

# Archaeological Society of Alberta Conference and Annual General Meeting

May 1st, 2021  
Online via Zoom

## Conference Program

- 09:00 am Welcome Address**  
Shawn Bubel, ASA President
- 09:10 am Detecting Change at an Arctic Heritage Site Using UAV Photogrammetry: A Case study from Qikiqtaruk, Yukon**  
Katelyn O'Keefe, MA Student, University of Calgary
- 09:30 am Examining Food Security in Inuit Communities**  
Deanna Andreschefski & Megan Fisk, Undergraduate Students, University of Lethbridge
- 09:50 am Locating Fort Vermilion II: Tying Archival Records to the Archaeological Remains**  
James Carnahan, Recent BSc Graduate, University of Lethbridge
- 10:10 am Phytolith Analysis: Subjectivity in the Creation of Scientific Knowledge**  
Kelly Thomas, MA student, University of Calgary
- 10:30 am Control Samples for Phytolith Analysis; a Case Study from the Jezreel Valley**  
Kali R. Wade, Atlatl Archaeology
- 10:50 am Old Women's Buffalo Jump (EcPI-1): A Site Visit**  
Tammi Mills, PhD Student, University of Lethbridge
- 11:10 am Ongoing Investigations at DIPI-1**  
Tatyanna Ewald, ASA Lethbridge Centre & Atlatl Archaeology
- 11:30 am The ASA Rocky View County Public Archaeology Program at Rosie's Site (EhPn-89) and the Efficacy of Small-Scale Archaeology Programs for Public Engagement**  
Erik G. Johannesson, ASA Calgary Centre & University of Calgary
- 11:50 am Operation Artifact 2.0: An Update on Recent Collections**  
Rachel Lindemann, ASA Lethbridge Centre & Atlatl Archaeology
- 12:15 pm Annual General Meeting**
- 01:00 pm Embark on one of the Self-Guided Field Trips**

## Archaeological Society of Alberta Annual Conference May 1<sup>st</sup>, 2021

### Welcome Address

On behalf of the Archaeological Society of Alberta, welcome everyone to the 45<sup>th</sup> Archaeological Society of Alberta Conference and Annual General Meeting (AGM). We wish we were hosting this event in person, but we are excited to see you all via Zoom!

One of the key missions of the ASA is to advance education in archaeology and related disciplines. We do this a number of ways, including hosting public talks such as our Speaker Series, visiting K-12 classrooms, publishing articles in the *Alberta Archaeological Review (AAR)*, sharing information on social media and in our newsletter, participating in community outreach events, and organizing an annual conference. The aim is to articulate the importance of the past with everyone! Our annual conference is a means for professional archaeologists, researchers, students, and avocationalists to share their knowledge. It is a venue for learning about and discussing the cultural heritage of the province and beyond.

This year's presentations highlight the exciting research being done by students and professional archaeologists based in Alberta. They also showcase the important projects being conducted by ASA centres. You are sure to gain valuable insights from the presentations. Thank you for joining us this year. Your interest and engagement are appreciated!

### Conference Abstracts

**Title:** Detecting Change at an Arctic Heritage Site Using UAV Photogrammetry: A Case study from Qikiqtaruk, Yukon

**Speaker:** Katelyn O'Keefe, MA Student, University of Calgary

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**Abstract:** The heritage features on Qikiqtaruk (formerly known as Herschel Island), Yukon, represent a long period of occupation, from 800 years to the present. Pauline Cove is the island's most culturally significant area, with the most heritage features. These features include Inuvialuit sod houses and historic buildings associated with the whaling period, fur trade, missionaries, and the RCMP. Unfortunately, coastal erosion, inland flooding, and polar tourism are putting these features at risk. Before the COVID-19 pandemic, the excavation of two at-risk sod house features was scheduled. With travel bans in place and many logistical difficulties, the research goals pivoted, becoming focused on using the UAV (i.e., drone) imagery we captured in 2019. The 2019 imagery has been compared to 2017 imagery taken by another research group. Two different change-detection methods were used to determine and document changes to the heritage features and the landscape between 2017 and 2019. The low-cost, streamlined procedures developed here can be applied to develop a monitoring strategy for Pauline Cove's heritage.

**Title:** Examining Food Security in Inuit Communities

**Speakers:** Deanna Andreschefski & Megan Fisk, Undergraduate Students, University of Lethbridge

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**Abstract:** Food insecurity in Inuit communities in Canada is an increasing concern for Inuit families and, as a complex issue, needs to be fully understood to be properly addressed. We analyzed peer-reviewed articles from the University of Lethbridge data base to understand the complexities of Inuit food insecurity issue. Inuit are in a time of nutritional transition, as they move from nutrient-dense traditional foods to highly processed nutrient-deficit westernized foods, compromising food accessibility and affordability. Food insecurity is exacerbated by intersecting socioeconomic and environmental factors, including high rates of unemployment and poverty, high food prices in grocery stores, an increase in the frequency of extreme weather events, declining animal populations, delayed freeze-up of sea ice and earlier thaw, and failed attempts to mitigate some of these issues. This presentation will discuss each of the factors and their health impacts and will identify possible solutions to the Inuit food insecurity.

**Title:** Locating Fort Vermilion II: Tying Archival Records to the Archaeological Remains

**Speaker:** James Carnahan, Recent BSc Graduate, University of Lethbridge

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**Abstract:** As part of the Fort Vermilion field school, my fellow students and I were exposed to archival research. The local museum has copies of the journals relating to the Hudson's Bay Company fur trade posts in the area; the originals are in the Hudson's Bay Company Archives (HBCA) in Winnipeg, Manitoba. We reviewed entries relating to the operations of the fur trade in this region, especially focusing on location information because the original position of Fort Vermilion II, constructed in 1830, has not yet been confirmed. Unfortunately, these journals did not contain precise descriptions of where this post and others were located or how they were built. I decided to explore this topic further and examined journals from Sir John Lefroy. "Fort Lefroy" may have existed on the northern bank of the Peace River around 1844, which is in the same general locality of the site we excavated. Was this the original location of Fort Vermilion II? This paper presents the possible localities for Fort Vermilion II. First-hand accounts recorded by surveyors provide clues to why we did not unearth earlier artifacts in our excavations around the Big House of Fort Vermilion II, which was in use by the HBC until 1940.

**Title:** Phytolith Analysis: Subjectivity in the Creation of Scientific Knowledge

**Speaker:** Kelly Thomas, MA Student, University of Calgary

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**Abstract:** Despite the common perception of science as a purely objective endeavour, the construction of scientific knowledge necessarily requires a high degree of interpretation, subjectivity and expertise. Within the wider social discussion on science, specifically absent are the scientists' own perspectives on the subjective nature of their work, how they navigate uncertainties, and how they understand the influence of their research on a broader scale. One scientific tool commonly used by archaeologists is phytolith analysis. Phytoliths are microscopic silica fossils formed within the cell tissues of living plants, whose morphologies are used to

understand past environments. Within the field, there remains ongoing debate regarding the structure and limits of the method, including how accurately phytolith analysis can produce ecological reconstructions. Further, the ways in which archaeologists navigate the uncertainties and subjectivity involved in phytolith analysis has not been studied. Using an anthropological approach, this presentation will discuss the ways in which archaeologists perform phytolith analysis, specifically exploring the roles of interpretation, subjectivity, and expertise.

**Title:** Control Samples for Phytolith Analysis; a Case Study from the Jezreel Valley

**Speaker:** Kali R. Wade, Atlatl Archaeology

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**Abstract:** Archaeobotanical analysis is becoming more common in many archaeological sites and, while each site is different, there are some useful sampling strategies that any site can implement. These sampling strategies are accessible and affordable for academic and CRM projects and imperative to the successful interpretation of specialized, microbotanical analysis. This study examines phytoliths from twenty-one sediment samples extracted from four stratigraphic columns from the Jezreel Valley of modern-day Israel and compares these to three surrounding archaeological sites. Overall, our understanding of plant use within occupation areas is heightened when they are paired with internal and external control samples from the surrounding areas. Together, this work provides a large scale understanding of the ancient Jezreel Valley and highlights the importance of collecting and analyzing external and internal control samples for meaningful phytolith interpretations. This work is being completed by Atlatl Archaeology Ltd for the Jezreel Valley Regional Project, Tel Megiddo Expeditions, and Tel Shimron Excavations.

**Title:** Old Women's Buffalo Jump (EcPI-1): A Site Visit

**Speaker:** Tammi Mills, PhD Student, University of Lethbridge

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**Abstract:** Old Women's Buffalo Jump (EcPI-1) is located approximately 3 km northwest of Cayley, AB on the south bank of the Squaw Coulee. Comprised of low sandstone cliffs, there is a drop of 6-7 m to the bone bed deposits below. During a recent personal site visit, a review of the site history and excavations was carried out. Old Women's Buffalo Jump has an amazing story that is worth re-telling, in association with the archaeological evidence that has been recovered over the years.

**Title:** Ongoing Investigations at DIPI-1

**Speaker:** Tatyanna Ewald, Atlatl Archaeology

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**Abstract:** The Archaeological Society of Alberta (ASA) – Lethbridge Centre has been involved in a research project at the multi-component site DIPI-1 for four years. With the participation of ASA members, the project has involved erosion monitoring of the site, which is currently being degraded by ATV trails. A program of subsurface testing and pedestrian survey was implemented to monitor the extent and impact of the erosion and to define the boundaries and horizontal distribution of the site. During the 2016, 2018, 2019, and 2020 seasons, 20 projectile points including Plains and Prairie Side-Notched, Plains Triangular, Avonlea, Besant, Pelican Lake, and Oxbow, over 70 lithic tools, and various debitage and faunal remains were recovered. Blood residue analysis was also conducted on lithic artifacts recovered from 2018 to 2020. Future research at the site will be focused on identifying the northern and eastern site boundaries and continuing to monitor the erosion caused by off-road recreation vehicles.

**Title:** The ASA Rocky View County Public Archaeology Program at Rosie's Site (EhPn-89) and the Efficacy of Small-Scale Archaeology Programs for Public Engagement

**Speaker:** Erik G. Johannesson, PhD, RPA, ASA Calgary Centre & University of Calgary

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**Abstract:** The Archaeological Society of Alberta, Calgary Centre, has operated *The Rocky View County Public Archaeology Program at Rosie's Site (EhPn-89)* since the beginning of 2019. This is a small public outreach and education initiative aimed at offering students and volunteers the opportunity to participate in archaeological fieldwork and contribute to uncovering Alberta's archaeological and indigenous heritage. The project's location at the very outskirts of Calgary offers a unique opportunity not only in terms of accessibility, but also as a teaching opportunity to highlight that Alberta's rich cultural heritage lies literally at our doorstep. This paper details the results of two years of fieldwork at EhPn-89, which include overcoming the challenges posed by Covid-19, and the identification of a multi-component site spanning the last 3000 years. This presentation serves to emphasize the substantial outreach potential posed by small-scale archaeology projects whose size make them both flexible and resilient, and which offer a type of experience for participants not typically found at larger multi-year programs and field-schools.

**Title:** Operation Artifact 2.0: An Update on Recent Collections

**Speaker:** Rachel Lindemann, ASA Lethbridge Centre & Atlatl Archaeology

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**Abstract:** Operation Artifact was a program initiated in the early 1990s that looked at various privately held artifact collections in southern Alberta. In 2017, the program was revived with the recording of the Armin Dyck Collection. Since then, a further four collections have been fully recorded, and another two are in progress. This presentation will look at these new collections, some of the interesting finds and how they're continuing to be valuable contributions to how we understand the archaeology of southern Alberta.