

CCPA 2010

Conference Presentation Schedule

FRIDAY MARCH 26

1:00 to 4:30 p.m.

1:00 - Move It or Lose It: Transportation of Stored Foods by Mobile Hunter-Gatherers

Alan D. Reed, Alpine Archaeological Consultants, Inc.

1:15 - Rock Art, Ritual, and Archaeoacoustics in the Uncompahgre Plateau

Gregory E. Williams, Aims Community College, Redpoint Resources, LLC

1:30 - When Ethnography Informs Archaeology: Researching *Sake* at Camp Amache

Michelle Slaughter, Avalon Archaeology, LLC

1:45 - Archaeological Investigations During 2009 at the Upper Crossing Site

Mark D. Mitchell (Paleocultural Research Group), and Angie M. Krall (San Luis Valley Public Lands Center)

2:00 - Taphonomy of the Olsen-Chubbuck Bison Kill: A Preliminary Perspective

Ryan M. Byerly (Colorado Archaeological Society, Northern Colorado Chapter), and Charles P. Egeland (University of North Carolina at Greensboro)

2:15 - Metal Projectile Point Survey of the Interior West: Updated Results and Description of the Colorado Sample

John Kennedy, SWCA Environmental Consultants

2:30 - Microwear on Microblades from Block F Mountaineer (student presentation)

Brock Stai, Western State College

2:45 - 3:00 - Break-

3:00 - Symposium – *Isolating the Archaeological Culture of Colorado's Ute Speakers*

Steven G. Baker, Organizer; Curtis Martin, Jenn Mueller, Richard Ott, & Scott C. Phillips

4:30 - Adjourn -

SATURDAY MARCH 27

8:30 a.m. to Noon

8:30 – Conflict on the Plains

Thomas Carr, Office of Archaeology and Historic Preservation

8:45 – The Durango Basketmakers: Tightening the Weave

Mona C. Charles, Fort Lewis College

9:00 - Bioarchaeological Signatures of Strife in Terminal Pueblo III Settlements in the Northern San Juan

Kristin Kuckelman, Crow Canyon Archaeological Center

9:15 - It's a Small World After All: A Preliminary Investigation of Lichenometry Dating on Historic Structures (graduate presentation)

Sarah E. Wolff, Pennsylvania State University

9:30 - The Community Approach in the Interpretation of Rural Western Settlement

Thomas Witt, SWCA Environmental Consultants

9:45 - And the Peat Goes On: Prehistoric Culture Change, Population and Paleoenvironment from “Pocket Fens” in Eastern Colorado

Kevin P. Gilmore, ERO Resources Corp.

10:00 - 10:15 - Break-

10:15 - Symposium – Beware What You Leave in Your Cellar: Investigations at the “History Colorado Center” Site, 5DV12345

Organizer, Steven Dominguez; Todd C. McMahon, Jennie O. Sturm, Susan East, Laine Vandal, & Richard Carillo

11:30 - Upper Animas AML Survey; Mineral Creek Study Unit SJ98018H

Eric Kneebone, San Juan Public Lands Office, BLM

11:45 - Save Our Air Quality Using Section 106

Shina duVall, Office of Archaeology and Historic Preservation

Noon - 1:30 - Lunch Break

1:30 to 5:00 p.m.

1:30 – A Short Summary of the Archaeological Investigations along the Collbran Pipeline Project

Carl Conner, Grand River Institute

1:45 - Recent Investigations in Sand Wash Basin, Northwestern Colorado
Robyn Watkins Morris, Bureau of Land Management, Little Snake Field Office

2:00 - Planning for the Future while Informing the Past: Archaeological Sensitivity Analyses in Northwest Colorado
Paul Burnett, SWCA Environmental Consultants

2:15 - Differentiating Brush Fences in Colorado's Piñon Juniper Woodlands
George Connell, SWCA Environmental Consultants

2:30 - Lithic Procurement Studies in Sand Wash Basin, the Dry Mountains and Eastern Browns Park, Northwest Colorado
Lorraine Poulson (Little Snake Field Office, BLM) and James C. Miller (Dominguez Anthropological Research Group)

2:45 - 3:00 - Break-

3:00 - The Scanning Electron Microscope Analysis of Bone Needle Use Wear (student presentation)
Collin Smith, Western State College

3:15 - This Olde Wikiup: Modeling the Architectural Dynamics of Living Structures with Archaeological Residues
Casey Dukeman, Western State College of Colorado

3:30 - An Analysis of Plants Traditionally Used by Plains Indians as Topical Antiseptics for Antimicrobial Effectiveness (undergraduate presentation)
Shana Wolff, Laramie County Community College

3:45 - The Apishipa and the Use of a Variety of Plant Resources along the Purgatoire River: Preliminary Results of Excavations along the Purgatoire River, in Southeastern Colorado
A. Dudley Gardner, Laura Pasacreta, and Glade Hadden

4:00 - Bifaces, Flake Tools, and the Division of Labor at the Mountaineer Site
Mark Stiger, Western State College

4:15 - Mini-Session by Paleo Research Institute – Lifespans, Residues, & Diets!!
Linda Scott Cummings, Kathryn Puseman, Melissa K. Logan, & Chad Yost

5:00 -Adjourn-

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PAPER ABSTRACTS

FRIDAY MARCH 26

1:00 to 4:30 p.m.

Move It or Lose It: Transportation of Stored Foods by Mobile Hunter-Gatherers

Alan D. Reed, Alpine Archaeological Consultants, Inc.

Pedestrian hunter-gatherers in northern latitudes required stored foods to survive winters. If large quantities of storable foods were necessary, then the logistics of transporting storable foods from warm-season procurement areas to cold-season residential areas affected settlement patterns. This paper estimates the scope of the transportation challenges that faced prehistoric peoples of northwestern Colorado. Ethnographic data do not indicate the quantity of storable foods necessary for winter survival in northwestern Colorado, however, so a hypothetical model is constructed, based on established caloric needs of people and the weights of dried meats and seeds. The resulting model suggests that the weight of stored foods necessary for winter survival exceeded the amount that could be carried by pedestrian and dogs in a single trip. Annual settlement rounds, therefore, probably included multiple trips between summer procurement areas and winter residences.

Rock Art, Ritual, and Archaeoacoustics in the Uncompahgre Plateau

Gregory E. Williams, Aims Community College, Redpoint Resources, LLC

This research project examined the relationship between the rock art of the Colorado's Uncompahgre Plateau and the seven characteristics of human ritual behavior as defined by Roy Rappaport (1999). The project employed a multi-site approach in an effort to interpret rock art in terms of its relationship with the physical and cultural landscape. The project established a link between rock art and ritual and identified several new approaches to rock art research, including the measurement of the acoustical properties of panel locations. The results have potential applications for future research and for the management of the cultural resources in the study area and elsewhere. This research was funded in part by a grant from the Ward Weakly Memorial Scholarship fund.

When Ethnography Informs Archaeology: Researching *Sake* at Camp Amache

Michelle Slaughter, Avalon Archaeology, LLC

In the popular imagination archaeology is used to study deep prehistory, however, archaeology can provide a new view on history as well. This has certainly been the case at Camp Amache, the site of Colorado's WWII Japanese Internment Camp located on the southeastern plains of Colorado. My paper attempts to examine one very small part of life at Camp Amache. The questions I addressed were about *saké*; who was drinking it at camp, when, why, and how it was acquired since internees were not allowed to have or consume alcoholic beverages while living at the internment camps. In this talk I will present the results of my research at Amache, which revealed surprising evidence of daily

life at the camp. The question of *saké*, though seemingly simple actually proved to be far more complex than expected, and encompassed issues of ethnicity, identity, subtle rebellion, and cultural preservation. A combination of ethnography and archaeology helped me not only understand what happened at Amache, but also gives us glimpses of why, and internee interviews about *sake* revealed a considerable amount about camp life and about attitudes of both the camp staff and the internees.

Archaeological Investigations During 2009 at the Upper Crossing Site

Mark D. Mitchell (Paleocultural Research Group)

Angie M. Krall (San Luis Valley Public Lands Center)

In 2009, Paleocultural Research Group and the San Luis Valley Public Lands Center began a long-term collaborative research program in the Saguache Creek valley. Initial work focused on the Upper Crossing site, a multicomponent locality covering roughly 9 ha (22.2 ac) near the confluence of Sheep and Saguache creeks. The site preserves evidence of at least four major occupation phases. Intensive use of the area—represented by a series of superimposed hearths and a dense scatter of animal bones and stone tools—began at least by Middle Archaic times and continued into the Late Archaic. A second intensive occupation, marked by the construction of 28 or more stone enclosures grouped into two clusters, likely occurred between about A.D. 500 and A.D. 1200. The site was used a third time in the 1700s or 1800s, probably by one or more Ute bands. This occupation is represented by at least 15 peeled ponderosas and three possible eagle-trapping pits. The fourth and final occupation took place in the early twentieth century and is represented by the existing U.S. Forest Service guard station, which served originally as the Supervisor's office for the Cochetopa Forest Reserve. In addition to these four major occupations, ephemeral evidence points to sporadic use of the area by Late Paleoindian and Puebloan groups.

Taphonomy of the Olsen-Chubbuck Bison Kill: A Preliminary Perspective

Ryan M. Byerly (Colorado Archaeological Society, Northern Colorado Chapter), and

Charles P. Egeland (University of North Carolina at Greensboro)

The Olsen-Chubbuck Bison Kill is iconic in North American archaeology, embodying popular perceptions of Great Plains Paleoindian subsistence and representing the standard for contemporary bison kill-butchery analyses. Recent taphonomic research has expanded our understanding of Late Paleoindian bison carcass exploitation and provided a solid base for the continued development of mobility and land-use models for Early Holocene Great Plains and Rocky Mountain hunter-gatherers. This paper presents preliminary bone taphonomy data from an ongoing re-analysis of the Olsen-Chubbuck bison skeletal assemblage to augment the available dataset, and better integrate this keystone Colorado archaeological resource into current discussions about Paleoindian lifeways.

Metal Projectile Point Survey of the Interior West: Updated Results and Description of the Colorado Sample

John Kennedy, SWCA Environmental Consultants

A survey of 14 states across the interior west was begun in 2008 to amass information on Protohistoric and Historic aged metal projectile points. Preliminary results of analysis of 435 metal points, presented in 2009, suggested certain quantitative and qualitative patterns may be distinct across time and space. An update of this ongoing research effort is provided by presentation of new results from the growing sample (~1,000) with consideration of how the Colorado points articulate to the sample as a whole.

Microwear on Microblades from Block F Mountaineer

Brock Stai, Western State College

The purpose of this paper is to determine if microblades from block F of Mountaineer site (5GN2477) were used as a tool. Examining the edges of the flakes under the Scanning Electron Microscope (SEM), the author will be able to explore continuity with previous research such as, Keeley *et al.* (1977), Toll (1978), Odell *et al.* (1980), Evans *et al.* (2008), to determine if the microblade was used as a tool. Determining if these microblades were used for a utilitarian purpose will provide further data into the past life ways that existed in Block F as related to tool use, material type, and tool design. This study will further shed light on what has been interpreted as a domestic structure (Stiger; 2009).

Symposium – Isolating the Archaeological Culture of Colorado’s Ute Speakers

Steven G. Baker, Organizer

Symposium Abstract

The goal of this symposium is to commence the task of more formally identifying the late prehistoric and very early historic period archaeological culture of the Ute speaking peoples who once occupied western Colorado. It is further intended to begin to differentiate the archaeological culture of these peoples from those representing occupations by other regional peoples who were not Ute speakers. This exercise is a critical and very necessary step in advancing regional Ute studies. Achieving these goals at a high level of confidence will take the sustained efforts of investigators for many years into the future.

Considering Ute Archaeological Culture-What it Does Not Look Like: Answering Mark Stiger’s Question

Steven G. Baker

There are only a few archaeologists who regularly and intentionally engage the ephemeral archaeological record of Colorado’s Ute speaking peoples. Those of us who do seem to understand that these people left behind an archaeological culture which is observably different from that of other linguistic groups who were in Colorado in late prehistoric or early historic times. Some of our colleagues have in the past questioned if it is possible to identify a discrete archaeological culture for the Ute speakers as they are primarily defined from a linguistic basis. Others have questioned the notion that

archaeological cultures even conform to linguistic identities. At the most recent meeting of the Rocky Mountain Anthropological Conference (2009), Mark Stiger justifiably reiterated this question and this archaeologist provided only a cursory response to it. In this offering the archaeological culture of Colorado's Ute speakers will be summarized and compared to other regional archaeological cultures which differ from it. Through this simple exercise it becomes clear that there does indeed appear to be an archaeological culture which is discrete from others of the same time frame and correlates with the occupation of Colorado by Ute speakers. While archaeological cultures do not necessarily always correspond to linguistic identities, it appears, as in this case, that they at times can and do.

Differentiating Between Early Historic Numic and Euro-American Sites

Curtis Martin, Principal Investigator, The Colorado Wickiup Project
Dominguez Archaeological Research Group (DARG)

The past six years of research by the Colorado Wickiup Project has provided the opportunity to investigate a number of Protohistoric and Early Historic Numic (primarily Ute) camp sites in western Colorado. It has become obvious that many of these aboriginal sites have been, and continue to be, recorded as Euro-American occupations, or disregarded as historic trash scatters of little import. The project has tree-ring dated a number of these sites to post-1881, and even post-1900. The presence of cans, bottle glass, plate glass, ammunition, tacks and nails, buttons, horse tack, and so forth, should not automatically be considered an indication of non-Native resources. The nature of these sites, and the trade artifacts and wooden features that distinguish them as being of Numic affiliation, is presented.

Social Relations at the Long Knife Site (5MF5827): Toward an Understanding of Protohistoric Shoshone/Ute border politics

Jenn Mueller

Recent extensive excavations at the Long Knife site (5MF5827) produced a wealth of spatial data. Analysis at the site strongly suggests that several structures or household hearth groups were present during the primary occupation. Artifacts indicate that the primary occupation was ancestral Shoshonean, despite the site's location several miles south of the Yampa River, on the wrong side of the Ute-Shoshone border. Since the site is within Ute "territory", the spatial distribution of features and artifacts will be examined to elucidate on the social relations at the site, and to pose some observations regarding Shoshonean-Ute border politics.

Historic Ute Brush Fences and Corrals

Richard Ott, Administrative Director, Dominguez Anthropological Research Group, Inc.
Project Coordinator, BLM-Ute Ethnohistory Project

Historic brush fences and corrals in western Colorado have typically been interpreted in the course of CRM surveys as historic Euro-American animal control features. Recent studies in eastern Utah and southern Wyoming describe some such sites as historic Ute in

origin. Similar sites known to exist in western Colorado may hold valuable research potential for historical archaeologists interested in the development and spread of Ute horse culture.

Maintaining a Ute Perspective: Ethnographic Consultation, Cultural Landscape, and Archaeological Modeling

Scott C. Phillips, SWCA Environmental Consultants

For Ute archaeology, consultation with those who possess traditional Ute culture is essential, and I will advocate for consulting the Ute perspective in identifying Ute archaeological culture. We all realize that the Ute are still here; their language and culture still persist in contemporary form. The Ute Tribes are not disconnected from Ute archaeology, in fact, they are still creating it. That said, one key consideration of this symposium is whether archaeologists can distinguish Ute archaeological culture when it is encountered. This task is possible, and—it may seem obvious—made more approachable when informed by Ute knowledge. Another key consideration of this symposium is how far back or for which points in time Ute archaeology can be distinguished. Regarding Ute knowledge, this may be posited to be any timeframe in which distinctive patterns of Ute materials and landscape use can be differentiated within the archaeological record and contexts based on ‘ethnographically’ known Ute culture. This is one of the greatest challenges. In consultation with the Ute and other Tribes across the West, the relationship of archaeological sites to the surrounding landscape is often expressed in terms of the cultural and environmental connections, articulated in both site composition and the surrounding natural resource base. This fits well with many archaeological approaches to landscape study, especially as augmented by GIS. We have recently completed several modeling studies within Numic territories (Ute and Shoshone), with several other studies on-going. These studies use ethnographic consultation approaches and/or archaeological/GIS modeling approaches to associate archaeological landscape settings to those considered significant to Tribes. Recent projects include work centered on the Piceance Basin, expanded to the whole of northwestern Colorado, on projects for the BLM White River Field Office in Colorado (in Ute to Shoshone transition areas); modeling differences between protohistoric or historic Native American sites and those from earlier time periods in Wyoming’s Big Horn country (at the transition between Shoshone, Crow, and potentially other territories); and modeling potential site occurrence along the southwest Colorado/northeast New Mexico border (across Ute and Navajo areas). By incorporating ethnographic models into archaeological models, and having feedback between Tribal consultants and archaeological consultants, each benefit. Our work, specifically our work with the Ute Mountain Ute Tribe in Colorado, is an endorsement of this approach. This approach certainly is nothing new, having originated in anthropology relatively long ago, but these current iterations and their applications are worth re-emphasizing in considering the present topic.

SATURDAY MARCH 27

8:30 a.m. to Noon

Conflict on the Plains

Thomas Carr, Office of Archaeology and Historic Preservation

Abstract: This presentation is a photographic overview of Native American sites on the Great Plains associated with the Indian Wars of the 19th century. This was a time when the United States sought to destroy and/or assimilate Plains Indian culture. The photographer is an archaeologist who has worked with various tribes on cultural resources research, site preservation, and interpretation. The images combine historic 19th century photographs of Cheyenne, Arapaho, and Lakota peoples, with contemporary photographs of historic sites. The inspiration for this project came from the artist watching the healing process between Anglo Americans and Native Americans - this involves acknowledging what happened in the past, coming to grips with its consequences, and finding a way to mutually move forward. For this project, the photographer visited nine historic sites in Colorado, Wyoming, Nebraska, Oklahoma, South Dakota, and Montana. He states that "the sacredness and spiritual power I encountered at the sites was very tangible yet difficult to explain. I approached visiting these places with a sincere reverence for the people who lived and died there, and I hope this is sensitively conveyed in the final images." This presentation will discuss the history of the sites, the technical process used to create the photographs, and a slide show.

The Durango Basketmakers: Tightening the Weave

Mona C. Charles, Fort Lewis College

AMS radiocarbon dates from the Darkmold Site provide new data on the Basketmaker II occupation of Southwest Colorado. These new AMS radiocarbon dates on corn and other annuals expand our knowledge of the Basketmaker II period in the Durango area by providing better beginning and ending dates for occupation and by filling in "gaps" in the occupation sequence. The earliest AMS dates from the Darkmold Site coincide well with dates from rock art paint, corn and other annuals from the Falls Creek Shelters. A cluster of new dates in the late 5th century A.D. is especially informative because they confirm occupation by the Durango Basketmakers until A.D. 500. Taken together the tree-ring and AMS dates from the Darkmold Site, along with those from the nearby sites of Talus Village, North and South Falls Creek Shelters and 5LP6444, leave little doubt that the Basketmakers inhabited the Durango area for at least 1000 years with few if any hiatuses.

Bioarchaeological Signatures of Strife in Terminal Pueblo III Settlements in the Northern San Juan

Kristin Kuckelman, Crow Canyon Archaeological Center

The complete depopulation of the northern San Juan region by Pueblo farmers about A.D. 1280 was stimulated by complex and interrelated factors such as drought, resource depletion, cooler temperatures, environmental degradation, dense population, and violence in the mid-A.D. 1270s. Recent bioarchaeological and contextual analyses of

human remains from terminal Pueblo III sites in the region reveal evidence of aggression including cranial depression fractures, broken noses, teeth fractured from blows to the mouth, trophy-taking, and inconsiderate disposition of bodies, as well as evidence of anthropophagy. This study examines roles of violence in late Pueblo society in the northern San Juan as reflected in the signatures of strife found on human remains in abandonment contexts. The empirical evidence mentioned above and other data, including indicators of conflict revealed during recent excavations at Goodman Point Pueblo in southwestern Colorado, suggest that violent attacks on these late Pueblo villages served numerous purposes: to reduce competition for limited resources; to gain access to stored food within settlements; to intimidate, demoralize, and display dominance over other Pueblo communities; and to engage in anthropophagy. The bioarchaeological evidence of strife associated with regional depopulation thus illuminates important facets of the cultural role of aggression and violence at an especially significant hinge point in Pueblo prehistory.

It's a Small World After All: A Preliminary Investigation of Lichenometry Dating on Historic Structures (graduate presentation)

Sarah E. Wolff, Pennsylvania State University

Lichenometry is the use of lichens to date archaeological or geological events using a regression curve derived from using size of the lichen to predict the age of the lichen, and hence, the age of the exposed substrate to conditions that would foster lichen growth. Lichenometry has successfully been done in Colorado on game drives and prehistoric sites. In this preliminary investigation, I explore the possibility of using lichenometry in historic archaeology. I will focus on two contrasting applications of lichenometry to historic archaeology to determine age of structures. First I will focus on the use of lichenometry in the Southeastern plains of Wyoming on historic structures. Second, I will contrast the application of lichenometry in the west to the use of lichenometry on historic stone structures in the Orkney Islands, Scotland. By comparing and contrasting these two areas, I will demonstrate the appropriate application and potential of using lichenometry to date historic structures.

The Community Approach in the Interpretation of Rural Western Settlement

Thomas Witt, SWCA Environmental Consultants

In the homesteading era of Colorado and surrounding parts of the West, communities form both organically, through the successive settlement of an area, and inorganically, through planned communities by ethnic or religious groups. In both cases community formation is represented in the ways that settlers orient settlements to the physical and social landscape of a region. This presentation describes the historic settlement of the west in terms of communities, and how archaeologists can use a community focused approach in the interpretation of these sites. Using landscape and site layout data from sites in southeastern Colorado, the Piceance Basin, and from neighboring plains states, the ways that communities oriented themselves within the surrounding landscape is examined. This presentation also addresses ways in which examining historical sites

through the lens of community interactions can lead to more informed interpretations of archaeological material.

And the Peat Goes On: Prehistoric Culture Change, Population and Paleoenvironment from “Pocket Fens” in Eastern Colorado

Kevin P. Gilmore, ERO Resources Corp.

Understanding paleoenvironments of the western High Plains is critical to understanding prehistoric human adaptations to past climate change. These pocket fens and small marshes are small wetlands (25-2500 m²) sustained by springs fed by perched water tables. Fluctuations in the relative humification and organic content of both peat and mineral sediments from these features provide proxies for effective moisture and temperature, respectively. Correlation between sediment variables in high resolution lead-210 dated sediment cores and the climate variables contained in historic records of temperature and precipitation are significant in both fen and marsh sediments. These results can be extrapolated into the past, and the data from pocket fens and marshes suggest that they contain sensitive records of climate fluctuations such as the Little Ice Age (LIA) and earlier Neo-glacial events, the Medieval Climate Anomaly (MCA), and anthropogenic climate warming of the past 150 years. These records, in conjunction with proxies for prehistoric population, provide a context for examining the complex relationship between climate, population and culture change during the Archaic-Late Prehistoric transition and later changes in the Late Prehistoric period. Although extended periods of drought influenced cultural adaptations, it is periods of high variability in climate that apparently have a greater coincidence with episodes of rapid culture change.

Symposium – Beware What You Leave in Your Cellar: Investigations at the “History Colorado Center” Site, 5DV12345

Organizer, Steven Dominguez

Symposium Abstract

During August 2009, archaeological excavations were conducted at the new site of the History Colorado Center, one block south of the present museum, within the Capitol Hill district. Archival, Ground Penetrating Radar, and archaeological investigations yielded a close view of life near the center of Denver. Evidence of a series of early 20th century row house brick foundations (ca. 1900-1940s) were recovered that included, in addition to the foundation remains, cellars, infrastructure, automobile period architectural and archaeological remains, demolition debris, a remediation pit and artifacts. The majority of the excavations were oriented toward unearthing aspects of the ca. 1900-1940s row houses. Although indications of 19th century activity were present, extensive re-use and rebuilding of the block during the first half of the 20th century, and results of the auto industry beginning in the 1930s, created major changes to the block that eventually resulted in the demolition of the row houses in the 1940s.

Archival Research - Setting the Stage for the Excavation Strategy and Interpretation at the New History Colorado Center

Todd C. McMahon

Investigations for the new History Colorado Center started with an in-house archival research project. This paper summarizes the results of that archival research which was gathered from a variety of sources. This documentation revealed land-use changes that started from residential, then to automobile and finally commercial related buildings and activities. The archival research laid the groundwork for subsequent inquiry, facilitated field investigations and made immediate interpretation of the site possible to the public. Future archaeological investigations of a similar nature should also incorporate pre-excavation archival studies since it aids future phases of field investigation.

Ground-Penetrating Radar Investigations at the New History Colorado Center Site

Jennie O. Sturm

Ground-penetrating radar (GPR) surveys were conducted as part of the archaeological assessment of the area where the new Colorado History Museum will be relocated. The GPR method was chosen for this project because of this method's demonstrated ability to map the location and spatial extent of archaeological features in complex urban settings. These surveys mapped the foundations of a number of domestic structures. In addition, analysis of amplitude slice-maps and reflection profiles show distinct foundations at various depths, indicating construction methods and re-building phases of these structures over time. When compared with Sanborn maps available for the area, it was also clear GPR was mapping structures not recorded in these historic documents, lending important insight into the history of this area.

Structure Construction, What's Your Function? Field Results from Excavations at 5DV12345

Susan East

This paper provides a view into site layout, historic building techniques, and structure functions indicated by the archaeological excavations at the 'Colorado History Center' site. Excavation yielded structure layouts of a 12th Street row house, a Lincoln Avenue duplex, and various other historic features within the city of Denver. Relevant dates range from before 1889 to later than 1950. Architectural units consisted of remnants of cellars, sub subterranean stairwells, party walls, front yards and crawl spaces. Artifact concentrations across the site yielded information on potential spatial use, including personal storage, use of utilities and a refuse bin. The use of masonry and stratigraphic data yielded insight into historic construction techniques and yielded clues regarding the functions of specific features. This excavation provided a glimpse into the changing technologies and economy of Denver Colorado.

Analysis of the 5DV12345 Artifact Assemblage

Laine Vandal

This paper presents an overview of the laboratory analysis for site 5DV12345 and summarizes the artifact distribution throughout the residential complex. The primary goals of laboratory investigations were to analyze the assemblage and to discard materials

with limited diagnostic potential. A secondary goal was to generate a catalog of materials retained during analyses and to prepare them for curation. In the second analytic phase we gathered diagnostic information specifically in relation to the origin of manufacture and temporal data. Additionally, function codes were assigned to all objects based on a group of known uses or technological contexts for the most common items. Patterns of artifact functions help indicate how the structures were utilized throughout time and to identify patterns of material consumption.

After the Gold Rush: A Review of the Results from the “History Colorado Center” Project

Richard Carillo

This paper outlines some of the more critical observations that relate to archaeological sites from the 20th century and examines comparisons with 19th century and other 20th century sites in Denver. Information resulting from the History Colorado Center project indicated site layout and chronology of occupation as well as technologic change in utilities. Analyses of functional and origins of artifacts categories provided further details on the uses of space and economy. External comparisons allowed spatial and temporal contrasts in site layout and socioeconomic status.

Upper Animas AML Survey; Mineral Creek Study Unit SJ98018H

Eric Kneebone, San Juan Public Lands Office, BLM

The Eureka Creek and South Mineral Creek Study Units of the Upper Animas Abandoned Mine Lands Survey SJ9801H were never completed with the rest of the project. In 1998-2000, archaeological surveys were undertaken of historic mining sites in the Upper Animas Watershed as part of a larger plan to improve the water quality of the Animas River. The fieldwork for both units was completed by USFS personnel. Due to various factors, documentation remained incomplete and in storage until 2007. In this paper, I discuss the South Mineral Study Unit and demonstrate the difficulty of data preservation and accessibility for archaeological research and management purposes.

Save Our Air Quality Using Section 106

Shina duVall, Office of Archaeology and Historic Preservation

Much confusion exists regarding Section 106 of the National Historic Preservation Act and the code of federal regulations at 36 CFR Part 800. This presentation will focus on the role of the State Historic Preservation Office (SHPO) in the Section 106 process and will describe how the SHPO consults on Section 106 undertakings. Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Council a reasonable opportunity to comment on such undertakings. It seeks to accommodate historic preservation concerns with the needs of Federal undertakings through consultation among the agency official and other parties with an interest in the effects. The goal of consultation is to identify historic properties potentially affected, assess effects, and seek ways to avoid, minimize or mitigate any adverse effects. The agency remains legally

responsible for all required findings and determinations and has approval authority for the undertaking.

1:30 to 5:00 p.m.

A Short Summary of the Archaeological Investigations along the Collbran Pipeline Project

Carl Conner, Grand River Institute

Monitoring of the Collbran pipeline construction began in June and proceeded to the end of August 2009. Blading and trenching exposed eighteen sites previously unrecorded during the initial inventory--three of which had buried housepits. Range of the dates for the pit structures are from 2300 - to - 6000 years old.

Recent Investigations in Sand Wash Basin, Northwestern Colorado

Robyn Watkins Morris, Bureau of Land Management, Little Snake Field Office

Sand Wash basin has long been known as an area of high archaeological interest, although most of it has not been surveyed, documented or shared with the professional community. In 2007-2010, in response to increase off-highway vehicle use, the Bureau of Land Management, State Historic Fund, and the Vermillion Chapter of Colorado Archaeological Society have worked together to fund further survey and testing in this area filled with quarry pits, lithic landscapes, large toolstone processing areas, wickiups, and a stone circle site. A GIS predictive model was developed and refined by the recent data. Preliminary results from these surveys will be shared.

Planning for the Future while Informing the Past: Archaeological Sensitivity Analyses in Northwest Colorado

Paul Burnett, SWCA Environmental Consultants

Northwest Colorado is a focal point for the development of the region's natural resources. Among the challenges associated with this development is the effective management of the region's cultural resources. While physical disturbances associated with this development will continue to receive standard cultural inventories, there is a lack of guidance that is otherwise available from existing archaeological data. As a partial remedy to this situation, SWCA has initiated a GIS-based archaeological sensitivity modeling program for the region. The goal of this program is twofold. First, sensitivity models can be used in the planning stages of future projects to inform the evaluation of project alternatives. Second, the models can be used to identify significant cultural patterns of the region, providing a context to future archaeological research in the region. This paper discusses the model building process, establishes ways to identify preferred alternatives for development, and highlights the ways in which these models can inform our understanding of the region's prehistory.

Differentiating Brush Fences in Colorado's Piñon Juniper Woodlands

George Connell, SWCA Environmental Consultants

Brush fences, mainly constructed of interwoven juniper trunks, stumps, and branches, are common structural features in the piñon-juniper woodlands of western Colorado. Although often simply referred to as brush fences, these features have been previously defined to include a variety of structural types, such as prehistoric or protohistoric game traps, Ute horse corrals, historic sheep and cattle pastures, and historic to modern property boundaries. Due to a lack of distinction between structural types on the western slope and surrounding areas, use of the term “brush fence” often does not consider morphological traits suggestive of specific use, function, or time period. We suggest that brush fences in the Piceance Basin differ in construction and even modification compared to those found in the vicinity of Powder Wash, Wyoming, and in the Ashley National Forest, Utah. Of the 16 brush fences recently documented in the Piceance Basin, site 5RB2684/5447 displays many different construction techniques and ample evidence of modification. We describe the fences at this site using a standardized method that can be used to differentiate the various forms that these features assume. A goal of this standardized description is to separate these features into various functional, cultural, and, possibly, temporal associations.

Lithic Procurement Studies in Sand Wash Basin, the Dry Mountains and Eastern Browns Park, Northwest Colorado

Lorraine Poulson (Little Snake Field Office, BLM) and James C. Miller (Dominguez Anthropological Research Group)

Quarry and lithic procurement areas in Sand Wash Basin and adjacent areas consist of primary bedded chert associated with calcareous bedrock and secondary lag gravel deposits on some higher elevations. Procurement habits for over 10,000 years varied from scattered testing to deliberate excavations. Aboriginal quarry methods in Sand Wash were adjusted to bedrock geology—horizontal excavations obtained chert under resistant limestone while vertical excavations penetrated calcareous shale to reach chert below. The labor expended to obtain buried chert suggests this chert had a preferred quality. The abundance of tool stone in Sand Wash modified tool manufacturing habits in some ways. Numerous expedient scrapers, unifaces and some crude bifaces were made from fortuitously shaped pieces of raw chert and discarded after minimal use. True dune, phytogenic aeolian, and alluvial deposits in Sand Wash Basin span most of the post-glacial period and contain a mosaic of open camps stretching across 10,000 years. Research potential for both lithic procurement habits and latest Pleistocene and Holocene habitation is significant. Damage to many sites has resulted from recreational use, particularly by off-highway vehicle (OHV) traffic and collectors.

The Scanning Electron Microscope Analysis of Bone Needle Use Wear (student presentation)

Collin Smith, Western State College

Through the use of a scanning electron microscope, images of fine detail in use wear can be captured. The scanning electron microscope has the ability use an electron beam to

magnify images at a power of up to 200,000 xs. The magnification power of the scanning electron microscope makes it a great diagnostic tool for use wear analysis on artifacts. The scanning electron microscope has much potential to enable identification of tools and their use wear pattern. Due to the fact that only few have access to scanning electron microscopes, bone needle use wear studies are one of the many studies that are unexplored. In this experiment, three manufactured bone needles will be analyzed using the scanning electron microscope at Western State College. Of the three bone needles which have been sharpened on a sand stone abrader, one has been unused and worked, the second worked and used, and the third un-worked and used. The objective is to determine whether or not the scanning electron microscope is efficient at diagnosing use wear pattern on tools like bone needles. The ability to identify tools may be enhanced through the use of a scanning electron microscope. The images from this study will help solidify the scanning electron microscopes ability to produce fine detail images in artifact analysis.

This Olde Wikiup: Modeling the Architectural Dynamics of Living Structures with Archaeological Residues

Casey Dukeman, Western State College of Colorado

Researchers in the New Archaeology have shown that there is great deal of information to be gained about prehistoric sites from modeling or observing the material residues generated from human activities today. But, what of using the archaeological residues to create models that could glean even more interpretive information (i.e., architectural efficiency; segregation of space; human ecology; etc.) regarding prehistoric behavioral residues? In the fall of 2009, a wikiup was constructed by Western State College students as part of their archaeology laboratory course. The model was built, using contextual archaeological data recovered during the excavation of two Folsom aged structures at Mountaineer, as a framework for design, construction, materials, and many interior features. Unlike wikiup construction projects conducted in the past at WSC (usually resulting in a fire of some sort), this wikiup was built not only to stand for an extended period of time, but to be habitable, as well. Throughout the course of the winter of 2009-2010, the wikiup has been the site of numerous experiments, focusing on testing a number of archaeological scenarios. From heat treating chert bifaces to monitoring heat efficiency, this paper will offer a brief overview (and some results) of many of the experiments conducted in This Olde Wikiup.

An Analysis of Plants Traditionally Used by Plains Indians as Topical Antiseptics for Antimicrobial Effectiveness (undergraduate presentation)

Shana Wolff, Laramie County Community College, Cheyenne, WY

The purpose of this middle-range archaeology study was to examine the effectiveness in the laboratory of Plains Indian plant remedies traditionally used as topical antiseptics to prevent or treat infections of the skin. My hypothesis is that some of these plants will display significant antimicrobial activity in the laboratory, *in vitro*. In this study I used 30 different medicinal plants that Plains Indians used as antiseptics found growing in and near Cheyenne, Wyoming. The sterile plant extracts were then tested against 9 different

bacteria and 1 yeast, using the Kirby-Bauer Antibiotic Disc Assay technique. After incubation, the plates were examined and any zones of bacterial inhibition, indicating antimicrobial activity of plant extracts, were measured. From this series of experiments I concluded that 50% of the native plants isolated from southeast Wyoming that were historically used by Plains Indians as topical antiseptics did indeed exhibit some antimicrobial properties *in vitro*. I can assume most of the plants would inhibit or kill bacteria just as effectively *in vivo*, and would be beneficial in preventing and/or treating infections of the skin and mucous membranes.

The Apishpa and the Use of a Variety of Plant Resources along the Purgatoire River: Preliminary Results of Excavations along the Purgatoire River, in Southeastern Colorado

A. Dudley Gardner, Laura Pasacreta, and Glade Hadden

Subsurface investigations and pollen analysis at two sites along the Purgatoire River indicate that maize and Chenopods may both have made up a significant part of the diet at about AD 1000. The area investigated over the last eight years is located in the southeastern Plains of Colorado. Within the structures excavated, we have found evidence of processing maize and Chenopods. This paper will put forward the results of our excavations and offer some suggestions about the nature of subsistence strategies along the Purgatoire River around AD 1000.

Bifaces, Flake Tools, and the Division of Labor at the Mountaineer Site

Mark Stiger, Western State College

During the summer of 2009 Western State College conducted excavations on a third Folsom structure on the Mountaineer site. While analysis is on-going, dramatic differences in the organization of lithic technology in different structures are obvious. A case is made for a pronounced division of labor at the Folsom Mountaineer site. Contrasts are drawn between the organization of Folsom lithic technology at Mountaineer and at the Archaic lithic technology at the nearby Tenderfoot site.

Mini-Session by Paleo Research Institute – Lifespans, Residues, & Diets!!

Radiocarbon Dating and Lifespans

Kathryn Puseman and Linda Scott Cummings

Understanding dates that are “out of sequence” might be as simple as understanding life spans of different woods. Many dates that are deemed to be “bad” are, in fact, very good dates from the standpoint of good processing and good dating (physics). The “bad” part comes in the selection of what to date or in failure to understand the lifespan of the item dated. Dating multiple samples is getting a “bad rap”, suggesting that the more you date the more problems you will have interpreting the chronology. Traditionally, archaeologists have preferentially selected point-provenienced, large pieces of charcoal for radiocarbon dating. Examining post-depositional processes affecting charcoal

suggests that these items are usually remnants of inner portions of much larger pieces of fuel wood that were burned in a feature. Radiocarbon dates on heartwood and later wood are potentially hundreds of years different, resulting in an age determination that has little to do with the use of the feature. Growth of trees and interaction between ^{14}C in the atmosphere and the plant are reviewed. A method for selecting the most appropriate sample for radiocarbon dating is presented, as well as options for dating problematic contexts.

Protein Residues and Organic Residues: What's the Difference?

Melissa K. Logan, Linda Scott Cummings, and Chad Yost

These two techniques provide non-overlapping and complementary interpretations. Infrared spectroscopy is useful for examining organic residues on/in ceramics, FCR, and other types of artifacts and sediments to yield information on past lifeways, including subsistence, technology, and religion. FTIR has experienced a resurgence for identifying organic substances in other disciplines. Innovative use of this technology in archaeology to recognize materials such as plant or animal fats, plant waxes, esters, proteins, and carbohydrates expands current databases by offering new information beyond that which can be obtained from existing methods of analysis; however only protein residue analysis provides identification of specific animal represented.

Starches: Evidence for Diet in the Archaeological Record

Linda Scott Cummings

Starches have been recovered from archaeological samples for a few decades. In Colorado and surrounding states they have provided evidence for processing foods from a variety of settings and from a variety of sample types. In the Douglas Creek area we are finding wild potato starches. Starches from various types of grasses are common on groundstone, in hearth samples, and from other locations. Distinguishing between them provides information concerning types of grass seeds processed. Some of the starches may be identified as having been cooked, while others appear unaltered. A visual portrayal of starches is presented, along with a review of results and discussion of starches as an archaeobotanic resource.

POSTER ABSTRACTS

Thermal Alteration of Chipped Stone Tools at the Kinney Springs Site (5LR144c): Evidence for Functional, Spatial, and Structural Associations

Maggard, Annie E., Colorado State University Anthropology Department

The Kinney Springs site (5LR144c) is a multicomponent open campsite near Livermore, Larimer County, Colorado, that was excavated by Elizabeth Ann Morris and the Colorado State University field school in the mid 1980s; its lithic artifacts are housed at the CSU Laboratory of Public Archaeology (LOPA). The artifacts in this lithic assemblage exhibit ubiquitous evidence for thermal alteration, present in the form of potlid fractures, scaling/crazing, and color changes from the parent material. Functional, spatial, and structural relationships among the thermally altered artifacts are investigated by first quantifying the evidence for burning using macroscopic techniques of analysis, and then examining the resulting patterns of thermal alteration as related to tool type, as well as vertical and horizontal distribution throughout the site.

Paleoindian Site Structure at American Flats (5PA158): A High Altitude Camp in Colorado's Mosquito Range

Travis A. Hill, Jason M. LaBelle, Sarah M. Millonig, Jerry Partin, and Greg Sustad, Lab of Public Archaeology, Department of Anthropology Colorado State University

5PA158 is located at an elevation of 3661 m (12,010 ft), placing the site above timberline, on a bench overlooking the South Mosquito Creek valley. The Colorado State University Laboratory of Public Archaeology (CSU-LOPA) conducted a large block excavation (96 m²) of the site in 1979. Excavations revealed a lithic assemblage containing mostly debitage, projectile points, retouched flakes, bifaces, and a few other formal tools. On-going analysis of the extant collection aims at examining the spatial distribution of the artifacts in an attempt to investigate site structure. Research consisted of mapping patterns in the distribution of debitage, projectile points, and bifaces; examining flakes and tools for burning; and conjoining/refitting the lithic assemblage. Prehistoric site activities consisted of discarding projectile point bases, tips, and midsections, coupled with the manufacture of projectile point preforms and bifaces, the latter in the form of large blanks. The site is multicomponent, although the majority of the projectile points are typologically similar to the James Allen complex, a common Paleoindian component in the Southern Rocky Mountains. As part of this analysis, 5PA158 is compared to several similar Late Paleoindian sites from Colorado, as well as two early Paleoindian sites from outside the region, to examine broad patterns in hunter-gatherer site structure.

Across the Great Divide: A New Look at the Game Drive System atop Rollins Pass (5BL145-148)

Kristin Deily and Jason M. LaBelle Lab of Public Archaeology, Department of Anthropology, Colorado State University

The Rollins Pass game drive complex consists of a series of prehistoric archaeological sites situated along the Continental Divide, straddling the boundary between Boulder, Grand, and Gilpin Counties. Rock walls, blinds, pits, and cairns are numerous and apparent. The features are located in eight strategically placed clusters, effectively blocking animal movement to the north/south along the Continental Divide, or east/west across the Pass itself. The archaeology is spectacular and obvious, having first been described in 1873, in a letter to the editor of the Rocky Mountain News. However, nearly a century would go by before the game drive complex would be formally described, when Byron Olson and James Benedict began working in the immediate area in the late 1960s. Rollins Pass came under the focus of Olson, who led surface inventory of the area, mapped the game drives, and conducted limited test excavations at several of the sites. No final report was ever produced, although aspects of the work are mentioned in several of Benedict's publications. Building on this prior work, our current project examines four of the sites located in Boulder County, describing past work, the prehistoric chronology, patterns in tool types and debitage, and basic raw material source identification. Fieldwork is planned for the near future, including GPS/GIS mapping of the drive complex, additional surface survey, and sampling the proposed ambush/kill areas for ancient animal DNA or other evidence of prey species.

5GN2477: South Side Lithic Scatters and on Site Surface Analysis

Josh Boyd, Greg Meldrum, and Megan Jamison, Western State College

Western State students have been analyzing and collecting tools and debitage from five lithic scatters for several years on the southern side of the Mountaineer archaeological assemblage. The artifacts represent a multi-component site and are believed to be kill/processing sites. Prior to this project, lithic scatters had been pin-flagged, mapped, collected, and sent to the C.T. Hurst Museum to be curated and later analyzed by employees. Currently, a new approach is being taken in an effort to more efficiently collect and analyze the surface data. Three lithic analysts are analyzing the pin-flagged artifacts on site as they are being collected; instead of the time consuming process of collection, curation, and analysis that may take awhile to be completed. The data being collected will eventually be correlated with previous years' data of the same five lithic scatters for a more complete interpretation of the Mountaineer site, which could lead to the excavation of test pits on the southern side of the mountain.

Intellectual Genealogy

Erin Cahill, Western State College

Intellectual genealogy is the idea that each anthropologist has been taught by another anthropologist, who in turn has learned from their teachers, and so on. While I may not have had direct instruction from the founding luminaries of Anthropology, their styles of observations, methods for recording data, and even their approaches to studying cultures have been passed down through the years by their students to culminate in the education I am receiving at Western State College of Colorado, and so I am learning indirectly from the masters. In the years I have been an anthropology student, I have had three

instructors: Dr. Mark Stiger, Dr. Lynn Sikkink, and Casey Dukeman through whom I can trace my intellectual genealogy. This poster will illustrate my intellectual genealogy, as traced through my professors at Western State, which has implications for understanding the interconnectedness of influences represented by any one student.

Folsom Endscrapers

Joshua Boyd, Western State College

Endscrapers are common in pre-historic lithic technologies. Their use and association has been documented across vast time and spatial contexts, indicating that no specific cultural determination can be ascribed. Work needs to be done with endscrapper morphological variability across landscapes and time. This poster examines two assemblages of endscrapers from two spatially segregated Folsom artifact clusters. Both are suspected to be contemporaneous Folsom habitations at 5GN2477. Block F and Block B, both deemed structural habitation sites, contain a sufficient number of endscrapers to attempt a study of the endscrapper morphology between two assemblages considered contemporaneous. Morphological characteristics such as length, width, end bit depth and angle will be employed in an attempt to evaluate variability in style and function of endscrapers between two contemporaneous Folsom age structures. These endscrapper morphological attributes will also be evaluated between raw material types to determine if style and function are dependent on the physical properties of rock types.

Paleoindian Manifestations on the Routt National Forest, Colorado: Environmental Change, Temporal Variation, or Sampling Bias?

Ashleigh Knapp and Kristin Hare, Medicine Bow-Routt National Forest

Conventional wisdom holds that Paleoindian occupation in high montane environments was a rare occurrence, particularly in the Routt National Forest. An increase in cultural resource survey over the last two decades has led to further identification of Paleoindian artifacts. The Paleoindian period on the Routt National Forest is represented by a range of different projectile point styles. Trends to examine include: environmental change, temporal variation, and sampling bias. Available collections were analyzed to expand our understanding of the exploitation of high montane environments.

Liquor, Lead and Picket Fences: A Picture of Domestic Life at Fort Lewis, Colorado

Eric Kneebone and Mona C. Charles, Fort Lewis College

A picture of domestic life is emerging at Fort Lewis, Colorado. In the summers of 2007, 2008 and 2009, the Fort Lewis College archaeological field school conducted inventory, mapping, geophysical surveys and limited evaluative testing at the Fort. Through geophysical survey, the boundary of the military cemetery appears as a strong magnetic anomaly. Evaluative testing in the area of the anomaly recovered square nails and a wooden post, apparently from a deteriorated picket fence. Overall, bottle glass is the major artifact class thus far encountered and most of the glass is from alcoholic beverage bottles. Other bottles found include an assortment of medicines, laxatives and personal sundries. Fragments of various types of porcelain and hotelware are prevalent as well.

Bones from butchered animals provide evidence of food consumption, but a paucity of tin cans in the refuse shows the lack of dependence on expensive, imported food items. Cartridge casings have been recovered at every site and in each test unit. Continued investigations at the military reservation enhance our understanding of the daily life of the military in this frontier fort. The artifacts reveal a fairly sedate daily life at this post during the post's occupation.

Avocational Contributions to Colorado Archaeology

Kevin D. Black

Avocational archaeologists have been active participants in Colorado for decades. Organizationally, they have been integral to the formation of support groups such as the Colorado Archaeological Society—one of the oldest such organizations in the country, founded in 1935—and the San Luis Valley Archaeological Network, and were indispensable lobbyists for the creation of Colorado's Office of the State Archaeologist in 1973. Avocationalists continue to contribute to the study and preservation of the state's cultural resources through activities and programs such as site stewardship, volunteer field and laboratory work, publication in local and regional journals, sponsoring college scholarships, and project fund-raising.

BIOGRAPHIES

Steven G. Baker

Steven Guy Baker (ROPA#10537) was formally cross-trained in anthropology (*B.A. Un. of Kansas 1968*) and American History (*M.A. Un. of South Carolina 1974*). He regularly works as an ethnohistorian and archaeologist in both the local western Colorado prehistoric and historic contexts. He is a charter member of the Colorado and Utah Professional Archaeological Councils and was admitted to the Society of Professional Archaeologists (SOPA) in 1977 with certifications in nearly all areas of practice, including: field research, collections research, historical archaeology, cultural resource management, archaeological administration, and archival/ theoretical research. His areas of special interest include contact period Indian studies and the historical archaeology of mining and the Victorian settlements of western Colorado. In addition to his intensive investigations of the Fremont and Ute occupations of the Douglas Creek Arch near Rangely, he has also made substantial published contributions to the broader ethnohistory and archaeology of Colorado's Ute Indians and the Catawba Indians of South Carolina and their famous pottery production. His early professional career included employment and training with the Kansas State Historical Society, Washington State University, the University of Manitoba, Parks, Canada, the Institute of Archaeology and Anthropology and the Office of Advanced Studies and Research at the University of South Carolina and the Georgia Historical Commission where he served as Acting State Archaeologist in 1969 and 1970. Baker is now partially retired after serving as founder, President, and Principal Investigator of Centuries Research, Inc. of Montrose, Colorado since 1977.

Kevin Black

I have been a "practicing" archaeologist since graduating from the University of Colorado at Boulder in 1979. Through 1988, I was employed by consulting firms in Montrose and Eagle, Colorado, conducting inventories and excavations in the western U.S., especially in Colorado, Wyoming and Utah. Since October 1988, I have been in my current position as Assistant State Archaeologist at History Colorado, the Colorado Historical Society (CHS). My primary duty (about 75%) is state coordinator of the Program for Avocational Archaeological Certification (PAAC). I am CHS's liaison with the Colorado Archaeological Society (CAS), and I am also involved in reviewing and issuing permits for archaeological and paleontological work on state land, and providing technical assistance to other CHS managers and the public. Annually, I give an average of ten presentations to public and private organizations such as state parks and schools.

Joshua Boyd

Joshua Boyd is a student of Anthropology at Western State College and expects to graduate Spring 2010. He is also the President of the Anthropology Club at Western State College.

Paul Burnett

Paul Burnett is an archaeologist and project manager for SWCA Environmental Consultants (Denver office). His research focus is hunter-gatherer archaeology of the

plains, Rocky Mountains, and intermountain regions. Among his recent endeavors are a wide range of GIS-based archaeological modeling efforts ranging from depositional modeling across South Dakota to archaeological sensitivity analyses in Wyoming, Colorado, New Mexico, and Texas.

Ryan Byerly

Ryan Byerly received his B.A. in Anthropology from Colorado State University in 2002, and his Ph.D. from Southern Methodist University in 2009. His research primarily focuses on vertebrate taphonomy and hunter-gatherer archaeology in the Great Plains and Rocky Mountains.

Erin Cahill

Erin Cahill is a graduating senior at Western State College of Colorado, from John Day, Oregon, furthering her career with the U.S. National Park Service as an Interpretive Ranger, and a member of Lambda Alpha, Epsilon of Colorado.

Richard Carillo

Richard F. Carrillo is a La Junta, Colorado, native and owns and operates Cuartelejo HP Associates, Inc. He holds an A.A. degree from Otero Junior College (1968) and a B.A. in anthropology from the University of Kansas (1971). He also worked extensively with Stanley South at the Institute of Archaeology and Anthropology at the University of South Carolina. His career in private consulting as a historical archaeologist began shortly thereafter in 1978. His career has included work at numerous well known historic sites in Colorado, including Camp Amache, Boggsville, Bent's Old Fort, the 1882 Fort Collins Water Works, and Tremont House in Denver. He is very active in the historic preservation community of southeastern Colorado and has a particular research interest in Hispanic history in southeastern Colorado.

Thomas Carr

Thomas Carr is an archaeologist and photographer living in Colorado. His artistic influences include Eugene Atget, Fay Godwin, Edward Weston, and Paul Caponigro. His work has been shown in numerous juried, group, and solo exhibitions for over 30 years. He has also lectured extensively on photography, archaeology, visual ethnography, and historic preservation. In characterizing his own work, he states that "I find myself drawn towards making images of places with subtle indications of a past human presence. Having been trained in photography, I endeavor to document the essence of these places in visual terms. This subtle sense of presence is what I seek in my photography."

Mona C. Charles

I am the Director of Archaeological Resources for the Office of Community Services and Director of the Archaeological Field School at Fort Lewis College. I began my career in the Fort Lewis College Anthropology Department in 1990 as a research associate and teaching assistant. In addition to teaching the field school, other responsibilities include overseeing field work, laboratory analysis, database management, final report writing and production, part-teaching, grant writing, and public outreach. My particular archaeological interests include the Durango Basketmakers, geoarchaeology, GIS, geophysical survey and, most recently, historic military archaeology.

George Connell

George Connell began working with SWCA in 2004 on the Animas La Plata project, after receiving his bachelors degree in Anthropology. He is an archaeological technician/crew chief in SWCA's Denver, Colorado office with more than six years of experience in performing archaeological surveys, excavations, and monitoring projects throughout Colorado, Utah, Nebraska, Wyoming, New Mexico, North Dakota, South Dakota, Texas, Oklahoma, and California. He has worked in both field and lab settings, including two seasons of archaeological excavation experience. Also he has marshaled tasks including feature and human burial excavations, soil profiles, artifact identification, and all aspects of field documentation, including pedestrian survey.

Carl E. Conner

Carl E. Conner has been an active field archaeologist for thirty years as owner and director of Grand River Institute (GRI). Operating under BLM, Forest Service and state permits, he has administered and participated in the cultural resources survey of over forty thousand acres in Colorado and Utah, including many large-scale projects. He has been personally responsible for recording and evaluating hundreds of archaeological sites. In addition, as Principal Investigator, he has overseen numerous site testing, evaluation and excavation projects. In 2003, he formed Dominguez Anthropological Research Group, a non-profit company organized for the study of cultural resources in Colorado. His education includes: B.A. in Anthropology, Adams State College; Senior Research in Linguistics and Mesoamerican Archaeology, University of the Americas, Puebla, Mexico; Associate of Arts, Mesa State College; and Archaeology Field School, Adams State College, Llaves, New Mexico.

Kristin Deily

Kristin Deily is a graduate student at Colorado State University concentrating in archaeology under Dr. Jason LaBelle. Her thesis work will be concentrated on high altitude game drives, and specifically those located at Rollins Pass, Colorado. Kristin moved to Colorado from Virginia, where she worked as a CRM archaeologist for three years at Thunderbird Archaeology, a Division of Wetland Studies and Solutions, Inc. Before this Kristin received her BA from the University of Maryland, College Park in Anthropology with a concentration in Historic Archaeology and History with a concentration in the Middle East.

Steven Dominguez

Steven Dominguez is a Senior Archaeologist with RMC Consultants, Inc., and Research Faculty with the Colorado School of Mines Division of Engineering. Over the past 30 years, Steve earned his Bachelor of Arts and MA from the University of Colorado at Boulder, and PhD from the University of New Mexico in Albuquerque. During his three-year post-doctoral fellowship with the National Science he developed the geomorphic/vadose zone model for Hopi agricultural hydrology. Other research includes biotic resource use and geoarchaeology.

Casey Dukeman

Casey Dukeman is a lecturer in Anthropology and Geology at Western State College in Gunnison, CO, where he also received his B.A. in Geoarchaeology and History in 1997. Dukeman received his M.A. in anthropology from the University of Wyoming in 2002. After a brief stint as a high school teacher, Dukeman has been teaching at WSC since 2003 and is currently the Field Director at the Mountaineer Folsom site.

Shina duVall

Shina duVall received a B.A. in Anthropology from the Metropolitan State College of Denver and M.A. in Anthropology from the University of Colorado at Denver. She has conducted research, supported, and/or managed projects in Colorado, Utah, California, Wyoming, Wisconsin, West Mexico, and northern Peru. Her professional experience includes working as a Staff Archaeologist / Cultural Resource Specialist in environmental consulting - coordinating and managing projects in compliance with Section 106 of the NHPA, supervising field crews, conducting research and fieldwork, and completing project documentation. During her work in environmental consulting, she also worked extensively in NEPA compliance. She currently serves as the Section 106 Compliance Manager for Archaeology within the Office of Archaeology and Historic Preservation, and as an affiliate faculty member within the Department of Sociology, Anthropology, and Behavioral Science at the Metropolitan State College of Denver.

Susan East

Susan East is currently an archaeology technician at RMC Consultants, Inc. Susan earned her B.A. in anthropology from Colorado State University in Fort Collins. She attended field school through Colorado State's Archaeological Field School and participated in the Greybull River Sustainable Landscape Ecology (GRSLE) Project in Wyoming. It was there that Susan found her love of archaeology. Susan has also participated in various volunteer archaeological projects throughout her undergraduate education. She is extremely interested in public outreach to promote archaeological site stewardship. She is also interested in the study of lithic technology and trade networks. Susan plans to attend graduate school in the years ahead and is excited to be involved in the professional archaeological community.

Charles P. Egeland

Charles P. Egeland is currently a Visiting Assistant Professor at the University of North Carolina at Greensboro. His research interests focus on vertebrate taphonomy and prehistoric subsistence patterns. In addition to his current work on the Olsen-Chubbuck

archaeofauna, he is co-director of the Lori Depression Paleoanthropological Project in the Republic of Armenia, which aims to document the first human dispersals from Africa around 2 million years ago.

Kevin Gilmore

I am currently a Senior Archaeologist/Principle Investigator in the Denver office of ERO Resources. I grew up in Denver, and received my BA from Colorado College, my MA in CU-Boulder, and my PhD in Geography from the University of Denver. I'm interested in how changing climate and population influenced prehistoric culture change, and I'm investigating the high-resolution records of paleoenvironment from small spring-fed wetlands in eastern Colorado. I have published on the archaeology of eastern Colorado, prehistoric population, geoarchaeology, gender in prehistoric plains society, landscape archaeology and , most recently, the origin and evolution of "pocket fens" in eastern Colorado.

Travis Hill

I am a junior undergrad at Colorado State University. I am from Peaceful Valley, right next to the Indian Peaks Wilderness. I have always had a deep love for the mountains I grew up in, and now I have started kindling an interest in the cultures that have lived in these beautiful places before myself.

John Kennedy

Mr. Kennedy is an archaeologist with SWCA's Denver Office. He has more than 15 years of professional experience in academic archaeology, cultural resource management, and environmental consulting in Colorado, Wyoming, North and South Dakota, Nebraska, and Utah. Zooarchaeology is a favored specialty and he has excavated and/or analyzed faunal remains from large bison bonebeds, bison jumps, open kill sites including a large elk assemblage, and taxonomically diverse rockshelter assemblages. Beyond bones, his experience encompasses all varieties of prehistoric and historic artifacts analysis, with a particular interest in projectile points.

Eric Kneebone

Eric Kneebone is a 2008 Graduate of Fort Lewis College. Since then he has acted as a Teaching Assistant for the Fort Lewis College Field School, and as an Intern with the BLM completing historic mining surveys in South Mineral Creek and Ice Lakes Basin. He has also worked for Powderhorn Archaeology on mining sites in the Animas Forks and Gladstone areas, and has assisted in identifying artifacts in the Center of Southwest Studies collections.

Angie Krall

Angie Krall currently is the Heritage Program Manager for the San Luis Valley Public Lands Center, a 'Service First' unit that stewards both Forest Service (Rio Grande National Forest) and Bureau of Land Management (San Luis Resource Area) public lands within and around the San Luis Valley. Originally from Pueblo, Colorado, Angie obtained an undergraduate degree in Anthropology, with a minor in Southwest Studies, from the Colorado College (1992) and an M.A. in Applied Archaeology from Northern

Arizona University (2000). Most of her career has been spent working as a Forest Service archaeologist on the Medicine Bow-Routt, Arapaho-Roosevelt, Shoshone, Bighorn, and the Tahoe national forests. For six years she ran the Ute Conservation Corps, a job training and conservation program for indigenous youth from the Northern Ute Tribe. She has also worked as a consultant for Anthropological Research L.L.C. in New Mexico and Arizona, conducting traditional cultural properties investigations with the Hopi, Acoma, Laguna, Yavapai and Western Apache tribes. Angie currently serves as adjunct faculty with the Alpine Campus of the Colorado Mountain College for various Outdoor Education classes including Southwest Field Exploration centered in southeastern Utah. Her interests lie in public archaeology, preservation, and interpretation.

Kristin A. Kuckelman

Kristin A. Kuckelman is Senior Research Archaeologist at the Crow Canyon Archaeological Center near Cortez, Colorado. She has conducted field research in the western United States for more than 30 years, the results of which have been published in numerous volume-length reports, in journals such as *Kiva*, *American Antiquity*, *American Scientist*, and *Polish Contributions in New World Archaeology*, and in many edited volumes on the archaeology of the American Southwest. She helped pioneer the publication of site reports and research databases on the Internet and served as president of the Colorado Council of Professional Archaeologists (2009/2010). Her research interests include field methodology, violence and warfare, anthropophagy, architectural patterning, environmental impacts on societal decision-making, and the thirteenth-century depopulation of the Mesa Verde region.

Jason LaBelle

Dr. Jason LaBelle is an assistant professor of Anthropology at Colorado State University. He is also Director of the Lab of Public Archaeology and runs the annual CSU field school.

Annie Maggard

Annie Maggard is a second-year graduate student at Colorado State University. Her research interests include high-altitude archaeology, the protohistoric West, and GIS in cultural resource management. She has conducted field survey and excavation for projects throughout Colorado, and hopes to continue to live and work in the Rocky Mountains upon her graduation.

Curtis Martin

Curtis Martin was awarded his Bachelors and Masters degrees in Anthropology from the University of Colorado. His initial field experiences were under the tutelage of Joe Ben Wheat and Doug Scott. These were followed by three seasons with the University of Colorado Mesa Verde Research Center under the guidance of David Breternitz and Al Lancaster where he served as Project Archaeologist for the excavation and stabilization of the Escalante Site, the Uncompahgre Plateau Environmental Impact Statement survey, and the stabilization inventory of the masonry sites in what is now the Canyons of the Ancients National Monument. He also worked on the re-excavation and stabilization of Lowry Ruins near Mesa Verde. Curtis has worked as an archaeologist for the Colorado

State Highway Department, the Museum of Northern Arizona, and a series of private cultural resource management firms in Colorado, Utah, Kansas, Arizona, New Mexico, California, and Switzerland. In addition to performing Cultural Resource Management contracts through Grand River Institute (GRI) in Grand Junction, he is Principal Investigator for the Colorado Wickiup Project with the non-profit organization Dominguez Anthropological Research Group (DARG). Curtis teaches Field Techniques in Archaeology at Mesa State College.

Todd McMahon

Todd McMahon is a Staff Archaeologist with History Colorado where he has been employed for the past eighteen years. Todd earned his BA in anthropology from the University Of Colorado at Denver in 1989. He continues to hold research interests for the Formative Period in west-central Colorado and has written past journal articles and organized symposia sessions on the Fremont culture of northwestern Colorado and GIS computer applications for archaeology. Todd regularly gives school and adult talks on archaeology and local history. Todd is a 4th generation Colorado native, married with three children, has served on many historic preservation committees, and is a former Board Member and Treasurer of the Colorado Council of Professional Archaeologists.

James C. Miller

James C. Miller is a staff archaeologist, geoarchaeologist, geologist and paleontologist for Dominguez Anthropological Research Group and Grand River Institute, both in Grand Junction, CO. With over 30 years of field experience, Miller is currently a PhD candidate in geology at the University of Wyoming, Laramie, (second area in archaeology) and an adjunct professor in the Social and Behavioral Sciences Department at Mesa State College, also in Grand Junction. Miller's research interests include lithic materials, geoarchaeology, and Paleoindian and Archaic life ways.

Mark Mitchell

Mark D. Mitchell received a bachelor's degree in Geography from the University of Utah, a master's in Anthropology from the University of Colorado at Denver, and currently is a doctoral student at the University of Colorado at Boulder. He has worked for the U.S. Forest Service and several cultural resource management firms, and has directed excavations in Colorado, Kansas, Utah, Wyoming, Nebraska, and North Dakota. He also is president of Paleocultural Research Group, a member-supported nonprofit organization devoted to archaeological research and public education in the Great Plains and Rocky Mountains. Mitchell's research interests center on the archaeology of the northern Great Plains, with a particular emphasis on the farming villages of the Missouri River region. His current work traces changes in the social and economic organization of northern Middle Missouri communities during the seventeenth and eighteenth centuries. He also has research interests in historic Native American art, in the anthropology of technology, and the history of archaeology.

Robyn Watkins Morris

Robyn Watkins Morris is the Field Office Archaeologist at the Little Snake Field Office located in Craig, Colorado. She graduated with her Master's in Anthropology from

University of Wyoming in 2000. She has worked all over the western United States (Arizona, Colorado, California, Wyoming, Alaska, Utah), but loves the archaeology of the sagebrush steppe where she is currently.

Jenn Mueller

Jenn Mueller is a staff archaeologist and faunal analyst for Alpine Archaeological Consultants, Inc. in Montrose, CO. She received her M.A. from Washington State University. Her research interests include middle range societies, prehistoric social organization and social relations, the Protohistoric era, faunal materials, and applications of ethnographic analogy.

Richard Ott

Richard Ott is Administrative Director for Dominguez Anthropological Research Group, Inc. (DARG). He serves as Project Coordinator for DARG's Colorado Wickiup Project and Ute Ethnohistory Project. His research interests include cultural landscapes and interpretive/cross-boundary information systems and applications. His current personal work is focused on development of documentary and interpretive ethnohistorical media. He holds a Bachelor of Fine Arts from the University of Colorado with minor study in paleontology.

Scott Phillips

Scott Phillips is a Cultural Anthropologist, Archaeologist, and Historian with SWCA Environmental Consultants in Broomfield, established there for over the last 8.5 years. He has worked in Colorado cultural resources management since 1995, since receiving his Master's degree from the University of Colorado - Boulder.

Lorraine Poulson

Lorraine Poulson is a seasonal archaeologist for the Bureau of Land Management at the Little Snake Field Office in Craig, CO. Poulson trained with Mike Collins at UT-Austin and the (Clovis) Gault site. She attended Mark Stiger's field school at the (Folsom) Mountaineer Site. Graduating from Mesa State College in 2005 with a BA in Sociology/Anthropology and studies in Geology she also has a minor degree in GIS. After one field season each with Alpine Archaeology and the Grand Junction BLM, the Craig BLM best fits Poulson's professional and family interests as a local land owner.

Alan Reed

Alan Reed is one of the founders and owners of Alpine Archaeological Consultants, Inc. and currently serves as a principal investigator. He has worked as a professional archaeologist for 32 years, mostly in Colorado and the surrounding states.

Michelle Slaughter, RPA

I am a CCPA board member, historical archaeologist, and the principal of Avalon Archaeology, a woman-owned, small business in Denver, which specializes in cultural resources management. I have worked at four of Colorado's Most Endangered Places, three of which have been saved, and one of which is in the process of being saved. I love working on projects that combine both historic preservation and archaeology, and enjoy

opportunities to learn about new places while working with people who are as passionate as I am about the past, its relevance in the present, and its preservation for the future.

Collin Smith

As an anthropology student at Western State College, there are many resources available in the field of archaeology. With so much cultural history in the Gunnison Valley, the surrounding archaeological sites provide great research opportunities. My anthropology professors, Dr. Mark Stiger, Casey Dukeman and Lynn Sykkink are all excellent mentors at Western State College. I feel that the Western State College anthropology department is privileged in that the students have access to a Scanning Electron Microscope or (SEM). Not many schools have an SEM, and the ones that do charge 365 dollars an hour to use. The maintenance on our SEM is 10,000 dollars a year. Being able to work on the Mountaineer Archaeological site only a few miles from campus and having access to resources such as the SEM is great experience for an aspiring archaeologist.

Brock Stai

Brock Stai is a junior at Western State College majoring in Anthropology and a member of Lambda Alpha, Epsilon of Colorado. He currently lives in Crested Butte, CO.

Jennie O. Sturm

Jennie O. Sturm is the owner of TAG Research by Sturm Inc., a company that specializes in geophysical consulting for archaeology, historic preservation, and environmental studies. She earned her B.A. ('04) and M.A. ('06) at the University of Denver under the direction of Dr. Larry Conyers. Ms. Sturm has over eight years of experience working with CRM firms, universities, non-profit organizations, and government agencies to develop integrated approaches to subsurface mapping and site analysis. She has done geophysical work in 14 U.S. states and several countries, including Peru and Israel. When not in the field, she enjoys exploring the outdoors in her beautiful home state of New Mexico.

Laine Vandal

Laine Vandal graduated with honors from the University of Northern Colorado in 2009 with a B.A. in anthropology, art history, and drawing. While attending UNC, Laine participated in excavation and survey in North Park, Colorado and assisted in lab work and lithic illustration. In 2009, Laine became involved in public awareness and preservation efforts for the historic site of Dearfield, Colorado. Laine began working for RMC Consultants in August 2009 during excavation for the new History Colorado Center. She was responsible for developing the laboratory methods and organizing the artifact analysis database for the project and was responsible for curation. Laine plans to pursue a master's degree in geoarchaeology.

Gregory Williams

Gregory Williams received his MA in Anthropology/Archaeology from the University of Colorado Denver in December 2009. He also holds an MBA from UCD and a BA in Anthropology/Archaeology from UNC in Greeley. Greg teaches archaeology and cultural anthropology as a part-time faculty at Aims Community College. He works

occasionally for several CRM firms and the Bureau of Land Management as an archaeologist. He is a former member of the Colorado State Historic Preservation Review Board (appointed by Governor Romer) and is the outgoing editor of the CCPA newsletter. His interests include cultural ecology, behavioral and experimental approaches to archaeology, agency, and symbolism. He is revising an upcoming journal article on Rock Art and Ritual and will present on this topic at SAA in Saint Louis.

Thomas Witt

Thomas Witt received his B.A. in Anthropology in 1996 from the University of Maine and his M.A. in Historical Archaeology from the University of Massachusetts at Boston in 2007. He has been employed with SWCA since 2007 working on a variety of archaeological and architectural history projects in Colorado and throughout the west.

Sarah E. Wolff (graduate student)

Sarah Wolff is a native Wyomingite who hails from Cheyenne, and is an alumnus of Laramie County Community College. She graduated from the University of Wyoming with a BA in anthropology and history in 2007, and has continued on with her education by earning a MA in biological anthropology from Pennsylvania State University December of 2009. In the fall, she plans to enter a Ph.D. program at the University of Arizona in archaeology. She is excited to be presenting at CCPA again, and hopes that everyone takes a-“lichen” to her presentation on lichenometry.

Shana Wolff (undergraduate student)

Shana Wolff intends to graduate in May 2010 from Laramie County Community College, with an Associate of Arts in anthropology to complement her Associate of Science in general science completed in December 2009, from the same institution. She currently plans to pursue her research interest in reconstructing the past through her interests in geology, chemistry, biology, and anthropology. In fall 2010, she will transfer to the University of Wyoming to complete her bachelor’s degree, and hopes to continue her education by pursuing a Ph.D.

Others Short Bios:

Dudley Gardner, Western Wyoming College; Laura Pasacreta, Western Wyoming College and archaeological consultant; Glade Hadden, Montrose Field Office, Bureau of Land Management, Colorado

Josh Boyd and Greg Meldrum are both students at Western State College of Colorado, as well as employees of the anthropology laboratory. They are also the President and Vice-President, respectively, of the Western State College Anthropology Club. Megan Jamison is a 2009 graduate of Western State with a major in anthropology.

Both Ashleigh Knapp and Kristin Hare graduated from Colorado State University and currently work in Steamboat Springs for the Medicine Bow-Routt National Forest, Hahns Peak-Bears Ears/Yampa Ranger Districts, Colorado.