



CAA/ACA
Whitehorse, Yukon 2016

**Conference
Program
and
Abstracts**

49th
Annual Meeting of the
Canadian Archaeological Association

May 4 – 7, 2016
Westmark Whitehorse Hotel, Yukon



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Canadian Archaeological Association
Association canadienne d'archéologie

The Canadian Archaeological Association (CAA) was founded in 1968. Membership includes professional, avocational and student archaeologists, as well as individuals of the general public of any country, who are interested in furthering the objectives of the Association. The objectives of the CAA are as follows:

- To promote the increase and the dissemination of archaeological knowledge in Canada;
- To promote active discourse and cooperation among archaeological societies and agencies and encourage archaeological research and conservation efforts;
- To foster cooperative endeavours with aboriginal groups and agencies concerned with First Peoples' heritage of Canada;
- To serve as the national association capable of promoting activities advantageous to archaeology and discouraging activities detrimental to archaeology;
- To publish archaeological literature, and;
- To stimulate the interest of the general public in archaeology.

L'Association canadienne d'archéologie (ACA) a été fondée en 1968. Ses adhérents comptent des archéologues dont c'est la profession ou un violon d'Ingres et des étudiants, ainsi que des membres venant du grand public et de n'importe quel pays, qui ont en vue de favoriser les objectifs de l'Association.

- Les objectifs de l'ACA sont les suivants:
- promouvoir l'accroissement et la propagation de connaissances archéologiques au Canada;
- promouvoir une coopération et des échanges actifs entre les sociétés et les organismes archéologiques, et favoriser le travail de recherche et de conservation;
- stimuler les efforts de coopération avec les groupes autochtones et les organismes concernés par le patrimoine canadien des Premières nations;
- servir d'association nationale pouvant promouvoir les activités avantageuses pour l'archéologie et décourager les activités nuisibles à l'archéologie;
- publier de la documentation archéologique;
- stimuler l'intérêt du grand public pour l'archéologie.

CAA Executive:

Lisa Rankin, President
Adrian Burke, Vice-President
Joanne Braaten, Secretary-Treasurer
William Ross, Past President
President Elect, Gary Warrick

CAA Editors and Committee Members:

Gary Coupland, CJA Editor-in-Chief
Dave Norris, Web Editor
Gary Warrick, Book Review Editor
Karen Ryan, CAA Newsletter Editor
Cheryl Takahashi, Webmaster
Leigh Syms, Public Advocacy Committee
Eldon Yellowhorn, Aboriginal Heritage Committee
Eric Guiry, Student's Committee
Jack Brink, Membership Committee
Jennifer Campbell, Heritage and Legislation Policy Committee

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Conference and Event Locations

Westmark Whitehorse Hotel

Conference Venue, Conference Hotel, CAA Executive, CAPTA and Data Managers meetings
Yukon Science Institute Public Lecture venue
201 Wood Street, Whitehorse Phone: (867) 393-9700

Yukon Beringia Interpretive Centre

Opening Reception
Km 1423 Alaska Highway, Whitehorse Phone: (867) 667-8855

Yukon College

Yukon College Wine and Cheese
500 College Dr, Whitehorse Phone: (867) 668-8800

MacBride Museum of the Yukon

A Night at the MacBride Museum
1124 Front Street, Whitehorse Phone: (867) 667-2709

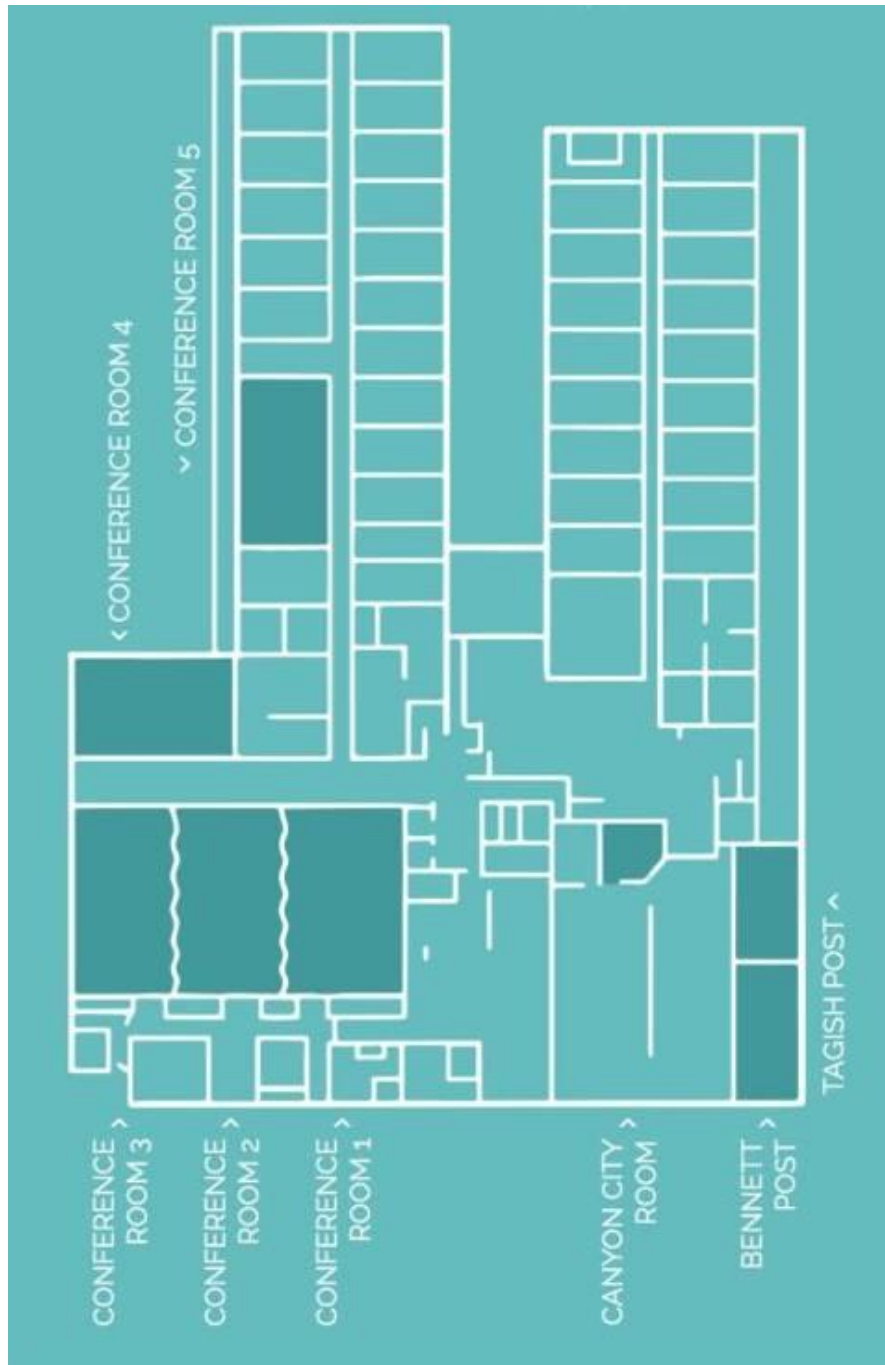
Kwanlin Dün Cultural Centre

Banquet and Keynote Address
1171 Front Street, Whitehorse Phone: (867) 456-5322



Downtown Whitehorse

Steele Street



Wood Street

Second Avenue

Westmark Whitehorse Hotel – Main Floor Meeting Rooms

Registration and General Information

The Registration Desk will be open on Wednesday, May 4 between 15:00 and 18:00 in Conference Room 4 at the Westmark Whitehorse Hotel for delegates who have not as yet registered for the conference. Delegates who have registered in advance can pick up their registration package at the Registration Desk anytime or at the Opening Reception at the Yukon Beringia Interpretive Centre on May 4 from 18:00 - 21:00. The Registration Desk will be open from 8:00 to 17:00 on May 5, and from 8:00 am to 13:30 on May 6 and 7. US currency will be accepted at par. Banks and ATMs are located on Main Street, two blocks from the Westmark Whitehorse.

Conference Badges

Conference registration badges must be worn to attend all events during the conference. Delegates are asked to wear their badges at all times.

CAA Membership

Delegates can renew their membership at the Registration Desk. Conference presenters are required to be CAA members. Delegates who are not presenting at the conference do not have to become CAA members.

Instructions for Presenters and Session Chairs

Instructions for Paper Presenters

Paper presenters are allotted a maximum of 20 minutes in which to present papers. There will be a PC laptop and projector in each session room with a USB port, loaded with MS PowerPoint. Please arrive at your session 20 minutes ahead of time, in the break *before* your session is scheduled to start to upload your PowerPoint presentation from a USB stick. Presentations should be saved as PowerPoint files. Mac users should save PowerPoint presentations as a PC format. Bringing a backup copy of your presentation as a pdf file is always a good idea.

Instructions for Session Chairs

Please maintain the established schedule in fairness to persons planning to attend specific presentations. If a scheduled speaker fails to appear, please pause for the period allotted in the program. Please arrive at your session 20 minutes in advance to co-ordinate the loading of presentations onto the laptop provided.

Instructions for Poster Presenters

Setup of posters will be available in Conference Room 3 and 4 between 8:00-10:00 am. There are no grouping requirements or assigned spaces for posters; they are allotted on a first-come, first-served basis. Posters should not exceed 4 x 3 feet in size if at all possible. Velcro coins, tape and pins for the attachment of posters will be provided. The poster session is scheduled for Friday from 13:20am to 4:00pm; however, poster presenters may choose when to be present at the poster session. Poster presenters may wish to attach a note to their posters indicating when they will be present to discuss their research with fellow delegates.

Student Poster Prize

The 2016 Canadian Archaeological Association Conference is pleased to announce sponsorship of two Student Poster Awards. One prize (\$250) will be given for the best poster by an undergraduate student, and one (\$250) for the best poster by a graduate student. Entry to the poster competition required submission of a pdf of posters by April 15, 2016 to heritageresources@gov.yk.ca along with a confirmation of current student status (a scanned copy of a student card or an institutional

letter confirming current student status). Posters will be evaluated by a committee formed of the CAA 2016 Conference Organizers. Posters will be evaluated on content, presentation, and the overall contribution that the research makes to the field.

The student poster competition does *not* require students to be present with their poster for judging; all judging decisions will be made with the advance submission of the poster pdf file. The Student Poster Awards will be presented at the MacBride Museum Open House, on Friday, May 6, 2016.

Student Travel Grants

The CAA provides partial travel grants to students who are members of the CAA. Students are eligible if they are: presenting a paper or a poster; a Session Discussant; or an Invited Presenter. The application form can be found in the 'Members Only' section of the CAA webpage; only travel costs are eligible (not accommodation or meals). Download the pdf file, fill it out, and submit to the CAA Secretary-Treasurer by July 1, 2016. Any questions can be addressed to webeditor@canadianarchaeology.com.

Conference at a Glance

Wednesday, May 4

	Conference Room 5			Bennett Room	Tagish Room	Yukon Beringia Interpretive Centre
Morning	CAPTA			Data Managers	Executive	
Afternoon						
Evening						Opening Reception

Thursday, May 5

Room	Conference Room 1	Conference Room 2	Conference Room 3	Conference Room 5	Tagish Room	Yukon College
Morning	Environment, Climate, Ecology and Archaeological Contributions to the Discussion	Contributions from Cultural Resource Management	Beyond Little John: The Archaeology of Borderlands	Molecular Anthropology and Bioarchaeology		
Afternoon			Interpreting Ethnicity in the Archaeological Record			
Evening	Contributed International Papers					19:00 - 22:00 Yukon College Open House

Friday, May 6

Room	Conference Room 1	Conference Room 2	Conference Room 3	Conference Room 5	Tagish Room	
Morning	Recent Research in the Western Subarctic	Current Approaches to Archaeology & Heritage Research in the Western Arctic and Lower Mackenzie Region	Maritime Archaeology	From Across the Land - Contributed Papers		
Afternoon			Poster Session	Geochemical Analysis in Archaeology	On the Edge: European Adaptations to Life on the Periphery	
Evening					16:10 - 18:00 Regional Archaeological Societies Meeting	
						19:00 - 20:00 Conference Room 1 Yukon Science Institute Public Lecture
						20:00-22:00 MacBride Museum - A Night at the Museum

Saturday May 7

Room	Conference Room 1	Conference Room 2	Conference Room 3	Kwanlin Dun Cultural Centre
Morning	Papers in Honour of Raymond Le Blanc	Archaeology and Modern Climate Change	The Power of Palaeo-environments	
Afternoon		Current Research in British Columbia	Archaeology in the Public Sphere	
	15:00 CAA Business Meeting			
Evening				18:00 - 23:00 Conference Banquet and Keynote Address

Daily Schedule in Brief

WEDNESDAY, MAY 4

9:00 – 16:00 **CAPTA meeting** (pre-registration required)
Westmark Whitehorse, Conference Room 5

9:00 – 16:00 **Data Manager's meeting** (pre-registration required)
Westmark Whitehorse, Bennett Room

9:00 – 16:00 **CAA Executive meeting** (pre-registration required)
Westmark Whitehorse, Tagish Room

15:00 – 18:00 **Registration Desk** is open at the Westmark Whitehorse Hotel, Conference Room 4 for those who have not pre-registered for the conference. For those who have pre-registered, you may pick up your conference packages from the Registration Desk.

18:30 – 21:00 **Opening Reception.** Yukon Beringia Interpretive Centre hosted by Cultural Services Branch, Department of Tourism and Culture, Government of Yukon. Bus transportation will be provided. Begin departure at 18:15 from the Westmark Whitehorse (Wood Street entrance) running every 15 - 30 minutes to the Beringia Centre. Those who have pre-registered may pick up their conference packages at the reception.

THURSDAY, MAY 5

8:00 to 17:00 **Registration.** Westmark Whitehorse, Conference Room 4

8:00 to 17:00 **Paper presentations.** Westmark Whitehorse. Conference Room 1, 2, 3, 5

9:00 to 17:00 **Book Room and Silent Auction.** Westmark Whitehorse, Conference Room 4

14:00 to 16:00 **Grad School Workshop.** Westmark Whitehorse, Tagish Room

16:00 to 18:00 **Student Publishing Workshop.** Westmark Whitehorse, Tagish Room

19:00 to 22:00 **Yukon College Open House and Wine and Cheese.** Shuttle bus service will run between the Westmark Whitehorse (Wood Street entrance) and Yukon College between 18:30 and 22:30. **Event sponsored by Yukon College and Stantec.**

FRIDAY, MAY 6

8:00 to 13:30 **Registration Desk.** Westmark Whitehorse, Conference Room 4

8:00 to 17:00 **Paper presentations.** Westmark Whitehorse. Conference Room 1, 2, 3, 5

9:00 to 17:00 **Book Room and Silent Auction.** Westmark Whitehorse, Conference Room 4

16:10 to 18:00 **Regional Archaeological Societies Meeting.** Westmark Whitehorse,
Tagish Room

19:00 to 20:00 **Yukon Science Institute Public Lecture.** Patricia D. Sutherland, Carleton University. **A Meeting of Northern Worlds: Indigenous Peoples and the Norse in Arctic Canada.** Westmark Whitehorse, Conference Room 1.

Yukon Science Institute Public Lecture

May 6, 2016 7:00 PM – Westmark Whitehorse Hotel

A Meeting of Northern Worlds: Indigenous Peoples and the Norse in Arctic Canada

Patricia D. Sutherland, Adjunct Research Professor, Department of Geography and Environmental Studies, Carleton University, Ottawa

Recently identified archaeological finds from Canada's eastern Arctic provide new evidence of a little known chapter in North American history. Artefacts resembling those used by Europeans of the Viking and Medieval periods have been recognized in several archaeological collections from Baffin Island and the adjacent regions of northern Labrador. These collections are from site locations occupied by the Dorset culture Palaeo-Eskimos, a distinct population that inhabited Arctic Canada before the arrival of ancestral Inuit from their Alaskan homeland. Investigations undertaken as part of the Helluland Archaeological Project have also yielded other lines of evidence which suggest that the Norse, who had founded colonies in southwest Greenland, may have had a significant presence in Arctic Canada. Interactions with the Dorset culture people during the centuries around 1000 A.D. appear to have been more frequent, more widespread and more complex than has previously been believed. Relations between the Norse and the early Inuit were likely more sporadic and opportunistic.

20:00 to 22:00 **A Night at the Museum – MacBride Museum Open House.** Event sponsored by **Kleanza Consulting Ltd.** **Undergraduate and Graduate Student Poster Awards** will be presented at the MacBride Museum. Awards sponsored by **Tree Time Services.**

SATURDAY, MAY 7

9:00 to 13:30 **Registration.** Westmark Whitehorse, Conference Room 4

8:00 to 17:00 **Paper presentations.** Westmark Whitehorse. Conference Room 1, 2, 3, 5

9:00 to 17:00 **Book Room and Silent Auction.** Westmark Whitehorse, Conference Room 4

15:00 – 17:00 **Canadian Archaeological Association Annual Business Meeting.**
Westmark Whitehorse Hotel, Conference Room 1

18:30 – 23:00 **Banquet and Keynote Address.** Kwanlin Dün Cultural Centre.
Cash bar at 18:30; banquet at 19:00.

The keynote speaker for the 2016 CAA Banquet is one of the leading archaeologists researching the early peopling of the New World, **Ted Goebel** from Texas A&M University. The address is entitled: **Pleistocene Human Dispersal to the New World: A View from the Top of the World.**

The new Kwanlin Dün First Nation/Yukon Archaeology Programme exhibit: **Archaeology in the Kwanlin Dün Traditional Territory** will be open for the duration of the evening for conference participants. Through objects and images, the exhibit highlights the archaeological and oral history research done in partnership by the Kwanlin Dün First Nation and Yukon Government Archaeology Programme since 1993.

The Kwanlin Dün Cultural Centre is located on the Yukon River, about a 10 minute walk from the Westmark Whitehorse. **Banquet Sponsor is [Air North – Yukon's Airline](#).**

KEYNOTE ADDRESS

Dr. Ted Goebel, Texas A&M University

Pleistocene Human Dispersal to the New World: A View from the Top of the World



With the acceptance of Monte Verde as a viable pre-Clovis archaeological site nearly two decades ago, our traditional understanding of the Pleistocene peopling of the

Americas had to be set aside to make room for a new theory of dispersal. Some archaeologists and paleoanthropologists, dissatisfied with the lack of early archaeological sites in Beringia, looked to Europe as a likely source for the first Americans. At the same time, geneticists modeled a north Pacific coastal migration, based on geographic patterning of mitochondrial DNA lineages. Then, the discovery of the 30,000-year-old Yana site in arctic northeast Siberia and a large-scale analysis of mitochondrial genomes from multiple human populations led to the development of the ‘Beringian incubation’ theory, the idea that ancestors of the first Americans dispersed into Beringia long before the last glacial maximum, became isolated there for many thousands of years so that the genetic variability among today’s Native American lineages could develop, and then eventually spread from Alaska to the rest of the Americas early in the late glacial, after 16,000 years ago. Since the turn of the last century, new discoveries and new models were being published at such a pace that it became nearly impossible to keep up.

Now the dust is finally starting to settle. A new synthesis of ancient genomic and archaeological evidence from greater northeast Asia and North America is providing the raw material we need to fashion a new working model of Native American origins and dispersal. In this presentation we will take a fresh, new look at the problem, reviewing the results and implications of (1) the latest full-genome studies of ancient humans and contemporary human populations, (2) recent genomic analyses of the keystone species of the mammoth-steppe and what their late Pleistocene demographic histories might tell us about the process of human dispersal, (3) amazing new archaeological discoveries in Alaska that are finally providing some of our first full portrayals of human life on the Beringian mammoth steppe, and (4) new chronologies of the earliest archaeological complexes in temperate North America that are calling for a re-organization of the traditional order of Paleoindian ‘cultures’. The goal is to show how all of these new studies—primarily focusing on the northern latitudes of Asia and America—stack up to form a cohesive scientific explanation of how humans first dispersed to the Western Hemisphere.

Conference Tours

SUNDAY, MAY 8

8:30 – 18:00 **Tour of historic Skagway, Alaska with U.S. National Parks Service Staff**

This tour includes of a two hour bus journey along the staggeringly beautiful Klondike Highway from Whitehorse to Skagway. The Canadian portion of the tour will be led by James Mooney (Heritage Program Manager, Ecofor Consulting Ltd., Whitehorse) office and include a visit to the Carcross-Tagish First Nation Carving Centre in historic Carcross and discussions with master carver Keith Wolfe Smarch. Karl Gurcke, Historian at the U.S. National Park Service Klondike Gold Rush National Historical Park will meet tour participants near the summit of White Pass to point out the early historic routes between the port of Skagway, Alaska and the Yukon: the White Pass Trail, the Brackett Wagon Road, and the White Pass & Yukon Route Railroad. Once in Skagway, participants will visit several of the Klondike Gold Rush National Historical Park house museums: the Moore House, the Mascot Saloon, and the new Jeff Smith Parlor with NPS staff. Then an hour or two of time on you own will allow you to explore this historic gold rush town and do a little souvenir shopping should you wish. A box lunch, snacks and beverages will be provided on the tour.

<http://www.nps.gov/klgo/index.htm>

Note: You must have your passport with you to participate in this trip.

Deadline for signing up for this tour (if space is available) is Friday, May 6 by 13:00.

8:30 – 18:00 **Visit to the Canyon site, Haines Junction and Kluane National Park in Dákeyi - Champagne and Aishihik First Nations traditional territory**

This tour has been organized jointly with the Champagne and Aishihik First Nations. The tour will be led by John Fingland, a Champagne and Aishihik First Nation (CAFN) member and certified guide, and by Ty Heffner (Senior Archaeologist, Stantec, Whitehorse), a Yukon archaeologist who has extensive research and field experience in this region of the Yukon. The first stop for this excursion will be at the Takhini Burn on the Alaska Highway for a discussion of how ice, water and fire shape the landscape in Southern Yukon. Next, the bus will stop at Long Ago Peoples' Place – a reproduction of a Southern Tutchone wilderness camp as it would have been constructed prior to contact with Europeans. Long Ago Peoples' Place is located at historic Mile 974 on an old section of the Alaska Highway near Shadhāla (Champagne). During the visit, participants will also be given a presentation on traditional tools and technology by Harold Johnson, a CAFN member who developed the interpretive facility. The next stop is the site of Canyon, an early post-glacial archaeological site and the site of much of well-known Alaskan archaeologist Bill Workmans' Ph.D. research. Canyon is also a CAFN settlement and an important traditional resource area for CAFN. Next, tour participants will drive to Haines Junction to visit Da Kū ('our house'), Champagne and Aishihik First Nations' new cultural centre where participants will have an opportunity to see the centre's permanent exhibits, the current "Treasures" feature exhibit,

and the centre's marquee exhibit – the floor map of dákeyi. On the return trip, a brief stop near Haines Junction will provide an opportunity to view the beach lines associated with Neoglacial Lake Alsek, highlighting the region's dynamic and ongoing relationship with the glaciers of the St. Elias Mountains. A box lunch, snacks and beverages will be provided on the tour. The tour sponsor is **Stantec**.

Long Ago Peoples' Place: <http://yukonfirstnationculture.com/>

Da Kų Cultural Centre: <http://www.cafn.ca/centre.html>

Note: Upon request, portions of this tour can be presented also in French.

Deadline for signing up for this tour (if space is available) is Friday, May 6 at 13:00.

MONDAY, MAY 9 – THURSDAY, MAY 12

Dawson City, Tr'ondëk Hwëch'in Cultural Centre and Culture Camp, Tombstone Territorial Park and a Palaeontological Visit to Klondike Goldfields

This field trip has been organized jointly with the Tr'ondëk Hwëch'in and the Yukon Government Palaeontology Programme.

Day 1 – Monday, May 9

The vans depart Whitehorse at 8:30 AM heading up the North Klondike Highway. Along the way, your hosts will point out locations of historical and archaeological interest. A box lunch will be provided on the trip. Arrival in Dawson will be around 3:30 PM – check in at the Eldorado Hotel. At 5:30 PM, our Tr'ondëk Hwëch'in hosts will open the doors of their Community Hall, to host a dinner featuring a performance by the Tr'ondëk Hwëch'in dancers. During dinner, participants will hear a presentation outlining the development of the Tr'ondëk Hwëch'in Heritage Program beginning with the signing of Tr'ondëk Hwëch'in Final Agreement and the development of programs to promote and transmit culture in their traditional territory.

Day 2 – Tuesday, May 10

The vans will depart Dawson City at 8:00 AM, heading north on the Dempster Highway. At 10:30, a stop is planned at the Tr'ondëk Hwëch'in Culture Camp Cache on the Blackstone Uplands to learn about the TH Heritage Department's Cultural Education programs. The next stop will be a short visit to an upland Gwich'in hunting lookout where hunters intercept the Porcupine Caribou Herd. Participants will then receive a tour of the Tombstone Territorial Park interpretive centre/campground. A box lunch is provided for the trip. This evening's dinner is on your own. After dinner (7:30), local physical anthropologist Susan Mooney will present on discovery of the graves of the Nantuck brothers, a well-known and tragic story from the time of the Klondike Gold Rush. Doors open at the Dawson City Museum at 7:00 PM.

Day 3 – Wednesday, May 11

Walking tour of historic Dawson City led by Dawson City Museum staff, and a tour of the Dänojà Zho Cultural between 9:00 and Noon. Lunch on your own. 1:30-4:30 – tour of the

historic Klondike Goldfields with Yukon Palaeontologist Grant Zazula, including a visit to Gold Bottom Creek and Dredge #4. Dinner on your own. After dinner, Grant will present on the current understanding of ice age Beringia and review some the dynamic research taking place in the Dawson gold fields. Talk begins at 7:30 at the Odd Fellows Hall.

Day 4 – Thursday, May 12

9:00 AM departure for Whitehorse with entertaining stops along the way. Box lunch and beverages will be provided. Back to Whitehorse by 3:30 PM. Remember to book your hotel room in Whitehorse for Thursday, May 12.

*** Note: people with their own transportation can follow along on these field trips but will be responsible for their own meals, accommodation and other costs.**

Conference Social Events

WEDNESDAY, MAY 4

Opening Reception 18:30 – 21:30

Yukon Beringia Interpretive Centre

Hosted by Cultural Services Branch, Department of Tourism and Culture, Government of Yukon. Hors d'oeuvres and cash bar. Bus transportation will be provided. Begin departure at 18:15 from the Westmark Whitehorse (Wood Street entrance) running every 15-30 minutes to the Beringia Centre. Those who are pre-registered may pick up their conference packages at the reception.

THURSDAY, MAY 5

Yukon College Open House and Wine and Cheese 19:00 to 22:00

Wine and cheese at Yukon College and an opportunity to tour the campus and learn about current and past research by college faculty. Shuttle bus service will run between the Westmark Whitehorse (Wood Street entrance) and Yukon College between 18:30 and 22:30. **Event sponsored by Yukon College and Stantec.**

FRIDAY, MAY 6

Yukon Science Institute Public Lecture. 19:00 to 20:00

A Meeting of Northern Worlds: Indigenous Peoples and the Norse in Arctic Canada

Patricia D. Sutherland, Carleton University. Westmark Whitehorse, Conference Room 1

A Night at the Museum – 20:00 to 22:00

MacBride Museum

Open House at the MacBride Museum, located a block away from the Westmark Whitehorse at the corner of Front and Wood Streets. Hors d'oeuvres and cash bar. Undergraduate and Graduate Student Poster Awards. Event Sponsored by Kleanza Consulting Ltd.

SATURDAY, MAY 7

Banquet and Keynote Address – 18:30 – 23:00

Kwanlin Dün Cultural Centre – Long House

The Kwanlin Dün Cultural Centre is located on the Yukon River, about a 10 minute walk from the Westmark Whitehorse. Transportation is available for those in need – a passenger van will be at the Wood Street entrance of the Westmark Whitehorse at 6:30.

Transportation back to the Westmark Whitehorse will be available after the banquet, upon request (to be announced). **Banquet Sponsor is Air North – Yukon's Airline.**

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Bookroom and Silent Auction and Conference Memorabilia

The bookroom is located in Conference Room 4 and will be open on Thursday, May 5, Friday, May 6 and Saturday May 7 from 8:00 to 17:00. Order/purchase information varies by vendor/publisher.

Items up for auction as part of the **Silent Auction** are on display in the bookroom. Bids will be collected over the three days that the bookroom is open. The Silent Auction closes Saturday, May 7 at 12:30. At this point, the winning bidders must be on hand to make payment by cash (exact payment) or cheque.

Note: ATMs are located in various banking establishments on Main Street, a block from the Westmark Whitehorse.

CAA/ACA 2016 Conference t-shirts, commemorative Marshsalltown trowels and insulated tea/coffee cups all bearing the “CAA/ACA 2016 Whitehorse, Yukon” conference logo will be for sale in the bookroom as well. Payment may be made by cash or cheque (preferred), or you may use credit card when Registration Desk is open

Note: Registration Desk hours: Thursday 8:00 – 17:00; Friday 8:00 – 13:30; Saturday 9:00-13:30.

Sessions at a Glance

Thursday, May 5				
Time	Conference Room 1	Conference Room 2	Conference Room 3	Conference Room 5
8:00			Poster Set-Up	
8:20	Session Introduction (8:35)	Heffner, S. and J. Zatorski	Conference Room 3 and Bookroom	
8:40	Armstrong, C.G. et al.	MacKenzie, S. and K. Booker		
9:00	Burley, David	Soucey, Kristen		Murchie, Tyler
9:20	Gibbons, Kevin S.	Morrissey, G. and C. Hartley		Brown, Kelly et al.
9:40	Yang, Dongya	Herkes, Jennifer		Royle, T. and D.Y. Yang
10:00	Richards, Michael	Break		Morales-Arce, Ana
10:20	Break	Graham, Taylor R.	Easton, N.A. et al.	Daley, Patrick et al.
10:40	Armstrong, C.G.	Mooney, James	Yesner, D. et al.	Break
11:00	Young-Boyle, Chandra	Mooney, James	Break	Guiry, E. et al.
11:20	Szpak, Paul	Wagner, S.C. and T.Y. Ng	McLaren, W. et al.	Hutchinson, V.
11:40	Duffield, S. and D. McLaren	Timmins, Peter	Younie, A.M. et al.	Holland, A. et al.
12:00	Lunch	Lunch	Sattler, R.A. et al.	Holland, E. et al.
13:20	Carleton, W. Christopher et al.	MacMillan, J. and M. Young	Lunch	Lunch
13:40	Damkjar, E.	Mooney, James et al.	Rankin, Lisa K.	Hudecek-Cuff, C. and A. Wilson
14:00	Morin, Jesse et al.	Forsythe, Kyle D.	Fay, Amelia	Bruwelheide, K. et al.
14:20	Monks, Greg	Sullivan, Kristian et al.	Ramsden, Peter	Gardner, J.M. et al.
14:40	Break	Blakey, J. and B. Vivian	Dermarkar, Susan	Mooney, Susan Moorhead
15:00	Roksandic, Ivan	Break	Beaudoin, Matthew	Break
15:20	Wiebe, M. and F. Berna	Meyers, Adrian	Break	Cooper, H.K. and A. Simonetti
15:40	Werner, J. Jeffrey	Seibert, Jeff	Supernant, Kisha	Thompson, L. and R.C.P. Doonan
16:00	Peuramaki-Brown, M. et al.	Haukaas, Colleen et al.	Brownlee, K. and W. Dumas	Cooper, H. K. and J. Speakman
16:20	Ahronson, K. and T. Cowie	Robertson, Elizabeth	Nielsen, Scott	Pike, Matthew D.
16:40	Hills, William	Roskowski-Nuttall, Laura	Dielissen, Sandie	

	Environment, Climate, Ecology and Archaeological Contributions to the Discussion
	Contributed International Papers
	Contributions from Cultural Resource Management
	Beyond Little John: The Archaeology of Borderlands
	Interpreting Ethnicity in the Archaeological Record
	Molecular Anthropology and Bioarchaeology
	Ancient Metals and Metallurgy

Friday, May 6						
Time	Conference Room 1	Conference Room 2	Conference Room 3	Conference Room 5	Tagish Post	
8:20				Schwarz, Fred and Corey Hutchings		
8:40	Gryba, Eugene			Brake, Jamie and Michelle Davies		
9:00	Gore, Angela K.	Arnold, Charles D.	Easton, N.A. et al.	ten Bruggencate, R.E et al.		
9:20	Lynch, Joshua	Lyons, Natasha et al.	Moore, Charles	Norman, Lauren		
9:40	Graf, Kelly E. et al.	Compton, Mary E. and Lisa Hodgetts	Anichthcenko, Jenya	Walker, Samantha Leigh		
10:00	Break	Rodrigues, Antonia et al.	Break	Hossack, Adam		
10:20	Cook, John P.	Break	Pollack, John and Robyn Woodward	Break		
10:40	Bowman, Robert C. et al.	Munizzi, Jordon et al.	Gurcke, Karl	Deck, Donalee		
11:00	Reuther, Joshua D. et al.	Kotar, Kathryn and Lisa Hodgetts	Woodward, Robyn and John Pollack	MacKay, Glen		
11:20	Potter, Ben A. et al.	Hodgetts, Lisa	Magne, Martin et al.	Friesen, Nathan		
11:40	Bond, Jeffrey D. et al.	Goodwin, Rebecca		Kennedy, Margaret and Barney Reeves		
12:00	Lunch	Lunch	Lunch	Lunch	Lunch	
13:20	Thomas, C.D. and M. de Guzman	Desmarais, Danielle and Natasha Lyons	Poster Session	Carter, Kari and Aubrey Cannon	Surmely, Frédéric and Jay Franklin	
13:40	Vickers-Redhead, Ben and Gary Brewer	Griebel, Brendan et al.		Kristensen, Todd J. et al.	Weinbender, Kim	
14:00	Perdue, Adam	Kritsch, Ingrid and Alestine Andre		Spearing, Whitney K and Johnathan H. Grieve	Peach, Kate	
14:20	Bourgeon, Lauriane	Gray, Rebecca		Heffner, Ty	Booker, Kirby	
14:40	Smith, Heather	Break		Macfie, Ramsay	Beaudoin, Matthew	
15:00	Break	Arnold, Charles D.		Break		
15:20	Monteleone, K. and E.J. Dixon	Lyons, Natasha, Max Friesen and Lisa Hodgetts		ten Bruggencate, R.E et al.	Elliott, Deirdre and Anatolijs Venovcevs	
15:40	Lausanne, A. et al.			Handley, Jordan and Norman Alexander Easton	Venovcevs, Anatolijs	
16:00					Rasic, Jeffrey, P. et al.	

	Recent Research in the Western Subarctic
	Current Approaches to Archaeology & Heritage Research in the Western Arctic and Lower Mackenzie Region
	Maritime Archaeology
	Poster Session 13:20 – 16:00
	From Across the Land - Contributed Papers
	Geochemical Analysis in Archaeology
	On the Edge: European Adaptations to Life on the Periphery

Saturday, May 7			
Time	Conference Room 1	Conference Room 2	Conference Room 3
8:30	Castillo, Victoria		
8:40	Brink, Jack		
9:00	Nagy, Murielle		Hamilton, Scott
9:20	Woywitka, Robin	Friesen, Max and Michael O'Rourke	Gibson, Terrance
9:40	Esdale, Julie	O'Rourke, Michael	Pennanen, Kelsey and Matthew Boyd
10:00	Blaikie-Birgit, Kurtis	Jahraus, Adam et al.	Break
10:20	Break	Break	Jollymore, Kay
10:40	Castillo, Victoria	Andrews, Thomas D. and Glen MacKay	Gilliland, Krista
11:00	Reilly, A. and J.W. Ives	Hare, P. Gregory and Christian Thomas	Letham, Bryn et al.
11:20	McGhee, Robert	Landry, David B. et al.	Ponomarenko E. and E. Ershova
11:40	Friesen, Max	Lunch	Beaudoin, Alwynn
12:00	Lunch		Lunch
13:20	Younie, Angela	Ritchie, Morgan et al.	Carr-Locke, Sarah
13:40	Heffner, Ty	Waber, Nick	Steuber, Karin et al.
14:00	Sutherland, Patricia and Peter H. Thompson	Sellars, Ian and Morgan Ritchie	Clark, Terrence
14:20	Taylor-Hollings, Jill	French, Diana	Clark, Terrence
14:40	Ives, John W. et al.	Rahemtulla, Farid	Holder, Madeline and Amandah van Merlin
15:00	Further Remarks	Kantakis, Adam	Grekul, Christie
15:20	CAA Annual Business Meeting		
15:40			
16:00			
16:20			
16:40			

	Papers in Honour of Raymond Le Blanc
	Archaeology and Modern Climate Change
	Current Research in British Columbia
	The Power of Palaeoenvironments
	Archaeology in the Public Sphere

Sessions in Detail

Thursday, May 5

Conference Room 1

Environment, Climate, Ecology and Archaeological Contributions to the Discussion

Session Chairs: Chelsey Armstrong and David Burley, Simon Fraser University

8:35		Session Introduction
8:40	Armstrong, Chelsey Geralda, Kevin Gibbons and Anna Shoemakers	Archaeological Contributions to Historical Ecology: 50 Questions, Infinite Prospects
9:00	Burley, David	Rising Oceans and Pacific Island Catastrophes – Archaeological Data Demarcates 21st Century Shoreline Transformation in the Kingdom of Tonga
9:20	Gibbons, Kevin S.	Human Ecodynamics in the North Atlantic: Archaeological Sites as Endangered Environmental Archives
9:40	Yang, Dongya	Ancient DNA Analysis as a Tool for the Study of Human Environment Interaction of the Past
10:00	Richards, Michael	Terrestrial climate records from faunal isotope sequences
10:40	Armstrong, Chelsey Geralda	Documenting Cultural Landscapes in Northwest British Columbia: Gitsm'geelm Land Use and Resource Management
11:00	Young-Boyle, Chandra	Archaeological Cod Otoliths as Environmental Indicators
11:20	Szpak, Paul	Long-term Baselines for Assessing Ecosystem Change in the Canadian Maritime Arctic
11:40	Duffield, Seonaid and Duncan McLaren	Tracking Long Term Patterns in Archaeological Site Occupation and Environmental Change on the Central Pacific Coast of Canada
13:20	Carleton, W. Christopher, David Campbell and Mark Collard	Classic Maya data reveal massive impact of climate change on conflict frequency at the century scale
13:40	Damkjar, Eric	It All Happened So Fast -- Late Dorset Adaptations to the Medieval Warm Period in the Eastern Arctic
14:00	Morin, Jesse, John Konovsky, Dana Lepofsky Kevin Edinborough, Meghan Burchell, Dongya Yang, Blake Evans, Nova Pierson, Morgan Ritchie	Tsleil-Waututh Nation Pre-Contact Ecological Reconstruction of Burrard Inlet: Applied Archaeology
14:20	Monks, Greg	Further Thoughts on Climate Change and Cultural Implications in Barkley Sound, British Columbia

Thursday, May 5

Conference Room 1

Contributed International Papers

Session Chair: Meaghan Peuramaki-Brown, Athabasca University

15:00	Roksandic, Ivan	Early Connections Between the Greater Antilles and Lower Central America
15:20	Wiebe, Matthea and Francesco Berna	Microstratigraphic investigation of site formation processes at the Upper Paleolithic site of Manot Cave, Israel
15:40	Werner, J. Jeffrey	Hunter/Gatherer Responses to Glacial Climate During the African Middle Stone Age: Evidence From The Magubike Archaeological Site, Tanzania
16:00	Peuramaki-Brown, Meaghan, Kathryn Reese-Taylor, and Armando Anaya Hernández	Ancient Multiple Nuclei and Peri-Urban Development in Campeche, Mexico
16:20	Ahronson, Kristjan and Trevor Cowie	Pioneering early dendrochronology in Canada: Thomas Stratton's "Botanical Chronology"
16:40	Hills, William	Sablère Kinart à Omal: A Refitting and Raw Material Analysis

Conference Room 2

Contributions from Cultural Resource Management

Session Chair: Laura Roskowski-Nuttall, University of Calgary/Stantec

8:20	Heffner, Susie and Jezelle Zatorski	Incorporating Traditional Land Use Data into GIS-Based Models of Archaeological Potential: A Case Study from the Yukon
8:40	MacKenzie, Sarah and Kirby Booker	Inherent management difficulties of unpredictable distribution of lithic reduction sites near dacite raw material source locations
9:00	Soucey, Kristin	Application of LiDAR imagery for managing forestry HRIAs in north-central Alberta
9:20	Morrissey, Greg and Corey Hartley	Northern Landscapes and Southern Budgets: GIS modeling to access archaeological potential in Forestry Development Areas throughout the South Slave Region of the Northwest Territories
9:40	Herkes, Jennifer	Modelling for Archaeological Potential within the Mackenzie Natural Resource District, Northern British Columbia

Thursday, May 5

Conference Room 2

Contributions from Cultural Resource Management (cont'd)

Session Chair: Laura Roskowski-Nuttall, University of Calgary/Stantec

10:20	Graham, Taylor R.	The Visualization of Archaeological features in Alberta From LiDAR Based Digital Terrain Models
10:40	Mooney, James	Heritage Resources Summary of the BMC Kudz Ze Kayah Project
11:00	Mooney, James	Heritage Resources Summary of the Casino Project
11:20	Wagner, Stephen C. and Tommy Y. Ng	Impact Assessment in a Tipi City: Cultural Resource Management Contributions to Understanding a Cultural Landscape
11:40	Timmins, Peter	Inverhuron Revisited: Recent CRM Investigations at Inverhuron, Ontario
13:20	MacMillan, Jodie and Mark Young	Archaeology of Howard's Pass
13:40	Mooney, James, Tim Bennett and Elizabeth Hall	Dawson City Waste Water Revisited
14:00	Forsythe, Kyle D.	The Mount Albert Site: Purposeful Artifact Breakage in the Middle Archaic of Southern Ontario
14:20	Sullivan, Kristian, Jody Pletz, and Grzegorz Kwiecien	The Peace River Before Dunvegan: Excavating a Boreal Forest Multicomponent Site in Alberta
14:40	Blakey, Janet and Brian Vivian	An Overview of the 2015 Excavations at the Junction Site (DkPi-2)
15:20	Meyers, Adrian	3D Laser Scanning of Culturally Modified Trees in British Columbia
15:40	Seibert, Jeff	Collaborative approaches to archaeological site avoidance strategies: examples from MTO archaeological practices
16:00	Haukaas, Colleen, Robin Woywitka and Jo-Ann Marvin	Applications of Geospatial Data and Technology in Cultural Resource Management at the Archaeological Survey, Government of Alberta
16:20	Robertson, Elizabeth	Dating with Microblades: Diagnostic or Dead End?
16:40	Roskowski-Nuttall, Laura	Bridging the Gap between Cultural Resources Management and Academia: A Consultant In Residence's Perspective

Thursday, May 5

Conference Room 3

Beyond Little John: The Archaeology of Borderlands

Session Chair: Norman Easton, Yukon College

10:00	Easton, Norman Alexander, David Yesner, Vance Hutchinson, Michael Grooms, Jordan Handley, Joel Cubley	Challenges and Opportunities in the Archaeology of Borderlands: Constructing a Cultural Chronology of the Little John Site
10:20	Yesner, David, Vance M. Hutchinson, Lauriane Bourgeon, Norman Alexander Easton	Inter-site and Intra-site Patterning of the Late Pleistocene/Holocene Faunal Assemblage from Little John (KdVo6), a Multi-Component East Beringia Site in Yukon Territory, Canada
11:00	McLaren, Whitney, Julie Esdale and Norm Easton	Archaeological Investigations at Six-Mile Hill, Tok, Alaska - 2015
11:20	Younie, A.M., R.A. Sattler, N.A. Easton, J. Reuther and S.C. Coffman	Advancing the Archaeology of Deadman Lake, Upper Tanana River: A Legacy Project for Bill Sheppard
11:40	Sattler, R.A., T.E. Gillespie., N.A. Easton, C. Thomas and A.M. Younie	A River Runs Through It: The Archaeology of a Trans-National River Corridor

Thursday, May 5

Conference Room 3

Interpreting Ethnicity in the Archaeological Record

Session Chair: Lisa K. Rankin, Memorial University and Amelia Fay (Manitoba Museum)

13:20	Rankin, Lisa K.	Untangling and Interpreting Inuit Ethnicity(ies) in Southern Labrador
13:40	Fay, Amelia	The Ethnicity of Things
14:00	Ramsden, Peter	Is Ethnicity a Polite Word for Politics?
14:20	Dermarkar, Susan	Explorations of Ethnicity, Identity and Ethnogenesis at the 15th Century Iroquoian Keffer Site
14:40	Beaudoin, Matthew	Green, Orange, or Something in Between: Exploring the Evolution of an Irish Ethnicity in 19th-Century Ontario
15:20	Supernant, Kisha	An archaeological exploration of Métis ethnogenesis and daily life on the Canadian Prairies, 1840-1880
15:40	Brownlee, Kevin and William Dumas	Community Interpretation of the Protocontact Period: The Rocky Cree
16:00	Nielsen, Scott	Questions of Continuity and Transformation at Ashuanipi
16:20	Dielissen, Sandie	Being a 'good' girl: Crafting gender in the Indian Residential Schools

Conference Room 5

Molecular Anthropology and Bioarchaeology

Session Chair: Susan Mooney, Whitehorse, Yukon and Tyler Murchie, McMaster University

8:40	Murchie, Tyler	Frozen wooden artifacts as a source of ancient DNA?
9:00	Brown, Kelly, Barbara J. Winter, Chen Shen and Dongya Y. Yang	Developing Minimally Destructive Protocols for DNA Analysis of Museum Collection Bone Artifacts
9:20	Royle, Thomas C.A. and Dongya Y. Yang	Ancient DNA Analysis of Fish Remains from Charlie Lake Cave (HbRf-39), British Columbia, Canada
9:40	Morales-Arce, Ana	Sex determination and ancient mitochondrial genetic variation in infants among the offerings dedicated to Ehécatl-Quetzalcóatl in Tlatelolco (1325-1521 AD)
10:00	Daley, Patrick, Andrew Wilson, and Julia Beaumont	Stable isotope analysis of incremental dentine to investigate childhood diet and disease in 19th-century London

Thursday, May 5

Conference Room 5

Molecular Anthropology and Bioarchaeology (cont'd)

Session Chair: Susan Moorhead Mooney, Whitehorse, Yukon and Tyler Murchie, McMaster University

10:40	Guiry, Eric, Suzanne Needs- Howarth, Alicia L. Hawkins, Michelle Courtemanche, Paul Szpak and Michael Richards	Forgotten fish: Isotopic insights into the behaviour of the extinct Lake Ontario salmon
11:00	Hutchinson, Vance	Biological Anthropology and the Peopling of the Americas: A synthesis of current research
11:20	Holland, Alyson, Terence Clark, Jerome Cybulski, and Gary Coupland	The Bead Family of Shishalh: A discussion of the bioarchaeological investigations of the Shishalh Archaeological Research Project
11:40	Holland, E., Rogers, T., and L. Lesage	Childhood Health in the Kleinburg Ossuary: A preliminary analysis of linear enamel hypoplasia
13:20	Hudecek-Cuffe, Caroline and Aaron Wilson	The Viking Burial Site (FgOw-2): A Collaborative Undertaking to Excavate and Reinter an Historic Burial in Central Alberta
13:40	Bruwelheide, Karin S., Sandra S. Schlachtsmeyer, Douglas W. Owsley, and Vicki E. Simon, Arthur C. Aufderheide, Larry W. Cartmell, and Stephan J. Swanson	Unearthing Robert Kennicott: Naturalist, Explorer, Smithsonian Scientist
14:00	Gardner, J. M. Spence, H. Martelle, Amanda DiLoreto- Bendek	Really 'Cold' Cases- Identifying Executed Prisoners from Ontario's Historic Jails
14:20	Mooney, Susan Moorhead	What Happened to Frank and Joe?: The Search for the Missing Nantuck Brothers

Thursday, May 5

Conference Room 5

Ancient Metals and Metallurgy

Session Chair: H. Kory Cooper, Purdue University

15:00	Cooper, H. Kory and Antonio Simonetti	Lead Isotope Analysis of Geological Native Copper: Implications for Provenance Work
15:20	Micon, Jonathan	Classification and Copper: Experimental Insight on Native Copper Artifact Typology
15:40	Thompson, Lenore and R.C.P. Doonan	Writing Artefact Biographies: A Study of Copper Use and Culture Contact in the Pacific Northwest
16:00	Cooper, H. Kory and Jeff Speakman	Copper from Old Town, Yakutat Bay, Alaska
16:20	Pike, Matthew D.	Indigenous Copper Technology of the Central Arctic and Subarctic: Preliminary assessments of spatiotemporal variation in artifact morphologies

Friday, May 6

Conference Room 1

Recent Research in the Western Subarctic

Session Chair: Ben A. Potter, University of Alaska Fairbanks

8:40	Gryba, Eugene	Back to Basics in Interpreting Variations in Late Pleistocene-Early Holocene Northeast Asian-Northwest North American Microblade Technologies
9:00	Gore, Angela K.	Eastern Beringian Toolstone Procurement: A Preliminary Investigation of Basalts from Dry Creek, Alaska
9:20	Lynch, Joshua	Results from Excavations at Blair Lakes, Interior Alaska
9:40	Graf, Kelly E. Julie Esdale, Ted Goebel	New Investigations of Late Glacial Occupations at the McDonald Creek Site, Central Alaska
10:20	Cook, John P.	Obsidian at Healy Lake Village Site
10:40	Bowman, Robert C., Joshua D. Reuther, and Richard Vanderhoek	Recent and Paleoenvironmental Indicators for Change within Sand Dunes in Subarctic Interior Alaska and their Impact on Archaeological Assemblages
11:00	Reuther, Joshua D., Ben A. Potter, Charles E. Holmes, Julie A. Esdale, and Jennifer Kielhofer	Late Quaternary Landscape Change and Large Mammal Habitat Fragmentation in Interior Alaska
11:20	Potter, Ben A., Julie Esdale, Charles E. Holmes, Joshua D. Reuther, Holly J. McKinney	New Discoveries at Delta River Overlook, a terminal Pleistocene – late Holocene multicomponent site in central Alaska
11:40	Bond, Jeffrey D., Brent C. Ward, John C. Gosse and Derek G. Turner	Timing and rate of deglaciation of the MIS 2 Cordilleran Ice Sheet in Yukon Territory and implications for landscape occupation
13:20	Christian Thomas and Margarita de Guzman	Early human occupation in the Britannia Creek valley: Archaeology at Britannia Creek
13:40	Vickers-Redhead, Ben and Gary Brewer	Paleo-Environmental Change as an Indicator of Cultural Change? 10 000 years of Culture Change and Environment in the Peace River Drainage of British Columbia and Alberta.
14:00	Perdue, Adam	The Michie-M'Clintock Heritage Resources Inventory Project
14:20	Bourgeon, Lauriane	Bluefish Caves I and II (Yukon Territory) and the first peopling of Eastern Beringia

Friday, May 6

Conference Room 1

Recent Research in the Western Subarctic (cont'd)

Session Chair: Ben A. Potter, University of Alaska Fairbanks

14:40	Smith, Heather	The transmission of fluted-point technology in the ice-free corridor: a morphological investigation of variability in the region using geometric morphometrics
15:20	Monteleone, Kelly and E. James Dixon	Underwater Archaeology in SE Alaska: Results from modeling and four-seasons of exploration of the continental shelf
15:40	Lausanne, Alex, Daryl Fedje, Ian Walker, Quentin Mackie	Archaeological Prospection of Early Paleo-Coastal Sites using LIDAR. Sea Level History & GIS Modeling Techniques

Conference Room 2

Current Approaches to Archaeology and Heritage Research in the Western Arctic and Lower Mackenzie Region

Session Chairs: Natasha Lyons, Ursus Heritage Consulting, Max Friesen, University of Toronto and Lisa Hodgetts, University of Western Ontario

9:00	Arnold, Charles D.	Finding Connections – A role for archaeology in discovering Inuvialuit history and heritage
9:20	Lyons, Natasha, Lisa Hodgetts and Max Friesen	Contemporary modes of knowledge production & curation in Western Arctic Archaeology
9:40	Compton, Mary E. and Lisa Hodgetts	Engaging with Archaeological Collections from Banks Island, NWT: Examining the value of digital representations and physical replicas
10:00	Rodrigues, Antonia, Lisa Hodgetts and Dongya Yang	Archaeogenetic Insights into the Natural History of Muskox Populations on Banks Island, NWT, Canada
10:20	Munizzi, Jordon Simon, Lisa Hodgetts, Fred J. Longstaffe	An Isotopic Approach to the Terrestrial Resource Ecology of Hunter-Gatherers on Banks Island, NWT, Canada over the Last 3500 Years
11:00	Kotar, Kathryn and Lisa Hodgetts	Variability in the Banks Island Thule-Inuit Subsistence Economy: A Faunal Analysis of OkRn-1, Banks Island, N.W.T.

Friday, May 6

Conference Room 2

Current Approaches to Archaeology & Heritage Research in the Western Arctic and Lower Mackenzie Region (cont'd)

Session Chairs: Natasha Lyons, Ursus Heritage Consulting, Max Friesen, University of Toronto and Lisa Hodgetts, University of Western Ontario

11:20	Hodgetts, Lisa	Negotiating difference and distance: Doing and teaching community-engaged archaeology in the North from the South
11:40	Goodwin, Rebecca	Spawning and Seasonality: investigating an Inuvialuit fishery at the Kuukpak Site, Mackenzie Delta
13:20	Desmarais, Danielle and Natasha Lyons	Dressed to the nines: European elite fashions and Inuvialuit economy and clothing designs
13:40	Griebel, Brendan, Pam Gross, Darren Keith and Amos Hayes	Mapping Inuit Knowledge in the Western Arctic: The Progress and Archaeological Potential of the Fifth Thule Atlas
14:00	Kritsch, Ingrid and Alestine Andre	A Place for Stories: Gwich'in Experience in Ethno-Archaeology, 1992 to 2016, and Beyond
14:20	Gray, Rebecca	Ezǝdzitı (The Refuge): Tłıchǝ Archaeology and Oral Tradition
15:00	Arnold, Charles D.	Discussant
15:20	Lyons, Natasha, Max Friesen and Lisa Hodgetts	Facilitated discussion

Friday, May 6

Conference Room 3

Maritime Archaeology

Session Chair: Robyn Woodward, Institute of Nautical Archaeology

9:00	Easton, Norman Alexander, Charles Moore, Andrew Mason, Rob Field, Niki Virga, Rebecca Wigen and Eduard Rhienhardt	The Montague Harbour Underwater Archaeology Project: Final Conclusions and Prospects for Future Research on the Northwest Coast
9:20	Moore, Charles	Precontact and Historic Archaeology for the Seabed Remediation of Esquimalt Harbour, Esquimalt, BC.
9:40	Anichthcenko, Jenya	Reconstructing Forgotten Watercraft: Ethno-Archaeology of the St. Lawrence Island Kayak
10:20	Pollack, John and Robyn Woodward	The Yukon River Steamboat Survey (INA-124): A Decade of Research and Discovery in the Yukon Territory
10:40	Woodward, Robyn and John Pollack	Patterns of Construction, Use and Abandonment of Stern Wheel Steamboats in the Yukon River Drainage
11:00	Gurcke, Karl	A Klondike gold rush shipwreck in Nahku Bay, Alaska
11:20	Magne, Martin, Ryan Harris, Jonathan Moore, and Marc-André Bernier	The Wreck of HMS Erebus: An Archaeological Overview
11:40	Magne et al.	The Wreck of HMS Erebus - Part II

Conference Room 3

Poster Session

13:20 – 16:00		POSTER SESSION (Posters in Book Room should be moved to Conference Room 3 during the lunch hour)
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Friday, May 6

Conference Room 5

From Across the Land - Contributed Papers in Canadian Archaeology

Session Chair: Jamie Brake, Nunatsiavut Government

8:20	Schwarz, Fred and Corey Hutchings	Tshiashkunish 2 (FfCi-02) Locus B: Excavation of an Historic Innu Earth-Walled Tent-Ring in central Labrador
8:40	Brake, Jamie and Michelle Davies	Nunatsiavut Government Archaeology in 2015
9:00	ten Bruggencate, R.E, S.B. Milne, R.W. Park, D.R. Stenton and M.Fayek,	Open-source GIS modeling of mobility networks on southern Baffin Island
9:20	Norman, Lauren	Beyond the House: Similarities and differences in midden and house archaeofaunal assemblages
9:40	Walker, Samantha Leigh	Hunter-Gatherer Cemeteries and Land-Use Patterns: A Case Study from the Trent Valley, Ontario
10:00	Hossack, Adam	A Discriminant Function Analysis of Meadowood Points from Ontario
10:40	Deck, Donalee	Archaeological Investigations at Two Sites along the Slave River, Wood Buffalo National Park
11:00	MacKay, Glen	A Possible Cache of Taltheilei Bifaces from the South End of Contwoyto Lake, Nunavut
11:20	Friesen, Nathan	Photogrammetry as a Tool for Petroglyph Discovery and Recording: Examples from Saskatchewan
11:40	Kennedy, Margaret and Barney Reeves	Passing Paradigms

Friday, May 6

Conference Room 5

Geochemical Analysis in Archaeology

Session Chairs: Jonathan Grieve and Whitney Spearing, Stantec

13:20	Carter, Kari and Aubrey Cannon	Exploring the efficacy of phosphate analysis for characterizing variability in occupational intensity at shell midden sites on the central coast of British Columbia
13:40	Kristensen, Todd J., Thomas D. Andrews, Glen MacKay, Ruth Gotthardt, Sean C. Lynch, M. John M. Duke, Andrew J. Locock, and John W. Ives	Tertiary Hills Clinker : A partially fused vesicular toolstone from the Mackenzie Basin of Northwest Territories, Canada
14:00	Spearing, Whitney K and. Johnathan H. Grieve	Baker Creek or Baezaeko: Geochemical Analysis of Fine-Grained Volcanic Lithic Artifacts from the Interior Plateau of British Columbia
14:20	Heffner, Ty	Geochemical Characterization of Fine-Grained Volcanic Artifacts from Yukon Archaeological Sites
15:00	Macfie, Ramsay	From Till to Grill: Investigating the Possibility of Sourcing Fire-Cracked Rock in Southwestern Ontario
15:20	ten Bruggencate, R.E, S.B.Milne, M.Fayek, R.W.Park and D.R. Stenton	Connecting the dots: reconstructing Paleo-Inuit pathways on southern Baffin Island using chert geochemistry and least-cost pathway analysis.
15:40	Handley, Jordan and Norman Alexander Easton	Elemental Analysis of Basaltic Materials from the Little John Site (KdVo6), Yukon Territory, Canada
16:00	Rasic, Jeffrey, P.,Gregory Hare, Norman Alexander Easton and Jeff Speakman	Geochemical Characterization Obsidian in the Yukon Territory

Friday, May 6

Tagish Post

On the Edge: European Adaptations to Life on the Periphery

Session Chair: Anatolijs Venovcevs, Memorial University

13:20	Surmely, Frédéric and Jay Franklin	Medieval architecture in the volcanic mountains of the Auvergne (France)
13:40	Weinbender, Kim	Petite Ville: A Saskatchewan Métis Wintering Village
14:00	Peach, Kate	Edge or Centre, Frontier or Homeland: A case study of two sites in the southern boreal forest of east-central Alberta
14:20	Booker, Kirby	Hybrid Identities and Plural Economies in 18th Century Labrador
14:40	Beaudoin, Matthew	Repairing the Dialogue on Ceramic Repair: An Exploration of Ceramic Mending Along in Newfoundland and Labrador
15:20	Elliott, Deirdre and Anatolijs Venovcevs	A Bird Flew over a Winter House: Zooarchaeological Insights into the Newfoundland Winter House Foodways
15:40	Venovcevs, Anatolijs	A Matter of Perspective: Rethinking Periphery through Transience and Seasonality

Saturday, May 7

Conference Room 1

Papers in Honour of Raymond Le Blanc

Session Chair: Victoria Castillo, Yukon College

8:30	Castillo, Victoria	Welcome and Introduction
8:40	Brink, Jack	Investigating the Rocks of Medicine Wheels of Alberta
9:00	Nagy, Murielle	From Old Crow to Cape Bathurst or how I (literally) followed the steps of Raymond Le Blanc
9:20	Woywitka, Robin	Bezya and beyond: northeastern Alberta archaeology since the 1980s
9:40	Esdale, Julie	Le Blanc's Lessons on Lithic Technology and Subarctic Research in the North
10:00	Blaikie-Birgit, Kurtis	More archaeological research in the Lesser Slave Lake region
10:40	Castillo, Victoria	"Women making shoes & etc. & etc.": Identifying the Presence and Role of Women in the Remote Subarctic Fur Trade Post of Fort Selkirk, Yukon
11:00	Reilly, Aileen and John W. (Jack) Ives	The Curious Case of Chi-thos—Or, "I Don't Know What to Call This"
11:20	McGhee, Robert	Re-Interpreting Inuit History in the Central Arctic
11:40	Friesen, Max	The Summer of '87: Travels with Ray in the Mackenzie Delta
13:40	Younie, Angela	Alberta to the Arctic: northern microblade technology and the work of Raymond Le Blanc
14:00	Heffner, Ty	The Heritage Legacy of the 2006-2014 Yukon Mineral Exploration Boom
14:20	Sutherland, Patricia and Peter H. Thompson	Material and Meaning: Honing in on the Avayalik Islands
14:40	Taylor-Hollings, Jill	Bringing Stories Full Circle: Archaeology as Informed by Anishinaabe Traditional Knowledge and Environmental Science in Northwestern Ontario
15:00	Ives, John W., Jonathan Driver, Kisha Supernant, Duane Froese, Beth Shapiro, Peter D. Heintzman, Courtney Lakevold, and Todd Kristensen	On the Critical Role of the Peace River Country in Linking Eastern Beringia and the Corridor Region
15:20	Various	Further remarks

Saturday, May 7

Conference Room 2

Archaeology and Modern Climate Change

Session Chairs: Thomas D. Andrews, Prince of Wales Northern Heritage Centre and T. Max Friesen, University of Toronto

9:20	Friesen, Max and Michael O'Rourke	In Search of Lost Time: The Missing Archaeological Record on the Beaufort Sea Coast
9:40	O'Rourke, Michael	Challenges in Mapping Arctic Archaeological Site Vulnerability - Examples From the Kugmallit Bay Region
10:00	Jahraus, Adam, Peter Dawson, Derek Lichti, Rémi Méreuze and Max Friesen	Assessing the Suitability of Laser Scanning and Photogrammetry in Archaeological Site Documentation: Lessons from Kuukpak.
10:40	Andrews, Thomas D. and Glen MacKay	Frozen Past, Thawing Future: The Impact of Climate Change on Heritage Resources in the Northwest Territories, Canada
11:00	Hare, P. Gregory and Christian Thomas	Continuing Discoveries on Yukon Ice Patches - A 2016 Update
11:20	Landry, David B., S. Brooke Milne, Ian Ferguson, Mulu Serzu, Robert Park, Douglas Stenton, and Mostafa Fayek	Mapping and Monitoring Arctic Archaeological Site Subsidence due to Permafrost Thaw and Erosion: Long-term Remote Sensing Testing on Inland and Coastal Baffin Island Sites

Conference Room 2

Current Research in British Columbia

Session Chair: Farid Rahemtullah, University of Northern British Columbia

13:20	Ritchie, Morgan, Dana Lepofsky, Sue Formosa, Marko Porcic, and Kevan Edinborough	Coast Salish Settlement Patterning and Demography in the Fraser Valley, B.C
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Saturday, May 7

Conference Room 2

Current Research in British Columbia (cont'd)

Session Chair: Farid Rahemtullah, University of Northern British Columbia

13:40	Waber, Nick	Wireless Lithics: An Open Hardware Approach to Stroke Quantification and Replicability in Lithic Use-wear Experiments
14:00	Sellars, Ian and Morgan Ritchie	Barnet and Caraholly Point: Broadening the 'View from the Inlets'
14:20	French, Diana	The Taku River: What's Gone and What's Not
14:40	Rahemtulla, Farid	"Smokehouse Island: An Aboriginal-engineered island on the Babine River, north central British Columbia."
15:00	Kantakis, Adam	Wood Stake Fish Weirs in the Babine River, north central British Columbia

Conference Room 3

The Power of Palaeoenvironments

Session Chair: Krista Gilliland, Western Heritage and Cynthia Zutter, MacEwan University

9:00	Hamilton, Scott	Palaeo-ecological modelling: implicit and explicit
9:20	Gibson, Terrance	Getting the Data - Collecting Geoarchaeological Information in the 21st Century
9:40	Pennanen, Kelsey and Matthew Boyd	Early Holocene Dynamics of Lake Superior: Reconstruction of Climate, Vegetation, and Water-Level Changes from Sediments Exposed by the McIntyre River (Thunder Bay, Ontario)
10:20	Jollymore, Kay	Tipi Rings and Fire Pits: Stone Circle Investigations at a Hyper-Saline Lake in South-Central Saskatchewan
10:40	Gilliland, Krista	Catalyst for Correlation: Flooding, Stratigraphy, and the FM Ranch Campsite (EfPk-1)
11:00	Letham, Bryn, Andrew Martindale and Kenneth Ames	An Archaeological Survey of Early-Mid Holocene Paleoshorelines around Prince Rupert Harbour, British Columbia

Saturday, May 7

Conference Room 3

The Power of Palaeoenvironments (cont'd)

Session Chair: Krista Gilliland, Western Heritage and Cynthia Zutter, MacEwan University

11:20	Ponomarenko E. and E. Ershova	Fire frequency and seasonality as indicators of peopling the landscape
11:40	Beaudoin, Alwynn	Discussant

Conference Room 3

Archaeology in the Public Sphere

Session Chair: Christie Grekul, Yukon Beringia Interpretive Centre

13:20	Carr-Locke, Sarah	This Land is our Home: Exhibiting Yellowknives Dene history and identity
13:40	Steuber, Karin, Tomasin Playford and Biron Ebell	Saving the Best 'til Last (day in the field): The Farr Site Community Archaeology Project
14:00	Clark, Terrence	Interpreting the Other: An Outsider's View of Greek Archaeology
14:20	Clark, Terrence	The Mercury Series: Entering the Digital Age
14:40	Holder, Madeline and Amandah van Merlin	Swept Away: Results, Discussion, and Future Directions from the 2015 Breazeau Reservoir Pilot Project
15:00	Grekul, Christie	Archaeology for Public Consumption: Five Years of public archaeology at the Bodo Archaeological Site

Session Abstracts

Listed alphabetically by session name

Ancient Metals and Metallurgy

Session Chair: H. Kory Cooper, Purdue University

Metal artifacts provide an important source of information about the ancient and historic past. This session invites papers addressing methodological or theoretical issues in the analysis and interpretation of ancient and historic metals and metallurgy. Relevant papers from any geographic region are welcome.

Archaeology and Modern Climate Change

Session Chairs: Thomas D. Andrews, Prince of Wales Northern Heritage Centre and T. Max Friesen University of Toronto

Recent anthropogenic emissions of greenhouse gases are the highest in history, and human influence on the climate system is now well documented. These climate changes have had widespread impacts on human and natural systems on all continents and across the oceans. For archaeologists and heritage managers, the challenges are massive. In northern Canada, rising temperatures are leading to permafrost thaw, causing massive landscape destabilization and erosion. In coastal areas across Canada, rising ocean levels and changing weather patterns have led to an increase in storm surges, resulting in an increase in coastal erosion. In some northern settings, long-frozen organic remains are being exposed through erosion, leading to mechanical breakage and to rapid decomposition due to increased microbial action. In other regions, increases in precipitation are linked to catastrophic erosion events. Papers in this session will focus on presenting examples of climate change impacts across Canada and throughout the circumpolar north, sharing details of methods and tools developed to mitigate impacts.

Beyond Little John: The Archaeology of Borderlands

Session Chair: Norman Alexander Easton, Yukon College

Archaeology is a cross-border enterprise. Our subject of study – the Past – is manifested in the contemporary Present. Our European roots and North American florescence has given us a polyglot technical heritage. Its multidisciplinary nature involves a wide variety of professions ordinarily separated within the academy. Our geographic focus may cross contemporary national and ethnic borders. In multi-cultural countries the profession must communicate across the linguistic and cultural divides or weak or strong Ethno-Nationalisms. Using the Scottie Creek Borderlands Culture History Project as a springboard this symposium invites contributions grounded in Archaeology that explore the challenges and opportunities, the failures and successes of Borderland Archaeology.

Contributions from Cultural Resource Management

Session Chair: Laura Roskowski-Nuttall, University of Calgary/Stantec

Cultural Resources Management (CRM) has proven to be a viable, sustainable route of employment for the many of students graduating from Anthropology and Archaeology departments across North America. Contributing large, diverse datasets to the disciplines of archaeology and Traditional Land Use CRM personnel have the opportunity to record and excavate at numerous sites, in remote locations, using a wide variety of methods and

methodologies. The amount and types of data recovered is continually increasing as a result of their experience. This session will focus on recent contributions made by CRM archaeologists and Traditional Land Use specialists, highlighting significant sites that may be otherwise lost to the grey literature.

Current Approaches to Archaeology & Heritage Research in the Western Arctic and Lower Mackenzie Region

Session Chairs: Natasha Lyons, Ursus Consulting, Max Friesen, University of Toronto and Lisa Hodgetts, University of Western Ontario

The Lower Mackenzie and neighbouring regions are lively, compelling, and productive places to do archaeology and heritage research. They are home to a rich mosaic of indigenous peoples who have deep, varied, and complex histories. Communities such as the Inuvialuit, Gwich'in, and Inuinait are working to drive the form, content, and agenda of contemporary research in their traditional territories, and thereby changing the way conventional research is conducted. In this session, our goals are to: map the breadth and nature of current archaeology and related forms of heritage research in this area; outline major results of recent archaeological research projects; explore the intersections between indigenous and non-indigenous approaches to these forms of inquiry; and consider the directions that this large and emerging corpus of knowledge is taking us collectively as a community of scholars.

Environment, Climate, Ecology and Archaeological Contributions to the Discussion

Session Chairs: Chelsey Armstrong and David Burley, Simon Fraser University

Global warming, rising sea levels, air and water pollution, species extinction and deforestation among other issues are significant challenges in the contemporary world. The human experience of environmental change, however, is not a modern phenomenon. Complex and varied interactions between people and environments long have been a subject of archaeological inquiry and archaeological studies have contributed insights into the frequency, extent and impacts of environmental transition, and the processes of human adaptation to those changes through time. In this session we ask participants to consider the question of whether archaeological data from the past can contribute to contemporary discussions of climate change and environmental policy. Papers will focus on a broad range of issues from archaeological considerations of human/environment interaction with implications for the present to case study lessons of ancient sustainability to the provision of baseline climate data for planning our emergent future.

Geochemical Analysis in Archaeology

Session Chairs: Jonathan Grieve and Whitney Spearing, Stantec

The purpose of this session is to explore how lithic geochemistry is currently being used for the analysis of archaeological remains, through use of techniques such as XRF and ICPMS. Specifically, this session will examine the identification of lithic raw materials, including the geospatial analysis of source locations, related site distribution, and precontact lithic procurement and utilisation strategies. The session will also include discussion of theoretical approaches to the identification and comparison of lithic materials within, and between, archaeological assemblages. As geochemical techniques are becoming more

widely utilised and accessible, presentation of all scales are acceptable; whether in site-specific, local, regional or temporal contexts. Discussions of new or innovative uses of geochemical data within archaeology, and/or methodological advances are greatly encouraged.

Interpreting Ethnicity in the Archaeological Record

Session Chairs: Lisa Rankin, Memorial University and Amelia Fay, Manitoba Museum

Ethnicity requires an awareness of the difference between a given community and outsiders and signals these differences in ways that can be understood by other ethnic groups. In this manner, ethnicity should have material correlates that can be recovered and interpreted archaeologically. However, ethnicity is not static and may be flexible when used as an adaptive mechanism to negotiate changes in social, economic and political circumstance. Such adaptations can blur distinctions between ethnic groups and may result in intentionally ambiguous ethnicities. This can occur in both pre and post contact situations where power relations between ethnic groups are presumed to be unequal, cultural encounters are new or frequent and where ethnogenesis occurs. This session encourages researchers working in any region or period to present specific case studies which discuss the range of ways we comprehend, identify and interpret ethnicity archaeologically.

Maritime Archaeology

Robyn Woodward, Institute of Nautical Archaeology

Reports on recent research in maritime archaeology and explorations of underwater wreck from across Canada, including an extended presentation by Parks Canada on work underway on the HMS Erebus.

On the Edge: European Adaptations to Life on the Periphery

Session Chair: Anatolijs Venovcevs, Memorial University of Newfoundland

This session seeks to explore unique adaptations to places deemed peripheral to the larger centres of post-medieval European society. These scenarios took place in many arctic and subarctic regions and other environmentally or socially marginal locations that witnessed people of European descent adopting and developing a wide variety of strategies that allowed them to survive in these challenging situations. By tackling issues like seasonality, transience, creolization, hybrid identities, pluralistic economic strategies, and the complex interactions between these peripheries and their cores, the papers will present case studies on how people reacted to life on the limits of the historic European world. In so doing, this discussion will confront the difficulties of studying these chronologically or geographically remote subjects, provide a more nuanced understanding of life in frontier environments, and celebrate the adaptability of historic populations to the challenges presented by foreign and otherwise inhospitable places.

Molecular Anthropology and Bioarchaeology

Session Chairs: Susan Moorhead Mooney, Osteologist, Whitehorse, Yukon and Tyler Murchie, McMaster University

The integration of biomolecular methods into archaeological analyses has become a standard procedure. This session aims to incorporate approaches from molecular biology and biochemistry applied to questions of past food production and consumption (i.e. isotopes), migration, cultural transmission, domestication, archaeo-epidemiology, palaeoecology, diagenesis and the preservation of molecules from different sources (bones or tools). Further, we wish to encourage the presentation of both successes and failures in order to enrich a discussion of methodological viability in a variety of instances. We particularly seek presentations that employ novel approaches and techniques towards the analysis of ancient DNA and proteins.

Papers in Honour of Raymond LeBlanc

Session Chair: Victoria Castillo, Yukon College

This session is in recognition of the outstanding, life-long contributions by Professor Raymond Le Blanc to Canadian archaeology. It recognizes his work with the Archaeological Survey of Alberta, the Archaeological Survey of Canada (Canadian Museum of Civilization), his extensive academic career at the University of Alberta, and his long time research program in the Yukon. Professor Le Blanc has trained many arctic and subarctic archaeologists over the years. Among Dr. Le Blanc's noteworthy contributions are his research interests in the arctic, subarctic, lithic and bone technology, prehistoric archaeology, Yukon archaeology, and caribou fences.

Recent Research in the Western Subarctic

Session Chair: Ben Potter, University of Alaska Fairbanks

This symposium encompasses recent and ongoing archaeological and/or ethnographic research in the Western Subarctic of North America. The session is intended to build on recent discoveries and welcomes papers on new discoveries, field and lab results, as well as theoretical contributions to understanding human adaptations in the region. Specific topics are open, but we encourage work involving anthropological archaeology and human/environment interactions.

The Power of Palaeoenvironments

Session Chair: Krista Gilliland, Western Heritage and Cynthia Zutter, MacEwan University

Given the limited time and financial resources that frequently accompany any archaeological investigation, palaeoenvironmental research is often accomplished as an afterthought, if it is conducted at all. However, incorporating palaeoenvironmental information can appreciably enhance the impact of archaeological work, whether on a small or large scale. Additionally, it is becoming increasingly clear that palaeoenvironmental data sets that extend more deeply into the past than the historic period are critical for constructing more accurate models of climate fluctuations (past and future), and for determining appropriate mitigative and resource management strategies going forward. The Power of Palaeoenvironments session highlights the broad range of applications to which palaeoenvironmental investigations can contribute, as well as the

potential impacts of these investigations within the field of archaeology and within a wider range of disciplines, including the earth sciences and those that address modern problems such as heritage potential modelling and climate change. Examples of relevant topics include (but are not limited to): characterizing landscape disturbances, constructing stratigraphic and/or chronological frameworks, identifying environmental indicators, discussing interpretive challenges, incorporating specific and/or multiple proxies into research, modelling former landscapes as a means of targeting archaeological surveys, employing palaeoenvironmental data to formulate future management strategies, and establishing protocols for reclaiming landscapes.

Contributed Paper Sessions:

Contributed International Papers

Session Chair: Meaghan Peuramaki-Brown

From Across the Land: Contributed Papers in Canadian Archaeology

Session Chair: Jamie Brake, Nunatsiavut Government

Archaeology in the Public Sphere

Session Chair: Christie Grekul, Yukon Beringia Interpretive Centre

Current Research in British Columbia

Session Chair: Farid Rahemtulla, University of Northern British Columbia

Paper/Poster Abstracts

Abbott, Cal

University of Victoria

Lithic Technologies of the Discovery Islands: Materials, Stone Tool Production and Communities of Skilled Practitioners

Archaeological investigations on Quadra Island have resulted in the discovery of a variety of lithic artifacts at numerous sites. In this presentation I outline some preliminary findings related to the culture history of the region as inferred through the lithic assemblages collected during the 2014 and 2015 field seasons. In particular, I draw attention to the raw materials selected for the production of stone tools and their relationships to technological continuity and change through time. This diachronic multi-site analysis enables insights into the skills and daily lives of the people who inhabited the study area throughout its deep history and provides a more nuanced understanding of their material culture.

[Poster](#)

Ahronson, Kristjan¹ and Trevor Cowie²

1 School of History, Welsh History and Archaeology, Bangor University, Wales (UK)

2 Department of Scottish History and Archaeology, National Museum of Scotland

Pioneering early dendrochronology in Canada: Thomas Stratton's "Botanical Chronology"

With its influx of leading and innovative thinkers in disparate fields, mid-nineteenth-century Canada seems to have fostered a heady intellectual environment that enabled inter-disciplinary innovation. Scottish and Scottish-Canadian scholars figured prominently within this academic community. One example is the pioneering (but forgotten) "Botanical Chronology" of Thomas Stratton – in 1844, he applied his methodological innovations in southern Ontario in the Penantanguishine peninsula area of Lake Huron in order to date archaeological features on Christian Island. Remarkably, Stratton's recently re-discovered manuscript (held in the Society of Antiquaries of Scotland's archives) appears to anticipate the principles of dendrochronology by nearly a century.

Recent work has highlighted how Scottish and wider European impulses influenced early Canadian archaeology, as well as how research into Canada's prehistoric material culture helped shape conceptions of the prehistoric British and Irish past. The towering figures of Daniel Wilson and William Logan exemplify this inter-connectedness. Our presentation therefore seeks to (a) situate Stratton's "Botanical Chronology" within its academic milieu, and (b) assess the significance of his innovative method in relation to the later, twentieth-century, development of dendrochronology. Consequently, we pose the question: what does Stratton's "Botanical Chronology" reveal about Canada and the history of archaeology?

[Contributed International Papers](#) Thursday, May 5 16:00

Ali, Zain and Benjamin Keyes

MacEwan University

Doing Bodo Without Bodo: Public Archaeology in Your Classroom

The Alberta education system recently started teaching archaeology and the history of Alberta before European contact to the grade 4 social studies curriculum. As children many of us gained our first experience of archaeology through pop culture with icons like Indiana Jones. Such pop culture exposure does not accurately represent what archaeologists do or public value for archaeology as a whole. We will engage children with real world-archaeologists in order to teach them how to approach the human past. Archaeologists teaching young students about archaeology both clarifies ambiguity and reveals exciting career paths that otherwise tend to escape public awareness. Students from MacEwan University in collaboration with the Bodo Archaeological Society (BAS) will seek to develop a program to take this educational journey to the next step. We will determine if there is value for educators to enlist specialists from the field. Using an Edukit (collection of artifacts, tools and exercises developed by the BAS), we will develop and conduct a series of in-school field trip scenarios with a number of elementary schools in Edmonton, Alberta during February and March 2016. Pre- and Post-test questionnaires and feedback forms will be distributed to the children and educators, respectively, in order to test their knowledge before and after our program. With this program we hope to dispel many of the common misconceptions about archaeology and Alberta's past, while establishing the benefit of having archaeologists directly educate children about their discipline.

[Poster](#)

Andrews, Thomas D. and Glen MacKay
Prince of Wales Northern Heritage Centre

Frozen Past, Thawing Future: The Impact of Climate Change on Heritage Resources in the Northwest Territories, Canada

Thaw-induced landscape change in terrain underlain by permafrost has been widely documented in circumpolar settings in recent decades. In the Northwest Territories, Canada, where continuous or discontinuous permafrost underlies 80% of the landscape, and temperatures are increasing at a rate significantly greater than the global average, thaw-driven landscape change has become the leading cause of impacts to archaeological and paleontological heritage, creating significant challenges for heritage resource managers. In this paper we discuss two recent examples of efforts to manage these challenges. In the first we discuss the use of satellite image analysis to develop risk models to assess impacts from retrogressive thaw slumping on Aboriginal heritage resources in the Mackenzie Delta region. Results indicate that a fine-grained approach is essential. Secondly, we discuss recent efforts to rescue archaeological artifacts from melting ice patches, suggesting that as ice melts and caribou dung is exposed in greater amounts, the ice/dung balance reaches a tipping point leading to rapid disappearance of the ice. Once exposed, artifacts are at risk from mechanical breakage and rapid decomposition due to in

[Modern Climate Change](#) [Saturday, May 7](#) [10:40](#)

Anichthcenko, Jenya
Smithsonian Arctic Studies Center, Anchorage, Alaska

Reconstructing Forgotten Watercraft: Ethno-Archaeology of the St. Lawrence Island Kayak

Alaska has a rich tradition of indigenous kayak use. Over a dozen ethnographic kayak

variants are distinguished, representing all indigenous coastal nations of Alaska except for one – the St. Lawrence Island Yupiit. St. Lawrence kayaks are absent in both museum collections and written historical sources, although the indigenous oral lore and archaeological data point to uninterrupted use of kayaks well into the beginning of the twentieth century. Drawing on the analysis of kayak data from four archaeological sites, this presentation reconstructs design of the St. Lawrence kayak and discusses the watercraft's role in the context of maritime networks and mobility in the larger Bering Strait region.

[Maritime Archaeology](#) [Friday, May 6](#) [9:40](#)

Armstrong, Chelsey Geralda
Simon Fraser University

Documenting Cultural Landscapes in Northwest British Columbia: Gitsm'geelm Land Use and Resource Management

Robin Town (Dałth Gyilakyaw) is a long-lived village of the Gitsm'geelm (Tsimshian) First Nations of Northwestern British Columbia. The legacy of generations lived on the landscape are visible today in subtle archaeological features, modified ecosystems, and remnant orchard gardens. Due to settler colonialism and new lifeways, much of the deep time history of this place including how people interacted with this cultural landscape, are hidden in its material remains. We use a variety of approaches, including archaeological and paleoecological methods, botanical inventories, historic maps and community member interviews to reconstruct how Gitsm'geelm people lived their lives at Robin Town. This historical ecological data provides industry, the provincial government, and the regional district's operational land-use interests with alternative narratives about the anthropogenic origins of ecosystems along the Skeena River. Working with the community, we document traditional resource management systems to build capacity for First Nations to manage their own resources – as they have done for millennia, and ensure land-use decisions are respectful of Gitsm'geelm values and traditions.

[Environment, Climate, Ecology and Archaeological Contributions to the Discussion](#)
[Thursday, May 5](#) [10:40](#)

Armstrong, Chelsey Geralda¹, Kevin Gibbons² and Anna Shoemakers³

1 Simon Fraser University; 2 University of Maryland; 3 Uppsala University

Archaeological Contributions to Historical Ecology: 50 Questions, Infinite Prospects

Historical ecology is the qualitative and quantitative study of human interactions with and disturbances to the biophysical environment. Historical ecology has evolved in both ecological and anthropological fields with some measurable distinctions and applications. Despite broad agreement on core terms of reference, questions about archaeological contributions to larger historical ecological purposes remain. In pursuit of these questions, and in keeping with the approach employed in previous studies, we used crowdsourcing and workshopping to identify and refine a list of 50 integral research questions for historical ecology from the archaeological and anthropological perspective. While we do not pretend to represent the entire historical ecology community, our list distills to three findings. First, archaeological contributions to historical ecology are fundamentally applied endeavours. Second, this program seeks to understand humans' environmental impacts over specifically long-term scales with an eye toward the avoidance, mitigation, and

reversal of adverse effects. Third, historical ecology is part of emergent trends toward transversal and transdisciplinary research science, which erodes scientific boundaries between the cultural and natural. We will present our findings with specific attention to the archaeological questions that will contribute best to historical ecology.

[Environment, Climate, Ecology and Archaeological Contributions to the Discussion](#)
Thursday, May 5 8:40

Arnold, Charles D.

Arctic Institute of North America

Finding Connections – A role for archaeology in discovering Inuvialuit history and heritage

One of the challenges of (and also an opportunity for) creating a ‘public’ archaeology is showing how information derived from archaeological discoveries contributes to an awareness of history and heritage that extends beyond the boundaries of the discipline. In this paper I draw from archaeological fieldwork that I have conducted in the outer Mackenzie Delta region to provide several examples of how objects found in the ground connect to Inuvialuit ethnographic objects, oral histories and archival information, and thereby serve as access points for the public at large to explore Inuvialuit heritage.

[Current Approaches to Archaeology & Heritage Research in the Western Arctic and Lower Mackenzie Region](#) Friday, May 6 9:00

Beaudoin, Alwynne B.¹, Bolton, Matthew¹ and Lisa Bohach²

1 Royal Alberta Museum, 2 Stantec

Preliminary observations on organic-rich sediments revealed by 2013 floods along the Highwood River, southern Alberta

High-magnitude floods of 2013 in southern Alberta caused considerable erosion, scouring river banks and cutting new exposures. Organic-rich layers were documented during post-flood survey work undertaken to assess the impact on heritage resources. Twenty-four samples containing visible plant material or molluscs were collected along the Highwood River. So far, sixteen samples have been processed to extract macrofossils, including seeds, plant material, and mollusc remains. Samples can be divided into two categories: organic-rich vegetation mats and shell-beds. Although the sedimentary context varies, a range of taxa indicative of riparian, wet meadow, and aquatic habitats is common across all samples. Almost all taxa are consistent with the present regional biota. All samples are postglacial and most are late Holocene in age. Mazama tephra (dating to 7600 years ago) was also found at several localities. Land snail-rich sites frequently feature *Discus whitneyi*, *Vallonia gracilicosta*, and *Vertigo modesta* – all species which dwell in moist but usually well drained sites with leaf litter, dead wood, or stones. Succineidae, a group of snails tolerant of a wide range of environmental conditions, is ubiquitous in the snail assemblages.

Prominent aquatic molluscs include *Fossaria* sp. and *Pisidium* sp.. These taxa are found in perennial water but may also occur in temporary wet habitats. Recovered plant material includes abundant *Picea* needles, several types of moss, and seeds of the wetland genera *Carex* and *Eleocharis*. Of particular note are seeds of *Corispermum*. These plants are associated with sandy disturbed habitats, probably reflecting vegetation on fluvial sediments such as point bars. [Poster](#)

Beaudoin, Matthew

Timmins Martelle Heritage Consultants Inc.

Repairing the Dialogue on Ceramic Repair: An Exploration of Ceramic Mending Along in Newfoundland and Labrador

The mending of European ceramics in North America has often been conceptualized as a practice related to ethnic traditions or restrictions to access. These often over-lapping understandings often reduce a complex and nuanced reality of a lived experience within this colonial periphery to a simplistic binary that may reflect a researcher's own interests instead of a broader critical understanding of the choices people were making. An alternative that is emerging from the Finnish context is using an object biography approach that emphasizes the nuanced and idiosyncratic choices individuals whether to repair or replace an object that places an emphasis on the relationship between people and material culture. This paper explores data related to ceramic mending practices from 18th and 19th century sites in Newfoundland and Labrador to critically evaluate whether an ethnic or restrictions to access framings of ceramic repair is appropriate, or if the object biography conceptualization is more appropriate for the data.

[On the Edge: European Adaptations to Life on the Periphery](#) Friday, May 6 14:40

Beaudoin, Matthew

Timmins Martelle Heritage Consultants Inc.

Green, Orange, or Something in Between: Exploring the Evolution of an Irish Ethnicity in 19th-Century Ontario

Within the North American context, the majority of ethnicity studies revolve around the exploration of various "others" demonstrated conscious or unconscious continuity through change to maintain connections to their respective pasts to exist in their lived presents and make choices oriented to their perceived futures. This has resulted in numerous conceptualizations that have effectively been used to explore this process. In contrast, ethnicity studies of peoples who fall within the dominant group of the time are often less emphasized or less robust. This paper explores how two Protestant Irish families in 19th-century Ontario navigated the shifting Irish ethnicity of the time. This paper emphasizes how the combination of archaeological materials and historic records can be useful vehicles to understand how families were shaped by, and subsequently shaped, the perception the Irish ethnicity at the time.

[Interpreting Ethnicity in the Archaeological Record](#) Thursday, May 5 14:40

Blaikie-Birgit, Kurtis

Tree Time Services

More archaeological research in the Lesser Slave Lake region

From 1979 to 1990 Dr. Raymond Le Blanc conducted archaeological surveys and excavations in the Lesser Slave Lake region, first as a member of the Archaeological Survey of Alberta, and later with an archaeological field school with the University of Alberta. These projects are one of the largest archaeological bodies of work in Alberta's boreal forest outside of the oilsands region. The Mercury paper published from them is one of very few monographs on northern Alberta prehistory. Since 1990, nearly all archaeological research in the region has been conducted under Cultural Resource Management projects, primarily for the forestry sector. These projects have focused our interest away from the

lakeshore into the uplands and hinterlands of the region. We have identified hundreds of new archaeological sites in these hinterlands, giving us new perspectives on land-use patterns and settlement systems, long-distance trade, and regional travel and trade networks.

[Papers in Honour of Raymond Le Blanc](#) Saturday, May 7 10:00

Blakey, Janet and Brian Vivian

Lifeways of Canada Limited

An Overview of the 2015 Excavations at the Junction Site (DkPi-2)

Recent excavations by Lifeways of Canada at the Junction Site (DkPi-2) located in southern Alberta have revealed numerous hearth features which are associated with domestic camp activities. Analysis of the wide range of lithic and faunal refuse found in association with these features provides a glimpse into traditional lifeways over the last millennia. These results have expanded our understanding and the significance of the Junction Site within the scope of the Blackfoot world. This presentation will provide an overview of the excavations completed in 2015 and their results.

[Contributions from Cultural Resource Management](#) Thursday, May 5 14:40

Bond, Jeffrey D.¹, Brent, C. Ward², John C.Gosse³ and Derek G.Turner^{2,4}

1 Yukon Geological Survey, 2 Department of Earth Sciences, Simon Fraser University, 3 Earth Sciences, Dalhousie University, 4 Department of Geography, University of British Columbia

Timing and rate of deglaciation of the MIS 2 Cordilleran Ice Sheet in Yukon Territory and implications for landscape occupation

The northern extent of the Cordilleran ice sheet (NCIS) was precipitation limited resulting in a well-defined ice margin that marked the eastern limit of Beringia in central Yukon. During the last glaciation the NCIS acted as a barrier to human and animal migration through Yukon's interior. Knowledge of the timing of glacial maximum, the rate of deglaciation and when physiographic features became exposed is poorly constrained. Understanding the patterns of ice retreat provides a framework for tracking landscape occupation and revegetation during the transition to Holocene conditions in Yukon. We use cosmogenic nuclide exposure dating (¹⁰Be and ³⁶Cl) on groups of glacial erratics to reconstruct the timing and rate of deglaciation. Our sampling concentrated on the quasi-independent lobes of the NCIS, as well as the independent glaciers in the Ogilvie Mountains. Boulders sampled up-ice from NCIS terminal moraines show that the initiation of deglaciation varied regionally between 18.2 ka to 15.3 ka. The rate and style of deglaciation are best constrained for the Cassiar Lobe that occupied south-central Yukon. Initial retreat rates are gradual around 15 ka and increase after 13.7 ka. Upland surfaces deglaciated as much as 2600 years prior to valley bottoms and some coastal passes were ice-free by 12.1 ka. Interior lowlands near the British Columbia border remained glaciated until 10.8 ka. These results provide the first chronological reconstruction of NCIS deglaciation and highlight the temporal contrast in landscape exposure associated with physiographic position. Within paraglacial terrain, plateau uplands may contain older records of landscape occupation.

[Recent Research in the Western Subarctic](#) Friday, May 6 11:40

Booker, Kirby

Stantec

Hybrid Identities and Plural Economies in 18th Century Labrador

Captain George Cartwright (1738/9-1819) is a relatively obscure historical figure, a British soldier who became a merchant trader with the indigenous people of Canada's east coast. Outside of Newfoundland and Labrador, Cartwright exists largely on the margins of Canadian maritime and British Colonial history. His expansive travel journal, published in 1792, is a medley of record-keeping, natural history, anthropology, poetry, and how-to manual. From 1770 to 1786, Cartwright lived at various camps and fishing stations along the Labrador coast. He was likely the first European to explore the coast north of Cape Charles and one of the first to establish year-round settlements in the area. I highlight some of Cartwright's most interesting experimental adaptations to life in 18th century Labrador, from myriad mosquito repellent recipes to kite-sleds, and chart the associated shift in his perception of and interactions with the Labrador Inuit. His friendly relationship with the local indigenous people is notable in light of previous and nearby merchants' diplomatic failures that sometimes resulted in them being driven away from their operations; this relationship is also undoubtedly a key factor in Cartwright's ability to survive and even at times prosper in a marginal environment. As well as being a catalogue of hybrid subsistence strategies and cultural interaction, Cartwright's journal has also provided geographic details for archaeologists interested in the material culture of early historic Eastern Canada.

[On the Edge: European Adaptations to Life on the Periphery](#) Friday, May 6 14:20

Bourgeon, Lauriane

Université de Montréal

Bluefish Caves I and II (Yukon Territory) and the first peopling of Eastern Beringia

Excavated in the '70s-80s, the Bluefish Caves (Yukon Territory) yielded a few lithic pieces, including microblades and burins, mixed with a rich and well-preserved faunal collection. When archaeologists J. Cinq-Mars and R. Morlan studied the material, they observed several cultural marks on bones recovered in a Pleistocene loess and radiocarbon dated between 10,000 to 25,000 14C BP. A human presence in the Yukon Territory during the Last Glacial Maximum was thus proposed. However, the regional archaeological record does not offer supporting evidence for a human dispersal into Eastern Beringia (Alaska-Yukon) before 12,000 14C BP. Recently, a complete study of the faunal assemblages of Caves I and II has been undertaken in order to re-evaluate this hypothesis from a taphonomic and zooarchaeological perspective. This new research shows that carnivores significantly contributed to the accumulation and the modification of the bone material. However, cutmarks observed on a few bone specimens attest to human activities at the site. Horse and caribou are the dominant taxa in the bone assemblages and both species bear clear evidence of butchery. Therefore, the Bluefish Caves is the first archaeological site in Eastern Beringia showing cultural marks on horse bone, thus confirming that equids (thought to become extinct in the region ca. 12,000 14C BP) were part of hunters-gatherers' diet. New radiocarbon dates obtained on cutmarked bone specimens will soon help to clarify the date of the human presence at the site and possibly document the arrival of the first hunters-gatherers in northwestern North America.

[Recent Research in the Western Subarctic](#) Friday, May 6 14:40

Bowman, Robert C.¹, Joshua D. Reuther¹, and Richard Vanderhoek²

1 University of Alaska Fairbanks, 2 Alaska Office of History and Archaeology

Recent and Paleoenvironmental Indicators for Change within Sand Dunes in Subarctic Interior Alaska and their Impact on Archaeological Assemblages

Environmental changes, presently and prehistorically, are important factors which influence the expression of the archaeological record in subarctic sand dune environments. Current environmental changes (e.g., vegetation loss, shifts in aridity) effect post-depositional preservation and associative contexts of the archaeological and paleoenvironmental records. Between 2008 and 2015 paleoenvironmental and archaeological investigations were conducted within the Gerstle-Sawmill Dune Field and sandsheet and the Rosa-Keystone Dunes Field, both located near Delta Junction in the middle Tanana River Valley in interior Alaska. Throughout the course of these investigations, multiple archaeological and geological locations were tested, cored, and excavated in order to collect pertinent field data with the goal of reconstructing human subsistence and mobility patterns within these lowland areas, as well as to describe the paleoenvironments in which these activities took place. Results from fieldwork over the last seven years have presented us with a detailed record of terrestrial lowland environmental changes that are unique to the area, as well as a limited sample of archaeological sites situated within these environmental conditions. At various locations, both recent and paleoenvironmental indicators detail local environmental changes over the last 12,000 years with potential affects for human landscape use and archaeological material preservation. In this paper, we will discuss the project's findings and consider Alaska's regulations dealing with the preservation of archaeological resources as well as the need to provide a basic level of protection for paleoenvironmental resources that are not covered under the guidelines of these current regulations.

[Recent Research in the Western Subarctic Friday, May 6 10:40](#)

Brake, Jamie and Michelle Davies

Nunatsiavut Government

Nunatsiavut Government Archaeology in 2015

The Nunatsiavut Archaeology Office (NAO) has had an active year in both the field and the office, based out of Nain in northern Labrador. Field work resumed with the use of our DIY drone at Kauk, Nain Bay, Satoosak and Hillsbury Island. Our surveys continued in the Rigolet area in Back Bay and along the south side of Groswater Bay, where with Dr. William Fitzhugh from the Smithsonian Institution and several summer students, we recorded 31 sites. At two of these sites we documented a previously unreported type of archaeological feature that, at one site in particular, seems to be associated with an approximately 2000 year old First Nations occupation of this area. In Hopedale, we conducted a foot survey in anticipation of a new subdivision, recording sites that would be impacted by the development. In the fall, we hitched a ride north to Okak Bay on a long liner intended to collect old oil barrels, which allowed us to connect related projects while surveying the inner bay at a minimal cost. The NAO serves primarily as a regulatory office, managing archaeological resources within the Labrador Inuit Settlement Area through collaborative field research, policy development, review of applications for development, consultations and public engagement. As the Nunatsiavut Government celebrates its 10 year

anniversary, the NAO is looking forward to its involvement in a multi-year, multi-disciplinary research project. This project, called Tradition and Transition among the Labrador Inuit, will add considerably to our knowledge of the archaeology of Nunatsiavut and will help inform continuing development of policy and law that protects this valuable record.

[From Across the Land - Contributed Papers](#) [Friday, May 6 8:40](#)

Brink, Jack and Melissa Bowerman

Royal Alberta Museum

Investigating the Rocks of Medicine Wheels of Alberta

Medicine wheels are one of the more enigmatic stone feature sites of the northern Plains. The great majority of medicine wheels, about 50 of them, are located within Alberta. This paper reports on new research looking at the specific rocks used to construct wheels. We address the question whether or not specific type, size or colour of rocks may have been preferentially selected for building medicine wheels. Six wheels have now been studied. Every visible rock has been recorded for these three attributes. In addition, off-site rock content has been examined to provide a base for comparison. Data are still being reviewed, but preliminary analysis indicates a clear size difference of rocks used for central cairns, for the encircling outer rings, and for the spokes of wheels. Also, a number of medicine wheels are clearly accretionary structures, built over a long period of time and intended for continuous use. Although medicine wheels and Ray Le Blanc may seem far apart, we will show a connection.

[Papers in Honour of Raymond Le Blanc](#) [Saturday, May 7 8:40](#)

Brisson, Laurence Forget¹, Kelly Graf², Ted Goeble², Julie Esdale³ and Michel Lamothe¹

1 Université du Québec à Montréal, 2 Texas A&M University, 3 Colorado State University

Dating Human Dispersal in America: Luminescence Application in Archaeological Context

This doctoral project deals with the issue of the arrival, adaptation and dispersal of early human groups in America. It is part of a multidisciplinary study led by researchers from the University of Texas A&M (TAMU) on archaeological evidence related to the presence of first American in Beringia. The main objective of this vast research project is to explain how humans from eastern Beringia responded to changing climatic conditions and the effects of these changes on the morphology of the territory, from terminal Pleistocene to middle Holocene. The project also focuses on the initial dispersion in human territory.

The contribution of our project is geochronologic. The optical luminescence (OSL) will be used on sediments from three archaeological sites in Alaska whose age is likely to be between 13 and 14 ka. These are the McDonald Creek, Dry Creek and Walker Road sites. The use of infrared stimulated luminescence (IRSL) on potassic feldspar will allow us firstly to refine the chronological framework of the region by dating the occupation of these archaeological sites, and also to define chronological sequence of the local stratigraphic profile. In this presentation, the overall context of the study, the measurement protocol and some preliminary results will be discussed.

[Poster](#)

Brown, Kelly¹, Barbara J. Winter¹, Chen Shen² and Dongya Y. Yang¹

1 Simon Fraser University, 2 Royal Ontario Museum

Developing Minimally Destructive Protocols for DNA Analysis of Museum Collection Bone Artifacts

Ancient DNA (aDNA) analysis has revolutionized the field of archaeology with its ability to provide unique, and otherwise unattainable information about the past. However, due to the destructive nature of current aDNA techniques many museum curators are hesitant to subject their collections to this kind of analysis. This paper presents a new sampling strategy for obtaining adequate amounts of bone powder from bone artifacts for aDNA extraction, while minimizing the damage done to the valuable artifacts. A low speed precision drill was used as it offers greater control and maneuverability during the drilling process. This is a major advantage as drilling angle, depth, speed and pressure are major considerations. X-ray imaging was used to examine the internal structure of the artifact in order to assess its stability and to identify the optimal drilling location and depth. Our preliminary lab work has shown that the low drilling speed, small drill bit size, and use of X-ray imaging reduced the likelihood of any unintentional damage being done to the internal or external structure of the artifact. This strategy has been tested, optimized and applied to modern bone samples, forensic bone samples, and archaeological bone artifacts curated in the SFU Museum of Archaeology and Ethnology (Burnaby, BC) and the Royal Ontario Museum (Toronto, ON).

[Molecular Anthropology and Bioarchaeology](#) [Thursday, May 5](#) [9:00](#)

Brownlee, Kevin¹ and William Dumas²

1 The Manitoba Museum, 2 Manitoba First Nation Education Resource Centre

Community Interpretation of the Protocontact Period: The Rocky Cree

The Asiniskow Ithiniwak or Rocky Cree in northern Manitoba have been using archaeology to validate and confirm their oral history. One specific case relates to the discovery of ancestral remains that dated to the Protocontact period approximately 1650 CE. The first written accounts by Europeans in the area date to the mid 1700s and confirmed that the Rocky Cree occupied the area. The ancestral remains have been the basis of two studies, one that followed a traditional archaeology interpretation and resulted in a book, the other resulted in a rich historical fiction book written by William Dumas, a local elder and educator, bringing this woman and her culture alive and sharing this story with the broader public. This presentation will explore this project and how it has enhanced the archaeologist's interpretation and supports community interpretation.

[Interpreting Ethnicity in the Archaeological Record](#) [Thursday, May 5](#) [15:40](#)

Bruwelheide, Karin S.¹, Sandra S. Schlachtmeyer¹, Douglas W. Owsley¹, and Vicki E. Simon¹, Arthur C. Aufderheide², Larry W. Cartmell³, and Stephan J. Swanson⁴

1 Department of Anthropology, National Museum of Natural History, Smithsonian Institution, 2 Department of Pathology, Duluth School of Medicine, University of Minnesota, 3 Pathology Department, Valley View Regional Hospital, North Montana Vista, Ada, OK, 4 The Grove, 1421 Milwaukee Ave, Glenview, IL 60025

Unearthing Robert Kennicott: Naturalist, Explorer, Smithsonian Scientist

In April 2001 the cast-iron coffin of former Smithsonian scientist Robert Kennicott was opened in Illinois at The Grove National Historic Landmark (his boyhood home). The

forensic investigation was conducted by a Smithsonian-led research team as part of an ongoing study of 19th-century cast-iron coffin burials. The primary objective was to resolve long-standing questions related to Kennicott's untimely, mysterious death at Fort Nulato at age 30 during an expedition into Russian America in 1866. His death was allegedly a suicide. Chemical and osteological analyses, combined with historical information on Kennicott's life and the description of his body and the scene at the time of discovery, exclude suicide and instead support death from cardiac arrest. Information gleaned from this study contributes to a growing data set on body preservation in iron coffins and the detection and use of toxins and heavy metals in nineteenth-century natural history specimen collection, medicine, and funerary practices.

[Molecular Anthropology and Bioarchaeology](#) Thursday, May 5 13:40

Burley, David

Simon Fraser University

Rising Oceans and Pacific Island Catastrophes – Archaeological Data Demarcates 21st Century Shoreline Transformation in the Kingdom of Tonga

Island Nations across the vast expanse of Oceania legitimately are concerned with global warming, glacial melt and the potential impact of rising sea levels. In this paper I examine the potential consequences of sea level rise on the island of Tongatapu in the South Pacific Kingdom of Tonga. At the time of first Tongan settlement 2850 BP, sea levels were 1.2-1.4 m higher than the present with existing msl not established until 2000 BP. Paleo-shoreline and archaeological data, thus, provide a model for coastal transformation and its impact for human settlement in the 21st century. Related issues for heritage and emergency planning also are addressed.

[Environment, Climate, Ecology and Archaeological Contributions to the Discussion](#)
Thursday, May 5 9:00

Carleton, W. Christopher, David Campbell and Mark Collard

Simon Fraser University

Classic Maya data reveal massive impact of climate change on conflict frequency at the century scale

The impact of climate change on human conflict over the long-term is critically important but poorly understood. Hitherto, attempts to shed light on this issue have used methods that are unsuitable for the type of data involved. With this in mind, we collated climatic and conflict data for the Classic Maya spanning ca. 363–888 CE, and then analyzed them with a recently developed time series method that is appropriate for the data. The results we obtained are dramatic. We found that a 1°C increase in temperature is associated with a 530% increase in conflict levels. This finding not only has implications for Classic Maya history but also suggests that the potential impact of current climate change on conflict levels has been greatly underestimated.

[Environment, Climate, Ecology and Archaeological Contributions to the Discussion](#)
Thursday, May 5 13:20

Carr-Locke, Sarah

Prince of Wales Northern Heritage Centre

This Land is our Home: Exhibiting Yellowknives Dene history and identity

The Prince of Wales Northern Heritage Centre, which functions as the territorial museum and archives for the Northwest Territories, sits on the traditional territory of the Wilhìdeh Yellowknives Dene. The Heritage Centre has had a long tradition of collaborative archaeological research with Arctic and Subarctic peoples, with many projects resulting in museum exhibits. “This Land is our Home: Wilhìdeh Yellowknives Dene” is a collaborative exhibit that opened in October 2015. In this case, the exhibit itself was the research project and incorporated archaeology and ethnography to represent the Yellowknives’ past. This paper examines the methods of creating the exhibit as well as its results, in order to see how it fits in with the collaborative research context of previous and current work at the institution. This project is an example of Indigenous museology; a concept related to Indigenous archaeology whereby research is undertaken in partnership with heritage stakeholders, for the benefit of all parties. I will ask what this specific exhibit project can teach us about collaborative heritage research, ways of representing an Aboriginal community’s past, and how this is relevant to heritage researchers in the north and beyond.

[Archaeology in the Public Sphere](#) Saturday, May 7 13:20

Carter, Kari and Aubrey Cannon

McMaster University

Exploring the efficacy of phosphate analysis for characterizing variability in occupational intensity at shell midden sites on the central coast of British Columbia

We present the results of research that tests the efficacy of sediment phosphate analysis for assessing variability in occupational intensity (i.e. as a function of scale and length of occupation) at shell midden sites on the central coast of British Columbia. Despite their prevalence in coastal environments world-wide and the long-standing history of elemental analysis in archaeology, shell middens are rarely investigated for their chemical content. Ongoing research on the central coast has shown clear associations between fish bone densities and site size, which has proven useful for characterizing variability in settlements in the region. This regional study provides the context and basis for investigating phosphate as a persistent and abundant element. Clear relationships between phosphate values and fish bone densities speak to the utility of phosphate as an independent indicator of relative occupational intensity.

[Geochemical Analysis in Archaeology](#) Friday, May 6 13:20

Castillo, Victoria

Yukon College

“Women making shoes & etc. & etc.”: Identifying the Presence and Role of Women in the Remote Subarctic Fur Trade Post of Fort Selkirk, Yukon

Fort Selkirk operated as a small fur trade post for the Hudson’s Bay Company (HBC) in central Yukon from 1848-1852. The company’s priority was the trade of European merchandise in exchange for furs trapped and hunted by Northern Tutchone and other Indigenous groups in the region. An examination of Fort Selkirk journal records indicates the fort employed and housed a pluralistic population, which included British, Indigenous and Métis men who worked as clerks, labourers and meat hunters. Largely missing from

the written record is the presence and role of women at the fort. Clearly women had a role to play. In particular, Indigenous women had extensive knowledge of the local landscape and lifeways, which would have been seen as valued qualities by the fort complement, particularly in a circumpolar context. Archaeological excavations recovered a variety of European and Indigenous made objects including those made from bone and antler, which fit into gendered artifact categories. The recovered artifacts, their spatial distribution, as well as HBC journals are analyzed to ascertain the presence and socio-economic role of Indigenous and nonindigenous women within the fort.

[Papers in Honour of Raymond Le Blanc](#) Saturday, May 7 10:40

Clark, Terrence

Canadian Museum of History

Interpreting the Other: An Outsider's View of Greek Archaeology

The Greeks – Agamemnon to Alexander the Great exhibition is currently touring North America, with previous stops at Pointe-à-Callière Museum in Montreal and the Canadian Museum of History in Gatineau. The Greeks is the largest archaeological exhibition in Canadian history. It brought over 600 objects from 22 Greek museums. Our scientific advisory committee consisted of 30 of Greece's most senior archaeological experts and high-ranking diplomats. As the lead curator and a non-expert in Greek history, I was uniquely positioned between the expert Greek insider and the museum goer outsider. I present my insights into how I navigated the complex and political task of presenting the finest Greek treasures to general North American audience.

[Archaeology in the Public Sphere](#) Saturday, May 7 14:00

Clark, Terrence

Canadian Museum of History

The Mercury Series: Entering the Digital Age

Since 1972, the Mercury Series published 180 books on archaeological research in Canada. This is the largest and most important collection of published primary data in Canadian archaeology. Unfortunately, the out of print back issues have been hard to get a hold of in recent years. A partnership between the Canadian Museum of History and University of Ottawa Press will now make all books in the Mercury Series available for digital download. This paper will examine the significance of the Mercury Series and its continuing importance now that all titles will be widely available again.

[Archaeology in the Public Sphere](#) Saturday, May 7 14:20

Compton, Mary E. and Lisa Hodgetts

University of Western Ontario

Engaging with Archaeological Collections from Banks Island, NWT: Examining the value of digital representations and physical replicas

Representations, replicas, and other “copies” of archaeological objects are increasingly used to document and preserve archaeological information and facilitate its sharing. As mediums of communication, both within and outside the archaeological realm, these “copies” form a locus for engagement and experience. Here, as part of our work with the Ikaahuk Archaeology Project on Banks Island, we explore the potential of artifact “copies” to link Inuvialuit community members in Sachs Harbour to ancestral archaeological

material now curated in distant repositories. Over the summer of 2015, Compton conducted interviews and focus groups in Sachs Harbour, Inuvik and Yellowknife with a diverse array of archaeological constituents including local Inuvialuit community members (elders, adults, and youth), museologists, curators, and archaeologists in order to examine how they experience, perceive, and value archaeological copies in relation to original archaeological material. A collection of artifacts, digital photographs, 3D models, 3D prints, and handmade replicas provided hands-on inspiration for this dialogue. Findings suggest that, in this case, framing the “copy” in opposition to, or as a devaluation of, the original may be an oversimplification of what is valuable about the various forms. While the majority of participants demonstrated a strong interest in emerging 3D technologies, there was a high diversity of opinion, both between and within communities, about the specific roles archaeological replicas should play.

[Current Approaches to Archaeology & Heritage Research in the Western Arctic and Lower Mackenzie Region](#) Friday, May 6 9:40

Cook, John P.

Fairbanks, Alaska

Obsidian at Healy Lake Village Site

I've been working on the re-analysis of the Healy Lake Village site. In this process, I've tried to deal with some 800 obsidian artifacts (including flakes) that have been analyzed, primarily, with INAA and XRF, to address several aspects of the prehistoric milieu; eg. changes through time and trade/travel connections. The use of elemental analyses of obsidian has been of considerable interest in the last few years, increasingly so with the portable XRF machines and with the development of the Alaska Obsidian Database (AOD). The latter is of obvious value but seems to have grown so much; it now has over 2,000 entries. Obsidian was found in all parts of the Village site and date from some 13,000 years ago to the almost present, as shown in the graphics. Depending upon the elements considered, there are potentially dozens of different geographic sources, including Canada, for these flakes and artifacts. These are shown in accompanying maps. Some hydration measurements may help in the analyses and will also be addressed.

[Recent Research in the Western Subarctic](#) Friday, May 6 10:20

Cooper, H. Kory¹ and Antonio Simonetti²

1 Purdue University, 2 Department of Civil & Environmental Engineering & Earth Sciences, University of Notre Dame

Lead Isotope Analysis of Geological Native Copper: Implications for Provenance Work

There are several potential problems when attempting to determine the provenance of archaeological metal artifacts. Access to sufficient quantities of representative source material is often difficult. For smelted metal, isotope and trace element data will be derived from multiple sources such as ores, alloying material and fluxes. With respect to native copper specifically, its purity, often greater than 99.99% Cu, creates a significant challenge when attempting to discern a unique signature based on trace amounts of elements. Additionally, the purity of native copper may produce trace element data at or below the detection limits of the instrument being used. A previous study of native copper using INAA found trace amounts of lead but these results were not sufficient for determining

provenance. However, the presence of lead provides an opportunity to test whether lead isotope data could be used to differentiate native copper from different regions where it was used in prehistory. This could, in turn, provide additional insight on the innovation and diffusion of this technology in the past. For this study, Pb isotope compositions were obtained for several samples of geological copper from the Arctic, Western Subarctic, and Michigan subsequent a (micro-column) Pb ion exchange separation/purification procedure, followed by solution mode analysis using a Nu Plasma II multi-collector inductively coupled plasma mass spectrometer (MC-ICP-MS) instrument.

[Ancient Metals and Metallurgy](#) [Thursday, May 5](#) [15:00](#)

Cooper, H. Kory¹ and Jeff Speakman²

1 Purdue University, 2 Applied Isotope Studies, University of Georgia

Copper from Old Town, Yakutat Bay, Alaska

De Laguna's excavations at the Old Town site in Yakutat Bay in the 1950s recovered over 40 copper artifacts. The availability of geologically pure native copper in the adjacent interior, regional oral history regarding its use, and the age of the site all strongly suggest that this material represents one of the larger collections of archaeological native copper in northwestern North America. However, several iron artifacts were recovered from Old Town as well as other artifacts that indicate this site, like many others with copper in northwestern North America, was occupied before and during the Contact Period. The ability to differentiate between native copper and industrial smelted copper at such sites across regions where native copper was used will allow for better-informed discussions of both native copper innovation, and the impact of introduced metal on Indigenous communities. As part of a larger effort to differentiate between native copper and industrial smelted copper at archaeological sites across northwest North America, the copper artifacts from Old Town, and other sites investigated by De Laguna in the 1930s and 1950s, were analyzed using hand-held x-ray fluorescence. This paper presents the results of this analysis as well as a discussion of Old Town copper technology.

[Ancient Metals and Metallurgy](#) [Thursday, May 5](#) [16:00](#)

Crann, Carley A.¹, Tara Grant²

1 A.E. Lalonde AMS Laboratory, 2 Canadian Conservation Institution,

Radiocarbon Age of Archaeological Consolidants and Adhesives used in Archaeological Conservation

Consolidants and adhesives used to conserve archaeological artifacts must be carefully removed prior to radiocarbon dating of the artifact. It is therefore paramount to understand how the artifact was conserved and which conservation products were used in order to determine: (1) the best location on the artifact to sample; (2) how to remove the consolidant physically and/or chemically, and; (3) whether or not the consolidant was successfully removed. The first two considerations are a matter of communication between the archaeologist, the conservator, and the radiocarbon laboratory, but the third consideration can be a bit tricky to determine. The archaeologist usually knows the approximate time period of the artifact given the context in which it was found so when the age is not as expected, it is possible the consolidant was not completely removed. However, without knowing the radiocarbon age of the consolidant – this is purely speculation. Here we present results from the radiocarbon analysis of 20 consolidants and adhesives

commonly used for archaeological conservation. The consolidants and adhesives cover both natural (animal and fish glues, tree resins, starches) and synthetic materials (acrylics, poly (vinyl acetates), poly (vinyl butyrals), polyethylene glycol, glycerol, cellulose ethers, cellulose esters, cyanoacrylates and soluble nylon) and are selected from those commonly in use now, as well as a few that were used historically but are now avoided due to poor aging qualities. Little is known about what effects conservation treatments used to bond or consolidate archaeological material have on radiocarbon dating. This paper will present data that may indicate in which direction – young or old – conservation treatments may skew radiocarbon dates, the importance of knowing the history of older samples and how these results should be interpreted.

[Poster](#)

Crowell, Travis and Dana Lepofsky
Simon Fraser University

Late Holocene Settlement and Sea-Level Dynamics in Waiatt and Kanish Bays, Quadra Island

Our research aims to examine the relationship between settlement and sea-level dynamics during the Late Holocene in Waitt and Kanish Bays, Quadra Island. While a sea level chronology has been established for this region, it does not take into account highly local events (e.g. subsidence). Using radiocarbon dates extracted from several sites by percussion coring, we can assess the extent that people extended their settlements seaward as sea levels fell. These findings relate to several issues. On a large scale, they will provide insights into how coastal and bay populations adapted to changing sea level. Locally, it will address responses to environmental change on Quadra Island, and help refine the region's Late Holocene sea level curve. In turn, this will provide alternative means for dating clam gardens and other features which were constructed relative to specific tidal heights. Finally, our research will serve as a foundation for inferences into how the duration and growth of settlements during times of environmental change contributed to a sense of identity and place.

[Poster](#)

Daley, Patrick¹, Andrew Wilson² and Julia Beaumont²
1 Eamer Science & Policy, 2 University of Bradford

Stable isotope analysis of incremental dentine to investigate childhood diet and disease in 19th-century London

The public health implications of poverty, industrialization, and urbanization are still important issues in the 21st century. A portion of the 19th-century parish cemetery of St. Mary Newington, in southeast London, was excavated in 2014. The individuals interred here during the first half of the 19th century included a substantial number of paupers and other local poor. Stable light isotope analysis of bone collagen is frequently employed to make general characterizations of lifetime diet in archaeological populations. Incremental microsampling of sequentially-growing tissues (dentine) can provide more detailed information on changes in diet and health over time. Incremental carbon and nitrogen isotopic analysis of dentine was applied to 30 individuals from the St. Mary Newington cemetery, to investigate patterns of lifetime nutrition and disease. Patterns of $\delta^{13}C$ and

$\delta^{15}\text{N}$ changes related to childhood dietary shifts and nutritional or disease stress are identified in this population.

[Molecular Anthropology and Bioarchaeology](#) [Thursday, May 5](#) 10:00

Eric Damkjar

Archaeological Survey of Alberta

It All Happened So Fast -- Late Dorset Adaptations to the Medieval Warm Period in the Eastern Arctic

Our currently warming climate is dramatically and visibly expressed in Arctic regions through the extent of sea ice during the late summer months. September Arctic sea ice has declined at a rate of 13.4 percent per decade over the past 35 years, rapid enough to be readily apparent to human observers. Where peoples' livelihood was intimately connected with sea ice and the animals that, in turn, depend on sea ice, such environmental changes would require an adaptive response. The last major climatic warming event, known as the Medieval Warm Period, coincides with dramatic adjustments in Palaeoeskimo ways of living and in their distribution across the Eastern Arctic. In particular, the Late Dorset made extensive use of large communal structures, commonly referred to as "longhouses", and occupied lands they had not seen for centuries, coalescing around areas with subsistence resources less dependent on the presence of sea ice and, rather, benefiting from a warming Arctic climate. In this paper, I will examine how many characteristics of the Late Dorset period can be understood as adaptations to the depletion of sea ice in late summer and the concomitant explosion of terrestrial life around Arctic oasis locations. Changes happened quickly and reveal much about the communal nature of Dorset culture and society – a culture that faced extinction a few centuries later.

[Environment, Climate, Ecology and Archaeological Contributions to the Discussion](#)

[Thursday, May 5](#) 13:40

Deck, Donalee

Parks Canada

Archaeological Investigations at Two Sites along the Slave River, Wood Buffalo National Park

Archaeological investigations were conducted at two sites along the Slave River in Wood Buffalo National Park as a result of applications for traditional harvesting cabins by members of Smith's Landing First Nation (SLFN). Parks Canada worked with the community during both the field and interpretive components of the projects. A combination of traditional knowledge and western science were used to try and achieve a more comprehensive understanding of the types of activities revealed at the sites. Both sites were quarry and camp sites with multiple occupations extending over 5,300 years or 266 generations. Flotation and residue analysis has contributed to identifying stone tool function and resource utilization.

[From Across the Land - Contributed Papers](#)

[Friday, May 6 10:40](#)

Dermarkar, Susan

University of Toronto

Explorations of Ethnicity, Identity and Ethnogenesis at the 15th Century Iroquoian Keffer Site

Fifteenth Century Iroquoia was exemplified by shifting socioeconomic and political patterns. Small local communities joined together to form larger expanding villages, perhaps for defense as intraregional warfare increased. The mid-15th century ancestral Wendat Keffer village is a prime example of this growth process. The majority of the longhouses at Keffer show evidence of expansion and the main palisade was greatly enlarged to accommodate this growth as well as the addition of five new longhouses. Within Iroquoian archaeology ceramic types have historically been seen as the premier material correlates for ethnicity and ethnic origins. This view is slowly changing as identity formation and signaling are now understood to be more nuanced. At the Keffer site ceramic vessel attributes and types are being used to understand the earliest socio-political affiliations, possibly ethnicity, of the population and their changing dynamics as village expansion was paralleled by an increasing growth in the numbers of 'non-local' ceramics and the appearance of one 'new' version of an eastern Iroquoian ceramic type. Ceramic and spatial analysis will be used in this presentation to investigate possible indications of ethnogenesis at the Keffer village during the turbulent 15th Century.

[Interpreting Ethnicity in the Archaeological Record](#) [Thursday, May 5](#) [14:20](#)

Desjardins-Martin, Nathaly¹, P. Gregory Hare², Christian Thomas², and Michel Lamothe¹
1 Université du Québec à Montréal, 2 Heritage Resources, Yukon Government

Luminescence dating at Britannia Creek, Yukon

In unglaciated South-Central Yukon, an archaeological site was first discovered in the course of a mineral exploration campaign in the vicinity of the Casino Project (Western Copper and Gold Corporation mining company). Stone tools, pieces of debitage and calcined bones were later analyzed by the Yukon Archeological Survey. Estimated between 13 000 and 14 000 years by the archaeologists, these artefacts attest to the presence of an ancient culture of the end of the Pleistocene in Eastern Beringia. To elaborate a detailed and hopefully precise chronological framework, a luminescence dating project was initiated at site KfVi-3, located on a terrace within the valley of Britannia Creek on the south bank of the Yukon River, a hundred kilometers west of Pelly Crossing. A total of 9 samples were collected through the excavation and brought back to the luminescence laboratory Lux of the Université du Québec à Montréal for analysis. The host sediment is a distal fine grained and carbonated loess from which the 63-90 um grain size was extracted. The K-feldspar fraction was isolated through densimetric separation. The dating protocol is based on the classical IRSL approach that requires the assessment of both the equivalent dose and the fading rate of the feldspar extracts to be measured in order to devise the "Archaeological Dose". Assessment and modelling of the soil water content as well as determining the sediment composition in uranium, thorium and potassium allows the calculation of the burial age. Preliminary results will be presented and discussed at the conference.

[Poster](#)

Desmarais, Danielle
University of Toronto

Dressed to the nines: European elite fashions and Inuvialuit economy and clothing designs This paper presentation will outline the influence of European fashion trends of elites to Inuvialuit economy and clothing designs as evidenced in the ethnohistoric and

ethnographic records. I will outline the types of influence European fashion produced including changes in resource extraction materials and quantity, changes in design, cut and decoration, and introduction of new clothing items. Next I will identify material culture influenced by European fashions including material culture moving to Europe from the Mackenzie Delta (such as baleen for corsets and crinolines, specific furs, and designs and/or clothing cuts) as well as material culture moving to the Mackenzie Delta from Europe (such as metal tools, beads, fabric, thread, introduction of the glove and designs and/or clothing cuts). This will be followed by a discussion of the degree of influence European fashions had on each material culture item and whether this influence had a lasting or residual impact.

[Current Approaches to Archaeology & Heritage Research in the Western Arctic and Lower Mackenzie Region](#) Friday, May 6 13:20

Dielissen, Sandie

Indigenous Research Institute, Simon Fraser University

[Being a 'good' girl: Crafting gender in the Indian Residential Schools](#)

As part of the project of colonialism in North America, churches and missionaries introduced their standards of childhood through the education of Aboriginal peoples. Indian residential schools determined what it meant for Indian girls to become proper women. Western ideals of femininity, modelled behaviour, appearance and clothing, personal possessions, and household goods informed respectability. Aboriginal girls were taught a Christian home life geared towards removing them from their otherwise savage, morally degraded, and uncultured behaviour. Being a 'good' girl was reinforced through the material culture and physical environment. Study of the material culture of these institutions provides insight into the role of education in crafting gender and re-creating identity among Aboriginal women and within Aboriginal communities. This poster examines how the praxis of daily life in these institutions crafted new ideas of gender, gender roles, and gender politics

[Interpreting Ethnicity in the Archaeological Record](#) Thursday, May 5 16:20

Duffield, Seonaid and Duncan McLaren

University of Victoria

Tracking Long Term Patterns in Archaeological Site Occupation and Environmental Change on the Central Pacific Coast of Canada

The Hakai Institute is a scientific research observatory that collects and monitors information on present day ecological conditions on the central Pacific Coast of Canada. The Hakai Ancient Landscapes Archaeology Project (HALAP) is an affiliated program designed to complement this ecological monitoring through the investigation of diachronic records of human occupation and environmental change since the region became ice free 15,000 years ago. We are implementing methods to link present-day ecological studies in oceanography, marine food webs, and terrestrial and near-shore ecology to our findings from archaeological and geological tests. In this paper, we draw from these long-term records to provide insights and commentary on contemporary issues concerning sea level change, forest succession, long-term sustainability in food getting practices, ocean acidification and achieving climate stabilization

Earnshaw, Jacob

Archaeological Society of British Columbia

Archaeological Society of British Columbia

The Archaeological Society of British Columbia was established in 1966 and is a non-profit society dedicated to the protection of archaeological resources and the spread of archaeological knowledge in British Columbia. The ASBC publishes an illustrated quarterly, *The Midden*, containing articles and news related provincial and northwest coast archaeology. Members receive a subscription to the journal, and access to various tours and workshops put on by the society. The ASBC has recently restructured itself and is currently based out of Victoria, BC. We hope to revive regional chapters in Nanaimo, Vancouver and elsewhere in the province. At the moment our focus is primarily hosting monthly archaeological lectures out of the University of Victoria and working to revive *The Midden* this coming spring.

[Poster](#)

Earnshaw, Jacob

University of Victoria

Cultural Forests of the Southern Nuu-chah-nulth: Historical Ecology and Salvage Archaeology on the West Coast of Vancouver Island

This graduate thesis delves into the question of Cultural Forests on Vancouver Island, British Columbia. Cedar, the “Tree of Life” to most coastal peoples of the Northwest Coast, was used in all aspects of indigenous life and is reflected in the Culturally Modified Trees (CMT) present throughout coastal forests. While most coastal CMT chronologies (consisting of dated bark or wood extraction dates) rarely reach beyond the early 18th century, a cedar’s lifespan is often in excess of 1000 years. What biases are causing archaeologists to overlook the most ancient of these features? I examined all CRM gray literature associated with recorded CMT sites in all southern Nuu-chah-nulth territories on Vancouver Island. Combined with fieldwork within old growth clear-cuts the research brings to light the level to which CMTs have been overlooked and understudied. I compare distributions of dates found in Archaeological Impact Assessments versus those of Post-Impact Assessments, the distributions of embedded bark strip scars, inadequate archaeological protections, the practice of cedar bark tending and aboriginal title to old growth cedar forests. The work has shed light on the true representation of CMT harvesting throughout the last 1100 years. It also looks into the arboriculture practices of restriping cedars to induce bark growth; one cedar having been found to have been stripped over nine times.

[Poster](#)

Easton, Norman Alexander¹, Charles Moore², Andrew Mason², Rob Field³, Niki Virga³, Rebecca Wigen³ and Eduard Rhenhardt⁴

1 Yukon College, 2 Golder and Associates, 3 University of Victoria, 4 McMaster University

The Montague Harbour Underwater Archaeology Project: Final Conclusions and Prospects for Future Research on the Northwest Coast

Twenty-one years ago we completed our last of four field seasons excavating inter-tidal and sub-tidal sediments in Montague Harbour, Galiano Island, British Columbia. While a permit report describing basic results and several analytical publications ensued, a final summary concluding publication remained to be completed. Here we present the essential elements of this forthcoming publication, which will discuss methodology, provide a comprehensive database on recovered artifacts and ecofacts, present sedimentological and facies analyses, radio-carbon dates, and a set of conclusions and propositions arising from our findings. We will conclude our presentation with some thoughts on the future of practical prehistoric underwater archaeological fieldwork on the northwest coast within the context of contemporary research.

Maritime Archaeology Friday, May 6 9:00

Easton, Norman Alexander¹, David Yesner², Vance Hutchinson¹, Michael Grooms³, Jordan Handley⁴, Joel Cubley⁵

1 Yukon College, 2 University of Alaska Anchorage, 3 University of New Mexico, 4 University of British Columbia, 5 Centre for Northern Innovation in Mining, Yukon College

Challenges and Opportunities in the Archaeology of Borderlands: Constructing a Cultural Chronology of the Little John Site

Situated a few kilometers from the international border with Alaska in Yukon, the Little John site holds a record of human occupation from the early Allerød in the Late Pleistocene post-glacial period through the Early and Later Holocene. Forty radio-carbon dates has identified nine Chronozones of occupation which can be correlated with other archaeological manifestations in both Alaska and Yukon. The archaeological culture of the Little John site lies within a regional network of prehistoric occupation that precedes contemporary state boundaries – it is in this sense borderless. The pursuit of a contextualization of the material culture history of Little John has demanded a cross-border perspective in our research, leading to rich collaborations with Native communities, colleagues, and institutions in Alaska as we strive to place Little John within its regional context. Old competing paradigms of typology are fading as a result, at least for us, as the culture history of the Tanana River basin emerges with increasing clarity through cross-border collaboration – an effort fully supported by the Dineh of the region that have long lived under their bisection and division by monolithic nation states and from whom we have learned new ways to practice archaeology that includes never hesitating to drop our trowel and drink tea in order to cross cultural borders of practice and understanding.

Beyond Little John: The Archaeology of Borderlands Thursday, May 5 9:40

Elliott, Deirdre

Memorial University of Newfoundland

A Bare-Bones Account Won't Do: Enriching the Narrative through Expanded Zooarchaeological Analysis

Recently, the importance of going above and beyond subsistence in zooarchaeology is becoming more widely acknowledged, as non-human animals so often hold a much more complex place in human life than simply the food that gets eaten. Although the field of human-animal studies is gaining ground in archaeology, a disconnect often exists between the faunal material and the bigger picture – the interactions between the human lives we study and the animals in their environment. Particularly in the Arctic, where so much of

daily life was and still is dependent upon animals in some capacity, it is important to bridge this gap and to explore the various ways the animals in the faunal assemblages and artefacts we study impacted the lives of the people who left them. This poster showcases an example of how this might be accomplished, using material recovered from Inuit sites in Labrador. Examining the distribution and nature of animal presence throughout the archaeological record, through artefacts relating to animals as well as animal remains, ethnographic accounts, and lived experience, will inform a narrative that more fully captures the relationships between people and the animals that in many ways were at the core of daily life.

[Poster](#)

Elliott, Deirdre and Anatolijs Venovcevs

Memorial University of Newfoundland

A Bird Flew over a Winter House: Zooarchaeological Insights into the Newfoundland Winter House Foodways

European fishing stations and rural settlements on the island of Newfoundland have received considerable attention historically and archaeologically. In the cool and short Newfoundland summers these places buzzed with activity as migrant cod fishermen and local fishing families unloaded their catch, processed the fish, and cured the product for the trans-Atlantic market. However, this sequence encompasses only part of the yearly round. For certain, most of the migrant fishermen returned home to Europe once the fishing was done but often some of the fishermen stayed behind. They and the local fishing families did not stay at the fishing station, where they would have been beaten by the harsh winter sea, but in the more sheltered wooded areas. Relatively little is known of this winter housing tradition, as only a handful of sites have to date been located, and even fewer have been excavated. One of the biggest questions these sites may address is what wintering families ate throughout the long season, as this and other aspects of this tradition were not well documented. This paper will present the results of what are the first analyses conducted on faunal remains recovered from European winter house sites in Newfoundland. These analyses shed light not only on subsistence practices, but also on winter pastimes, mobility, and planning by these Euro-Newfoundlanders wintering at the limits of the European world.

[On the Edge: European Adaptations to Life on the Periphery](#) [Friday, May 6 15:20](#)

Esdale, Julie

Colorado State University

Le Blanc's Lessons on Lithic Technology and Subarctic Research in the North

My late undergraduate and M.A. studies at University of Alberta with Ray Le Blanc were a major influence on my future professional track and residence. Trips to the Old Crow Flats instilled a love of northern landscapes and Quaternary geomorphology. Although Ray tried to steer me away from geoarchaeology in favor of lithic technology, I spent two years studying the geology of the soliflucted Dog Creek archaeological site before leaving for Alaska where I searched for more amazing glacially carved landscapes. The middle Holocene archaeological assemblages I discovered during PhD research in the Brooks Range unfortunately lacked significant sedimentary records. Luckily, Ray's strong behavioral approach to debitage analysis and lithic technology served me well for my

dissertation project. My U of A training also taught me valuable lessons about the necessity of strengthening arguments with multiple lines of evidence when interpreting non-traditional archaeological assemblages. This paper reviews the results of my research on middle Holocene sites in Alaska that reflect the influence of Ray's careful analytical and descriptive approaches to lithic analysis rooted in experimental flint knapping studies, tool production sequences, and tool life histories.

[Papers in Honour of Raymond Le Blanc](#) Saturday, May 7 9:40

Fay, Amelia
Manitoba Museum

The Ethnicity of Things

Inspired by recent scholarship in material culture studies, the concept of material agency, and my own research on the Labrador Inuit during the contact period this paper explores the idea of the ethnicity of things. Ethnicity can manifest itself through material culture but how and when do objects become signifiers of a particular cultural group? How do archaeologists make sense of artifacts from contexts where some items are made from locally sourced materials and others have been brought in from elsewhere through trade? Using examples of 'things' from 18th and 19th century Inuit households on Black Island, Labrador, I demonstrate the difficulties in ascribing ethnicity to contact-period assemblages.

[Interpreting Ethnicity in the Archaeological Record](#) Thursday, May 5 13:40

Fay, Amelia
Manitoba Museum

Opachuanau Lake Post Excavations: A forest fire sheds new light on an old site

A relatively recent forest fire swept through an area of Opachuanau Lake, along the Churchill River system, clearing the vegetation from a substantial area. Following the fire, local archaeologist Keith Anderson noticed new features on the landscape, including two potential chimney features. These features are roughly 50m northeast from a previously excavated fur trade post, thus sharing the same Borden number (HeLv-22). Our 2015 season focussed on testing this newly revealed building to try and determine its size and potential date of occupation. This poster presents the results of this preliminary field season and how it relates to the previous excavations, and discusses the directions for future research at this site.

[Poster](#)

Fisher, Monica
Lakehead University

Flooded with Finds: Archaeological Discoveries from Canadian Bog Contexts

Peat bogs cover approximately 12 per cent of Canada's surface and have been a prominent part of subarctic landscapes since the retreat of the glaciers during the early Holocene. Despite being so widespread, few archaeological sites in those contexts have been found and studied in this country. In the past, peat bogs would have provided ideal flat landscapes on which to build camps during the winter, much as Indigenous peoples have done in more recent times. During the spring melt, any lost or discarded items would sink into the thawed peat and consequently be preserved in anaerobic conditions, just as bog

bodies found in other circumpolar locations. Materials found in bog sites could yield valuable information missing from a typical archaeological artifact assemblage since organic materials would remain intact. In this poster, I provide a brief overview of sites found in bog contexts across Canada, highlighting the fact that despite its archaeological value, this type of research has been scarce and publications rare.

[Poster](#)

Forsythe, Kyle D.

University of Western Ontario

The Mount Albert Site: Purposeful Artifact Breakage in the Middle Archaic of Southern Ontario

Excavated as part of a stage 4 CRM project, the Mount Albert cache presents an unprecedented view of lifeways in the Laurentian Archaic of Ontario (ca. 5000-4500 B.P.). This talk presents the results of graduate research that has been conducted on an undisturbed, single-component Brewerton site south of Lake Simcoe, where the lithic assemblage contains high numbers of fragmented formal tools and preforms - moreso than is consistent with solely tool production activities. Through the refitting of artifacts it is clear that breakage was intentional and implemented for purposes beyond subsistence activities. The experimental breakage of reproduction bifaces provides insights into the specific strategies for tool destruction utilized by the site's occupants. I discuss the likelihood that the artifacts were purposefully destroyed as part of previously undocumented ceremonial practices in the region.

[Contributions from Cultural Resource Management](#)

[Thursday, May 5](#)

[14:00](#)

French, Diana

University of British Columbia Okanagan

The Taku River: What's Gone and What's Not

The Taku is a major salmon bearing river which connects the coast of South-east Alaska to travel routes leading into the interior of northwestern BC. Both environmental and cultural factors have had impacts on pre- and post- contact archaeological sites, and on indigenous cultural heritage resources situated in the river valley. Based on intermittent fieldwork carried out over a 40 year period, this paper documents some of the observable changes in the heartland of the Taku River Tlingit, focussing on the Canadian side of the border. The consequences of widespread flooding, glaciofluvial deposition and channel braiding all contribute to the difficulty of relocating previously documented sites. Extensive erosion especially at the confluences of the Taku with major streams has heavily impacted archaeological resources, as well as more recent First Nations settlements. Historic structures including cabins and gravehouses have either collapsed or weathered considerably, and some of the indigenous trails are now overgrown and difficult to find. Human activity has also resulted in changes to the landscape and the condition of culturally sensitive localities. Highly noticeable are impacts of earlier mining activities and the more recent Tulsequah Chief development in the vicinity of Tulsequah, where there was once a thriving community. The establishment of a number of hunting and fishing camps both old and new have resulted in some disturbances. Increasing recreational and other uses of the river may potentially further jeopardise the sustainability of all heritage resources over the next 40 years.

Friesen, Max

University of Toronto

The Summer of '87: Travels with Ray in the Mackenzie Delta

This paper is mainly an excuse to reminisce about a field season that played a central role in my decision to become an Arctic archaeologist. 1987 was, in retrospect, an almost perfect summer of large-scale helicopter survey and test excavation in the Mackenzie Delta region, under the superlative leadership of Ray Le Blanc. While walking the coasts of the Tuktoyaktuk and Cape Bathurst Peninsulas, I learned about everything from survey techniques and Arctic logistics to the joys of boil-in-bag dinners. There is a continuous, if convoluted, path from that summer to my current project, which involves fieldwork at some of the same sites we visited in '87.

[Papers in Honour of Raymond Le Blanc](#)

Saturday, May 7

11:40

Friesen, Max and Michael O'Rourke

University of Toronto

In Search of Lost Time: The Missing Archaeological Record on the Beaufort Sea Coast

Around much of the Circumpolar North, efforts are underway to understand and mitigate the destruction of archaeological sites resulting from coastal erosion. While this destruction is currently accelerating due to a warming climate, we are witnessing only the latest manifestation of a complex long-term process. A combination of vulnerable permafrost conditions and changing relative sea levels have long led to massive erosion in the Beaufort Sea region generally, and the Mackenzie Delta region specifically. This paper is a preliminary attempt to pull together what is known about the long-term trends in changing sea levels, coastal erosion, and archaeological site distributions. These data will be used to suggest the magnitude of what has already been lost, and its implications for our understanding of local and regional culture history.

[Archaeology and Modern Climate Change](#)

Saturday, May 7

9:20

Friesen, Nathan

Heritage Conservation Branch, Saskatchewan Ministry of Parks, Culture and Sport

Photogrammetry as a Tool for Petroglyph Discovery and Recording: Examples from Saskatchewan

The use of photogrammetry to capture three dimensional models of rock art is relatively new. While six years ago, this procedure would have required specialized photography and software, recent developments in photogrammetric software have made this process much more accessible. In addition to free software that uses cloud-based servers, the process no longer requires specialized photographic equipment. In this presentation we will look at some examples of three dimensional models of boulder petroglyphs, the level of detail that can be captured, and the use of 3D visualization software to create virtual lighting in order to reveal previously undetected glyphs. In particular, the Swift Current Petroglyph (EbNw-15) and the Herschel Petroglyph site (EjOc-3) will be used to illustrate how this process can work. The use of this technology as a new means of recording rock art, and the implications for 3D printing, will also be examined.

[From Across the Land - Contributed Papers](#)

Friday, May 6

11:20

Gardner, J¹, M. Spence², H. Martelle¹, Amanda DiLoreto-Bendek¹

1 Timmins Martelle Heritage Consultants, 2 University of Western Ontario

Really 'Cold' Cases- Identifying Executed Prisoners from Ontario's Historic Jails

Timmins Martelle Heritage Consultants (TMHC) has been involved in archaeological excavations at numerous historic jails across Ontario over the last six years. Executed prisoners were hanged within these jails and their remains were subsequently buried within the jail yards. Many of these historic properties remain in use; as they undergo repairs and maintenance it becomes necessary for burials to be located, exhumed and the individuals both identified and reburied in proper cemeteries. This paper presents information on four individuals that were exhumed from three jail yard burials and focuses on a bioarchaeological approach that integrates multiple lines of evidence - osteological, archival and archaeological. This approach allowed us to move beyond the collection of basic osteological data by offering a broader historical context in which to situate these individual cases.

[Molecular Anthropology and Bioarchaeology](#) [Thursday, May 5](#) [14:00](#)

Gibbons, Kevin S.

University of Maryland

Human Ecodynamics in the North Atlantic: Archaeological Sites as Endangered Environmental Archives

The North Atlantic Biocultural Organisation (NABO) is a multidisciplinary research network that has been coordinating an integrated historical ecology research program across the North Atlantic region for over two decades. Like much of the globe, this sub-Arctic region is experiencing increasingly rapid environmental change that is generating profound threats to cultural heritage and archaeological sites. Beyond the need to protect cultural heritage from these threats due to their inherent cultural, social, and economic value, these sites also contain data that represent the results of completed long-term resource management experiments operating within past social-ecological systems. Historical ecology work done in the North Atlantic views archaeological data as distributed observation networks of human ecodynamics in the past that can be mobilized to help understand processes of change and adaptation over the *longue durée*. Enhancing this baseline data can contribute to robust resource management decisions in the face of increased effects of anthropogenic climate change. This paper summarizes the successes of NABO and introduces current research that illustrates the wide-ranging potential of an integrated historical ecology approach. Methods ranging from palaeogenetics to stable isotope analysis are being employed to tackle questions relating to climate change and the traditional ecological knowledge driving local resource interactions and management.

[Environment, Climate, Ecology and Archaeological Contributions to the Discussion](#)

[Thursday, May 5](#) [9:20](#)

Gibson, Terrance

Western Heritage

Getting the Data - Collecting Geoarchaeological Information in the 21st Century

Total Phosphorus, Loss on Ignition, Carbonate Content, Particle Size Analysis, Sand Fraction Analysis, pH Analysis - these are but a few of the many analytical methods that are

currently in use to obtain data for geoarchaeological analyses. Much information requires soil sampling and laboratory processing, and the samples can take days (or weeks) to process, at significant expense. However, CRM archaeologists usually need the data right away, and they usually don't have the option to burden developers with delays and deferred costs while waiting for lab results. Are there ways to obtain normally sample-based geoarchaeological data quickly and efficiently, without resorting to lengthy laboratory processing? Even more importantly, are there culturally interpretable properties in soils that are being missed because there is too much reliance on the old ways of looking at archaeological sediments? In 2016 there are methodological and technological advancements underway that indicate that valuable near-real-time geoarchaeological information can be obtained from nearly every kind of site or profile exposure in any environment. This paper reviews some of these approaches, including the increasingly important role of rapidly acquired optically stimulated luminescence in stratigraphic interpretation and the use of magnetic susceptibility in detecting invisible features on archaeological sites. These two examples point the way to where archaeology as a discipline will go in the years ahead, where new archaeological research approaches will allow archaeologists to collect ever more ephemeral soils-based data that will profoundly change the way that archaeological remains are interpreted in the coming decades.

[The Power of Palaeoenvironments Saturday, May 7 9:20](#)

Gilliland, Krista
Western Heritage

Catalyst for Correlation: Flooding, Stratigraphy, and the FM Ranch Campsite (EfPk-1)

Catastrophic flooding of southern Alberta in 2013 resulted in alteration of the Bow River valley and changed depositional and erosional patterns along the channel. These changes hastened erosion along the banks of the terrace on which the frequently studied FM Ranch Campsite (EfPk-1) sits, resulting in significant exposures of archaeological remains along the terrace edge. As part of Alberta Culture and Tourism's Flood Impact Mitigation Program, Western Heritage conducted an Historic Resources Impact Mitigation of EfPk-1 in the fall of 2015. The objectives of this work were to address longstanding concerns regarding whether the cultural deposits recovered from across the landform could be correlated, or whether they represent discrete, unrelated occupations. This work was also undertaken in order to develop long-term management strategies for the site.

Project objectives were addressed using an integrated approach, focusing on archaeological excavations and detailed stratigraphic analysis, which incorporated standard stratigraphic recording techniques as well as handheld magnetic susceptibility and portable optically-stimulated luminescence (OSL) measurements. Using a combination of artifact distributions, stratigraphic features, and OSL characteristics, a number of 'marker horizons' were identified and correlated across most of the site. This work suggests that, following a period of frequent, high-energy flooding, there was a change to predominantly low-energy deposition and high rates of sediment accumulation. EfPk-1 appears to have been repeatedly occupied primarily during the very Late Prehistoric to early Protohistoric periods, which were during this phase of rapid sedimentation, which is likely responsible for the site's well-preserved, high resolution record.

[The Power of Palaeoenvironments Saturday, May 7 10:40](#)

Gilliland, Krista, Terrance Gibson, Petr Kurzybov, Rob Kadis, and Peter Stewart
Western Heritage

Forward....in Forestry: Towards an Integrated Predictive Model for Managing Archaeological Resources in the Boreal Forest

Until recently, predictive models used in cultural resource management (CRM) assessments of archaeological sites in the boreal forest were primarily based on digital elevation models and hydrological data. The subsequent availability of LiDAR for CRM archaeology had the result that, during pre-field desktop screening, LiDAR images derived from the primary data readily illustrated microtopographical relief that was previously not easily observable, particularly in areas with few macrotopographical features. Comparisons of LiDAR-based models with the older models demonstrate that the older models frequently missed high potential areas, while including areas of low potential that then had to undergo archaeological survey. LiDAR has made the screening process appreciably more streamlined and efficient, reducing the amount of time required for survey and ground-truthing of low-potential areas. Ground-truthing is still required to confirm LiDAR-based models, however, which begs the question: What additional data can be added to predictive modelling to further improve the screening process? To address this issue, Western Heritage has been collaborating with industry partners to formulate a predictive model that integrates sediment-based evidence and artifact distributions with geomorphological, hydrological, elevation data and other data products that can be derived from LiDAR. Preliminary results suggest that this approach can further streamline predictive modelling, resulting in an increased number of management options for the archaeological resources that may be present within a particular operating area.

Poster

Glassburn, L. Crystal¹, Ben A. Potter¹, Joshua D. Reuther^{1,2}, and Matthew J. Wooller³
1 Anthropology Department, University of Alaska Fairbanks, 2 University of Alaska Museum of the North, Fairbanks Alaska, 3 Alaska Stable Isotope Facility, University of Alaska Fairbanks

A New Method for Quantifying $^{87}\text{Sr}/^{86}\text{Sr}$ Mean Distribution on the Landscape for Paleo-Migration Studies

Strontium isotope analysis ($^{87}\text{Sr}/^{86}\text{Sr}$) is becoming one of the primary methods for characterizing past human and animal mobility patterns. $^{87}\text{Sr}/^{86}\text{Sr}$ values vary across the landscape as a function of bedrock geology and those values are incorporated into skeletal materials in a 1:1 correlation; this relationship permits a direct association between measured $^{87}\text{Sr}/^{86}\text{Sr}$ values in skeletal material and physical locations on the landscape. However, geographical variability of $^{87}\text{Sr}/^{86}\text{Sr}$ can be high, even within small regions, and that variability is difficult to quantify for migration studies. This poster presents a new method for quantifying the mean distribution of $^{87}\text{Sr}/^{86}\text{Sr}$ values by clipping a recently-published $^{87}\text{Sr}/^{86}\text{Sr}$ isoscape for the state of Alaska and Yukon Territory (Bataille et al. 2014) into small sub-regions in ArcGIS 10.2, and then calculating the mean and standard deviation for each sub-region to produce a mean-value trend-line radiating out from a sample locale. This method was then tested using *Bison priscus* specimens from the Lost Chicken Creek paleontological site, and the results indicate that this method can be useful for future paleo-migration studies as a way to quantify $^{87}\text{Sr}/^{86}\text{Sr}$ variability on the landscape. Poster

Goodwin, Rebecca

University of Western Ontario

Spawning and Seasonality: investigating an Inuvialuit fishery at the Kuukpak Site, Mackenzie Delta

The ethnohistoric record of the western Arctic demonstrates the importance of fishing and fish consumption as part of Inuvialuit culture, despite the availability of a wide range of other subsistence resources. The Lower East Channel of the Mackenzie Delta, NWT, is particularly rich and diverse in fish species and has been occupied by the Inuvialuit and their ancestors for thousands of years. These large Inuvialuit sites contain some of the best-preserved examples of fish exploitation in the entire arctic, yet the diversity and intensity of this fishery is rarely investigated in depth. In this paper, seasonality and methods of Inuvialuit fishing are explored at a newly excavated winter cruciform dwelling at the Kuukpak site using faunal analysis and historically documented fish spawning patterns. Kuukpak is a large Inuvialuit beluga-hunting site located on the Mackenzie River that includes a number of winter dwellings. From this data it is possible to explore how the ancestors of the Inuvialuit acquired and utilized the wide variety of marine, riverine, and lacustrine resources that were available to the inhabitants of Kuukpak throughout the year.

[Current Approaches to Archaeology & Heritage Research in the Western Arctic and Lower Mackenzie Region](#) Friday, May 6 11:40

Gore, Angela K.

Center for the Study of the First Americans, Department of Anthropology, Texas A&M University

Eastern Beringian Toolstone Procurement: A Preliminary Investigation of Basalts from Dry Creek, Alaska

One way to investigate prehistoric human behavior is through lithic procurement and selection studies. How do behaviors related to toolstone procurement and selection shape toolkits, mobility levels, and settlement patterns? An initial step in answering this important question is attempted through examining lithic artifacts from the Dry Creek site, Nenana valley, central Alaska. With two late Pleistocene components, dating to 13.4 and 12.5 ka and containing artifacts produced on volcanic materials, we can geochemically characterize these toolstones through portable x-ray fluorescence (pXRF) analysis and explore toolstone use. Such studies allow identification of geochemical groupings of materials in archaeological assemblages that may be tied to distinct geographic sources on the landscape, informing on human behavioral processes. To date, studies of the lithic landscape in the Nenana valley have been limited, and geochemical characterization of basalts in the valley's archaeological assemblages have not yet been conducted. In a first attempt to understand how prehistoric Alaskans provisioned themselves in this region, geochemical data from the Dry Creek basalt artifacts are then compared with geochemical signatures from both primary (basalt dikes) and secondary (local alluvium) basalt sources to establish if the local basalt was being utilized. With this presentation, I report preliminary results of the study and place them in the context of prehistoric behavior and landscape learning in the region.

[Recent Research in the Western Subarctic](#)

Friday, May 6

9:00

Graf, Kelly E.¹ Julie Esdale², Ted Goebel¹
1 Texas A&M University, 2 University of Colorado

New Investigations of Late Glacial Occupations at the McDonald Creek Site, Central Alaska

In 2013 we began testing the newly-discovered McDonald Creek (FAI-2043) archaeological site, located south of Fairbanks in the Tanana Flats, central Alaska. The site is situated in eolian deposits mantling an ancient alluvial terrace remnant of the Tanana River. To date we have excavated a total of 12 m². The site contains evidence of a series of living floors dating to the Middle Holocene, Younger Dryas, and early Allerød. Archaeological remains have already yielded thousands of lithics, faunal remains, and possible domestic dwellings. This paper reports our initial results of geochronological, lithic, and zooarchaeological analyses and places the site in the context of eastern Beringian prehistory.

[Recent Research in the Western Subarctic](#) [Friday, May 6](#) [9:40](#)

Graham, Reid J.
Tree Time Services Inc.

Relict Shoreline Identification using Lidar in the Lesser Slave Lake Region

Advances in remote sensing technologies and industry-driven initiatives have precipitated the wide scale production of lidar-derived digital elevation datasets in Alberta. These high-precision terrain models have been instrumental for cultural resource management strategies and the identification of new archaeological sites in the province, through the targeting of distinct landforms and topographic features present on the landscape, and the development of archaeological predictive models. While most lidar analyses for archaeological site predictions are focused on the modern landscape, these datasets can also be used to identify ancient landforms that may have been more suitable for human habitation in the distant past. Review of lidar data from the Lesser Slave Lake region in northern Alberta revealed numerous strandlines, meltwater channels, and relict beaches related to changing levels of proglacial lakes in the lake basin. These previously unmapped topographic features reveal a fluctuating landscape during the early period of human occupation in the province, and provide an opportunity to identify potential locations of ancient sites around the Lesser Slave Lake basin. A combination of reconstructions of proglacial lake levels using strandline elevations and current predictive modeling techniques was used to identify locations reflective of this past landscape with high archaeological potential for sites. This information will be used to direct future surveys in the region so as to identify archaeological sites that might otherwise have been missed by cultural resource management programs.

[Poster](#)

Graham, Taylor R.
Bison Historical Services Ltd.

The Visualization of Archaeological features in Alberta from LiDAR Based Digital Terrain Models

The use of LiDAR imagery for archaeological feature detection and visualization has been well established across the many regions of the globe. While majority of the recent applications have focused on monumental architecture such as pyramids, temples, medieval churches, and roman roads, little has been done to explore the much smaller

surface features found in the plains region of Alberta. This project tests the visualization capability of currently available LiDAR imagery in the province, as applied to four major surface feature types known to occur within the region. The four features types tested were stone circles at Massacre Butte (DjPm-1), drive lane cairns at Head Smashed-In Buffalo Jump (DkPj-1), Majorville medicine wheel (EdPc-1), and large scale earth works at Cluny (EePf-1). A survey of Archaeological professionals ranks and evaluates the nine different visualization techniques utilized. The applicability of these techniques is then discussed as to their potential for use in the CRM environment.

[Contributions from Cultural Resource Management](#) [Thursday, May 5](#) [10:20](#)

Gray, Rebecca

University of Toronto

Ezòdzìtì (The Refuge): Tłı̨chò Archaeology and Oral Tradition

Ezòdzìtì (the Refuge) is an important area of Tłı̨chò Dene traditional land use and history. Located in Grandin River, south of Great Bear Lake NWT, Ezòdzìtì has been designated as a special heritage area of cultural and national significance within the Tłı̨chò Land Claims and Self-Government Agreement. Oral tradition describes Ezòdzìtì as the place where Edzo, a prominent Tłı̨chò leader who made peace with the Yellowknives Dene during a time of conflict in the fur trade period, revitalized the struggling Tłı̨chò nation. In the summer of 2015 preliminary archaeological survey took place within Ezòdzìtì. This research was informed by oral histories recorded with elders from the community of Behchokò. Archaeological survey focused on Kwidiì?ee (Fish Trap Rock), a narrow channel that connects two large lakes within the Grandin River water system identified by elders as a valuable fishing location. The goals of survey were to determine the period of the site's occupation, how the site might fit into a pattern of regional land use, and the relationship of the site to Tłı̨chò oral tradition. Survey revealed evidence for a long history of use and occupation, from the recent past to potentially as early as the Arctic Small Tool tradition period. This project was made possible through collaboration between the Prince of Wales Northern Heritage Centre, University of Toronto, and Tłı̨chò Research and Training Institute. Future research aims to collaborate with additional communities in creating an archive of Ezòdzìtì oral history and expand archaeological investigations to other regions of Ezòdzìtì.

[Current Approaches to Archaeology & Heritage Research in the Western Arctic and Lower Mackenzie Region](#) [Friday, May 6 14:20](#)

Grekul, Christie

Bodo Archaeological Centre & Site

Archaeology for Public Consumption: Five Years of public archaeology at the Bodo Archaeological Site

The Bodo Archaeological Society (BAS) is a community-based non-profit organization that operates the Bodo Site & Centre by providing public archaeology opportunities and educational programs. Since 2003 the BAS has provided informal public engagement opportunities in archaeology. In 2010, with the short-term support of a Rural Alberta Development Fund (RADF) grant, the public archaeology program at Bodo was formalized. During the last five years the BAS has focused on building a unique, long term, research-based public archaeology program in Alberta. This program focuses on public-outreach

initiatives that provide accessible archaeological educational resources for adults, youth, students, teachers, and families. Started as a grassroots local community-driven effort, the BAS has grown into an organized and well-known institution in the province of Alberta. Even with continuous struggles to maintain adequate funding, the BAS has found creative ways to successfully make archaeology meaningful to the general public in both local and regional contexts. In addition, the BAS has seen sustained annual growth during this time. This paper explores that last five years of public archaeology in Bodo, Alberta by focusing on key aspects of public archaeology: teaching, learning, collaborating, accommodating, engaging, and creating.

[Archaeology in the Public Sphere](#) Saturday, May 7 15:00

Griebel, Brendan¹, Pam Gross¹, Darren Keith¹ and Amos Hayes²

1 Kitikmeot Heritage Society, 2 Geomatics and Cartographic Research Centre, Carleton University

Mapping Inuit Knowledge in the Western Arctic: The Progress and Archaeological Potential of the Fifth Thule Atlas

Between 1921 and 1924, a Danish anthropological expedition led by the Inuktitut speaking anthropologist Knud Rasmussen completed the first comprehensive recording of traditional Inuit societies in Canada. Known as the Fifth Thule Expedition, this voyage occurred during an era when many Inuit still adhered to pre-contact and pre-Christian worldviews and material technologies. In an attempt to document these vanishing lifeways, the expedition assembled a vast collection of oral traditions, traditional place names, linguistic information, Inuit drawn maps, photographs, archaeological artifacts and ethnographic objects. While a select amount of this important cultural knowledge has been published in formal expedition reports, the majority of the information remains inaccessible in archival storage and museum collections located in Denmark. In 2014, the Kitikmeot Heritage Society and Carleton University's Geomatics and Cartographic Research Centre developed a partnership designed to increase access to primary source material from the Fifth Thule Expedition. This has resulted in the development of an innovative digital atlas that allows users to re-trace the expedition's route through the Arctic to discover Inuit knowledge and materials collected along the way. This presentation will detail the Atlas' pilot phase of integrating knowledge from the 'Copper Inuit' cultural region, highlighting the steps that have been taken to ensure that this information is represented in a manner that aligns with both Inuit cultural priorities and northern accessibility issues. While the project has not yet begun to integrate archaeological materials into the Atlas database, this paper will also consider the Atlas' future archaeological potential for both the Western Arctic and beyond.

[Current Approaches to Archaeology & Heritage Research in the Western Arctic and Lower Mackenzie Region](#) Friday, May 6 13:40

Gryba, Eugene

Consulting Archaeologist, Alberta

Back to Basics in Interpreting Variations in Late Pleistocene-Early Holocene Northeast Asian-Northwest North American Microblade Technologies

There has been much speculation in print, and now on the Internet, on microblade manufacture. The manufacture of microblades from various types of cores found in

archaeological sites throughout eastern Siberia and the northern part of North America can easily be achieved through a simple direct hand pressure method, one that I have used since the 1970s. Through dialogue, supplemented by a short video presentation, it is argued that metric and shape variations in both cores and microblades can be easily explained by variations in any or a combination of key variables such as size, shape and quality of the lithic material, tools, knapper, cultural, social or physical environments, core history, and so on.

[Recent Research in the Western Subarctic](#)

Friday, May 6

8:40

Guiry, Eric¹, Suzanne Needs-Howarth², Alicia L. Hawkins³, Michelle Courtemanche⁴, Paul Szpak¹ and Michael Richards¹

1 University of British Columbia, 2 Perca Zooarchaeological Research, Trent University Archaeological Research Centre, 3 Laurentian University, 4 Ostéothèque de Montréal, Université de Montréal

Forgotten fish: Isotopic insights into the behaviour of the extinct Lake Ontario salmon

Archaeological data have great potential to address longstanding questions in historical ecology and provide new insights into key issues for the conservation and management of contemporary ecosystems. This paper explores the case of a unique Atlantic salmon population that was endemic to Lake Ontario and which disappeared by 1900. The early extinction of the Lake Ontario salmon has resulted in over a century of speculation about their behavioural ecology. Through stable carbon and nitrogen isotope analyses of archaeological salmon bones and museum-archived scales, we explore fundamental questions about the migratory behavior of this enigmatic species.

[Molecular Anthropology and Bioarchaeology](#)

Thursday, May 5

10:40

Gurcke, Karl

Klondike Gold Rush International Historical Park

A Klondike gold rush shipwreck in Nahku Bay, Alaska

The Canada is a shipwreck found at the head of Nahku Bay some four miles from Skagway, Alaska. Since it was run aground during the Klondike gold rush, legends have grown up around the ship. It was a smuggler's vessel laden with cases of illegal whiskey and torched in a clash between white and Native longshoremen with the flaming ship lighting up the night sky as its burning hulk coasted to its final resting place. Legendary con man Soapy Smith was even said to have played a part in its sinking but the truth is something much different and more interesting. The Canada was built in Bath, Maine in 1859 and traveled to every continent on the face of the planet except Antarctica and carried everything from barley to wool and even a complete iron church. She faced hurricanes, mutiny, strikes and her final voyage to Skagway ended in piracy! In the spring of 2013 and 2014, a small international team conducted a reconnaissance level archaeological survey and assessment of the wreck site. This makes the Canada the earliest known documented archaeological example of that form of vessel that marks the end of the clipper era and the rise of the last great development in American wooden-hulled deep-water sail, the Downeaster. An overview of the ship's history and the key findings of the archaeological survey and assessment will be presented.

[Maritime Archaeology](#)

Friday, May 6

10:40

Hallson, Jennifer
University of Alberta

A Quantitative Analysis of Hide Working at Promontory Cave 1, Utah

Promontory Cave 1 is an extraordinary archaeological site located on the shores of Great Salt Lake. Owing to the near perfect preservation in this dry setting, many artifacts survived that normally would not, including items made of hide, leather, cordage, and wood. Extensive radiocarbon dating of the Promontory Culture deposits in Cave 1 has defined a narrow occupation period of ca. 1250-1290 CE. Modelling and mapping of the bounded space of the cave allows for estimation of the extent and volume of the Promontory Culture deposits. I have calculated densities for the artifacts found during our excavations and projected these into the entire Cave 1 volume, allowing for predictions of the total number of artifacts present. Here I focus on the tools and by-products of hide working including moccasins, scrapers, fleshers, and other bone and stone tools. These numbers allow inferences to be made about the 13th century population that inhabited this cave as well as assessing the accumulation rate of these artifacts. This research has the potential for broader applications to archaeological investigations by increasing our awareness of perishable materials that are usually lost through taphonomic processes.

[Poster](#)

Hamilton, Chris
Lakehead University

A digital image processing methodology to record and enhance pictographs

The rapidly expanding availability and power of digital image processing software offers new tools and approaches for recording and interpreting pictographs, using either newly acquired digital or archived conventional photographs. These techniques allow researchers to address rapidly deteriorating pictographs in a touchless and non-destructive manner. One method is 'decorrelation stretch enhancement' (as developed by Jon Harman) that allows effective visualization of faded or obscured glyphs by amplifying the colour spectra associated with the painting. New 'spectral band comparison' processing further isolates the glyphs, and differentiates them from background rock and lichen. This produces a silhouette rendering of the pictographs similar the manual tracing paper sketches. These processes are undertaken without specialized equipment, and most importantly, have no physical impact upon the pictographs. These processes can be combined and altered to account for variations in pigment colour and saturation, and rock types. The combination of these techniques provides a new avenue for researchers to accurately detect, record and interpret pictographs.

[Poster](#)

Hamilton, Scott
Lakehead University

Palaeo-ecological modelling: implicit and explicit

While a growing number of North American archaeologists have formal training in geoarchaeological and palaeo-environmental analysis, its overt integration into field investigation remains intermittent. Examples of palaeo-landscape modelling are reviewed to illustrate its often post-hoc implementation to help 'explain' site sound in unexpected

places. Also problematic are rather intuitive links between specific landscape features and archaeological sites that have become embedded in the CRM regulatory environment. [The Power of Palaeoenvironments](#) Saturday, May 7 9:00

Hamilton, Scott and Jason Stephenson
Lakehead University

Experiments with aerial archaeology using low elevation UAV photography and photogrammetry

As radio-controlled 'drones' (UAVs) equipped with high quality cameras have rapidly developed for hobby and recreational use, their archaeological research potential has become apparent. At issue is whether archaeological application can move beyond 'orientation' or novelty photography, and contribute analytic 'value-added'. This involves two considerations: can low elevation photography (and its derived products) offer new research output; and can the technology improve the cost-effectiveness of conventional archaeological fieldwork. Preliminary investigation of heritage landscapes addresses image resolution and feature detectability, stability of flight, and utility of photogrammetry products (Digital Elevation Models and 3D renderings) for archaeological interpretation.

[Poster](#)

Handley, Jordan¹ and Norman Alexander Easton²
1 University of British Columbia, 2 Yukon College

Elemental Analysis of Basaltic Materials from the Little John Site (KdVo6), Yukon Territory, Canada

In this paper we report on the utility of portable X-Ray Florescence (pXRF) technology to distinguish intra-site variability of a large sample of archaeological basalts recovered at the Little John site (KdVo6) both within and between components dating from the Late Pleistocene to the Late Holocene. Our principal interest was to assess whether geochemically distinct basaltic materials, that dominate the earliest components of the site, are identifiable through the application of pXRF technology. These materials are expected to reflect aspects of the technological organization of a highly mobile founding population migrating into a region unfamiliar to them. Of additional interest were questions related to continuity of basaltic source material through time, in particular whether later populations, more intimately familiar with their geological surroundings changed from advantageously exploiting accessible stone to pursuing individual sources for preferable qualities. We will first provide a brief introduction to the site and nature of the assemblage in order to provide context to the analyzed subsample and set out the goals of the present study. This will be followed by an account of instrumentation and analytical procedures, which included classification of the sample using traditional visual morphological attributes and subsequent groupings based on elemental spectra generated through pXRF examination. We then discuss the implications of these results for basaltic use at Little John across the site and through time. We conclude the paper with a critical review of the limitations of our methods and make recommendations for improving its application in future research at Little John and elsewhere.

[Geochemical Analysis in Archaeology](#) Friday, May 6 15:40

Hare, P. Gregory and Christian Thomas
Heritage Resources, Yukon Government

Continuing Discoveries on Yukon Ice Patches - A 2016 Update

Ongoing monitoring of alpine ice patches in southern Yukon has resulted in recovery of additional well preserved organic hunting implements. This paper reports on recent discoveries and new directions in the Yukon Ice Patch Project. As alpine ice conditions wax and wane, alternative survey strategies are being investigated with some success.

[Archaeology and Modern Climate Change](#) [Saturday, May 7](#) [11:00](#)

Haukaas, Colleen, Robin Woywitka and Jo-Ann Marvin
Alberta Archaeological Survey

Applications of Geospatial Data and Technology in Cultural Resource Management at the Archaeological Survey, Government of Alberta

Geographic information systems (GIS) technology plays an important role in cultural resource management (CRM) in Alberta. It is used in the scoping and planning of projects, and forms the main framework for storing site, survey, and excavation data at the Archaeological Survey of the Government of Alberta. Whereas spatial records of data were previously created post-hoc by government staff, new data standards now require that detailed spatial data records are to be collected by consultants during every archaeological assessment in Alberta and submitted to the Archaeological Survey. As a result, the Archaeological Survey now has the beginnings of a rich dataset with great potential to address questions related to archaeological research, heritage regulation, and policy development. In this presentation we will outline the development of and the justification for the Spatial Data Standards. We will present a case study that illustrates how the data collected by consultants under the Spatial Data Standards can be used to assess archaeological methods and practice in Alberta, which in turn are used to inform heritage regulation and policy development within the Archaeological Survey. Finally, we will discuss the ongoing challenges related to collecting and managing the spatial datasets, including the intricacy of working with legacy data, shifting Information Technology (IT) environments, and continually evolving technology.

[Contributions from Cultural Resource Management](#) [Thursday, May 5](#) [16:00](#)

Heffner, Susie and Jezelle Zatorski
Stantec

Incorporating Traditional Land Use Data into GIS-Based Models of Archaeological Potential: A Case Study from the Yukon

For the past 20 years archaeological predictive modeling has been used as a decision-making tool in cultural resource management. GIS-based predictive models are commonly used to determine which proposed developments require archaeological assessments. These models are underpinned by archaeological theory and commonly involve inductive and deductive approaches: an analysis of known site locations and an analysis of the environmental and cultural factors that influence prospective archaeological site locations. While Traditional Knowledge (TK) and Traditional Land Use (TLU) and have been recognized as a valuable data source for these models, its incorporation remains problematic. This paper will explore current methodological and theoretical approaches to the incorporation of TK/TLU into archaeological predictive modeling. Considerations,

limitations and issues involved in this integration and in the incorporation of TK into Western scientific models in general will be discussed using a case study from an archaeological predictive modeling project in the central Yukon. The paper will outline how TK/TLU was incorporated into the Yukon model and will provide recommendations for future research.

[Contributions from Cultural Resource Management](#) [Thursday, May 5](#) [8:20](#)

Heffner, Ty

Stantec

Geochemical Characterization of Fine-Grained Volcanic Artifacts from Yukon Archaeological Sites

Obsidian sources and artifact distribution have been relatively well studied in comparison to other lithic raw material types. Recent work has shown that other fine-grained volcanic (FGV) raw materials can also be effectively differentiated using geochemical techniques. During this study, lithic artifacts created from fine-grained volcanic (FGV) rock were selected from Yukon archaeological site assemblages and subjected to geochemical analysis. Results indicate that these rock types can be effectively fingerprinted through Inductively Coupled Plasma Emission Spectrometry (ICP-ES) and Inductively Coupled Plasma Mass Spectrometry (ICP-MS). A number of discrete types of FGV were identified in the Yukon assemblages. The geographical distribution of artifacts made from these rock types can provide information on precontact land use and trade patterns on an intra-regional scale because they do not appear to have been as widely traded as other 'high quality' raw material types.

[Geochemical Analysis in Archaeology](#) [Friday, May 6](#) [14:20](#)

Heffner, Ty

Stantec

The Heritage Legacy of the 2006-2014 Yukon Mineral Exploration Boom

Between 2006 and 2014, the Yukon experienced a mineral exploration boom on a scale not seen in decades. The boom peaked in 2011 with the staking of nearly 120,000 quartz mining claims and the expenditure of 300 million dollars on exploration activities. Heritage inventories and assessments of various levels were conducted on many of these exploration projects. Up until the boom, most CRM archaeology projects in the Yukon were confined to easily accessible locations near roads and waterways. Exploration projects, however, were often located in remote areas and led to inventories of archaeological terra incognita. The mineral boom is over but left a valuable legacy in the archaeological record. This paper explores what we learned about Yukon archaeology as a result of the boom.

[Papers in Honour of Raymond Le Blanc](#) [Saturday, May 7](#) [13:40](#)

Herkes, Jennifer

Ecofor Consulting Ltd.

Modelling for Archaeological Potential within the Mackenzie Natural Resource District, Northern British Columbia

Two GIS supported models predicting the spatial distribution of archaeological sites were developed within the Mackenzie Natural Resource District in northern British Columbia. One model, to identify the potential for Culturally Modified Trees (CMTs), used vegetation

data and identified areas where lodgepole pine was present, and where trees were classed as being older than 140 years old. To identify buried archaeological sites, the model used variables of slope, distance to water resources, vegetation data, and proximity to recreational sites and trails. The models were tested for effectiveness by identifying the number of known archaeological sites that are captured by the model. The models were further tested by using the Kvamme Gain statistic, which assesses the efficiency of the models by identifying the accuracy within a restricted land area cover. The model was reviewed and refined over three field seasons and has an overall effectiveness 79%, and a Kvamme Gain Statistic of 0.91. The models are considered to be highly efficient and meet the BC Archaeology Branch's expectations for a predictive model. Opportunities to improve the model have been identified, which include more accurate data as well as increased archaeological investigations in the area.

[Contributions from Cultural Resource Management](#) Thursday, May 5 9:40

Hills, William

Vancouver Island University

Sablrière Kinart à Omal: A Refitting and Raw Material Analysis

This study presents a refitting analysis of flint lithic materials from the Sablière Kinart à Omal site (Omal, Belgium). This is first time a lithic refitting study has been conducted on the Middle Palaeolithic artifact assemblage from Omal which includes over 39 000 pieces of flint. The goal of the study was to use refitting analysis to examine the distribution of lithic materials at the site in order to understand the processes of site formation and site function. The artifact material from excavation units O4, O5, O6, P4, P5, P6, Q4, Q5, and Q6 (representing nine square metres of the excavation and bearing one of the highest concentrations of artifact material at the site) were chosen for the analysis. H  l  ne Danthine, who excavated the site in 1941, interpreted the concentrations of artifact material as having an anthropogenic origin. However, current understandings of the complex processes involved in the formation of archaeological sites have demonstrated that site formation processes and soil dynamics should be addressed before conclusions can be drawn regarding the anthropogenic origins of artifact materials. The results of the present study suggest a complex depositional history for the artifact material at Omal that is unrelated from an anthropogenic origin.

[Contributed International Papers](#) Thursday, May 5 16:20

Hodgetts, Lisa

University of Western Ontario

Negotiating difference and distance: Doing and teaching community-engaged archaeology in the North from the South

Academics practicing community-engaged research have noted the challenges of meeting the needs of multiple audiences for their work. They must balance the expectation of peer-reviewed publication with the need for products relevant and accessible to the communities with whom they work. Because effective community-engaged research demands in-person interaction, these challenges are exacerbated by distance, a major factor in many collaborations between northern communities and southern researchers. Here, I reflect on my recent attempts to marry community-engaged research with experiential learning by involving undergraduate students in my Arctic Archaeology class

at the University of Western Ontario in aspects of the Ikaahuk Archaeology Project, an ongoing community-engaged archaeological project on Banks Island, NWT. I tasked students with developing a series of products to convey IAP research results to the Inuvialuit community in Sachs Harbour and beyond. I hoped that this approach would both redress my own prioritizing of academic outputs over community ones, and provide students with a richer understanding of community-engaged research. Though students could not visit Sachs Harbour to interact directly with community members, their participation in IAP activities provided a productive lens through which to examine the history of community-engaged research in the north and to consider its challenges and rewards. Despite the limitations of this approach from both a community-engaged research perspective and a teaching and learning perspective, it resulted in effective, accessible products for sharing IAP results with the community and stronger learning outcomes for students than the “traditional” version of the course.

[Current Approaches to Archaeology & Heritage Research in the Western Arctic and Lower Mackenzie Region](#) Friday, May 6 11:20

Holder, Madeline and Amandah van Merlin
Strathcona Archaeological Society

Swept Away: Results, Discussion, and Future Directions from the 2015 Brazeau Reservoir Pilot Project

In May of 2015, members of the Strathcona Archaeological Society lead a pilot pedestrian survey of exposures at the Brazeau Reservoir near Drayton Valley, Alberta. This project is intended to be a way for the Society to provide an additional learning experience for our members who have expressed interest in hands on archaeological adventures. The presence of a site at the Brazeau Reservoir allows for a fun, engaging, accessible project. This presentation focuses on some of the challenges of running a one day survey on the exposed banks of the reservoir as we were unsure of whether or not our plans would get washed away. We were able to complete survey on its scheduled date and we were flooded with artifacts. The pilot survey in 2015 resulted in almost 2000 collected artifacts with tools from the Clovis Period to the Late Pre-contact cultural periods. In addition, this presentation will discuss how the Strathcona Archaeological Society will use this project as a launching point from which can provide archaeology professionals, enthusiasts, and novices diverse educational experiences in Alberta Archaeology.

[Archaeology in the Public Sphere](#) Saturday, May 7 14:40

Holland, Alyson¹, Terence Clark², Jerome Cybulski², and Gary Coupland³

1 McMaster University, 2 Canadian Museum of History, 3 University of Toronto

The Bead Family of Shishalh: A discussion of the bioarchaeological investigations of the Shishalh Archaeological Research Project

Excavations conducted as part of the Shishalh Archaeological Research Project in Sechelt traditional territory identified two bead rich burials that were excavated in 2010 and 2011. The recovery of three additional burials in close association provides strong evidence for the identification of this site as a burial ground. The first two burials were individual interments, whereas the third and fourth burials consisted of a double interment and the fifth burial was that of an exceptionally well-preserved infant. The first two burials were accompanied by relatively large numbers of ground stone and shell beads, which were also

present in lesser numbers in two of the three more recently recovered burials. All burials have been dated to the Charles period (550-3500BP), a time period for which burials are comparatively rare. The richness of these bead burials surpasses the majority of burials found on the Northwest coast in any time period, making these interments unique. The purpose of this paper is to describe the excavation and osteology of the three burials recovered during the 2012 season in relation to the first two burials from 2010 and 2011. Similarities in burial practices and geographic proximity strongly suggest that these individuals represent a powerful family group. Variations in grave goods and differential treatment of these three burials can be used to help indicate the relative positions of these family members, allowing us to make inferences not only about mortuary practices in kin groups, but also shed light on the individual identities of these past peoples.

[Molecular Anthropology and Bioarchaeology](#) Thursday, May 5 11:20

Holland, E.¹, Rogers, T.², and L. Lesage³

1 Brandon University, 2 University of Toronto at Mississauga, 3 Bureau du Nionwentsio, Nation huronne-wendat

Childhood Health in the Kleinburg Ossuary: A preliminary analysis of linear enamel hypoplasia

The Kleinburg Ossuary (AlGv-001) was excavated by the University of Toronto in 1968 and 1970, and contained the remains of a minimum of 561 individuals. It is an Iroquoian ossuary dated to A.D. 1585-1615 and is possibly associated with the Tahontaenrat (“Two White Ears”) or the “Deer People”, who traveled up the Humber River to join the Wendat confederacy. As a result, this ossuary could represent one of the last groups of Huron people to leave southern Ontario, and therefore provides a unique opportunity to shed light on an important period of time for the Nation huronne-wendat of Wendake, Qc. The purpose of this research is to assess the presence of defects in enamel formation (linear enamel hypoplasia (LEH)) to understand experiences of childhood health. LEH presents as lines of reduced enamel and are permanent indicators of stress experienced during development. They therefore offer a unique window into the lives of past peoples. Identifying evidence of childhood health stress experienced by the individuals in the ossuary has the potential to illuminate differential experiences of child health as experienced by those who grew up in the village associated with the ossuary (juveniles), versus those who grew up at an earlier village site (adults). The results of this analysis help shed light on the impact of a politically stressful period leading up to the relocation of the Huron-Wendat.

[Molecular Anthropology and Bioarchaeology](#) Thursday, May 5 11:40

Hossack, Adam

Stantec

A Discriminant Function Analysis of Meadowood Points from Ontario

In 2010 Kristen Snarey and Christopher Ellis co-authored a paper in which the classification of various projectile point forms as either arrow heads or dart tips was explored based on metric attribute analysis techniques developed by Michael Shott. A major outcome of this research project was that after evaluating various formulae it could be consistently demonstrated that while Late Archaic Crawford Knoll points were most often identified as arrow heads, Early Woodland Meadowood points were almost

exclusively identified as dart tips. These results undermined confidence in the identification of Crawford Knoll points as arrow heads irrespective of the results of metric analysis. It is possible that the somewhat small sample size of Meadowood points in Snarey and Ellis's study as well as the fact that they were drawn from only two sites, Bruce Boyd and Welke-Tonokonoh, may have impacted this assessment. The current study evaluates the identity of Meadowood points as either arrow heads, dart tips or an intermediary form that could function as either with the application of Shott's method to metric data gathered from a larger number of points collected from a wide variety of sites. The results of this meta-analysis raise the possibility that the use of the bow and arrow need not have necessarily died out entirely among Meadowood peoples, and a cultural continuity in projectile technology could have been maintained from Crawford Knoll to Meadowood times.

[From Across the Land - Contributed Papers](#) [Friday, May 6](#) [10:00](#)

Hudecek-Cuffe, Caroline¹ and Aaron Wilson²

1 Alberta Archaeological Survey, 2 Alberta Aboriginal Heritage - Historic Resources Management Branch

The Viking Burial Site (FgOw-2): A Collaborative Undertaking to Excavate and Reinter an Historic Burial in Central Alberta

In late summer of 2015, human remains were exposed by a badger digging into gopher holes in the middle of a cultivated field near Viking, Alberta. After the Office of the Chief Medical Examiner (OCME) determined that the human remains were historic in nature, the management of the human remains and burial site was handed over to the Historic Resources Management Branch (HRMB) of Alberta Culture and Tourism. Because a portion of the burial had already been disturbed and there was potential for further disturbance from badger activity, it was decided that the remainder of the burial should be removed and then reburied in a new protected location. The archaeological excavation of the burial occurred in mid-October and the reburial ceremony took place a week later. Based on the brief analysis of the bones and associated artifacts prior to their re-interment, it was determined that the individual was likely a 13 to 14 year old Aboriginal female who died possibly as early as the 1830s. Metal buttons, brass rings, a thimble, and over four thousand beads of various styles and sizes were buried with her. This paper will outline the results of the excavation, as well as review the collaborative process of working with representatives from the Confederacy of Treaty 6 First Nations, Treaty 7 Management Corporation, the landowner, the OCME, and the RCMP to determine the most appropriate approach and methods for dealing with this proto-historic Aboriginal burial.

[Molecular Anthropology and Bioarchaeology](#) [Thursday, May 5](#) [13:20](#)

Hutchinson, Vance

Yukon College

Biological Anthropology and the Peopling of the Americas: A synthesis of current

Recent studies in biological anthropology relating to the initial peopling of the Americas and the descendants of those first Americans have resolved some long-standing issues while simultaneously raising new ones. Advances in genomic research and newly discovered skeletal material have resulted in novel hypotheses regarding the source, modes and timing of the entry and dispersal of humans into the New World. Analyses of

ancient DNA, such as the Ust'-Ishim, Mal'ta 1, and Upward Sun specimens, have created a more refined genetic, temporal, and geographic framework for understanding human activity in Late Pleistocene Beringia and the relationships between Pleistocene Siberian hunter-gatherers and living Native Americans. Similarly, skeletal, especially cranial and dental studies, have attempted to refine the demographic trajectories of both the earliest Americans and their ancestors in North and South America. All of these research areas provide beneficial information regarding the past and living indigenous peoples of the New World yet all suffer from similar problems of sampling bias and equifinality in interpretation. As such, molecular and skeletal research should be interpreted in conjunction with each other whenever possible to ensure that any hypotheses explain a majority of the data. This paper will synthesize current molecular, osteological, and dental studies to provide a synopsis of current research

[Molecular Anthropology and Bioarchaeology](#) Thursday, May 5 11:00

Ives, John W.¹ Jonathan Driver², Kisha Supernant¹, Duane Froese³, Beth Shapiro⁴, Peter D. Heintzman⁴, Courtney Lakevold¹, and Todd Kristensen⁵

1 University of Alberta, 2 Simon Fraser University, 3 Earth and Atmospheric Sciences, University of Alberta 3 Ecology and Evolutionary Biology, UCSC, 4 Alberta Archaeological Survey

On the Critical Role of the Peace River Country in Linking Eastern Beringia and the Corridor Region

By virtue of geography alone, the Peace River Country should be of critical significance in North American prehistory. Situated between eastern Beringia and interior North America, along a deglaciating, terminal Pleistocene Corridor, this region has a rich archaeological record (particularly for the Paleoindian era), but has attracted relatively little attention. Yet, as genetic, Quaternary palaeontological, geological and archaeological evidence flow together to create new understandings of initial New World settlement, the Peace Country merits renewed attention. The Charlie Lake Cave strata anchor the regional chronology; we present a new series of dates for its basal deposits, making it the best-dated stratified Paleoindian site in Canada. Fossil bison serve as a proxy species for biotic habitability of the larger corridor region and have provided a clear timeline in which human occupation became feasible. Northern and southern clade bison entered the Corridor by or just prior to the advent of fluted point technology, with bison clades intermingling in a zone extending from the Peace Country to the Edmonton area over the succeeding millennium. More extensive documentation of avocational collections has amplified our understanding of the Paleoindian era in the Peace country, allowing for updated mapping of fluted point density isopleths. We can also recognize several facets of lithic technology characteristic of Paleoindian assemblages: macroblades, large bifaces and point preforms with outrepassé and “ultrashot” flaking patterns, caching behavior, and exotic lithics, along with indications of northern and southern cultural influences. The Peace Country’s unique setting made it a continental crossroad for Paleoindian interactions.

[Papers in Honour of Raymond Le Blanc](#) Saturday, May 7 14:40

Jahraus, Adam¹, Peter Dawson¹, Derek Lichti¹, Rémi Méreuzé² and Max Friesen³

1 University of Calgary, 2 Université Paris, 3 University of Toronto

Assessing the Suitability of Laser Scanning and Photogrammetry in Archaeological Site Documentation: Lessons from Kuukpak

Many archaeologists recognize the potential of reality capture technologies for digitally documenting heritage resources – especially those presently at risk due to climate change and human-caused destruction. Two of the most commonly used approaches are terrestrial laser scanning and photogrammetry. Laser scanning produces highly accurate and precise data, but can be prohibitively expensive, and often requires expertise in geomatics engineering to actualize. On the other hand, photogrammetry can be done using standard digital SLR cameras and a range of relatively inexpensive software such as Agisoft PhotoScan. However, errors in the resulting datasets are often greater. In this paper, we provide an overview of the strengths and weaknesses of both these approaches in archaeological site documentation, using recent fieldwork at the Kuukpak site, located on the east channel of the Mackenzie Delta, as a case study. We then present basic guidelines to aid archaeologists in selecting the reality capture technique best suited to achieving certain goals, such as creating 3D models for public education and engagement, monitoring, and archaeological feature reconstruction.

[Archaeology and Modern Climate Change](#)

[Saturday, May 7](#)

[9:40](#)

Jollymore, Kay

University of Saskatchewan

Tipi Rings and Fire Pits: Stone Circle Investigations at a Hyper-Saline Lake in South-Central Saskatchewan

Little Manitou Lake, located in south-central Saskatchewan, has been a hyper-saline lake for about the last 2,000 years but was previously freshwater in nature. This area and the stone circle sites focussed around the large lake have received little previous research. Thus an important research goal was to establish a chronological framework for prehistoric occupation in the area to determine if the sites relate to the lakes saline or freshwater characteristics, or both. Excavations were carried out at three sites after magnetometry was employed to aid in identifying areas most likely to contain hearth deposits. Here I discuss some of the results of these excavations and how these sites correlate with paleoenvironmental conditions.

[The Power of Palaeoenvironments](#)

[Saturday, May 7](#)

[10:20](#)

Jollymore, Kay¹ and Terry Gibson²

1 University of Saskatchewan, 2 Western Heritage

Magnetometry in Plains Archaeology - Optimizing Excavation Results in Stone Circle Investigations

Investigating stone circle sites can be notoriously difficult often involving significant time and effort to recover datable material and/or chronologically diagnostic artifacts. In an attempt to maximize productivity and focus subsurface investigations, magnetic surveys were carried out at three sites in south-central Saskatchewan. The results of this work will be presented highlighting the success of this research and the value of using magnetic assessments for future stone circle research.

[Poster](#)

Jones, Travis¹, Todd Kristensen² and Jeff Speakman³

1 The University of Georgia, Center for Applied Isotope Studies and The University of Georgia, Anthropology Department, 2 Alberta Archaeological Survey, 3 The University of Georgia, Center for Applied Isotope Studies

Sourcing Archaeological Obsidian in the Canadian Plains and Eastern Rocky Mountains with pXRF

In January 2015, researchers from The University of Alberta, the Royal Alberta Museum, and the University of Georgia's Center for Applied Isotope Studies began one of the largest portable X-Ray fluorescence (pXRF) analyses of obsidian artifacts to date in western Canada, a region previously lacking large scale obsidian XRF data. This study is part of a larger project to synthesize obsidian use in the North American Plains and Eastern Rocky Mountains. The sample consists of approximately 750 artifacts from throughout Alberta, representing much of the province's prehistory. The methodology used here has been successfully implemented in a wide range of geographic contexts to source meta-volcanic artifacts. Comparing trace elemental concentrations to known geologic sources, we seek to gain insight into prehistoric obsidian procurement and use in the region. Preliminary analysis demonstrates the majority of the samples' geologic origins are from known sources in the northwestern United States (primarily Idaho), British Columbia, and Alaska. This study aids in expanding our understanding of obsidian resource procurement and transportation throughout the North American Plains and Eastern Rocky Mountains. It is our hope that the results of this study will be incorporated into other studies about prehistoric trade, population movements, and differential access to materials.

[Poster](#)

Julien, Marie-Hélène¹, Thomas C.A. Royle¹, Paul Szpak², James Savelle³ and Dongya Y. Yang¹
1 Ancient DNA Laboratory, Department of Archaeology, Simon Fraser University, 2 University of British Columbia, 3 McGill University,

Assessing the Impacts of Historic Whaling on Beluga Whales (*Delphinapterus leucas*) in the Canadian Arctic through Ancient DNA Analysis

Every summer, hundreds of beluga whales (*Delphinapterus leucas*) congregate in Elwin Bay on Somerset Island, Nunavut, Canada. During the late 19th century, summer congregations of beluga whales were intensively hunted by Scottish commercial whalers. Historic records indicate that between 1874 and 1898, Scottish whalers, through a combination of drives and harpooning, harvested over 10,000 beluga whales from Elwin Bay and other nearby waters. This corresponds to approximately 10% of the 19th century beluga whale population in Elwin Bay and neighbouring waters. Our research seeks to assess the effects of this intensive whaling on the population structure and genetic diversity of the beluga whale population in Elwin Bay. We evaluate this by analyzing the mitochondrial DNA of 19th century beluga whale remains collected from Elwin Bay and comparing this sample's genetic diversity to that of modern beluga whale populations in the eastern Arctic. This research provides significant baseline data that can be used to understand modern beluga population dynamics.

[Poster](#)

Kaastan, Steve¹ and Aaron Osicki²

1 Simon Fraser University, 2 CH2M

The Wolf Creek Site, J1Wb-6: A Late Period Campsite in Southwest Yukon Territory

The Wolf Creek Site, J1Wb-6, is a late period campsite on the south bank of Wolf Creek in southwestern portion of the Yukon Territory. A field team lead by Aaron Osicki found the site during a 2011 assessment of the Alaska Pipeline Project. The site is at the confluence of Wolf and Long's Creeks, and is near the Koidern River. The site is 25 m southeast of the creek bank, and on a low terrace 1.5 m above the water. A total of 15 shovel tests were excavated in a 15 m x 11 m area, five of which contained cultural material. We recovered a total of 35 artifacts from the site, including two carved sticks, 19 silicified siltstone flakes, 10 pieces of fire cracked rock, and four fragments of calcined bone, as well as five grams of charcoal. All artifacts were found between 30-25 cm below surface in a 90 cm thick stratified alluvial deposit, and was above a layer of White River Ash. Therefore, the site is younger than ~1,900 rcybp. The site is unusual in that a pair of carved sticks were found in situ. Two pieces of spruce were both bevelled to a point on one end and exhibit cross-hatched style carving by a hard tool with a scalloped edge. One stick is 109.8 mm long, has a maximum diameter of 9.4 mm, the other is 80.4 mm long, and has a maximum diameter of 11.9 mm. We suspect that an active layer of permafrost preserved these wooden tools. Although the use of the carved sticks remains unknown, based on materials recovered in Yukon's ice patches, Kasstan posits that they could represent the ends of projectile foreshafts.

[Poster](#)

Kaastan, Steve¹ and John Wozniak²

1 Simon Fraser University, 2 CH2M

The Lily Lake Site, HgRr-7: An Early Fluted Point Site in Northern British Columbia

The Lily Lake Site, HgRr-7, is an intact buried single component site in Northern British Columbia. A field team directed by John Wozniak found the site in 2014 on a moderately well drained ridge a few kilometres north of Lily Lake, and at an elevation of 1075 m ASL. The site extends 33 m by 24 m on a ridge that rises up to 3 m above surrounding terrain. The site is 10 km north of the summit of Pink Mountain, and is at the former interface of the Laurentide and Cordilleran Ice Sheets. A total of 236 artifacts were recovered in 10 positive 1 m x 1 m units and 32 positive shovel tests from a total of 15 1 m x 1 m excavation units and 366 shovel tests. The component is relatively shallow and is between 0-20 cm below surface. It includes a projectile point, a multi-directional chert core, a unifacially retouched chert flake, 208 chert flakes, 11 pieces of chert shatter, 11 siltstone flakes, 3 pieces of siltstone shatter and an obsidian flake sourced to Anahim Peak, 520 km southwest in the Chilcotin Plateau of central British Columbia. The base of a fluted projectile point made of black chert is from a subsurface test at a depth of 10 cm below surface. The point has been fractured transversely, resulting in the removal of the medial body and the point tip. Lateral margins of the point are straight and expand towards the fracture. The point is lanceolate in form, with a concave base, and has a biconvex cross-section. The flaking pattern is mostly marginal and parallel. Both faces of the point exhibit fluting where narrow flakes have been removed from the midline. Grinding occurs along both basal edges. Usewear in the form of micro chipping is also evident.

[Poster](#)

Kantakis, Adam

University of Northern British Columbia

Wood Stake Fish Weirs in the Babine River, north central British Columbia

The consistent availability and abundance of salmon (*Onchorynchus* sp.) runs in the Babine River and the physiography of the region combine to provide optimum conditions for the use of weir technologies. Use of high volume capture techniques (such as wood stake weirs) allowed pre-Contact aboriginal groups in the area to harvest large amounts of surplus fish for subsistence and for trade. In north central British Columbia the Lake Babine Nation, (Ned'ut'en), used this technology for an extensive period of time. To understand the construction, operation and use of these wood stake weirs, traditional knowledge is used in combination with material evidence and global studies on weirs. Evaluation of specific environmental and other criteria are important to delineate how and why weirs were used in the study area. Riverine flow patterns determine placement of weirs while different wooden weir structural configurations are responses to certain riverine characteristics. For example, changes in water flow due to physiographic variation along the river course and bed affects weir design.

[Current Research in British Columbia](#) [Saturday, May 7](#) [15:00](#)

Kari Carter¹, Aubrey Cannon¹, and Eduard Reinhardt²

1 McMaster University, 2 School of Geography and Earth Sciences, McMaster University

High-resolution XRF analysis of bulk shell midden matrix using a core scanner

We present preliminary results of x-ray fluorescence (XRF) analysis of archaeological sediments from shell midden sites on the central coast of British Columbia. The goal of this study was to (1) explore the value of elemental analysis for addressing questions surrounding variability in occupational intensity, (2) evaluate the relationship between high-resolution and low-resolution analytical techniques, and (3) assess the potential for multi-element analysis. We used an ITRAX XRF Core scanner, which is newly developed instrumentation for high resolution (200 micron) core analysis, to analyze small quantities of fine matrix. This core scanner is unique in its ability to scan simultaneously for many elements in a way that is precise, highly replicable, and non-destructive. Preliminary results indicate the potential of extending the archaeological application of this analytical method.

[Poster](#)

Kennedy, Margaret¹ and Barney Reeves²

1 University of Saskatchewan, 2 Waterton Park, AB

Passing Paradigms

Plains archaeologists are not known for being deeply introspective and reflective about theoretical approaches (some exceptions noted, of course). Yet like any discipline where dominant paradigms are in use and then are replaced by others, the associated research methods, techniques and resulting interpretations can vary widely in that transition. We focus on one archaeologically rich area on the lower Red Deer River in the northern plains and two projects separated by 40 years and very different theoretical and methodological approaches to illustrate the dramatic impact that changing paradigms can have on our

interpretations of the archaeological record, particularly with ceremonial landscapes
[Across the Land - Contributed Papers](#) [Friday, May 6](#) [11:40](#)

Kotar, Kathryn and Lisa Hodgetts
University of Western Ontario

Variability in the Banks Island Thule-Inuit Subsistence Economy: A Faunal Analysis of OkRn-1, Banks Island, N.W.T.

This paper presents a zooarchaeological analysis of animal remains recovered from a late Thule qarmaq at the OkRn-1 archaeological site (ca. 1450 – 1650 AD) on Banks Island, NWT. Little is currently known about regional, temporal, and seasonal variability in Thule lifeways on Banks Island. Over 9000 bones and bone fragments were examined in order to document subsistence practices of the dwelling's occupants during the late Thule period, including season of occupation, hunting strategies and prey selection, and transport. Comparisons with the earlier Nelson River site (OhRh-1) on Banks Island reveal temporal variability in subsistence and settlement organization from early to late Thule times, and comparisons with contemporaneous sites in the Mackenzie Delta and on Victoria Island position the Banks Island Thule within broader regional trends. In addition, the OkRn-1 dwelling is one of few excavated Thule qarmat in the western Canadian Arctic and this work helps to resolve uncertainties about their seasonal use.

[Current Approaches to Archaeology & Heritage Research in the Western Arctic and Lower Mackenzie Region](#) [Friday, May 6](#) [11:00](#)

Kristensen, Todd J.¹, Jesse Morin², M. John M. Duke³, Andrew J. Locock⁴, Philip Lypaczewski⁴, Courtney Lakevold¹, Karen Giering⁵, and John W. Ives⁶

1 Alberta Archaeological Survey, 2 Tsleil-Waututh, 3 SLOWPOKE Nuclear Reactor Facility, University of Alberta, 4 Department of Earth and Atmospheric Sciences, University of Alberta, 5 Royal Alberta Museum, 6 Institute of Prairie Archaeology, Department of Anthropology, University of Alberta

Pre-contact Jade in Alberta: the Geochemistry, Mineralogy, and Archaeological Significance of Nephrite Ground Stone Tools

Nephrite is a type of jade that outcrops in British Columbia and was used in pre-contact times for ground stone celts. Pre-contact jade east of the Rockies is poorly documented. We assembled ten jade celts from private collections in central and northern Alberta and conducted near-infrared spectrometry to source them back to their outcrop in British Columbia. We also performed portable x-ray fluorescence, x-ray diffraction, and hyperspectral imaging on the celts to elucidate their geochemistry/mineralogy and to aid future archaeological identification of jade. Given the rarity of this material in Alberta and its macroscopic variability (e.g., white, green, black), it is likely that jade has been misidentified in archaeological assemblages. Affordable and non-destructive geochemical testing is useful for quickly distinguishing jade from jade-like materials. We conclude with a discussion of when, how, and why these unique artifacts likely arrived in Alberta.

[Poster](#)

Kristensen, Todd J.¹, Thomas D. Andrews², Glen MacKay², Ruth Gotthardt³, Sean C. Lynch⁴, M. John M. Duke⁵, Andrew J. Locock⁶, and John W. Ives⁷

1 Alberta Archaeological Survey, 2 Prince of Wales Northern Heritage Centre, 3 Heritage Resources, Yukon Government, 4 CH2M, 5 SLOWPOKE Nuclear Reactor Facility, University of Alberta, 6 Department of Earth and Atmospheric Sciences, University of Alberta, 7 University of Alberta

Tertiary Hills Clinker: A partially fused vesicular toolstone from the Mackenzie Basin of Northwest Territories, Canada

The objectives of this paper are to: 1) describe a distinct toolstone that outcrops west of Mackenzie River in the subarctic foothills of the Mackenzie Mountains; 2) provide a summary of geochemical/mineralogical work (pXRF, INAA, XRD, and electron microprobe analyses) that demonstrates that Tertiary Hills Clinker can be reliably sourced; and 3) summarize the archaeological significance of Tertiary Hills Clinker in N.W.T., Yukon, and Alberta. We argue that Tertiary Hills Clinker is a valuable indicator of the movement of northern hunter-gatherers, particularly in response to the White River Ash east eruption event of A.D. 846-848.

[Geochemical Analysis in Archaeology](#)

[Friday, May 6](#)

[13:40](#)

Kritsch, Ingrid and Alestine Andre

GTC Cultural Heritage Division (Gwich'in Social and Cultural Institute)

A Place for Stories: Gwich'in Experience in Ethno-Archaeology, 1992 to 2016, and Beyond

In 1992, as a newly created culture and heritage institute by the Gwich'in Tribal Council, the Gwich'in Social and Cultural Institute (GSCI) was invited to give a presentation to the 1994 CAA in Edmonton in a session entitled "Traditional Knowledge and Archaeology." The presentation featured traditional knowledge and heritage research being carried out by GSCI staff with Gwich'in Elders and youth as part of a larger plan to preserve, promote and manage Gwich'in heritage - important elements in nation-building. Our experience over 24 years has shown that working in collaborative relationships with archaeologists, based in mutual respect and understanding, provides tremendous benefits for both the community and the researcher. Archaeologists benefit through their exposure to Gwich'in traditional knowledge helping them develop better interpretations of the archaeological past. Gwich'in benefit by having their ancient stories made tangible through the archaeological remains recovered in excavations, providing a new lens through which to view their cultural history.

[Current Approaches to Archaeology & Heritage Research in the Western Arctic and Lower Mackenzie Region](#)

[Friday, May 6](#)

[14:00](#)

Landry, David B.¹, S. Brooke Milne¹, Ian Ferguson², Mulu Serzu², Robert Park³, Douglas Stenton⁴, and Mostafa Fayek²

1 University of Manitoba, Department of Anthropology and Center for Earth Observation Science, 2 University of Manitoba, Department of Geological Sciences, 3 University of Waterloo, Department of Anthropology, 4 Department of Culture and Heritage, Government of Nunavut

Mapping and Monitoring Arctic Archaeological Site Subsidence due to Permafrost Thaw and Erosion: Long-term Remote Sensing Testing on Inland and Coastal Baffin Island Sites

Since 2013, we have tested the effectiveness of using non-invasive remote sensing technologies to document and monitor surface and near-surface phenomena at several complex prehistoric hunter-gatherer sites located in the interior of southern Baffin Island. Based on our results, we are developing a survey methodology to measure annual surface subsidence, frost-cracking, and edge erosion along these sites. Arctic archaeological sites yield some of the most ideal conditions for preserving delicate organic artifacts made of bone, ivory, antler, and soft tissues. However, as climate change impacts intensify, the permafrost that has encased these perishable artifacts is now failing, leaving them as well as artifacts in the overlying active layer, susceptible to irreparable damage and loss of information. Using a combination of terrestrial laser scanning, ground penetrating radar, and magnetometry, we are able to measure in detail surface changes as an indicator of how extensive subsurface permafrost degradation might be within a site, and therefore decide how to effectively record and excavate these areas that are most at-risk. This paper discusses the development of our survey methodology and its application to three inland southern Baffin Island Palaeo-Inuit sites, LdFa-1, LeDx-42, and LbDt-1.

[Archaeology and Modern Climate Change](#)

[Saturday, May 7](#)

[11:00](#)

Lausanne, Alex, Daryl Fedje, Ian Walker and Quentin Mackie
University of Victoria

Archaeological Prospecion of Early Paleo-Coastal Sites using LIDAR. Sea Level History & GIS Modeling Techniques

The timing and routes of the First Peopling of North America have been debated for decades. There is now much support for a coastal expansion south of the late Wisconsin ice sheets at the Last Glacial Maximum (LGM), along the Pacific Northwest (PNW) coast by the Late Pleistocene, ca. 13,000 – 11,500 cal BP. However, a very limited number of Early Holocene (pre-10,000 cal BP) archaeological sites have been identified on the PNW coast of Canada. This research aims to identify locations of highest potential for evidence of the Early to Middle Holocene archaeological record on Quadra Island, B.C. Quadra Island has experienced dramatic sea level regression over the past 14,000 years following the LGM. These (now inland) paleo-shorelines represent key areas for archaeological prospecting. LIDAR is an invaluable tool for archaeological prospecting on the Pacific Northwest (PNW) coast of Canada. Due to dense rainforest coverage, archaeological prospecting is usually limited to modern coastal areas on the PNW and fails to effectively examine inland terrain, which may reveal a rich archaeological record. Using the local sea level history with LIDAR (a remote sensing technology) allows detailed 'bare-earth' visualizations to be generated and reveals hidden archaeological and paleo-coastal features. These features, such as inland paleo-beaches, can be remotely targeted from beneath the rainforest canopy for archaeological foot survey. LIDAR and GIS modeling techniques are up-and-coming in PNW archaeology. They technologies can decrease the time and effort spent doing fieldwork, and increase site identification rate.

[Recent Research in the Western Subarctic](#)

[Friday, May 6](#)

[16:00](#)

Letham, Bryn¹, Andrew Martindale¹ and Kenneth Ames²

1 University of British Columbia, 2 Portland State University

An Archaeological Survey of Early-Mid Holocene Paleoshorelines around Prince Rupert Harbour, British Columbia

In 2015, we conducted an archaeological survey of paleoshorelines in and around Prince Rupert Harbour, northern British Columbia. Using a newly refined post-glacial relative sea level curve for the area in conjunction with a high resolution LiDAR bare earth digital terrain model, we generated a predictive model for identifying landforms with a high potential for human occupation and subsequent archaeological preservation above relict paleoshorelines from times when relative sea level differed from that of today. Focusing on landforms associated with early and mid-Holocene shores, we identified several sites from these times; this is the earliest currently recorded archaeological evidence of human occupation in the study area. We present archaeological findings from these sites and discuss them in comparison with other contemporaneous sites on the northern coast of BC. Our work suggests that a rich early archaeological record remains away from the modern shoreline around Prince Rupert Harbour. We emphasize that detailed understandings of relative sea level change and shoreline evolution are invaluable for developing archaeological surveys of coastal landscapes, and for interpreting site preservation and archaeological settlement change. We highlight the utility of LiDAR remote sensing in the heavily forested Northwest Coast environment for identifying relict shoreline landforms and developing replicable and practical survey models for use in an otherwise logistically formidable setting.

[The Power of Palaeoenvironments](#)

[Saturday, May 7](#)

[11:00](#)

Lynch, Joshua

Texas A&M University

Results from Excavations at Blair Lakes, Interior Alaska

During 2013, 2014, and 2015, teams from Texas A&M University and the Center for the Environmental Management of Military Lands (CEMML) conducted archaeological surveys and excavations along the north shore of an upland lake in interior Alaska. Subject to initial testing by CEMML during the 1970's, the Blair Lakes are located in the Tanana Flats approximately 55 kilometers south-east of Fairbanks. Recent investigations have resulted in the discovery of four dated cultural components at the Blair Lake South-1 site, as well as the recovery of hundreds of artifacts from secondary context along the lakeshore. Here we report details on the surveys and excavations, including stratigraphic profiles and contents of archaeological components, highlighting microblade bearing component that has been dated to 7840±30 14C and a newly discovered cultural component that dates to 9040±40 14C. Results from the Blair Lakes South-1 site can inform on Holocene occupations of interior Alaska, regional patterns of raw material selection and technological organization, and the continued use of lacustrine environments in through the Holocene.

[Recent Research in the Western Subarctic](#)

[Friday, May 6](#)

[9:20](#)

Lyons, Natasha¹, Lisa Hodgetts² and Max Friesen³

1 Ursus Heritage Consulting Ltd., 2 University of Western Ontario, 3 University of Toronto

Contemporary modes of knowledge production & curation in Western Arctic Archaeology

Over the past half century, knowledge production and curation have shifted rather radically in archaeology. Our definitions of archaeology have transformed, as has their relation to heritage discourse. Our community of knowledge producers is ever more inclusive of scholars and knowledge-holders of many different origins, and the modes by which we collectively curate knowledge have migrated from largely analog to largely digital media. In this paper, we ask: how is archaeology conceived by different producers in the Western Arctic; what knowledge is being produced, by and for whom; how is this knowledge represented in different media, and who consumes it? To look at the spectrum of archaeological practice in this region, we search both permitted and non-permitted databases and other online sources, and consider who is producing different types of knowledge and to what ends. Finally, we suggest where this growing corpus of knowledge is taking us as a community of archaeological producers.

[Current Approaches to Archaeology & Heritage Research in the Western Arctic and Lower Mackenzie Region](#) Friday, May 6 9:20

Macfie, Ramsay

University of Western Ontario

From Till to Grill: Investigating the Possibility of Sourcing Fire-Cracked Rock in Southwestern Ontario

The Davidson Site (AhHk-54) in Southwestern Ontario continues to yield a wealth of information about the Late Archaic period in the Great Lakes Region. Excavations have shown the site to contain the well-preserved remains of pit-houses and other structures, as well as vast numbers of pits of varying description, including storage and refuse features. One focus of current research is the interpretation of two enigmatic clusters of overlapping pit-features, both of which have been dated to the Small Point Late Archaic of ca. 3,200-2,600 BP. Relatively shallow, basin-shaped profiles characterize the pits that form these clusters, and their contents are dominated by concentrations of fire-cracked rock (FCR). Similar clusters of pit-features with high numbers of associated FCR have been recorded as a characteristic of Late Archaic sites in the Great Lakes region, and have been described variously as earth ovens, hearths, and roasting pits, as well as general refuse and storage features. At the Davidson Site, suitable FCR raw material is not local to the immediate site environs and must have been collected from at least three km away. This paper discusses the preliminary results of attempts to interpret the sourcing and selection of cobble material for use as cook-stones at the site as well as their replication through experimentation with ethnographically recorded hot-rock cooking techniques. Petrographic and SEM techniques are explored as possible means of elucidating the life histories of FCR material from its origin within glacial till to its eventual deposition as Fire-cracked rock.

[Geochemical Analysis in Archaeology](#) Friday, May 6 15:00

MacKay, Glen

Prince of Wales Northern Heritage Centre, Government of Northwest Territories

A Possible Cache of Taltheilei Bifaces from the South End of Contwoyto Lake, Nunavut

In 2013, a mining company operating in the Northwest Territories (NWT) reported the discovery of six large bifaces that were found by environmental technicians while installing

a wildlife camera on an esker at the south end of Contwoyto Lake. Contwoyto Lake is located on the tundra just north of the NWT-Nunavut border, and within the range of Bathurst caribou herd. The collection consists of four semilunar knives or knife preforms, an adze with a ground working edge, and an ovoid biface. Four raw materials are present, including hornfels, chert, and rhyolite. All of the artifacts are complete, and one of the semilunar bifaces is unusually large. The artifacts are not dated, but based on regional comparisons likely belong to the Taltheilei Tradition, which spans 2,600 BP to the beginning of the historic period. The circumstances of the artifact discovery and the results of a brief field visit indicate that the artifacts were found in a discrete cluster on the esker, and did not come from a larger artifact scatter. By examining the assemblage in the context of the archaeological record of the Bathurst caribou range and Taltheilei land use patterns, this paper will explore the idea that these artifacts were deposited together as a cache or ritual offering.

[From Across the Land - Contributed Papers](#)

[Friday, May 6](#)

[11:00](#)

MacKenzie, Sarah and Kirby Booker

Stantec

Inherent management difficulties of unpredictable distribution of lithic reduction sites near dacite raw material source locations

In this paper we present a case study of four proposed forestry developments located in an area of unusual site distribution and density. Working in the Quesnel Forest District, we have the benefit of applying a relatively current archaeological potential model, updated approximately every five years, to help determine archaeological assessment requirements. However, there are areas west of the Fraser River that defy conventional indicators of archaeological potential and stand out in terms of spatial patterning and artifact density. Over the past thirteen years forestry-based fieldwork conducted in the vicinity of Long John Creek and Baker Creek has yielded a large number of lithic sites. We posit that a key factor in the unpredictable site distribution encountered in this area is the availability of fine-grained dacite, an igneous extrusive rock ideal for tool-making. We describe the survey and mitigation strategies employed and discuss some of the management challenges we have encountered, highlighting the differences between traditional areas of archaeological potential and high site density locations. To close, we point to assessment techniques and management strategies that could improve archaeological assessments of similar areas in the future and invite input for refining management of lithic site complexes.

[Contributions from Cultural Resource Management](#)

[Thursday, May 5](#)

[8:40](#)

MacMillan, Jodie and Mark Young

Stantec

Archaeology of Howard's Pass

During the 2014 and 2015 field seasons Stantec conducted a heritage inventory project within a proposed mine development located in Howard's Pass along the Yukon – NWT territorial border. 53 new archaeology sites were identified within the study area, representing one of the highest densities of sites within the Yukon. These sites primarily consist of small lithic sites likely associated with hunting or short term occupations in the area and are situated along esker and knoll features within the Don Creek valley. Multiple types of lithic raw materials were recovered at these sites, including cherts, chalcedony,

dacite, obsidian and clinker. In this paper we will present the results of the fieldwork conducted within Howard's Pass. In particular we discuss site distribution, the variety of lithic materials and artifact types found within the study area and lithic material sourcing data. We interpret the Howard's Pass area as unique and significant within Yukon-NWT archaeology.

[Contributions from Cultural Resource Management](#) [Thursday, May 5](#) [13:20](#)

Magne, Martin, Ryan Harris, Jonathan Moore, and Marc-André Bernier
Parks Canada

The Wreck of HMS Erebus: An Archaeological Overview

Since the discovery of the wreck of Sir John Franklin's HMS Erebus on September 2, 2014 in the eastern end of Queen Maud Gulf, Nunavut, there have been significant archaeological and site management advances. Parks Canada underwater archaeologists and their partners have completed three episodes of fieldwork and the wreck is now within a National Historic Site of Canada protected area that is 10 km x 10 km in size. This paper will provide an overview of the wreck's discovery, archaeological activities to date, and ongoing site management, protection, and outreach initiatives. Salient archaeological features and results will be shared, including: the largely intact hull structure and associated ship's equipment and debris field; in-context artifacts and assemblages; a marine biology inventory; visual reconnaissance of the hull interior; and preliminary results of material culture research and analytical investigations of many of the 55 artifacts recovered to date.

[Maritime Archaeology](#) [Friday, May 6](#) [11:20](#)

McGhee, Robert
Northlands Research

Re-Interpreting Inuit History in the Central Arctic

The ancestry of the Central Arctic Inuit has long been traced to the Thule culture population which moved eastward from Alaska during the twelfth or thirteenth centuries AD, establishing settlements in coastal regions of Arctic Canada and Greenland. Thule society has usually been characterized in terms of large permanent winter-house settlements, an elaborate technology and a rich and secure economy based on maritime hunting. The transition to the semi-nomadic Inuit societies of the Central Arctic during the Historic period has generally been viewed as one of economic, social and technological decline. New estimates of Thule population size suggest that Historic populations were significantly larger than those of the Thule period, and that a model of social and cultural transformation is more appropriate. The Central Arctic Inuit way of life can more validly be viewed as a very recent innovation, and as one that was successful in allowing the re-occupation of a vast stretch of territory that had been abandoned for several centuries.

[Papers in Honour of Raymond Le Blanc](#) [Saturday, May 7](#) [11:20](#)

McLaren, Whitney¹, Julie Esdale¹ and Norman Alexander Easton²
1 Colorado State University, 2 Yukon College

Archaeological Investigations at Six-Mile Hill, Tok, Alaska - 2015

During the summer of 2015, Yukon College, Colorado State University, and the Army teamed up to conduct a systematic survey of Six-Mile Hill, west of Tok, Alaska. Although six

sites were noted on the hill by John Cook in 1981, it was thought that the sites were destroyed by recent impacts, including the operation of a Cold War pump station and local resident recreational use. Of the six original sites, four were relocated and our surveys located an additional six sites that revealed undisturbed tool production areas. Years of pedestrian, atv, and truck traffic considerably damaged the top soil at the apex of the hill though significant archaeological material still remains. There is a hunting lookout on the southwest corner of the top of the hill where bifacial projectile points were sharpened. A larger campsite with separate activity areas and a diverse range of tools and raw materials dating to the late prehistoric period can be found further back on the hill, indicating longer habitation. Results of survey and test excavations demonstrate that Six-Mile Hill retains significant research potential and more studies are planned for the area in 2016.

[Beyond Little John: The Archaeology of Borderlands](#) Thursday, May 5 11:00

Meloche, Chelsea

Simon Fraser University

What Happens Next? Investigating the Impacts of Repatriation on Descendant Communities

Returning the remains of ancestors to descendant communities has become an integral part of archaeological and museum practice. However, assuming that repatriation ends with the return and reburial of said remains ignores key elements of its story. For though the debates and processes of negotiation and return have been relatively well-documented, the wider impacts of these events for descendant communities are less understood.

Repatriation's potential to foster communal healing has been somewhat established in the literature, yet what the impacts of this process look like, and how they are experienced across communities, remains to be seen. This project will seek to assess what short- and long-term impacts are felt by descendant communities from the repatriation of ancestral remains, and to understand whether these effects are experienced similarly across different First Nation communities in Canada. To do this, an ethnographic case study approach will be adopted to assess a total of four cases in which repatriation has occurred within the last decade. Extensive investigation will involve the use of ethnographic surveys and semi-structured interviews to consider community experiences of return and its after-effects. A comparative study like this one may offer key findings that would better inform future approaches to the repatriation of ancestral human remains, as well as the development of heritage policy and protocols.

[Poster](#)

Meredith, William

Geoscan

Mapping the Canadian past: A Geophysical Survey of a Pioneer Cemetery in BC

Archaeological Geophysics utilizes non-invasive and non-destructive geophysical techniques to map and reveal subsurface archaeological features. The field of Archaeological Geophysics has grown considerably over the last 40 years. Although the field is popular and very common within the UK and Europe. However, North America and specifically Canada have been slow to adopt geophysical surveys in Archaeology. A possible reason for the slow adoption could be due to the idea that geophysical surveys are slow, inconsistent and do not disclose any more new information about a potential site. This

study disproves these ideas and gives a case example of the use of Archaeological Geophysics in Canada. An Archaeological Geophysical survey was performed on a pioneer cemetery in British Columbia. The cemetery dates back to the 1860's, during the gold rush era of BC. Over the years, due to various reasons, including flooding, headstones were misplaced and lost over the area of the cemetery. Multiple Geophysical techniques including Ground Penetrating Radar (GPR) and Time Domain Electromagnetics (TDEM) were used to map subsurface features, with the emphasis on locating any unmarked graves. The geophysical methods deployed were able to display the location, size and depth of multiple unmarked graves within the cemetery, within a short amount of time. This study demonstrates that Archaeological Geophysics has a future within Canada as geophysical survey methods are a fast, consistent and precise way of mapping subsurface archaeology which may be lost, or sensitive to excavation techniques.

Poster

Meyers, Adrian

Amec Foster Wheeler Environment & Infrastructure

3D Laser Scanning of Culturally Modified Trees in British Columbia

A Culturally Modified Tree (CMT) is a tree that has been altered by an aboriginal person as part of their traditional use of the forest. In the Pacific Northwest many types of CMTs are found: trees with their bark harvested for basket making, trees with scars from the removal of planks, and the stumps that are left after trees have been cut to carve canoes. In British Columbia, any CMT with a modification dating to 1846 or older is automatically protected under the Heritage Conservation Act. Archaeologists working ahead of construction of a 250 KM transmission line project in southwest BC discovered that an impressive stand of 67 cedar CMTs was in conflict with the planned project right of way. Working collaboratively with our client, the Provincial regulator, and First Nations, Amec Foster Wheeler archaeologists and engineers designed a solution that would ensure that the Project's goals were achieved and that the stakeholder and regulator's requirements were addressed: we would preserve a digital record of the CMTs through high precision laser scanning. This approach allowed the transmission line to be built as planned, while satisfying the condition that a record of the protected resources be preserved prior to their alteration or removal.

[Contributions from Cultural Resource Management](#) [Thursday, May 5](#) [15:20](#)

Micon, Jonathan

Purdue University

Classification and Copper: Experimental Insight on Native Copper Artifact Typology

Over 170 artifacts have been recovered from the Late Prehistoric site of Gulkana in the Copper River Basin of south-central Alaska. Most of this material was excavated in the 1970s by Dr. William Workman. Objects recovered from the site included unworked nuggets, pieces of scrap, blanks, and finished tools. In order to develop a useful dialogue for this copper assemblage, Workman developed a typology based on morphology, metric data, and a hypothesized *chaîne opératoire* describing the process by which tools were made. Workman's ideas, as well as those of Ursula Franklin regarding the *chaîne opératoire* for native copper, have not been tested. This research tests ideas concerning how native copper was worked to make tools via replicative archaeological experiments. These

experiments evaluate Workman and Franklin's ideas on native copper production and subsequent typological schemes. By replicating select copper objects from the Gulkana collection it was found that many of the ideas of Workman and Franklin concerning the *chaine operatoire* are correct. However, despite the emphasis placed on hammering nuggets into flat sheets and building bulk through folding, results from this experiment suggest that this was most likely not an intermediate step for making many of the copper tools found at Gulkana.

[Ancient Metals and Metallurgy](#) Thursday, May 5 15:20

Monks, Gregory
University of Manitoba

Further Thoughts on Climate Change and Cultural Implications in Barkley Sound, British Columbia.

Changes in the assemblages of exploited fauna in northern Barkley Sound appear to be linked to the onset and decline of the Medieval Climatic Anomaly (MCA) and the subsequent Little Ice Age (LIA). These changes will be discussed in terms of the changes that they may have brought about in Toquaht cultural responses. Finally, the larger past and present implications of these environmental and cultural changes will be considered.

[Environment, Climate, Ecology and Archaeological Contributions to the Discussion](#)
Thursday, May 5 14:00

Monteleone, Kelly¹ and E. James Dixon²
1 University of Calgary, 2 University of New Mexico

Underwater Archaeology in SE Alaska: Results from modeling and four-seasons of exploration of the continental shelf

The coastline of SE Alaska was submerged by post-Pleistocene sea level rise from at least 16,000 cal yrs BP until about 10,600 cal yrs BP. The submerged continental shelf was modeled using bathymetry and other data to identify areas exhibiting high potential for the occurrence of archaeological sites. An archaeological settlement model employed various GIS applications to identify survey areas. Four seasons (2010-14) of underwater archaeological survey (NSF OPP -#0703980 and 1108367) on the continental shelf of the Alexandra Archipelago demonstrates that survey for evidence of human habitation when sea level was lower is feasible. Limiting dates for submerged landscape features and archeological sites can be established based on their depth in relation to regional sea level curves in combination with 14C AMS dating. Applications of these methods demonstrate proof of concept and survey for sites on the continental shelf pre-dating post-Pleistocene sea level rise is possible and practical in conjunction with landscape reconstruction.

[Recent Research in the Western Subarctic](#) Friday, May 6 15:40

Mooney, James
Ecofor Consulting Ltd.

Heritage Resources Summary of the BMC Kudz Ze Kayah Project

This paper will present a summary of the heritage resource management efforts and results to date and what remains to be done, in relation to the proposed BMC Minerals Kudz Ze Kayah Mine Project. This project is located approximately 260 km northwest of Watson Lake and approximately 110 km southeast of Ross River. Cultural resources staff of

Ecofor Consulting Ltd., (Ecofor) conducted assessment efforts in 2015 but associated heritage assessment and reporting tasks were also conducted in 1995 and 1996. No previous sites were recorded in or near this project and little work has been done in the surrounding area. The 2015 assessment efforts included testing eight landforms considered to have increased potential for buried cultural resources. Testing at two of these landforms revealed prehistoric materials (Sites JiTp-1 and JjTp-1). Obsidian samples from Site JiTp-1 has been the subject of recent sourcing efforts and these results are discussed. Three wooden surface finds were also identified in high elevation transects (two near proposed drill locations). These items were found near shrinking ice patch edges and within ice patch scars.

[Contributions from Cultural Resource Management](#) [Thursday, May 5](#) [10:40](#)

Mooney, James

Ecofor Consulting Ltd.

Heritage Resources Summary of the Casino Project

This paper will present a summary of the heritage resource management efforts and results to date and what remains to be done, in relation to the proposed Casino Mine Project. Cultural resources staff of Ecofor Consulting Ltd., (Ecofor) conducted assessment efforts in 2011 and 2013 but associated heritage assessment and reporting tasks were conducted from 1988 to 2015. The assessment efforts associated with this project have resulted in the recording of a large number and wide range of resources including one of the oldest multi-component cultural sites in the North America, KfVi-3 (approximately 13,000 BP), a wide range of prehistoric sites, a proto-historic site with a Chinese coin minted between 1667 and 1671, and numerous historic sites and built structures. Ecofor recently summarized these efforts and results in 2014 as a companion document to the Casino Heritage Resources Management Plan. The summary report serves to clearly identify what heritage assessment and mitigation work, remains to be completed, and when it should be completed. There are three main tasks remaining to be completed. These consist of: 1) remaining heritage impact assessment work; 2) management of impacts to known heritage resources (such as avoiding sites, monitoring construction, and mitigating negative impacts where needed through detailed data recovery excavations); and 3) managing chance heritage finds during construction. The first two tasks must be completed after final engineering designs are prepared but prior to construction efforts.

[Contributions from Cultural Resource Management](#) [Thursday, May 5](#) [11:00](#)

Mooney, James¹, Tim Bennett¹ and Elizabeth Hall²

1 Ecofor Consulting Ltd., 2 Yukon Government Palaeontology

Dawson City Waste Water Revisited

This paper will present a summary of the heritage resource monitoring efforts and results in relation to the 2015 improvements to the Dawson City Forced Main Project. Cultural resources staff of Ecofor Consulting Ltd., (Ecofor) conducted ground disturbance monitoring in the fall of 2015 based on the potential for the project to impact human remains. Initial ground disturbance for the same project in November of 2010 uncovered the remains of four gold rush era burials. Three of these individuals were the first people convicted of murder and hanged in the Yukon (put to death on August 4, 1899). The identity of the fourth individual was not confirmed but they were believed to be consistent

with the information known for Alexander King, the fourth individual convicted of murder (put to death on October 2, 1900). The 2015 ground disturbing efforts did not impact any additional graves or isolated human remains. However a surprisingly wide range and size of historic materials and faunal remains were identified.

[Contributions from Cultural Resource Management](#) [Thursday, May 5](#) [13:40](#)

Moore, Charles
Golder Associates

Precontact and Historic Archaeology for the Seabed Remediation of Esquimalt Harbour, Esquimalt, BC.

Archaeological investigations of the seabed within Esquimalt Harbour and in advance of extensive seabed remediation have revealed archaeological evidence of human activity over millennia. Testing methodologies have included testing between the upper inter-tidal area and the subtidal areas to about 10 m water depth. Evidence of precontact use on landsurfaces that may have been exposed 7,000 years previously have included fragments of basketry. The port has been well known for the last 150 years as the naval base for the Pacific Fleets of the Royal Navy and the Royal Canadian Navy. Along with the naval presence, there have also been extensive civilian and private enterprises. The latter has left a ship graveyard, but has also impacted the seascape in unexpected ways, including with undocumented dredging operations and the abandonment of a cradle for a patent slip, which was one of the largest of its kind when fabricated in the 1880s.

[Maritime Archaeology](#) [Friday, May 6](#) [9:20](#)

Mooney, Susan Moorhead
Osteologist, Whitehorse, Yukon

What Happened to Frank and Joe? The Search for the Missing Nantuck Brothers

In November, 2010 a construction project in Dawson City, Yukon unearthed several deeply buried wooden coffins associated with the first hangings at Fort Herchmer, the North West Mounted Police post at the center of the Klondike Gold Rush. The recovery and osteological analyses of the well-preserved remains provided insight into the quality of life during the period, but also exposed stark differences between First Nation and non-First Nation justice systems present within the territory at the time of the stampede. This paper reveals fresh details in the search for the remains of two adolescent Yukon First Nation boys who died while in custody at Fort Herchmer in February 1899, six months prior to their scheduled execution date with two of their clan brothers on August 4, 1899.

[Molecular Anthropology and Bioarchaeology](#) [Thursday, May 5](#) [14:20](#)

Morales-Arce, Ana
University of Calgary

Sex determination and ancient mitochondrial genetic variation in infants among the offerings dedicated to Ehécatl-Quetzalcóatl in Tlatelolco (1325-1521 AD)

Offerings and human sacrifices were central to the Mexica religion. Infants in precarious health conditions were sometimes offered to fertility deities, Ehécatl-Quetzacóatl, which were asked for help. This study focuses on the study of infants human remains excavated in the 70s in from the ceremony temple of Tlatelolco, Mexico, corresponding to the 1325 to 1521 AD occupation. Rib samples corresponding to 15 infants, between their 1st, 2nd, and

3rd infancy, were processed at ancient DNA laboratory of the University of Calgary. The purpose was to determine the sex of these infants as well as their D-loop mitochondrial genetic variation to understand ceremonial practices in Tlatelolco and possible biological affinities of the infants involved. Sanger sequencing was used to amplify short fragments at the X and Y chromosome. Similarly, eight mini-primer sets were used to target HVRI and II short fragments of varying from 126 to 170 bp. 13 samples out of 15 were successfully retrieved and amplified for the D-loop mitochondrial region while only eight of them amplified for sex determination primers. Bioarchaeological information and distinctive artifacts associated with each infant were also included in the analysis.

[Molecular Anthropology and Bioarchaeology](#) Thursday, May 5 9:40

Morin, Jesse¹, John Konovsky¹, Dana Lepofsky², Kevin Edinborough³, Meghan Burchell⁴, Dongya Yang², Blake Evans², Nova Pierson² and Morgan Ritchie²

1 Tsleil-Waututh Nation, 2 Simon Fraser University, 3 University College of London, 4 Memorial University

Tsleil-Waututh Nation Pre-Contact Ecological Reconstruction of Burrard Inlet: Applied Archaeology

Burrard Inlet within the Metro Vancouver area has experienced significant habitat degradation over the last 150 years through industrial fishing, urban expansion, pollution, and marine encroachment that has led to dramatic declines in ecological diversity and richness. The impacts to the marine environment have also seriously undermined and prevented aboriginal efforts by to continue utilizing traditional resources. Archaeological, historic, and TEK evidence indicates that several marine species such as herring, eulachon, anchovy, littleneck, butter clam, cockles, native oyster and sea urchin were abundant in the past, but are rare or extirpated in the Inlet today. Our multi-disciplinary team of biologists, archaeologists, historians, and Tsleil-Waututh elders propose to undertake a baseline ecological reconstruction of Burrard Inlet prior to European first contact (June 1792) utilizing a wide range of archaeological and natural data sets subject to specialized analyses such as isotopic paleosclerology, ancient DNA analysis, modelling biomass and trophic levels, and AMS dating. Understanding the nature of these ecological shifts and recreating the pre-industrial ecology of Burrard Inlet are fundamental to current conservation efforts in the Inlet.

[Environment, Climate, Ecology and Archaeological Contributions to the Discussion](#)
Thursday, May 5 13:40

Morrissey, Greg and Corey Hartley
Kleanza Consulting Ltd.

Northern Landscapes and Southern Budgets: GIS modeling to access archaeological potential in Forestry Development Areas throughout the South Slave Region of the Northwest Territories

In Cultural Resource Management (CRM), effectively balancing cost and providing accurate archaeological assessments is always a challenge. One way to minimize fieldwork costs for clients is to perform Archaeological Overview Assessments (AOAs) to determine the likelihood of encountering archaeological sites within a specific project footprint. The forestry industry in British Columbia relies heavily AOAs and as a result, archaeologists in BC have developed GIS based predictive models to reliably and efficiently identify areas of

high potential for a variety of site types. Our company was recently contracted to produce AOAs for two forestry development projects; their combined area dwarfing our previous AOA projects. To deal with the challenges of identifying the potential for archaeological materials on a landscape of this scale in an economical way, we developed a GIS based potential model for the region. Typically, models developed for such a scale must incorporate regional variations into the model. However, with a total site density of .094 sites/100 km² (compared with B.C.'s site density of 3.49/100 km²), it was much harder to assess site differences across sub-regions of the study area. As a result of this small sample of sites, baseline considerations were drawn from more heavily sampled portions of the subarctic culture area. Due to the low-level of industrial and urban development in the South Slave region, high quality datasets could not be obtained, but were not necessary to produce a model that is moderately efficient and accurate. Our work provides an effective new tool for CRM research in the southern NWT, that can be applied to large areas with minimal time commitments and that can be continually strengthened as more research is conducted in the area.

[Contributions from Cultural Resource Management](#) [Thursday, May 5](#) [9:20](#)

Munizzi, Jordon Simon¹, Lisa Hodgetts¹, Fred J. Longstaffe²

1 University of Western Ontario, 2 Department of Earth Science, University of Western Ontario

An Isotopic Approach to the Terrestrial Resource Ecology of Hunter-Gatherers on Banks Island, NWT, Canada over the Last 3500 Years

Muskox (*Ovibos moschatus*) and caribou (*Rangifer tarandus* spp.) have been key terrestrial prey species for human hunters on Banks Island since people first arrived there around 3500 years ago. Previous research suggests that population fluctuations of both species, in conjunction with overhunting and climatic changes, may have caused intermittent human occupational hiatuses on Banks Island and elsewhere in the Canadian Arctic archipelago. These ideas are based on historical accounts and demographic data that suggest that caribou and muskoxen experience opposing cycles of growth and decline. However, it is unclear whether these “booms and busts” are a regular part of caribou-muskox population dynamics, are related to human hunting pressure, or are a relatively recent phenomenon related to the rapid warming of the Arctic. We use the stable isotopic analysis of modern forage plants and meteoric water, and archaeological caribou and muskox tissues collected from 14C-dated archaeological sites spanning the last 3500 years on Banks Island to document long-term variation in faunal diets, metabolic stress, and mobility. Though analyses are ongoing, preliminary results suggest a pattern of dietary convergence and divergence between caribou and muskoxen during that time, which potentially affected the health and seasonal movements of both species. Combined with existing archaeological and environmental data, and Inuvialuit knowledge of landscape and animal behavior, this project will investigate how interspecies interactions on Banks Island ultimately affected the hunting strategies of the Inuvialuit, their ancestors and earlier populations on Banks Island over the last four millennia.

[Current Approaches to Archaeology & Heritage Research in the Western Arctic and Lower Mackenzie Region](#) [Friday, May 6](#) [10:20](#)

Murchie, Tyler
McMaster University

Frozen wooden artifacts as a source of ancient DNA?

Cryogenic wooden biofacts and artifacts are the most abundant archaeological component of ice patch sites in the Northwestern Subarctic. This is anomalous when compared with typical Subarctic sites that tend to have few surviving organic remains due to the acidity of soils in the boreal forest. Previous research into these objects has already contributed important insights to culture-historic developments in precontact British Columbia, Yukon, and Alaska. Palaeogenetics would seem to be an obvious candidate for further analysis. This paper discusses the viability of using ancient DNA (specifically PCR and Sanger sequencing) to study these important but limited material sample-sets. Willow (*Salix* sp.) was used as the target taxon for a phylogeographic assessment of precontact alpine travel between the Northern Northwest Coast and Subarctic Yukon. Wood was found to be a challenging tissue for a Sanger based methodology. However, it is suspected that next-generation techniques would alleviate almost all of the issues encountered, providing a viable means for investigating wooden artifacts moving forward.

[Molecular Anthropology and Bioarchaeology](#) [Thursday, May 5](#) 8:40

Nagy, Murielle
CIÉRA, Université Laval

From Old Crow to Cape Bathurst or how I (literally) followed the steps of Raymond Le Blanc

I owe Raymond Le Blanc my passion of the Arctic and its people. From 1985 to 1989, he hired me as his field assistant for the Northern Oil and Gas Assessment Project (NOGAP) undertaken by the Archaeological Survey of Canada in northern Yukon and the Northwest Territories. It is with him that I learned how to do archaeological surveys by helicopter and by foot in the Arctic. We covered a lot of territory and visited many Inuvialuit sites. This experience was extremely useful and allowed me to later undertake Inuvialuit oral history projects which brought elders back to areas they had not visited for a long time. In 1987, Le Blanc became a professor in anthropology at the University of Alberta. The next year, I started my PhD studies there and became one of his graduate students. For my dissertation, I worked on Palaeoeskimo sites from Ivujivik (Nunavik), more specifically the Pre-Dorset to Dorset Transition, a cultural label also associated with the Crane site of Cape Bathurst that I had a chance to excavate with Le Blanc and his crew. In the conclusion of his book about that site, Le Blanc (1994: 116) insists that the chronology of Palaeoeskimo culture needs more radiocarbon dates and “erring on the side of excessive may be preferable.” Although it took me over 20 years to get more dates for the Ivujivik sites, I followed his advice and it changed my initial conclusions about the various Palaeoeskimo occupations of two sites.

[Papers in Honour of Raymond Le Blanc](#) [Saturday, May 7](#) 9:00

Nielsen, Scott
Memorial University

Questions of Continuity and Transformation at Ashuanipi

Archaeological investigations at Ashuanipi, a large lake near the centre of the Quebec-Labrador Peninsula, identified many archaeological and ethnographic sites occupied within

the last 1600 years. Working within a framework of archaeological history, this presentation will detail the excavation results from archaeological site FeDn-01 - which was occupied, and re-occupied no less than seven times during the last 1000 years. Questions related to cultural continuity, transformation, and ethnicity – such as: what impact did the environment at FeDn-01 have on the site occupants?; were the occupants of each component connected to occupants in the components that preceded and followed them?, and what was the relationship of the FeDn-01 occupants to people in neighbouring regions? – will be critically examined over the course of this presentation, in an attempt to begin to understand the complexities of Ashuanipi’s archaeological history, and its implications for broader cultural history of the Quebec-Labrador Peninsula.

[Interpreting Ethnicity in the Archaeological Record](#) [Thursday, May 5](#) 16:00

Norman, Lauren
University of Kansas

Beyond the House: Similarities and differences in midden and house archaeofaunal assemblages

Arctic zooarchaeologists have studied material from different contexts, including semi-subterranean houses, middens, tents, and external workspaces. As shown in a number of studies, the contexts differ not only in their structure, stratigraphy, and artefact assemblages, but also in their taxonomic composition, element representation, and modification frequencies. Using faunal assemblages from the Thule period from a number of different locations across the Arctic, this paper looks at the similarities and differences between semi-subterranean houses and their associated midden assemblages. In some cases, differences in faunal assemblages between the midden and house material may not drastically change the overall interpretation of subsistence strategies, but may impact interpretations of transport strategies, discard patterns, and the use of domestic space. Understanding these differences will aid archaeologists in using faunal data from disparate contexts when conducting regional and inter-regional comparisons to understand Thule subsistence strategies and human-animal interactions.

[From Across the Land - Contributed Papers](#) [Friday, May 6 9:20](#)

O'Rourke, Michael
University of Toronto

Challenges in Mapping Arctic Archaeological Site Vulnerability - Examples From the Kugmallit Bay Region

A GIS model of site vulnerability has been developed for the Kugmallit Bay area of the Northwest Territories. Situated where the East Channel of the Mackenzie River meets the Beaufort Sea; this region is significant both as an area of ancestral reverence among Inuvialuit, as well as a critical location to further understanding the nature of connectivities between the eastern and western Arctic regions. By integrating a diverse range of spatial information, I have identified zones within this important area where known archaeological sites are at greatest risk of damage. Given the limited resources and restricted field season for undertaking site management initiatives in 'the north', such a model can be of tremendous value in prioritizing the mitigation and monitoring of threatened heritage materials. The results also align well with the vision, goals and priorities set out in the recently published 'GNWT Culture and Heritage Strategic

Framework'. While the site vulnerability model is largely complete, and components of the GIS data have already been released to the Inuvialuit Joint Secretariat for their use in land management efforts; the unique nature of the Beaufort Sea coastline did present a number of challenges to the GIS analytical process. So too has the nature of the archaeological site inventory, in part due to the substantial history of archaeological research having taken place in the region. This paper will outline the implications of these two factors for the accuracy of site vulnerability modelling, as well as the measures required to address them.

[Archaeology and Modern Climate Change](#) Saturday, May 7 9:20

Peach, Kate
Stantec

Edge or Centre, Frontier or Homeland: A case study of two sites in the southern boreal forest of east-central Alberta

Colonizing groups rarely settle in empty lands. Instead, these groups often expand into “new” regions at the expense of an existing population. Based on the results of the excavation and documentary/oral history of two sites in the southern boreal forest region of east-central Alberta, this paper explores the idea that the frontier of one culture group is the traditional territory of another. Both sites were occupied during the first quarter of the 20th century and within 100 km of one another, the one site a Euro-Canadian homestead and the other a winter trapping camp. The results of the study reflect quite different “adaptations” to life on the land as expressed through the artifact assemblages and oral/documentary histories.

[On the Edge: European Adaptations to Life on the Periphery](#) Friday, May 6 14:00

Pennanen, Kelsey and Matthew Boyd
Lakehead University

Early Holocene Dynamics of Lake Superior: Reconstruction of Climate, Vegetation, and Water-Level Changes from Sediments Exposed by the McIntyre River (Thunder Bay, Ontario)

A thick sequence of sediments exposed by the McIntyre River on the property of Confederation College (Thunder Bay, Ontario) provide important new insight into early Holocene water level changes and paleovegetation in the Superior basin. Basal sediments include rhythmically laminated couplets (interpreted as varves) interbedded between two organic layers dating to 8030+/-30 and 7900+/-30 14C BP. This sequence provides evidence of large-magnitude fluctuations in the base level of Lake Superior at approximately 8900 cal BP due to a combination of climate change and meltwater influx. Plant macrofossil analysis of the organics enables reconstruction of early boreal plant communities established in the Thunder Bay region shortly after deglaciation.

[The Power of Palaeoenvironments](#) Saturday, May 7 11:40

Perdue, Adam
Stantec

The Michie-M’Clintock Heritage Resources Inventory Project

The M’Clintock region is a core constituent of Tagish Kwan territory consisting of the Michie Creek and M’Clintock River Watersheds. This region was an important resource gathering and travel area in prehistory and continues to be used for traditional purposes.

This presentation details a recently conducted heritage inventory of the M'Clintock region. An overview of the project will include archaeological fieldwork, heritage sites recorded, and artifact and raw material types encountered. Discussion will include site distribution and the correspondence between prehistoric and modern landscape use.

[Recent Research in the Western Subarctic Friday, May 6 14:00](#)

Peuramaki-Brown¹, Meaghan, Kathryn Reese-Taylor¹, and Armando Anaya Hernández²
Athabasca University, University of Calgary, 2 Universidad Autónoma de Campeche
Ancient Multiple Nuclei and Peri-Urban Development in Campeche, Mexico

Peri-urban zones of settlement are unique localities along the urban-rural continuum that form due to dispersed urban growth, creating hybrid landscapes of fragmented urban and rural characteristics. In this presentation, we present our current study focused on processes of multiple nuclei urban development and associated peri-urban formation, expansion, and agglomeration in the pre-Columbian past, as exemplified through ongoing fieldwork at the Maya site of Yaxnohcah in southern Campeche, Mexico. Yaxnohcah is situated in the middle of the Central Karstic Uplands, a region in the center of the Yucatan Peninsula known for its large and early urban centers. The extended period of occupation at Yaxnohcah (c. 1000 BCE-850 CE), along with a distinct, dispersed, multiple nuclei settlement pattern, provide an excellent opportunity to pose questions concerning early urban development and its dynamic connections to local environment and integrative processes. Our research to-date (2011-2015) has adopted both higher and lower scale approaches—using LiDAR derived imagery and investigating both massive platforms and smaller urban houselots—thereby, advancing our awareness of early urban development in this area of the central Maya tropical lowlands.

[Contributed International Papers Thursday, May 5 15:40](#)

Pike, Matthew D.
Purdue University

Indigenous Copper Technology of the Central Arctic and Subarctic: Preliminary assessments of spatiotemporal variation in artifact morphologies

The Northern Indigenous Copper Technology working group at Purdue University has examined over 2000 copper objects from hundreds of pre-Contact and Contact period archaeological sites across Alaska, Northern Canada, and the Northwest Coast. Pre-Contact copper objects from arctic and subarctic contexts originate from geological native copper sources in either the Wrangell and St. Elias mountain ranges in the western subarctic or the Coronation Gulf region of the central arctic. Recent geospatial analysis has shown that the occurrence of sites containing archaeological copper decreases as acquisition costs and travel time from geological sources increase. The research presented here expands upon this analysis to examine variability within this trend. A significant subset of the Northern Indigenous Copper Technology database is examined here for morphological variability in artifact form. This group of over 1000 objects has been previously shown to most likely originate from central arctic sources in the Coppermine Mountains, Bathurst Inlet, and on Victoria Island based on geospatial modeling of travel time and acquisition cost. It is hypothesized that morphological variability in copper technologies in general and in this subset in particular will vary significantly as a function of increasing acquisition cost and travel time, as well as a response to local technical requirements imposed by specific

cultural and environmental contexts. Preliminary assessments of spatiotemporal variation in copper artifact morphologies will be presented, including correlations with variation in acquisition costs.

Ancient Metals and Metallurgy Thursday, May 5 16:20

Poletto, Christina
University of Alberta

Shaping and Shifting: Understanding Human – Landscape Narratives at Clear Lake and Eaglenest Lake, Alberta

The vegetative cover in the Boreal Forest plays a crucial role in ecological communities, and in turn impacts humans in the area, both past and present. First Nations ancestors living in Boreal Forest regions were closely attuned to ecosystem dynamics, familiar with the responses and changes the region would undergo. While the broad scale make-up of the boreal forest has been relatively stable for the past 5,000 years, factors like fire ecology and terrain features shape this broad regional homogeneity. Fire as a natural event occurs frequently in the boreal forest; however, the controlled anthropogenic fires that may have occurred would indicate a narrative between humans and the landscape. Any form of burning that occurs has a tremendous influence on the increased abundance of plant and communities in an area, which would have had a positive impact on communities and resource procurement in the north. Looking at the area around Clear Lake and Eaglenest Lake, the analysis of LiDAR imagery, fire history data, and vegetative cover can tell us the vegetative diversity of the area, and how the area responds to fires of varying scales. From this, we can infer what impact natural or anthropogenic burning events would have had on the populations in the area and how it shaped the landscape.

Poster

Pollack, John and Robyn Woodward
Institute of Nautical Archaeology

The Yukon River Steamboat Survey (INA-124): A Decade of Research and Discovery in the Yukon Territory

Since 2005 members of the INA have worked closely with the Government of Yukon to locate, survey and document more than sixteen historic stern wheel steamboats scattered throughout the Yukon River drainage. An overview of the project's design, major projects and methods will be presented, along with a summary of the classes of vessels, hull design and engineering of the last great fleet of stern wheel steamboats to be constructed in North America.

Maritime Archaeology Friday, May 6 10:20

Ponomarenko, E.¹ and E. Ershova²

1 Department of Geography, University of Ottawa, 2 Moscow State Lomonossov University

Fire frequency and seasonality as indicators of peopling the landscape

Geomorphological, palinological, and anthracological analyses of paleosols in deep stratigraphic sequences were applied to analyze a correlation between changes in the fire frequency and seasonality and the appearance of new archaeological cultures in the landscape. The study was carried out in the following site types:

- 1) Stratigraphic sequence embracing the Sangamonian soil and 5 interstadial paleosols, divided by the Aeolian deposits (Kursk region, Russia). The general area has a high density of the Upper Paleolithic archaeological sites ;
- 2) Paleosols of the Moscow River floodplain, divided by alluvial deposits. The area has archaeological sites dated from the Neolithic to the late Middle Ages.
- 3) Immature paleosols, divided by colluvial fan deposits in several gullies in the forest-steppe transition zone. The area experienced frequent shifts in human population in the last 5 thousand years. Peopling of the landscape by new cultures alternated here with short-term depopulations.
- 4) Charcoal-bearing tree uprooting structures in 90 forest sites in Atlantic Canada. Charcoal radiocarbon dates spanned from 10ka to 200yrs. The chronology of ignitions were compared with the timing of occupations of the area as recorded in CARD. The multiproxy analysis showed that the appearance of new archaeological cultures in the area can be correlated with the drastic increase in the fire frequency at the initial stage of colonization. The increase in fire frequencies co-occurred commonly with the onset of late fall fires. In the Holocene, the archaeologically-recorded depopulation periods coincided with either decrease in the occurrence of fires or their temporal cessation.

[The Power of Palaeoenvironments](#) [Saturday, May 7](#) [11:20](#)

Potter, Ben A. ¹, Julie Esdale², Charles E. Holmes¹, Joshua D. Reuther¹, Holly J. McKinney¹
1 University of Alaska Fairbanks, 2 Colorado State University - CEMML

New Discoveries at Delta River Overlook, a terminal Pleistocene – late Holocene multicomponent site in central Alaska

Recent large-scale excavations at Delta River Overlook in the middle Tanana River basin yielded 12 components dating from the Bolling-Allerod Interstadial/onset of the Younger Dryas (~12,860 cal BP) to the later Holocene. Well preserved faunal assemblages, including bison, are present in multiple components, and several features and activity areas were discovered. About 13,000 lithic items have been analyzed, primarily from the 11,500 and 10,900 cal BP components, indicating multiple lithic reduction behaviors from cobble testing to tool maintenance. We present interpretations of site function, geological context, radiocarbon dating, component delineation, lithic, faunal, and spatial analyses that track technological and subsistence change.

[Recent Research in the Western Subarctic](#) [Friday, May 6](#) [11:20](#)

Rahemtulla, Farid
University of Northern British Columbia

Smokehouse Island: An Aboriginal-engineered island on the Babine River, north central British Columbia

Over the last five years the Lake Babine Nation (LBN) and UNBC have partnered to conduct archaeological research and training within LBN attested traditional territory around the Babine River. Funded by the LBN, research excavations took place on Smokehouse Island in 2014 and 2015. Historically this small island was the locus of a number of complex wooden fish weirs and smokehouses that LBN clans maintained, to seasonally capture and process large volumes of Skeena River pink, chum, chinook and especially sockeye salmon that pass through the area annually. Excavations reveal an astonishing density of sub-surface cultural material such as chipped and ground stone, fauna, and a wet site component with

other preserved organics. Intact clusters of vertical wood posts and debris at depths of more than 1m below the terrestrial surface are clearly structural remnants of fish weir installations, and their location and position require explanation. Stratigraphic and other lines of evidence suggest that this is an engineered island. Over 1,000 years ago fish weirs were seasonally erected on a shallow sandbar in the river but over time, LBN ancestors intentionally intensified their discard activities at this location, leading to a very dense build up (an island) of artificial fill. Among other things, this resulted in a long-term terrestrial surface on which to process (gut/smoke) fish after capture.

[Current Research in British Columbia](#) [Saturday, May 7](#) [14:40](#)

Ramsden, Peter

McMaster University

Is Ethnicity a Polite Word for Politics?

A case study is presented from the Benson site, a small, late 16th century community in south-central Ontario, which appears to have been occupied by members of two or possibly three ethnic groups. While ceramic motifs and pipe styles, among other artifacts, carried traditional ethnic significance, this paper argues that while ethnicity may have been the language employed, the conversation was about politics. It goes on to generalize from this and to suggest that it may commonly be the case that what we recognize as ethnicity is really a political conversation employing readily understood ethnic metaphors.

[Interpreting Ethnicity in the Archaeological Record](#) [Thursday, May 5](#) [14:00](#)

Rankin, Lisa K.

Memorial University

Untangling and Interpreting Inuit Ethnicity(ies) in Southern Labrador

Between the late 16th and 19th centuries multiple ethnic populations inhabited the southern Labrador coast and their archaeological traces appear, at least on the surface, to be very similar. Household archaeology is used to untangle the ambiguous cultural landscape of Sandwich Bay and situate Inuit identity in this region throughout the early colonial era. The archaeological analysis of nine Inuit houses, inhabited perhaps a generation apart, suggests that Inuit identity was actively negotiated and frequently redefined in response to tradition and memory, as well as social, economic and political circumstance.

[Interpreting Ethnicity in the Archaeological Record](#) [Thursday, May 5](#) [13:20](#)

Rankin, Marissa

Lakehead University

Establishing a Basic Lithology for of Raw Materials from the Gunflint Formation Using File Maker as an Analytical Tool

For over 8,000 years the gunflint Gunflint formation Formation has been an important bedrock source of tool stone for people in the Thunder Bay area, and is particularly important at the numerous Paleo-Indians sites reported in the Thunder Bay area. However, the range of material types within the formation is not well known, nor is it clear which exposures and depositional units offer the archaeologically preferred raw materials. Recent work by Vickruck and Surette (2014) recently has shown that theredescribed is greatthis raw material variation, moving within the formation beyond what isthose types already

published in the literature (taconite/jasper taconite, gunflint silica, stromatalitic chert, carbonate chert and Kakabeka chert). Review of samples collected from diverse primary and secondary deposits identified attributes that address basic visual and lithological differences. This revealed complexity that was difficult to reorder into a taxonomy of raw material types. In order to ease this process, we experimented with File Maker (a relational database) to expedite the process of grouping and reordering samples into like-kind categories. This expedited definition of analytically useful types, and also addressing which outcrops yield tool stone of various types.

[Poster](#)

Rasic, Jeffrey, P.¹, Gregory Hare², Norman Alexander Easton³ and Jeff Speakman⁴
1 U.S. National Park Service, 2 Heritage Resources, Yukon Government, 3 Yukon College, 4 The University of Georgia, Center for Applied Isotope Studies

Geochemical Characterization Obsidian in the Yukon Territory

Obsidian is a common lithic raw material in archaeological assemblages from the Yukon Territory. It has well-known value in provenance research and offers a means to glimpse prehistoric interaction and movement of people and goods. Since 2007 we have conducted geochemical analyses of more than 1000 obsidian artifacts from 150 Yukon sites. A well-developed source catalog now exists and a high rate of successful source assignments is routine. Sites within the territory contain at least 15 geochemically distinct kinds of obsidian. The most commonly used sources were Hoodoo Mountain (YT), Mount Edziza (BC), and Wiki Peak (AK). A variety of obsidian types are found in the very earliest assemblages and suggest both a rapid pace of landscape learning and exceptionally wide-ranging circulation of people and raw materials during this interval. A surprisingly large proportion of obsidian found in Yukon assemblages derives from distant sources despite the presence of multiple, local obsidian sources. We discuss technological, social, economic and environmental reasons for this interesting pattern.

[Geochemical Analysis in Archaeology](#) [Friday, May 6](#) [16:00](#)

Reilly, Aileen and John W. (Jack) Ives
University of Alberta

The Curious Case of Chi-thos—Or, “I Don’t Know What to Call This”

Softening is a critical step in creating the high quality product that is brain-tanned leather. One of the ways that softening can be achieved is by using a hafted or hand held stone tool that has come to be known as a chi-tho. Since Rainey introduced this term in 1939, it has been used to describe retouched tabular implements, various cobble and boulder spalls and even choppers, for tools serving a variety of functions. Following Workman (1978) and LeBlanc (1984), we propose that the techno-morphological term “tabular biface” be restricted to implements demonstrably used in the hide softening process. Tabular bifaces can be reliably distinguished from other implements through morphological and statistical analyses. The simple nature of tabular bifaces has certainly played a role in the imprecise archaeological knowledge surrounding them. Tabular bifaces have persisted through time and space, particularly in Subarctic assemblages, and continue to be used by Dene hide tanners to this day. Ethnoarchaeological fieldwork conducted with Kaska experts has confirmed again that while tabular bifaces may be expediently made and discarded, the women making them may also retain favoured examples for lengthy periods of use, even

passing them down inter-generationally. Like other hide processing implements, they challenge the idea that the “finest” tools in an assemblage are the most meaningful. A serviceable definition for tabular bifaces has been helpful in determining whether their presence in the Promontory Caves of Utah is indicative of a Subarctic influence at the edge of the late Fremont world.

[Papers in Honour of Raymond Le Blanc](#) Saturday, May 7 11:00

Reuther, Joshua D.¹, Ben A. Potter¹, Charles E. Holmes¹, Julie A. Esdale², and Jennifer Kielhofer³

1 University of Alaska Fairbanks, 2 Colorado State University – CEMML, 3 Department of Geosciences, University of Arizona

Late Quaternary Landscape Change and Large Mammal Habitat Fragmentation in Interior Alaska

It has been known for some time that interior Alaskan terrestrial mammalian species diversity and biogeography changed during the Late Glacial and Holocene (16,000 years ago to present). Here we present a synthetic view of how these changes may have been manifested. Herbivores such as bison, camel, caribou, elk, mammoth, moose, horse, and saiga antelope once had widespread biogeographic distribution across Alaska. Several interrelated drivers behind the widespread mammalian shifts in diversity and ranges and extinction during the Late Glacial and into the Holocene in interior Alaska have been hypothesized. These comprise, but are not limited to, climate change, changes in vegetation regimes, shifts in available moisture, decreases in plant growing seasons, increases in snow accumulation, and predator pressure (including human hunting). The models we present are based on well-dated paleontological and archaeofaunal data-sets, well-defined records of changes in soil and sedimentation regimes, and vegetation reconstructions (pollen and macrofossils) from lake cores. As expected, environmental changes during the last 16,000 years across the diverse landscapes of the region, did not affect each species equally. Many species' ranges diminished and several species became extinct, yet others survived and flourished into the later periods of the Holocene.

[Recent Research in the Western Subarctic](#) Friday, May 6 11:00

Richards, Michael

University of British Columbia

Terrestrial climate records from faunal isotope sequences

Where there are long sequences of mammal remains in an archaeological and palaeontological site it may be possible to measure the isotope value of those remains as an indicator of how climate had changed throughout the deposition period. This has been attempted a number of times using oxygen isotopes in mammal teeth, but this approach has been of limited use, due partly to the often large annual range in tooth oxygen isotope values being a higher magnitude than change in average environmental oxygen isotope values over millennia. Here I will present the results of recent collaborative work on using carbon and nitrogen isotope values of faunal sequences as a potentially more useful climate indicator, with examples from a number of European Pleistocene archaeological sites. The isotope measurements of long-term faunal sequences have the potential to be a terrestrial-based climate indicator, and also a localized, site-specific, record of climate variation.

Environment, Climate, Ecology and Archaeological Contributions to the Discussion
Thursday, May 5 10:00

Ritchie, Morgan¹, Dana Lepofsky², Sue Formosa³, Marko Porcic⁴, and Kevan Edinborough⁵
*1 Sts'ailes, Inlailawatash, 2 Department of Archaeology, Simon Fraser University, 3 Views
4 Department of Archaeology, University of Belgrade, 5 Institute of Archaeology, University
College of London*

Coast Salish Settlement Patterning and Demography in the Fraser Valley, B.C

In this study we analyze 599 radiocarbon dates from 95 archaeological sites in the Fraser Valley of British Columbia to investigate local changes in demography, settlement patterning, socio-political organization, and the development of place-based identities. These modelled data indicate that populations fluctuated over the Holocene and generally rose exponentially, with several periods of prominent population increases and decreases. We interpret these potential peaks and troughs in population conservatively, but emphasize that many occur in relation to major historically known events that serve as independent evidence for the modelling. These data also show that the number and size of settlements increased through time. Against this population and settlement backdrop, we see that the relative number of camps, small settlements, and large settlements fluctuates, indicating constantly changing patterns of social aggregation and dispersal, settlement abandonment and reoccupation, and also long-term continuity in settlement. Overall, our data indicate that the correlation between greater population size and settlement aggregation is not straightforward, and represents distinctive and changing cultural expressions and organization. We also note that demographic events do not synchronize with local cultural historical boundaries but do match well with significant changes in cultural traditions and major environmental events suggesting archaeologists should re-evaluate the entrenched cultural historical framework in light of the more nuanced and dynamic history of people in the region.

Current Research in British Columbia Saturday, May 7 13:20

Robertson, Elizabeth

Amec Foster Wheeler Environment & Infrastructure

Dating with Microblades: Diagnostic or Dead End?

Like projectile points, microblades are frequently used as reliable indicators of temporal and cultural affiliation in regions where the combination of formal approaches to their production with radiometric dates allows them to be treated as a distinctive and diagnostic technology. Some efforts have been made by academic and CRM archaeologists to extend this approach to the boreal forest and Subarctic regions of western Canada, where microblade technology has been found with sufficient frequency to suggest its potential utility in the difficult task of delineating definitive culture histories. However, the scarcity of dateable archaeological material across much of this zone, coupled with the limited number of finds that clearly conform to formal definitions of microblade technology, has complicated these efforts. This paper will review these issues, arguing that an approach which focuses on production techniques, rather than an expectation of highly formal final products, may offer improved analytical leverage to culture history studies of this region.

Contributions from Cultural Resource Management Thursday, May 5 16:20

Rodrigues, Antonia¹, Lisa Hodgetts² and Dongya Yang¹

1 Simon Fraser University, 2 University of Western Ontario

Archaeogenetic Insights into the Natural History of Muskox Populations on Banks Island, NWT, Canada

Muskoxen (*Ovibos moschatus*) play an important role in the diets and traditions of peoples living on Banks Island today as in the past. Archaeological and historical records suggest that muskoxen were once abundant on Banks Island and, despite drastic declines in the late nineteenth and early twentieth centuries, it is currently home to three quarters of the world's muskox population. It is not well understood whether human hunting influenced the size of muskox populations through time, or whether naturally-driven population variability influenced subsistence and settlement choices of human hunters on Banks Island. In an effort to better understand this question, this study uses ancient DNA data collected from well-dated archaeological sites to reconstruct the genetic diversity and population dynamics of muskox populations over the past 4000 years on Banks Island. The comparison of mitochondrial DNA from ancient muskox populations with modern ones will shed light on historic inter-population relationships and levels of contemporary gene flow within muskox populations. This represents a novel approach to understanding long-term changes in the abundance and dynamics of muskoxen on Banks Island. Such data can also be used in conjunction with traditional knowledge and other scientific analyses to better understand how fluctuations in muskox populations affected peoples in the past, as well as provide important time depth to modern biological studies.

[Current Approaches to Archaeology & Heritage Research in the Western Arctic and Lower Mackenzie Region](#) Friday, May 6 10:00

Roksandic, Ivan

University of Winnipeg

Early Connections between the Greater Antilles and Lower Central America

This presentation looks at the patterns of interaction in the Western Caribbean at the time of early migrations onto the islands in the Archaic period, with a special focus on potential links between Lower Central America and the Greater Antilles. A recent comparative study of ancient DNA has identified presence of the frequent Central American haplogroup A (rare in South America) in the osteological material from Canímar Abajo site (western Cuba). Circulation of some plant species also points to direct communication between those two regions: the presence of *pollo* maize, a variety absent in northeastern South America and Mexico, but present in Colombia and Lower Central America, has been documented in Puerto Rico, while a special toolkit used for processing of *Zamia*, an edible plant requiring special detoxification process, has not been identified in either northeastern South America or Mexico, but only in the Isthmo-Colombian area and the Greater Antilles. Furthermore, the practice of dental modification was discovered on pre-contact skeletal remains from Canímar Abajo, a practice previously not identified among Pre-Columbian Caribbean groups, but present in both Mesoamerica and Isthmo-Colombian region. Finally, analysis of pre-Columbian place names from Cuba found out that some toponyms from the western part of the island, commonly interpreted as Island Arawak or Warao, actually display recurrent morphophonological structures similar to Chibchan languages spoken in Lower Central America and Colombia. Several lines of investigation thus support the proposition of early connections between the Isthmo-Colombian area and the Greater Antilles

Roskowski-Nuttall, Laura
University of Calgary, and Stantec

Bridging the Gap between Cultural Resources Management and Academia: A Consultant In Residence's Perspective

Archaeology as a discipline was initially conducted by academics who investigated only the most significant sites. Over time, government bodies recognized the heritage value of archaeological sites to their citizens, and began requiring industry to conduct archaeological assessments to mitigate impacts to known sites and to identify new sites of varying significance. Thus, the need for the archaeological consultant was born. More recently, Traditional Land Use sites have also received protection and a rise in Traditional Knowledge studies has logically followed. As the disciplines of archaeology and Traditional Knowledge become increasingly regulated by local governments, they have grown away from their academic roots, leaving students without much guidance in the consulting careers offered by Cultural Resources Management. Today there is a growing trend in Canada to reacquaint academia and consulting. This talk will present the successful results of the University of Calgary's first steps toward bridging this gap.

[Contributions from Cultural Resource Management](#) Thursday, May 5 16:40

Royle, Thomas C.A. and Dongya Y. Yang
Ancient DNA Laboratory, Department of Archaeology, Simon Fraser University

Ancient DNA Analysis of Fish Remains from Charlie Lake Cave (HbRf-39), British Columbia, Canada

Excavations of Charlie Lake Cave (HbRf-39) in northeastern British Columbia, Canada, have recovered well-preserved faunal remains from stratified deposits that span the Late Pleistocene and Holocene. These faunal remains represent a variety of taxa, including amphibians, birds, fish, mammals, and reptiles. A previous morphology-based analysis of the fish remains from the site (n=1,235) identified the majority of the fish remains as sucker (*Catostomus* sp.) (n=669). Due to bone fragmentation and other challenges associated with morphology-based species identification, only a small number (n=20) of the remains were identified to the species-level while a large number were simply identified as fish (n=465). To facilitate the identification of more of these fish remains to the species-level, we used ancient DNA analysis to assign species-level identifications to a sample of fish remains from Charlie Lake Cave. These data will aid in investigating temporal changes in the species composition of the assemblage of fish remains from Charlie Lake Cave. In addition, we sought to use ancient DNA analysis to document temporal changes in the population structure of the fish species represented at the site. By documenting these kinds of temporal changes, this research can potentially shed light on the dynamics of the complex relationships between fish, people, and the environment over the *longue durée*.

[Molecular Anthropology and Bioarchaeology](#) Thursday, May 5 9:20

Sattler, R.A.¹, T.E. Gillispie.¹, N.A. Easton², C. Thomas³ and A.M. Younie¹
1 Tanana Chiefs Conference, 2 Yukon College, 3 Yukon Government Archaeology Programme
A River Runs Through It: The Archaeology of a Trans-National River Corridor

The Upper Yukon River canyon (UYRC) is a geographic corridor between the lowland river basins of Interior Alaska and the Northwest Coast and conforms to a borderlands region in Eastern Beringia. The late prehistoric record indicates cultural connections between the riverine environment of the UYRC and the Northwest coast. A series of 50 radiocarbon dates on cultural components from sites located generally between Dawson City (Yukon) and Circle City (Alaska) range between c. 14,000 cal BP to present and offers a first-approximation understanding of cultural occupation in the riparian zone. Multiple dated components at the David Site (located downstream of the international border) provide a view of cultural dynamics in the floodplain of the Yukon River beginning in the early Holocene. Temporal gaps during both White River ash events suggest differential periods of local abandonment and reoccupation. Geochemical tracing of obsidian toolstone in components at the David site and in the general region indicate a broad swathe of prehistoric movement of people and trade through this inland waterway beginning with Denali microblade-bearing peoples around 9,000 cal BP. Borrowing from the geological record of the Yukon River flood history, dated terrace sequences in the riparian zone offer proxy records for the discovery of buried archaeological deposits. The geographically constrained valley through the UYRC provides a multidimensional record of human adaptation to the riparian environments of the Yukon River borderlands.

[Beyond Little John: The Archaeology of Borderlands](#) Thursday, May 5 11:40

Schwarz, Fred and Corey Hutchings

Stantec

Tshiashkunish 2 (FfCi-02) Locus B: Excavation of an Historic Innu Earth-Walled Tent-Ring in central Labrador

The “earth-walled tent-ring” is a characteristic and highly-visible feature of nineteenth and twentieth-century historic Innu habitation sites in northern Ntessinan (Labrador-Ungava). Features of this type were first identified archaeologically by Thomas Lee at Fort Chimo (Kuujuuaq), northern Quebec, in the 1960s. Since then, numerous examples have been recorded at sites in the barren or sparsely-wooded terrain of northern Labrador and Quebec. Relatively few of these features have been excavated, and fewer still have been recovered in their entirety. While earth-walled tent-rings are abundant on northern Innu sites, until recently no comparable features had been recorded or excavated anywhere in southern or central Labrador.

However, in 2015, a Stantec team completing archaeological recovery for Nalcor's Lower Churchill Hydroelectric Project commenced excavations at Tshiashkunish 2, a large, predominantly pre-contact, site on Gull Lake, within the Muskrat Falls reservoir area. During the course of this work, the first earth-walled tent-ring feature to be recorded in the region was identified at one locus. Excavation of this tent-ring yielded an assemblage of late nineteenth or early twentieth-century artifacts.

This paper presents the results of this excavation, compares the evidence recovered with that from northern earth-walled tent-ring sites, and explores the significance of this discovery. The Innu use of earth-walled tent-rings in central Labrador may have implications for our understanding of historic Innu land-use in the region, and also for the archaeological identification of historic Innu sites in low-visibility forested settings.

[From Across the Land - Contributed Papers](#) Friday, May 6 8:20

Seibert, Jeff

Ontario Ministry of Transportation

Collaborative approaches to archaeological site avoidance strategies: examples from MTO archaeological practices

As archaeological and cultural resource management practices change and evolve, there has been an increasing move towards implementing partial avoidance mitigation strategies for significant archaeological sites. In Ontario the pressure to make this change has come from a number of directions and sources, including from First Nations groups and stakeholder groups looking to preserve archaeological sites, the Standards and Guidelines for Consultant Archaeologists and other MTCS policy and practice documents which encourage site preservation and financial pressures like the desire to spend tax dollars more efficiently. Provincial bodies which administer large areas and or quantities of assets which contain archaeological resources, like the Ministry of Transportation (MTO) are particularly engaged with these practices, and have to constantly seek to find the balance between cost and benefit in the management of cultural heritage resources, including archaeological sites. Determining what constitutes a “significant” site, determining what level of impact is acceptable to sites, and where the cost-benefit analysis of avoiding excavation versus significantly altering the design of projects lies are at the core of this pursuit for MTO. In addition, MTO and other Provincial bodies are tasked with consulting meaningfully with First Nations groups in an attempt to find solutions to these problems. This paper seeks to explore these questions, drawing specific examples from projects related to highway design and asset management on MTO projects in Central Ontario.

[Contributions from Cultural Resource Management](#) [Thursday, May 5](#) [15:40](#)

Sellars, Ian and Morgan Ritchie

Inlailawatash

Barnet and Caraholly Point: Broadening the ‘View from the Inlets’

Barnet and Caraholly Point (DhRr-374 and 17) are two shell midden sites located in Port Moody Arm, Burrard Inlet, British Columbia. Research at Caraholly Point began in the 1970s with a large scale but unpublished excavation project. The nearby Barnet site was first recorded last year. In this talk I will outline the methods and results of limited excavation at both of these sites in 2015. These new faunal, lithic, soil, and radiocarbon analyses broaden our understanding of Coast Salish interaction in the Burrard Inlet and provide contrasting assemblages from which to evaluate village and resource procurement sites.

[Current Research in British Columbia](#) [Saturday, May 7](#) [14:00](#)

Shuttleworth, Laura¹, Angela Lieverse¹ and Hugh McKenzie²

1 University of Saskatchewan, 2 MacEwan University

Dietary variability, mobility, and mortuary treatment in the Early Bronze Age of the Little Sea Region in Cis-Baikal, Siberia

The Little Sea region of Lake Baikal, Siberia is unique in its abundance of mortuary archaeological and skeletal material. Previously published analyses of nitrogen ($\delta^{15}\text{N}$), carbon ($\delta^{13}\text{C}$) and strontium ($^{87}\text{Sr}/^{86}\text{Sr}$) isotopes from Early Bronze Age (EBA; 5200/5000-4000 cal. BP) hunter-gatherer skeletal remains in this region show two main diets: game-fish (GF) and game-fish-seal (GFS) that are in part based on patterns of

mobility: local and nonlocal. In the last few years, researchers have found that local individuals subsisted almost exclusively on the GFS diet, while non-locals subsisted almost equally on both. Previous analyses of mortuary archaeological data has shown that several unique mortuary protocols were followed among contemporaneous burials at the inter- and intra- cemetery levels. These data had yet to be fully synthesized with diet and mobility, as bioarchaeological data and archaeological data had often been published more or less separately. The research presented here examined all published data from four cemeteries in this region in order to investigate possible relationships between diet, mobility, and mortuary treatment. These results further illuminate mortuary treatment among Siberian hunter-gatherers through an individual life histories approach, while demonstrating the variability of life and death among circumpolar hunter-gatherer groups.

Poster

Smith, Heather

Center for the Study of the First Americans, Texas A&M University

The transmission of fluted-point technology in the ice-free corridor: a morphological investigation of variability in the region using geometric morphometrics

The Northern Fluted-point complex represents a cohesive projectile-point technology in northern Alaska and northern Yukon and appears to form part of an adaptive strategy characterized by bifacial technology, large-mammal hunting, schedule-driven mobility, and brief site use, similar to that of late Paleoindians in the North American plains. To investigate the origins of fluted-point technology in the Arctic, a geometric morphometric shape analysis was used to identify major factors of variability in fluted projectile-point morphology from both buried and surface sites in northern Alaska/Yukon, the Ice-free Corridor, the Great Lakes area, as well as Great Plains Folsom, and Clovis specimens. Results demonstrate contrasting shape information in the Ice-free Corridor sample suggesting a large degree of variability present in the region, which is likely made up of a variety of typological specimens possibly spanning over 2,000 years of fluted-point use. This paper presents the results of the shape analysis and complementing multivariate statistical evaluation. Discussion focuses on the major factors of variability in the Ice-free Corridor, which reflect the presence of Clovis-point morphology in the early deposits of the central Corridor as well as specimens from the Great Lakes region and Folsom at other sites. Conclusions address the transmission of fluting information into the Corridor and the technology's adaptive context in late-glacial Arctic and Subarctic ecosystems.

Recent Research in the Western Subarctic

Friday, May 6

15:20

Soucey, Kristin

Altamira Consulting Ltd. (a division of Circle CRM Group Inc.)

Application of LiDAR imagery for managing forestry HRIAs in north-central Alberta

For the past 10 years Altamira Consulting Ltd. has been conducting pre-impact forestry HRIAs for forestry companies based in and around Whitecourt, Alberta. Areas for survey were initially selected based on 1:50,000 topographic maps, 1:20 contour data, distance to water sources and proximity to known archaeology sites. However, since 2011, desktop assessments have been heavily influenced by newly available bare-earth LiDAR imagery. The purpose of this paper is determine if the use of LiDAR imagery has significantly altered

the selection of shovel test areas, and if new archaeology site identification has increased since LiDAR imagery has been used to guide in-assessments.

[Contributions from Cultural Resource Management](#) Thursday, May 5 9:00

Spearing, Whitney K and. Johnathan H. Grieve

Stantec

Baker Creek or Baezaeko: Geochemical Analysis of Fine-Grained Volcanic Lithic Artifacts from the Interior Plateau of British Columbia

The purpose of this paper is to present the results of portable X-Ray Fluorescence (pXRF) analysis on 66 fine-grained volcanic (FGV) artifacts from archaeological sites on the Interior Plateau of British Columbia. The sampled artifacts were predominantly collected during cultural resource management projects conducted within the Quesnel Forest District (QFD). Prior geochemical research and subjective visual analysis suggest that two distinct types of FGV were primarily utilized for lithic tool production within the QFD. We argue that these two types of FGV are also identifiable within our pXRF sample, and have assigned a preliminary geochemical fingerprint for each using trace element analysis. We offer a comparison between our results and two previously analysed sources of FGV from within the Interior Plateau.

[Geochemical Analysis in Archaeology](#) Friday, May 6 14:00

Speirs, K.

Lakehead University

Organic Residue Analysis of Pre-Contact Small and Miniature Pottery: A Multi-Proxy Approach

Small and miniature ceramic vessels are common in North American archaeology, however, they have not often been the focus of study. They are variously interpreted to be mortuary/ceremonial vessels, practice pots, toys, bowls, cups and even incorrectly labeled as pipes. Using multiple analytical techniques, residues recovered from museum specimens were analyzed to evaluate scientific methods for inferring their use and function.

Techniques used include microscopic examination, scanning electron microscope (SEM), gas chromatography coupled mass spectrometry (GC-MS), biochemical tests, and microfossil analyses. The research is non-destructive in approach, and tailored to address the fact that many specimens have been curated and held in museums for some time.

[Poster](#)

Steuber, Karin¹, Tomasin Playford² and Biron Ebell²

1 Saskatchewan Archaeological Society and University of Saskatchewan, 2 Saskatchewan Archaeological Society

Saving the Best 'til Last (day in the field): The Farr Site Community Archaeology Project

Over 30 years ago, Biron Ebell reported the existence of a probable Cody Complex site near Ogema, Saskatchewan, situated about 100 km south of Regina. Since then, numerous artifacts have been recovered and a discrete scatter of bison faunal remains identified. Like most Palaeoindian sites in the region, the Farr site had been recorded as a surface collection with artifacts and observed features exposed by cultivation, wind and water erosion. In 2014, the Saskatchewan Archaeological Society worked with Mr. Ebell to

develop a community-based research program for the site. The goals of the project were to establish site boundaries, survey and map artifact and feature distributions, establish site integrity, confirm site age and interpret the site within the context of Palaeoindian occupations on the northern plains. Local school groups, members of the local community and the general public assisted with pedestrian surveys, shovel testing and full-scale excavations in 2015. We also partnered with the University of Saskatchewan's Department of Archaeology and Anthropology to create a digital map of the site. This presentation will report on the results of the 2015 field season and showcase the community involvement in the project.

[Archaeology in the Public Sphere](#) Saturday, May 7 13:40

Sullivan, Kristian, Jody Pletz, and Grzegorz Kwiecien
Taiga Heritage Consulting Ltd.

The Peace River Before Dunvegan: Excavating a Boreal Forest Multicomponent Site in Alberta

Few deeply stratified archaeological sites in the boreal forest of Alberta have been investigated in any significant detail. GIQp-1 is a deeply stratified, multi-component site located on the Peace River near Fort Dunvegan, one of the earliest fur trade forts in northern Alberta. First recorded in 1964, the site is of interest for its components that predate the establishment of the fort. Taiga Heritage, as part of a development-driven project, conducted Stage I excavations at GIQp-1 in the summer of 2015. Twenty square metres of excavation yielded almost 6,000 artifacts and uncovered eight distinct cultural layers identified up to 1.8 m in depth. In addition, the site contained exceptional preservation of organic material. Radiocarbon reports of this material date the site as old as 2,200 years B.P. GIQp-1 has the potential to offer significant insight into the Late Middle Period of Alberta's boreal forest.

[Contributions from Cultural Resource Management](#) Thursday, May 5 14:20

Supernant, Kisha
University of Alberta

An archaeological exploration of Métis ethnogenesis and daily life on the Canadian Prairies, 1840-1880

Ethnicity and the emergence of new cultural identities are central concepts in anthropological inquiry but are inherently difficult to trace in the material culture of past societies. The Métis of Canada present an interesting case study of how new identities emerge from the crucible of contact. In the late 18th and early 19th century, a group of individuals and families of mixed heritage became a distinct "new" people unique from their European and First Nations neighbours. Their story of ethnogenesis has been told via historical texts in the context of contemporary struggles for rights and recognition, but archaeological perspectives on the western Métis are not as common. In this paper, I review the history of archaeological research on the Métis, identifying central issues to an archaeological approach to the Métis, including the complex relationship between material culture and the processes of identification, the question of whether Métis were using lithic stone tools, the scope of Métis land use in the Canadian west, and the unique ways in which Métis people created a cultural landscape. Using previously collected data and new data from recent excavations of Métis overwintering sites, I query whether material culture

types can be indicative of Métis ethnic identity, arguing that a holistic view of Métis lifeways must inform an archaeological understanding of the multiplicity of identities expressed materially by 19th century Métis people.

[Interpreting Ethnicity in the Archaeological Record](#)

Thursday, May 5

15:20

Surmely, Frédéric¹ and Jay Franklin²

1 DRAC Auvergne et GEOLAB (CNRS) - Clermont-Ferrand, France, 2 East Tennessee State University

Medieval architecture in the volcanic mountains of the Auvergne (France)

Our research is situated in the Massif Central, specifically the volcanic mountains of the Auvergne. We explored two areas, one in the northwest, the Sancy, and the other in the southwest, the Cantal. Both are plateaus with an average altitude of 1100m. The climate is harsh, with low temperatures, strong winds, and abundant rain and snow. We conducted multidisciplinary and diachronic investigations combining archaeological, historical, and palaeoecological approaches. We found a polymorphic pattern in scattered habitats, isolated houses and crofts gathered in small hamlets sharing the same territory and used as permanent dwellings between the end of the Xth and the middle of the XIIth centuries. This habitat is situated below 1285m, the cultivable limit. Houses were semi-subterranean. Rubble from soil excavation was stacked outside against the building as an earthwork bank, and the walls rested directly on the rock. Walls were thick and built of dry stone. There was no lack of building materials on these volcanic soils. In a vast majority of cases vegetation was used as roofing material. In one site the roof was consolidated by large stone slabs. A long corridor, straight or curved, whose length could go beyond 7m, sometimes preceded the entrance. In one site houses were semi-attached. If this was done to enforce the buildings, the main cause was to insulate against the cold and the wind. The configuration of the earthwork banks and curved corridors makes the Massif Central buildings unique as they are not found in other areas of France.

Architecture médiévale dans les monts d'Auvergne (France)

Notre zone d'études se situe dans le Massif central et plus précisément dans les montagnes volcaniques de l'Auvergne. Nous avons étudié deux secteurs, l'un au nord-ouest (massif du Sancy) et l'autre au sud-ouest (Cantal). Les deux zones sont des plateaux volcaniques avec une altitude moyenne de 1100 m. Le climat est particulièrement rude, avec des températures basses, des vents forts et des précipitations abondantes. Depuis 2000, nous avons engagé une étude diachronique et pluridisciplinaire, associant archéologie, archives et aléoenvironnement. En ce qui concerne le Moyen-Âge, nous avons découvert un semis de sites, composé de fermes isolées et de petits hameaux, distribués sur le même territoire et occupés de façon permanente à l'année entre la fin du Xe siècle et le milieu du XIIe. L'habitat a été localisé en-dessous de 1285 m, limite de la zone cultivable. Les maisons étaient semi-enterrées, avec les murs posés directement sur le substrat et les déblais étant disposés à l'extérieur des murs pour constituer d'épais bourrelets protecteurs. Les murs étaient épais et constitués de pierres sèches, matériau abondant dans les montagnes volcaniques. La couverture était végétale, mais, dans un site, elle avait été renforcée par des dalles en pierre. Parfois, dans les deux zones, l'entrée était précédée d'un long couloir courbe, pouvant atteindre 7 m et s'ouvrant du côté protégé des intempéries. Sur un site, les maisons étaient accolées. Si tout ceci peut avoir favorisé la solidité des constructions, la

raison principale est assurément la recherche d'une protection contre le froid et le vent. L'aménagement de ces épais bourrelets de terre et de ces couloirs courbes reste une particularité des montagnes auvergnates et n'a jamais été observé ailleurs en France.

[On the Edge: European Adaptations to Life on the Periphery](#) Friday, May 6 13:20

Sutherland, Patricia¹ and Peter H. Thompson²

1 University of Aberdeen, 2 Peter H. Thompson Geological Consulting Ltd

Material and Meaning: Honing in on the Avayalik Islands

In 1980 Richard Jordan published a paper on Dorset art from Labrador, in which he discussed a small rectangular block of Ramah chert that had been found in association with Middle and Late Dorset material from the Avayalik Islands in northern Labrador. Jordan described the artefact as having been “ground and polished with almost machine-like precision” and as being unique in the eastern Arctic. He suggested that it was non-utilitarian and may have functioned in a mortuary context. This specimen was re-examined as part of the Helluland Archaeological Project’s re-assessment of Dorset collections. Comparative analysis has shown that the form of the specimen is consistent with rectangular prismatic whetstones characteristic of Norse technology. Examination of the specimen’s surfaces using scanning electron microscopy has revealed traces of smelted metals, typical of the pattern found on hones from Norse Greenland and from Canadian Arctic sites that contain other evidence of an early European presence. Petrographic analysis that was undertaken supports the conclusion that the Avayalik hone was made from Ramah metachert. This paper discusses the evidence and explores the implications of an early European artefact type made from Labrador stone, including trade and/or European knowledge of local resources.

[Papers in Honour of Raymond Le Blanc](#) Saturday, May 7 14:00

Szpak, Paul

University of British Columbia

Long-term Baselines for Assessing Ecosystem Change in the Canadian Maritime Arctic

The Arctic is a region that is particularly sensitive to climate change, but predicting impacts on marine ecosystems is challenging because we lack sufficient comparative historical baselines. The work presented here summarizes ongoing research that makes use of stable isotope analyses of marine mammals from archaeological sites in the Canadian Arctic to document regional and temporal ecological variation in hopes of developing long-term baselines. These data have the potential to contribute to a more detailed environmental background with which to interpret human subsistence and settlement patterns in the region.

[Environment, Climate, Ecology and Archaeological Contributions to the Discussion](#)

Thursday, May 5 11:20

Taylor-Hollings, Jill

Lakehead University

Bringing Stories Full Circle: Archaeology as Informed by Anishinaabe Traditional Knowledge and Environmental Science in Northwestern Ontario

Archaeological projects completed in the central Canadian boreal forest offer an opportunity to combine different evidentiary lines in discovering a better understanding of the past: a 9,000 year archaeological record; detailed ethnohistoric sources; ethnographic information; and the possibility of local traditional knowledge by working together with Indigenous experts. Since 2003, archaeological collaborations have taken place with Ontario Parks as well as Lac Seul and Pikangikum Anishinaabe First Nations in their traditional lands along the Miskweyaabiziibi (Bloodvein River) within Woodland Caribou Provincial Park. Through mutually respectful work, partnerships developed on a basis of equality and combining information from different epistemologies (Indigenous ways of knowing, archaeological perspectives, and natural resource management expertise). It was particularly enlightening to see the sharing of information between partners, with Elders and community members providing insightful (and some unexpected) interpretations of artifacts with considerable antiquity, site locations, and how the land was occupied. Ontario Parks employees also provided site leads and scientific as well as park visitor information. Research benefits include cultural pride in learning about ancient Indigenous sites, a results-based web site geared towards youth, and tangible information for ongoing land use planning including the Pimachiowin Aki World Heritage site nomination. Some examples will be shared to highlight the benefits of working in the Canadian boreal forest and within community archaeological contexts.

[Papers in Honour of Raymond Le Blanc](#) [Saturday, May 7](#) [14:20](#)

ten Bruggencate, R.E¹, S.B.Milne², R.W.Park¹, D.R. Stenton¹ and M.Fayek³,
1 Department of Anthropology, University of Waterloo, 2 Department of Anthropology, University of Manitoba, 3 Department of Geological Sciences, University of Manitoba

Open-source GIS modeling of mobility networks on southern Baffin Island

Southern Baffin Island has been occupied for several millennia, but its size, coupled with the difficulty of linking identified inland archaeological sites with coastal occupations, makes modeling ancient seasonal mobility across the region through traditional GIS-based approaches impractical. We have developed a method using exclusively open source materials that combines weighted multi-criteria cost surface analysis with a watershed function to create a network of potential non-winter travel pathways covering the study area. We evaluate the predictive utility of the resulting pathways for future archaeological survey by assessing their spatial relationship to known archaeological sites. The results of this comparison suggest that elevation and land cover costs should be augmented with other environmental and cultural criteria to more accurately model past mobility in this region.

[From Across the Land - Contributed Papers](#) [Friday, May 6](#) [9:00](#)

ten Bruggencate, R.E¹, S.B.Milne², M.Fayek³, R.W.Park¹ and D.R. Stenton¹
1 Department of Anthropology, University of Waterloo, 2 Department of Anthropology, University of Manitoba, 3 Department of Geological Sciences, University of Manitoba

Connecting the dots: reconstructing Paleo-Inuit pathways on southern Baffin Island using chert geochemistry and least-cost pathway analysis.

Paleo-Inuit lithic assemblages recovered from both coastal and inland locales on southern Baffin Island are mostly made from chert. Ordovician limestone formations in the region's interior host the only documented sources of chert in the area. This uneven distribution of

lithic resources likely contributed to a pattern of coastal-inland mobility that continued throughout the Paleo-Inuit period in this part of the eastern Arctic. Using ICP-MS, we characterize two chert sources in the interior of southern Baffin Island, LbDt-1 and LdDx-2, and a sample of debitage from KkDo-3, a Paleo-Inuit site located at the head of Frobisher Bay. Results of this analysis indicate that toolmakers at KkDo-3 exploited chert from LbDt-1, along with at least one other, as yet uncharacterized source. We use a multi-criteria mobility cost surface to predict a least cost pathway between LbDt-1 and KkDo-3 as a first step to reconstructing routes of seasonal coastal-inland travel.

[Geochemical Analysis in Archaeology](#) [Friday, May 6](#) [15:20](#)

Thomas, Christian¹ and Margarita de Guzman²

1 Yukon Government Archaeology Programme, 2 Altamira Consulting Ltd. (Circle CRM Group)

Early human occupation in the Britannia Creek valley: Archaeology at Britannia Creek

In June 2013, Altamira Consulting conducted exploratory excavations at six sites in the Britannia Creek Valley. One site, KfVi-3, proved to be highly significant in terms of size and age. Preliminary analysis shows KfVi-3 to be a large, multi-component site consisting of microblades, cores, bifaces, and scrapers, with over 600 pieces of debitage and 1,000 fragments of bone. Radiocarbon dating indicates KfVi-3 is approximately 13,000 years old, making it one of the oldest sites in the region. This paper will present the results of the excavations, and provide a preliminary context for which sites of this age can be investigated, as well as give updates on other research that has been conducted to date at the site.

[Recent Research in the Western Subarctic](#) [Friday, May 6](#) [13:20](#)

Thompson, Lenore and R.C.P. Doonan

University of Sheffield

Writing Artefact Biographies: A Study of Copper Use and Culture Contact in the Pacific Northwest

This study explores the potential of copper metal artefacts to inform the investigation of cultural contact amongst the First Nations communities of the Pacific Northwest, and colonial explorers and traders in the late 17th to early 19th century. Prior to and throughout the contact period indigenous communities considered copper metal and artefacts to be powerful, animate, and tied to wealth and social prestige. Within this study traditional narratives and ethnographic accounts of indigenous copper artefacts, coupled with a detailed investigation of individual objects, are used to develop a biographical approach to this material. Analyses include the identification of fabrication, repair, and maintenance strategies, and the material characterisation of copper alloys. Comparative analysis is undertaken on compositional data from individual indigenous artefacts of copper native to the Pacific Northwest, and European copper alloy artefacts dating from the colonial period, to establish patterns of resource perception, material choice, and use. Artefact biographies place the object, and the relationships in which it was and is entwined, at the centre of the analysis. Biographies constructed in this way focus on the materiality of the object, making it possible to note how particular movements of and associations with materials, objects, and assemblages are bound up in the broader actions and decisions of

individuals and communities. Thus, it is argued that copper provides the opportunity to narrate changing social, economic, and political aspects of Northwest Coast indigenous culture through the contact period.

[Ancient Metals and Metallurgy](#) Thursday, May 5 15:40

Timmins, Peter

Timmins Martelle Heritage Consultants and Western University

Inverhuron Revisited: Recent CRM Investigations at Inverhuron, Ontario

In the 1950s avocational archaeologist Fritz Knechtel discovered several important archaeological sites near Inverhuron, Ontario, on the eastern shore of Lake Huron. Early professional investigations conducted by Tom Lee, J.V. Wright, Walter Kenyon and Peter Ramsden revealed rich Archaic and Woodland occupations associated with raised beaches, overlain by an extensive dune field. In 2014 a proposed infrastructure project provided an opportunity to attempt to re-locate and test several of Knechtel's sites. This paper presents the results of this project and discusses the challenges of conducting an archaeological assessment in an area of raised cobble beaches and shifting sand dunes overlain by recent road and cottage development. Despite the recent development in the area, portions of four previously documented sites were found under up to two meters of windblown sand and road fill. Mitigative excavations on portions of three of these sites revealed that they show variable preservation but still contain intact buried cultural deposits.

[Contributions from Cultural Resource Management](#) Thursday, May 5 11:40

Venovcevs, Anatolijs

Memorial University of Newfoundland

A Matter of Perspective: Rethinking Periphery through Transience and Seasonality

This paper calls for a redefinition of words such as “peripheral” or “marginal” when applied to the study of areas and landscapes. Scholars must be cognizant when using those terms as they are often applied uncritically to both geographical spaces and the people and traditions that occupied them. Instead, a new, narrower and more critical usage of those terms is needed. Using a case study of winter housing — a transhumant tradition that poor European fishers practiced in rural, historic Newfoundland — the author demonstrates that forested near-shore areas that lay on the economic and settlement margin during the summer season were the centre of activity and occupation during the winter. Transience, dispersion, and pluralism dominated the economic strategies of this environment and the tasks carried out within it contributed to the economic sustainability of fisher families throughout the entire year. In essence, the economic activities within Newfoundland’s peripheral landscapes sustained the core life ways in these isolated, rural communities. A discussion of the seasonal fluctuations between the periphery and the core is carried through to the understanding of settlement patterns around the island and how this flux allowed Euro-Newfoundlanders to survive on the edge of the expanding European capitalist world system.

[On the Edge: European Adaptations to Life on the Periphery](#) Friday, May 6 15:40

Vickers-Redhead, Ben¹ and Gary Brewer²

1 Ecofor Consulting Ltd., 2 British Columbia Archaeology Branch

Paleo-Environmental Change as an Indicator of Cultural Change? 10 000 years of Culture Change and Environment in the Peace River Drainage of British Columbia and Alberta

The Peace River region of northeast British Columbia and northwest Alberta is a unique region exhibiting over 10 000 years of human occupation. Throughout this time, periods of cultural overlap, intrusion, and dominance are demonstrated, facilitated by the region's capacity as a natural travel corridor enabling movement west to the Rocky Mountain Trench, north to the sub-arctic and arctic, and east to the northern extension of the Great Plains. This paper serves to present a preliminary exploration and analyses of the interplay between past climatic conditions and the presence, overlap, and intrusion of various cultural influences from the aforementioned regions. We attempt to begin to elucidate the drivers behind these periods of cultural overlap, intrusion, and dominance by examining this interplay through merging site data from reliably dated sites in the region with available paleo-environmental data and discussing the results in the context of the region's overall chronology. Investigating the potential role climatic conditions may have served in determining and influencing the dominant cultural trends in the region, as well as periods of overlap and intrusion, highlights the archaeological significance of the region and is the first step in improving the current archaeological knowledge of the region. In addition, it also serves as an appropriate foundation upon which future research can be based.

[Recent Research in the Western Subarctic Friday, May 6 13:40](#)

Waber, Nick

University of British Columbia

Wireless Lithics: An Open Hardware Approach to Stroke Quantification and Replicability in Lithic Use-wear Experiments

Use gesture is an integral aspect of any technology, yet it is one of the most poorly understood and most under-recorded components of many lithic use-wear experiments. In experimental contexts, task-related gestures are most often glossed under the catch-all term "stroke", and are counted, and then compared to other "strokes", often without any further definition. This paper proposes a method for recording and measuring "strokes" in an objective, replicable manner. Using a combination of a "lithic odometer" use-life index and a hand-held Arduino-based digital force gauge, it is possible to precisely quantify what constitutes a "stroke", and what the "strokes" mean regarding a tool's use-life history.

[Current Research in British Columbia Saturday, May 7 13:40](#)

Wagner, Stephen C. and Tommy Y. Ng

Bison Historical Services, Ltd.

Impact Assessment in a Tipi City: Cultural Resource Management Contributions to Understanding a Cultural Landscape

Although data recorded for cultural resource management projects are often regarded as purely descriptive, they can be presented in a way that adds value to landscape-oriented research questions, with little to no changes to the field methods being required. It is the organization of that data that can aid or hinder broader interpretation. This can be demonstrated using a recent example of a Historic Resource Impact Assessment near the Sundial Medicine Wheel in Alberta. Located near the Travers Reservoir on the Little Bow

River, the medicine wheel is located on a hill surrounded by a large number of sites. These sites have been identified, revisited, and modified through a large number of cultural resource management and research-oriented projects over the past 50 years. Most of these sites possess stone features, which are often the indicators used as boundary determinations for these sites. A recent development-driven CRM project within a portion of this area involved revisiting 19 of these sites, as well as identifying three new sites. These were recorded using standard attributes for stone features, including stone depth, feature size, and the number of visible stones. Assuming spatial and temporal relationships between neighbouring sites, we use these attributes to discern spatial differentiation within the landscape.

[Contributions from Cultural Resource Management](#) [Thursday, May 5](#) [11:20](#)

Walker, Samantha Leigh

McGill University

Hunter-Gatherer Cemeteries and Land-Use Patterns: A Case Study from the Trent Valley, Ontario

Understanding the origins of the earliest cemeteries among social foragers remains an understudied research area in hunter-gatherer archaeology. Drawing on evolutionary ecology, one potential explanation for the emergence of such cemeteries is that they are a product of resource competition, and functioned to confirm and maintain ancestral ties to critical resources. This paper offers a framework for testing this hypothesis through a case study of Late Archaic and Middle Woodland cemeteries in the Trent Valley region of Ontario. By focusing on the ecological context of local wetland-based foraging, it was possible to develop a set of environmentally-based predictions for cemetery locations. Accordingly, a GIS-based locational analysis was used to determine if the placement of the Trent Valley cemeteries correlates with certain environmental characteristics that would reflect the presence of valuable resources unique to these locations. The analysis reveals that ancient cemeteries in the Trent Valley were located near seasonal riparian wetlands, which offers the potential advantage of being able to secure wild rice and the variety of fauna associated with such environments. Overall, the integration of paleoecological, archaeological, and ethnographic data for this region offers a strong body of evidence to suggest that Late Archaic and Middle Woodland foragers in the Trent Valley strategically constructed cemeteries to establish and maintain tenure of wetland resource locations.

[From Across the Land - Contributed Papers](#) [Friday, May 6](#) [9:40](#)

Wei, Xuan and Megan Brickley

McMaster University

Identification of Elderly Individuals in Bioarchaeology: A Pilot Study on the Romano-British Collection from Lankhills, UK

Elderly people form an important part of both current and past societies, however, they are understudied in bioarchaeology. This phenomenon is multifactorial, but the key reason is that current age estimation techniques cannot effectively pick out those in advanced age, other than putting them in one open-ended category (50+ year). This pilot study uses a Romano-British sample (4th Century AD) of un-known age (n=243) to test the potential of using mandibular ridge resorption and the two “old age” traits described in transition analysis to identify the elderly. Mandibular ridge resorption is measured by mandibular

bone heights at each molar socket. The two “old age” traits, namely the breakdown of dorsal margin of pubic symphysis and extensive posterior exostoses on auricular surface, are scored following transition analysis manual. Mandibular ridge resorption was found to be negatively correlated with increasing age with the exception of first molars in females ($r = -0.209-0.302$, $p = 0.01-0.05$). The two “old age” traits both have a positive correlation with increasing age ($r_p = 0.292$, $r_d = 0.770$, $p = 0.001$). The correlation between “old age” traits and mandibular ridge resorption is more significant in males ($r = -0.301-0.436$, $p = 0.01-0.05$). It is clear that mandibular ridge resorption can aid in the identification of older individuals, and the two “old age” traits were demonstrated to be indicative of old age. However, skeletal preservation had a big impact on the survival of the “old age” traits. Further investigations using known-age samples are suggested.

Poster

Weinbender, Kim

Heritage Conservation Branch, Saskatchewan Ministry of Parks, Culture and Sport

Petite Ville: A Saskatchewan Métis Wintering Village

Métis culture evolved on the Western frontier as a fusion of First Nation and European culture. They are historically acknowledged as a significant force in the evolution of the provinces of Manitoba and Saskatchewan. This presentation will discuss the excavations of a Métis wintering village in Saskatchewan dating to the late 1860s/early 1870s. This is a time when the Métis buffalo hunters were forced to adapt to the disappearing bison herds and were redefining their identity and lifestyle, turning towards agriculture. One of the goals of the study was to find concrete evidence of this changing adaptation in the artifact assemblage. All site matrix was screened using window-screen mesh, making it the only (as of 2003) Métis site with an entirely fine-screened assemblage. The results provides insight into multiple aspects of the continuity of Métis culture during a time of change and interesting suggestions of how the Métis adapted a wintering village into an agricultural homestead.

[On the Edge: European Adaptations to Life on the Periphery](#) Friday, May 6 13:40

Werner, J. Jeffrey

University of Alberta

Hunter/Gatherer Responses to Glacial Climate During the African Middle Stone Age: Evidence From The Magubike Archaeological Site, Tanzania

Archaeological evidence suggests that the variability of early human behaviour increased significantly in Africa during the Middle Stone Age, most likely in response to changing environmental and socio-demographic conditions between approximately 280 and 30 thousand years ago. This observation is reinforced by well-studied sequences in many parts of Africa that show changes in social and technological organization coincident with the onset of arid glacial conditions during this period. However, the ways in which Middle Stone Age humans adapted to large-scale processes, such as climate change, almost certainly differed regionally in ways that have yet to be fully explored. This paper adds new evidence for Middle Stone Age behaviour from the Magubike archaeological site, Tanzania. Early analysis of the site demonstrates parallel transformations in lithic reduction intensity, raw material preference and technology, all of which appear to track deteriorating environmental circumstances during Marine Isotope Stage 4. This

presentation explores the possibility that these changes were stimulated by local manifestations of large-scale ecological and social forces which were active at the time and suggests avenues of future research.

[Contributed International Papers](#) Thursday, May 5 15:20

Wiebe, Matthea and Francesco Berna
Simon Fraser University

Microstratigraphic investigation of site formation processes at the Upper Paleolithic site of Manot Cave, Israel

Manot Cave, discovered in 2008 in western Galilee (Israel), produced the earliest fossil of an anatomically modern human found so far in the Middle East and Europe. It represents one of the richest Upper Paleolithic assemblages of the Levant.

The cave was sealed 33,000 years ago and to date the original entrance used by the Upper Paleolithic people has still to be accurately located. Archaeological material has been unearthed from the talus overlain the sloping cave floor. Several areas have been excavated and an intact block of archaeological deposits and control soil samples from the surroundings of the cave were collected for microstratigraphic analysis in an attempt to identify specific human activities and reconstruct site formation processes. Intact blocks were processed in petrographic thin sections and analysed by soil micromorphology and FTIR microspectroscopy. Our preliminary results indicate that the cave deposits as expected are classifiable as colluviated clay loam material rich in anthropogenic (wood ash and lithic and bone manuports) and biogenic material. Different colluvial fabrics are identified and their significance discussed.

[Contributed International Papers](#) Thursday, May 5 15:00

Woodward, Robyn and John Pollack
Institute of Nautical Archaeology

Patterns of Construction, Use and Abandonment of Stern Wheel Steamboats in the Yukon River Drainage

The 1896 Klondike Gold Rush in the Yukon Territory of Canada precipitated an unprecedented surge of shipbuilding along the West Coast of North America. In the following decades, more than 260 riverboats operated on the Yukon River, 131 of which were launched in 1898. Transiting the north Pacific to the mouth of the Yukon River on the Bering Sea and operating along the 2,200 miles of its navigable course was fraught with ever-changing natural hazards, intense competition between riverboat companies, major route changes due to new gold strikes along its tributaries or completion of rail linkages from population centers to the coast. As a result a large portion of the Yukon fleet was either wrecked or abandoned within two decades. This paper will examine the historical, economic and technological factors that resulted in a unique pattern of vessel abandonment in north-western Canada.

[Maritime Archaeology](#) Friday, May 6 11:00

Woywitka, Robin
Alberta Archaeological Survey

Bezya and beyond: northeastern Alberta archaeology since the 1980s

Ray Le Blanc served as a regional archaeologist during the halcyon days of the Archaeological Survey of Alberta in the early 1980s. Following a brief anecdotal overview of his time at the Survey, we turn our attention to northeastern Alberta, and the excavation of the Bezya site. This work is a hallmark of Ray's tenure at the Survey. The site yielded a microblade assemblage linked to the Denali Complex of central Alaska, and provided the first clear links between the oil sands region and more northerly archaeological complexes. Northeastern Alberta has undergone a massive transformation since the excavation of the site in the early 1980s. Extensive mining has captured international headlines, and the oil sands industry has become a political, economic, and social lightning rod. Behind all of this chatter, cultural resource management studies have recorded a rich archaeological record with temporal ties to the earliest Holocene, and cultural ties to the barren lands, Yukon/Alaska, and the Great Plains. The bulk of this paper summarizes developments in the oil sands region since Ray's time at the Survey, focusing on current understandings of the timing of human occupation, and the lithic technology people used in this part of the boreal forest.

[Papers in Honour of Raymond Le Blanc](#) Saturday, May 7 9:20

Yang, Dongya

Simon Fraser University

Ancient DNA Analysis as a Tool for the Study of Human Environment Interaction of the Past

The recovery and analysis of ancient DNA from archaeological faunal and floral remains have created new opportunities to use the more accurate genetic information to reconstruct life history of animal and plant species. Through case studies, this talk will demonstrate how ancient DNA can accurately identify faunal remains to species level to help gain critical information about species abundance in the past, and how DNA sequence analysis can be used to detect population size fluctuations and population genetic diversity changes of a species over time. These data can be critical for the establishment of baseline population estimates, habitat and environmental planning in the present.

[Environment, Climate, Ecology and Archaeological Contributions to the Discussion](#)

Thursday, May 5 9:40

Yesner, David¹, Vance M. Hutchinson², Lauriane Bourgeon³, Norman Alexander Easton²

1 University of Alaska Anchorage, 2 Yukon College, 3 Université de Montréal

Inter-site and Intra-site Patterning of the Late Pleistocene/Holocene Faunal Assemblage from Little John (KdVo6), a Multi-Component East Beringia Site in Yukon Territory, Canada

The Little John (LJ) site holds an extensive record of human occupation spanning 14,000 years ago to the recent past. Due to a combination of taphonomic factors (permafrost, calcareous soils, deep burial below loess, burning) the Late Pleistocene deposits are rich in culturally-derived faunal remains related to the economy of the early human occupants of the upper Tanana Valley of interior Alaska and the Yukon during the Bølling-Allerød, Younger Dryas (YD), and Early Holocene Hypsithermal climatic periods. Over the past decade, a series of analyses have been undertaken of the Little John fauna, including species identification, analyses of skeletal element distribution, and taphonomy of bone modification. These data suggest that early inhabitants of the Little John site focused

primarily on bison hunting, particularly in the Younger Dryas and post-YD period, although evidence of smaller game (especially hare) and waterfowl is present. Bison skeletal elements reflect all body parts and are highly localized in spite of permafrost-related and colluvial processes. Some bones are burned, and fire-hardening was apparently used to create expedient tools from bison bone. Taphonomic studies of skeletal element distributions link the LJ faunas to Alaskan Tanana River sites, especially the Broken Mammoth and Gerstle River sites, as a function of common subsistence and butchery practices. Although cut-marks are rare, long bone fragmentation follows similar patterns. All of these sites, in turn, show significant differences from cave sites such as Bluefish I in which carnivore and/or scavenger guilds were apparently more prominently involved in faunal assemblage accumulation and modification.

[Beyond Little John: The Archaeology of Borderlands](#) Thursday, May 5 10:20

Young-Boyle, Chandra
Ecofor Consulting Ltd.

Archaeological Cod Otoliths as Environmental Indicators

Through high resolution stable oxygen isotope analysis archaeological fish otoliths can serve as proxies for paleoclimate conditions and season of site occupation. By sampling along the distinctive sub-annular bands of the otolith and completing a stable isotope analysis ($\delta^{18}O$, $\delta^{13}C$), variations within the fish's environment can be identified. This research evaluates a micromilling methodological approach to extracting environmental data from archaeological otoliths through the analysis of cod otoliths from two sites on Kiska Island (the western Aleutians, Alaska). The integration of the otolith isotope values with radiocarbon dates obtained from the sites illustrates that climatic conditions play an integral role in the pattern of occupation on Kiska Island. This research also highlights the lack of temporal depth in existing fisheries data, demonstrating the value of archaeological data to inform modern management strategies.

[Environment, Climate, Ecology and Archaeological Contributions to the Discussion](#)
Thursday, May 5 11:00

Younie, A.M.¹, R.A. Sattler¹, N.A. Easton², J. Reuther³ and S.C. Coffman³

1 Tanana Chiefs Conference, 2 Yukon College, 3 University of Alaska Museum of the North

Advancing the Archaeology of Deadman Lake, Upper Tanana River: A Legacy Project for Bill Sheppard

William "Bill" Sheppard worked for many years on the borderlands surrounding the Upper Tanana River region, focusing his research on late prehistoric occupations along the Alaska Highway on Dineh village corporation lands and lands within the Tetlin National Wildlife Refuge (a large federal conservation unit of Dineh traditional lands). His untimely death in 2006 left behind a number of works in progress. With the encouragement of colleagues and relations with Dineh leadership, his legacy is advancing through the review of field documentation and archived archaeological collections, supplemented by new excavations to clarify the geological and archaeological stratigraphy in the region. In this paper we present the results of our efforts to summarize a series of middle to late Holocene archaeological sites on the shoreline Deadman Lake including geomorphic context, lithic technology, radiocarbon ages, obsidian and rhyolite sourcing, and superposition relative to a White River ash deposit. Working from Sheppard's initial testing, we have applied

modern methods of excavation and data recording to renewed field studies, confirming his initial discoveries of multiple occupations around the northern margins of the lake. Deeper testing indicates an older, higher lake stand dating to the early post-glacial period, broadening the temporal range of cultural site discovery. We also explore our attempts to cross borders through generations, from Bill's longstanding archaeological research goals, through archived museum collections, to the inclusion of college and high school student groups in archaeological learning.

[Beyond Little John: The Archaeology of Borderlands](#) Thursday, May 5 11:20

Younie, Angela

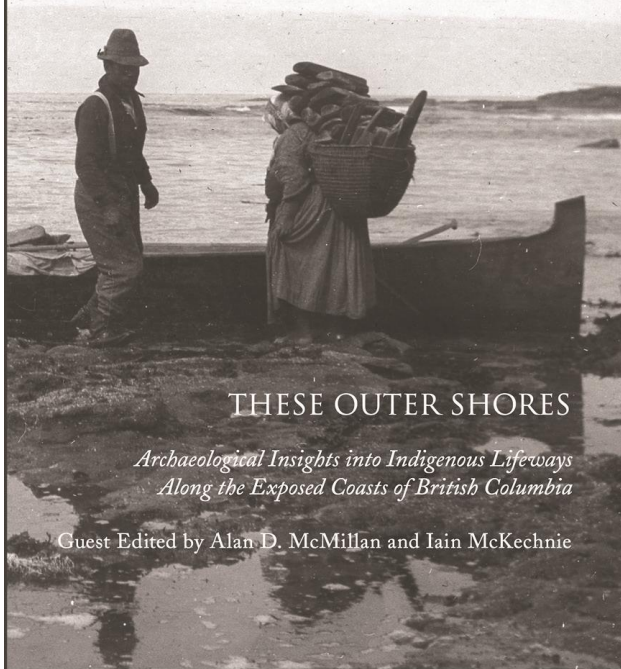
Tanana Chiefs Conference

Alberta to the Arctic: northern microblade technology and the work of Raymond Le Blanc

For over two decades of his career, Raymond Le Blanc taught at the University of Alberta, inspiring undergraduate students to a career in archaeology, and supervising many graduate students who have continued diverse studies in Arctic and Subarctic archaeological study. As one of these students, I worked with Ray from 2006-2008 to study microblade technology in northern Alberta, and trace its possible cultural origins from the Denali complex in Alaska. Since the discovery of the Bezya microblade site, and with the intensive archaeological study of the oil sands region in northern Alberta, a number of recent similar discoveries have spurred increasing interest in the connection to microblade traditions further northwest. Here, I will discuss our work to better delineate the character of oil sands microblade technology, and place it within the context of recent work in Siberia and Alaska. How do Alberta microblades fit in to research questions of human dispersals, cold-climate adaptation, and specific hunting and settlement strategies? Within the dense lithic deposits of the oil sands region, we have noted the potential for conflating microblade technology with more commonly-occurring blade-like bifacial and bipolar flakes, and advocated stringent definitions of microblade technology and attention to the reduction process itself. These findings are also relevant to wider regional studies of Beringia and the Subarctic, where discussions of culture history and technological organization have long focused on ambiguous patterns of presence and absence of microblades in early prehistoric settlements.

[Papers in Honour of Raymond Le Blanc](#) Saturday, May 7 13:20

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THESE OUTER SHORES

*Archaeological Insights into Indigenous Lifeways
Along the Exposed Coasts of British Columbia*

Guest Edited by Alan D. McMillan and Iain McKechnie

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BC Studies no. 187 (Autumn 2015) *These Outer Shores* presents recent archaeological research along the outer coast, from southeast Alaska to the entrance to Juan de Fuca Strait. Using a variety of modern approaches and techniques, the authors examine such topics as changing sea levels, human settlement history, fish and shellfish harvesting, whaling, and the integration of Indigenous oral history with archaeology.

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*There wasn't much sun,
but we had heaps of fun,
that summer at old Reese Bay.
Due to the fact,
I'd made a pact,
with the beautiful Susan K...*

Acknowledgements

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