

**Montana/Wyoming Archaeological Societies**  
**General Schedule of Events**  
May 8, 9 & 10, 1998

**Friday, May 8**

8:00 A.M. - 8:00 P.M. **Registration** - 3rd Floor of the Sheraton Hotel

9:00 A.M. **Business Meetings:**

9:00-12:00 Wyoming Association of Professional Archaeologists - Whitetail Room

9:00-10:00 Montana Archaeological Society Special Board of Directors Meeting -  
Wood Room

10:00-11:00 Montana Archaeological Society General Business Meeting - Wood Room

11:00-12:00 Montana Archaeological Society Board of Directors Meeting - Wood Room

1:00 - 4:30 **Papers** - Whitetail Room

6:30-8:30 **Wyoming Archaeological Society Business Meeting** - Whitetail Room

7:00 - 9:00 **Cash Bar/Montana Archaeological Society Auction** - Wood Room

**Saturday, May 9**

8:00 A.M. - 12:00 - **Registration**

8:30 -4:30 **Papers** - Whitetail Room

6:00 - 8:00 **Cash Bar/Banquet** - Wood Room

8:00 P.M. **Keynote Address** - Wood Room: Alice Kehoe, "Trowel Scratches Paper: One Researcher's Experiences of the Overlap of Archaeology and History in Montana."

**Sunday, May 10**

8:00 A.M. 9:30 A.M. **Wyoming Archaeological Foundation Breakfast** - Sheraton Hotel  
Restaurant

10:00-12:00 **Pictograph Cave Field Trip:** Pictograph Cave is located an easy drive from Billings. From the Sheraton Hotel, take 27th Street south to the Interstate and turn left heading east on Interstate 90. After only a few miles, and after crossing the Yellowstone River, take the next exit, (Lockwood Exit). Look for the brown state park signs. After exiting, turn right, and then another quick right at the Cenex Station. . The first few miles of this road are paved and the last few miles are gravel; both are good roads (under reasonable weather conditions). A parking and picnic area are located below the caves on the left side of the road. The caves are easily accessible by a maintained walking trail. We will regroup for the tour in the parking area.

## SCHEDULE OF PAPERS

### Friday May 8

- 1:00 - 1:10 Welcome and Introductions
- 1:10 - 1:30 Julie Francis (Wyoming Dept. of Transportation) **“Where are the Bison: Thirty Years of Highway Archaeology in Wyoming.”**
- 1:30 - 1:50 Ruthann Knudson (Agate Fossil Beds National Park ) **“Women's Northern Plains Archaeology in Context.”**
- 1:50 - 2:10 Becky Kallevig (Sydney, MT) **“Researching and Searching the Prairie.”**
- 2:10 - 2:30 John Albanese (Casper, WY) **“Site 48CO2379: A Prehistoric Rock Alignment Complex: Southwestern Powder River Basin Converse Co. WY.”**
- 2:30 - 2:50 BREAK
- 2:50 - 3:10 B.J. Earle (Bureau of Land Management, Buffalo, WY) **“A Summary of Archaeological Research in the Southern Powder River Basin.”**
- 3:10 - 3:30 Gene Munson (GCM Services, Butte, MT) **“4,000 years in Paradise: an Overview of the Archaeology of the NW Powder River Basin.”**
- 3:30 - 3:50 Kerry Lippincott (Casper, WY) **“The New View of Ceramic Sites in the Powder River Basin.”**
- 3:50 - 4:10 Mike Metcalf and Anne McKibbin (Metcalf Associates, Colorado) **“Coal Mine Archaeology in the Belle Fourche River Drainage of the Powder River Structural Basin.”**
- 4:10 - 4:30 Craig Lee (University of Wyoming, Laramie, WY) **“Nonvolcanic Natural Glass and the Prehistoric Populations of Southeastern Montana.”**

### Saturday May 9

- 8:30 - 8:40 Announcements
- 8:40 - 9:00 Ann Johnson (Yellowstone National Park) **“Archaeological Investigations along the Yellowstone River in Yellowstone National Park.”**
- 9:00 - 9:20 Mike Fosha (South Dakota Archaeological Research Center) **“Bison Procurement and Site Formation Processes at the Licking Bison Site, 39HN570.”**
- 9:20 - 9:40 Steve Platt (Montana Department of Transportation) **“Cashman Basalt Quarry (24MA1618): An Introduction.”**

- 9:40 - 10:00 John and Mavis Greer (Casper, Wyoming) **“Conserving Rock Art Through Recording.”**
- 10:00 - 10:20 BREAK
- 10:20 - 10:40 Becky Timmons (U.S. Forest Service, Libby MT) **“Role of Fire and Heritage Resources.”**
- 10:40 - 11:00 Ruthann Knudson (Agate Fossil Beds National Park) **“Late Paleoindian Typology and the Value of Plano/Yuma.”**
- 11:00 - 11:20 Steve Aaberg (Lewistown, Montana) **“Cree Crossing: A Middle (Oxbow) to Late Prehistoric Period Camp Site on the Milk River.”**
- 11:20 - 11:40 Sunday Walker-Kuntz (Ethnoscience, Billings) **“Archaeological Investigations at the Spiro Site (24CB1332): A Middle Plains Archaic Housepit in South Central Montana.”**
- 11:40 - 1:00 LUNCH
- 1:00 - 1:20 Tim Urbaniak (Montana State University-Billings) **“Digital Technology and Rock Art Research.”**
- 1:20 - 1:40 George C. Frison (Professor Emeritus, University of Wyoming) **“The Crook County , Wyoming Clovis Cache.”**
- 1:40 - 2:00 Edward J. Knell and E. Houston Rogers (University of Wyoming) **“A Model of Pleistocene-Holocene Land Use Patterns from the Big Horn Basin and Surrounding Mountains during the Paleoindian Period.”**
- 2:00 - 2:20 Alice Tratebas (Bureau of Land Management, Wyoming) **“Rethinking McKean.”**
- 2:20 - 2:40 BREAK
- 2:40 - 3:00 Dave Eckles (Office of the Wyoming State Archaeologist) **“Discussion of Early 1700s Protohistoric Sites in the North Platte River Valley.”**
- 3:00 - 3:20 Mark E. Miller (Office of the Wyoming State Archaeologist) **“Historical Archaeology at the Wagon Box Fight, Wyoming.”**
- 3:20 - 3:40 Dave F. McKee (Medicine Bow National Forest) **“Historic Logging Camps in the Sierra Madre Mountains of Southern Wyoming: Early 20th Century Industry in a Frontier Setting.”**
- 3:40 - 4:00 Cher Burgess (Wyoming Archaeological Society) **“Its a Possibility: Public Archaeology at the Muhlbauer Site in the Black Hills.”**
- 4:00 - 4:20 William Eckerle (Western GeoArch Research, Salt Lake City, UT) **“Geoarchaeology and Geographic Information Systems: A Case Study from the Seedskadee Wildlife Refuge, Wyoming.”**

**MONTANA/WYOMING  
ARCHAEOLOGICAL SOCIETY MEETINGS  
May 8, 9 and 10, 1998**

**ABSTRACTS**

**Steve Aaberg (Lewistown, MT)**

**CREE CROSSING (24PH3396): THE MID-HOLOCENE CULTURAL AND PALEOENVIRONMENTAL RECORD FROM A SITE ON THE MILK RIVER IN NORTH CENTRAL MONTANA**

Cree Crossing is a firm-bottom crossing of the Milk River which was used historically by a number of Plains Indian groups as well as the Metis and white settlers. Montana Department of Transportation funded archaeological investigations in 1997 documented the presence of Middle Prehistoric Period through Late Prehistoric Period cultural deposits on two adjacent landforms at Cree Crossing. The strongest record at the site associates with Middle Prehistoric Period occupations which date to between 2800 and 3500 BP. Recovered projectile points resemble those from the Oxbow Phase. Excavations indicate very high lithic densities for portions of the site and suggest site occupants focused on local lithic sources. Lithic analysis demonstrates a local adaptation toward the use of pebble sources for fine-grained material with a reduction sequence peculiar to use of these small pebbles.

Geoarchaeological investigations at Cree Crossing document at least three periods of downcutting and entrenchment of the Milk River Valley over the past 3000 years and suggest the Milk River in the Cree Crossing area is flowing through a pro-glacial drainage or depression. Soils and sediment analysis of the site kame terrace and adjacent alluvial terrace presents data that appears consistent with extant paleoclimatic models for the Northern Plains.

**John Albanese (Casper, WY)**

**SITE 48CO2379, A PREHISTORIC ROCK ALIGNMENT COMPLEX, SOUTHWESTERN POWDER RIVER BASIN; CONVERSE COUNTY, WYOMING.**

Site 48CO2379 is a 1.6 km long, prehistoric, rock alignment complex composed of rock cairns and mounds plus square and circular, walled structures. All consist of sandstone slabs. The site is situated on the axial crest of a northeast trending, bedrock ridge, that stands 60 m above nearby valley floors. Similar rock alignment complexes ranging in length from 2.1 - 4.3 km, respectively lie 3.3 km, 6.4 km, 7.9 km and 9.1 km northwest of Site 48CO2379. All of them also occur along

ridge crests. Rock alignment complexes are relatively rare within the Powder River Basin. These recorded in Converse County do not appear to be game drives or trail markers, Their prehistoric function is unknown.

**Cher Burgess (Wyoming Archaeological Society, New Castle, WY).**

**ITS A POSSIBILITY: PUBLIC ARCHAEOLOGY AT THE MUHLBAUER SITE IN THE BLACK HILLS.**

A special public archaeology project on the Black Hills National Forest this past year enabled a group of students, grades 5-8 to experience several aspects of archaeology. Students were trained in archaeological method and lab work during the school year. In June they traveled to the Black Hills to excavate on the Muhlbauer Site. Journals kept by students and staff show that a good experience resulted. Experience like this one would likely interest younger people in archaeology. Archaeological societies could possibly build a more youthful membership from experiences of this type.

**B.J. Earle (Bureau of Land Management, Buffalo, WY)**

**EVOLUTION OF CULTURAL INVENTORY IN WYOMING'S POWDER RIVER BASIN**

Systematic cultural inventory in the Powder River Basin began about 1950 with the River Basin Surveys of proposed dam sites. In 1971, Montana began conducting cultural inventories for coal development; Wyoming began systematic surveys in 1973 and '74. In 1980, consistent standards for survey and recordation were adopted by western states, and both prehistoric and historic sites were routinely recorded. Between 1978 and 1981, sampling survey strategies were tested in Wyoming, but comprehensive block surveys prevailed. Coal development continues to drive inventory, evaluation and mitigation studies, but oil and gas development, coal bed methane, and federal land ownership changes are providing opportunities to look at lands and cultural sites outside the coal belt.

**William Eckerle (Western GeoArch Research, Salt Lake City, UT)**

**GEOARCHAEOLOGY AND GEOGRAPHIC INFORMATION SYSTEMS: A CASE STUDY FROM THE SEEDSKADEE WILDLIFE REFUGE, WYOMING**

A Geographic Information Systems (GIS) approach to visualizing geoarchaeological spatial relationships was employed as part of the Seedskadee Wildlife Refuge Land Exchange project. Geoarchaeological field investigations, including profiling and radiocarbon dating of 21 prehistoric archaeological sites provided data on the fluvial chronology of the Green River in southwestern Wyoming. Bureau of Land Management soils mapping provided a database on the spatial distribution of sediments, landforms, soils, and potential natural vegetation. GIS manipulation of the combined geoarchaeological and soils mapping data allowed the prediction of landscape and subsistence resource changes that were important to the prehistoric adaptation. The same data was

successfully used to produce a model of archaeological landscape sensitivity that will allow for the prediction of areas that have a high potential for containing in situ, buried archaeological components, and thus facilitate the management of archaeological resources in the project area.

**Dave Eckles (Office of the Wyoming State Archaeologist, Laramie, WY).**

**DISCUSSION OF EARLY 1700s PROTOHISTORIC SITES IN THE NORTH PLATTE RIVER VALLEY.**

Two Protohistoric sites dating to 1700 AD have been investigated in the North Platte River valley east of Casper, Wyoming. The McLeary site is a bison processing area located at the base of the Laramie Mountains. The Edness Kimball Wilkins site is a probable residential site located near the North Platte River. Both contain similar kinds of simple stamped pottery, and similar projectile point styles. These sites are discussed and interpretations for possible ethnic relationships in the Protohistoric time period are presented.

**Michael Fosha (South Dakota State Archaeological Research Center, Rapid City, SD).**

**BISON PROCUREMENT AND SITE FORMATION PROCESSES AT THE LICKING BISON SITE, 39HN570**

Through the efforts of a member of the South Dakota Archaeological Society, a site in Harding County, South Dakota has been investigated with the help of volunteer labor over the past four years. The site consists of the remains of a prehistoric bison kill site. Projectile points associated with the site are of the Besant/Sonota type. With a lack of promontories and other natural traps in the area it is speculated that a bison corral was constructed at the site. Additional investigations will be conducted in 1998.

**Julie Francis (Wyoming Department of Transportation), David G. Eckles (Office of the Wyoming State Archaeologist), Craig Smith (TRC Mariah, Inc.)**

**WHERE ARE THE BISON? THIRTY YEARS OF HIGHWAY ARCHAEOLOGY IN WYOMING.**

In nearly 30 years, only two communal bison kill sites have been identified by archaeological investigations by the Wyoming Department of Transportation. This does not fit with the view of "man the bison hunter" commonly held for the Northwestern Plains. Instead, WYDOT excavations have documented complex architectural features and intensive usage of pronghorn, mountain sheep, roots, and seeds; they have complicated standard chronological sequences and yielded evidence of vastly different mobility strategies and regional land use patterns than traditional models. This paper reviews the empirical and potential theoretical contributions of highway archaeology of Northwestern Plains prehistory and offers a critique and suggestions for future research.

**George C. Frison (Professor Emeritus, University of Wyoming, Laramie, WY).  
THE CROOK COUNTY, WYOMING CLOVIS CACHE.**

During road construction for a seismograph crew in Crook County, Wyoming during the summer of 1963, one of the crew members noticed a pocket of red soil about four feet wide and six inches in maximum thickness in a road cut about five feet below the ground surface. Digging into this unusual feature, which proved to be a concentration of red ochre, produced several large bifaces, a large blade, a Clovis projectile point, and two bone artifacts described as "tent pegs as big as your finger and a foot long." In 1977, a collector acquired the collection except for the two bone items which had disintegrated and were discarded. The collector died in 1997 and the cache was acquired by still another collector who sent pictures of the remaining eight items to Michael Gramley in New York. Gramley notified me of the items which were then acquired by Forrest Fenn of Santa Fe, New Mexico who made the items available for study. They are of unquestionable Clovis origin and similar to specimens from the Anzick, Simon, Richey, and Fenn Clovis caches.

**Mavis Greer and John Greer (Casper, WY).  
CONSERVING ROCK ART THROUGH RECORDING.**

Recording is a means of conserving archeological information, including rock art, and methods constantly evolve to include more precision and to take advantage of advancements in technology and new media. At the same time some researchers strive to standardize recording in an attempt to develop more comparable data bases. Rock art recording in Montana has followed these international trends. The placement of site information on all kinds and levels of recording and all site visits into a permanent central repository in a timely manner is crucial for the preservation of research information pertinent not only to recording history but also for monitoring changing site contents and conditions. Recording methods for any particular site or project depend on site contents, location, access, and available budget for personnel, supplies, and equipment. Because of the variability inherent in such considerations, only basic recording items should be standardized. The ability to reach beyond the minimal standard and encourage development, utilization, and testing of new recording methods results in advances that cannot be gained through controlled standardization, which itself causes stagnation rather than innovation in recording quality.

**Ann Johnson (Yellowstone National Park, WY)  
ARCHAEOLOGICAL INVESTIGATIONS ALONG THE YELLOWSTONE RIVER IN  
YELLOWSTONE NATIONAL PARK.**

Five prehistoric sites on the Yellowstone River or its tributaries were tested in 1997. The most important site produced three components: Intermountain Tradition, Pelican Lake, and McKean(?). Faunal remains include beaver, deer, elk, rodents, antelope, unidentified bird, and large ungulate (bison or elk). Other sites also date between the Late Prehistoric and Middle Prehistoric Periods. Obsidian sourcing shows predominance of Obsidian Cliff obsidian with Bear Gulch about 3%. It

is believed that some of these sites are winter camps.

**Edward J. Knell and E. Houston Rogers (University of Wyoming, Laramie WY).  
A MODEL OF PLEISTOCENE-HOLOCENE LAND USE PATTERNS FROM THE BIG  
HORN BASIN AND SURROUNDING MOUNTAINS DURING THE PALEOINDIAN  
PERIOD.**

An inductively derived model of Paleoindian settlement patterns is developed for the foothills and surrounding mountains of the Big Horn Basin in Wyoming. Variables, including site type, projectile point style, elevation, topographic setting, and climatic history are analyzed. Correlations between climate, fauna, and projectile point styles extending over the Pleistocene-Holocene boundary in Wyoming suggest climate was particularly influential in the development of the Late Paleoindian Mountain Oriented Complex and its associated settlement patterns. Community ecology principles such as allopatry, sympatry, niche, and patchiness are used in developing the model of Paleoindian settlement patterns for the Big Horn Basin.

**Ruthann Knudson (Agate Fossil Beds National Monument, Harrison, NE)  
WOMEN'S NORTHERN PLAINS ARCHEOLOGY IN CONTEXT**

There are two realities in Northern Plains archeology--not many women archeologists have been involved in developing the scholarship, and the scholarship has minimally addressed women's and family issues over the prehistoric and past. But both are valuable communities and topics, and attention needs to be directed to filling these deficits.

**Ruthann Knudson (Agate Fossil Beds National Monument, Harrison, NE)  
LATE PALEOINDIAN TYPOLOGY AND THE VALUE OF PLANO/YUMA**

The Pleistocene-Holocene climatic transition was a period of tremendous variation in regional and local ecosystems--ecosystems that included landscapes, habitats, fauna, and people. People had been in the Americas prior to that transition and apparently flourished as did the biota in the eleventh and twelfth millennia before now. Classification of projectile point styles from that period is assumed to reflect culturally varying groups of people, but it appears that a generalized form of lanceolate bifaces with only variations in facial flaking, haft, or individual skill lasted for 1500-2500 years in the Plains. Do the Plano or Yuma concepts of 70 years ago have some explanatory utility?



**Craig Lee (University of Wyoming, Laramie, WY)**

**NON-VOLCANIC NATURAL GLASS AND THE PREHISTORIC POPULATIONS OF SOUTHEASTERN MONTANA.**

This paper presents a study of non-volcanic natural glass (NVNG) in the archaeological record of southeastern Montana. Accumulated data documenting the geography, lithic resource availability, established cultural chronology, and settlement strategies in the region are discussed. Archaeological survey information collected in the Pine Breaks area is then used to demonstrate the possibility of an embedded lithic procurement strategy, as opposed to a direct procurement strategy, for NVNG.

**Kerry Lippincott (Casper, WY)**

**A NEW VIEW OF CERAMIC SITES IN THE POWDER RIVER BASIN**

Several diverse interpretations are available of Late Prehistoric ceramic bearing sites on the Northwestern Plains. Recent excavations at two sites along the Belle Fourche River, 20 miles south of Gillette, WY have provided additional ceramic materials and have allowed for additional interpretations of ceramic period occupations. Site 48CA1383 has a single component with eight complete or partial tipi rings, a ceramic rim sherd and a ceramic bead, Late Prehistoric projectile point, and a sandstone shaft abrader. Site 48CA1366 is a multiple component site, with a 40 cm below surface occupation that may represent a hunting camp of Middle Missouri villagers. That component has prepared and unprepared hearths, a rim sherd that is identifiable as an Initial Middle Missouri type, Foreman Cord Impressed, as well as Prairie side notched projectile points, bifaces and scrapers, dentalium and shell disc beads, and an abundance of bison remains, especially lower limb elements. These sites and materials allow for a new combination of hypotheses for Late Prehistoric occupations of the powder River Basin.

**Dave F. McKee (Medicine Bow-Routt National Forest, WY).**

**HISTORIC LOGGING CAMPS IN THE SIERRA MADRE MOUNTAINS OF SOUTHERN, WYOMING: EARLY 20TH CENTURY INDUSTRY IN A FRONTIER SETTING.**

Historic horse-powered logging operations in the Sierra Madre Mountains of Southern Wyoming began during the late 1800's and continued until the advent of trucks and portable saw mills in the 1920's. During these early years timber companies established centrally located commissary camps while loggers worked through the year out of base and side camps in the timber at higher elevations. Surveys and a volunteer excavation have been used to collect information on logging operations conducted between 1902 and 1914. Analyses of spatial and material data can provide information on how the labor force and key resources such as food and horse teams were distributed over a historic landscape for the purpose of intensive resource extraction.

**Michael Metcalf and Ann McKibbin (Metcalf Associates, CO)  
COAL MINE ARCHAEOLOGY IN THE BELLE FOURCHE RIVER DRAINAGE OF  
THE POWDER RIVER STRUCTURAL BASIN.**

No abstract submitted.

**Mark E. Miller (Office of the Wyoming State Archaeologist, Laramie, WY).  
HISTORICAL ARCHAEOLOGY AT THE WAGON BOX FIGHT, WYOMING.**

A metal detection, transect survey was conducted on approximately 40 acres of the Wagon Box Battlefield (48SH129) during the summers of 1993-1994. The crew was composed of experienced volunteers, and staff from the Office of the Wyoming State Archaeologist and the State Parks and Historic Sites division of the Wyoming Department of Commerce. This joint research project was completed as a partnership with the Fort Phil Kearny/Bozeman Trail Association. Over 1,000 historic items were found, which may relate to events that took place during the Wagon Box Fight on August 2, 1867. These items were dispersed over a landscape encompassing at least three areas traditionally identified as candidates for the Wagon Box Corral location. This analysis suggests that the state monument area in Sheridan County is the most likely location for the defense perimeter, although the actual battlefield spans hundreds of acres in Sheridan and Johnson counties.

**Gene Munson (GCM Services, Butte, MT)  
"4000 YEARS IN PARADISE: AN OVERVIEW OF THE ARCHAEOLOGY OF THE  
NW POWDER RIVER BASIN**

The northwestern portion of the Powder River Basin is filled with an abundance of natural resources. Therefore, this area may have hosted resident populations for intervals of hundreds to thousands of years. Through the study of activity loci structures in combination with the material culture it may be possible to identify these groups. The challenge is to determine which aspects of cultural variation are the result of functional and social differences, and which are not.

**Steve Platt (Montana Department of Transportation, Helena, MT)  
CASHMAN BASALT QUARRY (24MA1618): AN INTRODUCTION.**

Lithic assemblages from prehistoric sites in Southwestern Montana invariably contain some percentage of chipped stone artifacts made of black basalt. Until recently, relatively little has been known about where people were acquiring this material in the prehistoric past. The Cashman Basalt Quarry, 24MA1618, is a good example of a large, relatively pristine, basalt quarry lying on the southeastern flank of the Tobacco Root Mountains near McAllister, Montana. Trace element analysis of Southwestern Montana basalts could prove as successful as it has been for obsidian, and may offer researchers an additional data set regarding prehistoric settlement

patterns and trade.

**Doug Smith (Dagmar, MT) and Rebecca Kallevig (Sidney, MT)**  
**EAGLES' NEST CREEK SITE (24SH690)**

Eagles' Nest Canyon is a geologic feature resulting from continental glaciation. The combination of steep canyons and coulees, with the continuous water supply of Eagle Creek, has created a variety of microclimates and habitats in contrast to the surrounding arid rolling grasslands. The diversity of flora and fauna in Eagles' Nest canyon is as attractive today as it undoubtedly was to Native Americans who came upon it in prehistoric times. From the historic record we know that these islands of water, wood, and shelter were a refuge for man and animal during the cold northern winters and in the arid summer months. We are currently investigating a prehistoric occupation at this site and have determined a processing site utilizing bison, pottery, hearths, and lithics. Concurrently we are researching a historic component to this site.

**Becky Timmons (Kootenai National Forest, Libby, MT)**  
**ROLE OF FIRE AND HERITAGE RESOURCES.**

Fire has been a natural disturbance force in Northern Rocky Mountain ecosystems for millennia. Ecosystems have been sculpted by fire and indigenous people have emulated natural fire patterns. Plant and animal species have adapted to fire regimes that are quite different from that of the last 100 years. The last century of active fire suppression has radically altered ecosystems in the Northern Rockies. The build-up of fuels poses unprecedented risk to archaeological sites. Federal agencies are reintroducing fire into the landscape in order to restore healthy ecosystems. Consequently, we must begin to piece together the complex puzzle of fire effects on heritage resources. We can also use this knowledge to interpret post-depositional impacts to sites that have been exposed to thousands of years of forest fire. This type of research may contribute to explanations of some perplexing artifact and feature patterns. This paper will discuss the history of aboriginal burning by the Kootenai people and the field experiments underway to understand fire effects to sites in northern forests.

**Alice Tratebas (Bureau of Land Management, WY).**  
**RETHINKING MCKEAN.**

New data have gradually accumulated since the McKean Complex was defined 30 or 40 years ago. It is time to rethink McKean and develop new models. Major research questions originally and still are origins, subsistence strategies, and adaptation to changing environments. New data no longer support some of the earlier theories about McKean origins and subsistence strategies. In addition, more sophisticated paleoenvironmental models require more specific models of adaptations to environmental changes. Today the concept of the McKean Complex has been

expanded to such a large geographic area that it needs to be shrunk to a more useful regional scope.

**Tim Urbaniak (Montana State University-Billings, MT)**  
**DIGITAL TECHNOLOGY AND ROCK ART RESEARCH**

In early 1997 the MSU-Billings Foundation awarded a grant to a group proposing to explore the utilization of technology to bridge academic and archeological disciplines. The availability of rock art in this area made it a good candidate for study. The team's gear includes two Kodak DC50 digital cameras, a Kodak DC40 digital camera, a Canon ES3000 Hi8MM video camera, a Canon E53 8mm video camera, a laptop computer, and at least one Global Positioning System unit. The digital cameras will store a total of 224 images in high-resolution mode before requiring downloading to a computer. With available software, images can be viewed, retouched, enhanced, and speculated upon in a non-destructive environment. Images can be transmitted over the Internet or provided on disk.

In the early stages of the project the field team has visited over 20 sites within 100 miles of Billings and has collected over 2000 images and related files. This represents a tiny fraction of the potential body of work. It is a goal of the team to assist in the creation of a digital catalog of Montana rock art sites which will be housed in the new MSU-Billings Center for the Northern Plains. This project is in its infancy and it is anticipated that it will take many years to obtain, convert and compile a body of work inclusive of the many sites in existence.

**Sunday A. Walker-Kuntz (Ethnoscience, Billings, MT)**  
**ARCHAEOLOGICAL INVESTIGATIONS AT THE SPIRO SITE (32CB1332): A  
MIDDLE PLAINS ARCHAIC HOUSEPIT SITE IN SOUTH CENTRAL MONTANA.**

Ethnoscience was contracted by the Express Pipeline to mitigate the archaeological sites located during pipeline construction in Montana. During trench monitoring, the Spiro site (24CB1332) was located. This paper presents the cultural findings during the mitigation of 24CB1332. Two hundred and two units were excavated exposing nine housepit structures and 49 non-housepit features. The majority of flaking debris, tools and projectile points are manufactured out of local material. Analysis of non-lithic material indicates that rabbit, deer, bison, and coyote were exploited. Rabbit bone was used to manufacture beads.