces of fire-broken rock (weight=2.6 kilos), and 46 lithic items (weight=595 grams) which include 10 tools and/or cores. Recovered bone consists of small fragments which are predominantly unidentifiable to element or species. Fire-broken rock is also represented by generally small fragments, with no significant concentrations noted. Given the relatively limited quantities of all cultural materials recovered at this site, the lack of any cultural features, and the lack of stratigraphic information, it was determined that further investigations were unlikely to yield significant results. Consequently, investigations were suspended and all excavation units were backfilled.

Recovered materials indicate that the assemblage at EfPl-189 likely represents a palimpsest of multiple occupations at this bluff edge location. Given the setting and assemblage composition, the site is interpreted as a series of small summer period campsites, with activities widely scattered along the bluff edge.

The West Calgary Ring Road stretches from the intersection of Stoney Trail and the TransCanada Highway to Lower Springbank Road and Glenmore Trail. This portion of the proposed ring road traverses lands that relatively undisturbed and has considerable potential for the presence of significant, undisturbed historical resource sites. Previous studies of the planned alignment (Peach 2005 and Hanna and Hanna 2009) identified six significant sites that will possibly be impacted. Analysis of the recovered cultural materials is underway but preliminary results follow.

EgPn-682 (originally recorded by Peach in 2003) was identified as a largely undisturbed Precontact era campsite within the proposed corridor. Lifeways' Stage 1 mitigative excavations at this site have identified a dispersed campsite assemblage consisting of a moderate sized collection of firebroken rock, a large faunal assemblage of predominantly bison and deer limb bones, and a small but diverse lithic assemblage with significant quantities of non-local toolstones. Two fire broken rock features with associated animal bone were identified, with one radiocarbon dated to 3540 ± 30 RCYBP (Beta 671387). This date is consistent with the recovery of two fragmentary projectile points which can be stylistically assigned to the Hanna Corner-notched type which is well represented on the Paskapoo slopes of Calgary. Based on these results, further investigations may be anticipated.

EgPn-683 was originally identified as an undisturbed Precontact killsite (Peach 2005). Lifeways' 2009 excavation of 8 m^2 at this site yielded a mixed faunal assemblage likely related the natural deaths/disarticulation of at least two bison. Consequently, no further investigations are anticipated.

EgPn-735 is a partially damaged Precontact campsite recorded by Lifeways during the 2007 HRIA (Hanna and Hanna 2009). Construction of an existing powerline appears to have caused some surface damage, but the site seems otherwise intact. Based on the quantity and diversity of cultural materials recovered in shovel tests, further investigations consisting of up to 24 m^2 of excavations were carried out. These excavations revealed a laterally extensive, diffuse distribution of cultural materials at depths between 10 and 130 cm below surface. Recovered materials include a small assemblage of firebroken rock, a moderate assemblage of large ungulate bone, and a moderate sized assemblage of lithic debitage and tools, including two projectile point bases, both stylistically assigned be stylistically assigned to the

Hanna Corner-notched type which is well represented on the Paskapoo slopes of Calgary. This assignment is further borne out by a radiocarbon date of 2,850 ± 30 RCYBP (Beta 271388) on animal bone from 120 centimeters below surface (Figure 9). Based on these results, further investigations may be expected.

Figure 9. Excavations at EgPn-735.

EgPn-737 was identified as an intact possible Precontact processing site by Lifeways during the 2007 HRIA (Hanna and Hanna 2009). Based on the recovery of a constrained and dense scatter of animal bone, excavation of 10 m^2 was carried out. These excavations revealed a mixed assemblage of fragmentary bison and deer bone that appears to represent a secondary deposit derived from a source further upstream. Consequently, no further investigations are recommended.

EgPn-740 is a largely intact Precontact campsite recorded by Lifeways during the 2007 HRIA (Hanna and Hanna 2009). A moderately diverse but relatively sparse assemblage of cultural materials was recovered in the excavation of to 14 m^2 at this site. Limited quantities of firebroken rock and extremely fragmentary animal bone were encountered, and extremely limited quantities of lithic debitage were recovered. Consequently, no further investigations are expected.

EgPn-741 is an intact Precontact stone feature site with limited quantities of associated debitage recorded by Lifeways during the 2007 HRIA (Hanna and Hanna 2009). Stage 1 mitigation at this site consisted of detailed feature mapping and test excavations of both the stone circle and the cairn. Only three pieces of lithic debitage were recovered in association with the stone circle and a single cobble core in association with the cairn. Consequently, no further investigations are anticipated.

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2009 fieldwork news compiled and edited by Alwynne B. Beaudoin, with contributions from Janet Blakey, Amanda Dow, Martina Purdon, Elizabeth Robertson, and Jennifer Tischer.

Alberta 2010

In 2010, there were 304 permits issued for archaeological work in Alberta. Work under permit resulted in the discovery of 741 new sites, and 411 sites were revisited. The provincial inventory of archaeological sites now (as of March 31 2011) totals 37,110.

FMA Heritage Inc. (now Stantec)

Jennifer Tischer, Stantec

Archaeologists from FMA Heritage Inc. (now Stantec) conducted a number of projects in a variety of different settings across the province in 2010.

Dale Boland conducted an HRIA for the West Ells SAGD Project on the southern margins of the Birch Mountains, west of Fort MacKay, under Permit 2010-193. Although the area is dominated by saturated land and muskeg, there are localities within the proposed development that are of moderate to high archaeological potential. No archaeological or historic sites had been previously recorded in the area or Borden Block, but one archaeological site was newly identified during the HRIA; one shovel test yielded a single expedient tool on a small knoll. A bifacial reduction flake made of Northern Quartzite that exhibits use wear along one edge marks the location of the newly recorded site HhPe-1.

Dale also conducted an HRIA for the Grande Prairie Mainline Lateral Loop pipeline in two areas (south of Fox Creek and southeast of Grande Prairie) under Permit 2010-195. The fieldwork was conducted as a multidisciplinary project, with involvement by Stantec environmental crews complementing the archaeological and First Nations assessments. The project near Grande Prairie proved, archaeologically speaking, to be the more interesting of the two, as 24 previously recorded sites were in the area and the Early Precontact (Palaeo-Indian) site GeQm-2, associated with Glacial Lake Peace's regression strandlines is located barely six km from the south end of the proposed GPML project. Shovel tests were excavated in localities of high archaeological potential and where First Nations participants had interest or concerns, but the primary targets were locations of high elevation (800 m ASL or higher) that had the potential to be associated with Early Precontact peoples' use of the peri-/post-glacial Peace Region.

Figure 1. Unusually large quartzite core tool from site GeQo-17.

One subsurface archaeological site was newly recorded as a result of the HRIA. Workshop/campsite GeQo-17 was identified on a truncated island in the middle of a deeply incised seasonal drainage, an unnamed tributary of Patterson Creek. A total of 21 lithic artifacts were recovered, including quartzite, northern quartzite, and silicified siltstone debitage, and a hearth-like stain was identified in one shovel test. Most interesting, however, was the recovery of an unusually large quartzite, boat-

shaped core tool, which may be an indication of Early Precontact occupation at the site (Figure 1). The artifact is approximately 32 cm long and weighs 3.6 kg. It is an almost wedge-shaped split cobble with initial large flakes removed unifacially at steep angles from both lateral edges (Figure 2). The dorsal surface remains almost completely covered in cortex. The "keel" runs the length of the tool and is relatively flat, representing the initial ventral surface of the split cobble.

For the most part, the flakes removed are large and coarse, and several hinge fractures along the margins attest to the relatively poor quality of the material. Hinge fracturing may have indicated to the knapper that the cobble was not worth further effort. It is suggested that the flintknapper's objective was to reduce the cobble, perhaps toward a more easily transportable blank or biface. One flake within the assemblage refits with the core tool suggesting, at least, minimal on-site modification, before ultimate abandonment. Similar, but smaller, boat-shaped cores / core tools have been recovered from Early occupations at the Lake Minnewanka site and at Charlie Lake Cave, and it is suggested here that this large core tool may also represent an Early period occupation.

As part of the ongoing long-term efforts to mitigate the impacts of the construction of the Keystone XL Pipeline Project in southeast Alberta, mitigation studies were conducted under Permit 2010-272 at four stone feature sites in position to be impacted. Five stone circles were fully mitigated under this program: two at site FaOq-124, and one each at sites EjOp-6, EgOo-9, and EfOo-160. The features at FaOq-124 each yielded a diagnostic Besant-like projectile point, and a hearth was identified near the centre of one. A Besant-like point and a hearth were also recovered from the stone circle at EjOp-6, and two Old Women's Phase projectile points and a well-defined hearth were recovered from the excavations at EfOo-160. The excavated feature at newly recorded site EgOo-9, a stone arc comprised of 113 rocks (73 of which were completely buried) yielded an Avonlea point, a large concentration of Swan River chert tools and debitage, seven scrapers, and a relatively large quantity of faunal material (including identifiable bison elements and comminuted fragments). Located near the bottom of a seasonal drainage with views along the coulee to the west and south, the site is ideally positioned for hunting or game scouting, suggesting the feature may have been used as a hunting blind. Two palaeosols were identified in the top 20 cm, attesting to multiple episodes of colluvial or alluvial deposition burying the site; the large bulk of the cultural material was identified in the uppermost of these, at approximately six to nine cm BS.

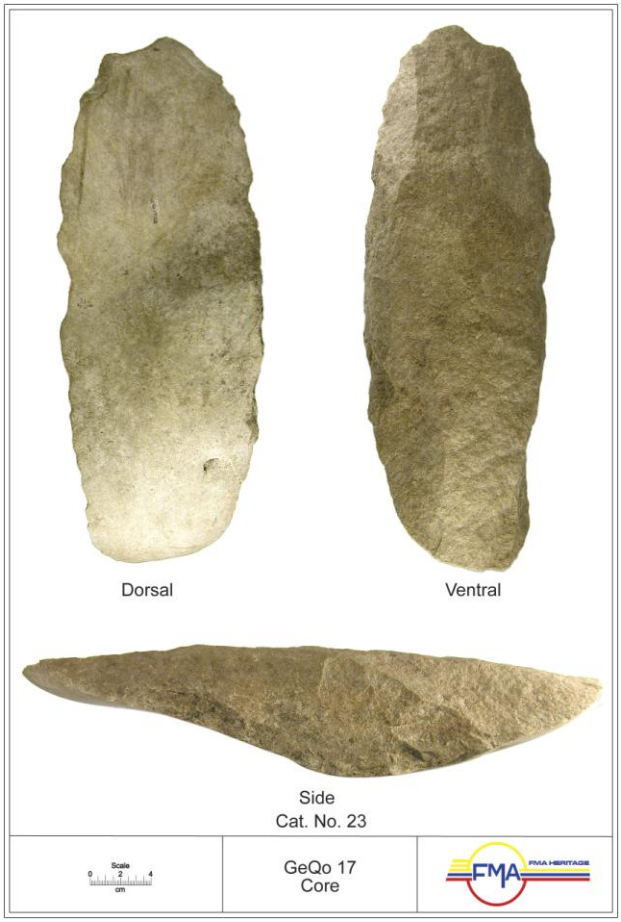

Figure 2. Unifacially retouched split cobble core from GeQo-17.

Meaghan Porter completed HRIAs on several projects in the province. Of note was the identification of newly recorded workshop/campsite/historic scatter site FbPi-8, identified during a HRIA for a proposed development on the north side of the Red Deer River (Figure 1). Located on the northern, upper terrace of the river, it extends for over 600 metres. The site is in undisturbed context surrounded by aspen forest. During the HRIA, shovel testing recovered over 700 pieces of lithic debitage in various stages of reduction from core to retouched flake, including microdebitage. The lithic material consists predominantly of silicified mudstone material with organic inclusions including plant fossils and some

vertebrate bone (Figure 2). For this reason, the site is also of palaeontological interest. There are habitation elements at the site as well, including moderate recoveries of fire broken rock and faunal remains. In addition, a small scatter of Historic Period debris was noted on the surface of the site, possibly dating to the early 1900s. Quarry site FbPi-3, originally recorded in the early 1980s, is located just to the south of the site on the opposite side of the river, and may have provided the source material for the workshop. Further work is expected to occur at site FbPi-8.

Figure 1. View of FbPi-8, a workshop/campsite/historic scatter site on north side of the Red Deer River.

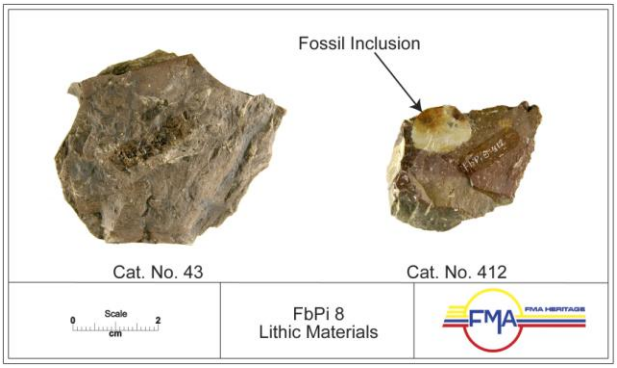

Figure 2. Fossil inclusion in silcified mudstone, FbPi-8.

Laura Roskowski conducted several studies in the Athabasca Oilsands region in 2010. Most notable is the HRIA she conducted with Eugene Gryba on Leases 14 and 311 as part of the Frontier Oil Sands Project (Permit

2010-123). The HRIA resulted in the recording of 100 Precontact sites and one historic cabin. The Precontact sites included isolated finds (N=5), lithic scatters (N=55) and campsites (N=40). These sites yielded a wide variety of lithic raw material types, burnt bone and tools. Lithic types collected from these sites include andesite, Beaver River Sandstone, chalcedony, cherts, coarse grained quartzite, diorite, gneiss, obsidian, quartzites, schist and siltstone (Figures 1-3). Interestingly, a third of the sites recorded during this study produced calcined bone. Four projectile points were collected in association with the calcined bone. It is presumed that mitigative excavation of many of the campsites will yield additional diagnostics.

Figure 1. Frontier Oil Sands Project. One of the projectile points recovered at site HkOv-76.

Studies were also conducted for the Muskeg River Mine Project, and included both HRIA and mitigative studies. During one HRIA (Permit 2010-244), two large campsites were recorded just north of the Quarry of the Ancestors. Mitigation of these sites in 2011 is expected to yield data related to campsite activities, rather than just the reduction of Beaver River Sandstone for lithic raw material transport, which characterizes most sites in the vicinity. Radiocarbon dates obtained from the bone features at each of these sites will greatly add to the local chronology. Together, the projectile points and radiocarbon dates from the bone features will begin to produce a more refined cultural chronology for the region.

Finally, during mitigation studies conducted at HhOv-87 (Permit 2010-068), well-defined activity areas were encountered. These activity areas include a concentration of chalcedony within an area dominated by Beaver River Sandstone, an area limited to core reduction and a small concentration of bifaces and biface related material. In

the boreal forest of Alberta, cryoturbation and bioturbation coupled with the lack of deposition tends to obscure in-situ artifact patterning, as such these activity areas are relatively unique in the area.

Figure 2. Frontier Oil Sands Project: A black chert scraper recovered at site HjOv-44.

Figure 3. Frontier Oil Sands Project. An obsidian flake recovered at site HkOv-75.

Alan Youell conducted a number of Traditional Knowledge projects and four HRIAs during the 2010 field season. The first project (Permit 2010-120) involved a ground reconnaissance of lands situated southeast of Calgary and adjacent to the Bow River. Involving both backhoe testing and pedestrian survey, two new Precontact sites were recorded and two previously recorded Precontact sites were revisited. The new Precontact sites include a campsite/stone feature site (EfPl-277), consisting of a single six m stone circle plus subsurface lithic debitage and fire cracked rock, and an artifact scatter (EfPl-278). This scatter was uncovered during backhoe testing and consists of a bison bone assemblage exhibiting green bone fractures, carnivore gnawing and root etching. It most likely represents the remains of a small bison processing area. The two revisited Precontact sites were EfPl-75 and EfPl-75. Both of these sites were originally recorded in 1971. EfPl-75 was originally recorded as having 50 to 75 rings ranging in diameter from 15' to over 25'. During the revisit, five stone circles were relocated ranging in size from five to seven meters in diameter. The second site (EfPl-76) was noted to contain in excess of 50 rings, ranging in diameter from 15' to 28', and with numerous internal and external hearths present. Unfortunately, none of these rings or hearth features was relocated during the field reconnaissance. It is possible that past agricultural activity and river bank erosion have impacted these sites.

Alan also conducted HRIA studies for revised project footprints associated with the Taiga Oil Sands project near Cold Lake and the Grizzly Oil Sands project south of Fort McMurray. No new archaeological, historic or palaeontological sites were identified and no previously recorded sites were revisited.

Alan also conducted assessment for the (Permit 2010-214) Stormwater Quality Retrofit footprint located in Bowmont Park south of the neighborhood of Silver Springs. During the course of the assessment no new archaeological, historic or palaeontological sites were identified and no previously recorded sites were revisited.

Treetime Services 2010 Field Season Report

Kurtis Blaikie, Blaikie Archaeological Consulting

2010 was a good year for Blaikie Archaeological Consulting and Treetime Services. We established ourselves in the forestry heritage management sector, managing heritage resources concerns for Sundre Forest Products, Alberta Plywood, Vanderwell Contractors and Tolko Slave Lake. As part of these programs, Treetime Services began the implementation of a research project into subsurface sampling methods, testing the effectiveness of screened shovel tests and unscreened shovel "probes" in a side by side comparison. We hope to present our research design and preliminary results at the

Archaeological Society of Alberta meetings in Edmonton this spring.

A highlight of the 2010 season was the opportunity to use LIDAR data for screening and pre-fieldwork reconnaissance for Sundre Forest Products entire 2010-11 harvest plan. As reported by archaeologists who've previously had the opportunity to work with LIDAR, this high resolution data has the potential to revolutionize cultural resource management, particularly in the areas of predictive modeling and the screening of remote, spatially extensive developments. Access to LIDAR data is probably in part responsible for our success in the Sundre FMA area, where we identified 19 new archaeological sites and revisited and expanded two previously recorded sites. Included in these finds are two sites with diagnostic artifacts. Two fragmentary late Precontact side notched points were recovered from surface exposure at EjPt-6, a small campsite on an intermediate terrace of the Red Deer River valley. A probable Besant point was recovered from a shovel test at EkPt-10. This site is located on a lower terrace over the confluence of Wilson Creek with the James River, and is a large campsite, up to 100 m across. In addition to the projectile point, the artifact sample collected from EkPt-10 includes a large amount of lithic debitage and two well preserved bison teeth, indicting that it has significant potential for future research.

A second highlight of the season was the opportunity to work with members of the Swan River First Nation Consultation Unit in the conduct of historical resource impact assessments for Vanderwell Contractors in the Swan Hills. The opportunity to work with First Nations Monitors with extensive local knowledge and expertise in traditional land use and ethnobotany was a tremendous learning experience for us.

Finally, Treetime Services was happy to see **Quinn Benders** defend his Master's thesis on Agate Basin in Alberta and Saskatchewan and join us as a junior permit archaeologist.

Fieldwork news compiled and edited by Alwynne B. Beaudoin, with contributions from Kurtis Blaikie, Martina Purdon, and Jennifer Tischer (a report by Cynthia Zutter on Labrador field activities can be found in the Newfoundland and Labrador fieldwork section).

Alberta 2011

In 2011, there were 316 permits issued for archaeological work in Alberta. Work under permit resulted in the discovery of 536 new archaeological sites, and 279 sites were revisited. The provincial inventory of archaeological sites now (as of February 23, 2012) totals 37,697.

AMEC Environment & Infrastructure
(formerly AMEC Earth & Environmental)

Amanda Dow, AMEC Environment & Infrastructure

Both Calgary and Edmonton offices of AMEC E&I were busy in the field this year.

In May, **Nancy Saxberg** conducted a historical cemetery baseline study of the Mountain Park Cemetery for Teck Coal Limited. The first burial at Mountain Park cemetery took place in 1913. When the coal operations shut down and the townsite abandoned in 1950, no other cemetery interments took place. Over the past decades, the effects of extreme elements, seasonal fluctuations, and even grizzly bears have resulted in varying degrees to damage to plot fences and grave markers. Recent efforts by the Mountain Park Environmental Protection and Heritage Association have stabilized many of the cemetery structures. AMEC archaeologists completed a field study to note the existing state of the cemetery and produce an archival record of 134 grave markers before potentially disruptive blasting activities begin nearby. One of the older and more distinct terrazzo grave markers (see Figure 1) has not withstood the effects of time as well as others. A professional stone mason provided expert opinion on the cause of degradation and this information was shared with Teck Coal and the Heritage Association. The results of the cemetery baseline study have been shared with Alberta Historic Sites Service.

In the fall, Nancy conducted a two-part survey on the north bank of the South Saskatchewan River just south of Suffield. Backhoe and shovel testing indicated the presence of a stratified, multi-component campsite with at least one buried stone circle, faunal scatters, and several features including hearth stains, ash and charcoal pits, and lithic workstations (the majority of lithic material recovered was Swan River chert). Silty deposits extended over a metre in depth with at least two distinct

paleosols. A broken projectile point made of banded chalcedony suggests a late middle period occupation (see Figure 2). The site is located on the terrace below the Suffield Medicine Wheel.

Figure 1. View of the name plate of the Mary Ann Pike monument in Mountain Park Cemetery. Note cracking and spalling of weathered marble plate. Previous attempts to fix the plate with incorrect materials may have accelerated the degradation. Cracking between marble terrazzo pieces of obelisk-style monument is also a concern.

Figure 2. Diagnostic projectile point base (Bracken Phase) made of banded chalcedony found ~50 cmbs at EaOs-18, lower terrace, north bank of South Saskatchewan River.

Murray Lobb started the field season with a brief assessment of an eroded slope on the south bank of the Belly River on the Káínawa Nation (Blood I.R. 148) west of Cardston. Repeated seasonal erosion has caused massive slumping and now threatens the stability of Highway 800. A survey assessment was enough to confirm no historical resources would be disturbed during slope stabilization efforts. Murray also completed a survey in the County of Newell (north of Brooks) for a secondary highway expansion.

Another HRIA was conducted in southeast Calgary near the Shepard Landfill. One previously unknown scatter of Precontact artifacts (EfPl-279, the Shittake Site) was located, but cultivation had disturbed the original context. The nature of the site, coupled with the proximity of other disperse scatters of campsite evidence supports the idea that the Chestermere uplands and the shores of numerous pothole drainages east of the Bow River were used by Precontact populations. Unfortunately, active agricultural activities have obscured or altered primary contexts. Finding sites like EfPl-279 indicates that the relatively flat landscape with small, seasonal ponds and sloughs was capable of supporting short-term use for resource procurement.

Murray also completed Stage I mitigation excavations at the Prairie Mines and Royalty's Paintearth North Mine extension on the south side of the Battle River (south of Forestburg). Previous surveys had identified three Precontact sites (FcPb-46, FcPb-50, and FcPb-51) and the remnants of one historic farmyard (FcPb-43) and the remains of 1930s occupied Battle River Mine coal yard (FcPb-42). The three Precontact sites consisted mainly of lithic scatters and fire broken rock. Two sites were located on the south edge of Big Knife Provincial Park, overlooking the Battle River valley, while the other was on the remnants of the intact edge of a major coulee system. Rudimentary stone tool manufacture and small-scale campsite activities appear to have been the focus of all of these sites. Occupants were making use of local quartzite materials and black chert pebbles.

In the oil sands area of Northern Alberta, Murray conducted surveys on both sides of the Clearwater River for a proposed multi-user access road and future overburden dump. Shovel testing and exposure surveys resulted in the discovery of a few small scatters (HgOw-8, Beaver Snag Site, and HgOv-118, Lost Cutline Site) and isolated finds (HdOs-6, the Buggy Pallet Site) for both field studies (see Figure 3). Murray also conducted an HRIA for Syncrude's winter drilling program west of the MacKay River.

Figure 3. Shovel testing on north bank of Clearwater River near mouth of Rainbow Creek. In the middle of the bush, we were surprised to get help digging from an orange tabby cat.

Murray also returned to the Grande Cache area to conduct more testing for a proposed coal ash disposal project near the mouth of Sheep Creek and Smoky River. Repeat visits by numerous archaeologists have excessively sampled this landform. It appears that early populations were not choosing to camp or procure resources at this location which is one of the higher slopes overlooking the deeply incised Sheep Creek. But it makes for a beautiful spot to dig some negative holes.

The Edmonton office was involved in two field projects during 2011. **Aidan Burford** conducted an HRIA northwest of Edmonton for a road upgrade and bridge replacement for Highway 663. Particular attention during the field survey was paid to the upland areas adjacent Kilini Creek, and a low density subsurface lithic scatter was identified on an upper terrace on the east side of the creek.

Aidan also conducted an HRIA for a pipeline in the Onion Lake locale. One newly identified archaeological site was recorded on a small level area below the upper bench on the northern side of a wide glacial meltwater channel (see Figure 4). The site consisted of two subsurface lithic debitage artifacts. Based on the results, the site most likely represents a single event of stone tool finishing or sharpening.

Figure 4. Shovel testing at site FjOm-10, facing southwest towards a meltwater channel.

Bodo Archaeological Society 2011 Field Season Report

Christie Grekul

2011 was the eighth consecutive year of the operation of the Bodo Archaeological Society (BAS) in east central Alberta. The 2011 season saw the continuation and further development of public archaeology programs at the Bodo Archaeological Site. This year the focus was on the *2011 Bison Pound Public Excavation Project.* This excavation took place at the Bodo Bison Skulls Site (FaOm-1), in the vicinity of Area 5, a well preserved bison bone bed. Previous research has suggested that the bone bed is the remains of a large bison pound that may have been used for hundreds of years (~300-500 years ago). Prior excavations in this locality include: four-square meters by Alberta Western Heritage in 2000, and approximately ten shovel tests excavated in 2008 by the University of Alberta Field School. The 2011 public archaeology program built on and expanded these previous excavation areas in attempt to learn more about this site, with a focus on defining the boundaries of the bison pound (Figure 1). The program consisted of series of excavation units (0.50 m x 0.50 m) excavated in the vicinity of Area 5 by public participants under the supervision of an archaeologist. 2011 was the first year that the BAS offered hands-on public excavation opportunities to the public.

During the months of May through August, twenty-one people participated in four dig camps for either two or

four days. This participation resulted in over 50-person days of excavation at the Bodo Archaeological Site. The Project Archaeologist, Christie Grekul, summer students, Justin Ganser (University of Calgary) and Julia Ramos-Strankman (University of Lethbridge), and archaeologist volunteers Peter Kirchmeir and Courtney Lakevold also took part in the excavation at the site. Additionally, approximately 250 people visited the excavation site during the course of the summer field season. These visitors included public drop-in tours, school tours, kids summer camp participants, family camp participants, and people attending special events, such as Archaeology Week.

Figure 1. Public participants Iris Larson (right) and Madison Penman (left) excavating near the eastern edge of the bone bed.

During the 2011 field season over six thousand artifacts (mostly bison bone, but included lithic debitage, tools, FCR, pottery, late side notched projectile points and bison hair) were recovered. The program resulted in the determination of the east and west boundaries of the bone bed, and that the possible pound structure was likely confined to the lower bowl-shaped area at the base of the current sand dune. Further detailed analysis of the recoveries, including radiocarbon dating, is ongoing at this time.

Due to the public interest and success of the *2011 Bison Pound Public Excavation Project* this project will be a multi-year project, with each year building on the knowledge collected from the previous years in order to develop a more complete understanding of the hunting practices and the people who inhabited this site. Additional excavation is planned in this area during the 2012 field season that will attempt to complete the delineation of the bone bed perimeter. Defining the limits of the pound will be a solid step to begin the Provincial Historical Designation of the Bodo Archaeological Site, an important step in ensuring that the site has the necessary level of protection and recognition. For more information or to get involved in this project please visit the Bodo Archaeological Society website, www.bodoarchaeology.com.

Figure 2. Public participants Meeghan (right) and Trevor (left) Ford show-off the side-notched projectile point that they recovered from their excavation unit.

Lifeways of Canada

Kendra Kolomyja

Mitigation at HhOv-338

This 2011 Lifeways field project completed under the direction of Christy de Mille included the final phase of Historic Resource Mitigation Studies at the Muskeg Valley Quarry north of Fort McMurray. The Historic Resource Impact Assessment undertaken in 2003 (Saxberg and Reeves 2004) resulted in the discovery of the historically significant Quarry of the Ancestors site complex, the bedrock source of fine-grained toolstone used almost exclusively within the Oilsands region for the production of stone tools now protected through a Provincial Protective Notation. Many of the associated workshop sites that lie outside the Protective Notation have been mitigated revealing a complex history of use of the Quarry area. In May 2011, Stage II mitigation excavations were undertaken at HhOv-338 that fulfilled the outstanding requirements at that site. HhOv-338 had previously been identified as a series of

workshop/campsites along a linear landform immediately west of the Quarry of the Ancestors. Several of the occupations at this site are identified as belonging to the Beaver River Complex (7750-3500 ^{14}C yr BP) (de Mille and Reeves 2009). Our smoke-filled excavations (due to the forest fires at the time, Figure 1) at three areas of the site confirmed the workshop/campsite interpretation of the site. Although artifact analysis is not yet complete, the typical large debitage assemblages of workshop debris and tool assemblages mainly dominated by manufacturing rejects are in evidence at HhOv-338.

Figure 1. Smoky excavations at HhOv-338: excavators D. Foster and C. Lakevold.

Pengrowth Lindbergh SAGD Project

Historical Resources Impact Assessment

Don Hanna

On behalf of Pengrowth Energy Corporation, Lifeways carried out an HRIA (ACCS Permit 11-185) in support of their plans to develop a steam assisted gravity drainage (SAGD) Project to exploit buried oil sand deposits near Lindbergh, south of Cold Lake and approximately 30 kilometres southeast of Bonnyville, Alberta. During the course of this HRIA, several previously unrecorded Precontact era archaeological sites were identified during shovel testing in the bottomland of a major glacial spillway passing through the study area. This spillway comprises a natural linkage and travel between the North Saskatchewan River valley at the historic fur trade sites of Fort George/Buckingham House (ca. 1792 to 1800 AD) and traditional wintering camps on the Kehiwin Indian Reserve on Muriel Lake. This HRIA is the first area-based study carried out in association with this landform.

The glacial outwash channel runs from the headwaters of Middle Creek, through Garnier Lake to the southeast shore of Muriel Lake. This deep, broad valley has well-defined margins and steep valley walls. The valley is occupied by an underfit creek drainage with a number of small unnamed streams disrupted by beaver damming. Some of the largest and most complex sites identified in this study directly overlook the shores of Garnier Lake (Figure 1). Four of these sites (GaOp-6, 7, 8 and 11) exhibit strongly similar characteristics, and may reflect an intensification in use of this area during the Late Precontact and into the Contact Period.

Figure 1. View east across major glacial spillway, north end of Garnier Lake to right.

GaOp-6 is a partially disturbed surface and subsurface campsite artifact scatter in the bottom of the glacial spillway, just north of the shoreline of Garnier Lake (Figure 2). The site consists of a well-defined surface and sub-surface scatter of calcined bone, fire-broken rock, lithic debitage, and stone tools. A well-defined concentration of small, calcined bone fragments (medium to large animal) and associated fire-broken rock exposed in an incised livestock trail indicates the presence of at least one intact hearth feature. Other observed cultural materials include scattered quantities of fire-broken rock and at least 50 lithic items, including both formed and expedient tools (Figure 3).

GaOp-7 is a small, undisturbed, localized subsurface lithic chipping station on the north side in the bottom of a major glacial spillway, just north of the shoreline of

Garnier Lake. This site is extremely localized, but exhibits both debitage and a broken bifacial tool.

Figure 2. View of GaOp-6 showing association.

GaOp-8 is a small, undisturbed subsurface campsite in the bottom of the glacial spillway, just north of the shoreline of Garnier Lake. GaOp-8 consists of an entirely undisturbed sub-surface scatter fire-broken rock, lithic tools and flakes, ceramic sherds, faunal remains and a single historic artifact recovered in multiple positive shovel tests within a small area. Of particular importance are two conjoining pieces of pottery, identified as Narrows Fabric-impressed ware, recovered in the same shovel test with small bone fragments from a mid- to large-sized mammal, pieces of fire-broken rock, pieces of quartz and quartzite debitage, and a small black pebble chert retouched flake fragment (likely part of a scraping tool) (Figure 3). A closely associate shovel test yielded a blue glass trade bead and one quartzite flake fragment. Other nearby shovel tests unearthed additional fragmentary mammal bone, firebroken rock and lithic debitage.

The small, tubular, opaque, light-blue monochrome (Munsell Colour 10PB5/12), drawn-glass trade bead exhibits irregular snap fracture terminations with subsequent polish, consistent with 17th to 18th century European bead-making.

The ceramic sherds (Figure 3) exhibit a buff to grey-black, uniform fabric with a very fine, sand temper. The inner surface is smoothed, while the outer surface is darkened, rough, and displays a very clear vertical fabric (sprang) impression. These sherds constitute a small portion of the prominent, obtusely-angled shoulder (~115°) of a large vessel. Based on curvature, the vessel may have had an outside diameter of approximately 18cm at the shoulder. These sherds are very similar in appearance to the Black Fox Island vessel (Lac La Biche), identified as Narrows Fabric-impressed ware (Walde and Meyer 2003). Use of Narrows Fabric-impressed ware has been dated elsewhere to within the last 1,000 years BP. The recovery of these ceramics in association with a fur trade era trade bead may provide additional dating evidence for the use of this ware. As with the Black Fox Island vessel, the Garnier Lake sherds exhibit a prominent shoulder, otherwise rare in this ware. Together these specimens may represent an as yet unnamed local variant.

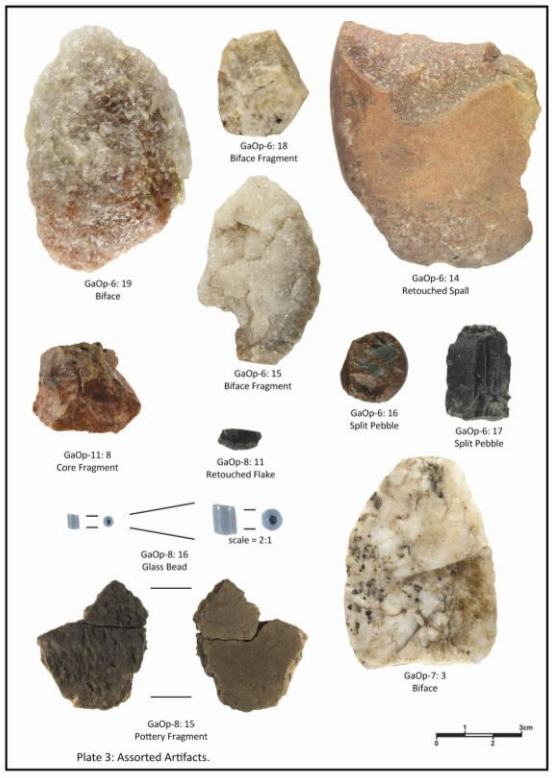

Figure 3. A selection of artifacts collected from GaOp sites.

GaOp-11 is a partly disturbed surface and subsurface Precontact campsite scatter north of Garnier Lake overlooking the underfit stream that drains the glacial spillway. Shovel tests at this site encountered an intact hearth feature, preserved faunal materials, and moderate quantities of lithic debitage. Notably, a single fish bone fragment was collected, along with a larger sample of small calcined mammal bone fragments.

Traits these four sites share in common include: association with a south aspect and Garnier Lake, relatively shallow burial (5-15 centimeters below surface), very localized distributions of artifacts, faunal remains and/or intact hearth features (relatively rare in this region), and a high frequency of quartzite, quartz, Swan River chert and pebble chert tool stone. Taken together and in conjunction with the recovery of First Nations ceramics and historic trade goods, these characteristics suggest that these sites are relatively recent in age, and may reflect a traditional land-use pattern dating to the fur trade era.

2011 Fieldwork Review

Dan Meyer

2011 marked another year of exclusively survey projects for Dan Meyer and crew including Mary Attia, Brian Beaulieu, and Courtney Lakevold. In addition to on-going projects involving studies of traditional ecological knowledge in the Foothills, Dan directed two significant HRIA reconnaissance projects and one significant mapping project, also in the Foothills of west-central Alberta.

Building on ten years of successful work in the Hinton Wood Products FMA, during the 2011 field season, Lifeways undertook HRIA work in the FMA as part of continuing efforts to help record and preserve Alberta's past. Working with regulators from the Historic Resources Management Branch of ACCS, the archaeologists identified a total of 28 cut blocks and segments of 4 roads requiring either pre-impact assessment, post-impact assessment, or ground-truthing. In the areas assessed, the HRIA program recorded 9 Precontact archaeological sites and 1 Historic Period archaeological site. One additional site recorded previously was revisited to ensure it was properly flagged and outside of areas to be impacted. During the shovel testing program a total of 19 artifacts were collected, primarily stone items including one tool, a stone axe (Figure 1). The analysis of these artifacts and sites will contribute to our knowledge of the past both within the FMA and in Alberta. Over the last ten years, Hinton Wood Products' HRIA efforts have resulted in the recording of almost 750 previously unknown archaeological sites, helping to preserve Alberta's past for the future.

Figure 1. A stone axe recovered on a site in the Hinton Wood Products FMA.

The crew also undertook survey in advance of a coal mine project outside of Hinton along McPherson Creek. This area had actually been surveyed previously by a Lifeways crew under Brian Ronaghan in the 1980s, and a portion of it also at that time by Ed McCullough. In addition to relocating and re-recording 18 previously located sites, the Lifeways crews found an additional 27 previously unknown sites, primarily through an extensive shovel testing program. Unfortunately no diagnostic projectile points were recovered from the Precontact sites, but some familiar tools such as Reverse Unifaces and types of bifaces were recovered during shovel testing of the Precontact sites, and one site produced Knife River Flint and Swan River Chert, both rarities in this region. Site types of course ranged from small scatters of lithic debitage to major campsites, of which several were located. Of other note, for years we have found the occasional piece of Paskapoo Chert in sites in the region that appear to come from gravel sources. A few of the sites along McPherson Creek suggest that this valley may be one of the sources of the gravels in which a substantial amount of this material may be found. Historic Period sites included trapper's cabins and two large logging camps, both in good condition (Figure 2).

Finally, at the request of one of our clients, we undertook a mapping project of several of the known remaining Historic cemeteries in the Coal Branch (Figure 3). The purpose of the mapping project was to ensure these

locations are properly investigated and recorded before they become even more shrouded by the forests, and to provide this information to the Director of Cemeteries, Sustainable Resource Development, and the Archaeological Survey to ensure their future avoidance. Following work we had done previously using RTK GPS technology to map an old mining town in the area, we used a GPS with sub-meter accuracy and post-processing correction, in addition to photography and generous note-taking, to map and record these cemeteries.

Figure 2. The remains of a cabin at a logging camp along McPherson Creek.

Figure 3. One of the old cemeteries mapped in the Coal Branch.

Pigeon Lake Provincial Park HRIA

Brian Vivian

Under the direction of Brian Vivian, Lifeways of Canada completed a HRIA in Pigeon Lake Provincial Park. As the park was established prior to when provincial legislation protecting Historical Cultural Resources was enacted, the park has not been subject to any previous cultural resources studies. The importance of Pigeon Lake is historically well established, as Rundle Mission was established here as the first Protestant Mission in Alberta in 1847, and some years later a Hudson's Bay Company trading post was built on the west shore of the lake. Despite these ties to the early historic era in Alberta, Pigeon Lake has garnered little attention from archaeologists and few sites have been recorded around the margins of the lake. The HRIA completed by Lifeways was completed prior to plans to redevelop the camp ground and boat launch facilities in the park.

Survey activities resulted in the discovery and documentation of five archaeological sites. Cultural materials found range from small scatters of bone, fire broken rock and lithic debitage from Precontact occupations to historic debris from a church camp dating to the 1930s. The largest and most extensive site extended for some 300m along the main terrace adjacent to the lake shore, where close to 50% of shovel tests proved positive results (Figure 1). Artifacts found here included assorted stone tools and cores, discarded waste flakes, burned and processed bone, and fire broken rock. At least two hearth features were identified. A hand-wrought iron bracket, wire cut nails and burned clay from cabin chinking indicated an early historic component is also present on site.

Overall, these results stand as the largest number of archaeological sites identified on the shores of Pigeon Lake to date. As Pigeon Lake was a well-known destination for Precontact First Nations peoples and later historic figures during the early historic era of the mid-19th century, it is clear that there are many Precontact and early historic sites to be found along the lake's margins. The large quantity of fire broken rock and processed bone fragments recovered from many of the sites is indicative of extensive processing activities being undertaken here. These results closely mirror results of investigations Dan Meyer from Lifeways undertook at Buck Lake in 2008 and 2009. Indications are that extensive late period occupations are prevalent at both lakes, and it is hypothesized that these large lakes in west-central Alberta played an important role as provisioning posts during the Late Precontact and early Historic Fur Trade era. This supposition may focus future research in the area, which based on results of the 2011

Pigeon Lake survey should gain more attention from archaeologists in Alberta.

Figure 1. Hanna projectile point recovered from shovel test at FgPm-7.

Pine Coulee Archaeological Survey and Mapping Project 2011

Lindsay Amundsen-Meyer, PhD Student, Department of Archaeology, University of Calgary

During the summer of 2011, the Pine Coulee Survey Project visited 87 sites (including 13 new sites) in the Pine Coulee/Willow Creek study region west of Claresholm and Stavely, in southwestern Alberta. The main goal of the project was to relocate surface sites (primarily those recorded during a 1968 University of Calgary field school) to more accurately determine their nature and location. The end goal of gathering this information is to understand these sites at a landscape level, rather than individually, in order to evaluate influences on prehistoric site selection and human decision making. The field portion of this project relied heavily on volunteers recruited from the Archaeological Society of Alberta, as well as other interested individuals, all of whom were integral to the project's success. Project funding was received from the Archaeological Society of Alberta, the Alberta Historical Resources Foundation, the Friends of Head-Smashed-In Scholarship, the Coutts Family Western Canadian Archaeology Scholarship, the Martha Biggar-Anders Memorial Award and the Vanier Canada Graduate Scholarship.

Sites visited during the project included "rock shelters", kill sites/buffalo jumps, drive lane, stone circle (Figure 1) and other stone feature sites (including several rock alignments of unknown function; Figure 2), rock art sites (both pictographs and petroglyphs), historic trail segments, a ribstone, several effigies and a possible death-lodge type medicine wheel (as defined by Brumley 1988). Detailed mapping and recording of each site was undertaken, including recording attributes of all stone features and detailed mapping of all cultural and major topographic features with both total station and global positioning system. One of the most interesting sites visited was EaPk-37, the Willow Creek Stone Feature Complex, which proved to be much larger than previously believed. In 2011, 81 tipi rings, 6 drive lanes, 120 "peripheral" cairns, 4 rock alignments, 1 large effigy (composed of 3 rock lines each over 100 m long), 2 pictograph panels, and a large bone bed at the base of a cliff along Willow Creek (below the pictographs) were recorded. One of the rock alignments may be a partially disturbed death-lodge type medicine wheel. This type of medicine wheel consists of a stone circle, usually the size of a tipi ring, with radiating spokes. These death-lodge type medicine wheels commemorate the place where an important chief or warrior died or the place of their last tipi. The large effigy has been interpreted in the past as a horse and buffalo.

Although detailed analysis of the data collected during the project has not yet been undertaken, a few interesting observations are worth noting. This research was undertaken with a landscape level approach. Although arbitrary site boundaries are inevitable and administratively necessary, a landscape approach, such as taken here, provides a more holistic understanding of individual archaeological sites, the distribution of archaeological sites across the larger landscape, and the use of the landscape by prehistoric human populations.

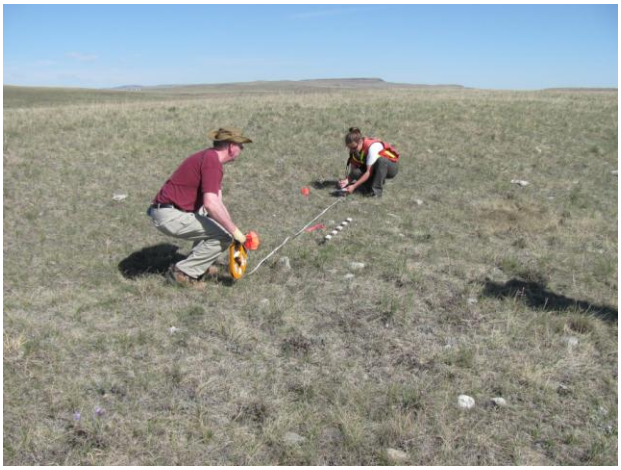

Figure 1. Volunteer Terry Quinn (Archaeological Society of Alberta) and Lindsay Amundsen Meyer (University of Calgary) recording a stone circle at EaPk-37.

Figure 2. Volunteers Don Lyster (Archaeological Society of Alberta) and Bill Perry (Parks Canada) recording a stone feature at EbPk-45.

The function of many sites remains unclear until their relationship with other sites is understood. As archaeologists, out of necessity, we often divide one functional site into many administrative/archaeological sites. For example, numerous drive lane sites were recorded in the Pine Coulee/Willow Creek study region at which either a) only a single drive lane or b) multiple drive lanes that are parallel and only 10-50 m apart, were recorded. Furthermore, most of these drive lane sites are not near a cliff, hill, break in slope or any landform that could be used as a jump, and no bone beds were observed nearby. In this context, when examined alone, the purpose of each individual site does not seem clear. However, when mapped together, it appears that all of these "sites" actually make up two drive lanes, remodelled and refined over time, that lead to a jump site on the west bank of Willow Creek.

In addition, the value of a landscape level approach lies in the association of sites with each other and with landscape features. The position of particular sites and/or features on the landscape can be extremely important and add value to these resources, both through their association with other sites and their association with landscape features. Because of this, important features or sites should be protected at their original place, not removed to a safer site for their protection. Removing many features (e.g., the EbPk-18 ribstone) from the landscape would significantly decrease their cultural and heritage value, as it is the association of these features with the landscape and other sites in the area which makes them valuable.

Another interesting observation made in the field was that sites were often found in areas that have not traditionally been considered high potential. For example, based on current models, we would expect tipi ring sites to be located on sheltered landforms, such as terraces, with ready access to wood and water, as this is the wintering ground of the Blackfoot people and the bison. However, in many cases tipi ring sites were found on high, exposed ridges or on the banks high above Willow Creek in an area where no drainages are present to allow people easy access to creek level. This may be a preliminary indication that spiritual/cultural models of site distribution are influencing the site selection process in this region. This is further supported by the presence of places with Blackfoot names including Table Butte (a large, flat-topped butte that can be seen both from the north and south as one travels along the Old North Trail through the study region) and the Porcupine Hills and the high number of a sites with stone features of spiritual significance (e.g., rock art, effigies, medicine wheels, rock alignments) found in the study region.

The field work conducted in the Pine Coulee/Willow Creek study area in 2011 has refined the data available for the region to the best possible degree barring excavation. The next steps will be to use a combination of geographic information systems (GIS) and spatial statistics to analyze this study region in an attempt to determine the extent to which spiritual/cultural and/or

ecological models affected prehistoric site selection in this area. Although analysis of the data collected during this project is still in a very preliminary stage, the evidence suggests that in addition to the location of ecologically important resources, the location of spiritual and culturally important places on the landscape was also an important part of prehistoric human decision-making in this region. The entire study area is ecologically rich with access to water and wood undoubtedly important criteria in site selection. However, the specific location of sites in this ecologically rich landscape seems to be tied to views (particularly of Table Butte), important landmarks, tree groves and named places. A picture of land use in which ecological and landscape variables are both important to site location is emerging

Stantec Consulting Ltd. Summary of 2011 Fieldwork

Jennifer Tischer

Mitigative excavations were conducted by **Dale Boland** at four Precontact and three historic homestead sites in east-central Alberta. Excavations were conducted alongside the participation of First Nations monitors from the Siksika First Nation and the Maskwacis Cree First Nations. Analysis is ongoing and external lab results are pending. Summary highlights from six of the sites are presented here.

Two 9 m diameter stone circles north of the Red Deer River (EfOo-180) yielded only sparse amounts of cultural material (n=410), but the architecture (wherein 566 and 502 stones respectively, comprise the two circles) suggests a somewhat unique and possible ceremonial use for the structures.

One subsurface campsite on the south shores of the Red Deer River (EfOo-134) yielded cultural materials including two adjacent hearths (one of which was first recorded in a backhoe test, permit 2010-130), bison or large ungulate remains, and two occupation layers coincident with buried palaeosols. The hearths are large (30-40 cm diameter) prepared basin-shaped features and were located barely 40 cm apart, at the same depth BS. Cultural deposits were observed to be divided between the two palaeosols, at approximately 10-30 cm BS and 40-60 cm BS, while bone had been recorded earlier at approximately 90-125 cm BS; no cultural material was noted at these depths during the mitigation. Burnt bone, modified bone and FBR were recovered; only one piece of lithic debitage was recovered.

Historic sites located north of Oyen (EjOp-19) and south of Hardisty (FbOq-83 and FdOs-6) yielded domestic and agricultural artifacts dating as early as 1908 for an "EMBURY MFG CO." hurricane lantern from New Jersey, a 1939 "RCA Victor" radio from Montreal, and .22 cartridge casings (including Winchester, Remington, Dominion, and Ohio's Creedmoor Cartridge Co) dating as early as 1886 and 1898. Other name-brand or diagnostic items include a "DEERE" coulter blade, a NABOB pepper tin, "Burns / Spork" and "Prem" food tins, a 1951 Ford F1 truck, a bottle base with Owen's scar, "Made in Japan" porcelain tableware, "MEDALTA" crockery, patent medicine bottle fragments, and manganese glass sherds. Ruins of log-built structures were observed at the two northern farmsteads, while a third stone building foundation was newly recorded at the more southern site. These and other finds support early and continuous residency upon the farm properties, and suggest a high degree of mobility / immigration/transmigration or long distance trade were at play. Participation within and some degree of long distance communication with the greater world economy during the early settlement years (and continuing into 1939, when Canada joined WWII) in this part of the province are similarly evidenced.

The highlight of the 2011 season was the excavation of 60 sq m at a deeply buried processing /campsite (EjOp-29) likely associated with a nearby bison kill site. Located just 200 m south of Sounding Creek, the site has been affected by colluvial and fluvial overbank deposition episodes, as demonstrated by the occurrence of at least 10 thin palaeosols through the 2.75 m stratigraphy of the excavation blocks. All overburden was removed by hand by our amazing hard-working crew (Figure 1): the main block made a hole bigger than a basement! Analysis is in the preliminary stages, but within the two occupations (approx. 170 cm and 195 cm BS) remains of nine hearths, fourteen projectile points, at least 1,550 lithics, 650 pieces of FBR, and at least 10,000 faunal remains were recovered. The points include Sonota-like, Besant, and Sandy Creek-like styles (Figure 2); a standard radiocarbon date of 1,860±40 yr BP (calibrated) was obtained from bone recovered during initial site recording in 2009 (permit 2009-052). Faunal

remains are primarily bison and include juvenile (possibly foetal), sub-adult, and bull and cow adult bison, as well as cervid, canid, Leporidae, and Aves remains. The majority of the bones are of low meat utility (distal long bones, feet, and ankle bones), suggesting the better cuts of meat were systematically removed to a camp further away.

Figure 1. The field crew at the deep bone bed at site EjOp-29.

Culturally modified faunal material includes at least 1,900 burnt or calcined bone fragments, 12 with cut marks or impact fractures, and 45 with spiral fractures. The MNI for bison is eleven, including four immature individuals. Lithic materials indicate a reliance on local sources, but also include Swan River chert and Knife River flint; split pebble technology is prevalent among the assemblage. At least 57 other tools were recovered, including bifaces and unifaces, side- and endscrapers, choppers, hammerstones, and expedient tools; at least 22 cores were also recovered.

A subsurface component was identified by **Jean-Paul Foster** at a previously recorded significant site (DjPk-119) at Summerview Ridge near Pincher Creek. Subsurface testing away from known stone features recorded 20 positive shovel tests including seven expediency tools, four cores and core fragments, and lithic debitage. Fire-broken rock, faunal remains, and a hearth were also identified. Lithic materials recovered included quartzite, Swan River Chert, silicified siltstone, chalcedony, and pebble chert. The site will be avoided by the proposed development.

Survey work in the area around Kirby Lake in northeastern Alberta continued, resulting in the recording of five previously unknown archaeological sites. LiDAR data were used to great effect in establishing a survey methodology. All the newly recorded sites are represented by lithic debitage, with materials including Beaver River Sandstone, quartzite, quartz, and silicified siltstone.

Construction monitoring was conducted on a location in central Alberta, initiated by chance discovery made by First Nations monitoring pipeline construction, and resulted in the recording of new site FfPj-5. It is recorded as a kill site with a minimum number of individuals of three (bison) from a total faunal material recovery of 140, mostly bison or large ungulate. Also recovered were an endscraper, a uniface, and a retouched flake. All recoveries were made during topsoil stripping.

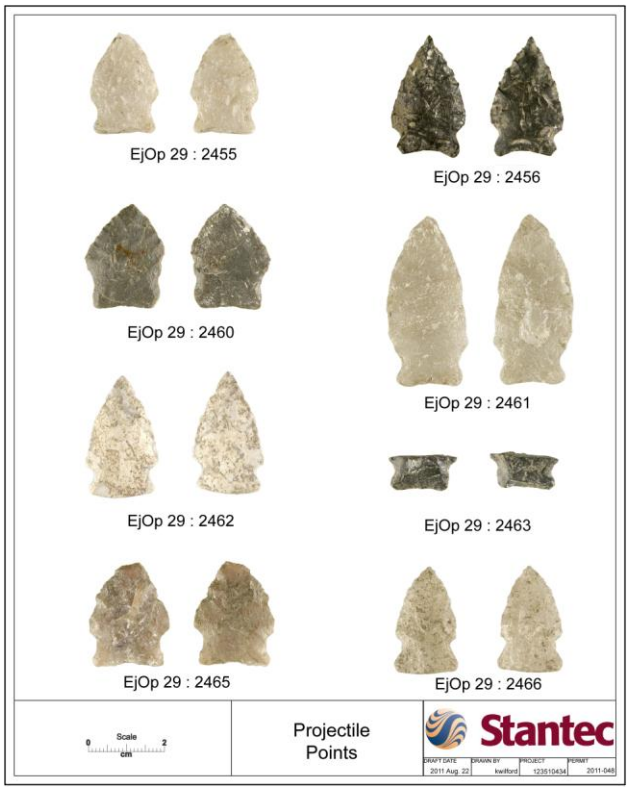

Figure 2. Some of the points recovered from site EjOp-29 (Boland).

Two HRIA projects were completed in the Cold Lake region by **Jeremy Leyden**, both for pipeline projects. One was located in the CLAWR, the other was located north of the town of Cold Lake. In all, five new sites were recorded and two sites were revisited. The new sites consisted of four Precontact period artifact scatters and a single historic period trail associated with possible cold storage pits. Additional work was recommended at two of the artifact scatters located on the CLAWR.

Excavation of an archaeological workshop and campsite, FbPi-8, was directed in the late summer of 2011 by **Meaghan Porter**. The site is over 600 m along the upper terrace of the Red Deer River. Given the site's large size, and extensive use of a unique and locally available lithic material, the site has high interpretive potential. The lithic material is silicified mudstone with vertebrate fossil inclusions throughout. A recorded quarry source for this material (also called 'bog' material) is located on the south side of the river across from FbPi-8. The 2011 excavations resulted in the recovery of over 30,000 artifacts from 30 square m (consisting of five blocks) and included lithic material, faunal remains and fire broken rock. A Plains Side-Notched projectile point was recovered, providing at least one date range for this extensive site. Analysis of the large collection is currently underway.

Ground-truthing and assessment of several Fur Trade posts in the province was undertaken in 2011. Visits were made to the Northwest Company's Boggy Hall (ca. 1798-1808), several independently operated Métis trading posts at Lac La Biche (ca. late 1800s to early 1900s), a wintering outpost located on the Red Deer River called "Green Wintering Post" (ca. 1890), and the Hudson's Bay Company's Ponoka Outpost (ca. 1884-1885). Investigation of these posts provided insight as to their current status and context. Further research is currently underway.

Excavations led by **Laura Roskowski** were conducted on several sites associated with the Muskeg River Mine project in northeastern Alberta under permits 2011-058, 2011-070 and 2011-071, including sites HhOv-156, HhOv-506 and HhOv-520.

Recent excavations in the Athabasca Oilsands Region have encountered datable bone features at over 60 sites (Permits 2000-087, 2003-269, 2007-217, 2007-283, 2007-393, 2008-163, 2008-166, 2008-208, 2009-077, 2009-168, 2010-068, 2010-093, 2011-058, 2011-070, 2011-167, 2011-268). Conventional radiocarbon dates have been collected from some of these sites and range in

age from 5,660±40 yr BP (Beta-298152) to 70±30 yr BP, suggesting that the area associated with the Quarry of the Ancestors has been continuously occupied for over 6,000 years. Projectile points collected from this area extend the time of occupation back to approximately 9,000 yr BP.

The increase in the identification of datable bone is the result of intensified shovel testing programs, the use of fine screens during shovel testing, and larger scale mitigative excavations. The implementation of these methods has yielded significant results at sites HhOv-156, HhOv-520 and HhOv-506. A brief discussion of the increased interpretive value of the artifact assemblages recovered from these sites is presented below.

Locus 1 at site HhOv-156 was originally identified by the presence of subsurface, calcined comminuted bone and a single northern quartzite flake. The bone yielded a conventional radiocarbon date of 3,990±30 yr BP (Beta-312092), which is one of the older dates identified in the region. Although this portion of the site has not yet been excavated the results thus far are intriguing. Three other hearth features in the area have been excavated that produced only calcined bone and a small scatter of northern quartzite (Permits 2009-168, 2011-070). The bone from these features dates to 130±30 (Beta-298151), 2030±40 (Beta-277702), 2870±30 yr BP (Beta-312095) suggesting that this activity was consistent through time. Two additional bone features associated with quartzite concentrations were also excavated; however insufficient bone was recovered for radiocarbon dating (Permit 2010-068, 2011-167). This site patterning of northern quartzite in association with calcined, comminuted bone indicates that the practice of using northern quartzite to prepare (i.e., butcher, hide processing, removal of meat after cooking) animal carcasses was conducted for at least 3,000 years.

While a few small formed and expedient tool fragments have been recovered, the northern quartzite artifact assemblages excavated from the outer margins of the hearth features are generally dominated by late stage edge modification or tool maintenance. The artifact assemblages suggest that Precontact people were sitting around a fire either finishing or maintaining their tools prior to or during the processing of an animal carcass. Given the accessibility to a quarry of Beaver River Sandstone, it is surprising that bone features are consistently associated with northern quartzite. Whether quartzite was used for functional or spiritual reasons is currently unknown.

Without the recovery of bone, many of these activity areas would not have been identified. The use of 1/8th screen increased the recovery of small retouch/resharpening flakes critical for identifying late stage edge modification or tool maintenance. Furthermore, the assemblage that would have been recovered would simply have been interpreted as a small chipping station without the context of animal processing and lacking a radiocarbon date.

The second example, site HhOv-506, is a large, multi-component campsite from which faunal remains were recovered from five of eight large excavation blocks. Faunal remains recovered consist of beaver, moose, and deer. Conventional radiocarbon dates obtained from the bone recovered at this site include 2870±0 yr BP (Beta-312095), 550±30 (Beta-312096), 130±30 (Beta-298151), 90±30 (312093), and 70± 30 yr BP (Beta-312097). For the purposes of this review only one block will presented to illustrate the increase in interpretive value resulting from the identification of bone. Complete results from this site will be presented in Roskowski and Netzel in prep.

Figure 1. Concentration of fire-broken rock from HhOv-506.

Based on the presence of the hearth identified at Block B (HhOv-506) during the shovel testing program, a large excavation block was opened up in an effort to recognize any other activities associated with this feature. Many of the units excavated within this block were sterile,

revealing specific activity areas at this location. The artifact assemblage from this block includes a small scatter of northern quartzite, circular concentration of fire-broken rock (Figure 1), two pieces of metal scrap, a hearth of calcined beaver bone, and an associated scatter of moose bone.

Radiocarbon dates collected from the beaver and moose date to 130±30 yr BP (Beta-298151) and 90±30 yr BP (Beta-312093) respectively, suggesting that this block was occupied during the Proto-Historic period. The inhabitants of this site appear to have killed and processed a beaver and moose. The presence of a small scatter of northern quartzite retouch/resharpening flakes suggests that tools were maintained during the processing of these animals. Given the location of the lithics, the tools may have been chipped near the edge of the fire. The carcasses were then cooked over a small fire and consumed by the occupants. Based on the concentration of fire-broken rock, bone grease (likely from the moose based on breakage patterns of the faunal remains) may have been rendered. Subsequently the fire-broken rock and the faunal remains were discarded.

The presence of scrap metal, but lack of butchering marks on the bone indicates that while contact with Europeans had been made, metal tools had not yet replaced stone tools. This is also supported by the concentration of fire-broken rock as kettles replaced rocks for heating water immediately after contact with Europeans was made. Thus, the presence of these artifacts indicates that this site was occupied by First Nations shortly after Europeans had entered the region. Had bone not been identified at this block, this portion of HhOv-506 would not have been excavated. This would have resulted in the loss of the only example of Proto-Historic occupation in the region.

The final example is site HhOv-520. This campsite yielded two bone features, of which only one yielded enough bone for radiocarbon dating. Locus 1 produced a date of 5260±20 (Beta-32098) and is associated with a laterally extensive but sparse lithic scatter. Although Beaver River Sandstone was the predominant material type collected, eleven material types were recovered from this locus. A wide variety of activities including primary and secondary core reduction, tool production and tool use were evidenced here. Based on the assemblage, it appears that Locus 1 represents both a campsite and a workshop. The activities conducted around the campsite include tool maintenance and tool use, while the artifacts recovered from the workshop area are suggestive of core reduction and early stage biface production. The spatial relationship between these two areas suggests that campsite activities were conducted away from the densest areas of debitage, but close enough to the workshop that individuals conducting the tasks would be within talking distance.

Figure 2. Historic-aged large ungulate bone from HhOv-506.

The large lateral extent of the lithic scatter within the campsite portion indicates that the site was likely occupied in the summer, when activities did not have to be directly adjacent to the fire. Furthermore, the quality of the Beaver River Sandstone at this site is generally high. This suggests that the lithic raw material was likely transported from the Quarry of the Ancestors to this location for secondary reduction, prior to further curation of the raw material. Based on the sites location it is likely that this site was a day's journey away from the quarry. This suggests that the people who occupied this site approximately 5,000 years ago were travelling across land rather than by watercourse. By this time the small ponds, creeks and drainages that would have been common in the area after deglaciation would have begun to in-fill. Muskeg would have developed in the low-lying areas and people would have been able to traverse the area more easily by foot.

In conclusion, without these radiocarbon dates the analyses of the above mentioned sites would be sparse, perhaps interpreted as chipping stations or lithic scatters; adding little to our understanding of how Precontact

people used this region over the past 10,000 years. The recovery of datable, calcined bone allows us to more fully understand the activities conducted at sites, offers information regarding diet, and provides a date for which the site was occupied. This is especially important for determining the number of occupations at sites yielding multiple activity areas (which is very common especially around the Quarry of the Ancestors). Given that fire was a fundamental part of Precontact life in the forms of heat and light and was necessary for cooking it is likely that hearths were made at most sites. The examples presented here demonstrate the need to continue to improve our methods of site testing and mitigative excavation to further increase our understanding of sites in the area.

During the 2011 field season, in addition to numerous Traditional Knowledge projects, seven Historical Resources Impact Assessments were completed by **Alan Youell**. An assessment conducted under Permit 11-067 involved a ground reconnaissance of lands selected for a campground relocation situated adjacent to the Athabasca River. During the pedestrian survey three new Historic archaeological sites were recorded. The new Historic sites include a homestead site (GePh-16), consisting of several historic buildings, associated pit features and midden, a historic semi-subterranean cabin (GePh-17) and the former location of a historic barn structure, associated lined pit feature and middens (GePh-18).

Pedestrian survey of a proposed tank farm expansion east of Edmonton was conducted under permit 11-224. During the course of the assessment no new archaeological, historic or palaeontological sites were identified and no previously recorded sites were revisited.

Several SAGD projects in northeastern Alberta were assessed under Permits 11-126, 11-140, 11-169 and 11-239. During the course of these assessments, no new archaeological, historic or palaeontological sites were identified and no previously recorded sites were revisited.

HRIA studies were also conducted for a large proposed commercial SAGD project located northwest of Cold Lake under Permit 11-242. During the pedestrian survey nine new Precontact archaeological sites and one new Historic site were recorded. The new Precontact sites include three isolated finds (GgOs-1, GgOq-2 and GgOp-10), two artifact scatters >10 (GgOs-2 and GgOs-5) and four artifact scatters <10 (GfOp-6, GgOq-1, GgOs-3 and GgOs-4). The lithic assemblages collected from these Precontact sites were dominated by quartzite material; however, quartz, chalcedony, siltstone and Beaver River sandstone artifacts were also present. In addition to the Precontact sites, one new Historic site (GgOp-9), consisting of a trapper's cabin, was recorded. The majority of these new sites are located along the Sand River and its tributary streams, within an area of high archaeological potential, that to date has seen very few archaeological assessments conducted. Therefore, these new discoveries bode well for the documentation of numerous additional archaeological sites in the future.

Stantec's palaeontological team (**Lisa Bohach and Emily Frampton**) directed by investigated a gastropod shell bed below Mazama Ash and above the Bighill Creek Gravel in the Bow River Valley in southern Calgary. The identification of at least 18 taxa of freshwater and terrestrial gastropods and one bivalve indicate the area was a wetland in a wooded area at the margin of a perennial water body. The shell bed is between 8,000 and 10,000 years old.

In addition, studies at the Sturgeon River, north of Fort Saskatchewan, identified fluvial deposits containing at least 11 species of molluscs, including freshwater and terrestrial gastropods and various bivalves. Vertebrate remains include ungulates and small mammals. The conventional radiocarbon age of the deposits is 25,770±120 ^{14}C yr BP (calibrated age approximately 30,000 yr BP). The assemblage shows a thriving ecosystem in the Watino Nonglacial Interval.

Tree Time Services Inc. 2011 Field Season Report

Kurtis Blaikie

2011 was another year of growth and development for Tree Time Services Inc. Scott Formaniuk (BSc, RPF) had a great year with our silviculture division, completing our annual aerial herbicide application programs in record time. We brought on Mike Ardiel (RPF) to head our oil and gas reforestation division, successfully planting over 100,000 seedlings on 50 well sites. We have more than 250,000 seedlings lined up for the 2012 season.

Our archaeological division also had a good year. Christie Grekul has joined us as a Project Archaeologist, when she can get away from her responsibilities as the Project Archaeologist for the Bodo Archaeological

Society Public Archaeology Program. She brings her experience with small-scale oil and gas and mitigative excavation. Vincent Jankunis has also joined us as a full-time Archaeologist, bringing his experience with winter work in northern BC.

Forestry Historical Resource Management Programs remain our focus. This year we managed programs for Sundre Forest Products, Alberta Plywood, Vanderwell Contractors and Tolko Slave Lake. Highlights of these programs include:

- The development of a GIS-based, statistically-derived archaeological predictive model for the Sundre Forest Products FMA area. This model made use of a high-resolution LiDAR-derived Digital Elevation Model and recent statistical regression techniques to predict sites on the basis of the known site database. Testing of the model during the 2012 season indicated a high overall accuracy, but identified areas for improvement to increase precision. Evaluation is ongoing, but preliminary results indicate that LiDAR has the potential to revolutionize predictive modeling for forestry programs, providing a valuable planning tool to enable developers to control historical resources costs without sacrificing historical resources.

- Survey of areas on the Elk Creek Flats in the Rocky Mountain foothills south of Nordegg. Survey of forest cutblocks in this area resulted in the extension of FaPw-3 to an area over 700 m in extent, and the identification of FaPw-6 through 14 consisting of small to very large scatters and campsites on elevated terrain adjacent to the flats. The assemblages in the area are dominated by bipolar-reduced chert pebbles, and retooling appears to have been a major activity focus. One test in FaPw-3 produced a probable Besant point in association with two probable palaeosols. These sites reinforce the archaeological potential of these intermontane valleys.

- Survey of the North Saskatchewan River at Misty Valley Ranch. We identified eleven new sites here (FcPv-6 through 15, FCPw-18) representing both Precontact occupation and early 20th century occupation associated with the Canadian Northern Western Railway from Rocky Mountain House to Nordegg, including the probable location of the Ancona Siding.

- Working with field assistants from Swan River First Nation for all of our forestry programs in the Slave Lake region. These assistants brought a knowledge of the area and enthusiasm for the history that contributed significantly to the effectiveness of our programs, and we look forward to continuing this partnership.

- Identification of HaPn-1 on the confluence of the Pastecho and Muskwa Rivers. This site is a very extensive low density artifact scatter. No diagnostic artifacts were recovered, but the sample did include a small endscraper, two pieces of calcined bone and three fragments of probable FCR. The northwest corner of HaPn-1 is very similar to small corner and point-terrace lithic scatters throughout the boreal forest. Under previous assessment methods this may have been all that was identified. This season Tree Time amended our site assessment procedures to conduct more intensive testing at greater distances (20-40 m) from positive finds. In this case these procedures resulted in the identification of a low density scatter extending back more than 100 m from the river valley margin onto gently sloping, featureless upland terrain. This draws into question the evaluation of many of the small sites I have previously found in the boreal region. My current working hypothesis is that in many cases, the identified sites may be only knapping stations on the periphery of the occupation site, and that occupation areas may be located 20-30 m back from these sites, represented by very low density artifact scatters, but with the possibility for the presence of features and faunal remains. This theory will be tested through the continued implementation of our new assessment procedures in the coming season.

Another project of interest was an HRIA and HRIM of a proposed RV Park on Lac La Nonne, northwest of Edmonton. Initial survey of the area identified a large and relatively rich site extending over the 500 m along a small peninsula and adjacent terrace above the modern shoreline. The site was recorded as FlPn-6. Excavations there, supervised by Christie Grekul, have recovered a rich sample of archaeological materials including lithic debitage, fire-cracked rock and a wide variety of faunal material. The faunal sample includes bison, canid, beaver, rabbit, bird and fish bone, indicating a broad spectrum adaptation. The site represents a palimpsest of occupation over nearly the entirety of human history in Alberta. The historic period is represented by a horse humerus, tin can fragments and a large pair of shears. The Late Period is represented by five late side notched (Old Women's) points. The Middle Period by two McKean series points, and a large side-notched point which may be early side notched. The Early Period may be represented by two rectangular basal fragments consistent with the Plano series. Analysis is ongoing, but FlPn-6 is an interesting site in a poorly understood region. It is important to note, however, that this site is believed to be unexceptional and indicative of the archaeological potential of the many lakes in the mixed wood northwest of Edmonton.

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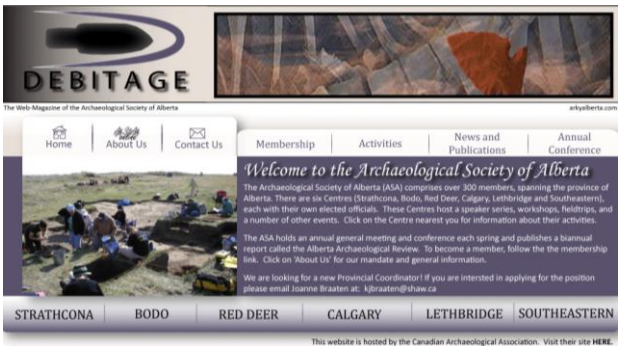
Fieldwork news compiled and edited by Alwynne B. Beaudoin, with contributions from Lindsay Amundsen-Meyer, Kurtis Blaikie, Amanda Dow, Christie Grekul, Kendra Kolomyja, Martina Purdon, and Jennifer Tischer.



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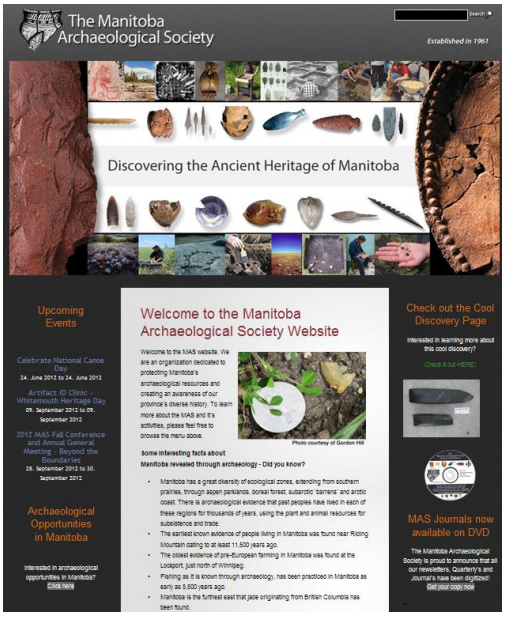

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Ontario

Submissions compiled by regional editors Wai Kok, Adam Pollock, and Ryan Primrose.

Archaeological Services Inc (ASI)

In addition to numerous heritage planning studies, the consulting firm of *Archaeological Services Inc.* (ASI), operated under the co-direction of Ronald Williamson, Martin Cooper, Deborah Steiss, Robert MacDonald, and Robert Pihl, conducted roughly 175 archaeological assessments throughout Ontario during 2011. Some of the more notable projects undertaken during the 2011 field season are summarized below.

Fort York, City of Toronto

In 2009 ASI, in association with Dr. Andrew Stewart, Strata Consulting, assessed the proposed location of the new Fort York Visitors' Centre. The Stage 2 GPR survey and historic map modelling was used to direct the Stage 4 work, which was completed by July 2011. Excavations uncovered the original surface of the Garrison Common, which was rich in cultural material. Structural remains encountered within the Ordnance Yard included wooden piles associated with the Military Store and the brick footings of the 1868 Military Store Office. Also documented was an extensive engineered pavement that corresponds to the yard itself. The most exciting finds related to the War of 1812 were the numerous fragments of copper barrel hoops (Figure 1), distorted by the famous Grand Magazine explosion that killed American Brigadier General Pike on April 27, 1813.

An exploratory trench was also excavated through the south ramparts, which were remodelled in the 1930s, in an effort to uncover any remains of the Grand Magazine. While it was considered unlikely that any structural elements would have survived the massive explosion that sent debris flying hundreds of metres away, it was thought possible that the crater might still be evident. There were no vestiges of the magazine or the explosion. Investigations, however, did uncover a buried sod representing an earlier phase of the defences, the use of wooden mats to stabilize and reinforce the fill making up the earthworks, and a deposit of artifacts likely discarded when the area was cleaned up and refortified.

Sponsored by History Television, our excavation of the remains of the Government House, the official residence of the Lieutenant-Governor of Upper Canada which was looted and destroyed by American troops in the spring of 1813, was documented by YAP Films for an upcoming film about the War of 1812.

Figure 1. *In situ* copper barrel hoop fragment.

Parliament Site, City of Toronto

In 2010, ASI undertook a Stage 1 assessment to evaluate the known and potential archaeological deposits on the property that make up the c. 1797-1824 First Parliament site (AjGu-41), as well as those associated with the c. 1799-1818 Town Blockhouse, the circa 1838-1879 Third Home District Gaol, and the post-1879 Consumers' Gas Station A facility. In 2011, a GPR survey was undertaken as part of the Stage 2 assessment but was not successful in identifying any Parliamentary era features. Stage 3 work involved the mechanical and hand excavation of 22 test trenches which uncovered large-scale fill layers, built surfaces, and structural remains associated with the Consumers' Gas operations (Figure 2). Deposits associated with the Gaol, including both intact and robbed out sections of foundation, were documented in four trenches. Parliamentary era deposits were found in two trenches, consisting of a probable robbed out structural feature, thin layers of construction and demolition fill and an original ground surface. The location of the Town Blockhouse was found to have been completely destroyed by later landscape alterations.

Figure 2. Stage 3 work at the Parliament site.

Seaton Lands, Town of Pickering

ASI has been conducting Stage 1-2 survey of all areas within the Seaton Lands (Pickering) that were not assessed during the 2004-2005 Oak Ridges Moraine/Seaton Class EA. The current work is being undertaken as part of the Seaton Master Environmental Servicing Plan and the Region of Durham's Environmental Assessment. Additionally, ASI has been conducting Stage 3 assessments of three Ancestral Huron village sites in order to determine their limits so that they can be preserved, as per the First Nations cultural heritage consultation program that took place as part of the Oak Ridges Moraine/Seaton Class EA.

Darlington, Municipality of Clarington

ASI was contracted by Ontario Power Generation Inc., Toronto, to undertake a Cultural Heritage Resources Assessment in conjunction with the New Nuclear – Darlington (NND) Environmental Assessment Project; this was conducted under the Canadian Environmental Assessment Act for both archaeological (Stage 1-4 assessments), and built heritage and cultural landscape resources. During the Stage 2 Archaeological Assessment, 12 pre-contact Aboriginal sites were identified and 12 archaeological sites of Euro-Canadian origin were discovered. Stage 3 site-specific assessment was conducted on five pre-contact Aboriginal sites and three Euro-Canadian sites. The Brady (AlGq-83) and Crumb (AlGq-86) sites went on to Stage 4 mitigative excavation.

Highway 407 Extension

In 2008, ASI began a Stage 2 survey of the Highway 407 extension. Approximately 558 ha (27%) of the Technically Preferred Route (TPR) was subject to Stage 2 archaeological assessment. In 2009, aside from 8 ha of shovel test-pit survey, fieldwork consisted of Stage 3 assessment of historic Euro-Canadian sites. Since August 2010, ASI has continued to survey the Phase 1 lands (~1220 ha.) and completed this at the end of the 2011 field season. To date we have completed Stage 3 assessments on 12 pre-contact Aboriginal sites and 32 historic Euro-Canadian sites in association with URS Canada Inc (Figure 3). Stage 4 fieldwork continues on one pre-contact Huron-Wendat settlement, the Joseph Picard site. Over the last year and a half, ASI also conducted over 40 Cultural Heritage Evaluation Reports of properties to be impacted by the highway extension.

Figure 3. *In situ* Otter Creek Spear Point made from Normanskill chert found during the Stage 2 survey of the Highway 407 extension.

Renewable Energy

ASI has worked on numerous Renewable Energy projects in the past few years, including solar power, wind energy and biogas cogeneration. Mostly notable are two large wind farm projects in southwestern Ontario. Stage 2 property assessment was conducted over the 2010 and 2011 field seasons resulting in discovery of 113 sites. Of these sites 58 were recommended for Stage 3 investigations. Based on project layout revisions 32 are being investigated further and a number of these sites have progressed to Stage 4 excavation.

Figure 4. Stage 4 winter excavation as part of renewable energy project in southwestern Ontario.

Cultural Heritage Landscape Studies

As part of larger planning and policy research studies, ASI has developed a framework for assessing, inventorying, and evaluation cultural heritage landscapes. This work provides a clear mandate to municipalities to identify archaeologically sensitive areas or archaeological sites as cultural heritage landscapes where there are either tangible or intangible heritage attributes that express the values linked to a site's archaeological record. As case studies, ASI applied the framework to a number of known archaeological sites, including the Parsons site in the City of Toronto and the combined Skandatut village and Kleinburg Ossuary cultural heritage landscape in the City of Vaughan.

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Archaeology of the Home Front: A Brief Glimpse of Canada's Role in the Great War

Aaron Clemens

There are many occasions where a single artifact can actually reveal much about it's own history, as well as a broader history of it's own nation. This is true of European-Canadian settlements with their own written record. Many artifacts can be found with labels, manufacturing stamps, crests, even dates. With this wealth of information already imprinted on the artifact, in addition to careful consideration of it's provenience, can give a reasonably accurate portrayal of its history, and even provide a snapshot in time of a much more global nature.

One such instance was discovered this past field season. Pedestrian surveys of a ploughed airstrip in Haldimand County revealed a spent casing from a rifle (Figure 1). Little attention was given since nothing was found on the surface near it, and it was argued to be of too recent use to be of significance anyway. However I wish to use this artifact as an example of how much information can be derived from a few mere markings.

From the top going clockwise, here is a brief summary of what the stamps mean. "DA" stands for Dominion Arsenal. Established in 1882 in Quebec, Dominion Arsenal was the first Canadian government shell and cartridge factory. It's aim was to supply the Canadian militia with ammunition. These shells would go on to be used both against and by the Boers in South Africa, and later to be used by Canadian troops in the First World War. Given the date and context of this particular cartridge, it would seem entirely plausible the round was part of the training of Canadian troops before embarking to Europe.

Following the "DA" is what is commonly known as the "C Broad Arrow", a military stamp used by Canada until the end of the Second World War. The "C" stands for Canada, and the "Arrow" represents the British Empire. A plain arrow stamp can be found on the Lee Enfield rifles, machinery, ammunition, and other goods produced

Figure 1. Spent rifle casing from Haldimand County airstrip.

in Britain for British Troops. Other commonwealth nations used similar stamps.

Following the C broad arrow is the date of the manufacture of the round. 1912 is two years before the start of the First World War, so it is likely this round was stockpiled among millions of other rounds and used for training troops. Not much else can be said but one must appreciate the convenience of having an artifact with an exact date on it.

The Roman numeral "VI" simply means Mark 6, or Mk. VI. This cartridge had a round nosed lead bullet with a thin jacket of copper in hopes of expansion upon impact, since hollowpoint and lead tipped ammunition was banned by the Hague Convention of 1899. This round was developed in 1904.

This single artifact represents the "total war" aspect of the Great War, in which society at home became profoundly impacted by the events overseas. Fieldwork in both the first and second world wars implies an emerging discipline of 20th century conflict archaeology. At home, training grounds, bunkers, and spent casings like the one I have described can greatly contribute to our understanding of Canada's contributions to the war.

Limited Stage 4: Excavation of Site BiFw-101, Ottawa, Ontario (2009 & 2010)

Fisher Archaeological Consulting

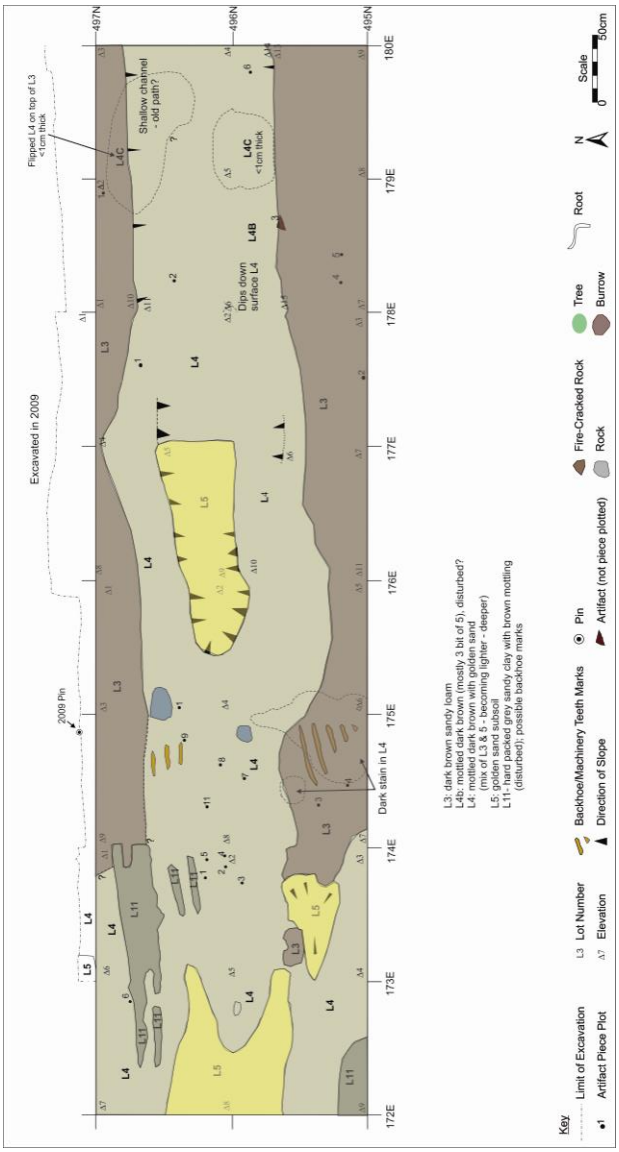
Fisher Archaeological Consulting (FAC) had been hired by an engineering company to be part of a team for an infrastructure project in Ottawa, Ontario. FAC's mandate was to conduct a Stage 1 (research background) and Stage 2 (physical assessment) of the construction staging areas and the pathway interconnecting these staging areas in preparation for the reconstruction of a bridge across the Rideau River. The project was on National Capital Commission (NCC) lands within a park setting. The assessment resulted in two positive shovel tests approximately 30 metres apart along the edge of a pathway adjacent to the river. Through testing it was determined that the site was substantial and straddles both sides of the pathway and was also determined to be partially preserved beneath the pathway. The Stage 4 excavation was carried out over two years due to construction schedules: the north and south sides of the pathway were excavated in the fall of 2009, while the section beneath the pathway was excavated in the fall of 2010.

The limited excavations for the two field seasons covered approximately 60 metres in length of the pathway, and produced a wealth of data. Even though portions of the excavated area had been impacted by the construction of the pathway in the 1960s, the preservation on the site was

Excavation under the pathway, showing subunits.

astounding. The lithics and pottery indicate that Aboriginal peoples inhabited the site mostly in the Middle Woodland, at approximately A.D. 800 -900, but there were artifacts present from the Late Archaic and into the Late Woodland period as well. The predominate artifacts were lithics, followed by pottery, with only a small number of faunal elements recovered. Settlement pattern data were related solely to the presence of four probable hearths and three post moulds. However, this stated, the excavation was limited to the construction corridor, and presents only a thin slice of the probable much larger site.

Despite the narrow corridor and the impact from the construction of the pathway, the site yielded a wealth of distribution data. Many lithic materials were recovered including Onondaga chert, Hudson Bay Lowlands chert, Abitibi rhyolite, quartz, quartzite, Mistassini quartzite, Appalachian cherts, Flint Ridge, and local Kitchisippi chert. There were three main non-local concentrations of lithics: west, central and eastern. Most of the Onondaga chert and white quartz are in the western part of the site. The fine grained cherts are mostly distributed between the western and the central cluster. The most obvious clustering is that of the Abitibi Rhyolite in the central cluster of artifacts, and is predominately still preserved beneath the pathway. The rhyolite is along the northern edge of the pathway as well as it continues underneath. The Mistassini quartzite and an exotic unidentified chert are clustered together in the eastern cluster.



The clustering and presence of the various exotic raw materials provide a window to the various groups who inhabited this area along the Rideau River. The lithic raw materials from northeastern Québec (Mistassini), the northwestern Québec-Ontario border (Rhyolite), the western and southern fine grained cherts such as Flint Ridge, Indiana Hornstone, Kettle Point, Appalachian cherts indicate a vast network of communication and trade. They had ties throughout the northeast utilizing the rivers as thoroughfares. The individual clustering of the different lithic materials speak of separate groupings of people. This could be a coming together of a number of loosely affiliated families during the summer gathering

(the faunal results indicate at least a warm season habitation).

The site is a major find within the City of Ottawa and represents a predominantly Middle Woodland habitation site. While the site had been mentioned by William J. Wintemberg in 1915/18 in his field notes, the site remained hidden under the pathway until this limited excavation occurred just under 100 years later.

STAGE 4 SALVAGE EXCAVATION OF THE SKYWAY SITE (AhGw-278), CITY OF BURLINGTON, ONTARIO

Shaun Austin

AMEC Environment & Infrastructure conducted Stage 4 salvage excavation of the Skyway site (AhGw-278), on the Burlington Beach Strip in Burlington, Ontario, between January and August, 2011. Representatives from Six Nations of the Grand and the Haudenosaunee Development Institute monitored and assisted with all aspects of the Stage 4 assessment. The Skyway site was most intensively exploited by pre-contact Aboriginal groups from the Transitional Woodland to the early Late Woodland periods (ca. A.D. 700-1400). The site also contained material culture and structural evidence associated with the Grand Trunk/Hamilton and North Western rail line that ran along the beach strip from the 1870s until the early 1900s.

Figure 1. Tent used to cover majority of site area in winter.

Figure 2. Ground thawing machine outside tent.

Figure 3. Laying out ground thawing hoses inside tent.

During the winter months, AMEC worked inside a 60-by-30-metre, halogen lighted and electrically heated tent (Figure 1). The frost was taken out of the ground within the tent using a ground thawing machine (Figure 2). These machines, which are conventionally used to cure poured concrete in winter, circulate heated glycol through long hoses. In this case, the hoses were laid out directly on the frozen ground in a closely spaced pattern and covered with insulated tarps to drive the heat downward (Figure 3). Within a 24 hour period the frost was completely removed from the soil, and was prevented from reforming by four electric ambient heaters (Figure 4). With fully thawed ground, a minimum air temperature of 6^{o} Celsius, and excellent lighting conditions, the identification of deeply buried cultural deposits began with the hand excavation of a series of exploratory

trenches (Figure 5). Once the depth of imported fill atop the significant site deposits was understood, this recent overburden was mechanically removed (Figure 6). The underlying soil layers were then hand excavated by stratigraphic layer in one-metre units (Figure 7), thereby exposing the settlement pattern evidence in the subsoil (Figure 8) for documentation (Figure 9). In early May 2011 fieldwork continued in site areas beyond the tent footprint (Figure 10).

Figure 4. One of four electric ambient heaters inside the tent.

Figure 5. Hand excavation of exploratory trenches.

Apart from winter conditions, AMEC encountered another major challenge: rising groundwater levels in the spring. Beginning in April, the level of nearby Lake Ontario and the groundwater level in the site area had risen significantly, resulting in AMEC encountering standing water in some of the excavation units before culturally sterile subsoil could be reached. In order to address this issue, three sump pits were installed in strategic locations that had either had been completely excavated or were beyond the site deposits. Each sump pit was mechanically excavated in the presence of a licensed archaeologist to a depth well below the water table. A perforated drum, lined with burlap to filter out sediments, was dropped into the hole and surrounded by clear stone (Figure 11). A pump placed inside the drum could then redirect the constantly recharging groundwater to an off-site location. This strategy served to bring the water table down to an acceptable level within a limited radius of influence, but it was not the complete solution. Using the same premise, but with smaller perforated plastic buckets and hand-dug sump pits, the pumps were also used to lower the water table still further within the immediate work area. An AMEC environmental scientist monitored the combined flow rate of all pumps to ensure that our dewatering was within acceptable legal limits without a permit to take water. Moreover a Shop Vac® was employed to help remove any water that did manage to reach a level that would interfere with the excavations.

Figure 6. Mechanical removal of imported fill.

The Stage 4 assessment of the Skyway site required the hand excavation of 1,680 square metres, resulting in the recovery of 25,444 Euro-Canadian artifacts and 122,841 Aboriginal artifacts. The Skyway site settlement pattern and artifact analyses are still underway; however, we can offer the following preliminary results.

The dominant historic Euro-Canadian artifact classes are kitchen/food-related items (mostly ceramics) and

architectural artifacts (principally metal items). While a few isolated creamware sherds and wrought nails were found, there were no discrete concentrations of early nineteenth-century artifacts and none of the early nineteenth-century artifacts came from subsurface features.

Figure 7. Hand excavation of contiguous one-metre units.

Figure 8. Defining settlement patterns in the subsoil.

The most frequently occurring Aboriginal artifact class, ceramic vessel fragments, includes not only Transitional Woodland Princess Point wares (Figure 12), but also Early Iroquoian and Middle Iroquoian vessel fragments, and even a few classic Late Iroquoian rim sherds. The next most frequently occurring artifacts are netsinkers (Figure 13). The fact that the site area was still in use into the historic period is most clearly indicated by the recovery of several isolated historic glass trade beads. AMEC also recovered a variety of intriguing ceramic smoking pipes and other miscellaneous ceramic artifacts (Figure 14, 15, 16, 17, 18), as well as flaked lithics, hammer stones, celts, anvil stones, abraders, bone awls, needles, and combs, and several pieces of indigenous copper.

Figure 9. Recording settlement patterns by means of a Total Station.

Figure 10. Exterior excavation in the spring.

Well over 100 settlement pattern features and more than 2,400 post moulds were fully documented (Figure 19). The types of historic Euro-Canadian features identified include: general pits, wells/cisterns, an animal burial, a utility trench, a concrete house foundation; and a complex structural feature containing a small rectangular wooden box of unknown function and 12 long rectilinear wooden timbers, some of which contained embedded railway spikes.

Figure 11. Installing perforated drum in sump pit.

Figure 12. Princess Point ceramics.

Figure 13. Netsinkers.

Aboriginal features include: nondescript refuse/storage pits, ash pits, hearths, animal burials, hearth events, living floor/hearth complexes, refuse-filled depressions, a sweat lodge, a netsinker cache, a living floor and a hearth complex. Roughly 95% of the post moulds identified relate to the Aboriginal occupation of the site and serve to delineate one longhouse, and one smaller oval structure. In conjunction with exterior feature activity, post moulds also demarcate two substantial outdoor activity areas.

Figure 14. Turtle head effigy pipe bowl.

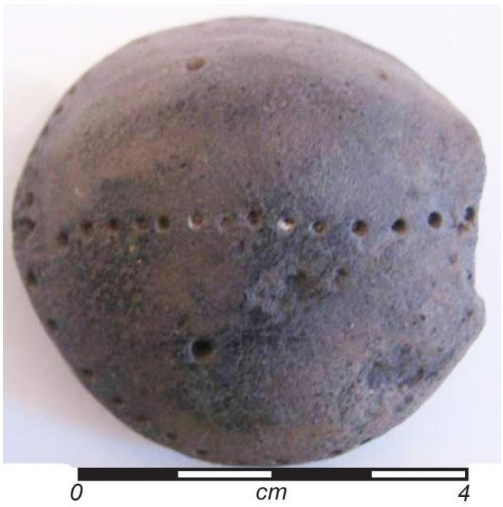


Figure 15. Turtle shell effigy, top view.

The prodigious numbers of netsinkers and other fishing gear (e.g., bone leister fragments and a netting needle), as well as abundant fish bone and fish scales, from both unit layers and features, indicate that the main Aboriginal subsistence focus at the Skyway site was on fishing and fish processing. The site is located near the former natural outlet (filled in ca. 1820s) through the baymouth sand bar referred to as the Burlington Beach Strip, and was situated there to take advantage of the concentrated movements of fish through this former channel.

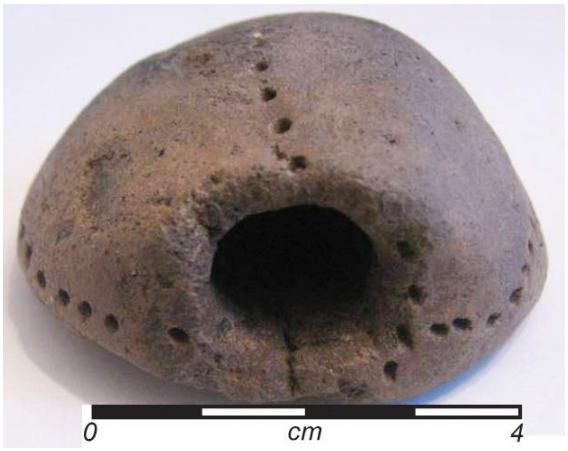


Figure 16. Turtle shell effigy, large opening at one end.

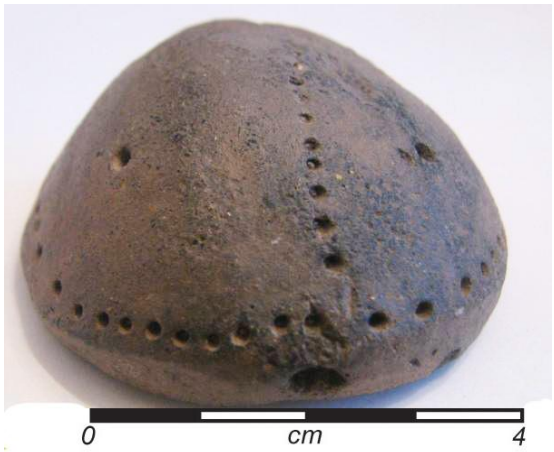


Figure 17. Turtle shell effigy, small opening at opposite end.

Figure 18. Turtle shell effigy, underside showing inscribed figure.

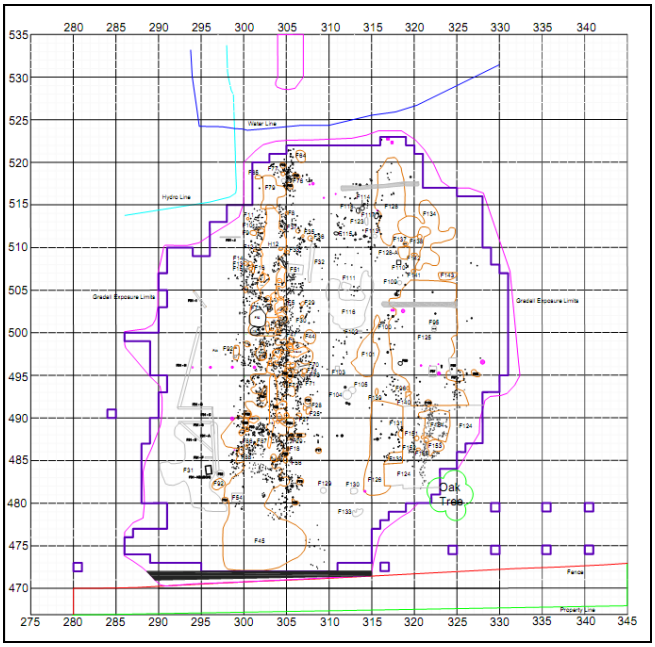


Figure 19. Settlement patterns.

Rice Lake, Ontario

Lisa Sonnenburg, School of Geography and Earth Sciences, McMaster University

Isostatic rebound and climatic changes throughout the Holocene have resulted in several periods of lowered water-levels in the Great Lakes watershed. The Early Holocene lowstand phase corresponds with the Paleoindian period in the Great Lakes Region (11,000-9000 YBP), and subsequent water-level rise has inundated Paleoindian archaeological sites. Research done by Lisa Sonnenburg, Joe Boyce and Ed Reinhardt of McMaster University between 2007 and 2010 sought to reconstruct the water-level history of Rice Lake (located north of Lake Ontario) in order to identify areas of high potential for submerged prehistoric sites.

In 2007 and 2008, over 750 line km of detailed geophysical data (single-beam bathymetry) and 16 sediment cores were collected over a 30 km^2 area of Rice Lake. Sediment cores were visually logged and analyzed for particle size, microfossils and microdebitage. Water-level reconstructions accounting for sediment infill and isostatic rebound of the lake record a post Lake Iroquois (after 12 ka BP) Early Holocene lowstand (~10-12 m below present level (bpl)) (EH-1). At 10 ka BP, gradually rising water-levels and establishment of wetlands as

indicated by thecamoebian assemblages coincide with a newly discovered Paleoindian occupation of the McIntyre basin, where quartz microdebitage was found. Water-level continued to rise to almost 2 m bpl until 6.5 ka BP, when warmer and drier temperatures caused a sudden drop in water-levels as recorded by a pollen hiatus. After 4 ka BP, water-levels quickly recovered and stabilized as shown by rapid recovery of pre-hiatus thecamoebian biofacies and the establishment of wild rice stands.

Changes in Holocene water levels and shoreline positions were reconstructed by integrating core data with a digital elevation and bathymetric model (DEBM) that accounted for differential isostatic uplift and basin sedimentation. The DEBM was used to generate a series of paleogeographic maps showing paleoshoreline positions, water depths and areas of prehistoric archaeological potential. The isostatic uplift of the eastern basin outlet (> 30 m) had a dramatic influence on water levels and shoreline positions since the inception of Rice Lake (ca. 12 ka BP). An archaeological potential map based on the reconstructed paleoshorelines identified four areas with archaeological potential: these include drowned river mouths, submerged wetlands and an area of uplifted Early Holocene lakebed in northeast Rice Lake.

The small number of known, well-preserved Great Lakes Paleoindian sites has limited analysis of Early Holocene population densities, migration patterns, cultural diffusion, or the chronology of settlement. The method of modelling water-level fluctuations and associated archaeological potential developed in this study represents a substantial advance in our understanding of Early Holocene archaeology in the Great Lakes. These methods will have broader application to exploration of submerged terrestrial landscapes elsewhere in the Great Lakes and will allow for future regional synthesis of archaeological site distribution and characteristics. While research on this section of Rice Lake has been completed, it is the hope of the researchers that additional work will be completed in the future.

The Ontario Archaeological Society

http://hamilton.ontarioarchaeology.on.ca/

http://huronia.ontarioarchaeology.on.ca/

http://www.ssc.uwo.ca/assoc/oas/index.html

http://www.ottawaoas.ca/

http://peterborough.ontarioarchaeology.on.ca/

http://anthropology.lakeheadu.ca/?display=page&pageid=80

http://toronto.ontarioarchaeology.on.ca/

https://sites.google.com/site/windsoroas/

Quebec

http://www.archeologie.qc.ca/

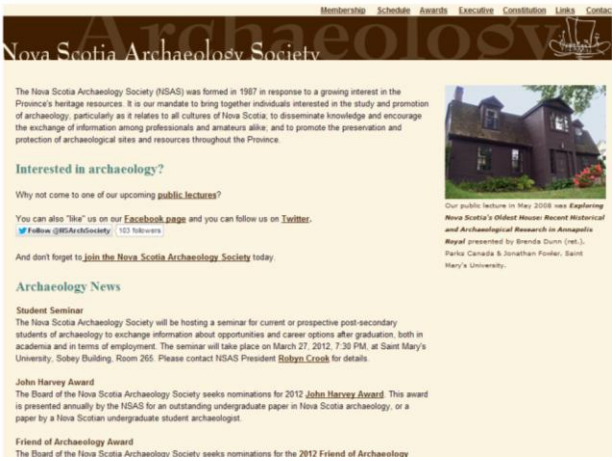
New Brunswick

http://www.archaeological.org/societies/newbrunswick

Nova Scotia

The Nova Scotia Museum compiles its own fieldwork reports; these can be downloaded from the Museum's webpage http://museum.gov.ns.ca/arch/.

The 2010 edition includes seven submissions dealing with a diverse range of topics including mitigation operations at the historic sites of the Fortress of Louisberg (Dugan) and Grand-Pré (Fowler), preliminary work on Acadian expulsion sites (Shears), efforts by the Archaeological Land Trust of Nova Scotia (www.altns.ca) to protect prehistoric and historic occupations in the central part of the province, excavation of pre-historic shell midden sites on the province's east and west coasts (Betts and Deal et al.), and a public archaeology program organised by the Nova Scotia Archaeological Society (http://www.novascotiaarchaeologysociety.com/).



Prince Edward Island

Helen Kristmanson, Director, Aboriginal Affairs and Archaeology, Aboriginal Affairs Secretariat, Department of Health and Wellness, Government of PEI,. and Meghan Ferris, Research Assistant, Aboriginal Affairs Secretariat, Department of Health and Wellness, Government of PEI.

Archaeology continues to gain momentum in Prince Edward Island. Slowly but surely we are seeing a positive public and private sector response to the demands of cultural resource management; although given the small number of permits issued so far it is clear we still have a long way to go before impact assessments are a matter of routine. We are also pleased to report an active research agenda whether it be our own Malpeque Bay Archaeological Research Project, collaboration with community groups, independent research, or work conducted in the National Park by our friends and colleagues at Parks Canada.

In terms of our in-house research program, 2011 has been a productive year. This summer we spent eleven weeks

Figure 1. 2011 Excavations at La Pointe aux Vieux, a pre-Deporation Acadian site in western PEI.

at La Pointe aux Vieux (CdCx-5), a pre-Deportation Acadian house, c. 1728-1758, situated adjacent to several coeval Mi'kmaq settlements (Figures 1 and 2). Our crew and volunteers included local Acadian and First Nations community members who contributed a profound sense of place and history to the work. This intensified as one of our crew members genealogically traced a number of volunteers to the original settler, Pierre Arsenault, while also revealing (previously unknown) shared ancestry between some of the Acadian and Mi'kmaq crew and volunteers. Meanwhile, our friends from the nearby Lennox Island Reserve were regular visitors and kept a protective eye on things when we were off-site. In addition to the usual benefits of archaeological research, the crew's discovery and appreciation of the past as a shared place contested sub-texts of ownership and drew attention to the social and intellectual implications of archaeology as a practice in the present. In January, the site was designated as protected under provincial legislation. In summer 2013 we will be hosting an exhibit of the work at the Acadian Museum in Miscouche, Western PEI.

While most of our attention was focused on PAV, this September we were invited to document a portion of Pethick's brewery and distillery site (c. 1826) which was located under a private downtown residence whose foundation was being repaired (Figures 3 and 4). This October we will return to Malpeque Bay with the Mi'kmaq Confederacy of Prince Edward Island for a couple of days of monitoring and testing at Pitawelkek, a Woodland period shell midden. In other activities, we will continue to process some private collections, and, to aid in the protection of PEI's fragile archaeological heritage we are also working with climatology scientists on a provincial strategy for dealing with the impact of climate change and coastal erosion at cultural sites.

Figure 2. La Pointe aux Vieux, pre-Deportation Acadian farmstead. Meghan examining a new feature.

Figure 3. Documenting Pethick's Brewery and Distillery, c. 1826, before it is destroyed by the backhoe.

Figure 4. Interior shot, storage vault at Pethick's Brewery and Distillery, c. 1826.

Many thanks to all of our colleagues, partners, and volunteers who are helping to raise the profile of archaeology in Prince Edward Island.

Pat Allen (SAW-WHET Consulting)

In the spring of 2009 two Island coastal surveys (initiated by PEI's Aboriginal Affairs Secretariat and co-sponsored by the Mi'kmaq Confederacy of Prince Edward Island) were conducted. The footwork focused on shorelines surrounding Green Park Provincial Park in the northern arm of Malpeque Bay and, on the Murray Harbour / Murray River area off Northumberland Strait. While coastal erosion was found to have destroyed several sites recorded less than 30 years ago, 16 new sites were added to the PEI register including a small shell midden. All but one of the six sites having First Nation pre-contact/early historic affiliations were judged to be at extreme risk of total erosion within the short term. Several wonderfully representative 19th century Island economic/commercial sites were recorded. Murray Harbour's Beach Point lobster processing factory (within a dune) and the Buckwheat Wharf shipping terminal (only visible at low tide) are impressive sites. Within Green Park a superbly preserved shipbuilding site was located while just to the east of the Park an intact 19th century Lime Kiln site has been preserved by a diligent landowner.

During July 2010 an archaeological testing project (sponsored by PEI's Aboriginal Affairs Secretariat in co-operation with the Mi'kmaq Confederacy of Prince Edward Island) was initiated along the upper Hillsborough River, near Mount Stewart. Retired farmer Bruce Pigot (Figure 1) had amassed an intriguing collection of artifacts from a plowed riverside location historically known as *Red Bank*. Two sites, dating from the late 18th through 19th century were found and identified as Mi'kmaq wigwam sites. The sites contain general domestic artifacts as well as a considerable collection of culturally specific items such as glass sherds modified into wood-working tools and Mi'kmaq stone pipe fragments. The *Red Bank* sites represent a period of extreme hardship for the Mi'kmaq whose very survival depended on adapting traditional lifeways and skills to the new English system of land ownership and, to a fast developing and intensive fishing and farming economy.

Both *Red Bank* sites are considered worthy of preservation and future research.

Figure 1. Bruce Pigot, local resident and amateur historian who showed us the locations of the Mi'kmaq wigwam sites at the Mount Stewart Lagoon.

Stanhope Farmlands Archaeological Project, PEI National Park.

Robert Ferguson (retired), Atlantic Service Centre, Parks Canada

For the third year, Parks Canada and the Stanhope Historical Society (SHS) collaborated on a week-long excavation in a late 18th-century house on the north shore of Prince Edward Island. In 2008, SHS members requested an investigation of a large depression along the Farmlands Trail in PEI National Park (Figure 1). A team of volunteers organized through SHS, working with Parks Canada archaeologist Rob Ferguson, spent one week in 2008 and again in 2010 and 2011 testing the site. Artefacts indicate an occupation falling within the late 18th and/or early 19th century. Creamwares and pearlwares dominate the ceramic assemblage (Figure 2), as well as agateware and black basaltes stoneware, verifying a post-Acadian time period. There are no artefacts to indicate a continued later 19th-century occupation.

Figure 1. Volunteers excavate the cellar of a late 18th-century house beside the Farmlands Trail in PEI National Park. (Photo: Rob Ferguson, Parks Canada)

The site is within the bounds of a former flax plantation established by James Montgomery, an absentee landlord who acquired rights to Lot 34 in 1767, after the deportation of the French population in 1758. David Lawson was sent over as overseer for the plantation, together with about 50 Scottish settlers in 1770. Lawson was dismissed in 1788 over mishandling of funds. The farm was subsequently leased to the Bovyer family, Loyalists from Rhode Island who had recently arrived on the island. The Bovyers occupied Lawson's house at least until 1802. It is possible that this is the Lawson/Bovyer residence, although the connection is tenuous. One of the Bovyer sons remained in Saint John, New Brunswick and served in the New Brunswick Regiment. In our first season, we recovered

a copper alloy button of the New Brunswick Regiment. The coincidence of regiment and time period is our only clue to the identification of the structure.

Figure 2. Volunteer Bob Smith uncovers fragments of a creamware plate with 'Royal' pattern rim. (Photo: Rob Ferguson, Parks Canada)

Excavations in 2008 and 2010 revealed a shallow midden deposit north of the cellar, and provided a cross-section into the north side of the cellar. This year, excavations were focussed on the cellar floor. An area 2.5 x 5 m was opened, exposing a chimney base and a thick deposit of charcoal and artefacts presumably dumped from the hearth above (Figure 3). Much of the cellar had been filled over the years with field stones removed from ploughed fields adjacent to the Farmlands Trail. Artefacts within that stratum are small and scattered. Once below that, however, there are sizable pieces of ceramics, especially creamware plates. Apart from the kitchen-related items, there are few other artefacts relating to activities or to the house construction. Wrought iron nails are limited, and there are only a couple of hinge fragments. Also there are surprisingly few tobacco pipe fragments, and faunal remains are scant.

Figure 3. Final view of 2011 excavations, showing stone chimney base, partially excavated charcoal stratum in foreground, and post-occupation stone fill in background. (Photo: Rob Ferguson, Parks Canada)

The cellar floor has not yet been reached. It is hoped that excavations can continue in 2012, completing the work of 2011 and expanding into deeper parts of the cellar. Parks Canada is grateful to members of the Stanhope Historical Society, and in particular John Palmer who coordinated the long list of daily volunteers and sustained us with daily nourishment. Tara McNally coordinated project logistics for Parks Canada. The site is located on a popular hiking trail, making it an exciting point of interpretation for the human history of our national park.

Newfoundland and Labrador

The Newfoundland and Labrador Provincial Archaeology Office 2011 Archaeology Review contains 19 submissions involving excavation and survey work throughout the province (Figure 1). Complementing the geographic range of projects are the periods and cultures involved, including prehistoric occupations on the Island (Wells et al.), the proto-historic and post-contact periods (Fay, Fitzhugh and Phaneuf, McLean, Rankin, Stopp, Swinarton), and historic archaeology (Burns and Lock, Crompton, Daly and Guiry, Gaulton and Tuck, Gilbert, Jenkinson and Loring, Pope). Both governmental and private agencies conducted a range of

activities including repatriation, mitigation, excavation, and field schools at a variety of sites (Brake, McLean, Penney, Reynolds et al., Schwarz, Skanes).

The Archaeology in Newfoundland and Labrador 2011 report is available for download at http://www.tcr.gov.nl.ca/tcr/pao/Newsletters/Vol%2010%20-%202011.pdf

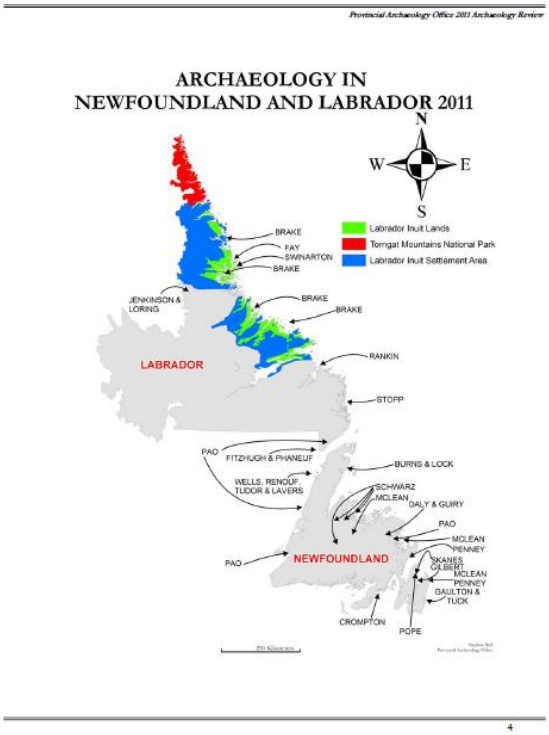


Figure 1. Map showing locations of archaeological activity in Newfoundland and Labrador (courtesy the PAO).

Archaeology at Ferryland 2011

Barry C. Gaulton and James A. Tuck

This year marked the 20th season of consecutive fieldwork at Ferryland, but it was eventful for other reasons as well: 2011 was the most labour intensive, coldest and yet, one of the most informative field seasons to date. The first half of the 16 week season focused on a seventeenth-century mortared stone building partially exposed back in 2004 but which we had not revisited owing to a variety of logistical challenges, not the least of which was its elevated location at the southern end of Area F nestled under a steep hillside. In June, the field crew removed the tarps, sand bags and wooden platforms that had covered the site and proceeded to excavate a 2x5 metre trench inside the eastern half of the structure (Figure 1). Unfortunately, the first metre of overburden consisted largely of unconsolidated gravel rapidly deposited in the depression of the collapsed building sometime in the early decades of the nineteenth century. To make matters worse, below the gravel fill was a dense concentration of large boulders, almost all of which were too large to remove by hand and owing to the site's location were inaccessible for mechanized removal. The only recourse was to break up the boulders individually using a maul or cleave them apart with a hammer and chisel. All the rocks and excavated soil were carried from the site approximately 150 metres (thankfully some of it downhill) to the sifters and backdirt pile.

Figure 1. Partially exposed back wall of mortared stone building, looking south.

While most of the crew were struggling with the challenges posed inside the building, excavations started

outside the east wall of structure in an effort to locate associated refuse deposits and expose portions of the builder's trench. This proved to be much more productive with much less effort. The matrix within the builder's trench – mostly shattered bits of stone, roof slate fragments and lime mortar – also contained a variety of seventeenth-century ceramic, glass and clay tobacco pipe fragments. The pipes, in particular, helped to date the building's construction to the Calvert period. A nearby refuse deposit also demonstrated that this stone building was utilized throughout most of the Kirke era (1638-1696). Beside datable clay tobacco pipes, some of which were produced in the third quarter of the seventeenth century, excavations revealed another lead DK token, this one an example of the smallest denomination 'farthing' pieces described by Berry (2006) and Jordan (2006). The large quantity of faunal remains is likewise worthy of note. This may be suggestive of the building's function (discussed below); however, it must be recognized that the lime mortar greatly improved bone preservation, and thus recovery, compared to most other parts of the site.

Excavations to the east of the stone building also uncovered thousands of associated window glass fragments indicating that there were glazed windows on this side of the structure. Curiously, there were comparatively few lead window cames in the same deposits. Those that were recovered, like the other examples of window cames at Ferryland, were devoid of any dates or diagnostic marks as is often *not* the case on other sites in colonial North America. Outside the northeast wall of the building, a 0.91m (3 ft) wide cobblestone pavement was exposed and continued north for a short distance toward the large stone hall of Calvert's 'Mansion House' (Figure 2). The pavement's southern and eastern edges were clearly delineated but its northern terminus is uncertain due to the gradual erosion caused when the high stone walls of the adjoining buttery/cold room and nearby stone 'hall' collapsed sometime after 1696. The location and orientation of this cobble pavement suggests that there was a door at the northeast side of the mortared stone building and that those living/working there had access to the second floor of Calvert's hall.

Despite the difficult conditions encountered inside the mortared stone building, the field crew were able to fully

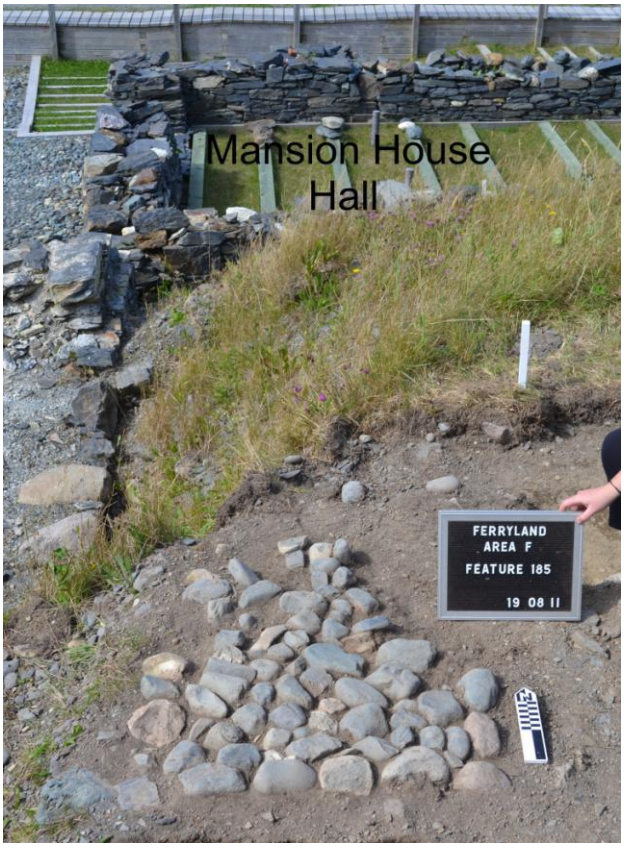


Figure 2. Cobblestone pavement leading toward the hall of the 'Mansion House.'

expose and record its interior walls and a fireplace and excavate down to subsoil in several units. As seen in Figure 3, the mortared walls are well preserved and the interior dimensions of the structure are 4.87m by 6.09m (16 by 20 feet). The fireplace at the back (south) of the building is 1.83m (6 ft) wide at the opening, 0.91m (3 ft) deep and situated just west of centre. The building appears to have had a wooden floor based on the presence of post molds which could have supported floor joists.

There are two other features associated with this building: a cobblestone pavement immediately south of the structure and a large circular hole, 1.83m (6 ft) in diameter, inside the southwest corner of the building. The cobblestone pavement (Figure 4) appears to have functioned as a drainage feature, redirecting water runoff away from the interior of the building. The circular feature, with vertical walls dug into the rocky subsoil, was excavated for about 1 metre before work was halted due to the potential danger of collapse of the nearby

Figure 3. Stone building, looking south.

mortared walls. Given its shape and vertical orientation, it seems likely that this is another well. The presence of this feature holds promise for some very interesting archaeology. However, before excavations can proceed we must determine how to stabilize the nearby south and east walls of the building.

Figure 4. Cobblestone 'drain' feature at the back of the building, looking west.

Based on the above description, the current interpretation is that this mortared building originally served as a kitchen within a larger group of interconnected structures later referred to in the 1650s as Calvert's 'Mansion House.' The kitchen was the southern half of a two-unit service wing; the northern half, the buttery/cold room was fully excavated (with the exception of its cellar) back in 2006. Although future excavation and analysis is required before any conclusions can be drawn, the architectural and artifactual evidence suggests that food preparation and cooking were primary activities associated with the building's initial function.

Toward the end of August, the remainder of the field crew (minus the summer students) came down from the hill and began excavations at the western end of Area F, on land formerly owned by the Costello family. At the end of last year's field season, the crew exposed a small section of a stone feature and this was one area we planned on investigating further in 2011. As often turns out, this feature overlies the remnants of an earlier building which overlies an even earlier sixteenth-century migratory fishery and Beothuk occupation. The uppermost and thus most recent feature turned out to be a large stone fireplace, likely dating to the early decades of the eighteenth century (Figure 5). Measuring 2.32m (7 ft, 6 in) at the opening, the fireplace has a brick hearth and at the back (east) is a small alcove or room, with a well-worn flagstone floor.

Immediately above these structural remains, we found our most interesting (and exciting) artifact of the summer: a Portuguese 1000 Reis gold coin dated 1708 (Figure 6a-b). What makes this coin so interesting is that it was purposefully bent into an S shape to make a love token, essentially an object of affection that a man would bestow to his sweetheart or wife. We may never know who gave the token or who received it; however due to its value, it was certainly presented by an individual of some means. One possible individual is the merchant James Benger who later married Mary Kirke, the former wife of David Kirke (Jr). Mary Kirke took possession of the Kirke family's Pool Plantation after 1697 and both Mary and her second husband James Benger resided somewhere in the vicinity of the inner harbour or Pool, possibly in the same house revealed this summer. Our next step is to figure out how best to preserve and display the remains of this structure while also investigating the

Figure 5. Stone fireplace with brick hearth, looking east.

earlier occupations beneath. No doubt 2012 will prove to be a busy time.

The 2011 field season would not have been possible without the assistance of the Colony of Avalon Foundation, the Atlantic Canada Opportunities Agency, the Provincial Department of Tourism, Culture and Recreation, the Provincial Archaeology Office, the Social Sciences and Humanities Research Council and last but certainly not least, Loyal and Millie Benham of New Mexico, who, over the last number of years have generously funded two students to work in the field. Thank you as well to our field and lab crews, our conservators Donna Teasedale and Charlotte Newton, and curator Maria Lear.

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Figure 6a. Portuguese 1000 Reis gold coin dated 1708 (obverse).

Figure 6b. Portuguese 1000 Reis gold coin dated 1708 (reverse).

The 2011 Field Season at Phillip's Garden (EeBi-1), Port au Choix National Historic Site, Northwestern Newfoundland.

P.J. Wells, M.A.P. Renouf, C. Tudor, and D. Lavers
(Memorial University of Newfoundland)

Introduction

Survey and excavations in the summer of 2011 were conducted by the Port au Choix Archaeology Project at Phillip's Garden, a large Middle Dorset site on the northwest coast of Newfoundland. The aims of this season build upon ongoing research focusing on dwelling architecture to include high resolution geophysical surveys of excavated and unexcavated house features, and the continued excavation of one dwelling, House 10 (Harp 1976; Renouf 2003, 2006, 2011; Renouf et al. 2005).

Phillip's Garden covers an area of over 2 ha on the Point Riche Peninsula, northwestern Newfoundland (Figure 1). Its occupation spans 800 years, from 1990 to 1180 BP. Based on calibrated radiocarbon dates from house features, Renouf and Bell (2009) divide the occupation into three phases defined by shifts in the intensity of settlement. The early phase of initial low population is followed by a middle phase showing a dramatic increase in the number of houses with overlapping dates, and finally a late phase marked by a population decline. The lengthy and intense occupation at Phillip's Garden is influenced by the abundant, predictable harp seal populations that migrate through this area twice each year (Renouf 2011). Excavations of midden features at the site demonstrate a strong focus on seal hunting (Hodgetts et al. 2003; Murray 1992; Renouf 2000), and associated skin processing practices (Bell et al. 2005; Renouf and Bell 2008).

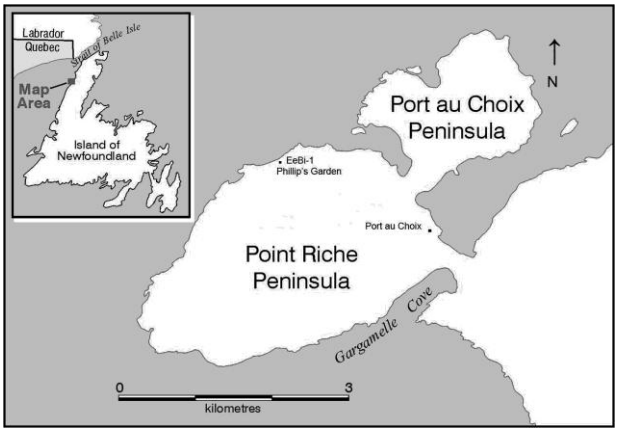

Figure 1 Location of Phillip's Garden on the Point Riche Peninsula, northwestern Newfoundland.

Phillip's Garden includes an estimated 68 dwellings located on a series of beach terraces 6-11 m above sea level, of which twenty-four have been investigated archaeologically. Twenty dwelling were tested or extensively excavated by Harp (1964, 1976), and four by the Port au Choix Archaeology Project under the direction of Renouf (1986, 1987, 1991, 1993, 2011). In addition, Renouf's re-investigation of four dwellings previously excavated by Harp resulted in an enhanced understanding of house dimensions and details of construction (Cogswell et al. 2006; Renouf 2006, 2007,

2011; Renouf et al. 2005). In particular, houses from the middle phase are much larger than Harp suggested; indeed exceeding dimensions recorded elsewhere for the Dorset (Renouf 2003). Furthermore, their construction was more substantial and included a number of re-building phases (Renouf 2011).

Excavations in 2011involved continued re-investigation of House 10, a middle phase (1550-1350 cal BP) dwelling previously excavated by Elmer Harp (1976, field notes 1962), and later tested by the Port au Choix Archaeology Project (Renouf et al. 2005). In 2004 the Port au Choix Archaeology Project excavated a 1.5 m by 14.5 m east-west trench through the centre of House 10, establishing the presence of an eastern platform, western berm, and two central pits. Excavations this year revealed greater details of the dwelling size, shape, orientation, and internal layout. In addition, features uncovered by Harp (field notes 1962) were reinvestigated to reveal their structural design and function, and new features were exposed, expanding our appreciation of architectural details and activities within the house.

The geophysical survey builds on magnetometry conducted at Phillip's Garden in 2001 by Eastaugh and Taylor (2011) in which they identified the presence of four dwellings hidden beneath midden deposits within a 2600 m² area of the site. The 2011 survey focused specifically on recording, at high resolution, seven dwellings using both magnetometry and ground penetrating radar (Figure 2). The results of data collected by the geophysical survey will form the basis of Tudor's MA thesis.

Figure 2. Surveying with ground penetrating radar (left) and magnetometer (right).

Geophysical Methods

Two types of non-invasive geophysical survey techniques, magnetometry and ground penetrating radar, were used. These methods complement each other as they test different properties and yield results at different spatial resolutions. While magnetometry can provide information at the scale of house outline, ground penetrating radar can record data at the scale of house layout.

Our survey focused on four previously excavated or partially excavated middle phase dwellings including: House 4, House 6, House 10, and House 11 (Harp field notes 1961-63). In addition, three unexcavated depressions that we presume to be dwellings (Feature (F) 368, F381 and F382) were surveyed to determine whether they would render different results than excavated dwellings (Figure 3). For the geophysical survey, we employed a Sensors and Software Ground Penetrating Radar with a 500 MHz antenna and a GEM Systems Overhauser Magnetometer. A 20 x 20 m grid was established over and beyond each dwelling. We surveyed along continuous east-west transects, spaced at intervals of both 10 cm and 25 cm.

House 10 Excavation Results

A total of 103 m² was excavated exposing the house front, eastern platform, western platform and much of the rear (southern) platform of the dwelling (Figure 4). In addition, 34 features were identified including several pits, post-holes, middens and flake concentrations. Like other dwellings dated to this period, House 10 is large, measuring 13.5 m north to south and 10 m east to west. It has a well-defined interior depression and a central axial feature including at least one post-hole. The entrance to the house was marked by a cluster of large stone slabs, and excavations along the outside of the house front revealed a narrow berm of heavy boulders reinforcing the natural sandy matrix. Just outside the house to the northwest was a large midden. It included a number of articulated seal vertebral columns and skulls in addition to the bones of other species, charcoal, and some artefacts. A number of charcoal samples from various areas associated with the dwelling was collected for dating.

Conclusion

The 2011 excavations of House 10 at Phillip's Garden identified dwelling architecture and internal features. Analysis of the geophysical data for House 10 and the other six dwellings in the sample is in progress and will provide an assessment of the utility of these methods for non-invasive identification of dwelling architecture at the site.

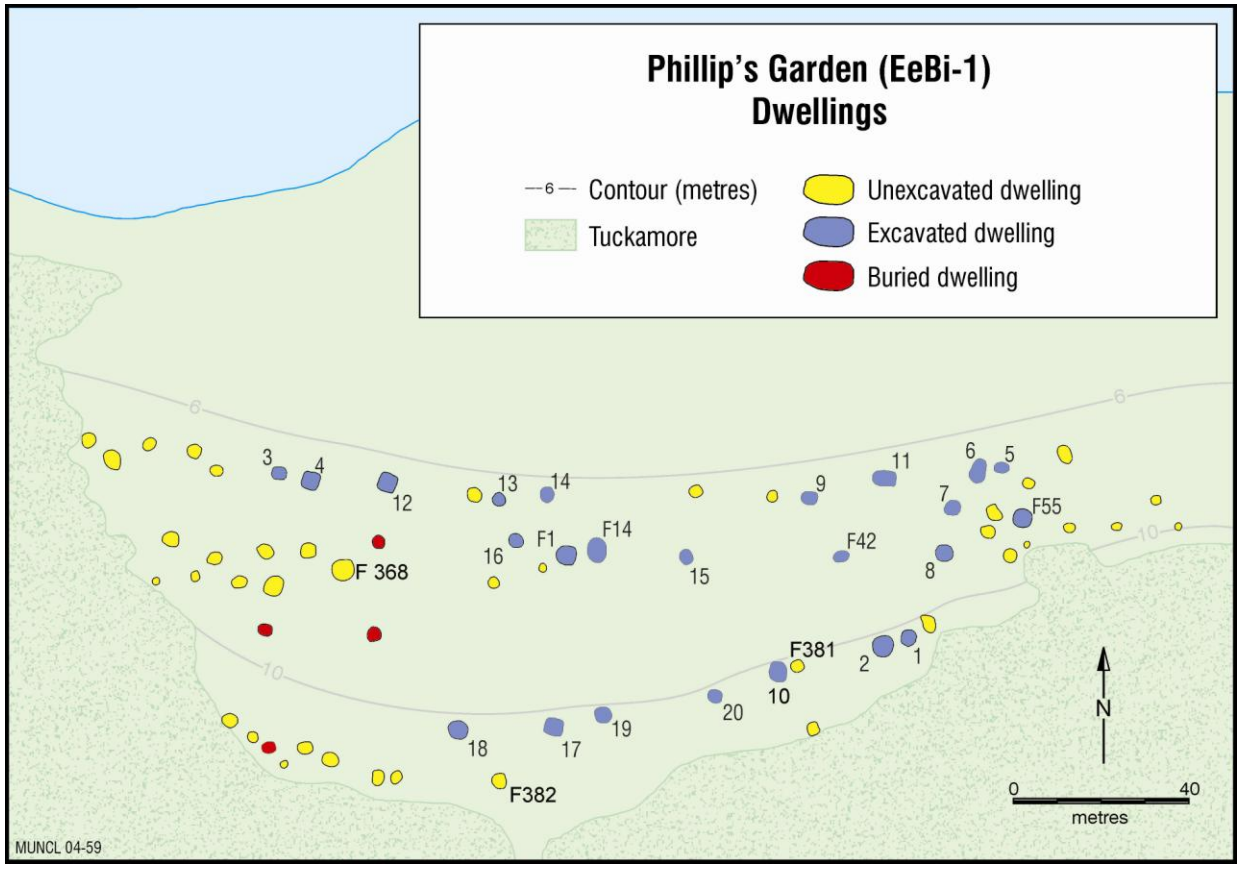

Figure 3. Location of dwelling features at Phillip's Garden. The dwellings and depressions investigated through geophysical methods are circled. House 10 was also fully excavated.

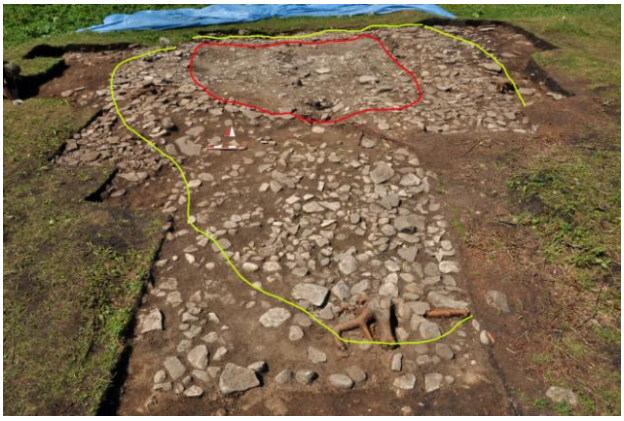

Figure 4. House 10 looking north. The exterior perimeter is outlined in yellow and the interior depression in red.

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2010 Fieldwork report: Historic Palaeoenvironmental Landscape Analysis: Okak Bay, Labrador

Cynthia Zutter, Grant MacEwan University, Edmonton

In the summer of 2010, micro and macro botanical samples were collected in the Okak Bay region of Labrador to initiate research into the formation of anthropogenic landscapes by 17th C. Inuit. A total of 60, 5 litre samples were retrieved along two transects beginning from the Inuit archaeological site of Uivak Point 1 (HjCj-9) and extending to small stands of spruce forest in the area. A small team of two MacEwan University students (**Claire Earley** and **Jamie Ohler**) along with **Ashlee Pigford** (MSc University of Alberta) assisted me in this SSHRC supported project. In addition to the collection of samples, many hours were spent by the team on reconnaissance treks documenting current forest biomass in the region with close attention being paid to the presence and absence of spruce krummholz and trees.

Krummholz spruce stand in the Okak Bay area. As part of this exploratory landscape research the economic significance of forest tundra plant resources within historic Inuit culture will be considered and will assist in restoring traditional knowledge concerning land use to local communities in northern Labrador. The next 18 months of this project will involve many hours of pollen and macro botanical analysis to be conducted at MacEwan University and the Palaeoenvironmental Lab, University of Alberta followed by the dissemination of results at professional meetings and various publications.

Krummholz near the Uivak site, Okak Bay, Labrador.

Yukon

Yukon Fieldwork Highlights 2008-2011

Ruth Gotthardt, Heritage Resources Unit, Cultural Services Branch Department of Tourism and Culture, Government of Yukon

2008

The 2008 field season in Yukon saw 16 permits issued for archaeological investigations in the Yukon. Archaeological consultants for Matrix Research Ltd., Ty Heffner, Michael Ross , Rob Commiso, and Robin Wowitka, carried out impact assessments for the Ketza mine site and for various infrastructure development projects throughout the Yukon, including the Carmacks-Stewart Crossing transmission line, Northern Cross oil exploration access in Eagle Plains, and subdivision development in the Dawson area. James Mooney (Ecofor Consulting Ltd.) completed assessment work in connection with relicensing and new developments at the Mayo B dam. Brian Apland (Points North Heritage Consulting) undertook assessment work at the MacTung Project and Bjorn Simonsen (Bastion Group), carried out assessment work for the Selwyn Project, both large scale mining exploration projects in the Mackenzie Mountains on the Yukon/NWT border. Research/inventory projects included year three of an inventory of shipwreck sites on the Yukon River by John Pollack (Institute for Nautical Archaeology), year two of archaeological mapping at the Northwest Mounted Police Post at Tagish by Victoria Castillo (Salix Consulting), investigations at Gwizi Cave and other cave localities in the northern Ogilvie Mountains as well as a revisit to the Poulton Station site by Raymond Le Blanc (University of Alberta), continuing excavation at the Little John site by Norm Easton (Yukon College), excavation at the site of Trouble Hill near Minto, on the Yukon River by Christian Thomas (Government of Yukon), preliminary archaeological inventory in the Peel River watershed and ongoing monitoring of southwest Yukon ice patch localities by Greg Hare (Government of Yukon).

Ta'an Kwach'an elders visiting the Yukon Government Archaeology Lab to view ice patch artefact collections and discuss the project with Greg Hare.

2009

A total of 20 permitted archaeological investigations were carried out in Yukon in the 2009 field season. Impact assessments in connection with a growing number of developments dominated the archaeological work. Ty Heffner (Matrix Research Ltd.) assessed various residential and agricultural subdivisions in the Whitehorse and Haines Junction area, timber harvesting

Non-standard archaeological sites: southern Yukon ice patch survey in 2009.

Non-standard archaeological technique. Greg Hare chainsaw sampling an ice patch showing marked layering of caribou dung and ice.

areas near Haines Junction, portions of the Carmacks-Stewart Crossing transmission line, trails and ancillary developments in the White Gold mining area in central Yukon and proposed staging areas for North American Tungsten near Ross River. Jamie Mooney (Ecofor Consulting Ltd.) carried out additional assessments at the Mayo B Hydro project and undertook impact assessment of proposed Yukon Government and Teslin Tlingit Council subdivisions near Teslin. Kirsten Soucey (Altamira Consulting) carried out impact assessment of Western Copper's Casino Project in central Yukon. Research/inventory projects included further studies of Yukon River underwater wreck by John Pollack (Institute of Nautical Archaeology) continuing work at the Little John site by Norm Easton (Yukon College), excavations at the early-mid Holocene Poulton Station site by Raymond Le Blanc (University of Alberta), inventory work in the upper Peel River watershed and ongoing monitoring of southwest Yukon alpine ice patch sites by Greg Hare and Christian Thomas (Government of Yukon).

Rae Mombourquette (Kwanlin Dun First Nation) with a wooden arrow shaft found at the edge of a melting ice patch.

2010

The 2010 field season saw 29 permits issued for archaeological investigations. Additional work was completed at Casino Mine (Kirsten Soucey), Teslin subdivisions (James Mooney), Selwyn Project Phase II in the Ross River area (Bjorn Simonsen) and in timber harvest areas around Haines Junction and on the Carmacks-Stewart Crossing transmission line (Ty Heffner).

James Mooney (Ecofor Consulting) completed as well salvage work at sites on Mayo Lake and additional work for the Mayo B Hydro project. John Pollack (INA) located the underwater wreck of the sternwheeler *Columbian*, possibly the most famous steamboat disaster on the Yukon River, near Eagle Rock, upriver of Carmacks, and worked with Lindsey Thomas (Texas A & M) in the dive and recording on the sternwheeler *A.J. Goddard* in Lake Laberge. Ty Heffner (Matrix Research) carried out assessment at the Minto Mine Phase IV expansion and at the site of the new hospital in Dawson City, which identified a very small prehistoric component, dated ca. 2800 BP and an elk (?) antler (non-cultural) at a depth of about 1.4 m dated to about 9,000 BP.

Excavations at JeUs-42 with Kwanlin Dun First Nation and Ta'an Kwach'an Council students assisting, and husky looking on.

Additional work was carried out by Heffner in connection to new Whitehorse subdivisions, focussing on salvage of three sites in the McIntyre Creek drainage; this work overlapped with a community research project undertaken by Ruth Gotthardt, assisted by student Gillian Farnell (Yukon Government) with Kwanlin Dun First Nation and Ta'an Kwach'an to carry out test excavations at four microblade sites in the McIntyre Creek drainage. One site worked on by both projects (JeUs-42) appears to represent a specialized workshop with a preponderance of burins in the collection. A total of seven radiocarbon dates were run on charcoal from apparent hearths in the site; two dates are in the range of 7000 BP and likely date what is interpreted to be a single component occupation; the remaining dates are quite variable and considered problematic.

Lindsey Thomas diving on sternwheeler *A.J. Goddard*. The *A.J. Goddard* was designated as a Yukon Historic Site in 2010 (John Pollack photo)

Heffner also carried out the first year of an inventory project with Kwanlin Dun First Nation, with assistance from Ta'an Kwach'an Council looking at historic and prehistoric occupations in the Michie and M'Clintock Creeks area, north of Marsh Lake. Greg Hare (Yukon Government) assisted in this project as well, examining

alpine zones of the study area and ice patch locations. Gotthardt and Hare (Yukon Government) completed a brief archaeological sites overview for the proposed new territorial park in the McDougall Pass/Bell River region of northern Yukon and as well as testing of the traditional camp site at Fraser Falls with the First Nation of Nacho Nyak Dun.

Dawson Wastewater Treatment Plant excavation. Coffin under plywood in back corner of excavation.

Coffin being removed from edge of Dawson Wastewater Treatment Plant excavation (Sue Parsons photo).

Later in the season, Greg Hare and Christian Thomas assisted FNNND in the recovery and reburial of bones eroding from the cemetery at Lansing Post on the Stewart River. Monitoring of southwest Yukon ice patch sites was also continued by Greg Hare and Christian Thomas. Other projects included an overview of a proposed mine project on the Yukon/NWT border, west of Watson Lake by Casey O'Neil (Golder & Assoc.), overview assessments of the quartz exploration in White River and Stewart River areas and in the Coffee Creek area by Ty Heffner and Todd Kristensen (Matrix Research), and of proposed airstrip and access construction in the Upper Stewart River region by Todd Kristensen (Matrix Research).

The season ended in November and December for Greg Hare and Christian Thomas (Government of Yukon) when excavations for the new Dawson City Wastewater Treatment Plant uncovered four historic burials associated with the North West Mounted Police post Fort Herchmer. These were unmarked graves of men tried and executed for crimes of murder during the Gold Rush. With the assistance of the Tr'ondek Hwech'in First Nation and osteologist Susan Mooney (then Heritage officer for the Carcross/Tagish First Nation), the burials were recovered and identified. Temperatures were in the -30° C range which proved a new frontier in Yukon archaeology.

2011

Twenty-seven projects were permitted in the 2011 field season in Yukon. Assessment work in connection with mineral exploration and mine development continued to account for most permits:

James Mooney carried out assessment for the Silvertip Mine project on the Yukon/B.C. border, in southeast Yukon, surveyed the 100+ km route of the Casino Mine access road extension from the Freegold Road, assessed advanced exploration in the Mount Nansen area west of Carmacks, and in the 3 Aces property in the Nahanni Range Road area. Matrix Research (Ty Heffner and Todd Kristensen) carried out further work in the Coffee Creek/White River area, in the Wheaton River area, the Ross River area, and the upper Stewart River area. The Alaska Highway Gas Pipeline route saw additional impact assessment work by Steve Kaasten (Tera Environmental Consultants) following up on the surveys carried out by Lifeways in the late 1970s. B.O.K. Reeves assisted the 2011 survey in a command return performance. Research/inventory types of projects

included further studies Ty Heffner for Kwanlin Dun First Nation in the Michie and M'Clintock Creeks area, and site inventory on the Dempster Highway for Tr'ondek Hwech'in. John Pollack (INA) succeeded in locating the wrecks of the second hull of Casca and ***Dawson*** in Rink Rapids; the evaluation of the wreck of the ***Columbian*** was hampered by high water levels and floating debris – plans are to return to the site 2012/13. Ray Le Blanc (University of Alberta) worked with Vuntut Gwitchin First Nation in a brief reconnaissance of sites in the Rock River area of northern Yukon.

Shirleen Smith and Esau Schaeffer collecting ochre at one of the Rock River area sites (R. Le Blanc photo).

Alvie Josie stands inside a round depression – possibly a hunting blind at a site in the Rock River area. (R. Le Blanc photo)

Continuing research projects included work by Norm Easton (Yukon College) at the Little John Site and monitoring of alpine ice patch sites by Greg Hare and Christian Thomas (Yukon Government). A highlight of the 2011 field season was the discovery of one of two Chinese coins in the same weekend – one by the Matrix crew on Michie Lake and one by the Ecofor crew on the Casino Road. Both were likely lost by coastal Tlingit traders on their annual trading trips in the early to mid-19th century.

Chinese coin from Michie Lake.

Further information on N.A. Easton's work at the Little John site can be obtained at: **http://dl1.yukoncollege.yk.ca/anth225/N_A_Easton_Publications**

Northwest Territories

The Prince of Wales Northern Heritage Centre compiles fieldwork reports from those conducting research in the territory. These can be found at the following web address:

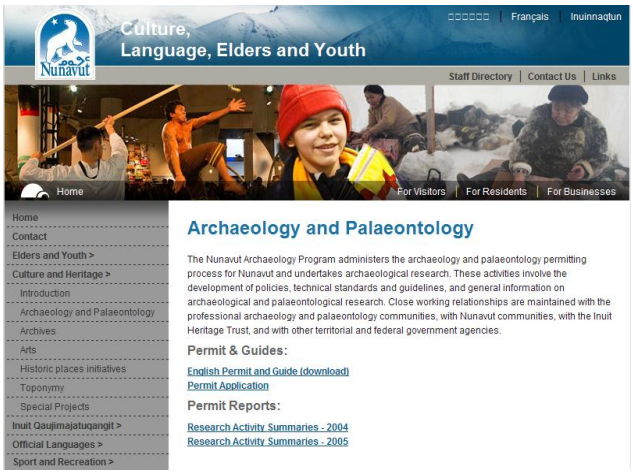
http://pwnhc.learnnet.nt.ca/research/archrep/index.asp

Shelley Crouch, Prince of Wales Northern Heritage Centre

Twenty-two archaeological research permits were issued to 14 archaeologists for work in the NWT in 2009. Of these, four were cancelled at the request of the permit holder and no work was conducted. Of the 18 permits remaining, twelve were for projects related to resource development impact assessment and infrastructure projects, four were part of ongoing traditional knowledge and research projects, and two were part of remediation projects.

http://pwnhc.learnnet.nt.ca/research/archrep/archrep10/index.html

Nunavut



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Parcs Canada (Français)

Compilé par Daniel LaRoche, Analyste, archéologie, Parcs Canada

Est du Canada

Activité d'archéologie publique: l'archéologie historique au parc national Terra-Nova, parc national du Canada Terra-Nova

Jenneth Curtis

Description

Le parc national Terra-Nova abrite de nombreux sites patrimoniaux qui témoignent de l'évolution de l'industrie forestière au début du XX^{e} siècle. Cette étude permettra à des bénévoles de participer à des recherches visant à documenter des éléments culturels dans le but d'accroître nos connaissances sur cette période, ainsi qu'à prendre les mesures nécessaires pour préserver les grands

artéfacts de métal qui sont les principales composantes de ces sites. Les participants réaliseront des levés à pied pour cartographier les éléments culturels, effectueront des fouilles archéologiques visant à exposer des artéfacts de métal partiellement enfouis et construiront des plateformes de bois pour ces artéfacts.

Objectifs

Les objectifs de ce projet sont multiples : définir et documenter les éléments culturels qui sont liés à cette période de l'histoire humaine dans le parc national Terra-Nova, accroître la durée de vie des grands artéfacts de métal en les plaçant sur des plateformes, offrir à des bénévoles une expérience de l'archéologie, accroître nos connaissances sur l'histoire humaine du parc national Terra-Nova et produire du contenu pouvant être utilisé dans le cadre des programmes d'interprétation à l'intention des visiteurs. Cette étude permettra de vérifier certaines données à référence spatiale (SIG) de l'inventaire des sites archéologiques du parc, ainsi que d'ajouter de nouvelles données à cet inventaire. Elle produira également des renseignements pouvant être intégrés aux messages communiqués au sujet de l'histoire humaine du parc.

Archéologie des caves des fermes de Stanhope, parc national du Canada de l'Île-du-Prince-Édouard

Robert Ferguson

Description

Le projet est fondé sur des fouilles réalisées en 2008 et 2010. Cet été, il consistera principalement à exposer une plus grande partie du plancher de la cave de la maison qui date de la fin du XVIII^{e} siècle et à repérer sa fondation est. Les participants tenteront de déterminer s'il s'agit de la maison habitée par David Lawson et/ou plus tard par la famille Bovyer, qui ont supervisé le lot 34 pour le compte de sir James Montgomery. Une équipe de bénévoles de la Stanhope Historical Society sera mise à contribution et dirigée par un archéologue d'expérience.

Objectifs

Ce projet compte plusieurs objectifs : déterminer l'âge de la structure et les familles qui y sont associées, repérer les caractéristiques structurelles du bâtiment et offrir une expérience significative aux membres de la Stanhope Historical Society. Ce projet n'est pas une initiative de Parcs Canada, mais il contribuera à enrichir l'inventaire de Parcs Canada et à accroître la compréhension des ressources culturelles situées sur les terres administrées par l'Agence.

Centre du Canada (Ontario)

Examen des sites archéologiques menacés, parc national du Canada de la Péninsule-Bruce

Brian Ross

Description

Poursuite des travaux du programme d'inspection et de surveillance des sites fragiles sur les sites archéologiques terrestres dont la valeur culturelle est jugée importante. Il y a actuellement 26 sites ayant une valeur culturelle dans

le parc marin Fathom Five et 12 autres dans la péninsule Bruce. Le projet actuel consiste principalement à examiner les sites que l'on sait être détériorés ou menacés de l'être. Le nombre de sites à visiter passera à 13 dans le parc marin Fathom Five et à 9 dans la péninsule Bruce. Une fois ce projet d'évaluation achevé, nous pourrons établir comme prévu un programme officiel d'inspection régulière des sites à Fathom Five et dans la péninsule Bruce conformément à la Politique sur la gestion des ressources culturelles de Parcs Canada.

Objectifs

Ce projet vise principalement à amorcer le processus consistant à retrouver les sites archéologiques fragiles et menacés dans le parc marin national Fathom Five et le parc national de la Péninsule-Bruce afin de recueillir des données GPS précises et d'évaluer leur état actuel et la mesure dans laquelle ils sont menacés.

Le projet permettra de mettre à jour les renseignements recueillis sur les sites archéologiques fragiles dans les deux parcs et constituera la base d'un futur programme de surveillance.

Protection des ressources du camp Kitchikewana, parc national du Canada des Îles-de-la-Baie-Georgienne

Brian Ross

Description

Ce projet consiste à entreprendre des fouilles archéologiques contrôlées pour préserver des ressources culturelles menacées situées sur l'île Beausoleil sous le camp Kitchikewana de la YMCA de Simcoe et de Muskoka.

Objectifs

Conformément à la Politique sur la gestion des ressources culturelles de Parcs Canada, l'objectif global de ce projet est de préserver les ressources culturelles menacées par le développement et l'exploitation des installations d'hébergement estival de la YMCA appelées camp Kitchikewana. Des artéfacts et des renseignements archéologiques très précieux pourront être sauvés d'une destruction imminente, et un rapport papier sera produit au sujet des résultats de l'évaluation archéologique et de leur interprétation. Ces travaux ont un lien direct avec la commémoration de l'histoire des Autochtones. Les mesures de protection des ressources archéologiques du camp Kitchi ont été approuvées et continuent d'être appuyées par les membres du cercle de consultation sur les questions culturelles du parc, les membres des communautés autochtones locales et la YMCA. Depuis 2000, les fouilles archéologiques au camp Kitchi sont une composante clé du programme du parc à l'intention des jeunes Autochtones, et elles sont aussi devenues un volet important des activités d'éducation en plein air tenues au printemps par la YMCA.

Évaluation archéologique en vue de la construction d'un nouveau centre d'accueil au lieu historique national de la Maison-Commémorative-Bethune,. lieu historique national du Canada de la Maison-Commémorative-Bethune

Rachel Brooks

Description

Il s'agit d'un projet de surveillance et de documentation archéologiques associé à la démolition du centre d'accueil actuel du LHN de la Maison-Commémorative-Bethune et à la construction d'un nouveau centre sur un tracé différent.

Objectifs

Ce projet vise à documenter et à atténuer toute répercussion que pourraient avoir la démolition de l'ancien centre d'accueil et la construction des nouvelles installations sur les ressources culturelles du secteur touchées par ces travaux. De plus, tous les travaux connexes (par exemple l'aménagement du paysage et des sentiers) feront aussi l'objet d'une évaluation pour atténuer leurs effets sur les ressources culturelles.

Les participants rédigeront un rapport et prendront des photos. Ils réaliseront aussi des dessins (vues en plan et vues latérales) des ressources culturelles et des éléments archéologiques trouvés pendant les fouilles et les activités de surveillance, et ils recueilleront et documenteront les artéfacts mis au jour dans le cadre de l'étude.

Ouest et Nord du Canada

Projet d'archéologie à Gwaii Haanas 2011-2012, réserve de parc national et site du patrimoine haïda du Canada Gwaii Haanas

Daryl Fedje and Nicole Smith

Description

Le programme d'archéologie de 2011 portant sur les sites marins et menacés à Gwaii Haanas consiste à dresser un inventaire de la zone intertidale, à protéger les sites menacés dans la mesure du possible et à réaliser des recherches coopératives.

Objectif

Ce projet vise à dresser un inventaire des principales ressources en étudiant et en interprétant l'histoire des humains et le milieu qu'ils ont habités. L'inventaire des ressources culturelles et l'évaluation de leur valeur patrimoniale et archéologique constituent des composantes clés des pratiques de gestion des ressources culturelles et de la prise de décisions à cet égard à Parcs Canada. Ce projet a pour but d'évaluer les sites archéologiques récemment découverts et à protéger les sites menacés, au besoin et dans la mesure du possible.

Programme de gestion des ressources archéologiques de la réserve de parc national des Îles-Gulf ,réserve de parc national du Canada des Îles-Gulf

Daryl Fedje

Description

Cette étude est composée de deux projets : 1) évaluation des répercussions sur les ressources archéologiques dans les sites menacés, notamment ceux exposés à des phénomènes naturels comme le vent et l'érosion par les vagues, ou à des phénomènes culturels comme la fréquentation par les visiteurs et l'aménagement d'installations; 2) travaux réalisés en collaboration avec l'Université de Victoria dans le cadre d'un projet sur le terrain.

Objectifs

Aider la réserve de parc national des Îles-Gulf à protéger et à gérer ses ressources culturelles de façon proactive. Portée de l'étude : 1) effectuer une évaluation détaillée des sites archéologiques très menacés, principalement ceux situés dans la zone intertidale; 2) retourner sur certains sites connus, les évaluer et passer en revue les renseignements notés à leur sujet; 3) dresser l'inventaire des autres sites éventuellement découverts et les évaluer; 4) collaborer avec les Premières Nations salish du littoral, notamment pendant les projets sur le terrain et en leur communiquant les résultats de l'inventaire et de l'évaluation des sites archéologiques; 5) contribuer à la gestion des ressources et à l'interprétation des sites archéologiques de la réserve de parc; 6) évaluer les répercussions sur les ressources culturelles qu'ont le développement du parc et l'amélioration des installations à l'intention des visiteurs, de même que la dégradation des ressources culturelles par les phénomènes naturels. Le programme d'évaluation archéologique est une composante importante des activités de protection et de gestion des ressources culturelles de la réserve de parc réalisées conformément à la Politique sur la gestion des ressources culturelles de Parcs Canada.

Gestion des ressources culturelles : consignation des structures de halliers patrimoniales à Ä'äy Chù ainsi que des sentiers patrimoniaux dans le parc national et la réserve de parc national du Canada Kluane, 2011. parc national et réserve de parc national du Canada Kluane

Lori Dueck

Description

Les structures de halliers sont un type d'abri traditionnel érigé par les Tutchones du Sud dans la partie sud du Yukon, et elles sont considérées comme une composante importante du patrimoine culturel. Des sites archéologiques où ont été bâtis ces abris ont été découverts à Ä'äy Chù en 2006, et plusieurs recommandations ont été faites à cet égard, notamment la réalisation d'une analyse dendrochronologique (datation par les anneaux de croissance des arbres) et la consignation des structures dans l'inventaire patrimonial. Les résultats de l'analyse dendrochronologique ont

permis d'établir que les abris ont été construits entre 1865 et 1886 (Luckman 2010).

Cependant, les sentiers traditionnels ou patrimoniaux qui font partie du parc national et de la réserve de parc national Kluane constituent des ressources culturelles qui n'ont pas encore été étudiées sur le plan archéologique et consignées dans l'inventaire des ressources culturelles du parc.

Objectifs

Le projet d'étude de 2011 comprend l'étude de l'emplacement des six abris de halliers, des éléments connexes et d'une cabane en bois rond, ainsi que la prise de photos et la consignation des caractéristiques de ces structures. Par la réalisation d'un diagramme des structures, de leur composition et de leur construction, le projet contribuera à l'interprétation de leur construction et permettra de recueillir des données sur leur état actuel.

L'étude des sentiers patrimoniaux vise quant à elle à établir la carte des sentiers et à consigner les récits oraux qui y sont associés. Parcs Canada propose de lancer un projet pour commencer à documenter les sentiers traditionnels du parc et de la réserve Kluane.

Cette proposition s'inscrit dans le cadre de la Politique sur la gestion des ressources culturelles de Parcs Canada : le projet permettra de tenir à jour l'inventaire des ressources culturelles dans le but de protéger ces ressources et de les mettre en valeur pour les visiteurs.

Programme d'archéologie publique du ranch Bar U, lieu historique national du Canada du Ranch-Bar U

Brad Himour

Description

Le Programme d'archéologie publique du ranch Bar U mettra à contribution de huit à dix membres de la population dans le cadre de fouilles archéologiques contrôlées d'une durée de trois semaines. L'étude portera principalement sur la résidence d'origine du ranch (construite vers 1881). À ce jour, aucune étude archéologique n'a été effectuée sur ce bâtiment, qui a été détruit par le feu au début du XX^{e} siècle.

Objectifs

Le programme de fouilles archéologiques proposé au ranch Bar U vise à atteindre plusieurs objectifs généraux dans le cadre des activités continues de gestion des ressources culturelles du lieu historique national. Voici ces objectifs : 1) permettre à la population de participer à des activités pratiques de fouilles archéologiques; 2) recueillir des données scientifiques sur le lieu historique national du Ranch-Bar U; 3) permettre aux visiteurs qui ne participent pas aux fouilles de se rendre à pied de façon sécuritaire jusqu'au lieu des fouilles, de les observer en direct et de poser des questions aux archéologues; 4) d'offrir à des étudiants en archéologie un stage de formation et de supervision pendant l'été.

Les fouilles contrôlées permettront de recueillir des renseignements précieux sur une structure importante du ranch Bar U, la résidence d'origine, et sur le mode de vie de ses premiers habitants, la famille Stimson. Ces renseignements contribueront aux activités d'interprétation et aux expériences offertes aux visiteurs.

Étude des sites archéologiques du parc national Kootenay qui précèdent l'arrivée des Européens,

Brad Himour

Description

Vers la fin mai ou le début juin 2011, dans le cadre du programme de travaux sur le terrain, une étude de télédétection (par magnétomètre) sera effectuée au lieu historique national Kootenay House pour contribuer à définir les éléments du site, les secteurs où des travaux seront effectués et les risques possibles qui pourraient devoir être atténués avant le début de la construction de la route et du parc de stationnement prévus au LHN.

Le second projet de travaux archéologiques sur le terrain prévu dans le parc national en 2009 consistera à réaliser une étude à pied et des fouilles à la pelle à faibles répercussions sur des sites archéologiques répertoriés précédemment (1989) dans le parc afin de mettre à jour l'inventaire.

Conformément à la Politique sur la gestion des ressources culturelles de Parcs Canada et dans le but de gérer et de protéger efficacement les ressources

culturelles non renouvelables, Parcs Canada est déterminé à améliorer son inventaire des sites archéologiques de la région. En déterminant quels sites ont une importance particulière pour les Premières Nations, le milieu scientifique et la population, l'Agence peut protéger leur intégrité de façon active et mettre en lumière leur importance en ce qui a trait à l'histoire culturelle de la région.

Objectifs

Le projet a deux objectifs : 1) accroître nos connaissances actuelles sur le LHN Kootenay House à l'aide de techniques de télédétection afin de mieux définir les éléments du lieu; 2) mettre à jour l'inventaire des ressources culturelles gérées par Parcs Canada qui datent de l'arrivée des Européens et de la période antérieure.

L'histoire invisible, un programme d'archéologie publique, lieu historique national du Canada Rocky Mountain House

Peter Francis

Description

Le programme d'archéologie publique du LHN Rocky Mountain House offre une occasion unique aux amateurs d'archéologie de participer à des fouilles supervisées au lieu historique national du Canada Rocky Mountain House.

Objectifs

Pendant la saison 2011, les travaux sur le terrain consisteront principalement à étudier le fort de la Compagnie de la Baie d'Hudson, qui a été occupé par des commerçants de fourrures, des commis, des voyageurs, des ouvriers et des Autochtones de 1835 à 1861. Le programme comprend deux séances de quatre jours sur le terrain dans la deuxième moitié du mois d'août. Pendant chaque séance, une équipe d'une dizaine de participants fouillera une partie du tertre associé au troisième poste de traite, apprendra les techniques de fouilles archéologiques et celles utilisées en laboratoire et assistera à des présentations sur les recherches patrimoniales menées actuellement sur place. Les participants passeront la majeure partie de leur temps à manier la truelle, mais ils auront tout de même de nombreuses occasions de profiter du panorama et des sons de la Rocky Mountain House et de découvrir la riche culture des Métis.

Fouilles archéologiques à Rocky Mountain House © Parcs Canada

Surveillance des sites faisant partie de l'expérience de pâturage et étude des nouvelles terres dans le parc national des Prairies, 2011, parc national du Canada des Prairies

Sharon Thomson

Description

Dans le cadre de l'expérience de pâturage du bloc est du parc national des Prairies, 24 sites archéologiques seront étudiés selon des protocoles précis afin de documenter les répercussions de l'utilisation des terres comme pâturage.

Ce projet permettra également de repérer et de documenter les sites culturels situés sur les terres ayant appartenu aux Anderson et aux Poirier. Les terres seront étudiées à l'aide de photos aériennes et de cartes topographiques afin de repérer des éléments du relief qui auraient pu être occupés dans le passé. Cette étude a pour but de tenir à jour l'inventaire des ressources culturelles du parc afin qu'elles puissent être gérées de façon efficace.

Objectifs

Le projet vise à documenter l'état de 24 sites faisant partie de l'expérience de pâturage au sein du parc national des Prairies, afin de déterminer l'incidence de l'utilisation des terres comme pâturage, ainsi qu'à étudier

de nouvelles terres, soit celles ayant été acquises de James Anderson et des Poirier. Le projet consiste également à examiner l'emplacement des nouveaux sentiers proposés dans les blocs est et ouest et à recommander la modification de leur tracé là où ils pourraient avoir des répercussions sur des ressources culturelles. De plus, une inspection aura lieu dans le secteur des Deux-Arbres pour documenter les éventuelles ressources culturelles qui auraient été exposées à la suite du brûlage dirigé.

Des renseignements de base seront recueillis (formes du site, photos) sur tous les nouveaux sites consignés. Il est nécessaire de tenir à jour l'inventaire du parc pour que les ressources culturelles qui s'y trouvent puissent être protégées et interprétées.

En ce qui a trait aux 24 sites faisant partie de l'expérience de pâturage, des renseignements sur leur état seront compilés. Des données seront recueillies et analysées, et un rapport sera rédigé à cet égard au terme de l'expérience en 2012. Les résultats de l'expérience contribueront à l'évaluation globale des répercussions de l'utilisation des terres comme pâturage, évaluation qui tiendra compte des ressources naturelles et culturelles présentes dans le parc national des Prairies.

Le projet contribuera ainsi à la préservation des ressources culturelles, ce qui est l'un des objectifs énoncés dans le plan directeur du parc national des Prairies.

Projet de stabilisation des murs du fort Prince-de-Galles, 2011, lieu historique national du Canada du Fort-Prince-de-Galles

Donalee Deck

Description

Des travaux archéologiques doivent être effectués conjointement avec l'installation d'un système de drainage dans le cadre d'un projet à long terme de stabilisation des murs du fort Prince-de-Galles. Les secteurs étudiés sont la courtine ouest, la courtine sud-ouest et le bastion sud-ouest.

Objectifs

Voici les objectifs du volet archéologique de 2011 du projet de stabilisation des murs du fort : 1) achever les fouilles archéologiques près de la courtine sud-ouest pour déterminer si le mur interne d'origine est encore intact, pour documenter l'état et la configuration de la plateforme des canons et des dépôts culturels, et pour établir des liens entre le mur interne d'origine et les caractéristiques culturelles observées entre les courtines sud-est et sud-ouest; 2) mettre à contribution un conservateur d'éléments biologiques pour recueillir les vestiges du grand baril mis au jour l'année dernière à des fins d'analyse et de présentation; 3) étudier les éléments structuraux en bois découverts sous le petit baril par l'équipe de l'atelier de restauration; 4) soumettre des échantillons des douves du baril à une analyse à l'aide d'un IRTF (analyse moléculaire); 5) contribuer aux travaux de mise en œuvre du plan de drainage pour les courtines ouest et sud-ouest; 6) traiter d'autres questions liées à la gestion des ressources culturelles qui pourraient être soulevées pendant les autres travaux effectués au fort, comme l'installation d'échafaudages, le déplacement d'armatures, la coupe de saules, le repositionnement et la gestion de l'accès au site (ce qui comprend la surveillance de la route qui mène au fort et qui le contourne); 7) s'il reste suffisamment de temps, effectuer des tests sur le bastion sud-ouest pour déterminer l'état des ressources culturelles.

Le fait de continuer à mettre au jour les vestiges associés au fort contribuera à l'interprétation des riches ressources culturelles découvertes le long de la courtine ouest, ce qui permettra de comprendre les activités qui se déroulaient au XVIII^{e} siècle dans ce secteur des remparts. Ces données serviront à l'équipe du projet de stabilisation des murs pour élaborer un plan de drainage ayant le moins de répercussions possibles sur les ressources culturelles intactes. Elles pourront également être intégrées aux renseignements d'interprétation présentés aux visiteurs sur place.

Travaux archéologiques à Wapusk, 2011, parc national du Canada Wapusk

Margaret Bertulli

Description

Cartographier les sites prioritaires du parc national Wapusk, en consigner les détails et mettre en place des programmes de surveillance photographique dans certains sites choisis.

Objectifs

De 1998 à 2001, un inventaire et une évaluation des sites archéologiques et des ressources culturelles du parc national Wapusk ont été effectués dans le cadre du processus de planification de la gestion découlant de la création du parc. La démarche progressive a été résumée dans un rapport de synthèse intitulé The People and the Land They Used: Final Report of the Wapusk National Park of Canada Cultural Resource Management Project (2001), de Carroll et al. L'inventaire initial faisait état de plus de 82 sites archéologiques, et l'un des objectifs du projet de 2011 est de déterminer les caractéristiques culturelles de ces sites et d'en faire un compte rendu au Conseil de gestion de Wapusk. La plupart des travaux consisteront à recueillir des éléments de preuve dans le but d'élaborer un programme de protection des ressources culturelles à Wapusk.

Parcs nationaux du Canada Aulavik, Ivvavik et Tuktut Nogait

Henry Cary

Description

Au cours des deux dernières années, Parcs Canada a mené des recherches sur trois sites pré-contact situés sur l'île Banks et sur le continent dans l'Arctique de l'Ouest. Le projet le plus important était celui de la baie Mercy, située sur l'île Banks, dans le Parc national Aulavik. Des recherches de moindre envergure ont eu lieu dans les parcs nationaux Ivvavik et Tuktut Nogait. La plupart de ces recherches en sont à un stade préliminaire, mais elles ont permis de révéler de nouveaux pans de l'histoire des Paléo-esquimaux, des Thuléens et des Inuinnait de l'Arctique de l'Ouest.

Objectifs

Baie Mercy, parc national Aulavik
L'objectif principal des recherches menées à la baie Mercy en 2010 et en 2011 était de retrouver des vestiges archéologiques de l'expédition du HMS *Investigator* (Cary ,2011 et Cary, à paraître). L'objectif secondaire était de rechercher des preuves d'une présence humaine plus ancienne.

Parc national Ivvavik
On a consacré du temps à l'évaluation de l'état d'un site connu à la *station Sheep Creek*.

Parc national Tuktut Nogait
Les recherches sur le terrain au parc national Tuktut Nogait ont duré moins d'une semaine en août 2011, mais elles ont permis de confirmer l'énorme potentiel archéologique de l'endroit.

Description

Baie Mercy, Parc national Aulavik

Ces recherches étaient axées sur le site Arviq (site n^{o} 130X232 de Parcs Canada), une série de caches, des cercles de tente et d'autres aménagements épars le long d'une plateforme rocheuse au fond de la baie Mercy. Après sa découverte et une brève reconnaissance en 1997, Stephen Toews (1998, p. 38-43) a déduit qu'il s'agissait d'un site thuléen en raison de la présence d'os de baleine boréale. Il a également avancé qu'il pourrait s'agir de l'endroit où Johann Miertsching, missionnaire moravien et traducteur inuit de l'*Investigator*, avait trouvé, en juillet 1853, des « récipients circulaires » et des « maisons en pierres », dont une était coiffée d'un « toit en os de baleine » (Miertsching, 1967, p. 165-166).

Désireux de visiter l'un des rares sites thuléens d'Aulavik — particulièrement en raison de son lien avec l'histoire de l'*Investigator* — nous nous sommes rendus sur le site en 2010, par hélicoptère, à partir de notre campement établi près de la cache McClure, vestige d'un dépôt côtier utilisé par l'équipage de l'*Investigator*. Nous avons atterri près de la plateforme rocheuse et Edward Eastaugh, John Lucas Jr., Letitia Pokiak et moi-même avons effectué une brève reconnaissance à pied. Nous avons rapidement découvert une préforme de pointe de harpon, deux racloirs, un large biface asymétrique, ainsi

que plusieurs éclats lithiques et structures de pierres. Nous avons photographié puis cartographié toutes ces découvertes à l'aide d'un GPS ProMark 3 d'Ashtech, un appareil portatif de précision, puis nous les avons laissées sur place, à l'exception du biface **(Figure 1).** Monsieur Eastaugh a recueilli, à des fins de datation par radiocarbone, quatre os de mammifères terrestres, trouvés dans une structure de pierres entourée de fragments de côtes de baleine. Par la suite, les os ont été acheminés à Beta Analytic Inc.

Figure 1. Grand biface recueilli au site Arviq, parc national Aulavik, 2010. Photo d'Edward Eastaugh, University of Western Ontario.

Les contraintes de temps ne nous ont pas permis d'effectuer des recherches approfondies, mais selon notre évaluation initiale, Arviq serait plus ancien que ce que nous avions d'abord cru. L'analyse des échantillons au radiocarbone a révélé qu'ils datent en moyenne de 2 500 années BP (écart-type 2, âge au radiocarbone normalisé de 2 410-2 500 ± 40 années BP) et le biface présente des similitudes avec des outils retrouvés au site Lagoon dans le Sud de l'île Banks. Ces nouvelles découvertes ont donné lieu à des travaux de recherche approfondis en 2011. Le 17 juillet, Mervin Joe et Letitia Pokiak de Parcs Canada ont arpenté systématiquement le site à la recherche d'artefacts et de caractéristiques à la surface du sol et ont marqué leurs découvertes de fanions à tige en plastique (**Figure 2).** À notre retour quatre jours plus tard, Mervin Joe, John Lucas Jr. et moi avons établi des points de repère semi-permanents et cartographié le site à l'aide de la station de base à positionnement cinématique en temps réel (RTK) et d'un GPS mobile ProMark 3 d'Ashtech, une unité en mesure d'offrir une précision de ± 2 cm. Nous avons relevé et photographié vingt-neuf caractéristiques au sol, tout comme nous l'avons fait pour les artefacts que nous avons recueillis par la suite. De plus, nous avons cartographié la concentration d'os d'animaux et les vestiges isolés par positionnement RTK, puis nous les avons laissés sur place. Nous avons enregistré la topographie du site et de la zone littorale adjacente à l'aide de cette même technologie. Au cours de ce processus, nous avons découvert deux caches d'âge indéterminé sur la péninsule se trouvant au nord du site. Après avoir topographié le site par photographie aérienne en fonction des points de repère temporaires disposés antérieurement sur toute la plateforme, nous avons photographié le site à l'aide d'un appareil photo reflex mono-objectif numérique EOS-1 Mk3 de Canon fixé à un support et installé sur le longeron extérieur de l'hélicoptère. Une tablette Yuma de Trimble reliée par câble à l'appareil photo permettait de contrôler ce dernier depuis l'intérieur de la cabine. De plus, chaque photo était géoréférencée grâce à un GPS portatif 76CSx de Garmin, également relié par câble à l'appareil photo. Une série de photos ont été prises à des altitudes d'environ 30 mètres et 130 mètres. L'assemblage de ces photos permettra de créer une mosaïque géoréférencée à haute résolution.

Figure 2. Mervin Joe et Henry Cary effectuent des recherches au site Arviq, parc national Aulavik, 2011. Les fanions signalent la découverte d'un aménagement ou d'un artefact et la silhouette distinctive de la falaise Gryfalcon est visible en arrière-plan. Photo de John Lucas Jr., Agence Parcs Canada.

Parmi les quatre-vingt-sept artefacts recueillis, près de 90 % sont faits de quartz-arénite grise semblable au « quartzite de type sucre » dont une grande quantité se

trouve à Umingmak, un site datant de 3 300-3 600 années BP, situé vers le centre du parc national Aulavik (Toews, 1998, p. 112). Au total, des parties de quatre bifaces, cinq pointes de harpon et quatre racloirs ont été récupérés, ainsi que quatre-vingt-dix éclats de divers formats. Compte tenu de la découverte de nombreux gros bifaces de quartz et échantillons dont l'âge au radiocarbone se situe aux alentours de 500 ans avant notre ère, il est presque certain que la première occupation des lieux remonte à l'ère paléoesquimaude du complexe de la lagune, propre au Sud de l'île Banks, aux environs de Tuktoyaktuk sur le continent et possiblement à l'île Melville (Arnold, 1981, LeBlanc, 1994). Nous avons une connaissance limitée de la place qu'occupe cette ère dans la chronologie culturelle de l'Arctique de l'Ouest, mais elle possède des caractéristiques communes avec les cultures pré-Dorset et choris. Dans ce contexte, le potentiel du site Arviq pourrait aider à lever le voile sur cette culture hybride, une éventualité d'autant plus attrayante du fait que des habitations pourraient être préservées. Seules les fouilles permettront de déterminer si les structures de pierres du site Arviq sont l'œuvre de Paléoesquimaux ayant vécu à l'ère du complexe de la lagune. Le cas échéant, il s'agirait de l'un des rares exemples d'architecture datant de cette époque.

La majeure partie des outils lithiques et des structures de pierres ont probablement été fabriqués par des Paléoesquimaux. En revanche, la présence de vastes aménagements de caches et d'artefacts d'os, de bois d'animaux et de bois, tels qu'une tige en os, peut-être un gros leurre pour la pêche, ainsi que les bois d'un caribou dans lesquels on a pratiqué des entailles et des trous, révèle clairement une occupation inuinnait. Enfin, l'importance des vestiges faunistiques visibles à la surface du sol, y compris un oiseau, un phoque, un caribou et un bœuf musqué, signale une présence humaine prolongée sur le site.

La reconnaissance en hélicoptère menée dans le reste de la baie Mercy en 2011 a également donné lieu à des découvertes. Nous avons atterri sur le site d'un ancien camp militaire des années 1950 à Investigator Point, où nous avons trouvé, près d'une petite butte, des débris de quartz-arénite et de grandes quantités d'os d'animaux. Nous avons recueilli deux gros éclats et trois os de mammifère terrestre à des fins de datation par le radiocarbone. Malgré les réserves exprimées au sujet des possibilités que les os remontent à l'époque du camp militaire, l'analyse a révélé que les trois os dataient en moyenne de 2 500 années BP (écart-type 2, âge au radiocarbone normalisé de 2340-2420 ± 30 années BP), ce qui suggère une présence des Paléoesquimaux datant de la même époque que le site Arviq. Nous n'avons retracé aucune structure, mais la grande quantité d'os pourrait marquer l'emplacement d'un site de dépeçage et la butte constitue un point d'observation idéal pour la chasse.

Nous avons trouvé un autre site contenant une quantité considérable d'os d'animaux à la pointe Back, sur la rive nord-est de la baie Mercy. Lors de la cartographie des limites de cette zone, les os couvraient une superficie de 63 mètres du nord au sud et de 44 mètres d'est en ouest, mais la principale concentration était située au sud autour d'un petit cercle de tente et de trois squelettes de bœufs musqués. Nous y avons recueilli quatre échantillons de mammifère terrestre datant, en moyenne, de 1430 (écart-type 2, âge au radiocarbone normalisé de 540-590 ± 30 années BP), lesquels proviennent donc de l'époque thuléenne. L'absence de structures sur ce site par rapport à la quantité de vestiges faunistiques retrouvés est étonnante et justifie des recherches approfondies, tout comme le site trouvé à la pointe Investigator. Cependant, l'emplacement du site et ses vestiges faunistiques considérables portent à croire qu'il s'agirait du site découvert en 1908 par C.W. Green, un membre de l'expédition de la patrouille arctique canadienne dirigée par Joseph-Elzéar Bernier. Monsieur Green a également visité brièvement le site Arviq. Nous avons cartographié le site de Back Point à l'aide d'un GPS portatif de précision et nous avons pris des photos aériennes des vestiges grâce au système d'appareil photo fixé à l'hélicoptère.

Station Sheep Creek, parc national Ivvavik

En juin 2011, une évaluation partielle a eu lieu à la station Sheep Creek, située vers le centre du parc national Ivvavik. Un site connu à cet endroit pourrait dater de la fin de l'époque thuléenne, quoique cette estimation soit fondée sur un seul échantillon de bois. Nous avons découvert que la partie sud du site, en bordure du ruisseau Sheep, était en proie à l'érosion, dégageant clairement un horizon d'os d'animaux à environ 10 cm sous la surface. Des débris d'os sont également visibles à la surface et couvrent une superficie de 10 mètres par

6 mètres. La zone érodée fera l'objet de recherches et de fouilles approfondies en 2012, dans le cadre d'un projet bénévole de formation des adultes.

Figure 3. Une vaste cache dans une fissure et son repère en pierre à *Many Caches*, parc national Tuktut Nogait, 2011. La rivière Hornaday est visible dans la vallée ci-bas. Photo d'Eric Baron, Agence Parcs Canada.

Uyarsivik, parc national Tuktut Nogait

Nous avons visité plusieurs sites connus, à pied ou en hélicoptère, et nous les avons cartographiés avec plus de précision à l'aide d'un GPS à positionnement RTK, à partir d'un camp de base au lac Uyarsivik, situé près du centre du parc. Sur la rive nord-est de ce lac, nous avons géoréférencé par positionnement RTK un site ayant fait l'objet de fouilles en 2006 et 2007 (Bertulli 2008) et nous avons entamé une cartographie préliminaire du complexe *Many Caches* situé sur un banc de la rivière Hornaday. *Many Caches* consiste en une mystérieuse collection de plus de trente structures, y compris des inuksuit, des vestiges de kayak, des tombes et de vastes caches intégrées aux fissures naturelles dans le roc **(Figure 3).** Ce site est fréquenté depuis de nombreuses générations, mais les dates précises de cette occupation sont indéterminées. Les recherches futures comprendront des collectes d'échantillons à des fins de datation par radiocarbone et des levés en trois dimensions des diverses structures présentes sur le site.

Le chercheur tient à remercier M. Chuck Arnold et Mme Lisa Hodgetts qui ont bien voulu partager leurs connaissances sur le site Arviq.

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Québec

Intervention archéologique d'urgence sur la route du Banc dans le secteur du Cap-des-Rosiers, Parc national du Canada Forillon

Anne Desgagné

Objectifs

Mesure de mitigation suite à l'érosion du littoral et à la découverte fortuite d'ossements humains sur la route du Banc dans le secteur du Cap-des-Rosiers.

À partir des découvertes, effectuer des tranchées mécaniques à intervalles réguliers sous la supervisons étroite d'une archéologue, afin de délimiter la zone incertaine d'une fosse commune.

Description

Le 17 mai 2011, une découverte fortuite d'ossements humains trouvés sur la plage et en bordure du rivage dans le secteur de la route du Banc à Cap-des-Rosiers a été faite lors de la planification de travaux dans le secteur. L'érosion de la berge des derniers mois a modifiée considérablement la dynamique littorale de ce secteur et ainsi exposé ces ressources inattendues. Étant donnée la proximité de ces ossements avec le monument aux Irlandais commémorant le naufrage du Carricks of Whitehaven en 1847, il est possible que ces restes humains sont en lien avec cet événement. L'étendue d'une fosse commune dans laquelle selon les sources historiques 87 victimes ont été enterrées sur la grève à Cap-des-Rosiers nous est inconnue. Cette intervention a pour but de trouver les limites de cette fosse commune.

Les ossements seront analysés au Laboratoire des sciences judicaires et de médecine légale de Montréal.

Réfection de la terrasse Dufferin-nord et mise en valeur des vestiges des forts et châteaux Saint-Louis (Programme d'amélioration des infrastructures (PAI) de la terrasse nord), Lieu historique national du Canada (LNHC) des Forts-et-châteaux-Saint-Louis

Manon Goyette

Objectifs

Mesures de mitigation lors des projets de mise en valeur des vestiges archéologiques des forts et châteaux Saint-Louis et de réfection de la section nord de la terrasse Dufferin. Poursuite des travaux qui ont débuté au printemps 2010 :

-Supervision du volet archéologique du projet de mise en valeur et de reconstruction de la terrasse,

- Interventions archéologiques sur le terrain : surveillance et fouilles systématiques dans les secteurs visés par les travaux de construction,

- Suivit des travaux et expertise-conseil en matière de protection et de conservation des vestiges auprès des différents intervenants, selon la Politique de gestion des ressources culturelles,

- Intégration des nouvelles données au rapport d'intervention de 2005 à 2011.

Description

C'est suite aux importantes fouilles archéologiques menées à la terrasse Dufferin de 2005 à 2007, que le site des Forts-et-Châteaux-Saint-Louis fit l'objet d'un projet de mise en valeur, visant à protéger les vestiges découverts et à maintenir l'accès au dessous de la terrasse, dans le but de faire connaître au public son histoire.

Pour ce faire, le sommet des vestiges du château Saint-Louis, résidence du gouverneur général de la colonie de 1648 à 1834, dut être recouvert d'une dalle structurale de béton et d'une membrane d'étanchéité avant la reconstruction du tablier de la terrasse, dont la réouverture au public était prévue pour juillet 2011.

Afin de supporter cette dalle, murs poutres et pieux d'acier durent être installés par une série d'excavation et de forages au travers des vestiges en place, incluant ceux de la cour sud du château Saint-Louis. Certains des sommets les plus élevés des vestiges durent également être partiellement démontés, sous supervision pour permettre la construction du coffrage de la dalle. À cela s'ajoute l'excavation mécanique de différents secteurs du site, dans le but d'y aménager sentier, caniveaux et différentes conduites de ventilation, d'électricité et de plomberie.

Résultats : Les données récoltées au cours de ces travaux ont permit de compléter les informations déjà colligées lors des fouilles menées sur le site de 2005 à 2007. Il s'agit principalement des nouvelles données suivantes :

- Éléments du premier fort Saint-Louis érigé par Champlain en 1620, - Éléments de deuxième fort Saint-Louis érigé par Champlain en 1626,

- Corps de logis construit par les Kirke de 1629 et terminé par Champlain de 1632 à 1635,

- Nouveaux éléments relatifs à la boulangerie du premier château Saint-Louis (1648-1660),

- Divers niveaux d'occupation du fort Saint-Louis, dans la cour avant du corps de logis de Champlain et du château Saint-Louis (1620 à 1834),

- Cratères de bombe du siège de 1759,

- Niveau de destruction d'une partie des caves à provisions du deuxième château Saint-Louis, en 1759 (à l'endroit du funiculaire)

- Identification et datation de certains des murs du funiculaire, (qui correspondent aux fondations des bâtiments temporaires construit à la place de la moitié sud du pavillon nord du deuxième château, détruit par les bombardements de 1759).

- Nouveau mur de soutènement à l'extrémité sud de la cour avant du château Saint-Louis (1779),

- Continuité d'un dallage découvert en 2007, dans la cour basse du château Saint-Louis (1816-1834)

Réfection de la terrasse Dufferin-sud (PAI de la terrasse sud), Lieu historique national du Canada (LNHC) des Forts-et-Châteaux Saint-Louis et des Fortifications-de-Québec

Manon Goyette

Objectifs

Mesures de mitigation dans le cadre du projet de réfection de la section sud de la terrasse Dufferin, amorcé à l'automne 2010 :

Surveillance archéologique, sondages exploratoires, protection des ressources archéologiques présentes (dont le corps de garde) et expertise-conseil auprès des différents intervenants.

Description

Ce projet s'inscrit dans le vaste projet de réfection de la terrasse Dufferin à Québec. Il concerne toute la partie de la terrasse qui va du bas-jardin des gouverneurs jusqu'à l'emplacement de la batterie caronade, à l'extrémité sud de la terrasse.

Plus précisément, les secteurs touchés sont :

- Le bas-jardin

- La courtine de 1845
- La courtine caronade, le corps de garde et l'écurie du major Éliott

Tous ces secteurs ont fait l'objet d'une surveillance archéologique lors de la démolition de l'ancienne infrastructure de la terrasse (enlèvement des anciens piliers), puis lors de la réfection d'une nouvelle (installation de nouveaux piliers).

Le secteur du corps de garde plus particulièrement, fit l'objet de sondages exploratoires dans le but de vérifier la présence des vestiges de l'écurie du major Éliott et autres aménagements (drains, brick barrels, citerne, banquettes) lesquels étaient menacés par les travaux. Compte tenu de la présence intacte des vestiges de l'écurie, il fut décidé de rehausser le niveau de circulation actuel dans le but d'installer les nouveaux piliers sans perturber les vestiges en place.

École de fouille au Lieu historique national du Canada (LNHC) du Fort-Saint-Jean, LHNC du Fort Saint-Jean (géré par le Ministère de la défense nationale)

Andrew Beaupre (Université Laval)

Objectifs

Stage de fouille pour les étudiants du premier cycle universitaire en archéologie de l'Université Laval de Québec.

Documenter le premier fort Saint-Jean (1666) et le chantier naval de 1757.

Description

La direction histoire et patrimoine du Ministère de la Défense nationale finance, par l'entremise du Musée du Fort Saint-Jean, l'école de fouilles de l'université Laval qui fouille, sur une période de 5 ans (2009 à 2013), une partie du fort Saint-Jean. Parcs Canada est associé au projet par l'apport de deux de ses spécialistes (André Charbonneau, historien et Pierre Cloutier, archéologue) et contribue au projet par la réalisation des relevés géo-référencés et par la gestion des artefacts et des données de terrain à long terme.

Base de cheminée double et niveau d'incendie du plancher d'un bâtiment du chantier naval de 1757 mise au jour en 2009.

Vérification de l'état des sites archéologiques de la Réserve de parc national du Canada de l'Archipel-de-Mingan, Réserve de parc national du Canada de l'Archipel de Mingan

Jacques Guimont et Jean Tanguay

Objectifs

Vérifier l'état des 270 sites archéologiques identifiés dans la Réserve (les îles du secteur ouest de l'archipel) en 1985. Les objectifs de l'opération consistent en premier lieu à vérifier si certains des sites sont menacés par les éléments naturels et de recommander des mesures d'intervention en vue de leur protection, le cas échéant. Le deuxième objectif est de localiser les sites à l'aide d'un GPS portatif. Le troisième objectif consiste à caractériser les sites en fonction de leur valeur patrimoniale dans l'éventualité d'une mise en valeur de certains d'entre eux.

Vue de l'arrière d'un des fours à fondre la graisse de mammifères marins de l'île Nue de Mingan (site 5052G). Ces fours sont d'origine basque et datent du dernier quart du 16e siècle. Leur état s'est considérablement détérioré depuis la dernière intervention archéologique de 1994. Nous suggérons une intervention de stabilisation dès le printemps 2012.

Description

Les 270 sites archéologiques ont été repérés dans cette zone en 1985 par des études de potentiel et des inventaires. Il s'agit de trois types de sites : paléohistoriques, amérindiens historiques et euro-canadiens. À l'exception de quatre sites, aucun des autres sites n'a été visité ou a fait l'objet d'intervention depuis plus de 25 ans. Il s'agissait cette année de la première étape du programme. Cette première étape avait pour objectif principal de voir s'il était possible de localiser tous les types de sites. Ce qui permettrait, espérions-nous, d'estimer le temps nécessaire à l'exercice en entier. Après une semaine de terrain, nous croyons que le programme de vérification pourra s'échelonner sur quelques années, en fonction des ressources financières disponibles.

Surveillance des travaux d'aqueduc au LHN du Fort-Saint-Jean, Lieu historique national du Canada (LNHC) du Fort-Saint-Jean

Maggy Bernier

Objectifs

Assurer la surveillance archéologique des travaux d'excavation associés à la réfection du système d'aqueduc sur le site du Collège militaire Royal de Saint-Jean-sur-Richelieu dans le but d'assurer la protection des vestiges pouvant se trouver dans l'emprise des travaux.

Vestiges des fondations de pierres d'une caserne construite en 1790 et mis au jour lors de l'intervention du printemps 2011.

Description

La Corporation du fort Saint-Jean a entrepris en 2010 un projet, échelonné sur plusieurs années, visant la réfection générale de son réseau d'aqueduc. En 2011, les travaux se concentrent dans des zones environnant le quadrilatère historique. Dans cette zone, densément occupée par les activités militaires dès le régime français, se trouvent de nombreux vestiges connus ou présumés. Devant le fort potentiel archéologique des secteurs touchés, une surveillance archéologique constante des travaux doit être assurée afin de préserver les vestiges mis au jour mais également de colliger des informations sur les installations et les activités militaires.

Fouille devant les flancs du bastion du Gouverneur Général à la Citadelle de Québec, Lieu historique national du Canada (LNHC) des Fortifications-de-Québec - Citadelle

Maggy Bernier

Objectifs

Vérifier la présence de vestiges d'ouvrages défensifs, antérieurs à la construction de la citadelle actuelle (années 1820), dans l'emprise des futurs travaux de réfection du mur d'escarpe du bastion du Gouverneur Général.

Caronade jetée lors des travaux des années 1930 devant le flanc gauche du bastion du Gouverneur

Description

Devant le mauvais état de conservation du mur d'escarpe de la citadelle qui longe la promenade des Gouverneurs, Travaux publics et services gouvernementaux du Canada (TPSGC) met de l'avant, en 2011, un projet de réfection du mur de l'escarpe du bastion du Gouverneur Général. La présence présumée d'anciens ouvrages défensifs, palissades et batterie, autant à la période française qu'anglaise, dans le secteur, a rendu nécessaire une intervention archéologique préalable aux travaux de réfection du mur. Les fouilles confiées à Parcs Canada ont été effectuées, dans l'emprise des travaux, pour vérifier la présence de telles installations militaires ainsi que pour documenter les ouvrages de la citadelle actuelle.

Cunette construite en 1846 devant l'escarpe du flanc droit du bastion du Gouverneur et partiellement détruite lors de travaux au XX^{e} siècle.

Caractérisation et réhabilitation à la redoute nord du Fort Saint-Jean, Lieu historique national du Canada (LNHC) du Fort-Saint-Jean

Maggy Bernier

Objectifs

Profiter de la réalisation de forages de caractérisation des sols pour évaluer la stratigraphie du secteur de la redoute nord et vérifier la présence de vestiges.

Lors de la réhabilitation de l'intérieur de la redoute nord, procéder au dégagement mécanique complet des vestiges de la maison Christie/poudrière, en assurer la protection

lors de l'excavation ainsi que celle des autres vestiges pouvant être mis au jour lors des travaux. Documenter les diverses installations de la redoute nord dans une perspective chronologique.

Travaux de caractérisation du printemps 2011.

Description

En 2008, le Ministère de la défense nationale entreprenait un vaste projet de caractérisation des sols au LHNC du Fort-Saint-Jean. Le mandat fut alors confié à Parcs Canada d'identifier les ressources culturelles du site et de proposer des mesures de mitigation à suivre pour protéger ces ressources lors des travaux. Suite à deux phases de caractérisation dans la redoute nord et aux résultats positifs quant à une contamination des sols par des hydrocarbures aromatiques polycycliques (HAP), une intervention archéologique fut proposée dans ce secteur, préalablement à toute phase de réhabilitation des lieux. Une campagne de fouille s'est tenue en 2009 et a permis entre autre de mettre au jour les vestiges de la maison Christie (1770) transformée en poudrière lors du siège du fort Saint-Jean en 1775.

En 2011, après une dernière caractérisation détaillée des sols, est finalement mise de l'avant la phase de réhabilitation du secteur. Le programme environnemental prévoit l'excavation de près de 60 cm de sol sur l'ensemble de l'intérieur de la redoute mais également l'enlèvement de tous les sols venus combler l'intérieur des caves de la maison Christie. Devant l'ampleur des vestiges mis au jour lors de la fouille de 2009, une équipe d'archéologue sera chargée, lors des travaux de réhabilitation devant se tenir à l'automne, de superviser l'excavation mécanique des sols et de procéder au dégagement manuel des vestiges. Une surveillance constante des travaux sera donc assurée pour protéger les vestiges et colliger toute l'information disponible quant aux vestiges de la maison Christie et de ses annexes.

Vestiges de la maison Christie/poudrière mis au jour lors de la fouille de 2009.

Excavation exploratoire au Fort Sainte-Thérèse, Lieu historique national du Canada (LNHC) du Fort-Sainte-Thérèse

Maggy Bernier

Objectifs

Vérifier la présence de vestiges des retranchements faits par les Britanniques lors de leur passage sur le site en septembre 1760.

L'empreinte d'un fossé, témoin du passage des Britanniques sur le site, a pu être localisée près de l'épaule du bastion nord-ouest du fort. Un parapet de terre devait se lever derrière pour protéger les soldats.

Descriptions

Trois campagnes de fouilles ont été menées au LHNC du Fort-Sainte-Thérèse à Carignan de 2008 à 2010. Elles ont permis de localiser le fort, de documenter les trois générations de fortifications ainsi que les bâtiments construits dans leur enceinte au XVIII^{e} siècle. Malgré ces travaux importants, aucune trace des retranchements construits par l'armée d'Havilland, en marche vers Montréal à l'automne 1760, n'a été repérée sur le site. Après plusieurs tentatives de localisation infructueuses, une tranchée mécanique exploratoire a été effectuée en août 2011 pour vérifier la présence de vestiges de ces installations dans le seul secteur au nord du fort n'ayant pas encore été couvert par les sondages archéologiques.

Inventaire archéologique à Penouille, Parc national du Canada Forillon

Manon Goyette

Objectifs

Évaluer le potentiel des ressources archéologiques menacées par l'érosion des berges, de même que celles situées dans l'emprise d'éventuels travaux de réaménagements.

Description

Ce projet, amorcé en 2009, s'inscrit dans le cadre du programme «Agir sur le terrain». Il a pour objectif de repérer, localiser et documenter les différentes zones

d'occupation d'activités humaines dans les secteurs menacés par l'érosion des berges, de même que dans les différentes emprises concernées par d'éventuels travaux de réaménagements (nouveau centre d'interprétation, bâtiment de service, sentiers d'interprétation, passerelles et trottoirs flottants). Selon l'Entente de partenariat entre la Nation Micmac de Gespeg et Parcs Canada, il vise également à mieux documenter la présence autochtone paléohistorique de Penouille.

Depuis 2009, plusieurs nouveaux sites d'occupation humaine ont été repérés, autant pour la période historique que la paléohistorique. Parmi les plus significatifs, notons la présence de plusieurs sites paléohistoriques (certains avec foyers) dont l'occupation remonterait à plus ou moins 2000 ans AA, de même que les fondations et planchers de bois associés potentiellement à des cabanes de pêcheurs normands (XVIIe-XVIIIe siècles). À cela s'ajoute la découverte possible d'une coque d'embarcation ensevelie dans le sable de la berge sud ainsi que des traces de la station baleinière ayant été en opération sur la presqu'île au XIXe siècle.

Plus de 9000 éclats de taille, quelques outils lithiques et des fragments de poterie iroquoïenne ont été récupérés lors de cette intervention, de même que des artefacts témoignant respectivement de la présence de pêcheurs normands et de l'industrie baleinière dans le secteur.

Surveillance archéologique de travaux d'aménagement au Fort Chambly, Lieu historique national du Canada (LHNC) du Fort-Chambly

Maggy Bernier

Objectifs

Par le biais d'une surveillance des excavations faites dans le cadre de projets d'aménagements sur le site du Fort Chambly, vérifier la présence de vestiges, documenter la stratigraphie du site et dans le cas de découverte, mettre en place des mesures de mitigation pour assurer la protection des ressources archéologiques mises au jour.

Fondations du moulin seigneurial (XVII^{e} siècle) mises au jour lors des travaux de drainage.

Description

Dans la continuité des projets liés au Programme d'amélioration des infrastructures (PAI) de 2010, l'Unité de gestion de l'ouest du Québec poursuit, en 2011, l'amélioration des installations liées à l'accueil des visiteurs au LHNC du Fort-Chambly. Les travaux de 2011 consistaient en la mise en place d'une aire d'interprétation ainsi que la pose d'un système de drainage dans la portion est du site. La réalisation de ces

travaux impliquait des excavations ponctuelles dans des secteurs présentant un potentiel archéologique. La présence d'un archéologue a donc été assurée tout au long de ces travaux.

Parks Canada (English)

Compiled by Daniel LaRoche, Analyst, archeology, Parks Canada

Eastern Canada

Project Title: Public Archaeology Experience: Historical Archaeology in Terra Nova National Park, Terra Nova National Park of Canada

Jenneth Curtis

Description

Terra Nova National Park is home to numerous historic period sites representing the development of the forestry industry in the early 20th century. This study will engage volunteers in research aimed at documenting cultural features to increase our knowledge of this period and at taking actions to preserve the large metal artifacts that are a key component of these sites. Research activities will include pedestrian survey to map cultural features, archaeological excavation to expose partially buried metal artifacts and the construction of wooden platforms for these artifacts.

Objectives

The objectives are multiple including: to identify and document cultural features related to historic period human history in Terra Nova National Park, to extend the life-time of large metal artifacts by placing them on platforms, to provide a public archaeology experience for volunteers, to increase our knowledge of the human history of Terra Nova National Park and contribute content to interpretation programs for visitors. This study will help to verify and add information to the Geographical Information System (GIS)-based archaeological site inventory for Terra Nova National Park. It will also contribute information for the communication of messages about the human history of the park.

Stanhope Farmlands Archaeology, Prince Edward Island National Park of Canada

Robert Ferguson

Description

Building on research excavations in 2008 and 2010, this summer the project will focus on exposing more of the cellar floor of the late 18th-Century house and locating its eastern foundation. It will attempt to clarify if this is the original home of David Lawson and/or the later home of the Bovyer family, overseers of Lot 34 for Sir James Montgomery. The project includes a team of volunteers from the Stanhope Historical Society under the direction of an experienced archaeologist.

Objectives

There are multiple objectives associated with this project: to verify the age and family association of the structure, to identify structural details of the building and to provide a meaningful experience for members of the Stanhope Historical Society. The project is not a Parks Canada initiative but contributes to Parks Canada's inventory and understanding of the cultural resources located on the land administered by Parks Canada.

Central Canada (Ontario)

Threatened Archaeological Sites Review, Bruce Peninsula National Park of Canada

Brian Ross

Description

Continuation of "Sensitive Sites inspection and monitoring programme" for those land-based archaeological sites deemed to have significant cultural value. Currently, there are 26 known sites of cultural value in Fathom Five and 12 such sites in Bruce Peninsula. The current project focuses on reviewing sites that are known to be disturbed or are threatened with disturbance. This reduces the immediate number of sites to be visited to 13 threatened sites in Fathom Five and 9 such sites in Bruce Peninsula. Once this assessment project is complete, the goal is to proceed with plans to establish a formal and regular site inspection and monitoring programme for Fathom Five and Bruce Peninsula in accordance with Parks Canada's Cultural Resource Management Policy.

Objectives

The primary objective of this project is to begin the process of re-locating fragile and threatened archaeological sites in Fathom Five National Marine Park and Bruce Peninsula National Park so as to garner accurate GPS coordinates and assess their current condition and level of threat.

The project will update existing information on sensitive archaeological sites in the two parks and will form the basis upon which to build a monitoring programme.

Camp Kitchikewana Mitigation ,Georgian Bay Islands National Park of Canada

Brian Ross

Description

This project consists of undertaking controlled archaeological salvage excavation of threatened cultural resources beneath the YMCA of Simcoe/Muskoka's residential Camp Kitchikewana, on Beausoleil Island.

Objectives

In the interests of Parks Canada's Cultural Resource Management Policy, the over-riding objective of this project is to salvage those cultural resources threatened by the development at and operation of the YMCA summer residential facility known as Camp Kitchikewana. Invaluable archaeological artifacts and information will be saved from imminent destruction and a hard copy report detailing the findings and interpretations of the archaeological assessment will be produced. This work is directly related to the commemoration of Aboriginal history. Archaeological mitigation at Camp Kitchi has met, and continues to meet, with the approval of the Park's Cultural Advisory Circle, members of the local First Nation communities, and the YMCA. Archaeology at Camp Kitchi has been a key component of the Park's "Aboriginal Youth" programme since 2000 and is now a key component of the YMCA's spring outdoor education programming.

Archaeological Assessment for a new visitors centre at Bethune House, NHS. Bethune Memorial House National Historic Site of Canada

Rachel Brooks

Description

Archaeological monitoring and documentation project associated with the demolition of the current visitors centre at Bethune House NHS and the construction of a new visitors centre with a different footprint.

Objectives

Objectives for this project include the documentation and mitigation of any impacts that the demolition of the old visitor reception centre and construction of the new visitor reception centre will have on any cultural resources present in the area affected by the development. In addition, any supplemental development (i.e. landscaping, trail construction) will be similarly assessed with regards to its effects on extant cultural resources.

Outputs include a project report, photographs, profiles and plan view drawings of cultural resources and archaeological features encountered through monitoring and excavation in addition to the collection and documentation of artefacts encountered through investigations.

Western and Northern Canada

Gwaii Haanas Archaeology Project 2011/12, Gwaii Haanas National Park Reserve of Canada and Haida Heritage Site of Canada

Daryl Fedje and Nicole Smith

Description

The 2011 Gwaii Haanas Marine and Threatened Site Archaeology Programme consists of an intertidal Inventory, the mitigation of threatened sites as feasible, and Cooperative Research.

Objective

This project aims to conduct a basic resource inventory by investigating and interpreting human history and environment. The inventory of cultural resources and the evaluation of their historic/archaeological values are key elements in the practice of Cultural Resource Management and decision-making at Parks Canada. The project aim to assess newly discovered archaeological sites and mitigate threatened sites, if necessary and as feasible.

GINPR Archaeological Resource Management Programme, Gulf Islands National Park Reserve of Canada

Daryl Fedje

Description

This study consists of two projects: 1) Archaeological resource impact assessment of threatened sites, including those subject to natural factors such as wind and wave erosion or cultural factors such as visitor use and facility developments; 2) collaborative work with University of Victoria field school project.

Objectives

To assist Gulf Islands National Park Reserve in protecting and managing its cultural resources in a pro-active manner. The scope includes: 1) Conduct detailed assessment of highly threatened archaeological sites with a focus on those in the intertidal zone; 2) revisiting and assessing select known sites and reviewing associated records of these; 3) to inventory and assess any additional unknown cultural sites; 4) to work co-operatively with Coast Salish First Nations, including during field projects and information sharing on the results of archaeological inventory and assessment; 5) to support resource management and interpretation of park reserve archaeology; 6) to assess cultural resource impacts of park development/visitor facility improvements as well as disturbance to cultural resources by natural agencies. The archaeological assessment programme is an important component in the protection and management of the park reserve's cultural resources as per Parks Canada's *Cultural Resource Management Policy*.

Cultural Resource Management: Heritage Extant Recording of Brush Structures at Ä'äy Chù and Recording of Heritage Trails in Kluane National Park and Reserve of Canada, 2011, Kluane National Park and Reserve of Canada

Lori Dueck

Description

Brush structures are known as a traditional type of shelter of the Southern Tutchone in the southwest Yukon and are recognized as a significant and important part of the cultural heritage. The brush structure sites at Ä'äy Chù were first recorded archaeologically in 2006 and several sites recommendations were made, including (dendrochronology (tree rings dating) analysis and heritage recording of the structures. The results of the dendrochronology analysis placed the construction of the brush shelters within a time frame of 1865 – 1886 (Luckman 2010).

However, traditional or heritage trails within the Kluane National Park and Reserve are cultural resources that have yet to be recorded archaeologically and included in the park's cultural resource inventory.

Objectives

The 2011 recording project will include surveying the location of six brush shelters and their associated features, as well as one log cabin, and photographing and recording these structures in detail. By providing a visual diagram of the brush structures, their composition and construction, extant recording would assist in the interpretation of their construction and would preserve a record of their current condition.

For the recording of the Heritage Trails, the objective is to map the trail and record its associated oral history. Parks Canada proposes to initiate a project to begin documenting the traditional trails in KNP&R.

This proposal supports Parks Canada's Cultural Resource Management Policy by maintaining and updating the inventory of cultural resources for the purpose of protecting and presenting the material to the public.

Bar U Ranch Public Archaeology Program, Bar U Ranch National Historic Site of Canada

Brad Himour

Description

The Bar U Ranch Public Archaeology Program will involve 8-10 members of the public in a three week controlled archaeological excavation. The focus of the investigation will be the original residence at the ranch (circa 1881). To date, no archaeological research has been conducted on the original ranch house, which was lost to a fire in the early 20th Century.

Objectives

The proposed public archaeology program of excavation at Bar U Ranch is meant to address several main objectives as part of an ongoing program of cultural resource management at Bar U Ranch National Historic Site. These include: 1) Allowing the public to participate in a 'hands on' archaeological excavation; 2) Adding scientific information to Bar U Ranch National Historic site; 3) Allowing the non-participating public a safe environment to walk up to the edge of the excavations, see the process first hand and be able to ask the archaeologists questions; 4) Allows training and supervision opportunities for summer student (s) in archaeology.

The controlled excavations will provide valuable information for interpretation and visitor experience about a key structure at Bar U Ranch - the original ranch house - and the lives of its earliest residents (Stimson Family).

Kootenay National Park PreContact Period Archaeological Site Update Survey, Kootenay National Park of Canada

Brad Himour

Description

In late May/ early June of 2011 the Field Programme will undertake a remote sensing (magnetometer) survey at Kootenay House National Historic Site to help delineate site features, activity areas and areas of potential concern

that may require mitigation prior to road/parking construction at the site.

The second archaeological field project planned for Kootenay National Park in 2009 will consist of a pedestrian survey and low-impact shovel testing programme on previously recorded (1989) archaeological sites in KNP to update the existing site inventory.

In line with Parks Canada's Cultural Resource Management policy and in order to effectively manage and protect non-renewable cultural resource sites, Parks Canada maintains an ongoing commitment to improve its regional inventory of archaeological sites. By identifying sites that are highly significant to First Nations, the scientific community and the public, Parks Canada can actively protect their integrity and promote their importance in terms of the overall cultural history of the region.

Objectives

The dual objectives of the project are : 1) to expand on our current knowledge of Kootenay House NHS by using remote sensing techniques to further delineate site features; 2) to update the existing inventory of significant Contact Period and Pre-Contact Period cultural resource sites that are professionally managed by Parks Canada.

"Invisible History, A Public Archaeology Program", Rocky Mountain House National Historic Site of Canada

Peter Francis

Description

The Rocky Mountain House Public Archaeology Program provides a unique opportunity for archaeology enthusiasts to join supervised digs at the Rocky Mountain House National Historic Site of Canada.

Objectives

The 2011 season will focus on field study at the Hudson's Bay Company Fort which was occupied by fur traders, clerks, voyageurs, tradesman and First Nations between 1835 and 1861. The program will consist of two 4-day field sessions in mid-late August. During each session, a crew of up to 10 participants will excavate a portion of the midden area associated with the third trading post, learn about archaeological field and lab techniques, and attend presentations addressing current historical research at the site. Although the crew will spend much of their time with trowels in hand, there will be ample opportunity for experiencing the sights and sounds of Rocky Mountain House and exploring the rich Métis Culture.

Archaeological Excavations at Rocky Mountain House © Parks Canada.

Grasslands National Park Grazing Experiment Sites Monitoring and New Lands Survey, 2011, Grasslands National Park of Canada

Sharon Thomson

Description

As part of Grasslands NPC's East Block Grazing Experiment, 24 archaeological sites will be monitored according to specific protocols to document impacts accruing from cattle grazing.

This project will also locate and document cultural sites on the former Anderson and Poirier lands. This will involve terrestrial survey using air photos and topographic maps to focus on landforms with potential for past occupation. The purpose of the survey is to maintain a complete inventory of cultural resources within the park, so that they can be managed effectively.

Objectives

The project aims to document the condition of 24 sites in the GNP Grazing Experiment, to identify the degree of impact accruing from cattle grazing and to complete the new lands survey, James Anderson and Poirier acquisitions. It also involves reviewing the locations of proposed new trails in the East and West blocks, and to make recommendations for modifications to trail placement where cultural resource impacts may occur. In addition, it will include the post-burn inspection in the Two Trees area to document any newly exposed cultural resources.

The project will provide baseline information (site forms, photos) for all new sites recorded. A current inventory is necessary if the park is to protect and interpret the cultural resources within its boundaries.

For the 24 sites in the Grazing Experiment, site condition information will be compiled. Data collection will allow for analysis and reporting at the conclusion of the experiment in 2012. Results will contribute to a holistic assessment of the effects of grazing - i.e., taking into account both natural and cultural resources in Grasslands National Park.

The project will help to preserve cultural resources, an objective highlighted in the Grasslands National Park Management Plan.

Prince of Wales Fort (PWF) Wall Stabilization Project, 2011, Prince of Wales Fort National Historic Site of Canada

Donalee Deck

Description

Archaeological work is required in support of the implementation of a drainage system for an ongoing Wall Stabilization Project at Price of Wales Fort. Areas of investigation will include the West Curtain, Southwest Curtain and Southwest Bastion.

Objectives

The objectives for the 2011 archaeological component of the PWF Wall Stabilization Project include: 1) completing archaeological investigations in the Southwest Curtain to document if the original inner wall is still intact, condition and configuration of the cannon platform and cultural deposits, establish the relationship of the original inner wall and cultural features between the Southeast and Southwest Curtains; 2) work with an organic conservator to collect the large barrel exposed last year, for analytical and display purposes; 3) investigate the structural wood discovered under the small barrel by the Restoration Workshop crew ; 4) Submit samples of the barrel staves for FTIR (molecular) analysis; 5) support for the implementation of the drainage plan in the West and Southwest Curtains; 6) other Cultural Resource Management related issues that may arise during other work activities at the fort including installation of scaffolding, movement of trusses, willow clearing, re-pointing activities and site access. This will include monitoring the road leading to and around the fort; and 7) time permitting, testing of the Southwest Bastion to determine the condition of cultural resources.

Further exposure of vestiges will aid in interpretation of the rich cultural remains discovered along the West Curtain to assist with interpretation as to what 18th Century activities were occurring in this area of the rampart. This information will be used by the Wall Stabilization team for the development of a drainage plan that will have the minimal amount of impact on intact cultural resources. The information will also add to the interpretive information presented to site visitors.

Archaeological Work in Wapusk, 2011, Wapusk National Park of Canada

Margaret Bertulli

Objectives

To map and take detailed recordings of high priority sites in Wapusk National Parks and set up photographic monitoring programs at selected sites

Description

A three-phase inventory and evaluation of archaeological sites and cultural resources in Wapusk National Park began in conjunction with the management planning process for park establishment in 1998 and ended in 2001. The phased approach was encapsulated in a synthesis report titled : The People and the Land They Used: Final Report of the Wapusk National Park of

Canada Cultural Resource Management Project (2001) by Carroll et al. The initial inventory recorded more than 82 archaeological sites and one of the objectives of the 2011 project is to determine the cultural affiliation of these sites and report it to the Wapusk Management Board. A lot of the work will concentrate on collecting diagnostic evidence in order to develop a cultural resource protection program in Wapusk.

Pre-contact Archaeology in the Western Arctic National Parks, 2011, Aulavik, Ivvavik and Tuktut Nogait National Parks of Canada

Henry Cary

Description

In the past two years, Parks Canada investigated three pre-contact sites on Banks Island and the western Arctic mainland. The largest project was on Banks Island at Mercy Bay, in Aulavik National Park, with smaller assessments in Ivvavik and Tuktut Nogait National Parks. Much of this research is in its preliminary stages, but has revealed new details about the western Arctic's Palaeoeskimo, Thule, and Inuinnait history.

Objectives

Mercy Bay, Aulavik National Park
Although field work in Mercy Bay in 2010 and 2011 focussed on archaeological remnants of the HMS *Investigator* expedition (Cary 2011, and Cary forthcoming), a second objective was to search for evidence of earlier human occupations.

Ivvavik National Park
Some time was also spent at *Sheep Creek Station*, to assess the state of a known site.

Tuktut Nogait National Park
Field work in Tuktut Nogait National Park was less than a week in August 2011 but reaffirmed the high potential this park has for archaeological study.

Description

Mercy Bay, Aulavik National Park
This effort centred on the Arviq Site (Parks Canada Site No. 130X232), a series of caches, tent rings, and other features dispersed along a rocky bench at the head of Mercy Bay. After its discovery and brief reconnaissance in 1997, Toews (1998:38-43) speculated from the presence of bowhead whale bone that the site was Thule, and also suggested it was where *Investigator*'s Moravian missionary and Inuit translator Johann Miertsching had found in July 1853 'circular receptacles' and 'houses built of stone,' one of which had a 'roof made of whalebones' (Miertsching 1967:165-166).

Keen to visit one of the few Thule sites in Aulavik — especially given its connection to the *Investigator* story— in 2010 we traveled to the site by helicopter while based at a camp near McClure's Cache, the remains of *Investigator*'s shore depot. After landing near the rock terrace, Edward Eastaugh, John Lucas Jr., Letitia Pokiak and I conducted a brief foot survey and soon discovered an endblade preform, two end scapers, a large asymmetric biface, and several lithic scatters and stone features. These finds were photographed, and mapped using a hand-held, survey-grade Ashtech ProMark 3 GPS and all left *in situ* except for the biface. **(**Figure 1**)** Ed collected for radiocarbon dating four terrestrial mammal bones from a stone feature surrounded by whale rib fragments, and these were later sent to Beta Analytic Inc.

Figure 1. Large biface collected from the Arviq Site, Aulavik National Park in 2010. Photo courtesy Edward Eastaugh, University of Western Ontario.

Time did not permit further investigation, but our initial assessment was that Arviq was older than previously believed. When the radiocarbon samples were analysed, the median date produced was 2550 BP (2 sigma, calibrated radiocarbon age 2410-2500 +/- 40 BP) and the biface had affinities with tools found at the Lagoon Site on southern Banks Island. With this new significance, further work was planned for the 2011 season. On 17 July Parks Canada staff Mervin Joe and Letitia Pokiak systematically traversed the site identifying artefacts and features on the surface, marking each find with a plastic pin flag (Figure 2**).** When Mervin, John Lucas Jr. and I could return four days later, we established semi-permanent control points and mapped the site using an Ashtech ProMark3 Real Time Kinematic (RTK) base station and rover GPS, a unit capable of +/- 2 cm precision. Twenty-nine features were plotted then photographed at ground level as were the artefacts, which were subsequently collected. Concentrations of animal bone or single remains were also mapped by RTK and left *in situ*. The site's topography and surrounding coastline were recorded using the RTK and in the process two caches of unknown date were discovered on the peninsula north of the site. After placing and surveying a series of temporary air photo control points across the bench, the site was photographed from the helicopter using a Canon Eos-1 Mk3 DSLR attached to a bracket mounted on the helicopter outrigger. The camera was controlled in the cabin via cable link to a Trimble Yuma tablet, and each shot was geo-referenced by a Garmin 76CSx hand-held GPS, also linked to the camera by cable. A series of photos were taken at approximately 30 m and 130 m altitude, and these will be stitched to create a high-resolution, geo-referenced photomosaic.

Of the eighty-seven artefacts collected, nearly 90% are grey quartz arenite similar to the 'sugar quartzite' found in quantity at Umingmak, a 3300-3600 BP site near the centre of Aulavik National Park (Toews 1998:112). In total, portions of four bifaces, five end blades, and four end scrapers were recovered, as were ninety flakes of various sizes. With so many large quartz bifaces and radiocarbon dates in the 500 BC range it is relatively certain the site's earliest occupation is Palaeoeskimo Lagoon Phase, known from southern Banks Island, the mainland near Tuktoyaktuk, and possibly Melville Island (Arnold 1981, LeBlanc 1994). How the Lagoon Phase fits within the western Arctic's cultural sequence is still not clearly understood, but it shares characteristics with both Pre-Dorset and Choris traditions. The Arviq Site thus has potential to reveal new insights into this hybrid culture, one made even more exciting by the possibility that dwellings may be preserved. Only excavation will determine if any of the stone features at Arviq were built be Lagoon Phase people, but if discovered it would be one of the few instances of architecture from this phase ever found.

Figure 2. Mervin Joe and H. Cary investigating the Arviq Site, Aulavik National Park in 2011. The pin flags indicate feature or artefact finds, and the prominent feature of Gryfalcon Bluff can be seen in the background. Photo by John Lucas, Jr., Parks Canada Agency.

Although the majority of lithic material and some features are likely Palaeoeskimo, an Innunnait occupation is well-represented by large cache features and bone, antler and wood artefacts such as a bone pin, what may be a large fish lure, and a caribou antler that had been cut and drilled. Finally, the range of faunal remains visible on the surface is extensive, including bird, seal, caribou and muskox, and indicates the site was occupied over many seasons.

Helicopter survey elsewhere in Mercy Bay in 2011 also yielded new discoveries. Landing at a 1950s military camp at Investigator Point, we found around a small knole a scatter of quartz arenite and large quantity of animal bone. Two large flakes were collected and three terrestrial mammal bones taken for radiocarbon analysis. Despite reservations the bone had come from the military camp, all three dated to a median of 2500 BP (2 sigma, calibrated radiocarbon age 2340-2420 +/- 30 BP), suggesting a Palaeoeskimo occupation contemporaneous

with the Arviq Site. No features were discerned but the high quantity of bone suggests a butchering site, and the knole provides a good lookout to scan for game.

Another site with a significant amount of animal bone was found at Back Point, on the northeast shore of Mercy Bay. When its boundaries were mapped, the bone covered 63 m north/south and 44 m east/west, but was concentrated in the south around a small tent ring and three muskox skulls. Four terrestrial mammal samples collected from this site provided a median date of AD 1430 (2 sigma, calibrated radiocarbon age 540-590 +/- 30 BP), placing it in the Thule period. The lack of features compared to the quantity of faunal material is puzzling and, like the Investigator Point Site, this site requires further study. However, the site's location and extensive faunal remains make it a likely candidate for one discovered in 1908 by C.W. Green, a member of Joseph-Elzéar Bernier's Canadian Arctic Patrol, who also briefly visited the Arviq Site. Mapping at Back Point was by survey-grade hand-held GPS and the remains were photographed from the air using the helicopter-mounted camera system.

Sheep Creek Station, Ivvavik National Park

In June 2011, a limited assessment was carried out at Sheep Creek Station, near the centre of Ivvavik National Park. A known site here is thought to date to the late-Thule period, although this date determination was based on a single wood sample. The south portion of the site was found eroding into Sheep Creek, revealing a clear horizon of animal bone about 10 cm below the surface. Scattered bone is also visible on the surface covering an area 10 m by 6 m. Further investigation and excavation at the erosion edge will take place in 2012 as part of an adult education and volunteer project.

Uyarsivik, Tuktut Nogait National Park

From a base camp near the centre of the park at Uyarsivik Lake, several known sites were visited on foot or by helicopter and mapped to greater precision using the RTK GPS. On the northeast bank of Uyarsivik Lake, a site excavated in 2006 and 2007 (Bertulli 2008) was geo-referenced by RTK, and preliminary mapping was begun at the *Many Caches* complex on the Hornaday River. An enigmatic collection of over thirty features, including inuksuit, kayak rests, graves, and large caches incorporated into natural fissures in the rock, *Many Caches* was visited over many generations **(**Figure 3**).** A clear start and finish to this occupation has yet to be determined, however, and future study will involve collecting samples for radiocarbon dating and three-dimensional digital survey of the site's diverse features.

The researcher wishes to thank Dr. Chuck Arnold and Dr. Lisa Hodgetts for sharing their expertise on the Arviq Site material.

Figure 3. A large fissure cache with marker stone at Many Caches, Tuktut Nogait National Park, 2011. The Hornaday River can be seen in the valley below. Photo by Eric Baron, Parks Canada Agency.

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Quebec

Emergency Archaeological Intervention on Banc Road, in the Cap-des-Rosiers Area, Forillon National Park of Canada

Anne Desgagné

Objectives

Mitigation measures following shoreline erosion and the unexpected discovery of human remains on Banc Road in the Cap-des-Rosiers area.

Excavation of mechanical trenches on the discovery site at regular intervals under the close supervision of an archaeologist to mark off the potential area of a common grave.

Description

On May 17, 2011, human remains were unexpectedly discovered on the beach and along the shore in the Banc Road area in Cap-des-Rosiers while work was being planned in the area. Shoreline erosion had significantly modified the nearshore dynamics in that area, thus exposing these unexpected resources. Given their proximity to the Irish monument commemorating the shipwreck of the *Carricks* of Whitehaven in 1847, the remains may be linked to this event. We do not know the size of the common grave in which 87 victims were buried, according to historical sources, on the shoreline at Cap-des-Rosiers. The purpose of this intervention is to mark off the common grave.

The remains will be analyzed in the Laboratoire des sciences judicaires et de médecine légale, in Montréal.

Repairs to the Northern Section of Dufferin Terrace and Development of Archaeological Rmains from the Saint-Louis Forts and Châteaux (Infrastructure Improvement Program), Saint-Louis Forts and Châteaux National Historic Site of Canada (NHSC)

Manon Goyette

Objectives

Mitigation measures for projects to develop archaeological remains from the Saint-Louis forts and

châteaux and repair the northern section of Dufferin Terrace. Continuation of work that began in spring 2010 :

-Supervision of the archaeological component of the development project and reconstruction of the terrace

- On-site archaeological interventions: systematic monitoring and excavation in the construction areas

- Monitoring of work and consulting with various experts on the protection and conservation of the archaeological remains, in compliance with the *Cultural Resource Management Policy*

- Integration of new data into the 2005—2011 Intervention Report

Description

Following extensive archaeological excavations at Dufferin Terrace from 2005 to 2007, the Saint-Louis Forts and Châteaux development project was launched to protect the archaeological remains that were discovered and maintain an access under the terrace so the public can learn about its history.

To this end, the apexes of the remains of Château Saint-Louis, the residence of the Governor General of the colony from 1648 to 1834, had to be covered with a waterproof membrane and concrete slab before the deck of the terrace was built. The terrace was slated to be open to the public in July 2011.

Walls, beams and steel piles had to be installed to support the slab by excavating and drilling through the existing remains, including those in the southern courtyard of Château Saint-Louis. Some of the highest apexes of the remains also had to be partially taken down under supervision so that the forms for the slab could be built. Then various parts of the site had to be mechanically excavated to make way for a pathway, troughs, ventilation pipes, electrical wiring and plumbing.

Results: The data collected during this project have rounded out information compiled during the digs on the site between 2005 and 2007. These are the main new findings:

- Parts of the first Fort Saint-Louis built by Champlain in 1620

- Parts of the second Fort Saint-Louis built by Champlain in 1626

- Living quarters built by the Kirkes in 1629 and completed by Champlain from 1632 to 1635

- New parts of the bakery in the first Château Saint-Louis (1648–1660)

- Various levels of occupation in Fort Saint-Louis in the front yard of Champlain's living quarters and Château Saint-Louis (1620–1834)

- Bomb craters from the siege of 1759

- Level of destruction of part of the root cellars of the second Château Saint-Louis, in 1759 (where the funicular is located)

- Identification and dating of some of the funicular walls (which correspond to the foundations of temporary buildings erected on the southern half of the second château's northern pavilion and destroyed by bombardment in 1759)

- New retaining wall at the southern end of Château Saint-Louis' front yard (1779)

- Continuation of a flagstone floor discovered in 2007 in the bailey of Château Saint-Louis (1816–1834)

Repairs to the Southern Section of Dufferin Terrace (Infrastructure Improvement Program – Southern Terrace), Saint-Louis Forts and Châteaux National Historic Site of Canada (NHSC)

Manon Goyette

Objectives

Mitigation measures for a project to repair the southern section of Dufferin Terrace, which began in fall 2010.

Archaeological monitoring, exploratory surveys, protection of archaeological resources (including the guardhouse) and consulting with various stakeholders.

Description

This project is part of the vast project to repair Dufferin Terrace in Québec. It concerns the section of the terrace that extends from the Governor's lower garden to the battery of carronades at the far southern end of the terrace.

More specifically, the affected areas are as follows:

- The lower garden
- The 1845 curtain wall
- The carronade curtain wall, the guardhouse and Major Éliott's stable

All of these areas are subject to archaeological monitoring while the old terrace infrastructure is being demolished (removal of old pillars) and the new infrastructure is being built (installation of new pillars).

Exploratory surveys were conducted in the guardhouse area to verify the remains of Major Éliott's stable and other installations (drains, brick barrels, cistern, firing steps) jeopardized by the work. Since the remains of the stable were intact, it was decided that the current level of circulation would be raised so that new pillars could be installed without disturbing the remains.

Archaeological Field School at the Fort Saint-Jean National Historic Site of Canada (NHSC), Fort Saint-Jean NHSC (managed by the Department of National Defence)

Andrew Beaupré (Laval University)

Objectives

Archaeological Field School internship for first-year Archaeology students at Laval University, in Québec.

Documenting of the first Fort Saint-Jean (1666) and the shipyard of 1757.

Description

Through the Fort Saint-Jean Museum, the Department of National Defence's Directorate of History and Heritage is funding Laval University's Archaeological Field School, which will be conducting a five-year dig in part of Fort Saint-Jean (2009–2013). Parks Canada is associated with the project through the work of two of its specialists (André Charbonneau, Historian, and Pierre Cloutier, Archaeologist) and is contributing to the project by preparing geo-referenced surveys and managing the artefacts and field data in the long term.

Base of a double chimney and extent of fire damage to the floor of a building in the 1757 shipyard that was uncovered in 2009.

Verification of the Status of Archaeological Sites in Mingan Archipelago National Park Reserve of Canada, Mingan Archipelago National Park Reserve of Canada

Jacques Guimont and Jean Tanguay

Objectives

Verification of the status of the 270 archaeological sites identified in 1985 in the Reserve (on islands in the western part of the archipelago). The project's first objective is to verify whether any of the sites are threatened by the elements and recommend action to protect them, as needed. The second objective is to locate the sites using a portable GPS. The third objective is to characterize the sites according to their heritage value with a view to their potential development.

Description

The 270 archaeological sites were identified in this area in 1985 through an assessment of their potential and inventories. There are three types of sites: prehistoric, historic Amerindian and Euro-Canadian. With the exception of four sites, none have been visited in over 25 years or had any work done on them. The first step of the project was carried out this year. The main objective was to try to locate all the types of sites, which we were hoping would enable us to estimate the time we needed for the entire exercise. After a week of field work, we determined that the verification could be done over a few years, based on available funding.

Rear view of one of the ovens for rendering the fat of marine mammals on Île Nue de Mingan (Site 5052G). These ovens are of Basque origin and date back to the last quarter of the 16th century. They have deteriorated significantly since the last archaeological dig in 1994. We suggest that they be stabilized in spring 2012.

Monitoring of work on the aqueduct at the Fort Saint-Jean NHSC, Fort Saint-Jean National Historic Site of Canada (NHSC)

Maggy Bernier

Objectives

Archaeological monitoring of excavation work in connection with repairs to the aqueduct on the site of the Saint-Jean Royal Military College in Saint-Jean-sur-Richelieu in order to protect any archaeological remains in the work area.

Description

The Corporation du Fort Saint-Jean launched a multi-year project in 2010 to repair its aqueduct. In 2011, the work focused on the areas surrounding the historic quadrangle. This area, which was densely occupied by military activities during the French Regime, contains many known or presumed archaeological remains. Because of the strong archaeological potential of the areas concerned, constant archaeological monitoring of the work is required in order to preserve the uncovered remains and to compile information on the facilities and military activities.

Remains of the stone foundations of the barracks built in 1790 and uncovered during the dig in spring 2011.

Dig in Front of the Flanks of the Governor General's Bastion at the Quebec Citadel, Fortifications of Québec National Historic Site – the Citadel

Maggy Bernier

Objectives

Verification of the presence of remains of defensive works that predate construction of the current citadel (1820s) in the area where future repairs will be made to the escarpment wall of the Governor General's bastion.

Description

Given the poor condition of the citadel escarpment wall along the Promenade des Gouverneurs, Public Works and Government Services Canada (PWGSC) launched a project in 2011 to repair the escarpment wall of the Governor General's bastion. The presumed presence in the area of old defensive works, palisades and a battery from both the French and English periods made it necessary to carry out an archaeological intervention before starting repair work on the wall. Parks Canada was responsible for digs in the work area in order to verify the presence of military facilities and to document the current citadel's installations.

Carronade discarded during work in the 1930s in front of the left flank of the Governor General's bastion.

Gutter built in 1846 in front of the escarpment on the right flank of the Governor General's bastion, partially destroyed during work in the 1900s.

Characterization and Remediation Work on Fort Saint-Jean's Northern Redoubt, Fort Saint-Jean National Historic Site of Canada (NHSC)

Maggy Bernier

Objectives

Take advantage of soil characterization drilling to evaluate the stratigraphy of the site of the northern redoubt and verify the presence of archaeological remains.

While remediation work in the northern redoubt is being carried out, mechanically remove all the remains of the Christie House / powder magazine and protect them and other archaeological remains that may be uncovered during the excavation process. Document the northern redoubt's facilities in chronological order.

Characterization work in spring 2011.

Description

In 2008, the Department of National Defence launched a major soil characterization project at the Fort Saint-Jean NHSC. Parks Canada was mandated to identify the site's natural resources and propose mitigation measures to protect these resources during the work. Following two characterization phases in the northern redoubt and the identification of soil contamination by polycyclic aromatic hydrocarbons (PAHs), it was suggested that an archaeological investigation be conducted before any remedial work was done on the premises. A 2009 dig uncovered the remains of the Christie House (1770), which had been converted to a powder magazine during the 1775 siege of Fort Saint-Jean.

Archaeological remains of the Christie House / powder magazine uncovered during the 2009 dig.

In 2011, after the final detailed soil characterization, the remediation phase for the area finally went ahead. The environmental project calls for the excavation of approximately 60 cm of soil inside the redoubt and remove all the soil that filled the Christie House cellars. Given the magnitude of the remains uncovered during the 2009 dig, a team of archaeologists will monitor the mechanical soil excavation during the remediation work, which is slated for the fall, and excavate the remains manually. The work will be monitored constantly to protect the archaeological remains and compile any available information on the remains of the Christie House and its outbuildings.

Exploratory Excavation at Fort Sainte-Thérèse, Fort Sainte-Thérèse National Historic Site of Canada (NHSC)

Maggy Bernier

Objectives

Verification of the presence of archaeological remains in the entrenchments dug by the British when they were at the site in September 1760.

Description

Three excavation campaigns were led in the Fort Sainte-Thérèse NHSC in Carignan from 2008 to 2010. This made it possible to locate the fort and document three generations of fortifications and the buildings erected within the fortifications in the 18th century. Despite the scope of this work, not a trace of the entrenchments dug by Havilland's army, which was marching towards Montréal in fall 1760, was found on the site. After many unsuccessful attempts to locate these entrenchments, an exploratory mechanical trench was dug in August 2011 to verify the presence of their archaeological remains in the only section north of the fort in which archaeological surveys had not been conducted.

The footprint of a trench, a witness to the passage of the British army on the site, was located near the shoulder of the fort's northwestern bastion. It probably featured a parapet of earth to protect the soldiers.

Archaeological Inventory at Penouille, Forillon National Park of Canada

Manon Goyette

Objectives

Assessment of the potential of archaeological resources threatened by shoreline erosion and those located where redevelopment work may be carried out.

Description

Launched in 2009, this project is part of the "Action on the Ground" program. Its purpose is to identify, locate and document various areas where human activities were carried out in sections threatened by shoreline erosion and those where redevelopment work may be carried out (new interpretation centre, service building, interpretation trails, footbridges and floating boardwalks). According to the partnership agreement between the Gespeg Mi'kmaq Nation and Parks Canada, the project also aims to more effectively document Penouille's prehistoric Aboriginal presence.

Since 2009, many new sites occupied by humans in the historic and prehistoric periods have been identified. Among the most significant are numerous prehistoric sites (some with fireplaces), which were occupied in around 2000 BP, as well as wooden foundations and

floors possibly associated with the cabins of Norman fishers (17th–18th centuries). In addition, there is the possible discovery of a boat hull buried in the sand on the south shore, as well as traces of the whaling station that operated on the peninsula in the 19th century.

Over 9,000 chipping flakes, some lithic tools and fragments of Iroquoian pottery were recovered at this dig, as well as artefacts pointing to the presence of Norman fishers and the whaling industry in the area.

Archaeological Monitoring of Redevelopment Work at Fort Chambly, Fort Chambly National Historic Site of Canada (NHSC)

Maggy Bernier

Objectives

Through the monitoring of excavations as part of redevelopment projects at the Fort Chambly site, verification of the presence of archaeological remains, documentation of the site's stratigraphy and, in the event of a discovery, implementation of mitigation measures to protect the archaeological resources uncovered.

Description

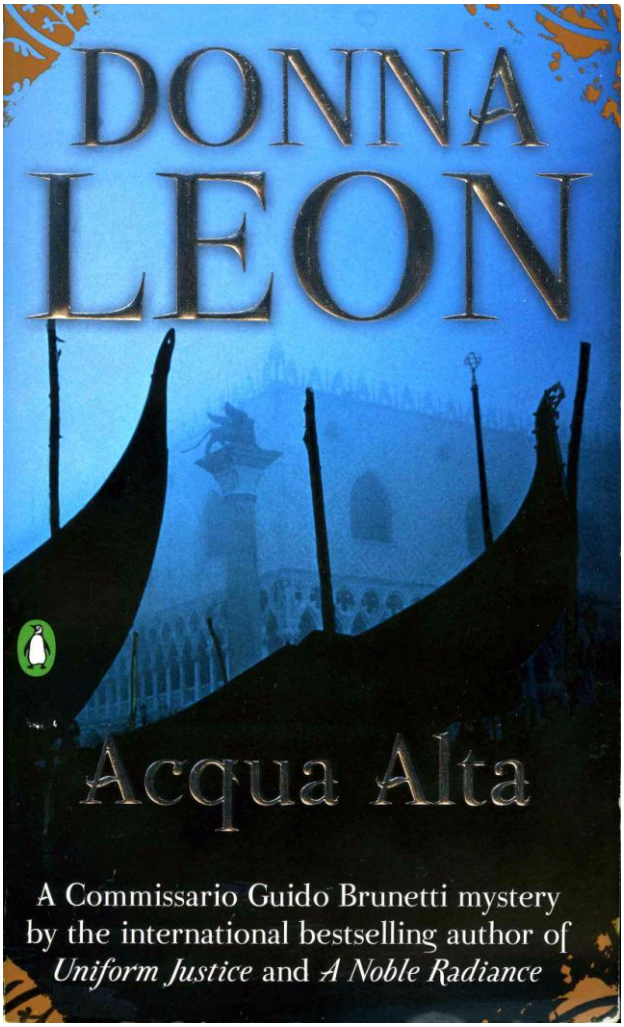
In the 2011 extension of projects under the 2010 Infrastructure Improvement Program, the Western Quebec Field Unit continued to improve visitor buildings at the Fort Chambly NHSC. The 2011 work consisted in setting up an interpretation area and building a drainage system in the eastern part of the site. This work involved selective digs in areas with archaeological potential. An archaeologist was therefore present for the duration of the work.

Foundations of the seigniorial mill (17th century) uncovered during drainage work.

Digging Books

Donna Leon (2004) *Acqua Alta*. Reprint of 1996 edition. Penguin Books, New York. 387 pages. ISBN 0-14-200496-0. $11.99 (Can.)

Alwynne B. Beaudoin



The citizens of Venice are used to occasional inundations of acqua alta or high water, caused by heavy rainfall coupled with exceptional high tides in the Adriatic. Getting around the city dry shod then becomes a challenge, if not a near impossibility. Venturing outdoors involves wet feet, black rubber boots, umbrellas, wading, and cold clammy weather. Even the criminals dislike the conditions, not that it puts much of a crimp in crime, as police investigator Commissario Guido Brunetti is gloomily aware.

In the fifth outing for Donna Leon's featured character, Brunetti becomes involved with a case that has links to the antiquities trade. That's not how it starts, however. Brunetti sees a police report about an assault and, recognizing the name of the victim, Brett Lynch, as someone he'd met and liked several years earlier, he goes to visit her in hospital. He thinks that the attack is probably either a robbery attempt or a hate crime, because Brett is in a relationship with the wealthy and successful Flavia Petrelli, a world-renowned soprano and opera performer. The assault took place at Brett's apartment on the top floor of a fourteenth-century palazzo in the historic Cannaregio district. Two male visitors gain entry by purporting to deliver some documents from Francesco Semenzato, the Director of the Museum at the Doge's Palace. They warn Brett not to meet with Semenzato, and reinforce their message with a brutal beating. Brett's main purpose in this particular visit to Venice is to meet with Semenzato and discuss her concerns about the handling of artifacts in a recent exhibition. She's a distinguished archaeologist. For the last ten years, she has been working on sites in China and co-ordinating joint excavations undertaken by Chinese and Western teams. Some years earlier, she'd been instrumental in arranging a travelling exhibition of rare and significant artifacts from well-known archaeological sites in China, notably Xian. The artifacts included one of the terracotta warriors, a jade burial suit, and some beautiful Han Dynasty ceramics, her particular area of expertise. The Museum had been the last stop on the exhibition's tour.

Brett can't think of anyone who could possibly have a reason to prevent her from meeting with Semenzato. Yet, clearly, something odd is going on and Brunetti is concerned that the thugs might try further intimidation. The situation takes an uglier turn when Semenzato is discovered bludgeoned to death in his office at the Palazzo Ducale. Brunetti finds a certain irony in the choice of murder weapon: an ancient artifact, a cobalt blue brick from the façade of the Ishtar Gate of Babylon. Standard police procedure dictates that Brunetti has to excavate the background of Dottore Semenzato. Using his contacts in the art world and in the myriad agencies that comprise police administration in Italy, Brunetti uncovers Semenzato's connections to people with great wealth and passion for beautiful historical objects.

Brunetti is an attractive character, a person of impressive strength and integrity. He's devoted to his wife, Paola,

and children. His main delights in life are his family, his city, and good food. He's very much aware of the corruption and mismanagement around him and, although basically honest, is not always averse to the occasional shortcut to get the job done. He doesn't enquire too closely, for instance, into the way that Signorina Elettra, one of the office staff, gets hold of Semenzato's bank records. Through Brunetti, Leon examines, with a light touch, some complicated issues, such as the collision between the ancient self-sufficient culture of Venice and modernity. Italian identity is of minor importance to Venetians. She portrays Italy as a loose and uneasy juxtaposition of disparate regions, each with its own language and traditions, which mutually despise and misunderstand each other. Brett Lynch is a less fully delineated character but Leon uses her to explore ambivalent attitudes towards antiquities and ownership of the past. In a place as drenched in history as Venice, Leon tells us, there will always be tension between those who want to conserve the past and those who want to exploit it for personal gain.

As with all the novels in this popular series, the city of Venice is a major character. We learn to navigate our way around the bridges and canals as Brunetti criss-crosses the city in search of information. His progress is greatly impeded by the need to take detours around the flooded areas or wade gingerly along inundated streets and hope the water doesn't overtop his boots. He fights off the bone-chilling cold by occasionally ducking into warm and steamy cafes for a hot grog or coffee with a shot of grappa. Brunetti, a Venetian born and bred, is a sensitive guide to the city, which through his eyes appears to us as a mixture of decayed gentility, poorly maintained infrastructure, and brash commercialism. He's intensely conscious and proud of the city's history and uniqueness. Indeed, the charm and fascination of Venice is perhaps the most lasting impression we gain from Leon's Commissario Brunetti novels.

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Canadian Archaeological Association
Association Canadienne d'Archélogie

E'Se'Get and Shíshálh Fieldwork Blogs

In the summer of 2010, Matthew Betts of the Canadian Museum of Civilization ran the Museum's first fieldwork blog about his community archaeology project in Port Joli, Nova Scotia. On July 5th he is returning to the area and will continue his blog for the final year of the E'se'get Archaeology Project.

Matthew Betts giving a guided tour at a Woodland site near Port Joli, Nova Scotia, in 2010.

The blog will provide insights about archaeology, excavation methods, new digital technologies, camp life, laboratory work, wildlife, and all the mundane and farcical aspects of Museum-sponsored archaeological work on the east and west coasts of Canada.

Terry Clark, who is conducting the community-based Shíshálh Archaeological Research Project in Sechelt, British Columbia, will also be posting about his ongoing excavations.

The Sechelt field crew, 2011 season.

The blog can be accessed at:
http://coastalarchaeology.wordpress.com/

News and Announcements From, For, and About Our Members

Society for American Archaeology 78th Annual Meeting, Honolulu Hawaii, USA
April 3-7, 2013

http://www.saa.org/aboutthesociety/annualmeeting/tabid/138/default.aspx

CALL FOR PAPERS

Proposed Session Title

Spatial Approaches to the History of Archaeology

Session Chairs: Neha Gupta and Bernard K. Means

Scholars often remark that the practice of archaeology varies regionally. Moreover, archaeologists, including those interested in the history of their discipline, have often observed that specific places are investigated at particular times. What do these statements mean for the practice of archaeology? How and why did these spatial patterns come to be and what we can do about these 'spatial differences'? We argue that *seeing* where and when archaeologists carried out field studies is a first step to understanding how these patterns emerged and a prerequisite to addressing what we do not know. To that end we invite scholars to employ spatially explicit methods such as geographic information systems (GIS) to visualize where archaeologists have collected field data, and discuss how perceptions of variation in archaeological practices have influenced our understanding of the history of archaeology. We especially welcome papers on challenges faced in employing spatial approaches to the history of the discipline.

Interested researchers are requested to contact **both chairs** with their email address, institutional affiliation, and title of their proposed paper. Please note that the SAA has changed its submission process and participants are strongly encouraged to familiarize themselves with the new web registration system and deadlines (http://saa.org/Default.aspx?TabId=1419).

Session Chairs:

Neha Gupta

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Dr. Bernard Means

Collateral Professor, School of World Studies

Virginia Commonwealth University

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CNEHA 2012

46th Annual Conference and Meeting

Council for Northeast Historical Archaeology

St. John's, Newfoundland, Canada

St. John's, NL

Downtown St. John's from Signal Hill.

Proposed session topics include:

- Continuity and Change in New World Architecture
- Culture Contact and the Exchange of Ideas
- Extractive Industries and Early Modern Capitalism
- The Colonial Endeavours of the Lords Baltimore
- The War of 1812 Bicentennial
- 20 Years of Archaeology at Ferryland, Newfoundland
- Historical Archaeology in Newfoundland and Labrador
- French Expansion and Industry in North America
- Material Culture
- Collections Management and Conservation
- CRM and Public Archaeology
- Zooarchaeology and Foodways
- Urban Archaeology
- Military Archaeology
- The Isles of Shoals: 5000 Years of History and Ecology

For More Information Visit:

Council for Northeast Historical Archaeology
www.cneha.org
Find us on Facebook:
By Land or By Sea: Changing Worlds

Or Contact:

Barry Gaulton, Co-Chair
bgaulton@mun.ca
Stephen Mills, Co-Chair
sfmills2005@aol.com

The 46th Annual Conference and Meeting will be held October 4-7, 2012 in St. John's, Newfoundland, Canada. Located on the historic and beautiful Avalon Peninsula, St. John's is the largest city in Newfoundland and is located near several major historic and archaeological sites. From the archeological sites at Ferryland, Cupids and Placentia, to historic Signal Hill and Cape Spear and The Rooms Provincial Museum, there is plenty to see.

The conference theme is *"By Land or By Sea: Changing Worlds."* This theme explores European expansion into the northeast, focusing on this movement as a catalyst for change. Environmental and economic considerations facilitated change but equally important was the exchange of ideas, information and technology between Native cultures, Africans and Europeans. North America thus became a different world for those who came across the sea and for the people who were already living there.

Conference Venue:

The 2012 Conference will be held at the Delta Hotel in downtown St. John's. It is conveniently located in the heart of the city, within easy walking distance of many fine restaurants, pubs and shopping. Details on the tours, workshops and other special events will be announced in the near future.

Colony of Avalon archaeological site, Ferryland, Newfoundland.

Call for Submissions to the CAA Newsletter

The CAA Newsletter is intended to be a venue for discussing a wide range of topics relevant to the interests of CAA members and appears in an online downloadable format twice per year. As in the past, the Spring publication will function primarily as a forum for researchers working in Canada or affiliated with Canadian institutions to present summaries and preliminary findings of their activities. The Fall Newsletter is expected to contain a diverse range of topics of interest to all CAA members.

The Newsletter is currently soliciting contributions from individuals and groups whose interests include Canadian archaeology, as well as those who are based in Canada and involved in international projects. Academic or avocational, professional or student, the CAA Newsletter is where archaeologists can tell their colleagues about their work!

What's in the Newsletter?

The Spring edition of the Newsletter features preliminary reports on fieldwork done in all areas of Canada by avocational societies, federal/provincial/territorial organizations, museums, CRM companies, and university or college-based groups. The Newsletter encourages submitters to include full colour images to accompany their text (500-1000 words); submitters may also link their Newsletter contribution to a field or lab video previously uploaded to the CAA's YouTube channel (email the channel's manager at canadianarchaeology@gmail.com for details).

The submission deadline for the Spring CAA Newsletter is February 15, 2013 to the appropriate regional editor; information on how to submit can be obtained by contacting the managing Newsletter editor at caanewsletter@gmail.com.

The Fall Newsletter is a more diverse publication whose contents will vary according to the interests and needs of CAA member submitters and readers. Submissions should be sent directly to the managing editor at caanewsletter@gmail.com no later than September 15, 2012. A variety of submissions will be considered and are not limited to those suggested below.

CAA Organizational Activities

Check out this component of the Newsletter for news about your Association. This is one of the means through which the CAA communicates directly with its members, providing updates on topics including membership, elections, upcoming CAA conferences, policy changes, information about how to nominate people for awards, and how to get more involved.

News and Notes

Contributors can share news and announcements about the awards and honours they've received, grants and fellowships available in their area or institution, upcoming meetings, new digital resources, data sharing networks, and countless other useful tools. Tributes and obituaries for colleagues are also welcome.

Archaeology In-Depth

The Newsletter will also showcase more in-depth reports on research that may not be ready for more formal publication; this includes ongoing lab-based work, experimental archaeology projects, as well as reviews of new techniques and technologies for archaeological conservation and analysis. Commentaries on a variety of issues and policies relevant to archaeology as conducted in Canada and abroad are also encouraged.

Archaeology In-Depth is also a great place to publish more detailed treatments of conference papers and posters, highlights and histories of longer-term research programmes, as well as various mitigation activities. For those interested in hands-on,

life-in-the-trenches, archaeology, the Newsletter welcomes assessments of useful (or not so useful) products, especially field gear, lab equipment, and software.

Spotlight On ...

The Newsletter's Spotlight On … section allows members to focus on specific research problems and questions that they may be grappling with. If there is a puzzling artefact from a newly excavated site (or one newly discovered in an old collection) whose origin or significance presents more questions than answers, share the mystery with fellow CAA colleagues. The diverse backgrounds and experiences of fellow CAA members may mean a long-sought solution is within reach.

In a similar research vein, the Fall edition of the Newsletter is an ideal way to feature new or renovated archaeological facilities, exhibits, online resources, and community outreach activities.

Student Corner

The Newsletter makes it easy for students to get involved in their association! Fieldwork and grant opportunities for Canadian researchers and those working in Canada are listed here, as well as information on upcoming field schools and new facilities in anthropology and archaeology departments across Canada. New graduate programmes and new faculty may also post details of their research and supervisory interests here in an accessible format.

Newly Completed Theses and Dissertations

Have you, or someone you know, recently completed a Masters or Ph.D. in archaeology? If so, use the Newsletter to tell fellow CAA members all about it. Simply submit a title and brief (<300 word) abstract highlighting major findings to the managing editor at caanewsletter@gmail.com for inclusion in the Fall edition of the Newsletter. If the thesis/dissertation is available online, be sure to provide an electronic link and soon everyone in the CAA will know about this new research!

Books Available for Review

Book reviews are published in the Canadian Journal of Archaeology, and a list of available books can also be found at http://canadianarchaeology.com/caa/books-available-review.

Canadian Archaeological Association
Association Canadienne d'Archélogie

Appel à contributions pour le Bulletin de l'ACA

Le Bulletin est conçu pour être un lieu de discussion pour une grande variété de sujets concernant les intérêts des membres de l'ACA et il paraîtra deux fois par an dans un format téléchargeable en ligne. Comme par le passé, la parution du printemps aura pour rôle principal de servir de forum aux chercheurs travaillant au Canada ou affiliés à des institutions canadiennes, pour présenter leurs résumés et les découvertes préliminaires de leurs activités. Le bulletin de l'automne contiendra divers sujets intéressant tous les membres de l'ACA.

Le Bulletin sollicite actuellement des contributions de la part des individus ou des groupes concernés par l'archéologie canadienne, ainsi que de la part de ceux qui sont basés au Canada et impliqués dans des projets internationaux. Universitaires ou personnes sans affiliation, professionnels ou étudiants, le Bulletin de l'ACA est le lieu où les archéologues peuvent parler de leur travail à leurs collègues !

Qu'y a-t-il dans le Bulletin?

L'édition de printemps du Bulletin présente des rapports préliminaires de travaux de terrain réalisés dans tous les domaines au Canada, par des sociétés d'amateurs, des organisations fédérales, provinciales ou territoriales, des musées, des compagnies de gestion des ressources culturelles et des groupes basés dans des universités ou des collèges. Le Bulletin encourage ceux et celles qui lui adressent des propositions à y inclure des images couleur pour accompagner leur texte (de 500 à 1000 mots) ; ils/elles ont également la possibilité de lier leur contribution au Bulletin à une vidéo de terrain ou de laboratoire préalablement téléchargée sur la chaîne YouTube de l'ACA (veuillez adresser un courriel à la personne ressource à canadianaarchaeology@gmail.com pour plus de détails).

La date limite d'envoi des propositions pour l'édition de printemps du Bulletin est le 14 février 2013, au rédacteur en chef régional concerné ;vous pourrez obtenir l'information sur le processus à suivre pour soumettre une proposition en contactant le rédacteur en chef du Bulletin à caanewsletter@gmail.com.

Le numéro d'automne du Bulletin est une publication plus diversifiée dont le contenu variera en fonction des intérêts et des besoins des membres de l'ACA, lecteurs comme auteurs. Les propositions devraient être adressées directement au rédacteur en chef à caanewsletter@gmail.com, avant le 15 septembre 2012. Nous considérerons une grande variété de propositions, celles-ci ne se limitant pas à ce qui est suggéré ci-dessous.

Activités organisationnelles de l'ACA

Cette section du Bulletin est à consulter pour connaître les dernières nouvelles de notre Association. C'est l'un des moyens par lesquels l'ACA communique directement avec ses membres, en leur fournissant les plus récentes informations au sujet des souscriptions, des élections, des conférences de l'ACA en projet, des changements de politiques, ainsi que la manière dont proposer des candidats aux différents prix et comment s'impliquer davantage.

Informations et avis

Les contributeurs ont la possibilité de partager les nouvelles et les annonces au sujet des récompenses et des honneurs qu'ils ont reçus, des bourses et des subventions offertes dans leur domaine ou leur institution, les réunions à venir, les nouvelles ressources en ligne, les réseaux de partage des données et d'innombrables autres outils très utiles. Les hommages et les notices nécrologiques pour les collègues seront également bienvenus.

Archéologie en profondeur

Le Bulletin publiera également des rapports plus approfondis sur la recherche, qui pourraient ne pas être encore prêts pour une publication plus formelle ; cela inclura des travaux de laboratoire en cours, des projets d'archéologie expérimentale, de même que des commentaires sur les nouvelles techniques et technologies de conservation et d'analyse archéologique. Nous accueillerons aussi volontiers des commentaires sur divers sujets et questions concernant l'archéologie telle qu'on la pratique au Canada et à l'étranger.

Cette section représente également un lieu privilégié pour publier de manière plus détaillée des présentations par affiches ou des communications prononcées lors de conférences, pour faire l'historique de programmes de recherche à long terme, ainsi que pour l'intervention de divers modérateurs. Pour ceux qui s'intéressent aux aspects concrets, à la vie dans les tranchées de l'archéologie, le Bulletin publiera des évaluations de produits (utiles ou inutiles), en particulier en ce qui concerne le matériel de terrain, l'équipement de laboratoire et le matériel informatique.

Coup de projecteur sur…

La section « Coup de projecteur… » du Bulletin permet aux membres d'aborder des problèmes et des questions de recherche spécifiques avec lesquels ils éprouvent des difficultés. Si des fouilles sur un site mettent au jour un artefact déroutant (ou si l'on en découvre un dans une collection ancienne), dont l'origine ou la signification suscitent plus de questions que de réponses, partagez ce mystère avec des collègues de l'ACA. Les formations et les expériences diverses des membres de notre association pourront faire en sorte de résoudre une question qui pouvait paraître insoluble.

Dans une veine similaire pour ce qui est de la recherche, le numéro d'automne du Bulletin représente un moyen idéal de présenter des locaux, nouveaux ou rénovés, des expositions, des ressources en ligne et des activités communautaires de grande portée.

Le coin des étudiants

Le Bulletin permet aux étudiants de s'impliquer plus facilement dans leur association ! Nous y présentons la liste des travaux de terrain et des opportunités de bourses pour les chercheurs canadiens et ceux qui travaillent au Canada, ainsi que des informations sur les chantiers-écoles à venir et les nouveaux locaux et départements en anthropologie et en archéologie au Canada. Les directeurs de nouveaux programmes de deuxième et troisième cycle et de nouvelles facultés pourront également y diffuser des informations sur leurs orientations et intérêts de recherche dans un format accessible.

Nouvelles thèses et nouveaux mémoires

Avez-vous, ou quelqu'un que vous connaissez, récemment terminé une maîtrise ou un doctorat en archéologie ? Si oui, servez-vous du Bulletin pour en informer les autres membres de l'ACA. Adressez simplement un titre et un court résumé (moins de 300 mots) pour en décrire les principales découvertes au rédacteur en chef, à caanewsletter@gmail.com, pour qu'il puisse figurer dans la parution de l'automne. Si la thèse ou le mémoire est disponible en ligne, assurez-vous de fournir un lien électronique et tout le monde à l'ACA connaîtra bientôt cette nouvelle recherche !

Liste de livres pour comptes rendus

Les recensions sont publiées dans le Journal canadien d'archéologie et la liste des livres disponibles pour compte rendu peut également être consultée à http://canadianarchaeology.com/caa/books-available-review