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# EIGHTH BIENNIAL ROCKY MOUNTAIN ANTHROPOLOGICAL CONFERENCE

PROGRAM & ABSTRACTS

OCTOBER 25-28, 2007 SNOW KING RESORT JACKSON, WYOMING

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### **SCHEDULE**

## Thursday evening, October 25th

5:00-10:00 PM Conference registration, Lobby

7:00-10:00 PM Welcome Social, Lobby

## Friday morning, October 26th

7:30 AM-Noon Conference registrations, Lobby 8:30 AM-5:00 PM Publishers displays, Timberline III

8:00 AM-12:00 PM Paleoindian Research in the Southern and Central

Rocky Mountains, Teton Room

8:00 AM-9:40 AM Visualizing Archaeology, Timberline I

10:20 AM-11:20 AM Lithic Analysis in Rocky Mountain Archaeology,

Timberline I

12:00 PM-1:40 PM Luncheon, Grand Room

Speaker, Michael Scott, Greater Yellowstone Coalition

## Friday afternoon, October 26th

1:40 PM-5:00 PM New Perspectives On Folsom Archaeology in the Rocky

Mountains: Evidence From The Mountaineer Site,

Gunnison County, Colorado, Teton Room

1:40 PM-3:40 PM Doing Archaeology in the Rocky Mountains,

Timberline I

4:00 PM-5:00 PM Paleoenvironmental Studies in the Rocky Mountains,

Timberline I

3:30 PM -7:00 PM Poster session, Grand Room

## Friday evening, October 26th

5:00 PM-7:00 PM Social and Open house, Grand Room

## Saturday morning, October 27th

Archaeology in the Greater Yellowstone Ecosystem, 8:00 AM- 12:00 PM

Part I, Teton Room

Historic Studies in the Rocky Mountains, Timberline I 8:00 AM-10:00 AM 10:20 AM- 11:40 AM

Method and Theory in Rocky Mountain Archaeology,

Timberline I

## Saturday afternoon, October 27th

Archaeology in the Greater Yellowstone Ecosystem, 1:40 PM- 5:00 PM

Part II, Teton Room

Studies from Late Prehistory in the Rocky Mountains 1:40 PM- 4:00 PM

Timberline I

## Saturday evening, October 27th

Social, Grand Room 4:30 PM - 5:30 PM

Business Meeting, Grand Room 5:30 PM - 6:30 PM

Banquet, Grand Room 6:30 PM - 8:00 PM

Keynote Address, Grand Room 8:00 PM

John Rick, Stanford University "Hunter-Gatherers of the Frigid Tropics—Early Archaeology of High Altitude Peru"

## Sunday morning, October 28th

Field Trip 9:00 AM-3:00 PM

## The Program

## Friday Morning

## **Teton Room**

	Session	Presenter	Title
Time	Paleoindian Research in the Southern and Central Rocky Mountains	Chair: Bonnie Pitblado	
8:00 AM		Fedorchenko, Olena	Upper Paleolithic Bison Hunters: History of Research
8:20 AM		Kelly, Robert	Fluted Point Occupations in Caves and Rockshelters: Why Not?
8:40 AM		Mullen, Patrick	Middle Park Paleoclimate Evaluation Using Stable Isotopes
9:00 AM		Young, Chris	Auger Testing at Barger Gulch Locality C, Middle Park, Colorado
9:20 AM		Zink, Andrew	A Dynamic View of Folsom Lithic Technology: Intrasite Analysis of Variation, Flint-knapping Skill, and Individual Projectile Point Producers at Barger Gulch Locality B
9:40 AM		Dukeman, Casey	The Lanning Folsom Site, Gunnison County, Colorado
10:00 AM		Break	
10:20 AM		Pitblado, Bonnie, Chris Merriman and Bethany Arthion	Paleoindians in the Gunnison County High Country, Colorado: Test-Excavations at the Heath Site
10:40 AM	P	Brunswig, Bob and Frederic Sellet	Parsing a Montane Park Landscape for Clues to Paleoindian Prehistoric Adaptations: Frameworks for the UNC North Park Cultural Landscapes Project
INK DOWN PEN WILL TI:00 AM	Birch Tree E (GNE) - (lor. 1)	Andrew, Holly, Ben Fowler, Katie Harris, James Meservy and Bonnie Pitblado	Paleoindian Archaeology of Southeastern Idaho: A View from Private Collections
11:20 AM	`	Larson, Mary Lou	Late Paleoindian Cultural Complexes in the Central Rocky Mountains and Northwest Plains
11:40 AM		Discussant-Dave Madsen	
12:00 PM		Plenary Luncheon	To be held in the Grand Room
	Timberline I		
	Visualizing Archaeology	Chair: Jamie Palmer	
8:00 AM		Loosle, Byron, Jamie Palmer, and Michelle Knoll	A GIS Case Study from the Uinta Mountains of Northeastern Utah
8:20 AM		Cannon, Molly, David Miller, Kenneth Cannon and Carl Nelson	Using Fuzzy Set Theory to Identify Geophysical Anomalies
8:40 AM		Cox, Shanna, Margaret Morris, Mary Lou Larson	The Use of Predictive Modeling to Solve Archaeological Problems
9:00 AM		Davey, Amanda	A Landscape Approach to Understanding Prehistoric Rockshelter Use in the Bighorn Mountains of Northern Wyoming

## Friday Morning

	Timberline I		
Time	Session	Presenter	Title
9:20 AM	Visualizing Archaeology	Lee, Craig	Virtual Globes and Archaeology
9:40 AM		Pack, William C. and John W. Rick	Visualizing the Surface Archaeology of the Sun ranch Area of the Madison Valley
10:00 AM		Break	•
	Lithic Analysis in Rocky Mountain Archaeology	Moderator: Richard Adams	
10:20 AM		Adams, Richard	2007 The Greater Yellowstone Ecosystem, Soapstone Bowls and the Mountain Shoshone
10:40 AM		Sutter, Steve and Chris Young	The Relative Use of Obsidian through Time in Wyoming
11:00 AM		Lohse, E.S., P. Santarone, and C. Moser	"The Oldest, Least Significant Site": or Recovering Detailed Information on Prehistoric Reduction of Quartzite Boulders, Castle Rocks, Idaho
12:00 PM		Plenary Luncheon	To be held in the Grand Room

## Friday Afternoon

#### **Teton Room** Time Session Presenter Title New Prospectives on Folsom Archaeology in the Rocky Mountains: Chair:, Casey Evidence from the Dukeman Mountaineer Site, Gunnison County, Colorado "If You Don't Scale the Mountain, You Can't View the Plain": Folsom Mobility and Residence 1:40 PM Dukeman, Casey Strategies in a High Elevation Rocky Mountain Hearths at the Mountaineer Site: Inferences Owens, Andrew and 2:00 PM Gained through Fire Pit Experimentation with Elliot Tristan Fish Canyon Tuff Folsom Adaptation in the Southern Rockies: The 2:20 PM Andrews, Brian View from Mountaineer An Analysis of Daub Found on the Mountaineer 2:40 PM Rogers, Hillary 3:00 PM Break Folsom Residential Assemblages at the 3:20 PM Stiger, Mark Mountaineer Site, Gunnison, Colorado Morphometric Variation in the Wink of a 3:40 PM Meltzer, David Radiocarbon Eye: Examining the Mountaineer Folsom Points 4:00 PM Stafford, Thomas Geologic Interpretations at Mountaineer Site Discussant-Jason 4:20 PM LaBelle

## Friday Afternoon

## Timberline I

Time	Session	Presenter	Title
	Doing Archaeology in the Rocky Mountains	Moderator: Danny Walker	
1:40 PM		Greer, Maivs and John Greer	Indian Cave, High Pictographs in the Little Belt Mountains, Montana
2:00 PM		Walker, Danny, Molly Karnopp, Marit Bovee, Neffra Mathews, Tom Noble, and Mike Bies	Archaeological Investigations and Rock Art Recording at Legend Rock State Archaeological Site, Wyoming
2:20 PM		Vlcek, David and Russell Nelson	Six Skeletons in Pinedale, an Unusual Archaeological Discovery
2:40 PM		Eskenazi, Phoebe and Ronald J. Rood	Hands-on Archaeology: Going into the Field with Kids along the Wasatch Front
3:00 PM		Walker, Danny and Martha Ann Rogers	History of the University of Wyoming Archaeological Repository, 1967-2007
3:20 PM		Haydon, Merry and Rosemary Sucec	A Collaborative Approach Among Agencies, Disciplines, and Tribes to Study and Manage Conical Timber Lodges in the Greater Yellowstone Area
	Paleoenvironmental Studies in the Rocky Mountains	Moderator: Linda Scott Cummings	
4:00 PM		Louderback, Lisbeth, David Madsen, Michael Metcalf, Alan Reed, and David Rhode	Paleoenvironmental Research on the Piceance Basin Lateral and REX Pipeline Project: A Preliminary Report
4:20 PM		Cummings, Linda Scott, R.A. Varney, and Reid A. Bryson	People, Animals, and Climate: What Happened as Conditions Changed
4:40 PM		Varney, R.A, Linda Scott Cummings, Reid Bryson	Colorado Climate and the Distribution of Radiocarbon-Dated Archaeological Sites
	Grand Room	-	
3:00 PM	Poster Session*	Leick, Alison and Alysse Sowards	Location, Location, Location: Landscape Analysis of Prehistoric Settlement Patterns on the West Tavaputs Plateau
		Byers, David and Craig Smith	The Dawson Site: An Early Paleoindian Campsite on the Colorado Plateau
		Smith, Ashley Stephanie Crockett, Stephanie Fleshman, Ariana Phillips and Bonnie Pitblado	2007 Investigations of the Ute Archaeology, Gunnison and Hinsdale Counties, Colorado
		Vivian, Brian Kevin Thorson, Doug Mitchell, and Janet Blakey	Cultural Resource Survey of Yellowstone Lake South Side Shoreline
	<b>*</b>	/ Vivian, Brian, Amanda Dow, and Janet Blakey	Looking Back Today (Come What May) at Everblue By You
	,	Lohse, E.S., C. Schou, K. Turley-Ames, K. Lohse, and M. Smuin	Using Artificial Intelligence (SIGGI) to Construct a Projectile Point Typology for the Northwestern Plains
4.701		Williams, Dave, Elizabeth Seymour, and Derik Irelan	Distribution of Nonlocal Lithic Material in Uinta Fremont Sites

<sup>\*</sup> Please have posters displayed by 3:00 and be present for the final hour and beginning portion of the Open House

## Friday Evening

#### **Grand Room**

5:00 PM 7:00 PM

#### Social and Open House

## Saturday Morning

	Saturday Morning			
	Time	Teton Room Session Archaeology in	Presenter	Title
	the Greater Yellowstone Ecosystem		Chairs; William Eckerle And John W. Fisher, Jr.	
	8:00 AM	·	Lee, Craig	Discoveries and Prospects; The Archaeology and Paleoecology of Perennial Snow and Ice in the Greater Yellowstone Ecosystem
	8:20 AM		Adams, Richard	2007 The High Rise Village Site; Whitebark Pine Nut Processing and Sheep Hunting at 10,800 Feet
	8:40 AM		Fisher, John W., Jr., Walt Allen, and Tom Ballard	Rock Pits, Rock Alignments, Bighorn Sheep and Archaeology in Southwestern Montana
	9:00 AM		Eakin, Daniel	Evidence for Shoshonean Bighorn Sheep Trapping in the Absaroka Mountains of Northwest Wyoming
	9:20 AM		Finley, Judson and Laura Scheiber	Obsidian Source Analysis Traces the Effects of Colonialism on Contact Period Shoshone in the Greater Yellowstone Ecosystem
	9:40 AM		Todd, Lатту С.	Backcountry Archaeology at the Margins of the GYE: Upper Greybull River 2002-2007
	10:00 AM		Break	
X	10:20 AM		Hughes, Richard	Revision of Geologic Source Attributions for Obsidian Artifacts from Veratic Rockshelter, Idaho: Implications for Greater Yellowstone Prehistory
	10:40 AM		Vivian, Brian	Precontact Occupations on Yellowstone Lake; An Outline from the Shoreline
	11:00 AM		Eckerle, William and Daniel Eakin	The Game Creek Site: Paleoindian Occupation at a Valley-margin Spring in South Park, Jackson Hole, Wyoming
	11:20 AM		Aaberg, Stephen, William Eckerle, and Steven DeVore	Archaeological and Geoarchaeological Investigations at Crow Agency II (1875-1884) in the Upper Stillwater Basin, Montana
	11:40 AM		Francis, Julie	Rock Art in the Greater Yellowstone Ecosystem
	12.00 PM		Break for Lunch	
		Timberline I		
	Time	Session Historic	Presenter	Title
		Studies in the Rocky Mountains	Moderator: Russ Tanner	
	8:00 AM		Johnson, Leslie	Insanity and the Implications of Loneliness, Isolation, and the Failed Promises of the American Frontier
	8:20 AM		Tanner, Russ	In Context: The Western Emigration Trails Network Across Wyoming
	8:40 AM		Dengah, Henri Jean-Francois II	Mormon Economics: Differential Capital Access by Gender and Religiosity

## Saturday Morning

Time	Session Historic	Presenter	Title	
9:00 AM	Studies in the Rocky Mountains	Magennis, A.L. and Michael G. Lacy	The Late 19th Century Colorado Insane Asylum: Taking a Closer Look at the Institutionalized	
9:20 AM		Leavitt-Reynolds, Alissa	Incidences of Trauma in the Colorado State Insane Asylum	
9:40 AM		Tanner, Russ	Stories from the Old People: Anthropological Perspectives on Rock Art in the Red Desert.	
10:00 AM		Break		
	Method and Theory in Rocky Mountain Archaeology	Moderator: Linda Scott Cummings		
10:20 AM		Smith, Craig and Lance McNees	The Middle Holocene Wyoming Housepits: Locations within a Stable Long-Term Land Use System	_
10:40 AM		Cummings, Linda Scott	FTIR, Food Residues, and Sediments: A New Tool for Interpreting the Archaeological Record	*
11:00 AM		Varney, R.A.	Introducing AMS Radiocarbon Dating of MicroCharcoal: An Alternative to Soil Organic Matter and "Humate" Dating	
12:00 PM		Break for Lunch		

## Saturday Afternoon

## **Teton Room**

Time	Session	Presenter	Title
1:40 PM	Archaeology in the Greater Yellowstone Ecosystem	Sanders, Paul	Archaeological Data Recovery at the Nymph Lake Site (48YE114): A Small Prehistoric Lithic Workshop and Campsite near Obsidian Cliff, Yellowstone National Park
2:00 PM		Dowd, Anne	Excavations at Sites 48YE713 and 48YE1315 in Yellowstone National Park
2:20 PM		Ollie, Naomi	The Hills are Alive: Landscape Activity and Human Occupations in the Upper Greybull River, Greater Yellowstone Ecosystem
2:40 PM		Break	
3:00 PM		Reiser, Marcy	Running Circles around History: Comparing Tree-Ring Data to Historical Accounts in Northwestern Wyoming
3:20 PM		Cannon, Kenneth and Molly Boeka Cannon	An Update on Investigations at the Goetz Site, Teton County, Wyoming
3:40 PM		Discussant-Barney Reeves	
		Dave Mal	16e 2
		Dave Mal Marcel Ku	rail

## Saturday Afternoon

## Timberline I

	Time	Session	Presenter	Title
		Studies from Late Prehistory in the Rocky Mountains	Moderator: Brian P. Storm	
¥	1:40 PM		Arkush, Brooke	Recent Excavations at Trapper Cliff Shelter: A Riparian Zone Habitation Site in Cassia County, South-central Idaho
	2:00 PM		Gardner, Dudley and Kayli Westling	The Use of Wood during the Formative Period in Northwestern Colorado
	2:20 PM		Nash, Robert	Foraging Efficiency and the Adoption of Agriculture; The Role of Corn among Fremont Groups in Northeastern Utah
	2:40 PM		Break	
	3:00 PM		Storm, Brian P.	Eeny, Meeny, Miny, Mo? Tempering Choices of Unita Fremont Horticulturalists
	3:20 PM		Koenig, Orrin and Richard Adams	Intra-site Variability at High Rise Village
	3:40 PM		Truesdale, Christopher James, James A. Truesdale, and David Hill	Archaeological Investigations at the Hamlin Ceramic Site (42UN5406) Uintah County, Utah

## Saturday Evening

Grand Room			
Time	Activity		
4:30 PM	Social		
5:30 PM	Business Meeting		
6:30 PM	Banquet		
8:00 PM	Key Note Address	John Rick	Hunter Gatherers of the Frigid Tropics—Early Archaeology of High Altitude Peru

### **LUNCHEON SPEAKER**

Michael Scott, Executive Director of the Greater Yellowstone Coalition

### **KEYNOTE ADDRESS**

John Rick (Stanford University)

Hunter-Gatherers of the Frigid Tropics—Early Archaeology of High Altitude Peru

The resource constellation of high Andean environments, reflecting low temperatures and low seasonality conditions, was the economic base for specialized montaine preceramic (10,000-1800 B.C.) societies. In this talk, I explore some of the more interesting parameters of these occupations, including issues of reduced mobility, and high degrees of reliance on a low diversity of animal species. Although such a situation would be predictably unstable, the archaeological record suggests an evolving but increasingly stable and successful utilization of camelid game and a reticence to develop or adopt herd animals. The llama-like vicuna, the primary game animal of this high altitude *puna* grassland, was both predictable in behavior and susceptible to human predation in this open setting. Zooarchaeological analysis argues that conservative, perhaps managed hunting practices emerged over time in puna preceramic societies, while human groups became increasingly sedentary yet strikingly undifferentiated in social status.

## Symposia

### Symposium I

## Paleoindian Research in the Southern and Central Rocky Mountains

This session focuses on recent Paleoindian-era research in the Southern and Central Rockies. Papers focus on cultural periods ranging from Clovis and Folsom through Late Paleoindian time, and on a geographic region that extends from Idaho and Wyoming in the north through southern Colorado. Several presentations have strong methodological components; others highlight new work at Paleoindian sites in the region; and still others explore broad-scale patterning of sites on Rocky Mountain landscapes. All of the papers show that the Rockies continue to be a fertile source of new knowledge about the earliest hunter-gatherers of western North America.

Chair: Bonnie Pitblado, Utah State University
Discussant: David Madsen, Texas Archaeological Research
Laboratory/Mercyhurst Archaeological Institute

### Symposium II

New Perspectives On Folsom Archaeology In The Rocky Mountains: Evidence From The Mountaineer Site, Gunnison County, Colorado

Recent discoveries at the Mountaineer Site, most notably the presence of Folsom-aged structures, are beginning to generate new perspectives concerning Paleoindian adaptive behavior in the Upper Gunnison River Basin. The most important of these new perspectives, suggests longer-term, possibly winter residences at Mountaineer. This differs from the classic models of high residential mobility often used to describe Folsom adaptation in the Great Plains. This symposium will present the archaeological and experimental data collected from the Mountaineer Site over the past seven field seasons.

Chair: Casey Dukeman, Western State College Discussant: Jason LaBelle, Colorado State University

#### Symposium III

## Archaeology in the Greater Yellowstone Ecosystem

The prehistory and history of the Greater Yellowstone Ecosystem, as examined archaeologically, spans 10,000 or more years in time, and encompasses a landscape that includes Yellowstone National Park and surrounding lands in Montana, Wyoming, and Idaho. The ecological and physiographic diversity of the GYE are matched by this area's cultural diversity through time and across space. The papers in this symposium will sample this cultural diversity by examining an eclectic array of topics, and employing a variety of archaeological methods and theoretical perspectives. This symposium will present a valuable picture of current archaeological research in this fascinating portion of the Rocky Mountain region of North America.

Chairs: William Eckerle, Western GeoArch Research John W. Fisher Jr., Montana State University Discussant: Barney Reeves, Lifeways of Canada, Ltd.

## Symposia

## Symposium IV Visualizing Archaeology

This unique opportunity presents case studies for the visualization of archaeological settings in the Rocky Mountains. Archaeological visualization may take many forms. The papers in this session will explore the use of Geographic Information Science technology which integrates common database operations such as query and statistical analysis with the benefits in visualization and geographic analyses offered by maps and other remote sensing imagery. Other papers in this symposium offer alternatives to the more common Geographic Information System approach for the interpretation of archaeological patterning as well as novel media for the display of archaeological imagery.

Chair: Jamie Palmer, Ashley National Forest

## **General Sessions**

#### General Session I

Lithic Analysis is the Rocky Mountains Moderator: Richard Adams, Office of the Wyoming State Archaeologist

#### General Session II

Doing Archaeology in the Rocky Mountains
Moderator: Danny Walker, Wyoming State Archaeologist's Office

#### General Session III

Paleoenvironmental Studies in the Rocky Mountains
Moderator: Linda Scott Cummings, PaleoResearch Institute

#### General Session IV

Historic Studies in the Rocky Mountains

Moderator: Russ Tanner, Kyak Marook heritage Research, LLC.

#### General Session V

Method and Theory in Rocky Mountain Archaeology
Moderator: Linda Scott Cummings, PaleoResearch Institute

#### General Session VI

Studies from Late Prehistory in the Rocky Mountains
Moderator: Brian Storm, University of Nebraska-Lincoln

## **ABSTRACTS**

Aaberg Stephen A. (Aaberg Cultural Resource Consulting Service), William Eckerle (Western GeoArch Research), and Steven L. DeVore, (National Park Service, Midwest Archeological Center)

Results of Archaeological and Geoarchaeological Investigations of Crow Agency II (1875-1884) Symposium III

The second historic Crow Agency was occupied between 1875 and 1884 and was located on the east side of East Rosebud Creek in Stillwater County, Montana. Almost immediately following its abandonment in 1884, the old agency was partially disassembled by area ranchers who recycled construction materials. The remains of the agency were burned sometime in the first decade of the 20th Century. A county road, and later a state highway were constructed through the agency location. One hundred years of agricultural use and several episodes of road construction were believed to have obliterated all evidence of the old agency. Montana Department of Transportation sponsored investigations of the agency locality with the hope of determining what, if anything remained of the agency. Geophysical mapping, archaeological testing, and geoarchaeological evaluation documented areas of archaeological potential. Gradiometer survey confirmed the location of the Agency compound. Archaeological testing focused on an area of suspected Crow Indian housing; "Dobe Town". Test excavation recovered a rich cultural inventory of Crow and Euro-American artifacts. Ongoing laboratory analysis documents Crow hunting and gathering subsistence activity during this period when bison became locally extinct. Geoarchaeological investigations provide insights into landform development that made the location attractive for a large government compound and surrounding Crow residential camp.

**Adams**, Richard (Office of the Wyoming State Archaeologist and University of Wyoming) The High Rise Village site: Whitebark pine nut processing and sheep hunting at 10,800 feet Symposium III

In 2006, professional and avocational archaeologists 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 adjacent to a bighorn sheep migration bottleneck, and in a dense whitebark pine forest. 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 sheep bones at the site suggest a subsistence strategy based on pine nut and sheep procurement. Using ethnographic data from the Great Basin, I model the potential contribution of whitebark pine nuts to the diet and explore the number of occupants and the length of occupation of the site.

**Adams**, Richard (University of Wyoming, Office of the Wyoming State Archaeologist) The Greater Yellowstone Ecosystem, Soapstone Bowls and the Mountain Shoshone. Session I

Protohistoric and probably Late Prehistoric Mountain Shoshone (sometimes known as Sheepeaters) who lived in the Greater Yellowstone Ecosystem and surrounding environs made soapstone bowls in the mountains at the time of Euroamerican contact. The Rocky Mountain soapstone bowl industry is characterized by undecorated, flower pot shaped bowls that generally hold more than one liter. Using ethnographic and ethnohistoric data, as well as archaeological evidence, I examine how the distribution of soapstone also known as steatite vessels refines ideas about Mountain Shoshone territory, which in turn makes it possible to delineate a Protohistoric seasonal mobility system that included summertime use of alpine mineral, floral and faunal resources.

**Adams,** Richard (Office of the Wyoming State Archaeologist and University of Wyoming) see **Koenig,** Orrin (University of Wyoming) Session VI

**Allan**, Walt (Gallatin National Forest), see **Fisher**, John W., Jr. (Montana State University) Symposium III

**Andrew**, Holly, Ben Fowler, Katie Harris, James Meservy, and Bonnie Pitblado (Utah State University)

Paleoindian Archaeology of Southeastern Idaho: A View from Private Collections

Symposium I

In 2007, a team of Utah State University archaeologists began to explore the area around Soda Springs, Idaho, in the southeastern part of the state. This region—the focus of little archaeological research to date—is ecologically intriguing and compelling because it is an ecotone where the Great Basin, Columbia Plateau, and Central Rockies meet. The USU team spent ten days conducting initial geoarchaeological reconnaissance of the Blackfoot and Bear River drainages, informally surveying areas that appeared to be good candidates to yield early sites, and working with private collectors with knowledge of the area. This paper focuses on the latter component of this reconnaissance—establishing the basic nature of the Paleoindian record in an area where one can reasonably hypothesize there will be influences from the Northwest, the Great Basin, and the Rocky Mountains.

**Andrews**, Brian (Western State College)
Folsom Adaptation in the Southern Rockies: The View from Mountaineer
Symposium II

The Mountaineer site contains a Folsom assemblage indicative of intensive use of the high elevation Gunnison Basin. At least two temporally discrete occupations are recognized. One is thought to represent a winter residential occupation, with the assemblage consisting of a wide variety of tool types associated with structures and possible storage pits. The other probably represents a temporary hunting camp. Utilizing a model of seasonally scheduled elevationally controlled zonal resource procurement, it is argued that 1) subsistence ranged from broad spectrum to specialized, depending on the season, and 2) Mountaineer served as a centralized residential base during winter occupations, and a logistic hunting base during other seasons.

f Arthion, Bethany see f Pitblado, Bonnie (Utah State University) Symposium I

**Arkush**, Brooke S. (Weber State University)
Recent Excavations At Trapper Cliff Shelter: A Riparian Zone Habitation Site In Cassia County,
South-central Idaho
Session VI

During the past two summers, the Weber State University Archaeological Field School has conducted excavations at Trapper Cliff Shelter (10Ca20), located along Trapper Creek in the eastern Cassia Mountains (aka, South Hills) on public lands managed by the Sawtooth National Forest. Surprisingly, only a small portion of the site's deposits have been disturbed by vandalism, a situation that provides an ideal opportunity for investigating regional research topics concerning settlement practices, subsistence regimes, and technology, as well as for addressing site-specific questions regarding chronology, seasonality, and function.

How you

Thus far we have completed block excavations at two of the three major site loci and exposed five major living surfaces post-dating ca. A.D. 100. At the present time, we know that the rockshelter experienced a number of intermittent occupations by northern Fremont and Shoshonean groups, one of the more intensive of which was represented in the fourth living floor of Locus 1 and consisted of a burnt wickiup dating to around A.D. 750. The shelter's dry soils contain a large and diverse artifact assemblage including ceramics and incised stones, as well as a number of well-preserved faunal and macro botanical remains. Although we have yet to encounter any bonafide archaic deposits at 10Ca20, the site probably contains one or more archaic components, and future work at the shelter will focus on locating and thoroughly documenting these strata.

Ballard, Tom (Gallatin National Forest), see Fisher, John W., Jr. (Montana State University) Symposium III

Bies, Mike (Bureau of Land Management), see Walker, Danny (University of Wyoming) Session II

**Blakey**, Janet (Lifeways of Canada, Ltd.), see **Vivian**, Brian (Lifeways of Canada, Ltd.) Poster Session

Bovee, Marit (University of Wyoming), see Walker, Danny (University of Wyoming) Session II

**Brunswig**, Robert and Frederic Sellet (University of Northern Colorado)

Parsing a Montane Park Landscape for Clues to Paleoindian Prehistoric Adaptations: Analytical Frameworks for the UNC North Park Cultural Landscapes Project

Symposium I

After five years of survey and testing (1998-2002) of 47 square miles in Rocky Mountain National Park (RMNP), the University of Northern Colorado documented warm-season, high-altitude components of a complex socio-economic system of seasonal transhumance between lower elevation and high mountain areas of North Central Colorado. Geographically extensive cultural landscapes documented during the RMNP project provided abundant evidence of high altitude economic procurement by Paleoindian populations from Clovis through Late Paleoindian times. In 2003, the university initiated a long-term research program in Colorado's North Park Valley to establish, with particular emphasis on the Paleoindian periods, a hypothesized alternate cool-cold season phase of that ancient transhumant pattern. This paper details research design strategies employed over the past three field seasons (2003, 2005, and 2007) to find and extract archaeological and environmental evidence of inner montane basin Paleoindian lifestyles along with preliminary evidence for seasonal, migratory subsistence systems associated with those lifestyles.

**Bryson,** Reid A. (University of Wisconsin, Madison), see **Cummings,** Linda Scott (PaleoResearch Institute) Session III

**Bryson**, Reid (University of Wisconsin, Madison), see **Varney**, R.A. (PaleoResearch Institute) Session III

**Byers**, David A. and Craig Smith (ENTRIX, Inc.)

The Dawson Site: An Early Paleoindian Campsite on the Colorado Plateau

Poster Session

This poster introduces and describes the early Paleoindian assemblage from the Dawson Site. The Dawson Site was first identified in November of 2006. Located in the San Rafael Desert of central Utah, this site produced an assemblage of almost 100 Clovis, Folsom, and Great Basin Stemmed projectile points, projectile point performs, bifaces and flake tools. The artifacts are currently eroding from an aeolian sand sheet that mantles a low ridge and the entire surface scatter appears to surround what is tentatively considered a late Pleistocene spring mound.

**Cannon**, Kenneth (National Park Service) and Molly Boeka Cannon (National Park Service/University of Nebraska-Lincoln)

An Update on Investigations At The Goetz Site, Teton County, Wyoming

Symposium III

The Goetz site is located in a narrow, steep-walled drainage in the northeast portion of the US Fish and Wildlife Service's National Elk Refuge that heads on the flanks of Sheep Mountain in the Gros Ventre Wilderness. A spring at the base of the valley slope probably served as an attractant to both large mammals and humans. Excavations in 1971, under the direction of Dr. George Frison, revealed bison bones along with lithic tools and debris. Charles Love reported on the site in 1972 and provided a radiocarbon age of AD 1560 for the bison kill. Reanalysis of the bison bone indicates a minimum of four individuals were killed and processed at the site around 800 ± 40 RCYBP.

In 2000, we began a program to investigate the role of bison in the ecology and economy of precontact Jackson Hole. What we found were longer and more diverse occupations—the 800-year-old bison kill being only one component. Between 2001 and 2003, we focused upon delineating the vertical and horizontal extent of the site through hand excavation. A feature complex of burned bone, stone tools, and fired rock that encompasses a minimum of 9  $\rm m^2$  was uncovered and dated to 1900  $\pm$  40 RCYBP. Additional dating was provided by a radiocarbon age of 3360  $\pm$  40 RCYBP obtained from the mid-shaft fragment from a medium-sized artiodactyl.

In 2003 and 2004, we began a geophysical survey of the site using a GeoScan FM36 fluxgate gradiometer. Results indicate the presence of several anomalies that may represent precontact deposits. Ground-truthing revealed evidence of fired rock and lithic debris. Work in 2004 focused upon obtaining a paleoenvironmental record of the site through backhoe trenching and detailed sample collection. Trench 7, in the northern end of the site, provided the most compelling evidence of a long stratigraphic record. William Eckerle (Western GeoArch Research) and Kenneth Pierce (US Geological Survey) described the stratigraphic sequence of over 2 m of Holocene and Pleistocene fine sediment, including a buried paleosol (8840 ± 70 RCYBP) in contact with late Pleistocene Pinedale-aged fluvial deposits. An additional radiocarbon age of 980 ± 40 RCYBP was obtained from the distal right radius of a bison at 50 cmbs. Dr. Steve Bozarth (University of Kansas) collected phytolith samples from the trench at 10-cm intervals. Additional sampling was conducted for mechanical and chemical analysis of the soils, as well as magnetic susceptibility. Immunological residue analysis of stone tools has produced positive

results for bear, deer, rat, rabbit, Chenopodiaceae and Asteraceae. Faunal remains include bear, elk, deer/sheep, and bison.

Lithic raw materials at the site are dominated by local glacially redeposited quartzite cobbles. This is in contrast to other sites in the region in which volcanic glasses and cherts predominate. Geochemical analysis of obsidian artifacts by Dr. Richard Hughes (Geochemical Research Laboratory) has identified the following geochemical obsidian types: Crescent H, Packsaddle Creek, Phillips Pass area, Obsidian Cliff, Teton Pass, and West Gros Ventre Butte.

**Cannon**, Kenneth (National Park Service) see **Cannon**, Molly Boeka (National Park Service/University of Nebraska-Lincoln) Symposium IV

**Cannon**, Molly Boeka (National Park Service/University of Nebraska-Lincoln) see **Cannon**, Kenneth (National Park Service) Symposium III

**Cannon**, Molly Boeka (National Park Service/University of Nebraska-Lincoln), David Miller (University of Nebraska-Lincoln), Kenneth Cannon (National Park Service), and Carl Nelson (University of Nebraska-Lincoln)

Using Fuzzy Set Theory to Identify Geophysical Anomalies

Symposium IV

In this paper we explore the addition of fuzzy logic to the interpretation of geophysical data, specifically the application of identifying clusters in magnetometer data that approximate values known to reflect the presence of prehistoric cultural features such as fired rock, hearth features. We use magnetometer survey data from the Goetz site in northwestern Wyoming to manually tune the parameters of the algorithms for the identification of potential geophysical anomalies. The resulting algorithms are presented with differing results. Data from magnetometer survey at the Valles Caldera in north central New Mexico further tests the successful algorithms. Results from this preliminary study suggest that fuzzy set theory may be used to interpret geophysical data with success and has implications for the facilitation of efficient in-field data processing and visualization of the below surface archaeological record.

Cox, Shanna, Margaret Morris, and Mary Lou Larson (University of Wyoming)
The Use of Predictive Modeling to Solve Archaeological Problems
Symposium IV

This paper will present results from a joint project in predictive modeling between the Department of Anthropology at the University of Wyoming, the Bureau of Land Management's (BLM) Pinedale Field Office, and the Pinedale Anticline Working Group (PAWG). The study area, the Pinedale Anticline, is home to numerous historical and cultural resources ranging from Clovis sites dating as far back as 12,000 years ago to settlement era resources from the last century. As of spring 2005, 872 sites had been recorded on 15,152 inventoried acres for an average site density of 1 site for every 17 acres inventoried. The large average density of sites means any construction can potentially result in disturbance of known sites or discovery of new ones.

Two approaches to predictive modeling – one mathematically based and the other completed using geographic information systems (GIS) – are used to develop testable predictive surfaces for the Pinedale Anticline and identify areas of high site potential. This project provides an excellent opportunity to develop new research directions to help the state of Wyoming find more productive means of identifying, avoiding and/or mitigating the effects that oil and gas development will have on the cultural resources within this area.

Crockett, Stephanie (Utah State University), see Smith, Ashley (Utah State University) Poster Session

**Cummings,** Linda Scott (PaleoResearch Institute)
FTIR, Food Residues, and Sediments: A New Tool for Interpreting the Archaeological Record Session V

FTIR (Fourier Transform Infrared Spectroscopy) uses infrared spectroscopy to create an absorbance signature of organic compounds, including those recovered from archaeological sites. These signatures, or spectra, may then be compared with both commercial and private libraries of the spectra from known material to identify the unknown organic compound. Over the past several decades, the FTIR has been used to identify contaminants in manufacturing environments, for material quality control, and as a forensic tool for law enforcement agencies. Paleo Research Institute is now among a handful of facilities in the world who are using the FTIR to identify archaeological food remains and organic components in sediments from archaeological sites. We have examined ceramics, nutting stones, and fill from fire features and have found the FTIR to be a practical, economic tool to identify di- and tri-glycerides from meat fats, nut oils, maize, and a variety of plants.

**Cummings,** Linda Scott (PaleoResearch Institute), R.A. Varney (PaleoResearch Institute) and Reid A. Bryson (University of Wisconsin, Madison)

People, Animals, and Climate: What Happened as Conditions Changed

Session III

Modeled climate for the Paleoindian and Archaic periods provides clues for the causes of change between cultures that we see represented in archaeological sites. Differences in the paleoenvironment, as well as the speed of change, are important in understanding changes in hunting strategies, settlement patterns, use of the landscape, and much more. A survey of modeled climatic patterns indicates synchronous changes that coincide with what we know of changes in lifeways. Of particular interest is the rapid change between Paleoindian cultures and the Archaic.

**Cummings**, Linda Scott (PaleoResearch Institute), see **Varney**, R.A. (PaleoResearch Institute) Session III

**Davey**, Amanda (University of Wyoming)

A Landscape Approach to Understanding Prehistoric Rockshelter Use in the Bighorn Mountains of Northern Wyoming

Symposium IV

Rockshelters are unique landscape features that would have provided ready-made housing for prehistoric peoples, very similar to built structures. The University of Wyoming has been involved in the excavation and recording of over 115 rockshelters with prehistoric archaeology in the Bighorn Mountain region of Northern Wyoming in the last 50 years. This paper takes a landscape approach to understand what variables were possibly influencing whether or not a rockshelter was occupied prehistorically. A comparative analysis was conducted of rockshelters with prehistoric archaeology and those without for two types of variables. Landscape variables (elevation, aspect, and slope) commonly analyzed in archaeological site location modeling studies were first investigated. Geographic Information Systems was used to obtain these variables for shelters with this information not recorded. Rockshelter variables (length, width, and surface area) were then investigated to determine how these variables differ between occupied and unoccupied rockshelters. While it was predicted that unoccupied and occupied shelters would differ in regard to these variables, results indicated that significant differences were not present

**Dengah,** Henri Jean-François II (Colorado State University) Mormon Economics: Differential Capital Access by Gender and Religiosity Session IV

The Church of Jesus Christ of Latter-day Saints (LDS) is characterized by its communal nature. As such, the Mormon religion operates as an economic club, where the Church and its members exchange various goods, services, and labor. The members place great reliance on each other, as well as the Church, to provide salvation, psychological support, economic aid, and material needs. This paper will argue that the LDS Church offers its members differential access to capital along lines of gender and religiosity. Thus, various monitoring and surveillance techniques are utilized to determine the distribution of official Church capital, as well as informal community capital. Adherence to ascribed gender roles and doctrine is rewarded through capital acquisition opportunities, while social/religious deviance is punished through capital loss and accumulation limitations.

**DeVore**, Steven (National Park Service), see **Aaberg**, Stephen (Aaberg Cultural Resources Consulting Service) Symposium III

**Dow**, Amanda (Lifeways of Canada, Ltd.), see **Vivian**, Brian (Lifeways of Canada, Ltd.) Poster Session

**Dowd**, Anne S. (ArchaeoLOGIC USA) Excavations at Sites 48YE713 and 48YE1315 In Yellowstone National Park Symposium III

Site 48YE713, near Tower Junction, and Site 48YE1315, near Norris Junction, are camps in alluvial settings with high percentages of debitage and informal tools by comparison to formal tools. The sites' lithic assemblages are compared and contrasted to determine what kind of lithic production or raw material processing activities were conducted at each site, what raw materials were used (for example, predominantly chert in one location and almost exclusively obsidian in the other), and what conclusions can be drawn from the lithic distributions at each locale. These seasonal open camps were used for relatively short periods of time during the summer months. Debitage analysis is used to distinguish among spatially segregated activity areas at each site.

**Dukeman**, Casey (Western State College)

Tool Use-Life Histories and the Organization of Lithic Technology at the Lanning Site, Gunnison County, Colorado

Symposium I

The Lanning site, located in Gunnison County, Colorado, is a high elevation (8900 ft.) animal processing site overlooking the eastern edge of Sapinero Mesa. Lithic technology at Lanning was organized around planned intensive animal and hide processing. In cases such as Lanning, a single activity type location subsequently yielding a disproportionate number of processing tools (i.e. scrapers, gravers, awls, burinated and flake tools), as well as over eighty percent manufactured of predominately two, nearby lithic raw material resources, examining each tool-classes' on-site life histories will prove useful in determining to what extent the cognitive planning of tool stone procurement, use, and transport played in the overall organization of lithic technology.

**Dukeman**, Casey (Western State College)
"IF YOU DON'T SCALE THE MOUNTAIN, YOU CAN'T VIEW THE PLAIN": Folsom Mobility and
Residence Strategies in a High Elevation Rocky Mountain Basin
Symposium II

The Mountaineer site, much like today, is located in a diverse ecologic and topographic setting that prehistorically provided abundant, predictable plant and animal resources, as well as an optimal setting for extended winter occupations. Research in high elevation settings (especially in the southern Rockies) regarding Net Above-Ground Productivity (NAGP), temperature inversion, and other paleoenvironmental data suggests that the Gunnison Basin (located in western Colorado) was perhaps not as "unpredictable" or "sparse", as some of the literature might imply. In fact, high elevation basins may have been more conducive, ecologically and geographically to mobility strategies involving longer term, winter residences. This paper will discuss paleoecological modeling and how it relates to Paleoindian residence and mobility in high elevation basins. The paper will also set the contextual stage for the presentation of archaeological data being recovered at Mountaineer and other Folsom-aged sites in Gunnison County.

**Eakin**, Daniel (Office of the Wyoming State Archaeologist)

Evidence for Shoshonean Bighorn Sheep Trapping in the Absaroka Mountains of Northwest Wyoming

Symposium III

A review of bighorn sheep traps found in foothill/mountain areas of northwest Wyoming is presented. Past studies linking Late Prehistoric and Protohistoric Shoshonean groups with sheep trap construction did so with limited material or ethno-historic evidence. A 2004 post-wildfire damage assessment of high-elevation traps in the Absaroka Range revealed several campsites that provide material culture evidence for a Shoshonean connection to this subsistence strategy and a possible clarification of the role that sheep trapping played in the yearly subsistence cycle. A regional decline in forest health may lead to increased wildfire and a general loss of information related to Native American use of high-elevation environments.

**Eakin**, Daniel (Office of the Wyoming State Archaeologist), see **Eckerle**, William (Western GeoArch Research)
Symposium III

**Eckerle**, William (Western GeoArch Research) and Daniel Eakin (Office of the Wyoming State Archaeologist)

The Game Creek Site: Paleoindian Occupation at a Valley-margin Spring in South Park, Jackson Hole, Wyoming
Symposium III

Test excavations have revealed stratified Paleoindian age cultural levels in an Early Holocene coalescent terrace/fan composed of over 2 m of alluvium and slopewash sediment The upper meter of the landform is Middle Holocene age and highly bioturbated. Paleoindian occupations between 1 and 2+m below surface are encased in nearly intact bedded sediment Phreatogenic (phreatic implies secondary) carbonates engulf nearly the entire sediment unit and coat artifacts. Chipped stone artifacts are represented mainly by obsidian. Poorly preserved large mammal bone is present. Future data recovery excavations funded by the Wyoming Department of Transportation will mitigate impacts by planned construction.

**Eckerle**, William (Western GeoArch Research), see **Aaberg** Stephen (Aaberg Cultural Resources Consulting Service) Symposium III **Elliot**, Tristan (Western State College), see **Owens**, Andrew E. (Western State College) and Symposium II

**Eskenazi**, Phoebe (Sacred Spaces Consulting) and Ronald J. Rood (Utah Assistant State Archaeologist)

Hands-on Archaeology: Going into the Field with Kids Along the Wasatch Front Session II

In June 2007 ten public school students, upper elementary through middle school, participated in an archaeological field school sponsored by the Antiquities Section of the Utah Division of State History. In a partnership with Escalante Elementary School in Salt Lake City, the students were selected through an essay contest. Several of the 2007 participants also participated in a similar 2006 field school at Antelope Island State Park. Located on bluffs in the southern end of the Salt Lake Valley and east of the Jordan River, students worked at an Archaic campsite, 42SL186, known as "The Prison Site." The field school was taught by Rood and Eskenazi with assistance from the Antiquities Section staff including Kevin Jones, Andrew Yentsch and Lindsay Fenner.

With the intent of encouraging students to hypothesize and question, survey, excavate, and do lab work, the project also included a holistic component. The young archaeologists kept journals, wrote poetry, interviewed Dr. Kevin Jones regarding his doctoral research with hunter-gatherers in Paraguay, brainstormed using semantic mapping and created a colorful mural of their experiences. This multi-faceted approach to learning facilitated a community of scholarship amongst future stewards of our cultural resources.

**Francis**, Julie (Wyoming Department of Transportation)
Rock Art in the Greater Yellowstone Ecosystem
Symposium III

Native American rock art is unevenly distributed across the Greater Yellowstone Ecosystem. Major concentrations of known sites of occur along the periphery of the area in the Wind River Mountains. However rock art is virtually unknown from Yellowstone and Grand Teton National Parks. This paper examines several factors which might account for this spatial distribution, including regional geology and traditional belief systems.

**Fedorchenko**, Olena (University of Wyoming) Upper Paleolithic Bison Hunters: History Of Research Symposium I

Upper Paleolithic studies in southeastern Europe reach back more than 100 years resulting in large collections of archeological material. Over this time the theoretical approach has greatly changed and new methodologies emerged. In this paper I describe the main chronological periods of the research history of the region near the Black Sea. The paper concentrates on the analysis of the development of excavation methods and describes the theoretical ideas and the role of "external" factors in the research process. Among these factors are ideological, economic and political milieus of a country. I also consider the role of mainstream paradigm as "internal" factor acting upon the research process. During the Upper Paleolithic the region of southeastern Europe was inhabited by the bison hunters. Thus, this is the first paper that covers the history of research of the Upper Paleolithic bison hunters of this area. I explore the possibility that collaborative effort of southeast European and Plains Paleoindian bison hunter researches will provide insight for future enhancement of theoretical and methodological approaches to bison hunting groups.

**Finely**, Judson (Washington State University) and Laura Scheiber (Indiana University) Obsidian Source Analysis Traces the Effects of Colonialism on Contact Period Shoshone in the Greater Yellowstone Ecosystem Symposium III

Recent archaeological study of Historic period campsites in the Absaroka Mountains east of Yellowstone National Park permits new methodological and theoretical investigations of the nature of culture contact in the late 18th and early 19th centuries. Of particular interest is the continued use of traditional flintknapping technology by Mountain Shoshone well after the wider availability of Euroamerican-manufactured tools in the area. We view indigenous responses to contact in the Greater Yellowstone Ecosystem as an active, strategic process with measurable material consequences. Using x-ray fluorescence (XRF) analysis from over 1,000 sourced obsidian artifacts in western Wyoming, southwestern Montana, and eastern Idaho, we demonstrate regional diachronic changes in access to and preference for particular obsidian sources throughout the West. The results of the statistical analysis show that source area diversity and evenness differ significantly in pre- and post-contact settings. increase in mobility among local Native groups as a result of the introduction of the horse. which is well-documented ethnographically, our study demonstrates a restriction and reduction in Historic period source utilization in both northwest and southwest Wyoming. We propose that these changes in access to and preference for certain obsidian sources after the 1700s are a reflection of ethnogenesis and development of ethnographic bands (i.e., Mountain vs. Plains Shoshone) as a response to colonialism in western Wyoming in the decades surrounding the Rocky Mountains fur trade of 1807-1838.

**Fisher**, John W., Jr. (Montana State University), Walt Allen (Gallatin National Forest), and Tom Ballard (Gallatin National Forest)

Rock Pits, Rock Alignments, Bighorn Sheep, and Archaeology in Southwestern Montana

Symposium III

Rock pits and rock alignments constitute two distinctive, human-made manifestations found in southwestern Montana and adjacent areas. The pits consist of substantial depressions occurring in talus slopes at the base of cliffs. The alignments are enigmatic features of uncertain antiquity that follow a linear configuration up steep slopes. We suggest that these features were constructed and used by ancient Native peoples as part of a hunting "complex" for procuring large game species, at least one of which probably was bighorn sheep (Ovis canadensis). However, interpreting the function and antiquity of these features is challenging. We focus on features in the Gardiner Basin of southwestern Montana to examine their likely association with bighorn sheep procurement.

**Fleshman**, Stephanie (University of Illinois), see **Smith**, Ashley (Utah State University) Poster Session

**Gardner**, A. Dudley (Western Wyoming College) and Kayli Westling (Western Wyoming College) The Use of Wood During the Formative Period in Northwestern Colorado Session VI

The Fremont of Northwestern Colorado worked wood. The manner in which they modified wood, the way they lashed it together, and the type of tools they created from wood between 500 and 1800 BP exemplify a cultural preference that deserves analysis. This paper puts forth what we learned through excavation about wooden tools and their manufacture during the Formative Period. Our focus will be on wood artifacts found in granaries and rock shelters in northwest Colorado.

**Greer**, John (Greer Services), see **Greer**, Mavis (Greet Services) Session II **Greer**, Mavis and John Greer (Greer Services)

INDIAN CAVE, High Pictographs in the Little Belt Mountains, Montana
Session II

A limestone cave room high above the Smith River in central Montana (24CA347) contains numerous pictographs. The extensive main panel is dominated by a variety of abstract figures. These include patterns of lines and dots as well as stylized humans, some with upraised arms, some with robed bodies, and others with horned headdresses. There are few handprints and animals, but there are no horses and no indications of weapons. The high cave is prominently visible from the river but not easily accessed from either above or below. The setting is similar to other sites along the river attributed to shamanistic functions, but the content is noticeably different. The cave could have functioned for ceremony, ritual, shamanism, or vision quest, but actual distinction between such activities on the basis of rock art is highly problematical.

**Haydon,** Merry (Bridger-Teton National Forest) and Rosemary Sucec (Yellowstone National Park)

A Collaborative Approach Among Agencies, Disciplines And Tribes To Study And Manage Conical Timber Lodges In The Greater Yellowstone Area Session II

Archeologists have occasionally dismissed wickiup sites or conical timber lodges as having scant research value because few if any artifacts are found in and around the structures and because they are sometimes difficult to identify with certainty. Unanswered questions exist pertaining to their function, tribal affiliation, and significance.

Bridger-Teton National Forest, Grand Teton National Park, Shoshone National Forest, and Yellowstone National Park sought to address these and other issues through a collaborative study whose purpose was to provide management options of these structures. 26 tribes who have vested interest in the Greater Yellowstone Area (GYA) also have been invited to participate in the study.

Independent researcher David White was awarded a contract to write a comprehensive review of wickiup sites in the GYA that included a summary of the ethnographic literature and archival documents pertaining to wickiups, interviews with knowledgeable Euroamericans about GYA wickiups, and an inventory of known wickiup sites. In order to understand the origin and functions of wickiups, his research necessarily broadened to include views of similar structures throughout the western United States. White's report may be the most extensive research of wickiups in the Rocky Mountains to date and includes management recommendations for these structures.

We believe the interdisciplinary, interagency approach in collaboration with GYA tribes will help us to integrate tribal values in the development of effective, inclusive management strategies for these unique and perishable structures.

**Hill,** David see **Truesdale**, Christopher James Session VI

**Hughes**, Richard (Geochemical Research Laboratory)
Revision of Geologic Source Attributions for Obsidian Artifacts from Veratic Rockshelter, Idaho:
Implications for Greater Yellowstone Prehistory
Symposium III

In 1969 instrumental neutron activation analysis (INAA) data from 20 obsidian artifacts from Veratic Rockshelter, Idaho, were used to support the conclusion that the majority of artifacts tested were manufactured from geologic obsidian erupted in Yellowstone National Park, more than 180 km. (125 miles) east northeast from the site. Recent reanalysis of these same 20 specimens by energy dispersive x-ray fluorescence analysis (EDXRF) contradicts the INAA findings, indicating instead that, although Yellowstone obsidian was used, the majority of specimens were manufactured from geologic obsidians located much closer (between ca. 60-90 km.) to the archaeological site. These new results revise archaeological understanding of the importance of Yellowstone obsidians in eastern Idaho prehistory, and carry wider implications for extant obsidian source-use distribution models throughout the area.

Irelan, Derik (University of Michigan-Flint), see Williams, David (University of South Dakota) Poster Session

Johnson, Leslie (Colorado State University)

Insanity and Implication of Loneliness, Isolation, and the Failed Promises of the American Frontier

Session IV

The opening of the American western frontier for settlement inspired grandiose dreams as countless individuals and families uprooted and migrated west. They went for a myriad of specific reasons, but no matter what dream spurred the move, these people all migrated with the hope of a better life. They invested heavily in this new venture by readily purchasing land, equipment, housing materials, and the myth of the American West. The harsh reality was much different than popular notions suggested, as the land did not always bestow success to those who worked it. (Deverell 1994) The goal of this paper is to reveal what happened to these individuals who failed to achieve the success promised by frontier dreams. As many individuals sank into poverty, loneliness, and even depression, going west may have ultimately resulted in admittance to insane asylums for some emigrants. (Reference: William Deverell, "Fighting Words: the Significance of the American West in the History of the United States," *The Western Historical Quarterly* 25 (Summer 1994): 185-206.

**Karnopp**, Molly (University of Wyoming), see **Walker**, Danny (Wyoming State Archaeologist's Office)
Session II

**Kelly**, Robert (University of Wyoming)

Fluted Point Occupations in Caves and Rockshelters: Why Not?

Symposium I

Fluted point occupations are rarely found in caves and rockshelters across the US. This paper is a preliminary report on research in the Bighorn Mountains that focuses on discovering (a) if fluted point occupations are as rare as they seem to be nationally, (b) if shelter taphonomic factors account for this apparent fact, and, eventually, (c) if fluted point occupations are truly rare or if they are as abundant as we would expect them to be given the general rare occurrence of fluted point sites.

**Knoll**, Michelle (Utah Natural History Museum) see **Loosle**, Byron (Bureau of Land Management)

Symposium IV

**Koenig,** Orrin (University Of Wyoming) and Richard Adams (Office of the Wyoming State Archaeologist and University of Wyoming)

Intra-site Variability at High Rise Village

Session VI

The High Rise Village (HRV), in Wyoming's Wind River Range, is a Late Prehistoric village consisting of collapsed wooden structures, prepared lodge floors, chronologically diagnostic chipped stone tools, modified steatite and groundstone artifacts occurring at 3261 m (10,700 feet) above sea level. This summer we recorded 34 prepared lodge floors and tested four of them. Preliminary analyses of lodge outlines and lodge contents suggest variability in floor plan size, shape and placement, and artifact assemblages. This presentation examines the structural and spatial variability of living floors observed at this unique high altitude site.

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Lacy, Michael G. (Colorado State University) see Magennis, A.L. (Colorado State University) Session IV

Lamonski, Cathy (Metro State College), see Smith, Ashley (Utah State University) Poster Session

**Larson**, Mary Lou (University of Wyoming)

Late Paleoindian Cultural Complexes in the Central Rocky Mountains and Northwest Plains

Symposium I

My paper considers some of the unanswered questions about Late Paleoindian occupation of the Central Rockies and Northwest Plains. Between 10,000 and 7,500 rcybp six cultural complexes co-existed in the Central Rockies and Northwest Plains. The complexes include Cody, James Allen/Frederick, Angostura/Alder, Lovell Constricted, Pryor Stemmed, and Deception Creek. What we know about these complexes is largely based on a few extensively excavated and reported sites known to most of us. Data from more than 100 excavated components and as yet undetermined numbers of surface occurrences bring a different perspective to subsistence, spatial distribution, and interaction of these groups.

**Larson**, Mary Lou, see **Cox**, Shanna (University of Wyoming) Symposium IV

**LaBelle**, Jason (Colorado State University) Discussant Symposium II Lee, Craig (University of Colorado)

Discoveries and Prospects: The Archeology and Paleoecology of Perennial Snow and Ice in the Greater Yellowstone Ecosystem.

Symposium IV

Archeological discoveries made in association with perennial snow and ice patches in the Greater Yellowstone region hold the potential to elucidate an important aspect of prehistoric and historic human activity. For the past two summers, a project sponsored jointly by the Custer and Gallatin National Forests has explored these features in the plateau country south of the Yellowstone River in Montana. The survey has produced archeological and paleobiological discoveries including (1) prehistoric and historic artifacts indicative of human activities on or nearby the ice patches, (2) the remains of bison exposed by melting snow and ice, and (3) the presence of trees dating in excess of cal. 8 ka BP in growth position at the base of melting ice patches above modern tree line. The discovery of the trees was unexpected but illustrates the study's potential contribution to recognizing past climatic conditions, such as a regional signature for the Holocene thermal maximum, the warmest part of the Altithermal. Cultural activity at these locations is likely related to access to fresh water, associated hunting opportunities and spiritual activities. Barring unforeseen technological glitches, this paper will demonstrate the utility of virtual globes such as Google Earth and NASA's World Wind to identify prospective survey locations.

**Lee,** Craig (University of Colorado) Virtual Globes and Archeology Symposium IV

"Virtual globes," such as Google Earth, are fast becoming the news media's tool of choice for depicting geographic relationships and navigating the audience to "hotspots." There are at least 26 free and commercial virtual globes now available. Although Google Earth appears to be the front runner, the different globes possess unique capabilities. This technology holds enormous potential for archeological research and education. Although some aspects of the programs can be quite involved, you do not need to become an expert to use them. This presentation will examine the roots of virtual globe technology beginning with Buckminster Fuller's "Geoscope" and conclude by introducing two, different, "free" virtual globes: Google Earth and NASA's World Wind. Barring technological glitches, some real time exploration to illustrate how they can be integrated into your research will be attempted.

**Leavitt-Reynolds,** Alissa A. (Colorado State University)
Incidences of Trauma in the Colorado State Insane Asylum Skeletal Collection
Session IV

The rates of skeletal trauma on individuals from the Colorado State Insane Asylum (1879 - 1899) are high when compared with contemporaneous collections. This paper will examine the types of trauma present and discuss the implications of interpersonal violence, gendered differences of trauma, accidental/occupational trauma and the physical (mis)treatment of the mentally ill in historic Colorado.

**Leick**, Alison and Alysse Sowards (Ashley National Forest)

Location, Location, Location: Landscape Analysis of Prehistoric Settlement Patterns on the West Tavaputs Plateau

Poster Session

A recent survey on Anthro Mountain in the South Unit of Ashley National Forest has revealed a number of Paleoindian sites. This data casts new light on how prehistoric peoples used this harsh, isolated region. The South Unit is an expansive area of deep ridges and limited water sources located on the West Tavaputs Plateau in northeastern Utah. Vegetation ranges from pinyon-juniper woodland in lower elevations to sagebrush flats and small aspen groves on ridgetops at higher elevations. Using diagnostic tools as a basis for our analysis, we will compare Paleoindian, Archaic and Fremont sites in order to discern patterns in location, elevation, distance from developed springs and surrounding vegetation.

Lohse, E. Skip (Idaho State University), Paul Santarone (University of Wyoming) and C. Moser (Idaho State University)

"The Oldest, Least Significant Site" ... or Recovering Detailed Information on Prehistoric Reduction of Quartzite Boulders, Castle Rocks, Idaho
Session I

Testing for installation of a concrete latrine at Castle Rocks State Park, Fall 2006, documented prehistoric use of quartzite boulders for a wide range of functional tools. Excavation of a 3X4m test unit revealed at a depth of 1.5 meters a relict stream channel dating to the Early Holocene. Prehistoric people at that time were using large quartzite cobbles from the bed of the stream to produce large and small blades and generalized flakes. Large cores and conjoinable flakes were found embedded in the sandy overbank deposits alongside the stream channel. Accompanying the quartzite tools were a limited number of other more finished objects, including point bases, blades and flakes, from volcanic glass and cryptocrystalline stones. The lower levels of the unit were below water level over much of the excavation period as the current water flow follows the older abandoned stream channel. A radiocarbon date of c. 6000 B.P. was recovered from c. 90cm down in the excavation unit. Organic materials from the lowest levels in the relict stream channel showed contamination from the modern ground water flow. Cultural diagnostics found in these levels suggest a date of c. 9000 B.P. This year's work will extract an OSL date from the quartz sands to better date the prehistoric occupation.

**Lohse**, E. Skip (Idaho State University), C. Schou (Idaho State University), K. Turley-Ames (Idaho State University, Keith Lohse (University of Colorado), and M. Smuin (Idaho State University)

Using Artificial Intelligence (SIGGI) to Construct a Projectile Point Typology for the Northwestern Plains

Poster Session

We have been successful in training an AI system, called SIGGI-AACS, to accurately classify stone projectile points into recognized types. The initial prototype was trained based on rules extracted from Lohse (1985) for the Columbia Plateau classification system. Knowledge elicitation protocols have been developed to extract information from archaeological experts to train the neural agent, SIGGI. SIGGI is designed as a smart user interface to sit atop a large authenticated database. Archaeologists will be able to use SIGGI to better search large data sets and narrow parameters reflecting their particular research interests. Our team recently conducted a knowledge elicitation exercise and workshop with selected archaeological experts from the Northern Plains to attempt to develop a workable typology. This paper reports on our efforts and requests help from Plains archaeologists to produce a better, generally accepted typology for the Northwestern Plains-Rocky Mountain Region.

Lohse, Keith (University of Colorado), see Lohse, E. Skip (Idaho State University) Poster Session

**Loosle**, Byron (Bureau of Land Management), Jamie Palmer, (Ashley National Forest and Michelle Knoll (Utah Natural History Museum)

A GIS Case Study from the Uinta Mountains of Northeastern Utah

Symposium IV

The Uinta Mountains of northeastern Utah have served as a climatic, environmental, and cultural boundary for millennium. With the advent of the Fremont manifestation the cultural boundary effect of the Uintas appears to have waned. However, the development of GIS technology allows for a more in-depth analysis of artifact distribution. Recently generated maps show a marked contrast in the distribution of Uinta north versus south slope Fremont era artifacts. This distribution suggests groups may have used the mountains differently. Some of the reasons for this distribution will be briefly explored.

**Louderback,** Lisbeth (University of Washington), David B. Madsen (Texas Archaeological Research laboratory/Mercyhurst Archaeological Institute), Michael Metcalf (Metcalf Archaeological Consultants), Alan D. Reed (Alpine Archaeological Consultants Inc), and David Rhode (Desert Research Institute)

Paleoenvironmental Research on the Piceance Basin Lateral and REX Pipeline Project: A Preliminary Report

Session III

The Piceance Basin Lateral and REX Pipeline Project, stretching from southwest Wyoming southward across the Piceance Basin in northwest Colorado, has provided the basis for extensive archaeological investigations along its length. As part of this archaeological effort, we obtained paleoenvironmental information spanning the period of human occupation in the area, to better understand human responses to late Quaternary climate change in the region. Fossil woodrat middens from lower elevation contexts along the pipeline provide evidence of local vegetation change during the late Holocene. Pollen records from two localities on the White River Plateau provide a high-elevation perspective of Holocene vegetation and climate change for the region. Together these records promise to provide a record of regional vegetation change that will complement the regional geoarchaeological model developed by McFaul and Metcalf. We discuss objectives of this project and preliminary results contributing to a detailed paleoenvironmental record for southwestern Wyoming and northwestern Colorado.

**Madsen**, David B. (Texas Archaeological Research Laboratory/Mercyhurst Archaeological Institute)

Discussant Symposium I

**Madsen**, David B. (Texas Archaeological Research Laboratory/Mercyhurst Archaeological Institute) see **Louderback**, Lisbeth (University of Washington)
Session II

Magennis, A.L. and Michael G. Lacy. (Colorado State University.)

The Late 19th Century Colorado Insane Asylum: Taking a Closer Look at the Institutionalized Session IV

In late 1879, Colorado opened it's first State mental hospital. During the first 20 years of operation, nearly 2000 individuals were admitted. Slightly more than half were discharged after varying amounts of time, while about 500 died at the institution. Key information about each individual is revealed in a brief medical record kept by the superintendent including name, age, marital status, occupation, nativity, and mental illness diagnosis, or cause for admission.

The medical records reveal that the vast majority of the men were laborers, miners, and farmers, while the women were housewives or domestics. Intemperance was an important cause for admission of men. It has been estimated that nearly 20% of admissions to mental institutions in the late 19th century would be due to syphilis. We suggest, however, that only about 10-14% of patients at the asylum may have suffered from syphilis. Controlling by US census data, being single or widowed increased the risk of being admitted by nearly 1.3-2 times compared to those who were married, while males were at far higher risk of being admitted to the institution than females. Finally, immigrants, particularly female Irish immigrants, were at much higher risk of being institutionalized than were the native-born.

**McNees,** Lance M., (ENTRIX, Inc.) see **Smith**, Craig S. (ENTRIX, Inc.) Session V

**Meltzer**, David (Southern Methodist University)

Morphometric Variation In The Wink Of A Radiocarbon Eye: Examining The Mountaineer Folsom Points

Symposium II

Folsom fluted points are among the most recognizable types in North America, and across a vast region seem astonishingly alike. However, although broadly similar and easily recognized, they vary along several dimensions of shape and size, as a consequence of function, technology, and style. Archaeologists have a reasonably secure handle on how Folsom points vary as a consequence of use and, to a lesser degree, of technology. However, less attention has focused on style. The Mountaineer Folsom assemblage provides an opportunity to explore all dimensions by virtue of the fact that a single or closely-related group occupied the site for a relatively brief period of time, and hence certain aspects (such as raw material) are held more or less constant. An analysis of the morphometric variation in the Mountaineer projectile point assemblage reveals standardization in some aspects of the points, but what appear to be stylistic elements. These are also examined, against morphometric variation in other Folsom assemblages.

**Mathews**, Neffra (Bureau of Land Management), see **Walker**, Danny (Wyoming State Archaeologist's Office) Session II

**Merriman**, Chris (University of New Mexico), see **Pitblado**, Bonnie (Utah State University) Symposium I

**Metcalf,** Michael (Metcalf Archaeological Consultants, Inc.), see **Louderback,** Lisbeth (University of Washington) Symposium II **Miller**, David (University of Nebraska-Lincoln), see **Cannon**, Molly Boeka (National Park Service/University of Nebraska-Lincoln) Symposium IV

Mitchell, Doug (Lifeways of Canada, Ltd.), see Vivian, Brian (Lifeways of Canada, Ltd.) Poster Session

**Morris**, Margaret (University of Wyoming), see **Cox**, Shanna (University of Wyoming) Symposium IV

**Moser**, C. (Idaho State University), see **Lohse**, E Skip (Idaho State University) Session I

**Mullen**, Patrick Orion (University of Wyoming)

Middle Park Paleoclimate Evaluation Using Stable Isotopes

Symposium I

To better understand the environmental context of the Paleoindian occupations of Middle Park, Colorado, I analyzed stable carbon and oxygen isotopes from tooth enamel of both modern and ancient Middle Park fauna. Results from the Barger Gulch Locality B, Jerry Craig, and Upper Twin Mountain sites of Middle Park were compared with modern local samples, computer models of modern precipitation, ice core records, data from the Boca Negra Wash Folsom Site, and modern animals in New Mexico. This research demonstrates significant latitudinal differences in isotope values across the rocky mountain region both at present and in the past. Furthermore, ice core data are demonstrated to be a reasonable proxy for climatic trends in the Rocky Mountains, but a poor proxy for the scale of those changes. Finally, modern comparisons with ancient climates are provided to demonstrate the relative differences in climate in a more comprehensible manner.

**Nash**, Robert (University of California, Davis)

Foraging Efficiency and the Adoption of Agriculture: The Role of Corn among Fremont Groups in Northeastern Utah

The practice of agriculture prehistorically was often more risky, required more energy, and provided a poorer diet than hunting and gathering. This raises the question of why huntergatherers would have decided to adopt agriculture. This research investigates the adoption of agriculture north of the Uinta Mountains of northeastern Utah during the late Archaic - early Formative period. The region is at the extreme northern edge of maize cultivation and provides a unique place to study the physical and social forces that encouraged individuals to abandon a seemingly successful hunter-gatherer lifeway for a much more tenuous agriculture one. I argue that the decision to adopt agriculture was viewed as a way to increase foraging efficiency of high-ranked resources, as argued by Wills and Huckell (1994). According to this model, agriculture would have increased foraging efficiency by permitting more effective foraging tactics that prolonged access to high-ranked resources. The increased spatial and temporal predictability afforded by stored cultigens may have helped make wild resource procurement more effective by allowing more complete harvesting of foods having limited periods of availability. Prolonged access to resources would have opened up foraging opportunities by allowing hunter-gatherers to stay out and exploit the animal and plant resources that were most desired.

**Nelson**, Carl University of Nebraska-Lincoln), see **Cannon**, Molly Boeka (National Park Service/University of Nebraska-Lincoln) Symposium IV **Nelson,** Russell (University of Wyoming), see **Vlcek**, David (Bureau of Land Management) Session II

**Noble**, Tom (Bureau of Land Management), see **Walker**, Danny (Wyoming State Archaeologist's Office)
Session II

#### Ollie, Naomi

The Hills Are Alive: Landscape activity and human occupations in the Upper Greybull River, Greater Yellowstone Ecosystem
Symposium III

Evidence for past mass-wasting activity is common throughout the Upper Greybull River drainage basin in northwestern Wyoming. A growing archaeological database from this region shows that many archaeological sites occur on ancient slumps. Archaeological sites are associated with a diversity of other mass-wasting deposits including currently active surfaces. This study discusses two main aspects of these relationships: the frequency of mass-wasting in the region as it relates to the archaeological record and the environmental changes that can accompany these events. To explore these questions, field observations, GIS, and soil analyses are employed at an archaeological site-specific scale.

**Owens**, Andrew E. (Western State College) and Tristan Elliot (Western State College)

Hearths at The Mountaineer Site: Inferences Gained Through Fire Pit Experimentation With Fish

Canyon Tuff

Symposium II

Last summer, a new Folsom structure was excavated on the Mountaineer site in Gunnison Colorado. A hearth was found at the southeast corner of the structure containing burnt blackened tuff. After seeing the charred tuff, questions arose as to how the tuff reacts to fire, how it changes color, density, etc. Therefore, experiments were designed to examine the burning characteristics of Fish Canyon Tuff, since the identification of these characteristics is crucial in determining the presence of hearths and in extrapolating their function. In the experiment, several fire hearths were created using stone tuff materials from W Mountain. Some tuff stones were subjected to only one burn; some were subjected to several burns, while others were burnt repeatedly. The purpose of these differences in hearth usage was intended to demonstrate whether or not the lengths and temperatures of hearth usage affect the nature of the burn characteristics visible on the tuff. In the presentation, results from the experiment will be presented followed by a brief discussion of thoughts and potential explanations for pit usage and function.

**Pack**, William, and John W. Rick (Stanford University)

Visualizing the Surface Archaeology of the Sun Ranch Area of the Madison Valley

Symposium IV

Recent research in the upper Madison Valley of Montana in the vicinity of the Sun Ranch has revealed a wealth of surface features that represent surprisingly intensive use of the landscape. Stone cairns forming linear features are common, along with other cultural features. Initial evidence suggests a range of use periods for the area ranging back to Paleoindian. The linear arrangements are consistent with game drive activities in terms of topographic placement and interline arrangement. This talk presents various forms of visualization of the surface evidence that allows preliminary conclusions about the strategies organizing the apparent drive lines and other byproducts of pre-European human activity in the area.

**Palmer**, Jamie (Ashely National Forest) Visualizing Archaeology Symposium IV

**Palmer**, Jamie (Ashely National Forest), see **Loosle**, Byron (Bureau of Land Management) Symposium IV

**Phillips**, Ariana (Utah State University), see **Smith**, Ashley (Utah State University) Poster Session

**Pitblado**, Bonnie (Utah State University) Paleoindian Research in the Southern and Central Rocky Mountains Symposium I

**Pitblado**, Bonnie (Utah State University), Chris Merriman (University of New Mexico), and Bethany Arthion (Northeastern Illinois University)

Paleoindians in the Gunnison County High Country, Colorado: Test-Excavations at the Heath Site

Symposium I

In 2007, Bonnie Pitblado, C.W. Merriman and students from the Utah State University archaeological field school test-excavated a late Paleoindian site in Gunnison County, Colorado. The Heath Site (5GN3418) is located at an elevation of 8340 feet on a high terrace of the Lake Fork of the Gunnison River. When initially recorded in the 1990s, the site surface had yielded projectile points spanning 10,000 years of prehistory. Of most interest were Paleoindian specimens, which included Agate Basin, Jimmy Allen and Angostura types. Test-excavations revealed buried cultural material that appears to span the same time frame as the surface diagnostics. This paper focuses on evidence for the earliest occupation at the Heath Site, and particularly upon our dating strategy, which included standard radiocarbon dating of organic material, but also optically stimulated luminescent dating of sand grains in the stratigraphic levels at the site.

**Pitblado**, Bonnie (Utah State University), see **Andrew**, Holly (Utah State University) Symposium I

Pitblado, Bonnie (Utah State University), see Smith, Ashley (Utah State University) Poster Session

**Reed**, Alan D. (Alpine Archaeological Consultants, Inc.), see **Louderback**, Lisbeth (University of Washington) Session III Reiser, Marcy (Colorado State University)
Running Circles around History: Comparing Tree-Ring Data to Historical Accounts in
Northwestern Wyoming
Symposium III

In 2006, Colorado State University students working in the Upper Greybull watershed in Northwestern Wyoming collected samples for dendrochronological analysis from living trees, anthropogenically modified wood, and four historic cabins. Analysis of the tree-ring data has provided insight into past climate conditions in the area and yielded dates related to both cabin construction and human land use practices. When information gleaned from these tree-rings is compared to historic documents and personal accounts from the region, interesting parallels and surprising divergences emerge. Together, these sources of data can interact—confirming or dispelling certain assumptions, teasing out new research questions, exposing culturally-embedded versions of the past and, in the end, forming a more nuanced reconstruction of humans and their environment over time.

Rhode, David (Desert Research Institute), see Louderback, Lisbeth (University of Washington) Session III

**Rick**, John (Stanford University)

Hunter-Gatherers of the Frigid Tropics—Early Archaeology of High Altitude Peru

Keynote Address

The resource constellation of high Andean environments, reflecting low temperatures and low seasonality conditions, was the economic base for specialized montaine preceramic (10,000-1800 B.C.) societies. In this talk, I explore some of the more interesting parameters of these occupations, including issues of reduced mobility, and high degrees of reliance on a low diversity of animal species. Although such a situation would be predictably unstable, the archaeological record suggests an evolving but increasingly stable and successful utilization of camelid game and a reticence to develop or adopt herd animals. The llama-like vicuna, the primary game animal of this high altitude *puna* grassland, was both predictable in behavior and susceptible to human predation in this open setting. Zooarchaeological analysis argues that conservative, perhaps managed hunting practices emerged over time in puna preceramic societies, while human groups became increasingly sedentary yet strikingly undifferentiated in social status.

**Rick**, John (Stanford University), see **Pack**, William (Stanford University) Symposium IV

**Rogers**, Hillary (Western State College)

An Analysis of Daub Found On The Mountaineer Site

Symposium II

Daub is a low grade ceramic made from an ash soil, it is present through out the world at archeological sites; dating as far back as paleo sites to the colonial waddle-and-daub houses. At the mountaineer site (5GN2477) in Gunnison, Colorado, daub is a common artifact to excavate; having been found in blocks A-F. It has been noted between the two structures at mountaineer, that a color change is present in the daub. It is a darker orange in block C were the first structure was excavated, then in block F where the second structure is located. Little has been done, however, to understand the cause of this color change. This experiment was undertaken to determine the composition of daub found at mountaineer, as well as to determine if the temperature of the fire or the length of time in the fire could have created the color change present in the daub found at the structures.

**Rogers**, Martha Ann (Wyoming State Archaeologist Office), see **Walker**, Danny (Wyoming State Archaeologist's Office) Session II

**Rood,** Ronald J. (Utah Assistant State Archaeologist) see **Eskenazi**, Phoebe (Sacred Spaces Consulting) Session II

**Sanders**, Paul H. (Office of the Wyoming State Archaeologist).

Archaeological Data Recovery at the Nymph Lake Site (48YE114): A Small Prehistoric Lithic Workshop and Campsite near Obsidian Cliff, Yellowstone National Park Symposium III

The Nymph Lake site (48YE114) is a small, obsidian workshop and temporary campsite about 5 miles south of Obsidian Cliff that was excavated during 2004-2005. Large quantities of obsidian flaking debris, tools, burned rock, and one hearth feature were recovered. Wood charcoal from the hearth yielded an AMS radiocarbon age of 2260±40 years before present (Beta-195896). Most of the obsidian was recovered from the southernmost excavation block where one of the 1-x-1-m units contained nearly 14,000 flakes. Very little faunal materials were preserved in the acidic forest soil; however, protein residue analysis of a sample of tools provides some potential indications concerning subsistence patterns of the site inhabitants. Obsidian geochemical source analysis was also conducted to reveal patterns of lithic resource use. The site is approximately one mile north of the Norris Geyser Basin and is at the edge of active thermal areas that have modified some of the site sediments and artifacts. The location of the site near thermal areas dispels the notion that thermal areas were feared by Native American occupants of Yellowstone. These and other issues will be discussed in regards to this prehistoric occupation within Yellowstone National Park.

**Santarone**, Paul (University of Wyoming), see **Lohse**, E. Skip (Idaho State University) Session I

**Scheiber**, Laura (Indiana University), see **Finely**, Judson (Washington State University) Symposium III

**Sellet**, Frederic (University of Northern Colorado), see **Brunswig**, Robert (University of Northern Colorado) Symposium I

**Seymour**, Elizabeth (University of California-Davis), see **Williams**, David (University of South Dakota)

Poster Session

**Smith**, Ashley, (Utah State University) Stephanie Crockett (Utah State University), Cathy Lamonski (Metro State College), Stephanie Fleshman (University of Illinois), Ariana Phillips (Utah State University), and Bonnie Pitblado (Utah State University 2007 Investigations of Ute Archaeology, Gunnison and Hinsdale Counties, Colorado Poster Session

This poster reports on the test-excavation of a Ute component at the Heath Site (5GN3418), Gunnison County, Colorado and the documentation of new Ute sites in the Hinsdale and Gunnison County high country. Well documented Ute sites remain comparatively rare in the Southern Rockies, and so each new surface locality and excavated component helps us better understand these consummate Rocky Mountain-based people. The Heath site yielded, among other finds, a roasting pit containing Ute pottery sherds. Sites documented on survey included

a wickiup, camp sites, and lithic scatters at elevations ranging from about 9,500' asl to 11,500' above sea level.

**Smith**, Craig S. and Lance M. McNees, (ENTRIX, Inc.)

The Middle Holocene Wyoming Housepits: Locations within a Stable Long-Term Land Use System

Session V

The presence of housepits dating to the middle Holocene in the Wyoming Basin has generated much discussion as to why they were constructed and the type of associated mobility patterns. Their location in a marginal environment of low carrying capacity, their relatively informal and ephemeral nature, and occurrence of typically low densities of artifacts and bone suggest that occupations were of short durations. The probability that these houses were occupied only briefly poses the question of why the prehistoric inhabitants expended the energy to construct them. The prehistoric inhabitants may have constructed them for repeated occupations over periods of time, possibly as part of a stable long-term land use system. The structures could have served as markers on the landscape directing subsequent occupations to important locations. To explore the possibility that these locations were the focus of periodic revisits and a stable mobility pattern, this paper examines the evidence for housepit reuse. Examination of stratigraphic details of house remains, the sequences of radiocarbon age estimates, and caching of tools from a number of sites provide evidence for housepit reuse over broad periods of time.

**Stafford**, Thomas (Stafford Research Laboratories, Inc.) Geologic Interpretations at Mountaineer Site Symposium II

Archaeological sites are still largely untapped repositories for geomorphic, geochemical, paleoenvironmental and paleoecological information that has no comparable source in strictly geological contexts. Frequently stratified habitation or kill sites provide incremental geological data, and absolute or typological age data enable geomorphic and other processes to be calibrated. The Gunnison, CO Mountaineer Site being excavated by WSC has yielded chronological, geomorphic and paleoecological data not anticipated from a deposit with less than 40-50 cm of sediments lying directly upon bedrock. Unique geochemical conditions favored preservation of bone that has provided 14C chronologies. The Folsom-age lithics and blocks of volcanic tuff used to construct structures contain age and paleoecological data recorded in the caliche that formed on the artifacts and tuff over the past 10,400 RC yr. Without the archaeological context and auxiliary data, these geological interpretations could not have been made.

**Stiger**, Mark (Western State College)
Folsom Residential Assemblages at the Mountaineer Site, Gunnison, Colorado Symposium II

Excavations at the Mountaineer site have revealed two substantial structures both containing Folsom Paleoindian artifact assemblages. The seasons of occupation for both structures appear to be winter, but their exact contemporaneity is not certain. Assemblage differences are seen in tool content and raw material selection. Assemblage similarities are seen in breakage pattern and spatial distributions. Assemblage differences and similarities are described and explanations are explored.

**Storm**, Brian P. (University of Nebraska-Lincoln) *Eeny, Meeny, Miny, Mo? Tempering Choices of Uinta Fremont Horticulturalists*Session VI

The Fremont culture consists of highly diverse, variable, and adaptive groups. This is evidenced in the many variations of gray pottery that the Fremont peoples manufactured and used. Fremont ceramics have been studied since the archaeological culture's initial discovery. Much of the early research on Fremont pottery focused on classification, decorative analysis, and compositional studies. Early investigations of the Uinta Fremont and Uinta Gray pottery in northeastern Utah identified the tempering material as calcite. There have been many technological advances in compositional studies in recent decades including petrographic thin section analysis. These studies have better identified the tempering materials in Uinta Gray ceramics as limestone, though some local variation does exist. This paper seeks a cultural ecological approach to discussing the choices in ceramic tempering materials of the Fremont in an attempt to better understand the cultural contexts in which these pots were made and used.

**Sutter**, Steven J. (Wyoming State Historic Preservation Office, Cultural Records Office) and Chris M. Young (University of Wyoming)

The Relative Use Of Obsidian Through Time In Wyoming

Session I

In 1972 Leslie Davis used hydration analysis to date obsidian artifacts from across the Northwestern Plains. He found a period of intensified obsidian use in the Late Archaic and Late Prehistoric. This paper compares Davis's results with information from the Wyoming Cultural Records Office and the University of Wyoming Archaeological Repository. The relative frequencies of dated sites and dated artifacts were compared to Davis's results, and the relative presence of obsidian in dated sites and dated isolated finds were also examined. The results varied depending on which variables were used and ranged from indications of a slight increase in obsidian use through time to fairly minor variations in obsidian use through time. The merits of these comparisons are discussed and some regional and functional differences are noted.

**Tanner**, Russel L. (Kyak Marook Heritage Research, LLC)
In Context: The Western Emigration Trails Network Across Wyoming.
Session IV

Although the Bureau of Land Management and National Park Service official context study conducted between 2001 and 2005 remains in draft for reasons known only to BLM management, the professional community deserves to know the breadth and quality of information in the report which has recently been edited by historian Robert Rosenberg. This paper will present a broad overview of the study including a number of examples of the more than 4,000 low-level aerial photographs taken of the central Wyoming trails network. Special consideration will be given to issues of trail provenance as developed through over 100 years of research by Ezra Meeker, William Henry Jackson, Howard Driggs and several other trail historians. The National Register of Historic Places significance, integrity and condition of nearly 2000 miles of historic trails will also be addressed.

**Tanner**, Russel L. (Kyak Marook Heritage Research, LLC)
Stories from the Old People: Anthropological Perspectives on Rock Art in the Red Desert.
Session IV

A PowerPoint presentation showing many of the Native American petroglyph and pictograph sites in the Red Desert region, and discussion of how these artistic renditions may inform us

about how hunting and gathering cultures adapted to not only survive, but to thrive in this seemingly inhospitable environment.

**Thorson**, Kevin (Lifeways of Canada, Ltd.) see **Vivian**, Brian (Lifeways of Canada, Ltd.) Poster Session

**Todd**, Lawrence C. (Colorado State University)

Backcounty Archaeology at the Margins of the GYE: Upper Greybull River 2002-2007

Symposium III

Understanding prehistoric landuse in the Greater Yellowstone Ecosystem has been hampered by the limited number of sites documented. This lack of basic inventory has been particularly troubling in some of the more remote areas, such as the upper Greybull river and it's tributaries at the southeastern margins of the GYE. Since 2002, survey and in-field analysis of sites (primarily along trail corridors) in the Shoshone National Forest and Washakie Wilderness has resulted in discovery and documentation of over 260 archaeological sites ranging in age from Paleoindian to proto-historic, with most intensive use seemly during the Late Archaic and Late Prehistoric periods. In 2006, the Little Venus Fire burned over 34000 acres in a combination of previously surveyed and uninvestigated areas. In 2007, fieldwork emphasized survey of the recently burned areas and of re-examination of burned sites. Difference between pre- and post-burn site distribution and assemblage content patterns as well as changes in susceptibility of sites to looting, erosion, and grazing impacts highlight the need to develop baseline archaeological datasets and establish both regular monitoring and 'rapid response' research and management programs.

**Truesdale**, Christopher James, James A. Truesdale and David Hill Archaeological Investigations at the Hamblin Ceramic Site (42UN5406), Uintah County, Utah Session VI

An artifact assemblage of chipped stone tools, chipped stone debitage and ceramics from 42UN5406 represent evidence of two occupations during the Late Prehistoric period along Willow Creek Canyon in the Uinta Basin of northeastern Utah. The first component consists of over two hundred gray corrugated sherds representing four Anasazi PIII vessels. This component most likely dates between AD1150-1300. The second component represents a Numic occupation evidenced by the presence of Ute fingernail impressed brown ware and sherds from a Hopi Jeddito Black-on-yellow ceramic bowl. A Desert side-notched projectile point recorded at the site is also likely associated with the Numic occupation. Results from petrographic analysis and Optical Stimulated Luminescence (OSL) dating of a Numic sherd will be presented. The data offers insight into the postulated southern contraction of the Anasazi territory and that not all of Utah was abandoned by the Anasazi during their decline. In addition, the associations of the Numic and Hopi ceramics suggest that the Numic may have been well established in the Uintah Basin and Eastern Tavaputs Plateau by AD 1175 to 1365.

**Truesdale**, James A., see **Truesdale** Christopher James Session VI

Turley-Ames, K. (Idaho State University), see Lohse, E. Skip (Idaho State University) Poster Session

**Varney,** R.A. (PaleoResearch Institute)
Introducing AMS Radiocarbon Dating of MicroCharcoal: An Alternative to Soil Organic Matter and "Humate" Dating
Session III

Soil organic and/or "humate" radiocarbon dates have frequently been problematic to interpret, and have typically been dated only as a last resort when no macroscopic charcoal or organics have been recovered. Extraction of microscopic (less than 250 micron) charcoal using a process similar to the pollen extraction process permits dating on low-translocation charcoal rather than the highly mobile organic chemical fraction. So far, ten dates on sediment microcharcoal have been returned including comparisons with traditional macroscopic charcoal AMS dates with ages from 12650 +/- 30 to 1510 +/- 20. This has shown to be a useful and accurate alternative to problematic "humate" dates.

**Varney**, R.A, Cummings, Linda Scott (PaleoResearch Institute), Bryson, Reid (University of Wisconsin, Madison)

Colorado Climate and the Distribution of Radiocarbon-Dated Archaeological Sites

Colorado Climate and the Distribution of Radiocarbon-Dated Archaeological Sites Session III

Archaeoclimate models for most National Weather Service site records in Colorado were constructed and assembled into an animation of the climate for the last 14000 Radiocarbon years at 200 year intervals. Modeled temperature and precipitation animations are overlain with the position of radiocarbon-dated archaeological sites from the SHPO records. Methods of the construction of this amalgam and inferences from depositional, glacial and cultural record are discussed.

**Varney**, R.A. (PaleoResearch Institute), see **Cummings**, Linda Scott (PaleoResearch Institute) Session III

**Vivian**, Brian (Lifeways of Canada Limited)

Precontact Occupations on Yellowstone Lake: An Outline from the Shoreline

Symposium III

The following paper reports on an archaeological inventory and survey of Precontact Native American sites found along the south shore of Yellowstone Lake. The systematic survey of this portion of the lake shore, started in 2002 and completed in 2006, covered a total shoreline distance of approximately 95 km. In total 156 precontact archaeological sites and 62 isolated artifacts finds were documented and 372 formed tools and cores and 20 pieces of debitage were collected. Discussion of these results highlights management issues and characterizes the precontact use of the lakeshore within a wider regional setting of the Greater Yellowstone Ecosystem.

**Vivian**, Brian, Amanda Dow, and Janet Blakey (Lifeways of Canada Limited) Looking Back Today (Come What May) at Everblue by You Poster Session

This poster describes the results of final mitigative excavations undertaken at the Everblue Springs Site (EgPn-700) in the Fall of 2005 and Spring of 2006. Archaeological evidence in the form of discarded animal bones and stone tools indicates human inhabitants visited this spring location several times over the last 8000 years. The extensive faunal assemblage recovered from the site included the remains of at least forty mature bison as well as bones from antelope, deer, canid, rabbit, and beaver. Along with the bone a unique assemblage of projectile points was found. Points resembling the large tanged and basal barbed projectile points collected at Everblue Springs have seldom been found in Alberta or beyond, and figure to represent a short lived style associated with a transitional period when projectile points and

hunting technology were undergoing great change. Radiocarbon dates from the site place it as one of the four oldest bison kill sites found in the province of Alberta, and confirm this to be one of the most important precontact sites documented within Calgary city limits.

**Vivian,** Brian, Kevin Thorson, Doug Mitchell, and Janet Blakey (Lifeways of Canada Limited) Cultural Resource Survey of Yellowstone Lake South Side Shoreline Poster Session

An archaeological inventory and survey of Precontact Native American sites found along the south shore of Yellowstone Lake was undertaken from 2002 to 2006. Over the three years this systematic survey was carried out a total shoreline distance of over 95 km was examined, resulting in the documentation of 156 Precontact archaeological sites, 62 isolated artifacts finds and the collection of 372 formed tools and cores. The distribution of these finds highlights the importance and ongoing use of Yellowstone Lake in precontact times since the earliest humans set foot within the park region.

**Vicek**, David (Bureau of Land Management) and Russell Nelson (University of Wyoming) Six Skeletons in Pinedale: An Unusual Archaeological Discovery Session II

Six near complete human skeletons were unearthed during a private residence foundation construction project in Pinedale. Preliminary analysis of the skeletons indicates that they are Native American, and of presumed Archaic age. Dr. Nelson is conducting an extensive forensic analysis, complete with radiocarbon and DNA studies. This presentation describes the unusual find and places the discovery within the context of other prehistoric human remains known from the upper Green River basin.

**Walker,** Danny N., and Martha Ann Rogers (Wyoming State Archaeologist's Office) *History of the University of Wyoming Archaeological Repository, 1967-2007*Session II

Wyoming State Statutes establishing the Office of the Wyoming State Archaeologist in 1967 also established the basis for development of what eventually is known today as the University of Wyoming Archaeological Repository (UWAR). UWAR collections have been housed in a variety of buildings on campus over the past 40 years and under a variety of environmental and storage conditions. Each move of the repository over the years to different facilities resulted in improvement of these conditions and overall care of the collection. With the move to the new University of Wyoming Archaeological and Anthropological Research facility in 2007, these various moves have culminated in the housing of the collection in a state of the art archaeological repository, meeting all present requirements of 36CFR79. Future expansion of the repository is also possible with the new facility and its space.

**Walker,** Danny N. (Wyoming State Archaeologist's Office), Molly Karnopp (University of Wyoming), Marit Bovee, (University of Wyoming), Neffra Matthews (Bureau of Land Management), Tom Noble (Bureau of Land Management) and Mike Bies (Bureau of Land Management

Archaeological Investigations and Rock Art Recording at Legend Rock State Archaeological Site, Wyoming
Session II

After nearly a twenty year hiatus, archaeological investigations continued at Legend Rock State Petroglyph Site in north central Wyoming during the 2007 field season. Wyoming State Parks renewed their proposed installation of formal walking paths at the site following two major episodes of vandalism to the site in 2006, as one measure to possibly alleviate this problem. Thirty-five one by one meter excavation units were placed along the proposed main path and

three routes off that path. Despite having found several features in this area in 1988, only a single area of cultural occupation was found in 2007 along the terrace deposits of Cottonwood Creek. Nine additional units were placed at the base of two rock art panels exhibiting figures at present ground level. No intact cultural features were recorded in these areas. Close-range Photogrammetry began at Legend Rock in 2006 to provide baseline data for future evaluation of the petroglyph panels and any natural or vandalism damage that may occur. All prehistoric panels were photographed in 2007 for 3-dimensional modeling and imaging. The baseline photomosaic and the detailed photogrammetry will provide a resolution and positional accuracy of ~1 cm. Future work at the site will include yearly condition evaluation of the petroglyphs.

**Williams**, Dave (University of South Dakota), Derik Irelan (University of Michigan-Flint), and Elizabeth Seymour (University of CaliforniaDavis)

Distribution of Nonlocal Lithic Material in Unita Fremont Sites

Poster Session

The Uinta Fremont exploited tiger chert outcrops of the Bridger Formation, as well as Sheep Creek quartzite from northeastern Utah, for tool-making. Why they chose these materials rather than local materials (i.e., Uinta Quartzite) raises several questions. A hypothesis was developed about lithic distribution on the Uintas' north slope. This hypothesis was tested using data from IMACS. The results of this testing can help create an understanding of prehistoric travel routes, population movements, trade patterns, etc. Understanding the lithic distribution can lead to a better awareness of population interactions, tool-making procedures, and an overall importance of non-local lithics within the Fremont tool-kit.

**Young**, Chris (University of Wyoming)

Auger Testing at Barger Gulch Locality C, Middle Park, Colorado

Symposium I

The Barger Gulch site (5GA195) is located in Middle Park, Colorado and encompasses an area of more than 20 km². Terraces flanking Barger Gulch contain a remarkable record of Paleoindian activity from the late Pleistocene and Early Holocene. To date, eleven Paleoindian localities have been identified within the Barger Gulch drainage area. A large scale excavation project was undertaken from 1997 to 2007 at Locality B. Excavations at Locality B revealed a high density Folsom occupation associated with a buried soil. Locality C is a dense scatter of surface artifacts on a ridge adjacent to a small tributary of Barger Gulch just north of Locality B. A Folsom base was recovered from the surface of locality C. Based on the similarities between Localities B and C, the potential for buried deposits at locality C is high. Auger testing was undertaken to determine if the stratigraphic marker associated with the buried Folsom deposits at Locality B is also present at locality C. Areas of the site that contain the buried stratigraphic marker would be excellent areas to place test excavation units.

**Young**, Chris (University of Wyoming), see **Sutter**, Steven J. (Wyoming State Historic Preservation Office, Cultural Records Office)
Session I

**Zink**, Andrew (University of Wyoming)

A Dynamic View of Folsom Lithic Technology: Intrasite Analysis of Variation, Flintknapping Skill, and Individual Projectile Point Producers at Barger Gulch Locality B Symposium I

The degree of flintknapping skill required for individuals to consistently achieve success in manufacturing Folsom projectile points brings about the prospect that certain individuals within the Folsom culture specialized in the production of projectile points. Understanding the degree of specialization in projectile point production impacts the behaviors that are designed to fulfill various other needs. Time, or labor, spent during point production is time away from fulfilling other needs. The partitioning of time between activities and individuals is in large degree the essence of how groups, in this case Folsom, organize their behavior. Barger Gulch Locality B has provided a context applicable to a study concerned with specialized projectile point producers. As a camp site with two associated hearth centered activity areas with similar lithic assemblages, Barger Gulch Locality B is a prime site for intrasite comparisons with the objective of analyzing assemblage variability due to varying levels of flintknapping skill. By focusing on those artifacts related to the projectile point production sequence and comparing the traits telling of varying levels of skill it was feasible to determine if the points and production debris deposited in these activity areas are residues of the same individual(s).

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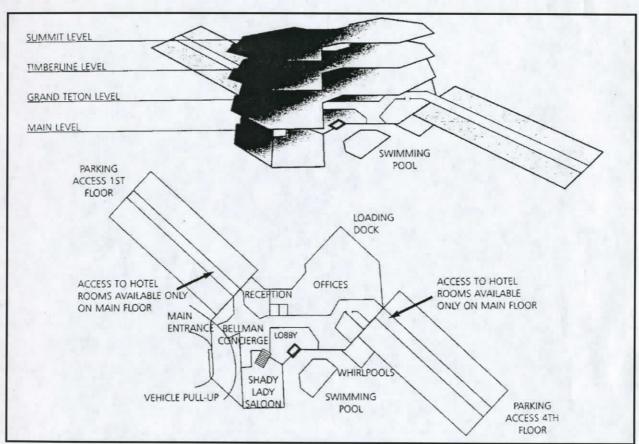
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## **ADENDUM to PROGRAM**

## Friday:

Paleoindian Session will start at 8:20 am with Robert Kelly's presentation

## Saturday:

**Colleen Sievers** and **Penelope Spears** will present at 11:20 am in the Method and Theory session in Timberline I

A Re-evaluation of Stone Circle Sites, are They Domestic or Sacred?

Early scientific research into stone circle sites concluded that these types of sites were predominately domestic in origin. Native American Consultation over the past twenty years has resulted in a shift in our understanding of the context associated with stone circle sites. Stone circles might not have been constructed for domestic purposes; but instead, have a sacred function. This paper will explore the debate of domestic versus sacred through a spatial analysis of known stone circle sites in southwestern Wyoming.

**David Madsen** will be the discussant for the Greater Yellowstone Ecosystem Symposium on Saturday at 3:40 pm

## **BOOK SALES**

All proceeds from the sale of books will directly benefit the Rocky Mountain Anthropological Association.

FIELD TRIP IS FULL, PLEASE CHECK BACK ON SATURDAY FOR POSSIBLE VACANCIES