

PCRG

PaleoCultural Research Group

2015 Annual Report

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Dr. Rolfe D. Mandel, Lawrence, Kansas
Cody Newton, Buffalo, Wyoming
Carl Williford, Fayetteville, Arkansas
Dr. Richard H. Wilshusen, Boulder, Colorado

New PCRG Publications

Johnston, Christopher M., Jason M. LaBelle, and Halston F. C. Meeker
2015 *A Class III Archaeological Survey of the Niwot Ridge UNESCO Biosphere Reserve, Boulder County, Colorado*. Research Contribution 98. Submitted to the Institute of Arctic and Alpine Research, University of Colorado, Boulder. [68 pp.]
Mitchell, Mark D., and Kathie Joyner
2015 *U.S. Forest Service National Curation Study*. Research Contribution 97. Submitted to the U.S. Forest Service, Washington, D.C. [81 pp.]

PCRG publications are distributed to members upon request and without charge.

Digital Archaeology Initiative

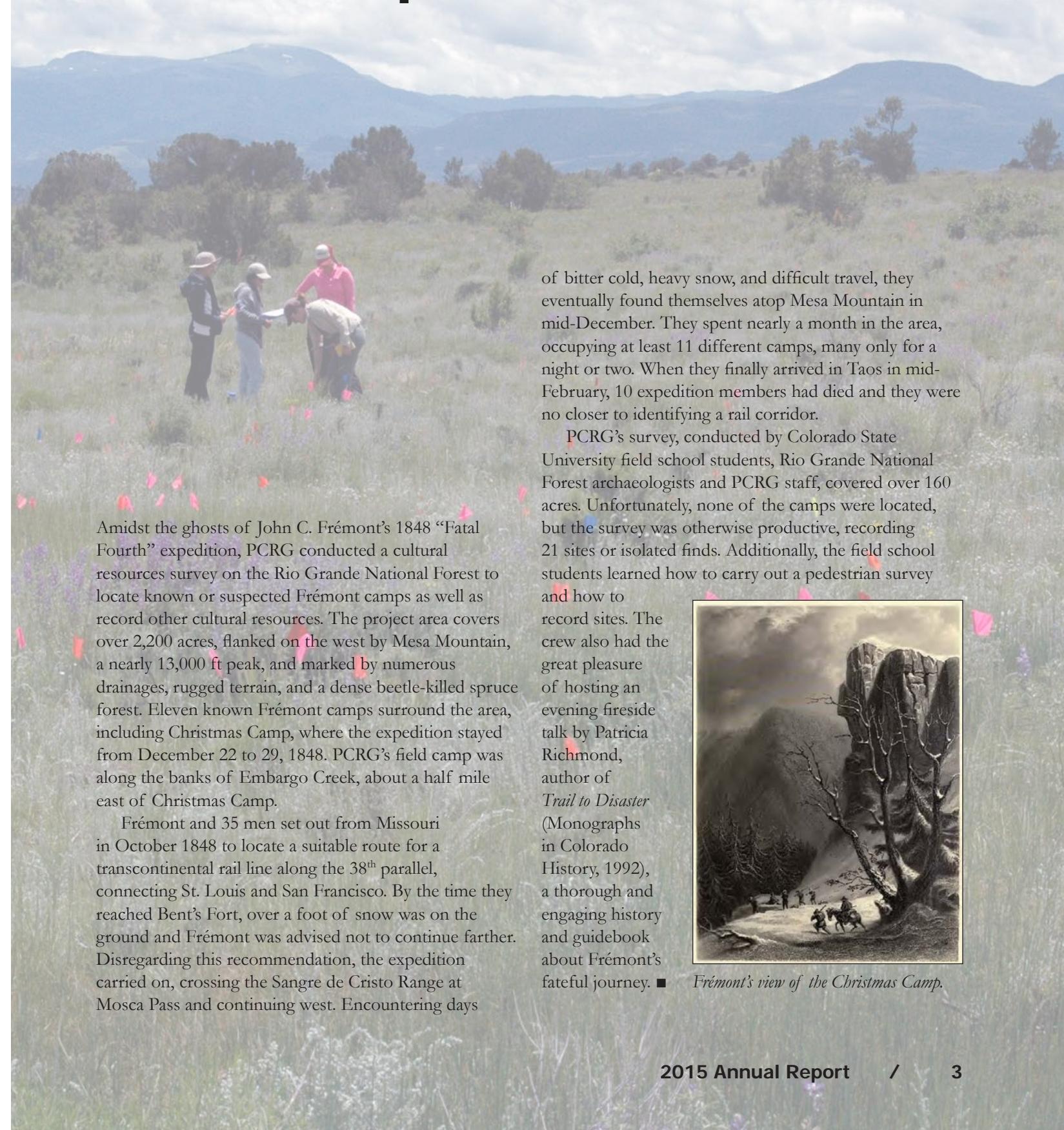
Digital technologies and the Internet are fundamentally altering the ways archaeologists disseminate their research results, challenging long-established practices but also opening up entirely new avenues for communication and collaboration. In 2015, PCRG began work on a digital archaeology project called Online Resources for Colorado Archaeology and Historic Preservation, or ORCA. The website will launch in mid-2016 at www.archaeologycolorado.org and will feature a searchable research library, a new online refereed journal called *Reviews in Colorado Archaeology*, links to online research resources, and tools for professional collaboration. The site will also feature sections for students and educators and for avocationals. Major funding for the project is provided by History Colorado – State Historical Fund. Six partner organizations and three anonymous donors are providing additional funding.

A central objective of the ORCA project is to create a digital space for publishing archaeological contexts. In 1999, the Colorado Council of

Professional Archaeologists published five books summarizing the state's archaeology that are widely recognized as among the most comprehensive and authoritative ever produced. But while they remain valuable, the rapid pace of archaeological documentation and research in the state is making them increasingly outdated. The ORCA platform offers a cost-effective and timely way to publish incremental updates to the existing contexts that are tailored to the pace and direction of research occurring in different parts of the state. In addition, ORCA facilitates the incorporation of critical supplementary materials, including images, maps, and datasets.

A second goal of the ORCA project is to expand public access to high-quality information about the state's history and prehistory. A majority of the documents in the research library are available without restriction or charge. ORCA also features brief summaries of current research written for a broad audience as well as non-technical books and articles summarizing the state's archaeology. ■

On the Trail of Frémont's Fourth Expedition



of bitter cold, heavy snow, and difficult travel, they eventually found themselves atop Mesa Mountain in mid-December. They spent nearly a month in the area, occupying at least 11 different camps, many only for a night or two. When they finally arrived in Taos in mid-February, 10 expedition members had died and they were no closer to identifying a rail corridor.

PCRG's survey, conducted by Colorado State University field school students, Rio Grande National Forest archaeologists and PCRG staff, covered over 160 acres. Unfortunately, none of the camps were located, but the survey was otherwise productive, recording 21 sites or isolated finds. Additionally, the field school students learned how to carry out a pedestrian survey



Frémont's view of the Christmas Camp.



The Big Dig

Late Paleoindian sites are rare in the Colorado foothills and adjacent Plains. Just one site—Blackfoot Cave, located about an hour south of Denver—has produced clear stratigraphic evidence for an occupation dating to James Allen times, between 8000 and 9000 years ago. In 2015, PCRG volunteers and Colorado State University field school students opened a block at the site to learn more about the site's Paleoindian component.

In contrast to the dearth of sites on the foothills-Plains ecotone, buried James Allen-age camps or bison kills are known from western Kansas and Nebraska and from the Colorado high country. Kill sites have been excavated in the Plains, including the Clary Ranch, Norton, Winger, and Laird sites. High country sites

include the Fourth of July Valley, Caribou Lake, and James Allen sites. The only site known from the edge of the Plains is the Hell Gap site, 250 miles to the north.

Thus, Blackfoot Cave is located in the center of vast gap in the known distribution of James Allen sites and for this reason is perfectly positioned to answer questions about group movement and landscape use during this understudied period.

The James Allen occupation at Blackfoot Cave is deeply buried. Previous work undertaken by the Denver Chapter of the Colorado Archaeological Society produced a James Allen point from a stratum 2.2 m below the modern surface. That work also showed that groundwater occurs at depths below 1.2 m.

Unfortunately, the wet spring of 2015 further raised the water table to within 20 cm of the modern surface. Despite frantic trenching, pumping, and shoring, the crew was not able to reach the James Allen component. However, the project's geoarchaeologist, Dr. Rolfe Mandel, was able to sample a series of buried soils, including one likely of James Allen age. The crew also obtained a sample of Early Archaic artifacts. ■

Return to Heart River

After a three year absence from the Northern Plains, PCRG set course in June for Bismarck and a renewed field investigation at Chief Looking's Village, also known as Ward Earthlodge Village. The 2015 work was the first year of a two-year project at the site.

The settlement—which is one of the most frequently visited archaeological sites in the Northern Plains—is located within the city limits of Bismarck and is managed by the Bismarck Parks and Recreation District. Two different types of houses were built at Chief Looking's Village during the late 1500s, and the project's primary research focus is to document and explain the differences between the family units living in each type of house. The project builds on PCRG's 2008 investigation at the site.

The research team first carried out large-scale, multi-instrument geophysical surveys of the settlement. Geophysical data were then used to define the locations of individual houses and to precisely target hand excavation units. The field crew opened a total of 15 test units, which were distributed across two different houses.

PCRG was privileged to lead the Colorado State University archaeological field school in 2015. Seven CSU students and a graduate teaching assistant joined six archaeological field school students from Minnesota State University-Moorhead to carry out the excavation. Including the students, a total of 29 people participated in the two-week field investigation.

Major funding for the project comes from the Northern Plains Heritage Foundation. Additional partners include the University of Arkansas, Minnesota State University-Moorhead, Colorado State University, the State Historical Society of North Dakota, the Mandan, Hidatsa, and Arikara Nation, the Bismarck Parks and Recreation District, and the University of Colorado.

The field investigation was only the first phase of the 2015 project. During fall and winter, seven University of Colorado undergraduate students processed and sorted the

90 collected samples. Concurrently, two graduate anthropology students, one at the University of Colorado and one at the University of Arkansas, are using data from the site for their Master's thesis projects. PCRG will return to the site in summer 2016 to conclude the field investigation; we hope to see you there! ■



Top: Volunteers and field school students working in House 1; bottom: the 2015 field crew at their home away from home in Menoken, North Dakota.

High and Dry: Living on Colorado's Steppe

Despite the searing August sun, PCRG traveled to southeastern Colorado in 2015 to evaluate the Dry Creek site located on the Comanche National Grassland. Data collected by the Forest Service in 2014 indicates the site likely contains a well-preserved and highly significant Developmental period occupation (A.D. 100 to 1050), represented by an estimated 750 to 1,000 artifacts exposed on the surface. The site is located in the flat to gently rolling open steppe. Dry Creek has cut a 3 m-deep arroyo adjacent to the site; however, as the name suggests, surface water is only intermittently present. A

low, partially stabilized dune field occurs on the north side of Dry Creek, opposite the site.

Archaeologists propose two contrasting settlement models for the Developmental period. Some argue that Developmental period bands wintered at base camps in the foothills of the Rockies. In early spring, they moved east into the canyon country along the Apishapa, Cucharas, and Purgatoire rivers, where they occupied large architectural sites and rockshelters. A second model reverses that sequence, putting Developmental period bands in the foothills in the summer and in the

canyons during the winter. However, both models envision sites like Dry Creek—which is located in the open plains far from either the mountains or the canyons—as briefly occupied, special-use localities. The preliminary survey data suggests the site may have been a residential base camp rather than a special-use locality and the goal of the project is to test that hypothesis.

PCRG members Ken and Jo Ann Kvamme (University of Arkansas) and one of Ken's graduate students, Carl Williford, carried out a magnetic survey of a portion of the site. Remote sensing methods such as magnetometry have rarely been used on hunter-gatherer sites in Colorado and the crew was excited to test this productive and non-destructive method. Eleven test units were then placed over subsurface anomalies seen in the magnetometer data, as well as over several partially eroded cultural features.

Seventeen people participated in the project, including students from five different colleges and universities. AMS radiocarbon dates place the features in the Developmental period. The features all contain burned and fragmented pieces of local shale bedrock. The collected assemblage includes numerous ground stone tool fragments, almost all of which are made from sandstone. Some of these specimens may be good candidates for pollen analysis. The rest of the collection is currently under study. Further work will focus on chipped stone raw material types, technological analysis of flaking debris and stone tools, and analysis on the small collection of pottery recovered from the site. A full report on the site is expected later in 2016. ■

Top: Carl Williford collecting magnetic gradiometry data; middle: Mona Charles (left) and Mark Howard excavating Unit 4; bottom: Peter Schlegel (left), Michelle Stevens, and Sara Cullen screening.



Rob Bozell

The Nebraska State Historical Society Archeology Division (State Archeology Office) has re-located our offices, site files, library and archives, collections, and laboratory to a newly constructed building in north Lincoln near Interstate 80. We are particularly excited to finally have our collections in a dry, well-lit, climate controlled room equipped with space-saver storage. The collections had previously been stored at a location with chronic water problems. I will continue to divide my time between this new office and a NSHS facility in Omaha where I live.

Rolfe Mandel (University of Kansas), Courtney Ziska, and I are working on a Nebraska Department of Roads funded research project to develop a GIS-based tool to better address where deeply buried archeological sites are likely to occur in Nebraska stream valleys. The project is intended to assist archeologists and planners to be better informed about the location and avoidance of sites not normally identified with traditional surface survey and shallow shovel testing.

I coordinated NSHS Foundation volunteers and two weeks of the University of Nebraska-Lincoln Archeology Field School in the summer and fall of



Bozell: With the Echo-Hawk brothers on the crest of a Pawnee sacred place overlooking the Cedar River valley in central Nebraska.

2015 to complete limited excavation, mapping, and restoration of the Engineer Cantonment site (1819-1820 Long Expedition winter camp) in response to damage caused by Missouri River flooding. Also on the public outreach front, our staff was very engaged in Nebraska Archeology Month 2015. I made presentations in Omaha, Lincoln, Bellevue, Fort Calhoun, Nebraska City, Plattsmouth, and Ashfall State Park.

Finally, I assisted Pawnee brothers Walter, Lance, and Roger Echo-Hawk on a week-long research tour of Pawnee villages, cemeteries, hunting camps, and sacred sites across Nebraska. Walter is working on an historical novel about their family's deep past in Nebraska. This was a particularly gratifying week and it was interesting to learn about specific villages dating back to the late 1700s, where various named individuals were born and died. The Echo-Hawks were able to recount oral traditions of various military engagements, ceremonies, alliances, and other events at specific places. It was a great reminder that with all the animal bones, bodyshards, endscrapers, and flakes we study, at the end of the day we as anthropologists are telling the stories of people.

Archeologists working in the Central Plains lost two great friends and colleagues in 2015. Donna Roper and Gayle Carlson, I miss you both.

John Craig

A joint effort in "finance scrounging" finally produced yet another shoestring budget and the gang of eight returned to Amisfield Tower for the last two weeks in July. Our host and owner of the fifteenth-century fortified tower house, Ms. Jane Johnstone, graciously invited us to room and board in the adjacent 1647 manor house and that was critical to making this trip possible.

This summer's excavations in the ditch feature on the east side of the tower continued to yield artifacts, many of which date to the early to mid medieval periods. Our discovery in 2013 during ditch excavations of a sandstone section of a Gothic style window frame suggested that the suspected pre-tower dwelling was likely on the same footprint as the present tower. A 1 x 3-m unit opened up this summer on the north side of the tower uncovered a threshold and partial wall connected to the northeast side of the tower. This may turn out to be further evidence of the pre-tower dwelling, but that will have to wait for our next trip.

While metal detecting a grassy, wooded knoll about

150 meters to the northwest of the tower, we discovered many cut nails with faceted heads, horse tack hardware, slag and other yet-to-be-identified metal items. We may have discovered a medieval blacksmith shop but we'll have to dig some holes to know more. One item we recovered from this area appears to be either a heel cleat



Craig: Excavating at Amisfield Tower



Craig: A heel cleat or horseshoe?

for a wooden clog or perhaps a horseshoe for the small Scottish medieval horse or pony. Any thoughts on this? The approximate dimensions are 4-1/2 in long, 2-1/2 in wide, and 1/2 in thick. All the best of health and luck to PCRG members in 2016.

Carl Falk

Activities for the past year included administrative duties as PCRG's Secretary and as a member of the Board of Directors. 2015 completes my 20th year of involvement with the organization. Work on PCRG projects centered on analyses of vertebrate fauna from PCRG's 2014 investigations of the Upper Crossing site, Saguache County, Colorado; preliminary evaluation of fine-screen samples from the 2015 investigation at Chief Looking's Village; and continued—though painfully slow—progress on completion of various tasks on the unfunded Menoken and Jones Village projects.

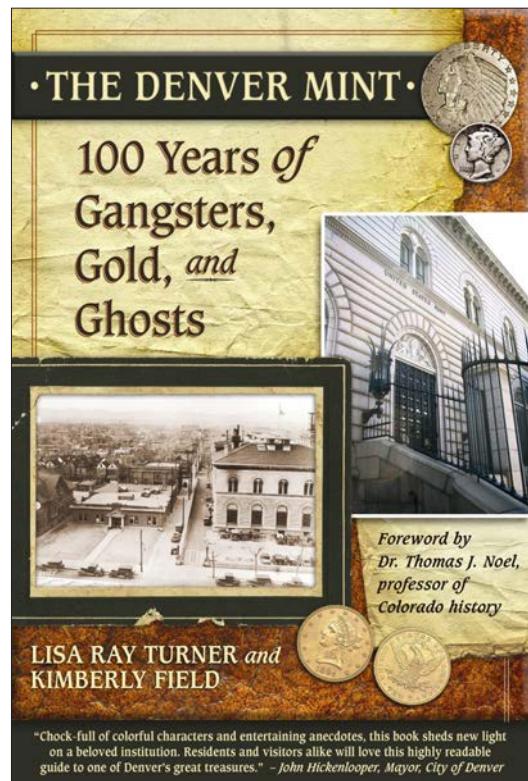
PCRG member Paul Picha (State Historical Society of North Dakota) and I prepared a paper (presented by Paul) at the 80th Annual Meeting of the Society for American Archaeology held in San Francisco this past April. The paper, "Where Rivers Flow: Mandan and Hidatsa Subsistence Economies from an Archaeomalacological Perspective", was included in a symposium chaired by Andrew Clark and Adam Wiewel, "Those Dam Sites: Recent Archaeological Research in the Dakotas."

Finally, I continued my participation in the Engineer Cantonment (with Rob Bozell) and the Beals (with Dale Henning and Paul Picha) projects. Both are scheduled for publication during the coming year. As part of the work on Great Oasis and Woodland components at Beals, I began a study of modified bone materials from the Great Oasis component of the Packer site, Sherman County, Nebraska. Minor consultations on materials from Colorado, Nebraska, Texas, and North and South Dakota were scattered though the year. Travel during 2015 was limited to a relaxing family trip to Memphis, Tennessee, followed by a trip in mid-October to Iowa City to attend the 73rd Annual Plains Anthropological Conference.

Kim Field

This year, I was featured, along with former Colorado State Historian Dr. William Convery, on the Rocky Mountain PBS series, *Colorado Experience*. The episode

is an outgrowth of work from my book published in 2007, *The Denver Mint: 100 Years of Gangsters, Gold, and Ghosts*. In the episode, we join plant manager Randy Johnson for a look into the history of the Denver Mint. Stepping through the ornate doors of Denver's most beautiful factory, housed in the historic 1906 building that was modeled on a Medici palace, we investigate the wild robbery of 1922 and discover the secrets behind Denver's very own mint. The episode can be viewed at <http://video.rmpbs.org/video/2365627233/>.



Field: Everything you ever wanted to know about Denver's mint.

I also was able to join the PCRG team in Bismarck this summer. Full disclosure: North Dakota was always fly-over country to me, and I didn't give a hoot about Plains archaeology. Then, I worked for a week at Chief Looking's Village in Bismarck and the scales fell away from my eyes!

Through visits to nearby sites including Double Ditch and On-A-Slant, along with conversations with the archaeologists involved in the excavation, remote sensing, and mapping projects, I came away with an appreciation for the richness of the lifeways of the



Field: The waterscreening operation at Chief Looking's Village.

peoples on the Northern Plains in the centuries prior to European contact. I also fell in love with the people and countryside of North Dakota—in the summer, that is.

I fondly remember standing on the bluff overlooking the wide Missouri River, as Mark Mitchell explained how the cultural landscape would have appeared at the time Chief Looking's Village was occupied. As he pointed out neighboring sites, I envisioned smoke curling up from large villages of substantial earthlodges, women working the surrounding maize patches and kitchen gardens, and bull boats ferrying visitors from nearby settlements across the swift current.

This was my second volunteer project with PCRG. I was impressed with the professionalism and quality of the entire experience. Simply put, its good archaeology. I'm looking forward to my next outing with PCRG, and encourage others to join us.

Michael Fosha

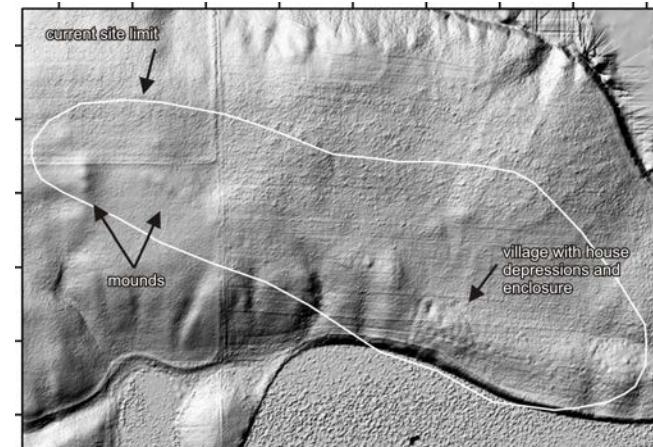
This summer a two week survey was conducted in Harding County, South Dakota by volunteers of the South Dakota Archaeological Society and other interested individuals. The project was conducted through a grant from the South Dakota State Historic Preservation Office and consisted of Principle Investigators Linea Sundstrom (Day Star Research) and Michael Fosha (South Dakota State Historical Society, Archaeological Research Center) to identify cultural resources on land administered by School and Public Lands. A total of 90 new sites were recorded, three of which were evaluated



Fosha: One of the possible stone-lined houses near the summit of the West Short Pines.

archaeologically, and four new radiocarbon dates were obtained. The sites ranged from artifact scatters, rock shelters, long-term occupations, stone enclosures, and bison kills. The 2016 season will focus on limited site testing and survey for additional sites in the area.

Another project focused on what appears to be a fortified Great Oasis village on Roy Lake in the northeast corner of the state. The fortified feature was revealed in LiDAR data during a mortuary survey in Marshall County conducted by Archaeo-Physics LLC. A single 1 x 2-m test unit was excavated to ascertain the age and cultural affiliation of the site. Artifacts consisted of large amounts of ceramics and fish bone with lesser amounts of reptile and small mammal and bird (the fauna is being



Fosha: LiDAR view of site 39ML9.

investigated through the gracious efforts of PCRG member Carl Falk). Our hopes are to get some limited geophysics and additional testing completed in 2016.

Eugene M. Gryba

For me, the highlight of the 2015 year was leading a lithics workshop at the Alaska Anthropological Association Annual Meeting in early March in Anchorage. The workshop had been arranged by Heather Smith and Angela Younie. Heather had worked at the Serpentine Site in western Alaska where early basally thinned points had been discovered. Angela had completed her thesis on the Little Pond Microblade site, a site that I had discovered on one of the Alberta oil sands projects. Of course, I focused my attention at the Anchorage workshop on basal thinning and microblade production. Another highlight of the Anchorage trip



Gryba: Large and small microblades.

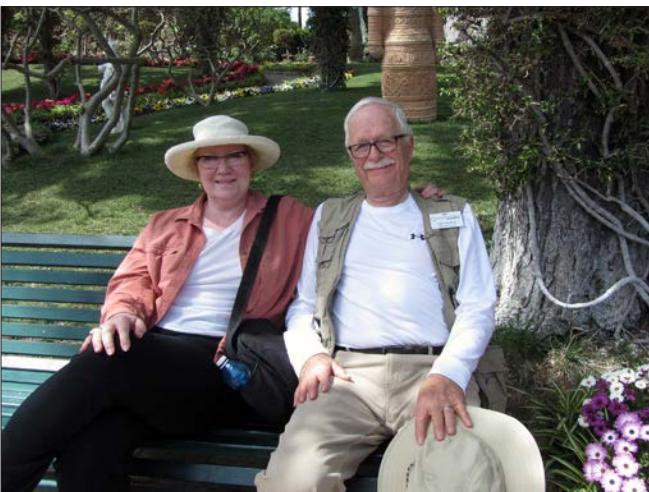
was, with huge thanks to Dr. Charles Holmes, seeing the Yubetsu type microblade cores and other artifacts from the Swan Point site.

The collapse in crude oil prices saw a contraction in CRM-related projects in the oil sands area of northeastern Alberta. The effects of the economic slowdown in the oil patch were felt even in the large urban areas. As but one example, the large mitigation project which would have entailed excavation of a number of Prehistoric period sites within a planned residential development on the edge of Calgary was shelved indefinitely. My field work was limited to monitoring projects at Fort Calgary which is located within a kilometer of downtown Calgary. However, I did use some of the “free time” to collect several hundred pounds of potentially suitable lithics for knapping from gravel bars along the Bow River within Calgary city limits. Over the rest of the winter I plan to see how the material responds to heat treatment and then share the results with local consultants and possibly contribute information to the province-wide database on Alberta lithics that people at the Archaeological Survey of Alberta and the University of Alberta have initiated. In addition, this semester, I am volunteering my time and knowledge and helping Professor J. Cormack at Mount Royal University with her lithics course lab.

It is impossible to tell whether the two archaeological overviews on nearby residential developments that have already been requested by developers this early in the year are signs of a possible busy field season. In the meantime, I have already committed to presenting a talk on microblade technology, and perhaps even supplementing it with a short video, at the Canadian Archaeological Association Annual Meeting which is scheduled for Whitehorse, Yukon in early May. Much of the material for this video has already been assembled. And, there are tentative plans to have a lithics workshop at this conference; details for one are still being worked out.

Dale and Barb Henning

This past year has been very active for both of us. Our major trip, in late April and early May was a Smithsonian tour of Sicily and southern Italy, capped off with a few hectic days in Rome. Both Sicily and Italy were characteristically laid-back with small villages (some loaded with tourists, of course) and excellent food every



Henning: Dale and Barb on Capri.

day. I was particularly interested in visiting Sicily because an uncle carried a rifle there in WWII, then Anzio and Rome and finally into southern France. While Sicily was delightful for us, I was not at all envious of my uncle’s experiences as an infantry squad leader there. A horrible place to fight a war. We, on the other hand, were favored with a great group to travel with, excellent guides (our guide in Sicily was the favorite of all the ladies), good accommodations, and wonderful weather. We took a day trip to Capri, visited small towns in southeast Italy, and spent a few days on the Amalfi coast. Of course, we joined the thousands of tourists who daily take in the wonders of Pompeii. Our guide was an archaeologist whose work has been focused there for well over a decade ... I was interested, but not in the least jealous of his experiences there. Our hotel near Pompeii faced Mt. Vesuvius which was quiet while we were there. I had visited Rome several times when serving in the Army and was not prepared for how busy and crowded it was only 55 years later! We dutifully toured the Vatican Museum, often in crowds. Fortunately, the Sistine chapel was monitored by a number of tough, no-nonsense (or noise) priests who kept things both quiet and moving along. We were thankful for their presence. Bottom line, though—a great trip, and possibly our last overseas venture, just what we have said for the past two-three years. We will see.

Archaeological and historical endeavors have not been laid aside for 2015, either. I gave back-to-back talks on Blood Run to the South Dakota Historical Society and to the South Dakota Parks Engineers in the spring

with time between to visit village sites and the Historical Museum in Bismarck, a side trip we both enjoyed immensely. Blood Run, a National Historic Landmark is, we hope, to become the first jointly-administered (Iowa and South Dakota) state park(s) in the country. South Dakota has moved very rapidly, dedicating their Good Earth at Blood Run State Park a few years ago, and have very recently built trails, a new road into the park, and have broken ground for a new visitor center that is to open early next year! I have been a consultant to South Dakota and am also involved with the proceedings in development of a park on the Iowa side, working closely with members of the Omaha, Ponca, and Iowa tribes whose ancestors once lived there. We all hope to see positive progress on both sides of the Big Sioux River in 2016. And, of course, conferences. I attended the Flint Hills (a paper on geoglyphs found in Iowa and at Blood Run), Plains (a paper on Blood Run’s unique qualities), and Midwest (relaxed, no paper) conferences.

Some progress is being made on clearing my personal backlog of Great Oasis site reports with hope for some completions this coming year. My hat must go off to my wife, Barbara, who continues to complete projects both very well and on time. Her latest contribution is a heavily-illustrated book detailing a history of the first five years of Edgewater, the retirement facility where we have resided the past three years. This involved collecting and evaluating photos and records beginning with facility planning, construction and inhabiting this large facility. Her reward is being tasked with collecting data for the next five-year history. Fortunately for me, perhaps even for Edgewater, I have been allowed to work primarily on archaeological endeavors.

That’s it for this past year and I’m looking ahead to reporting on 2016.

Craig Johnson

Steady progress was made this past year on several fronts. The majority of “spare” time on weekends and evenings was spent on my Middle Missouri lithics book. Drafts of all eight chapters were completed, including most of the many figures. In an effort to tie the results into anthropological theory, the field processing model was adopted to understand variability in the reduction of various raw materials. The field processing model, a derivative of central place foraging theory, states that as site distance from a food or lithic resource increases,

there is more field processing near the resource and away from a central place (village) to separate the high utility parts from those with low or no utility. This is manifested in village assemblages with lower amounts of cortical flakes, smaller debitage sizes, and lower debitage-to-tool ratios as distance increases, among other patterns.

Two week-long data collection trips were made to the South Dakota Archaeological Research Center in Rapid City and the State Historical Society of North Dakota in Bismarck in conjunction with the book. Work at Rapid City focused on identifying flake types on expedient flake tools and collecting information on a number of lithic caches. During my examination of tools for my book, a number of lithic caches were identified from these rarely reported and under-appreciated features. Most consisted either of flake blanks or unmodified pieces of plate chalcedony. However, a series of caches from the Whistling Elk site (39HU242), a large bastion-fortified Initial Coalescent village in the Big Bend region of South Dakota, consisted of unmodified irregular flakes, endscraper blanks, and completed but unused endscrapers. Nearly all, along with the other tools and flaking debris, were made from White River Group silicate. It is obvious that the village was settled by peoples who recently arrived from western South Dakota, built lodges within a defensible fortification system, only to quickly abandon the village without returning. All other Initial Coalescent chipped stone assemblages from the Big Bend region are dominated by locally available jaspers, cherts, and chalcedonies. The folks at Whistling Elk were never there long enough to exploit those toolstones.

Data collection in Bismarck focused on stone



Johnson: Lithic cache from the Whistling Elk site (39HU242).

tool raw materials and flake types from a number of Extended Middle Missouri and Middle Woodland components. High on the list was Fire Heart Creek, characterized by two components. Ceramics and provenience unit information was needed to partition the stone tools into their respective components. Only the Extended Middle Missouri component was large enough to use. Maximum endscraper lengths were also collected from many of these same sites in order to test the hypothesis that as distance from the Knife River flint primary and secondary source areas in west-central North Dakota increases, their average lengths decrease due to conservation or economizing efforts. Results indicate a gradual, if somewhat uneven reduction in length with distance downriver.

Concurrently with my work at the Heritage Center were the excavations at Chief Looking's Village by PCRG with students from Colorado State University and Minnesota State University-Moorhead. I volunteered for the last week of a two-week field session excavating at the site. It was another educational and productive effort for me, learning how to identify a house floor and the orifice of an undercut house floor pit (Feature 8) from some subtle clues such as soil texture, color, and density. Assisting me in the excavation of the 1 x 2-m unit and feature were my dig buddies Langley Bradley, Meagan Schoenfelder, Wendi Murray, and Laura Krische. The dig was also memorable for an 80 mph wind and rain storm that ripped through camp one evening. A number of tents were damaged or destroyed including two long but repairable tears to my tent fly caused by broken poles.



Johnson: Excavating Feature 8 at Chief Looking's Village.

Luckily, there was no water damage.

Additional research efforts initiated this year deal with the ceramic and chipped stone assemblages from Calamity Village (39DW231) and Medicine Creek (39LM2). The former Extended Middle Missouri site is important because it marks the steep decline of Knife River flint use 15 miles south of the Grand River. Medicine Creek is one of a few major Initial Middle Missouri villages that hasn't been reported. Future post-retirement plans in a few years include completing reports for these and other major Middle Missouri Plains Village sites. Finally, I presented a pictorial-based talk in conjunction with Minnesota Archaeology Week recapping my career entitled 'From Pots to Rocks: 40 Years of Plains Archaeology.'

Chris Johnston

I am happy to finally say that I have completed my Master's thesis at Colorado State University on the Roberts Buffalo Jump. The site, dating to roughly A.D. 1650 and located in northern Colorado, is one of the southern-most known Late Prehistoric bison jumps. My work included a re-analysis of the bison bone, modified stone, bone tools, and ceramics. I then used all of those data in a GIS to explore site structure patterns within and around the bonebed. The spatial analysis yielded great results, showing what are likely primary and secondary processing areas within the bonebed, with a great deal of flaking debris surrounding the secondary processing area. Needless to say, I am happy to have the project completed and look forward to sharing my results in the near future. I could not have done it without the support and mentorship of Mark Mitchell, as well as PCRG, for allowing me to take time away from work to get it done and for giving me a place to spend my days (and some nights) furiously typing away.

The summer was largely spent helping to coordinate our field projects for the year; making shopping lists and meal plans for upwards of 20 people is certainly an exercise in planning! I had a great summer working with all of the volunteers and especially enjoyed getting to work with all of the students from the 2015 CSU Archaeology Field School; they really were a great bunch of students. The rest of the year was spent catching up on report writing, and working in the PCRG lab with our volunteers and University of Colorado work-study students on processing the collections from Chief

Looking's Village, among other tasks. I am looking forward to getting back some free time to spend with my wife and son, and also getting out in the field for our slate of summer projects. I hope to see some of you out there this summer!

Amy Koch

Last October I survived an automobile accident in South Dakota and sustained a spinal cord injury. I am now in the process of rehabilitation in Omaha, Nebraska and working to regain my independence. My rehabilitation program involves physical, occupational, and speech therapies.

In physical therapy I focus on range-of-motion and functional electrical stimulation. For occupational therapy I am learning to use Dragon Naturally Speaking software in order to access the functions on my computer. Speech therapy includes exercises to increase breath support and verbal endurance.

My family and friends are a great source of love and support while I work toward recovery from the accident. Returning to work as an archaeologist is one of my main goals.

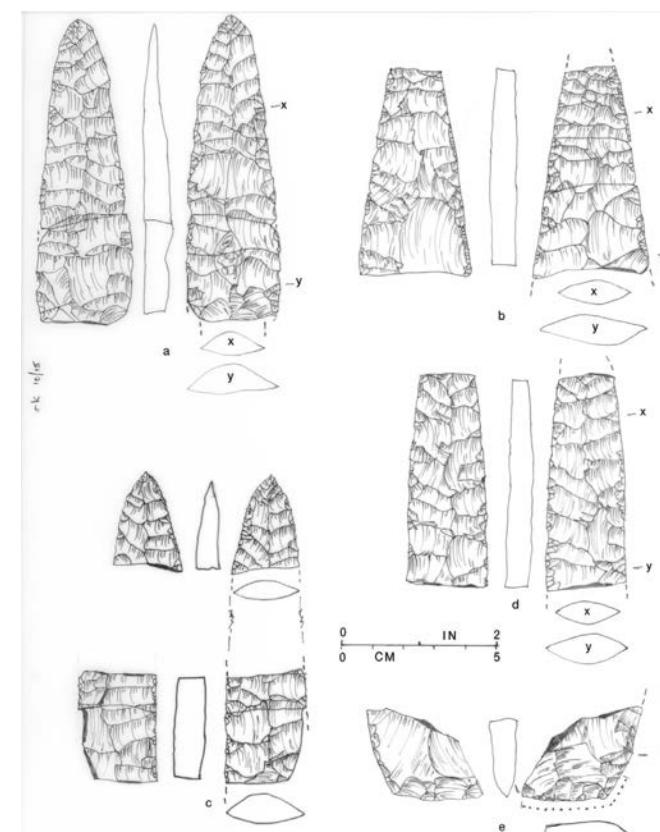


Koch: With Doug Bamforth at the King site, western Nebraska.

Ruthann Knudson

I kept busy this year presenting and publishing papers and completing project reports. The illustration shows

bifaces from the Renier site in Wisconsin which I drew to accompany a paper I presented at the Plains Anthropological Conference in Iowa City.



Knudson: Renier, Wisconsin bifaces.

Maxine McBrinn

Two exhibition catalogs, a co-edited volume, and an exhibition later, I can confirm that 2015 kept me hopping! The Museum of New Mexico Press published *Turquoise, Water, Sky: Meaning and Beauty in Southwest Native Arts*, a companion catalog for the exhibition I curated the previous year. The book, which I co-authored with Ross Altshuler, has hundreds of glossy images of historic and modern Native Southwest jewelry as well as information on the stone and its meaning in the region.

My new exhibition, *Oblique Views: Archaeology, Photography and Time*, opened at the Museum of Indian Arts and Culture in Santa Fe last October and will be up until April, 2017. It features then-and-now aerial photographs of Chaco Canyon, Canyon de Chelly, and

the northern Rio Grande area taken in 1929 by Charles and Anne Morrow Lindbergh and recently by Adriel Heisey. The photographs, which are presented side-by-side, reveal both subtle and obvious changes in the landscapes and archaeological sites. I edited a companion catalog, which is available from the Museum of New Mexico Press and from Amazon.com.

Barbara Roth and I edited a volume on foragers and early farmers in the Southwest and the Great Basin that is available in early 2016. Appropriately titled *Late Holocene Research on Foragers and Farmers in the Desert West*, it is published by the University of Utah Press. Each chapter addresses topics of interest across the greater Desert West with the aim of stimulating conversations beyond the silos of our individual regions. Three main themes link these papers: the role of the environment in shaping prehistoric behavior, flexibility in foraging and farming adaptations, and diversity in settlement strategies. Contributors cover a range of topics including the varied ways hunter-gatherers adapted to arid environments, the transition to farming and the reasons for it, the variation in early farming across the Southwest and Great Basin, and the differing paths followed as they developed settled villages.

Rin Porter

In June 2015, I was fortunate to take part in the excavations at the Chief Looking's Village site in Bismarck, North Dakota. Students, staff, and volunteers opened more than 15 units and I got to dig in three of them.



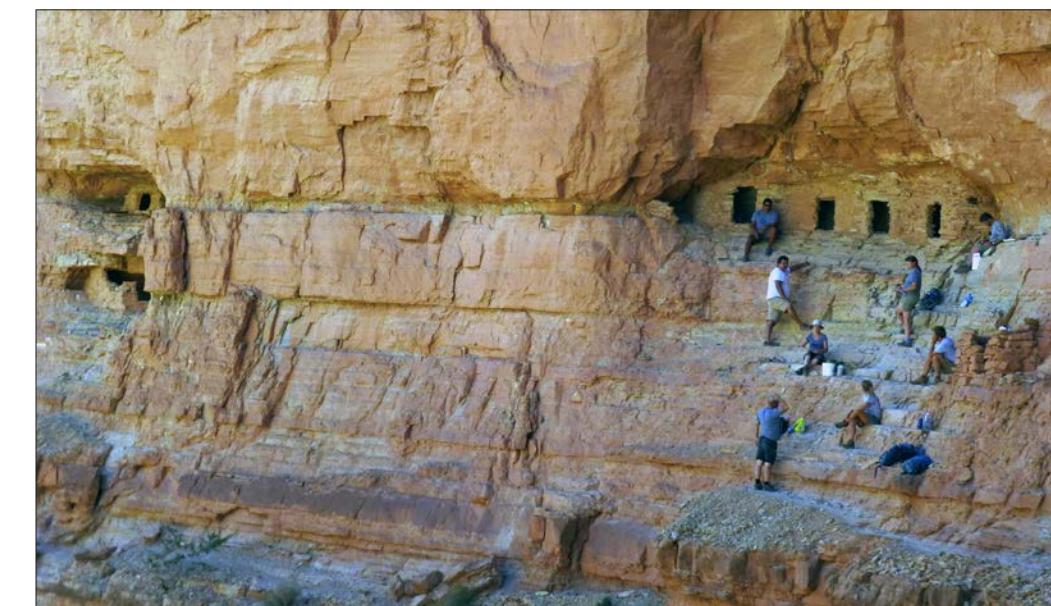
Porter: Still life with awl and glove.

David Purcell and Kimberly Spurr

It was another busy year! We attended and presented at four conferences: the Arizona Preservation Conference in Flagstaff in March; the Society for American Archaeology meetings in San Francisco in April; the Pecos Conference in Mancos, Colorado in August; and the 13th Biennial Colorado Plateau Science Conference in Flagstaff in October. David also gave a presentation to the Wupatki National Monument staff in September, as part of ongoing work with the extensive rock art in the monument. This also included finalizing our field work at Horseshoe Mesa from 2014, including visits to the site on the Winter Solstice 2014 (heavy fog), Vernal Equinox (success!), and Summer Solstice (106°) to record sun and shadow interactions on selected rock art panels using video and time-lapse photography. We ultimately assembled a huge amount of information for the park, including 1000s of photographs and forms. The project was a big success and came in so far under budget that—combined with some additional end-of-year money that the NPS obtained—we were able to launch an additional season of recording at Middle Mesa, the next site north of Horseshoe. David was out in the field on that from late September into November to document 108 petroglyph panels. We also applied for a grant for additional study of the geology of the sites and of the solar observatories, using long-term time-lapse photography. Our first camera arrived just before Christmas and we installed it in our yard to evaluate its durability; so far, so good, other than being knocked askew by falling snow.

We also had the rare opportunity to work together on a field project, surveying shoreline areas along Lake Powell in Utah. David had never visited the lake before, and we used an NPS boat to reach our camp from Halls Crossing, one of the main access points. Although it was windy and rainy for part of the session, we documented some interesting evidence of 1950s and 1960s uranium prospecting and mining. David also continued his writing of an administrative history of Arches National Park. Kim (in addition to supervising the entire Archaeology Division for the Museum of Northern Arizona) is trying to finalize a multi-year repatriation and documentation of human remains from the Coconino National Forest. She escaped the office for an 18-day river trip in late September to help stabilize prehistoric masonry ruins and mining cabins in the Grand Canyon.

Spurr: Stabilizing the Nankoweap Granaries in the Grand Canyon.



David's only other fieldwork was survey in New Mexico for his other job at WestLand Resources.

Although it was an opportunity to work in one of the most remote areas in the U.S., between Silver City and Quemado (and some amazing scenery), it was also his penultimate project with WestLand. For many reasons, call it "creative differences," he resigned his position in October, although he is continuing work on one project to document all of the extant segments of Route 66 in Arizona. Other than that he is now full time with MNA.

Joseph A. Tiffany

Last fall I organized a symposium with my colleague Shirley J. Schermer entitled "The Wall Ridge Site—The Archaeology of a Central Plains Tradition Household" for the 73rd Annual Plains Anthropological Conference in Iowa City. The participants presented their contributions as poster papers, covering a range of topics including material culture, subsistence and settlement systems, and floral and faunal remains.

The symposium theme was an in-depth interdisciplinary study of a single component Glenwood phase lodge site. While such research themes are commonplace today, the Glenwood phase of the Nebraska variant stands alone as the only major Central Plains tradition unit that is virtually unstudied from an integrated paleoecological perspective. Modern data-recovery methods used at Wall Ridge provide

the basis for unparalleled and long-needed contextual analysis from a site with excellent data preservation. Lack of project funding meant the study depended on contributed efforts of professional researchers, stretching report completion over three decades.

The research team divided responsibilities into site history, excavation and stratigraphy (Schermer and Tiffany); ceramics, bone, and shell tools (Tiffany); faunal remains and bone and shell tools (James L. Theler); lithics (Michael J. Perry); floral remains (William Green); ¹⁴C analysis and chronology (Stephen C. Lensink); and site interpretation (all researchers). The results of these efforts are liberally summarized from the participant's presentations as follows.

Wall Ridge was briefly occupied ca. A.D. 1300. The duration of occupation of 3 to 4 years is based on complimentary results which include: (1) the shallow sheet midden associated with the site; (2) an estimated storage pit capacity for the lodge of 2.86 years; and (3) ceramic breakage and use-rates methods indicating an occupation of 4 years.

The pottery is a typical Nebraska variant assemblage. Direct rim vessels (McVey ware) predominate and only a few examples of collared vessels (Beckman and Swoboda wares) and other forms are present. The frequency of red slipping and shell tempering is high compared to other Glenwood phase lodge sites. Shoulder designs are examples of Majors Opposed Diagonal. The pottery was also used in a seriation of 35 lodge sites. The seriation



Tiffany: Overview of the Wall Ridge site.

shows spatial clustering of lodge sites in the locality based in part on time. The spatial clustering indicates two or three social units (lineages) occupied the locality.

Bone and shell tools reflect a typical range of Nebraska variant assemblage. Included are a fish gorge, an antler bow guard and an antler handle, and highly curated scapula tools. Among the shell tools are a fish lure and a new fresh water mussel artifact type termed an applicator, used for coloring hides.

The lithic patterned tool assemblage is small and typical of the Nebraska variant. A GIS was used to examine the distribution of lithic artifacts. The majority of tools were left in the southwestern quarter of the lodge, while cache pits were preferred for the disposal of flaking debris. The flaking debris represents a wide variety of raw material types. Most are locally available

but sources from throughout the upper Midwest are present in the assemblage reflecting wide-ranging contact. Invertebrate (46 taxa) and vertebrate (71 taxa) faunal remains were recovered from Wall Ridge. The faunal assemblage shows that a broad range of habitats were exploited including open water, riparian edge, woodlands and prairies. The harvest of freshwater mussels, crawfish, frogs and certain bird species (represented in one instance by egg shell) along with large numbers of fish, many fingerling-sized, are indicative of a warm season occupation. Resource stress is suggested by the utilization of very small fish, frogs, and crawfish along with the occurrence of deer and elk fawns taken in late spring/early summer. Results of the analysis of a snail column from the site suggest a xerophytic environment during the occupation.



Tiffany: A shell fish lure from the Wall Ridge site.



Tiffany: Majors Opposed Diagonal shoulder designs from the Wall Ridge site.

Plant material was studied from 76 flotation-processed matrix samples from interior storage pits and non-feature contexts. Most wood charcoal represents elm and ash trees that were common along the nearby Missouri River floodplain. Little barley is the most abundant seed type at the site; other cultigens, notably maize, are present as well. Mostly 8- and 10-row maize was found in every sample. The plant assemblage suggests occupation during most of the year if not year round. Intra- and inter-site botanical variability indicates flexible farming strategies such as multiple plots, crop diversity, and possibly rotation and fallowing. This kind of archaeobotanical variability is characteristic of Glenwood sites.

W. Raymond Wood

I continue to be immersed in studies of the fur trade on the Upper Missouri River and its individual traders. Previously, I prepared a biography of James Kipp, published in *North Dakota History* in 2011, and the Garreau family, published in *South Dakota History* in 2013. The manuscripts for our (Michael Casler and I) publication of the Letter Book for Fort Union has run into a roadblock and is being resubmitted to another publication; our manuscript on the Forts Tecumseh and Pierre Chouteau is scheduled for publication in 2017—better late than never.

But we have been busy on other fronts (see the publications below). The fur trade certainly is not a subject that's been drained of new material. My son Eric and I didn't make it to North Dakota this past summer, for the first time in several years, but he did make a trip to the interior of southeastern Brazil with his mom on a world-class birdwatching excursion. Hopefully we'll make it to North Dakota next year. So my big trip of the year was to the Plains Conference in Iowa City. I'd planned to give a paper (on the family of Joseph Garreau in the Upper Missouri River fur trade), but ended up giving another one ("The Hidatsas: Culture History Revealed") as the opening talk in the symposium, "People of the Willows: Research Themes in the Study of Hidatsa Origins, Archaeology, History, and Culture,"

PCRG Members' Recent Publications

PCRG members are shown in **bold**.

Fosha, Michael

2015 More Clay Tobacco Pipes from Fort Sully (39SL45). *Newsletter of the South Dakota Archaeological Society* 45(1):1-3.

2015 A Goshen Point from Pennington County. *Newsletter of the South Dakota Archaeological Society* 45(2):4-6.

2015 Reinvestigation of the Antelope Research Station, Harding County, South Dakota: New Date New Sites. *Newsletter of the South Dakota Archaeological Society* 45(3&4):1-3.

Gleichman, Peter J., and Mark S. Becker

2015 The Chautauqua Biface Cache, Boulder County, Colorado. In *The Lithic Caches of Colorado*,

organized by Kacy L. Hollenback (Southern Methodist University) and Jay T. Sturdevant (National Park Service, Midwest Archeological Center). The Mandans have long dominated research in the Northern Plains regarding the Plains Village peoples, and the symposium highlighted the research that has illuminated Hidatsa culture and history resulting from the research accompanying the establishment of the Knife River Indian Villages National Historic Site.



Wood: My favorite road sign: it's at the intersection of Highways 85 and 20, 1.5 miles south of Buffalo and 54 miles west of Bison, South Dakota.

edited by Jason M. LaBelle and Christopher M. Johnston, pp. 58-63. *Southwestern Lore* 81(2&3).

Hollenback, Kacy L.

2015 Technological Continuity and Change Post-Disaster: A Behavioral Model. In *Explorations in Behavioral Archaeology*, edited by William H. Walker and James Skibo, pp. 500-534. University of Utah Press, Salt Lake City.

2015 Elevated Landscapes in the Northern Great Plains: Butte Top Settlements as Hidatsa Refuges after Smallpox. In *Engineering Mountain Landscapes: An Anthropology of Social Investment*, edited by Laura L. Scheiber and María Nieves Zedeño, pp. 147-166. University of Utah Press, Salt Lake City.

Johnston, Christopher M., and Halston F. C. Meeker
2015 The Perry Cache: A Large Chipped Stone

PCRG Members' Activities

Assemblage Found Along the Little Thompson River, Larimer County, Colorado. In *The Lithic Caches of Colorado*, edited by Jason M. LaBelle and **Christopher M. Johnston**, pp. 25-38. *Southwestern Lore* 81(2&3).

Kerns, Chris

2016 Monuments from the Doorstep: Exploring the Temporal, Spatial and Social Relationship Between Chambered Cairns and Settlements During the Orcadian Neolithic. In *Decoding Neolithic Atlantic and Mediterranean Island Rituals*, edited by G. Nash and A. Townsend, pp. 16-52. Oxbow Books, Havertown, Pennsylvania.

Knudson, Ruthann

2015 We Are All One: Anzick Children Reburied. *Mammoth Trumpet* 30(2):11-14,20.
2015 *A Cultural Resource Survey of a Proposed Ingersoll Ranch Waterline in Lewis and Clark County, Montana*. Submitted to the U. S. Fish and Wildlife Service Montana Partners for Fish & Wildlife Program, Choteau, Montana.
2015 *A Cultural Resource Survey of the Proposed Krause Ranch Riparian Fence Construction in Lewis and Clark County, Montana*. Submitted to the U. S. Fish and Wildlife Service Montana Partners for Fish & Wildlife Program, Choteau, Montana.

Lippincott, Kerry

2015 A Continent-Wide View of Marine Shell Mask Gorgets. *Archaeology in Montana* 56(1):31-50.

Logan, Brad, and Lauren W. Ritterbush

2015 *Prehistoric Sites of Wildcat Creek Watershed, Riley County, Kansas*. National Register of Historic Places (NRHP) Multiple Property Nomination, approved.

Metcalf, Michael D., and E. Kae McDonald

2015 The Spring Creek Prehistoric Caches, Moffat County, Colorado. In *The Lithic Caches of Colorado*, edited by Jason M. LaBelle and **Christopher M. Johnston**, pp. 111-119. *Southwestern Lore* 81(2&3).

McBrinn, Maxine E. (editor)

2015 *Oblique Views: Aerial Photography and Southwest Archaeology*. Museum of New Mexico Press, Albuquerque.

McBrinn, Maxine E., and Ross E. Altshuler

2015 *Turquoise, Water, Sky: Meaning and Beauty in Southwest Native Arts*. Museum of New Mexico Press, Albuquerque.

Mitchell, Mark D.

2015 Pattern and Variety: Remembering Stanley

A. Ahler's Contributions to Plains Village Archaeology. *Plains Anthropologist* 60(235):266-278.

Owens, Mark

2015 The Owens Cache (5LA12616): A Descriptive Account of a Utilitarian Insurance Cache from the Purgatoire River Drainage System in Southeastern Colorado. In *The Lithic Caches of Colorado*, edited by Jason M. LaBelle and **Christopher M. Johnston**, pp. 129-137. *Southwestern Lore* 81(2&3).

Purcell, David E., Kimberly Spurr, and Kirk C. Anderson

2015 *Visual and Descriptive Documentation and Condition Assessment of Rock Art at Horseshoe Mesa (WS834), Wupatki National Monument, Arizona*. Museum of Northern Arizona, Flagstaff.

Ritterbush, Lauren W.

2015 Visit to Blue Earth. *Kansas History: A Journal of the Central Plains* 38(1):2-12.

Roth, Barbara J., and **Maxine E. McBrinn** (editors)

2016 *Late Holocene Research on Foragers and Farmers in the Desert West*. University of Utah Press, Salt Lake City.

Semken, Holmes A., Jr., and Carl R. Falk

2014 Ecology and Environmental Degradation of Two Little Ice Age Earthlodge Villages in North Dakota: the Micromammal Evidence. In *Archaeology, Zooarchaeology, and Malacology: A Festschrift for James L. Theler*, edited by Matthew G. Hill. *Wisconsin Archeologist* 95(2):249-268.

Tiffany, Joseph A.

2015 The Oneota Tradition in Southeast Iowa. In *Oneota Historical Connections: Working Together in Iowa*, edited by Shirley J. Schermer, William Green, Larry J. Zimmerman, Linda Forman, and Robbin Lillie, pp. 47-55. Report 24. Office of the State Archaeologist of Iowa, Iowa City.

Wood, W. Raymond

2015 Fort George and the Union Fur Company on the Upper Missouri River. *South Dakota History* 45(4):305-326.

2015 Great Plains. *Cultura Antiqua* 67(3):76-80. [In Japanese]. Meiji University, Tokyo.

Wood, W. Raymond, and Michael M. Casler

2015 A Revised History of Fort Floyd. *North Dakota History* 80(4):3-13.