



From the Director, Jason Toohey

Let me tell you all how happy and excited I am to assume the directorship of the George C. Frison Institute of Archaeology and Anthropology at the University of Wyoming. First, I would like to thank outgoing director Todd Surovell for both his tireless work with the Institute over the past 5 years and for his assistance over the past 12 months as I came up to speed in the position. Under Todd's lead, the Institute's endowment grew to over \$800,000, giving us the ability to fund a large number of archaeological research projects in the US and abroad. As director of the Frison Institute I will continue this work with the goal of being able to support even more fascinating and groundbreaking research in the future.

I come to the position of director from the Department of Anthropology at the University of Wyoming, where I teach a number of undergraduate and graduate level courses and conduct archaeological field research both in the Peruvian Andes and in Wyoming where my colleagues and I are beginning a historical archaeology project near Laramie.

Thanks in large part to donors to the Frison Institute, our endowment has grown in the past year to over \$850,000. This has given the Institute the capacity to fund 19 research proposals in the 2017-2018 year, supporting the work of 16 scholars ranging from advanced undergraduate and graduate students at UW to senior archaeologists at UW and other North American institutions. Frison-supported field projects took place in a wide range of places, from the Northern Absaroka-Beartooth Wilderness and the Bighorn Mountains, and a number of sites in Wyoming, to archaeological sites in both Peru and Sonora, Mexico. The institute also supported laboratory analysis on materials from a number of Wyoming sites as well as initial analysis of perishable artifacts from Mummy Cave. As has been the case in the past, I will continue to utilize this annual Bulletin to highlight the valuable research supported by the Institute. None of this critical work would be possible without the generous support of donors to the Frison Institute. Thank you so much for your continued interest and support!

Predictive Modelling of Settlement Patterns in the Northern Absaroka-Beartooth Wilderness (NABW) of Wyoming and Montana

Supported by small grants from both the *Alpine Archaeology Fund* and the *Patrick Orion Mullen Fund*, **Scott Dersam**, an M.A. student at the University of Wyoming carried out a series of extended survey trips over a period of 30 days into the Northern Absaroka-Beartooth Wilderness in Montana.



Pack survey moving up-valley.



Surface artifacts marked during recording of a new site.

Dersam's research seeks to test the utility of a predictive model of high elevation settlement and land use first developed by **Paul Burnett** and **Lawrence Todd** for the high elevation Alpine of the Shoshone National Forest in Wyoming. In using this model in a related wilderness in Montana, Scott means to test its accuracy for predicting site location. Initial results do in fact show that the model remains relatively accurate with approximately 71% of recorded sites situated in 'high probability' areas of the landscape.

INSTITUTE FUNDED RESEARCH STUDENT & FACULTY PROJECTS

The Frison Institute supported the research of ten students in 2017-2018 including that of **Sarah Allaun, Scott Dersam, Alex Garcia-Putnam, Nicole Jacobson, Madeline Mackie, Chase Mahan, Spencer Pelton, Marcia Peterson, Ryann Seifers, and Sandra Zarzycka** from the University of Wyoming. Also supported was the research of post-doctoral scholars and senior archaeologists including **Robert Kelly, Erick Robinson, Todd Surovell, Jason Toohey, and Rick Weathermon** of the University of Wyoming, and **Laura Scheiber** of Indiana University.

JUNE FRISON FUND



Surface collected points from Sonora, Mexico.

Funded by the Frison Institute, **Sarah Allaun**, an M.A. student at UW, is developing a project in northern Mexico. She has established a network of international collaboration between with Dr. Guadalupe Sánchez of the Instituto Nacional de Antropología e Historia in Hermosillo, Sonora, Mexico. Preliminary field work is forming the basis for her M.A. research, which will involve a spatial analysis of an extensive surface locality at the Fin del Mundo Clovis site in Sonora, Mexico. While Clovis has been known from Sonora for many years, systematic research has lagged far behind that in the United States. Allaun's M.A. and proposed Ph.D. research will begin to address Clovis patterns in the south.



Clovis locality in Sonora, Mexico.

FUND FOR WYOMING ARCHAEOLOGY



Crew at Alm Shelter just before backfilling.

With support from the June Frison fund, **Dr. Bob Kelly** and a team of students were able to conduct two final field sessions at the Alm Shelter, completing excavations at the site. This is a good thing because it looks as though the ranch that owns the site is about to be sold. The team was able to reach “bottom” – some late-glacial stream gravels – and determined that the earliest occupation at the site is late Paleoindian, about 11,900 calendar years ago. Dr. Kelly and his team are now seeking National Science Foundation funding to cover costs of analyzing the excavated collection and UW graduate student **Alex Craib** will be working on the assemblage for his dissertation.

WILLIAM AND GLORIA TYRRELL FUND

Nicole Jacobson is an M.A. student at the University of Wyoming studying settlement patterns, mobility, and landscape use in the Bighorn Mountains of Wyoming. Her research is focusing on mobility between lower elevation Otter creek Canyon, and higher elevation Upper Canyon Creek. While her survey of Otter Creek identified no archaeological sites, her test excavations and surface collection at the Upper Canyon Creek Site revealed buried deposits containing lithics, ceramic sherds, and datable charcoal. Survey in the upper elevation zone also revealed a Madison Chert quarry and lithic workshop. Her analysis is ongoing.



Test excavation in upper Canyon Creek.

FEATURED PROJECT: THE BISHOP MAMMOTH



U.W. Graduate Students Chase Mahan and Madeline Mackie on the Bedtick Ranch

Finding the Bishop

By Todd Surovell

On June 21, 1958, L. C. Bishop, the Wyoming State Engineer wrote to Horace Thomas, the State Geologist, “with reference to excavation of a huge animal in the vicinity of Douglas.” The letter referred to mammoth bones Bishop had found twenty years earlier. He donated those bones to the Wyoming Pioneer Memorial Museum in Douglas. Bishop intended to excavate the remainder of the animal that July. I first learned of this mammoth in 2014 when I took the U.W. Field School to the museum on a rainy day. Another mammoth in the Douglas area piqued my interest. Was it killed by humans? How old was it? Where was it found?

Over the next four years, with the help of many people, I began a search for the site where Bishop Mammoth was found. Our search became more urgent when we sampled the humerus on display in the museum, and it produced a radiocarbon age of 10,899 BP, a date within Clovis period. This was an animal that could have been killed by Wyoming’s first residents.

The locational clues from Bishop’s letter, signs in the museum display, and other records were woefully incomplete but provided enough information that we felt fieldwork was justified. Over

five days in July with Frison Institute funding, three U.W. graduate students and I performed geoarchaeological reconnaissance along a draw on the Bedtick Ranch with permission from the landowners, the Baker family. We searched for late Pleistocene deposits, sediments dating to the time of the mammoth’s death. After digging 19 auger holes and a test trench, we found a buried archaeological site and recovered materials for radiocarbon dating.

While we waited for the radiocarbon lab to report our dates, we reached out to the local press to see if anyone in the Douglas area had memory of where the mammoth was found. The receipt of our dates brought disappointment because oldest dates we received were far too young. The area we tested was definitely not where Bishop had found the mammoth.

Two days after receiving our dates, though, our luck changed when I received an email from Pat Neill in Albany, Oregon. When Pat was 12 years old in 1958, he and his parents helped to excavate a mammoth with L. C. Bishop and others. Pat shared his photo album containing 35 photos of the excavation. From two of those photos, we were able to identify the exact find location. We are hopeful that future work at the site will indeed lead to the discovery of yet another Clovis site in Wyoming.



Bones from the Bishop Mammoth on Display at the Pioneer



Sadie and L. C. Bishop



Using a bucket auger on the Bedtick Ranch to search of Pleistocene deposits, July 2018



Looking up the draw on the Bedtick Ranch toward the 2018 excavation of a test trench (left side).



Fred Hildebrand, Jeneva Hildebrand, and Pat Neill sitting near the ribcage of the Bishop Mammoth, July or August 1958



The Bishop Mammoth site, September 2018

JUNE FRISON FUND

Sandra Zarzycka was in her final undergraduate year at UW in 2017-2018 and is now a graduate student at the University of North Texas. Along with her collaborators, she investigated the use of red ochre (hematite) by Paleoindian groups in the west. While the use of red ochre pigment is well documented for more recent peoples, archaeological evidence of its use by Paleoindians is very rare. Sandra and her collaborators have chemically sourced the ochre recovered from the La Prele Mammoth Site near Douglas, WY where numerous nodules and an expansive ochre stain have recently been discovered. Through the use of inductively coupled plasma atomic emission spectroscopy (ICP-OES) and inductively coupled plasma mass spectrometry (ICP-MS) analyses, the geochemical signature of La Prele ochre was established and compared to four ochre sources in Wyoming. The work has established that this ochre originated at the Powers II source 108 km. away. Sandra and her collaborators (**Todd Surovell, Madeline Mackie, Spencer Pelton, and Meghan Kent**) have established that the people who utilized the La Prele location approximately 13,000 years ago transported this material over long distances, speaking to the significance of the ochre within their society.



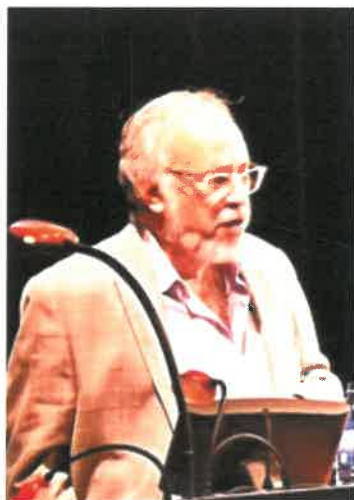
Historic mine at the Powers II ochre source.



Recovered ochre nodules (left), and enhanced image of ochre stain at La Prele (right).

FALL LECTURE

Dr. Stuart Fiedel of the Louis Berger Group, gave this year's Frison Institute annual lecture. His talk titled "Native American Origins: Reconciling the Evidence of Ancient Genomes and Archaeology" addressed his ongoing research in the first peopling of the new world. Fiedel has long played a vocal role in the ongoing debate over whether pre-Clovis aged human migrant communities existed in Americas.



2017 Frison Institute speaker Dr. Stuart Fiedel

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