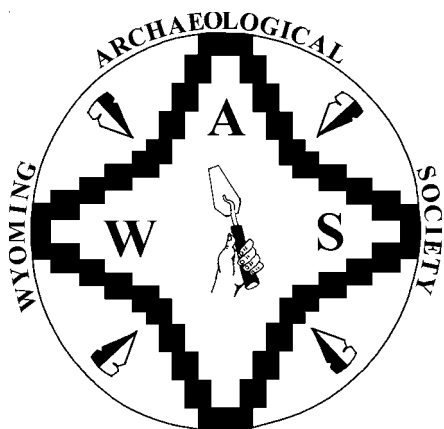


2007  
WYOMING ARCHAEOLOGICAL  
SOCIETY/ WYOMING ASSOCIATION  
OF PROFESSIONAL  
ARCHAEOLOGISTS  
ANNUAL MEETING PAPERS AND  
ABSTRACTS



**The Whistle Pig  
Saratoga, Wyoming  
April 21, 2007**

# PAPER SCHEDULE

- 10:30 THE HIGH RISE VILLAGE SITE: WHITEBARK PINE NUT PROCESSING AND SHEEP HUNTING AT 10,800 FEET** BY Richard Adams (University of Wyoming), Ruth Shepherd (University of Wyoming), Tory Taylor (Taylor Outfitting) and John Lund (Saratoga, Wyoming)
- 10:50 THE SAND CREEK PALEOSOL: A CULTURAL MATERIAL BEARING BURIED A HORIZON IN THE POWDER RIVER BASIN** by Rory Becker (University of Wyoming)
- 11:10 MANUPOINTS AS WEAPON SYSTEMS: EVALUATING “THE ROCK” AT THE ALCOVA REDOUBT (48NA3502)** by Bryon Alan Schroeder (Dust Devil Archaeology)
- 11:30-1:00 LUNCH**
- 1:00: VARIATION IN CARBON AND OXYGEN ISOTOPES IN TERMINAL PLEIST-OCENE AND EARLY HOLOCENE BISON** by Patrick Orion Mullen (University of Wyoming)
- 1:20 SAND AND SWEAT: VOLUNTEER CONTRIBUTIONS AT THE SAND DRAW DUMP SITE** by Adam S. Wiewel (University of Wyoming)
- 1:40 ASSEMBLING INTRASITE SPATIAL DATA AT THE 10,500 YBP HANSON SITE (48BH329)** by Craig R. Arnold (University of Wyoming)
- 2:00 NATIONAL REGISTER ESSENTIALS** by Jeff Pappas (Wyoming State Historic Preservation Office)

- 2:20 LAND OF PLENTY HORSES: RECENT ARCHAEOLOGICAL STUDIES IN THE POWDER MOUNTAIN REGION OF SWEETWATER COUNTY, WYOMING** by Russel L. Tanner (Kyak Marook Heritage Research, LLC)
- 2:40 CONTINUING INVESTIGATIONS AT THE SHEAMAN CLOVIS SITE, EASTERN WYOMING** by Mary M. Prasciunas (University of Wyoming)
- 3:00 MAIZE AGRICULTURE AND METHODOLOGY AT EAGLE POINT** by A. Dudley Gardner (Western Wyoming College), Kayli Westling, Jessica Brinkerhoff and Daniel McCurdy
- 3:20 DISTINGUISHING PERCUSSOR TYPE: AN EXAMINATION OF FLAKES PRODUCED FROM BIFACIAL AND AMORPHOUS CORES** by Becky Fritsche (University of Wyoming)
- 3:40 ARTIFACT ASSEMBLAGE FROM THE BATTLE OF SUMMIT SPRINGS, NORTHEAST COLORADO** by Charles A. Reher (University of Wyoming), Rick Weathermon (University of Wyoming), and Larry Finnell (Finnell Enterprises)
- 4:00 RESULTS OF 2005'S TEST EXCAVATIONS AT HELL'S HALF ACRE, NATRONA COUNTY, WY** by Kerry Lippincott (Consulting Archaeologist)
- 4:20 HELLACIOUS MUCKSHELTERS**, by John G. Goss (Dust Devil Archaeology, Inc.)

# ABSTRACTS

Adams, Richard (University of Wyoming), Ruth Shepherd (University of Wyoming), Tory Taylor (Taylor Outfitting, Dubois), and John Lund (Saratoga, Wyoming)

## **THE HIGH RISE VILLAGE SITE: WHITEBARK PINE NUT PROCESSING AND SHEEP HUNTING AT 10,800 FEET**

During the summer of 2006, we discovered a site consisting of about 20 circular lodge remnants on a mountainside at an altitude of 10,800 feet above sea level in Wyoming's Wind River Mountains. Late Prehistoric Shoshones most likely constructed and used the lodges, based on chronologically and culturally diagnostic artifacts. The lodge outlines occur as prepared flat spots on a moderately steep slope, in a dense whitebark pine forest adjacent to a bighorn sheep migration bottleneck. The high fat content of whitebark pine nuts made them highly desirable for immediate consumption and for long-term storage. Large numbers of groundstone artifacts and some bighorn sheep bones provide data on subsistence and seasonality. Using vivid images, we explore some of the lodge-centered activities at this and other mountain sites recently exposed by forest fires.

Arnold, Craig R. (University of Wyoming)

## **ASSEMBLING INTRASITE SPATIAL DATA AT THE 10,500 YBP HANSON SITE (48BH329)**

The Hanson Site (48BH329) is a Folsom occupation located in the Bighorn Mountains of Northern Wyoming. The site was partially excavated by University of Wyoming archaeologists between 1973 and 1976. An innovative recovery system was employed during excavation using Cartesian gridded cardboard and foam storage modules matching the in situ provenience of artifacts. Each artifact was piece plotted and then placed in a corresponding position within the storage modules. The "time capsules" have remained in the University of Wyoming Frison Institute for the past thirty years, while retaining their original spatial integrity. Present technology, in the form of Geographic Information Systems, provides an

opportunity to incorporate artifact provenience data into an analytical examination of Folsom intrasite spatial patterning focusing on faunal remains. Analysis of the Hanson site assemblage indicates the presence of specific activity areas including hearths, potential lodge structures and secondary butchering areas. Statistical testing is conducted to validate the integrity of site formation through cultural behavior. An integral component of the study is the curation of the Hanson assemblage recovered thirty years previous to facilitate present studies and future scientific analysis.

Becker, Rory (University of Wyoming)

### **THE SAND CREEK PALEOSOL: A CULTURAL MATERIAL BEARING BURIED A HORIZON IN THE POWDER RIVER BASIN**

In 2006, a series of archaeological sites were recorded along Sand Creek in the Powder River Basin of east-central Wyoming. The sites were all found in the same paleosol (buried A horizon) within the same drainage. Evidence of a similar paleosol with accompanying cultural material was sparse or non-existent in adjacent drainages. Local geology and site descriptions are presented in hopes the information will be of use to people conducting future archaeological investigations and recommendations in the area.

Dixon, E. James (University of Colorado at Boulder)

### **BANQUET SPEAKER**

### **ORIGINS OF THE FIRST AMERICANS: EVALUATING THE NW COASTAL MIGRATION HYPOTHESIS**

The hypothesis that the earliest colonization of the Americas occurred using watercraft along the southern coast of Beringia and the northwest coast of North America rests on dating geological events, human remains, artifacts, and paleoenvironmental events. While the mid-continent of northern North America remained blocked by ice until circa 13,000 calendar years ago, refugia, islands, glaciated areas of the continental shelf along the Northwest Coast were ice-free by 16,000 cal BP. Deglaciation along the northwest coast had begun by 16,800 cal BP and was sufficiently advanced to enable

humans using watercraft to colonize coastal areas by 15,350 BP.

Fritsche, Rebecca University of Wyoming)

### **DISTINGUISHING PERCUSSOR TYPE: AN EXAMINATION OF FLAKES PRODUCED FROM BIFACIAL AND AMORPHOUS CORES**

The current study aims to identify useful means of distinguishing flakes produced from hard hammer percussion from those produced from soft hammer percussion. I examine flakes from the reduction of a bifacial core and an amorphous core and consider the utility of certain variables for distinguishing percussor type for both reduction techniques. The ratio of platform area to overall flake size and the number of platform facets present were good predictors of percussor type. All other potentially useful variables yielded insignificant results. However, the presence of lipped platforms and diffuse bulbs of percussion may prove to be useful indicators of soft hammer percussion in a larger sample; these variables deserve further examination.

Gardner, A. Dudley, Kayli Westling, Jessica Brinkerhoff and Daniel McCurdy (Western Wyoming College)

### **MAIZE AGRICULTURE AND METHODOLOGY AT EAGLE POINT**

The extent of maize cultivation east of the Douglas Creek drainage in Northwest Colorado is not well known. Recent excavation along Piceance Creek has revealed that at least on a limited basis corn was cultivated along this drainage between AD900 and AD1000. This paper will put forth our preliminary findings and look at some of the reasons why both *Zea* pollen and corn cobs are present in the archaeological record in the Piceance Valley.

Goss, John G. (Dust Devil Archaeology, Inc.)

### **HELLACIOUS MUCKSHELTERS**

Massive brecciated limestone lithologic layers, water eroded sandstone, wind carved stone cliffs, and dissolved limestone sinkholes are all ideal formations for human occupied rock shelters throughout the world. In a place called Hell's Half

Acre in central Wyoming (where most everyone in this room has certainly stood at the edge, peered down into the fancy depths and said something like, “that’s interesting”, and motored on) I am hypothesizing that some ancient people were not living in geological cover anything like these settings mentioned above. Ambiguous deposits of cultural material are found in odd settings in the dramatic mini-canyons, which also contain natural soft-sediment caves. Presently, little is understood about primary deposition at Hell’s Half Acre. Much of the exposed cultural material appears as though it was secondarily deposited at the mouths of these canyons as a slump, like a small moraine, or siphoned into a sinkhole creating a resistant cement-like plug that is now an isolated spire, or drizzled over the walls of the canyons like glaze on a bundt cake. In one particular instance, a prolific cultural deposit in the spires, walls, and in slumped mounds in the bottom of one of the small canyons contains 20+ wood artifacts (sticks, modified logs, charred wood fragments), large quantities of charcoal, fractured bovid bone that looks quite green, and hundreds of lithic artifacts. This collection of material, localized in an area no more than 30 x 20 m is distinctive from many of the other individual deposits. In 10 test units excavated in various locations throughout the park in the summer of 2005, no non-carbonized wood artifacts were encountered in Late Prehistoric or Late Archaic levels. So why is there a concentration of perishable artifacts preserved and eroding out of identical sediments? They were deposited, preserved, and then disgorged from a now-dissolved muckshelter that was used by ancient hunter-gatherers, of course!

Lippincott, Kerry

### **RESULTS OF 2005’S TEST EXCAVATIONS AT HELL’S HALF ACRE, NATRONA COUNTY, WY**

Preliminary test excavations were undertaken at Hell’s Half Acre, Wyoming by Dust Devil Archaeology, Inc. through a grant from the Natrona County Historic Preservation Commission. Hell’s Half Acre, a unit in the Natrona County Parks Department, is a picturesque, highly eroded, “badlands” topography along the upper reaches of the Powder River in central Wyoming. Buried prehistoric cultural materials were found

in colluvial slope wash deposits, on an isolated butte-like erosional remnant, and on the uneroded margins of the eroded areas. Ten excavation units were placed directly over cultural features or strata partially exposed in eroded cutbanks. Based on seven radiocarbon dates, there are essentially four buried occupation layers - three Late Plains Archaic and one Late Prehistoric components - and a surface or near surface component of the Late Prehistoric Period. A 130 cm deep pollen profile characterized the botanical history of the locality as only minimally altered in the last 2000 years. Identification and analysis of bone fragments from a 112 cmbs Late Plains Archaic component emphasized the overwhelming predominance of bison and minor occurrences of pronghorn. Non-local debitage consisted of various colored cherts and chalcedonies from the southern Bighorn Mountains, 25-30 miles away; exotic materials included obsidian and porcellanite. One excavated and three surface obsidian pieces were sourced to Obsidian Cliff, WY and Malad, ID. Ceramics included simple-stamped body treatment and tool-impressed rim sherds. Macro floral analysis of three rock-lined hearth features remains to be completed.

Mullen, Patrick Orion, Travis Gilchreist and Abbey Wick  
(University of Wyoming)

### **VARIATION IN CARBON AND OXYGEN ISOTOPES IN TERMINAL PLEISTOCENE AND EARLY HOLOCENE BISON**

By analyzing carbon and oxygen isotopes from bison tooth enamel recovered from three Paleoindian sites in Middle Park Colorado, we were able to compare attributes of the climate and environment of during the Younger Dryas and the period immediately thereafter. Middle Park is a hotbed of Paleoindian sites, thus, adding isotopic information to our reconstruction of the paleoenvironment is important to our interpretations of site function, land use, and seasonality of sites. Our results reveal no significant difference in the ratio of C3 to C4 grasses in the diets of the bison sampled. There was however, a significant difference in the oxygen isotopes when comparing the Younger Dryas aged Barger Gulch and Upper Twin Mountain sites with the early Holocene Jerry Craig site. This indicates not only that the Younger Dryas was cooler than the period that followed, but

to what degree.

Pappas, Jeff Pappas (Wyoming State Historic Preservation Office)

### **NATIONAL REGISTER ESSENTIALS**

This presentation is for avocational archaeologists interested in learning about the National Register of Historic Places and the National Register process. The discussion will focus primarily on how to evaluate archaeological sites and how to successfully compete and submit a National Register nomination. In addition, the presentation will also dispel the various myths and misnomers associated with listing a property.

Prasciunas, Mary M. (University of Wyoming)

### **CONTINUING INVESTIGATIONS AT THE SHEAMAN CLOVIS SITE, EASTERN WYOMING**

The Sheaman Clovis locality of the Agate Basin site in eastern Wyoming has been a subject of investigation since the late 1970s. This paper discusses recent investigations at the site, focusing on the lithic assemblage which contains more than 4900 artifacts. Traditional interpretations of Paleoindian technological organization view Paleoindian technology as designed in specific ways to meet the requirements of highly mobile populations by conserving raw material and reducing the weight of the transported toolkit. Recent critiques, however, suggest that few sites actually satisfy the archaeological predictions of this traditional view, and that more variability existed within the Paleoindian period than once assumed. In contrast to these critiques, the Sheaman site fulfills every traditional technological expectation and appears unique in many ways compared to later Paleoindian manifestations.

Reher, Charles A. (University of Wyoming), Rick Weathermon (University of Wyoming) and Larry Finnell (Finnell Enterprises)  
**ARTIFACT ASSEMBLAGE FROM THE BATTLE OF SUMMIT SPRINGS, NORTHEAST COLORADO**

On July 19, 1869, U.S. 5<sup>th</sup> Cavalry troops under Gen. Eugene Carr and Pawnee Scouts led by Maj. Frank North launched a surprise attack on the 84 Cheyenne lodges of Tall

Bull and the *Hotametañao* (ADog Soldiers@) at Summit Springs, near the present-day town of Sterling. A short, fierce battle resulted in the death of 52 tribal members and the capture of 17, but several hundred more were able to scatter and escape. The Army in standard fashion inventoried and then destroyed the contents of the village. The privately-owned battle site apparently had been collected sporadically though the years by various people, and then it was intensely metal-detected by several individuals in the early 1980's. In spite of the ethical quandaries involved, we are fortunate that one of these individuals (Finnell) carefully curated and analyzed the more than 1000 items that he recovered. He also gave many public presentations and set up an informative website. The main author here has been using this collection for several years for classroom and research purposes, culminating in this brief consideration of the battle itself, the spatial structure of the tipi camp, and a description of the metal artifact assemblage. Analyzed in more detail are cartridges and slugs, metal arrow points, hide scraper bits, and buckles from the horse gear. Also mentioned are gun parts, kettles and cutlery, awls and other utilitarian items, buttons, tinklers, rings and other decorative items, and other artifact types. The Army's inventory confirms the veracity of the sample on hand, and these and other battlefield inventories in the literature add insight into the nature of these large nomadic camps.

Schroeder, Bryon Alan (Dust Devil Archaeology)

### **MANUPOINTS AS WEAPON SYSTEMS: EVALUATING "THE ROCK" AT THE ALCOVA REDOUBT (48NA3502)**

The Alcova Redoubt, 48NA3502, is a butte top defensive site located in central Wyoming. The sites perimeter is defined by juniper walls with approximately ten bastions incorporated into these walls. Within several of these bastions are rock piles transported from secondary deposits in nearby drainages. It will be suggested here that the primary function of these manually transported rocks was for use in a defense type scenario. Preliminary results indicate that certain size exotic rocks were being selected and strategically placed within the site. Moreover the location of similar rock outside of the site

may indicate probable attack areas. Thus, it may be possible to identify probable assailant entry points and where skirmishes took place around this site.

Tanner, Russel L. (Kyak Marook Heritage Research, LLC)

### **LAND OF PLENTY HORSES: RECENT ARCHAEOLOGICAL STUDIES IN THE POWDER MOUNTAIN REGION OF SWEETWATER COUNTY, WYOMING**

Powder Mountain, a mountainous region situated along the Wyoming-Colorado border, overlooks much of the southern Green River Basin to the north. From this perspective, it is proposed historic Ute horse raiders had a commanding view of the Overland Trail, a major mid-19<sup>th</sup> Century transportation route across the central Rocky Mountains. A cursory review of historical information indicates that archaeological features including brush corrals, stone alignments, charcoal pictographs and incised petroglyphs in the Powder Mountain region may be related to horse raids upon the Overland corridor staged by Ute warriors from about 1850 through the early reservation era.

Wiewel, Adam S. (University of Wyoming)

### **SAND AND SWEAT: VOLUNTEER CONTRIBUTIONS AT THE SAND DRAW DUMP SITE**

For several decades, professional archaeologists in Wyoming have recognized the importance of volunteer archaeologists. Without the contributions of volunteers, many of the largest and most archaeologically significant excavations in the state would not have been possible. Over four field seasons, the Sand Draw Dump site (48FR3123), a Late Prehistoric Period campsite located in the Wind River Basin, has been excavated primarily by volunteers. During the summer of 2006, 545 square meters were hand excavated, and an additional 517 square meters were mechanically scraped. A large number of volunteers from around the United States worked a total of 2,632 hours at Sand Draw. In this paper, I discuss the many contributions of these volunteers.



**BIOGRAPHICAL SKETCH  
THE WYOMING ARCHAEOLOGICAL SOCIETY  
2007 BANQUET SPEAKER**

Dr. E. JAMES DIXON is the author of *Bones, Boats & Bison: Archaeology and the First Colonization of Western North America* (University of New Mexico Press, 1999). This pioneering work provides an overview of the early archeology of western North America. Since 2001 Dr. Dixon has served Curator of Museum and Field Studies and Professor of Anthropology at the University of Colorado Museum. He is also a Fellow at the University's Institute of Arctic and Alpine Research and is active in archeological field research in western North America and Alaska. He received his B.A. and M.A from the University of Alaska and his Ph.D. from Brown University in 1979. He was a Marshall Fellow for research at the National Museum of Denmark in 1972 and a National Endowment for the Humanities Fellow in 1996-97. He was a professor at the University of Alaska until 1993, when he became curator of archeology at the Denver Museum of Nature and Science. He has extensive experience in North

American archeology, particularly focusing on the human colonization, high altitude and high latitude human adaptations, and early cultural development of the Americas. His first book, *Quest for the Origins of the First Americans* (1993), synthesizes the early prehistory of northwestern North America. He has published extensively and advised and participated in educational programs for the History Channel, NOVA and other television programs. He has been an invited lecturer in the United States, Canada, Australia, Japan, Russia, Norway, and Brazil.