

2023
Archaeological Society of Alberta
and
Saskatchewan Archaeological Society
Joint Annual Conference and Gathering



April 27-30, 2023

Co-hosted by:
The Archaeological Society of Alberta – Bodo Centre
and
Saskatchewan Archaeological Society



ARCHAEOLOGICAL SOCIETY OF ALBERTA

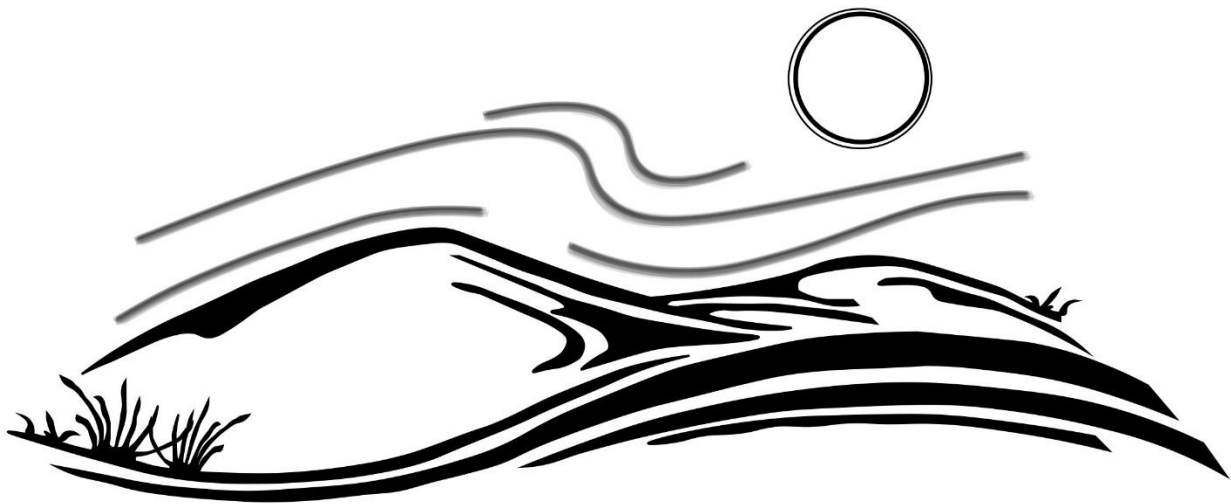


Land Acknowledgement

We respectfully acknowledge that we are located on Treaty 6 territory, near Sounding Lake where a Treaty 6 adhesion was signed in 1879, and in Region 3 of the Métis Nation of Alberta. This is the ancestral and traditional territory of the Cree, Blackfoot, Dene, Salteaux, Nakota Sioux, Métis, and many other diverse Indigenous peoples whose histories, languages and cultures continue to enrich our communities.

Conference Theme

Sand & Wind: Plains & Indigenous Archaeology



The theme of this conference is Sand & Wind: Plains & Indigenous Archaeology. Sand represents the ever-changing landscapes archaeology explores and the shifting perspectives of the discipline. Wind is like the voices of the past speaking to us through oral histories and tangible heritage (e.g., artifacts).

The Bodo Archaeological Sites are located on the edge of the Northern Plains in a dune field and in the past was an important locale where cultures converged in a spirit of cooperation (the Neutral Hills to the south were neutral territory). Through the process of colonization, many Indigenous peoples lost their connection to this place when they were displaced to reserves hundreds of kilometres away. Archaeology and oral histories have the power to reconnect people to place and culture, not only at Bodo, but across Canada. In turn, Indigenous ways of knowing have the power to inform the archaeological record. It is in this spirit of cooperation, and in the pursuit of Truth and Reconciliation, that we choose to honour all ways of knowing, and listen to all voices and perspectives.

Welcome and Acknowledgments

From ASA/BAS President, Leila Grobel:

This year, the Bodo Archaeological Society (BAS), on behalf of the Archaeological Society of Alberta (SAS), is hosting this joint archaeological conference in conjunction with the Saskatchewan Archaeological Society (SAS) here at the Bodo Archaeological Centre and Sites in Bodo, Alberta. Annually, each Society generally hosts their own Annual General Meeting (AGM) and Conference. These gatherings are vital to the sharing of current information and research essential to the provincial archaeological communities, and this year, I am pleased to acknowledge the participation of the Manitoba Archaeological Society also. Welcome!

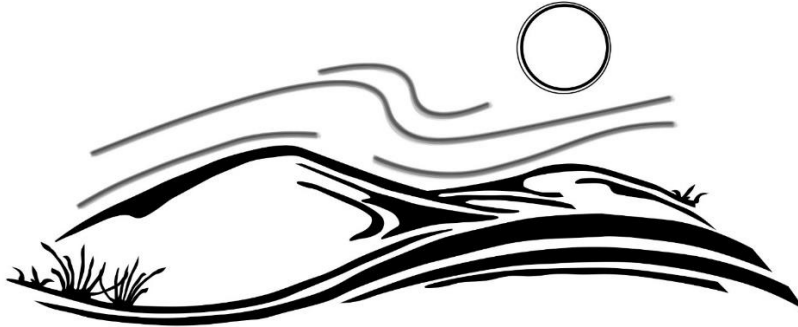
The annual conferences provide avocational and professional archaeologists, as well as students pursuing careers in the field, opportunity to immerse themselves in the rich archaeological heritage and history of western Canada. Enthusiasts can share their thoughts and opinions on any/all aspects of western plains archaeology. Each annual gathering is unique, but this year, we are excited to share our learned archaeological ways of knowing with the growing acknowledgement and inclusion of Indigenous archaeology. In the spirit of truth and reconciliation each provincial society seeks to partner with our Indigenous allies, who are truly the keepers of ceremony and the oral stories of the many archaeological sites we explore and excavate in Alberta, Saskatchewan and Manitoba.

I would now like to thank BAS, ASA and SAS for their monetary contributions, and for the countless hours of hard work and dedication, their volunteers and staff commit to the planning of this conference. I know your efforts will be noticed and appreciated by all of those in attendance. We could not host a conference like this without the financial support of the archaeological consulting community, specifically, Atlatl Archaeology - AB, Canada North (CanNorth) Environmental Services - SK, Ember Archaeology (Tree Time Services) - AB, KGS Group - SK, Stantec - AB & SK, and Western Heritage - AB & SK. I also need to take this time to recognize the significant financial contribution the Town of Provost made to our 2023 conference.

Thank you to any elders in attendance, event hosts, the keynote speaker, panel participants, presenters and poster entrants. *Please enjoy your stay and I hope you have a wonderful weekend.*

From SAS President, Loni Williams:

Thank you, everyone, for joining us at this year's gathering and conference on Treaty Six territory in Bodo, Alberta. We acknowledge that we are on traditional Indigenous homeland and offer our respects to the ancestral and descendant custodians of this land. We are delighted to be partnering with the ASA again and for the Bodo Archaeological Society to be hosting us. I extend my regrets that I cannot be there with you this year but do hope that you enjoy your time learning new things, visiting with old friends and colleagues and take the opportunity to meet some new folks. I also hope that you leave this gathering with renewed energy and excitement about archaeology and are reminded of what drew you to it in the first place.



Schedule At-A-Glance

Thursday, April 27

6:00-9:00 PM – Welcome Reception and Registration

Provost & District Museum (5360 – 49 Ave, Provost, AB)

Coffee, tea and snacks will be available

Friday, April 28

All events at the Bodo Archaeological Centre

8:30 am: Registration continues

9:00 am: Speaker Sessions

5:30 pm: Dinner, Games and Networking

6:30 pm: Friday Activity (Art or Sash-making demo)

Saturday, April 29

All events at the Bodo Archaeological Centre

8:30 am: Registration continues

9:00 am: Speaker Sessions

3:00 pm: ASA AGM

6:00 pm: Dinner & Banquet Speaker

Sunday, April 30

Sounding Lake Treaty 6 Cairn fieldtrip

Meet at the Bodo Archaeological Centre at 9:00 am

***Please Note** – a shuttle that can seat 20 ppl will be running from the Canalta Hotel, Provost to/from the Bodo Archaeological Centre on Friday and Saturday. A sign-up sheet will be available at the front desk of the Canalta.

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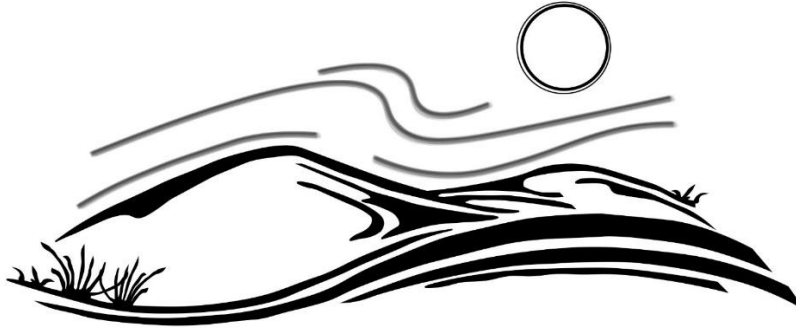
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ARCHAEOLOGICAL SOCIETY OF ALBERTA





SCHEDULE

THURSDAY, APRIL 27th	
Location: Provost & District Museum (5360 – 49 Ave, Provost, AB)	
6:00-9:00 PM	Welcome Reception and Registration - Coffee, tea, and snacks will be available

FRIDAY, APRIL 28th		
Location: Bodo Archaeological Centre (1 St. E Railway Ave, Bodo, AB)		
Time	Name	Paper Title
8:30 am	Registration	
9:00 am	Words of Welcome and Opening Remarks	
9:30 am	Rob Losey	Canid Remains on the Canadian Prairies: Sorting Through the Confusion
10:00 am	Mary Malainey	Pre-Contact Indigenous Farming and other Archaeological Sites in the Pierson Wildlife Management Area, south of Melita, Manitoba
10:30 am	Coffee/Networking Break	
11:00 am	Indigenous Archaeology Panel (Judy Half, Maria Mampe, Dylan Frank, Sarah Pocha-Tait)	
12:00 pm	Lunch Break and Informal Poster Session	
1:00 pm	Tim Allan	Tracking Obsidian Cliff and Bear Gulch artifacts across Canada and uncovering a trade network that spans over 2,000 km of mountains, forests and plains
1:30 pm	Todd Kristensen	Petrified wood in Alberta's archaeological record: Distribution, lithic reduction, and significance
2:00 pm	Human Barometer	
2:15 pm	Coffee/Networking Break	
2:45 pm	Kathy Gadd	Precontact Plains Archaeological Applications of GPR
3:15 pm	Tatiana Nomokonova	Needles, Needle cases, and women from the lamel-Nenets Region of Arctic Siberia
4:00 pm	Free Time - Networking, Flintknapping demo, Games, Atlatl	
5:30 pm	Dinner	
6:30 pm	Hands-On Activities (if registered) – Art & Archaeology, Sash Making	

SATURDAY, APRIL 29th		
Location: Bodo Archaeological Centre (1 St. E Railway Ave, Bodo, AB)		
Time	Name	Paper Title
8:30 am	Registration	
9:00 am	Kim Cloutier	Heritage Conservation Branch – Year in Review 2022-2023
9:30 am	Shawn Bubel, Bob Dawe, and Kevin McGeough	Highlights of the 2021 and 2022 Excavations at Head-Smashed-In Buffalo Jump, UNESCO World Heritage Site
10:00 am	Rexelle Asis, Skyler Ngo and Mavis Chan	Ancient Mitochondrial DNA Extraction and Analysis of Bison bison Long Bones at Head-Smashed-In Buffalo Jump UNESCO World Heritage Site
10:30 am	Coffee/Networking Break	
11:00 am	Graeme Revering	A Survey Reconnaissance of Eagle Creek: Identifying Place through the Archaeological Record
11:30 am	Friends of St. Victor Petroglyph Video	
12:00 pm	Lunch Break and Informal Poster Session	
1:00 pm	Sarah Pocha-Tait	What the Fort? An Overview of the 2021 and 2022 Field Season at Fort Carlton
1:30 pm	Alexis Hunter	Fish and Fishing at the fur-trade era site Fort Carlton
2:00 pm	Family Feud (Archaeology Editon): AB vs SASK w/ host Brian Vivian!	
2:30 pm	Coffee/Networking Break and Poster Session (Cast your votes!)	
3:00 pm	Archaeological Society of Alberta Annual General Meeting	
6:00 pm	Banquet and Keynote Speaker Tim Panas - Footprints in the Sand: Human and Bison Usage of Dunes on the Northern Plains	

SUNDAY, APRIL 30th	
Meet at the Bodo Archaeological Centre at 9:00 AM	
9:00-12:00	Tour to Treaty 6 Cairn at Sounding Lake

SUBMIT YOUR QUESTIONS FOR THE INDIGENOUS ARCHAEOLOGY PANEL



Scan the QR Code and submit via Google Forms OR save your questions and ask them in-person

Indigenous Archaeology Panel

Thank you to our panel participants!

Judy Half

Judy Half is a First Nation Nehiyaw from the Saddle Lake reserve. In Treaty Six (on the Alta. Side) the reserve is located on the north on the Saskatchewan River, and flows between townships such as Two Hills, and St. Paul. Through fathers' side, Judy is direct descendant to Onchiminahos, Little Hunters band. He signed Treaty with his first cousin Kake Kake (Kake) at Fort Pitt, in fall of 1876. On her mother's side, Judy would be a direct descendant Pasqayak band which is connected to the Blue Quills Band, and Kake Kake's Clan through Chicken Dance, Buffalo Dance, Horse Dance and Bear Dance societies that were practiced prior to the arrival of Europeans in western Canada.

Presently, Judy is a doctoral candidate and is completing her dissertation. She is conducting archaeological fieldwork on her reserve, and is collaborating and participating in an excavation unit at Bodo. She is also a member of the Bodo Archaeological Society board.

Judy's community archaeological approach uses nehiyawin approaches, like ceremony, and implements oral histories and narratives to establish the relationship how her ancestors, those that signed treaty, are related to the land and to the archaeological site at Cypress Hills and Sounding Lake.

Dylan Frank

Dylan Frank is a Cultural Resource Impact Assessment Officer working for Parks Canada in Waterton Lakes National Park. He graduated from the University of Lethbridge with a Bachelor's degree in Archaeology and Geography and focuses primarily on Indigenous Archaeology in his work. Previously, he was an archaeologist working on the Post-Kenow Wildfire project for 3 years, so in his current role he teaches about archaeology in the park and works as a member of the impact assessment team. Dylan is a member of the Kainai Nation (Blackfoot Confederacy), whose traditional territory is where the town of Waterton is located, so working in this place is very special to him.

Maria Mampe

Maria Mampe is a member of Muskoday First Nation in Saskatchewan and currently works as a Project Archaeologist for Stantec. Maria obtained both her BA and MA from the University of Saskatchewan where her research focused on Northern Plains Pre-contact Archaeology. She has held various positions on the SAS board including Member at Large-First Nations and Metis Liaison and First Vice President. Most recently, Maria's work with the SAS included authoring the foreword for their recent publication "Points of View: A Guide on Saskatchewan Projectile Points with Indigenous Perspectives."

Sarah Pocha-Tait

Sarah Pocha-Tait is a 1st year graduate student in Archaeology at the University of Saskatchewan. She is from MacDowall, Saskatchewan and works closely with Metis Local #83. Her thesis focuses on the role of Indigenous women in the fur trade at Fort Carlton.

Friday Evening Activities

Art and Archaeology: Drawing Lithics - Hailey Kennedy (@haileykenart)

Hailey Kennedy is an archaeologist and freelance illustrator with over ten years of fine art experience. She received an honours degree in anthropology from Grant MacEwan University. Her thesis research focused on how art can help facilitate a deeper understanding of observed material and its implications on archaeological thought. She has since created a variety of archaeological illustrations for papers and reports as well as facilitating workshops that center on drawing in archaeological contexts more broadly. Currently, she works at Ember Archaeology and pursues various fine art projects from technical illustrations to private commission work.

Description

Technical illustrations were once widely used within archaeology and were often taught within formal classes. In recent years, with the widespread use and adoption of digital photography and image-making there has been a decline in using technical illustrations within reports and publications. However, illustrations can often be helpful in providing additional details both for readers and the illustrator. Observational skills provide the foundation for many archaeological techniques and is also a critical tool when it comes to creating accurate depictions when drawing or illustrating. This workshop will introduce participants to basic drawing techniques and provide them the opportunity to practice illustrating lithic materials. No prior drawing experience is necessary.

Metis Sash Making Demonstration: Finger Weaving - Matthew Hiltermann

Matt Hiltermann is a Métis artisan and ethnohistorian. As a descendant of the Pruden family (among others), Matt has strong ties to the historic settlements of Edmonton, Fort Carlton, and Red River. Since 2008, he has worked in the museum and heritage field at venues including Heritage Park, Fort Edmonton Park, Lougheed House, and Fort Calgary. He currently works as a Historian for Metis Nation of Alberta - Region 3. As a Métis public historian Matt Hiltermann is the first to note the origins of the Métis sash are convoluted and obscure. Though several cultures produced woven textiles, the sash's beginnings are understood to lie with the traditional weaving practices of eastern woodland First Nations, combined literally, with woolen goods introduced by early French visitors. "It couldn't have happened any other way or anywhere else." With practical beginnings, the sash likely served numerous functions, including a rope, tumpline (a carrying strap worn across the head), pocket, tourniquet, emergency sewing kit or belt. The earliest designs were that of the double-chevron or arrowhead. The Assumption sash, or ceinture fléchée ("arrow belt"), proliferated with the fur trade and made its way west. Varying colors and designs were used to signify rank, status and trading allegiances or employment.

Demonstration - Finger Weaving

The art of finger weaving originated among the First Nations of the Eastern Woodlands, but as they began trading with the French, they acquired wool, and the belts woven by the First Nations became colorful. These colorful belts were so beautiful that the French adopted them as well! As the French fur traders began to move west, many of them took wives from Western First Nations. Their children, the Métis, carried on the fur trade tradition, sporting the sash of their forefathers. To this day, the sash is an integral part of Métis culture, and the art of finger weaving has become one of our proudest traditions! This is your opportunity to learn the basics of finger weaving. All materials will be provided.



Check the back of your name tag holder for a ballot for the **best poster**. This award of \$200 is presented by the Association of Consulting Archaeologists. Submit your vote by Saturday at 4:00 PM!

KEYNOTE SPEAKER: DR. TIM PANAS

Footprints in the Sand: Human and Bison Usage of Dunes on the Northern Plains

The role that ecology has played in Northern Plains archaeology has been examined in numerous studies over the past forty years. One of the largest debates to arise from these works has been the seasonal migrations of bison herds, and if the prairie grasslands were abandoned by both animals and humans during the winter months in favor of the parklands, where both shelter from the elements and food could be found. In these works, one landscape feature that has not been examined in playing a role in animal and human behaviour is sand dunes, such as those found within the Bodo region. Further, the larger role that dunes played in the cultural lives First Nations communities has not been incorporated into any examinations of landscape perception and usage. By using both archaeology and historical records, a holistic interpretation of both seasonal bison migration and how humans utilized and perceived dune areas within the Northern Plains is developed that illustrates how large of a role these landscapes played in the larger history of the region.



Dr. Tim Panas has worked within the fields of heritage research and conservation, education, and cultural resource management for over 25 years with organizations and institutions from across Canada and the United States. As a professional his primary area of interest has been the archaeology of western North America with a focus on the pre- and post-European contact periods of the Northern Plains. He completed a PhD in Interdisciplinary Studies from the University of Saskatchewan, examining Indigenous perceptions and usage of dune environments on the Northern Plains, and a Master's degree from the University of Montana, where he conducted archaeological excavations at a Métis river lot near Fort Saskatchewan, Alberta. Over the course of his career, he has had the opportunity to work with numerous educational and cultural organizations, including the Royal Alberta Museum, the Royal Saskatchewan Museum, the Canadian Museum of History, the University of

Saskatchewan, the University of Montana, the First Nations University of Canada, and Brandon University. In addition, he has also worked with the Archaeological Survey of Alberta, SaskPower, and Parks Canada in a governmental regulatory capacity, as well as with several cultural resource management firms across Canada. Currently, he is the Educational Program Lead with the Museums Association of Saskatchewan, where he oversees the operation of their Museum Studies Certificate Program, in addition to serving as an Adjunct Professor with the Department of Archaeology and Anthropology at the University of Saskatchewan.

Paper Abstracts

Allan, Timothy
(Ember Archaeology)

Tracking Obsidian Cliff and Bear Gulch artifacts across Canada and uncovering a trade network that spans over 2,000 km of mountains, forests and plains

Obsidian artifacts are quite uncommon in Canada, east of the Rocky Mountains. When identified at archaeological sites, these artifacts are the remains of Indigenous trade and exchange systems that spanned thousands of kilometers. Archaeologists have been 'sourcing' these artifacts to their volcanic origins for the past several decades, revealing glimpses of these trade systems represented at sites or in local regions. Members of the Alberta Obsidian Project have been working to compile data and associate large collections of obsidian artifacts with sources throughout North America. Two sources stand out in the scale at which they were utilized, Bear Gulch, Idaho, and Obsidian Cliff, Wyoming. Together with sourced obsidian artifacts from present day British Columbia, Saskatchewan, Manitoba and Ontario, a vast Indigenous obsidian trade network has been revealed that spanned over 2,000 km across five Canadian Provinces. This presentation will outline multiple years of research and analysis of obsidian artifacts from hundreds of sites, a field visit of the Bear Gulch obsidian source, and the compilation of data of over 1,000 obsidian artifacts.

Asis, Rexelle, Skyler Ngo, Mavis Chan, Shawn Bubel, and Theresa Burg
(University of Lethbridge)

Ancient Mitochondrial DNA Extraction and Analysis of *Bison bison* Long Bones at Head-Smashed-In Buffalo Jump UNESCO World Heritage Site

Ancient DNA (aDNA) analysis is a multidisciplinary tool that allows us to compare the genetic diversity of extinct and extant species. To biologists and archaeologists, it can provide insights into the origins, migration, and interactions of populations through time. Head-Smashed-In Buffalo Jump is an UNESCO World Heritage site in southern Alberta, where herds of bison were intentionally driven over a cliff by skilled Indigenous hunters for thousands of years. Excavations at the kill site, which lies directly below the cliff, yielded a large quantity of bison bones. Twenty-one bison long bones were selected for study. aDNA was extracted from these specimens and mitochondrial aDNA was targeted, amplified, and sequenced. We then compared the sequences to those from contemporary and ancient populations. It is clear that the bison populations at Head-Smashed-In Buffalo Jump are related to modern and ancient populations, but are genetically different from modern *Bison bison* herds as well as extinct *Bison priscus*. This study adds to our understanding of the genetic diversity of bison in North America and offers insights into the populations hunted at Head-Smashed-In Buffalo Jump and other sites.

Bubel, Shawn*, Robert Dawe, and Kevin McGeough***
(*University of Lethbridge, **Royal Alberta Museum)

Highlights of the 2021 and 2022 Excavations at Head-Smashed-In Buffalo Jump, UNESCO World Heritage Site

The ingenuity and skill of the people who hunted at Head-Smashed-In Buffalo Jump, as well as the butchering activities carried out following a successful kill event, are well-documented from about 6,000 years ago until European contact. Very little is known about how the site was used before that. To try to better understand the earlier phases of use, Shawn Bubel and Kevin McGeough of the University of Lethbridge, and Bob Dawe of the Royal Alberta Museum, initiated an archaeological field school at the site. Forging a partnership with the Blackfoot interpreters who work at the site (especially Quinton Crow Shoe, Stan Knowlton, and Conrad Little Leaf), with the permission (and blessing) of the Elders Advisory Council, we conducted two seasons of excavations in the summers of 2021 and 2022.

To investigate the earliest activities at the site, we worked in two main areas. In the Processing Area we re-opened the large excavation block dug in the 1980s and 1990 to explore deeper levels. It was here that excavators in an earlier project unexpectedly unearthed bones that are almost 8,000 years old under one meter of hard-packed, concrete-like sediment that was assumed to be sterile. In the Spring Channel Area, where two Paleoindian points were found out of context more than 70 years ago, we began excavating a test trench to determine if there are stratigraphically separable materials in this area, including deposits that date between 6,000 and 10,000 years ago. We also surveyed the site, both to attempt to tie together excavation areas from the past 80 years of research and to determine the extent of site damage due to burrowing animals. We will report on these research activities and our preliminary results, showcasing the cultural remains we unearthed that span almost 10,000 years of activity at the site.

Cloutier, Kim

(Government of Saskatchewan)

Heritage Conservation Branch - Year In Review 2022-2023

Our annual year in review talk will cover the previous Saskatchewan government fiscal period of 2022-2023. This will cover a wide range of updates, including such topics as staffing changes, trends in development reviews and permits, fieldwork, and current projects. We will also highlight our progress on a major IT Project called the Online Client Services Initiative, which has now entered the Execution Phase with a vendor onboard who will be digitally transforming our heritage regulatory process.

Gadd, Kathy

(Western Heritage Inc., University of Alberta)

Precontact Plains Archaeological Applications of GPR

Understandably, cemeteries have taken over the GPR conversation in Canada lately, but GPR can also be used in precontact archaeological projects as shown by work at the Mattheis Ranch from 2017-2019. Three quite varied uses in plains archaeology were suggested by work there: 1) the mapping of some archaeological features; 2) filling out site stratigraphy and site formation process data and interpretations; and 3) the relocation of overgrown excavations. While definitive results must still be obtained via excavation, GPR data can go a long way towards connecting areas of excavation and provide areas of focus for those excavations.

Hunter, Alexis K.B.*, Sarah Pocha-Tait*, Dr. Tomasin Playford, Dr. Tatiana Nomokonova***

(*University of Saskatchewan, **Saskatchewan Archaeological Society)

Fish and Fishing at the fur-trade era site Fort Carlton

Fort Carlton is a fur-trade site (FfNp-1) that is located about 94 kilometers north of Saskatoon, SK along the North Saskatchewan River. This fort was first built in 1810 and operated until 1885 under the Hudson Bay Company as a provision collection and dispersal center, later as a mail hub on top of daily trading activities. This site was excavated during field schools and public excavations led by the Department of Archaeology and Anthropology at the University of Saskatchewan and the Saskatchewan Archaeological Society in 2021-2022. Preliminary analysis of faunal remains suggests that the large-bodied mammals, such as bison, were a major focus of subsistence activities undertaken at this location. However, remains of fish, birds, leporids, rodents, and smaller carnivores were also recovered. The goal of our presentation is to discuss the role of fishing at Fort Carlton by utilizing the data of archaeological material found at this site to compare results with information available from the historical records. This will be addressed, first, by providing preliminary results of zooarchaeological analysis of fish remains (NISP = 172) and a discussion of what species were identified and where they were found during the excavations. It will be further supported by a summary of all fishing-related materials and artifacts that were also retrieved at Fort Carlton. Second, we will compare our results with the information available about fishing activities mentioned in the historical records. It is often assumed that people at historical forts and fur trade sites were only fishing in times of strife. However, this information is rarely discussed directly in journals and other forms of records. We hope that our talk will demonstrate a need in further research investigations on roles of fish and fishing at fur-trade era and other historic sites on the Canadian Plains.

Kristensen, Todd

(Government of Alberta)

Petrified wood in Alberta's archaeological record: Distribution, lithic reduction, and significance

This paper summarizes the archaeological record of petrified wood use by pre-contact people in Alberta. We conducted a series of flintknapping experiments on 30 nodules followed by archaeometric analyses to understand how petrified wood was knapped. Our interpretations, coupled with a photographic library and maps, will hopefully aid the identification of petrified wood at archaeological sites and help archaeologists understand why this raw material was such a common toolstone across Alberta. Project collaborators include Timothy Allan, Dale Fisher, Courtney Lawrence, Emily Moffat, Lisa Budney, Taydem Laroque, Natalia Nickeson, Julie Shea, Rebeca Adams, and Rebecca Plouffe. The presentation will be accompanied by in-person archaeological examples of petrified wood artifacts and nodules that audience members are welcome to inspect.

Losey, Robert, Tatiana Nomokonova**, and Megan Bieraugle***

(*University of Alberta, **University of Saskatchewan)

Canid Remains on the Canadian Prairies: Sorting Through the Confusion

Dogs have lived with Indigenous people in North America for at least 10,000 years, including on the Canadian prairies. Archaeologists working on the northern Great Plains have struggled for decades to differentiate dog remains from those of other canids, particularly wolves. This, in part, relates to the fact that Indigenous dogs from this region were relatively large animals. Historically, sizable dogs were valued in prairie Indigenous societies for their roles in transport—pulling travois. However, other factors also confound our efforts to identify ancient dog remains. First, there is a widespread notion that dogs and wolves commonly interbred and that hybrid offspring should be common in archaeological assemblages. This is likely untrue for several reasons. Second, the modern wolf and dog skeletons used comparatively in many studies may poorly characterize past canid size and shape variation. Modern dogs are far more variable in shape and size than past dogs. Further, early wolves on the Canadian prairies seem to have been somewhat smaller than those that now inhabit the mountains and forests to the west and north. Third, wolf remains may be more common in archaeological assemblages than anticipated. Prairie wolves likely preyed primarily on vulnerable bison (calves, older adults), but they surely also scavenged, including on bison killed by people. This paper explores efforts to develop pragmatic methods for differentiating dogs from wild canids on the Canadian prairies. We also discuss the hybridization issue and examine why large canid remains are seemingly abundant at bison mass kill sites. Finally, we describe efforts underway to analyze the genetics of these animals, including to assess issues of hybridization with European dogs in the pericolonial period.

Malainey, Mary

(Brandon University and Manitoba Archaeological Society)

Pre-Contact Indigenous Farming and other Archaeological Sites in the Pierson Wildlife Management Area, south of Melita, Manitoba

In September 2018, Eric Olson found two complete bison scapula hoes along Gainsborough Creek, south of Melita, Manitoba. A joint Brandon University and Manitoba Archaeological Society research project was launched to learn more about the pre-contact Indigenous farmers who made and used these tools. Radiocarbon dating of bone and charcoal shows the horticultural occupation began in the late 1400s/early 1500s CE and extended into the Protohistoric period. Excavations at the Olson site (DgMg-167) in the valley uncovered remains of a workshop where bone tool manufacturing and other activities took place. A nearby grassy expanse may be the location of floodplain fields. Excavations on the east prairie level (DgMg-168) encountered residential debris and intentionally buried fragments of a highly decorated vessel. A ground-penetrating radar survey of the prairie on the west side of the valley (DgMg-40c) detected twenty-nine subsurface anomalies; to date, six have been tested. Two closely spaced anomalies in the north-central part of the site had the highest concentrations of residential debris. A flint knapping station and cluster of potsherds were found 10 to 20 cm below surface and appear to be associated with the horticultural occupation. A bison bone upright was encountered directly below the potsherds between 25 and 49 cm db. This feature, a projectile point, and radiocarbon dates on bone provide evidence of a Besant/Sonota occupation about 1700 years ago. The Early Woodland stemmed projectile points found in the area are likely associated with people who introduced earthwork construction into the southwest corner of Manitoba.

Nomokonova, Tatiana*, **Stella Razdymakha****, **Lubov' Vozelova****, **Grace Kohut***, **Andrei Gusev****, **Andrei Plekhanov****, and **Robert J. Losey*^{***}**

(*University of Saskatchewan, **Arctic Research Center, Salekhard, Iamal-Nenets Autonomous District, Russian Federation, ***University of Alberta)

Needles, Needle cases, and women from the Iamal-Nenets Region of Arctic Siberia

The Iamal-Nenets region of Siberia is one of many areas in the Arctic where women's sewing skills were and are crucial to daily existence. Located just east of the Ural Mountains and bordered by Arctic Ocean, Iamal is home to Nenets and Khanty people and their reindeer. This territory is known as the global center of reindeer pastoralism, with many Indigenous families living a mobile lifestyle that involves moving with their animals on seasonal basis across the tundra. Our presentation discusses needles and needle cases found at archaeological sites and that were made and used by ancestors of the current Indigenous peoples of this region. We start with an introduction of *myua* (in Nenets) and *mytцaH* (in Khanty), or woman's sewing bag, which is one the most important belongings of mobile households. These bags are a symbolic representation of every stitch made by a woman's hands in creating dwelling covers, bedding sets, storage bags, and every piece of clothing, all of which are crucial to the survival and well-being of her family. These particular bags are not merely containers for essential sewing supplies such as needles and needle cases. They embody layers of multigenerational skill, ancestral knowledge, and identity that are passed by Khanty and Nenets women to their daughters, nieces, and granddaughters. We continue with a summary of needle and needle cases found at archaeological sites in an attempt to stitch the past and present of these belongings and knowledge together. By doing so, we highlight and acknowledge Indigenous women and their incredible sewing skills which have allowed families to survive and flourish in the Siberian Arctic for hundreds of generations.

Pocha-Tait, Sarah

(University of Saskatchewan)

What the Fort? An Overview of the 2021 and 2022 Field Season at Fort Carlton

Fort Carlton was a fur trade post which operated from 1810-1885. Its original location was at the forks of the two Saskatchewan Rivers, but in 1810 it moved further southwest to a prime location along the North Saskatchewan River. This area holds the Cree name *Pehonanik* meaning "the waiting place". The fort underwent five separate building phases during its time at this second location. Excavations in the 1960s and 70s by Ian Dyck and Anthony Ranere revealed the fourth and fifth building phases, which is where the reconstructed fort stands today at Fort Carlton Provincial Park. Further excavations ensued in 2021 and 2022 to the west of the reconstructed fort in search of the previous building phases and other features. The artifact assemblage currently sits at approximately 50,000, with about 80% consisting of faunal remains. This presentation will provide a general overview of these faunal remains (a more in-depth analysis will be presented by Alexis K. B. Hunter) and will highlight some of the key domestic artifacts found such as birch bark, bone tools, and ceramics.

Revering, Graeme

(KGS Group)

A Survey Reconnaissance of Eagle Creek: Identifying Place through the Archaeological Record

The Stranraer Terrace is a large geographical landmark located along Eagle Creek in mid-western Saskatchewan. After the identification of the Herschel Petroglyphs (EjOc-3) in the 1960s, the area

has undergone numerous small scale archaeological surveys and three excavations. To understand the use and significance of this landmark, a judgmental survey was conducted and the cultural history was established through artifact collections. From the survey 54 new sites were identified bringing the total number of sites within the region to 118. The artifacts identified through collections, excavations, and surface finds show the region has been utilized for several millennia; spanning a time period from at least the Middle Period to post-contact.

Understanding the significance of a locale and its role within the cultural landscape first requires a discussion on the formation processes of place. Both wayfinding theory and ecological concepts of patch selection are the building blocks of this type of analysis. If a spot satisfies some biological or cultural need, then there is incentive to return and use the space. It is through this repetition of use, that the locale becomes more than a location on the landscape. It takes on the attributes of memory, meaning, and experience. It is a transformation from space to place. The presence of petroglyphs, alignments, Medicine Wheels, and other sites of special significance indicates the Stranraer Terrace to be one of these places.

Poster Abstracts

Boser, Faith

Lake Midden (EfNg-1): A Pericolonial Site on the Northwestern Great Plains

The Lake Midden (EfNg-1) archaeological site is located just east of Last Mountain Lake in southern Saskatchewan. The Mortlach period site dating to the late 16th or early 17th century is considered to be one of the most archaeologically important sites in the province, yet the majority of the collection has not been systematically analyzed. Lake Midden was a hot spot for looters beginning in the 1930s, leading to much of the site being disrupted. The site was later subject to test excavations from the 1970s to the 1990s. The majority of the past research was conducted on the Mortlach pottery and some bone tools from the site. Limited analyses previously completed on the collection indicated that bison are the most abundant faunal remains at the site. The second largest set of remains belong to canids, three of which have been identified as dogs. Previous genetic research indicates some of the dogs are of European ancestry. This evidence suggests that European dogs had interbred with indigenous dogs prior to the establishment of colonial settlements in the province. Certain modified bone objects, vessel designs, and residue analyses of pottery from the site resulting in the identification of maize are suggestive of relationships with groups to the south and/or east. Current research is focused on analyzing the entire faunal collection, including those housed at the Canadian Museum of History in Ottawa and those located at museums throughout Saskatchewan. This will include element identification, age and sex determination, season of death estimation, stable isotope analysis, and additional aDNA analyses of the canids. The initial research of the Lake Midden collections clearly has generated a series of intriguing results, but more analysis must be conducted to evaluate these insights and to address other important questions about the site and its inhabitants.

Kohut, Grace*, **Stella Razdymakha****, **Tatiana Nomokonova***, **Andrei Plekhanov****, and **Robert J. Losey*,*****

(*University of Saskatchewan, **Arctic Research Center, Salekhard, Iamal-Nenets Autonomous District, Russian Federation, *** University of Alberta)

***Rangifer* Tooth Wear: Estimating Ages of a Key Species from Archaeological Sites**

Caribou and reindeer (*Rangifer tarandus*) are a key species for many people across the Circumpolar North. These animals, both wild and domestic, are essential to life in the North providing food, hides for clothing and shelter, transportation (where reindeer are domesticated) and are significant to many Northern Indigenous cultures and identities. Understandably, this species is well represented in northern archaeological sites demonstrating that the relationship between people and *Rangifer tarandus* has endured and changed over thousands of years. The remains of these animals (bones, teeth, and antler) recovered from archaeological sites can be examined using zooarchaeological methods to better understand how the relationship between people and caribou/reindeer has emerged and changed in the past. One such method, tooth wear age estimation, uses the severity of mandibular (jaw bone) tooth wear to estimate the number of years an individual animal lived. This data is used to reconstruct demographic profiles of populations of animals from archaeological contexts, telling us how people selected the animals they killed in the past. Building on decades of previous tooth wear methods for *Rangifer* and other ruminants, this poster presents the improved approach I have taken to estimate the ages of caribou and reindeer that is designed to be user friendly, accessible, and can be applied to fragmented mandibles from archaeological sites. I will also explain how this ageing method can be adapted to incorporate Indigenous age categories. This research project uses age categories for reindeer used by Nenets in the Iamal Peninsula of Arctic Siberia who migrate with their reindeer herds on the tundra. This approach provides a more nuanced and culturally appropriate interpretation of the use of these animals from archaeological sites in the Iamal region and this approach could be applied similarly elsewhere using other Indigenous categories as well.

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Western Heritage has a long history of involvement with the Bodo Archaeological Locality, from archaeological studies related to oil and gas developments in the area to field schools in collaboration with the University of Alberta and the Bodo Archaeological Society. One of our founders, Terry Gibson, was a strong advocate for the research potential of the Bodo Archaeological Locality and for the formation of the Bodo Archaeological Society. Western Heritage continues Terry's advocacy through our support of the Bodo Archaeological Society.

Western Heritage is known for excellence in the field of archaeology, but we also provide services in Indigenous consultation and engagement, archaeological geophysics, geoarchaeology, high resolution satellite imagery, and UAV survey. Recent projects include using Ground Penetrating Radar surveys of community cemeteries and detailed terrain mapping using LiDAR.

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Terry Gibson and student intern Riswan Qureshi conducting magnetometry research at the Bodo Archaeological Locality in 2018.



Western Heritage's UAV survey of excavations at the Bodo Archaeological Locality in 2019.

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