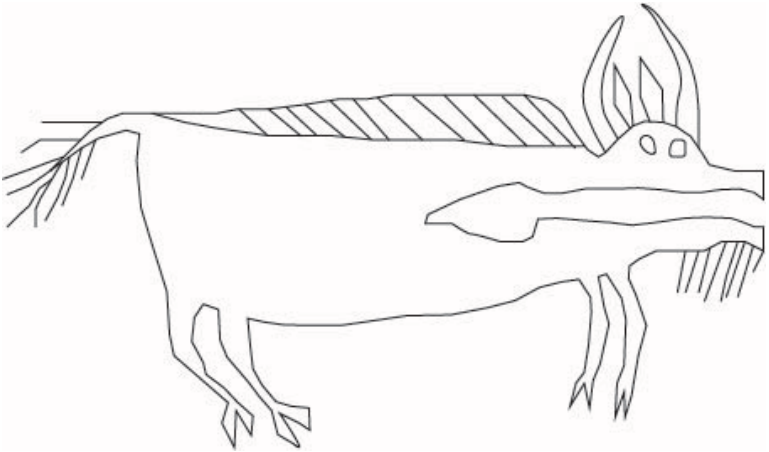
73nd Annual Plains Anthropological Conference



CONFERENCE PROGRAM & ABSTRACTS

Iowa City, Iowa
October 14-17, 2015

ACKNOWLEDGEMENTS

Conference Host: University of Iowa

Conference Committee:

- Matthew E. Hill Jr. (co-chair)
- Matthew G. Hill (co-chair)
- Margaret Beck (program & abstract coordinator)
- John Hedden (tour leader)
- Cindy Nagel (tour leader)
- Marlin Ingalls (tour leader)
- William Whittaker (tour leader)

We thank the staffs of the UI Center for Conferences and the Sheraton Iowa City Hotel for their exceptional support services for this conference. In particular, we thank Heather Kruse and Katie Johnson for all their patience and help.

Several individuals made special contributions to the success of this conference, including Amy Bleier, Dale Henning, Shari Knight, Kelly Flinn, Chris Johnston, Marty Mehlert, and Beverly Poduska. We also wish to thank the many volunteers and generous sponsors of the 73nd Plains Anthropological Conference.

About the 2015 Plains Anthropological Conference Logo:
The logo is an adaptation of a bison incised into a large catlinite tablet. The tablet was recovered from the Blood Run/Rock Island National Historic Landmark site (13LO2/39LN2) located on both sides of the Big Sioux River near Sioux Falls, SD. The immense site, with both late prehistoric and protohistoric Oneota tradition villages and mound groups, is generally identified with the ancestral Omaha/Ponca with much evidence of ancestral Ioway/Oto residence as well. Incised tablets from Blood Run bear motifs including bison, small mammals, birds, bird men, arrows, and various stylized elements, sometimes superimposed on both sides of the same tablet. Ethnographic accounts suggest that these tablets may have functioned in hunting magic.

CONFERENCE SPONSORS

The conference greatly benefitted from the generous donations of our numerous sponsors:

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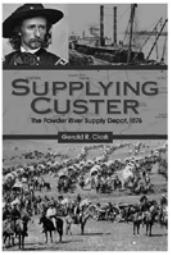

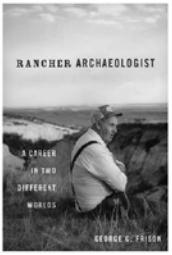

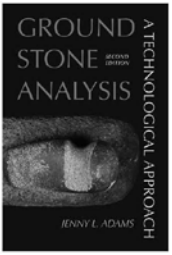

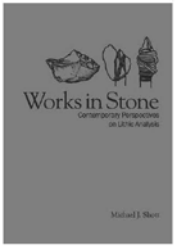

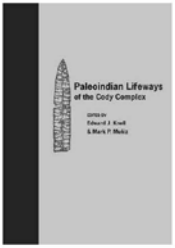

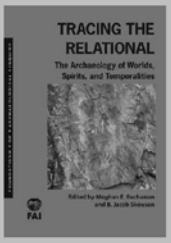

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GENERAL INFORMATION

Conference Headquarters: All conference events—except for guided tours on Wednesday and Thursday, the reception on Thursday at Old Brick, and the Friday banquet at hotelVetro—will be held at the Sheraton Iowa City Hotel (201 S. Dubuque Street, Iowa City).

Parking: Parking is available immediately next to the hotel at the City of Iowa City Dubuque Street Garage (220 S. Dubuque St.). Self-parking is $12 per night and Valet parking is $30 per night (see map in conference packet for Dubuque Street Garage).

Transportation to Airport: The Sheraton Hotel does not offer shuttle service to the airport. There are several ways to get to and from the airport including various national rental car companies, shuttle, and taxi service.

Airport Shuttle Services: Companies that offer airport shuttles include:

- Airport Shuttle Service: 1-800-725-8460
- Airport Express: 1-800-383-2219

Taxi Services: Taxi companies can make airport pick-ups and drop-offs include:

- American Class Taxi: 319-363-8294
- Century Cab: 319-365-0505
- Yellow Cab Iowa City: 319-338-9777
- Marco's Taxicab Co.: 319-337-TAXI

Registration: The registration and information table is located in the basement floor of the Sheraton Hotel immediately adjacent to Amos Dean Ball Room A. Hours of operation: Wednesday, October 14 from 4:00-8:00 pm, Thursday, October 15, from 7:30 am -3:30 pm, Friday, October 16, from 7:30 am -3:30 pm, and Saturday, October 17 from 7:00 10:00. The registration area will likely be closed over the lunch break.

Presentation Preview Area*:* Computers are available in the hotel business center in the Sheraton Hotel lobby.

Bookroom and Exhibits: The following organizations, companies, and individuals will exhibit in the Johnson Meeting Room 1, 2, 3 of the Sheraton Hotel. Hours of operation: Thursday and Friday, 8:00 am – 5:00 pm and Saturday, 8:00 am-12:00 pm:

- Cambridge Scholars Publishing
- Center for the Study of the First Americans
- Donna C. Roper Memorial Book Sal
- Elliot Werner Publications, Inc.
- Iowa Archeological Society
- Nebraska Association of Professional Archeologists (NAPA)
- Plains Anthropologists/Maney Publishing
- QLC, Inc. ArchaeoLINK-Americas
- University of Iowa Press
- University of Oklahoma Press

Conference Souvenirs: In order to keep conference expenses low, and because of the high environmental impact of textile manufacturing, there will be no conference shirts or hats.

Coffee Breaks & Refreshments*:* Coffee, tea, and water will be available each morning from 9:40-10:00 am and each afternoon from 2:40-3:00 pm in the hallway out from the Amos Dean Ball Room A, B, C. Many thanks to several sponsors for funding our coffee breaks!

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Conference Events: Highlights

Wednesday (October 14)

Pre-Conference Tour: The Meskwaki Archaeology tour participants should meet in the Sheraton Hotel lobby at 10:30 am for departure at 11:00 am. The fieldtrip should return to the hotel by approximately 5:00 pm. The tour will provide lunch and water as part of admission fee. *Participants of the tour were required to enroll prior to the conference.*

Board Meeting: The Plains Anthropological Society Board of Directors will meet on Wednesday, October 29th at 6:00 pm in the Robert Lucas Meeting Room.

Early Bird Party: The Early Bird Party will be from 7:00 pm – 11:00 pm in the Sheraton Hotel's Amos Dean Ballroom A, B, C. Free food and drink are available while they last. A cash bar is available.

Thursday (October 15)

Donna Roper Memorial Tribute; An informal gathering of friends and colleagues will celebrate the life and career of Donna Roper in Amos Dean Ballroom A from 3:00-5:00 pm.

Self-guided Tour of the Office of the State Archaeologist (OSA): The OSA (700 S. Clinton St), a University of Iowa research center since 1959 and the state archaeological repository, will be open 1:30 to 4:00 PM for informal visits and self-guided tours (i.e., feel free to stop by and visit!). Collections Manager John Cordell will be on hand to answer questions. Select materials from Nebraska phase sites in SW Iowa, a Prairie Lakes Woodland site in NW Iowa, and historic sites in Iowa City will be available for inspection as will other Iowa archaeology materials and posters. The OSA is directly south of the Sheraton Hotel– exit the hotel on the south side and proceed south across Burlington on Dubuque Street. One half-block after crossing the railroad tracks turn right and the OSA NE entrance is directly ahead of you across the parking lot. Total walk from the Sheraton ca. 4 blocks.

National Association of State Archaeologists, Regional Meeting. By invitation, regional members of the National Association of State Archaeologists will meet 4:00-6:00 PM in the Robert Lucas Meeting Room.

Walking Tour of History, Architecture, and Drinking: This free event involves a leisurely walking tour of downtown Iowa City. Tour will highlight local architecture, history, and interesting drinking establishments around the conference hotel. The tour will leave Sheraton Hotel lobby around 3 pm and will return to the around 6 pm.

Thursday Reception: A reception from 6:00 – 8:30 pm will occur at Old Brick (26 E. Market Street, Iowa City). Food and drinks are available while they last. *Attendees of the reception were required to purchase tickets prior to the conference*.

Old Brick is located about 0.5 miles north of the Sheraton Hotel. Because of the short distance it is assumed that most participants will walk to Old Brick from the Sheraton Hotel (see walking directions below). Limited parking for individuals with limited mobility is available along west sides of the building. Some street parking may also be available near the building.

Walking Directions to Old Brick from Sheraton:

- Leave the hotel lobby from the north entrance
- Turn west (left) onto E. College Street (a pedestrian walkway) and walk one block toward S. Clinton Street
- On S. Clinton Street turn North (right) and walk three blocks towards E. Market Street
- On E. Market Street turn east (left) and walk about a ¼ block

Friday (October 16)

Special Session: **STUDENT POSTER COMPETITION** (Session 17, Amos Dean Ballroom D, 9:00-11:00 am). Students competing for the Plains Anthropological Society Student Poster Awards will present their research.

Student workshop; **PROFESSIONAL BEHAVIOR, NETWORKING, AND FINDING A MENTOR** (Robert Lucas Meeting Room 11:30 – 1:30). The Student Affairs Committee has organized a workshop lunch. Two guest speakers (Bonnie Pitblado of the University of Oklahoma and John Doershuk of the Iowa Office of the State Archaeologist) will present on issues related to professional behavior (specifically dealing with gender harassment), how to find a mentor, and networking skills. A significant portion of this workshop will be an open for discussion, where students can ask the speakers questions regarding these topics and learn from the speaker's experiences. *Participants in the workshop were required to enroll prior to the conference.*

Special Session: **STUDENT PAPER COMPETION** (Session 21, Amos Dean Ballroom C, Friday, October 16, 1:00-4:00 pm). Students competing for the Plains Anthropological Society Student Paper Awards will present their research.

Business Meeting: The annual business meeting of the Plains Anthropological Society is open to all society members from 5:00-6:00 pm in the Amos Dean Ballroom B and C. Please take an active part in your Society.

Board Meeting: The second Plains Anthropological Society Board of Directors meeting will take place at 6:00 pm in the Robert Lucas Meeting Room

Pre-banquet Cash Bar: A cash bar will be set up at the termination of talks around 5 pm in the Hotel Vetro's Plaza 3 area, which is immediately outside of the Hotel Vetro's E.W. Lehman Ballroom 1. Hotel Vetro (201 South Linn Street) is located next door to the Sheraton.

Conference Banquet: The Conference Banquet will begin at 6:30 pm on in the Hotel Vetro's E.W. Lehman Ballroom 1. Hotel Vetro (201 South Linn Street) is located next door to the Sheraton. *Banquet tickets must have been purchased prior to the conference*.

Post-banquet Speaker: All conference attendees are invited to the presentation by our post-banquet speaker in the Hotel Vetro's E.W. Lehman Ballroom 1. The presentation will take place immediately after the banquet, approximately 8:00 pm. The presentation by Dr. James M. Skibo (Illinois State University) is "The Origins and Adoption of Pottery."

Dr. Skibo is a Distinguished Professor and Chair of the Department of Sociology and Anthropology at Illinois State University. His areas of specialization include ceramic analysis, archaeological theory, and the prehistory of the Southwestern and Midwestern United States. He has done research in the Philippines as well as excavation projects in Arizona, New Mexico, and he is currently director of the Grand Island Archaeological Project in the Upper Peninsula of Michigan. Dr. Skibo is also the co-editor of *The Journal of Archaeological Method and Theory* and he has authored or edited over 10 books and dozens of journal articles.

Saturday (October 17)

Iowa Archeological Society (IAS) Board Meeting. An open meeting of the membership of the Iowa Archaeological Society will take place from 7:30-8:00 am in Amos Dean Ballroom C.

Special Session **CURRENT RESEARCH IN IOWA ARCHAEOLOGY** (Session 27, Amos Dean Ballroom C, Saturday, October 17, 8:00-12:00 am). Associated with the Iowa Archaeological Society fall meeting, this session highlights recent archaeological research in Iowa

International Archaeology Day-Iowa City: Ancient Technology from pre-AD 1500 (Located on the lawn of the UI Pentacrest in front of Macbride Hall at intersection of Iowa Ave and S. Clinton St). The Iowa Society of the AIA, Office of the State Archaeologist, the UI Pentacrest Museums, Iowa Archeological Society, and the UI Departments of Anthropology, Classics, Religion, and Arts and Art History will team up to present information on ancient technology. Demonstrations include flint knapping, hide scraping, dart throwing with atlatls, Native American and historic pioneer games, bone marrow extraction, Roman bread cooking in terra cotta oven, pottery making, and several more. Specialists will be on hand to answer questions and offer hands-on participation.

SCHEDULE OF PRESENTATIONS

THURSDAY MORNING (October 15, 2015)

Session [1] Room: ***Amos Dean Ballroom A***
[GENERAL SESSION] GEOGRAPHIC INFORMATION SYSTEMS AND GEOPHYSICAL RESEARCH.
Chair: Kayla Bradshaw

8:20 Bradshaw, Kayla. WYOMING STATE SPATIAL AND TABULAR DATA ON LOOTING AND ITS APPLICATION IN UPCOMING RESEARCH
8:40 Bristow, Emilia, Joe Alan Artz. MATCHING MAPS TO LANDSCAPES: USING GIS TO VISUALIZE THE MORMON TRAILS ACROSS IOWA
9:00 Brunette, Jeremy, Matthew Douglass, Zachary Day. CREATING UNITY: DEVELOPING A COMMUNITY OUTREACH TOOL THROUGH PUBLIC PARTICIPATION IN THE RECREATION OF SULPHUR SPRINGS, INDIAN TERRITORY
9:20 Carr, Erin. GEOPHYSICAL ANALYSIS OF THREE SOD HOUSES ON THE FRENCH TABLE IN CUSTER COUNTY, NEBRASKA
9:40 ***** BREAK *****
10:00 Gibson, Terrance. IN SEARCH OF THE INVISIBLE IN ARCHAEOLOGY
10:20 Huffman, Thomas, Frank Lee Earley. CADDOAN ARCHAEOLOGY ON THE HIGH PLAINS: A GEOPHYSICAL SURVEY OF THE WALLACE AND HOBSON SITES, CENTRAL COLORADO
10:40 Kurtz, William. RELOCATING AND RECORDING MOUNDS THROUGH FIRE AND LIDAR
11:00 Kvamme, Kenneth L. RECENT GEOPHYSICAL FINDINGS AT CHIEF LOOKING'S VILLAGE, NORTH DAKOTA

Session [2] Room: ***Amos Dean Ballroom B***
[SYMPOSIUM] PEOPLE OF THE WILLOWS: RESEARCH IN THE STUDY OF HIDATSA ORIGINS, ARCHAEOLOGY, HISTORY, AND CULTURE, PART 1.
Organizers: Kacy L. Hollenback and Jay T. Sturdevant.
Symposium Chair: Calvin Grinnell.

8:00 Wood, W. Raymond. THE HIDATSAS: CULTURE HISTORY REVEALED

8:20 Calabrese, Cal. MIDWEST ARCHEOLOGICAL CENTER KNIFE RIVER INDIAN VILLAGES RESEARCH PROGRAM IN RETROSPECT
8:40 Krause, Richard. THE HIDATSA: ONE OF NORTH DAKOTA'S FIRST NATIONS
9:00 Green, William. REVISITING THE WISCONSIN ORIGIN HYPOTHESIS FOR THE AWAXAWI AND HIDATSA-PROPER SUBGROUPS OF THE HIDATSA
9:20 Mitchell, Mark D. HIDATSA AND MANDAN COMMUNITY VARIATION
9:40 ***** BREAK *****
10:00 Toom, Dennis.THE SAGEHORN VILLAGE ENIGMA
10:20 Belle, Nicky, Laura L. Scheiber. THE ROCKS AT JOLIET
10:40 Harty, Jennifer. UNCOVERING TRADE IN OLD SANISH
11:00 Schneider, Fred. EXOTIC NATIVE PLANT MATERIALS OBTAINED BY THE HIDATSA THROUGH TRADE
11:20 Hollenback, Kacy L.. "WE WERE ONCE A NUMEROUS PEOPLE": *MAAXAAGIHDIA* [SMALLPOX] AMONG THE HIDATSA

(This symposium continues as Session 9 in the afternoon.)

Session [3] Room: *Amos Dean Ballroom C*
[GENERAL SESSION] BIOARCHAEOLOGY AND FORENSIC ARCHAEOLOGY.
Chair: Kent Buehler (Oklahoma Archaeological Survey)

8:40 Buehler, Kent. WHAT LIES BENEATH: FORENSIC ARCHAEOLOGY OF A TRIPLE HOMICIDE IN OKLAHOMA
9:00 Ellis, Chelsea. THE MCLEMORE SITE: A BIOARCHAEOLOGICAL STUDY OF LIFESTYLE AND MORTALITY
9:20 Fitzpatrick, Tony, Leslie Brown. FEMORAL LENGTH ESTIMATION IN NATIVE NORTH AMERICAN POPULATIONS

Session [4] Room: *Amos Dean Ballroom C*
[GENERAL SESSION] PLANT REMAINS AND RESIDUE ANALYSIS.
Chair: Mary Adair

10:00 Adair, Mary J. NEW INTERPRETATIONS FROM OLD COLLECTIONS; GLENWOOD AREA ARCHAEOBOTANICAL REMAINS FROM 13ML129

10:20 Gardner, Dudley, Martin Lammers. A BRIEF OVERVIEW OF EXCAVATIONS ON APISHIPA (1200 TO 800BP) SITES ALONG PURGATORY RIVER CANYON, COLORADO
10:40 Rutecki, Dawn M. COOKING AND CONSUMPTION: WHAT FTIR CAN TELL US ABOUT SPIRO LIFEWAYS
11:00 Stuart, Glenn. ARCHAEOLOGICAL PALYNOLOGY OF THE WOLF WILLOW SITE

Session [5] Room: ***Amos Dean Ballroom D***
9:00-11:00 am
[POSTER SYMPOSIUM] SUMMER 2015 ARCHAEOLOGICAL RESEARCH AND OUTREACH IN THE GUNNISON BASIN, COLORADO.
Organizer: Bonnie Pitblado (U Oklahoma)

1. Dalpra, Cody. THE DISTRIBUTION OF QUARTZITE TOOLSTONE THROUGHOUT PREHISTORY AND ACROSS THE LANDSCAPE, UPPER GUNNISON BASIN, COLORADO
2. Oliver, J. Matthew. CHERT QUARRIES OF THE UPPER GUNNISON BASIN, SOUTHWEST COLORADO
3. Dudley, Meghan J. and William R. Ankele. CODENAME PELKO: A REASSESSMENT OF PELICAN LAKE AND ELKO PROJECTILE POINTS IN THE NORTHERN AND SOUTHERN ROCKY MOUNTAINS
4. Tharalson, Kirsten and William R. Ankele. FOLLOWING THE LAKE FORK OF THE GUNNISON RIVER: 10,000 YEARS OF OCCUPATION IN THE GUNNISON BASIN, COLORADO
5. Cooley, Delaney. SEARCHING HIGH AND LOW: AN EXPLORATION OF UTE OCCUPATION IN COLORADO
6. Andrew, Holly and Bonnie Pitblado. 2015 PREHISTORIC ARTIFACT ROADSHOWS IN SOUTHWESTERN COLORADO: CASE STUDIES IN CULTIVATING CITIZEN-SCIENTIST PARTNERSHIPS

Session [6] Room: ***Amos Dean Ballroom D***
9:00-11:00 am
[POSTER SESSION] WYOMING ARCHAEOLOGY

7. Burnett, Paul, Lawrence C. Todd, Kyle Wright. EVOLUTION OF THE SHOSHONE NATIONAL FOREST PREHISTORIC ARCHAEOLOGICAL SITE PROBABILITY MODEL
8. Carroll, Sean, Damian R. Kirkwood, Rick L. Weathermon. UPDATED FINDINGS ON THE DMZ SITE (48PL1794): A SERIES OF ROCKSHELTER AND TERRACE OCCUPATIONS IN EASTERN WYOMING

9. Hawley, Kirsten, Laura L. Scheiber, Amanda Burtt, Cally Steussy, Adam Stevens. THE HEART MOUNTAIN ARCHAEOLOGY PROJECT: IN THE SHADOW OF FORETOP'S FATHER
10. Ollie, Naomi. PREHISTORIC USE OF PINE RIDGE, CONVERSE AND NATRONA COUNTIES, WYOMING: A SYNTHESIS OF STONE FEATURES AND ECOLOGICAL TRAITS WITHIN AN ARCHIPELAGO OF THE PLAINS
11. Seifers, Ryann, Laura L. Scheiber, Amanda Burtt, Samuel Haskell, Jacob Heredos, Ian Carrico, Stephón Gilder (Indiana U), Lucas Chraponski. CONTINUED INVESTIGATIONS AT THE CALDWELL CAMPSITE (48FR6917), A LONG-TERM BASECAMP IN THE ABSAROKA MOUNTAINS
12. Todd, Lawrence C., Emily Brush (Iowa State), Kyle Wright. FORTY DAYS IN THE WILDERNESS: 2015 PARK COUNTY HISTORIC PRESERVATION COMMISSION ARCHAEOLOGICAL INVENTORY AND ASSESSMENT ON THE SHOSHONE NATIONAL FOREST, WYOMING

THURSDAY AFTERNOON (October 15, 2015)

Session [7] Room: ***Amos Dean Ballroom A***
[SYMPOSIUM] NEW APPROACHES AND REVISED METHODS IN THE ANALYSIS OF GREAT PLAINS CERAMICS.
Organizers: Sarah Trabert and Donna C. Roper.

1:00 Trabert, Sarah, Matthew E. Hill, Jr.. PXRF ON THE PLAINS: A CAUTIONARY TALE OF FRUSTRATION, DISAPPOINTMENT, AND OPTIMISM
1:20 Beck, Margaret. SOURCING LIMESTONE TEMPER: A KEITH PHASE CASE STUDY
1:40 Clauter, Jody. MOVEMENTS OF POTTERY AND PEOPLE: PETROGRAPHIC THIN-SECTION ANALYSIS FROM THE ELK MOUNTAIN SITE (48CR301)
2:00 Lints, Andrew, John W. Ives, Kris Fedyniak. SCRATCHING THE SURFACE OF A PRECONTACT PLAINS RITUAL PHENOMENON
2:20 Scott Cummings, Linda, Donna C. Roper. RADIOCARBON DATING THE CENTRAL PLAINS

Session [8] Room: ***Amos Dean Ballroom A***
3:00-5:00 pm
DONNA ROPER MEMORIAL TRIBUTE
Session [9] Room: ***Amos Dean Ballroom B***

[SYMPOSIUM] PEOPLE OF THE WILLOWS: RESEARCH IN THE STUDY OF HIDATSA ORIGINS, ARCHAEOLOGY, HISTORY, AND CULTURE, PART 2.
Organizers: Kacy L. Hollenback and Jay T. Sturdevant.
Symposium Chair: Calvin Grinnell

1:00 Scullin, Michael. HOW DOES YOUR GARDEN GROW? BUFFALOBIRD-WOMAN'S GARDEN—YIELDS AND VARIABILITY
1:20 Sturdevant, Jay, Steven L. DeVore, Blair Schneider. NEW GEOPHYSICAL INSIGHTS INTO VILLAGE LANDSCAPES AT KNIFE RIVER INDIAN VILLAGES NATIONAL HISTORIC SITE.
1:40 Wiewel, Adam S. DIGITAL PHOTOGRAMMETRY AND RUBBERSHEETING: USING AERIAL PHOTOGRAPHS TO EXAMINE SITES ALONG THE MISSOURI RIVER IN NORTH DAKOTA
2:00 Picha, Paul. WINDS OF THE UPPER MISSOURI: FRANCES DENSMORE AND ETHNOMUSICOLOGY AMONG THE HIDATSA INDIANS
2:20 Park, Indrek. LINGUISTIC LANDSCAPES IN HIDATSA CULTURE
2:40 ***** BREAK *****
3:00 Sturdevant, Jay, Brenda K. Todd, Wendy Ross, Craig Hansen. PRESERVATION PRACTICE AT KNIFE RIVER INDIAN VILLAGES NATIONAL HISTORIC SITE. USING NEW PLANNING FRAMEWORKS TO IDENTIFY AND ADDRESS IMPACTS TO AN ARCHEOLOGICAL LANDSCAPE
3:20 Hansen, Craig, Alisha Deegan, Amy Mossett, Elgin Crows Breast PANEL DISCUSSION

Session [10] Room: ***Amos Dean Ballroom C***
[GENERAL SESSION] RECORDS IN ROCK.
Chair: Bob Dawe

1:00 Dawe, Bob. AN UNUSUAL ROCK ART PANEL AT WRITING-ON-STONE, ALBERTA
1:20 Brink, Jack. Melissa Bowerman. INVESTIGATING THE ROCKS OF MEDICINE WHEELS OF ALBERTA
1:40 Bull Chief, Lila, Cleva Beston. APSAALOOKÉ PERSPECTIVE ON MEDICINE WHEELS
2:00 Hofman, Jack, Chris Hord. A PROBABLE PAWNEE HUNTING CAMP ON THE SMOKY HILL RIVER, KANSAS
2:20 Evans, Chaz. THE POWER OF PLACE: MAKING LEGENDS AT LEGEND ROCK

2:40 ***** BREAK *****
3:00 Keyser, James. CHEVAL BONNET: A CROW "CALLING CARD" IN THE BLACKFEET HOMELAND
3:20 Peterson, Lynelle. PATTERNED BEHAVIOR ASSOCIATED WITH TWO STONE RINGS IN CENTRAL NORTH DAKOTA
3:40 Oetelaar, Gerald. NATURAL DISASTERS AND CULTURAL INNOVATIONS: THE INTRODUCTION OF STONE BOILING ON THE NORTHERN PLAINS

Session [11] Room: ***Amos Dean Ballroom D***
1:00-3:00 pm
[POSTER SESSION] SITE AND SURVEY METHODS

1. DeVore, Steven L. MAGNETIC INVESTIGATIONS OF THE MCKINNEY SITE AT THE TOOLESBORO STATE PRESERVE IN LOUISA COUNTY, IOWA
2. Dow, Jessica, Lauren Johnson. KNOWLEDGE NETWORKS AND SOFT TECHNOLOGY ANALYSIS METHODS: APPLICATION IN PLAINS HUNTER-GATHERER STUDIES
3. Gibson, Terrance, Stefan Damkjar. DEVELOPING NEW ARCHAEOLOGICAL TOOLS IN THE 21ST CENTURY
4. Holven, Adam, Britt McNamara, Jason Reichel. BREAKING THE SOD: A CALL FOR SUBSURFACE TESTING ON HIGH PLAINS UPLANDS
5. Jollymore, Kay, Terrance Gibson. MAGNETOMETRY AND TIPI RINGS: OPTIMIZING EXCAVATION RESULTS IN STONE CIRCLE INVESTIGATIONS
6. Milton, Emily, Lawrence C. Todd, Kyle Wright. SPATIAL RECONNAISSANCE: A REEVALUATION OF PREFERENTIAL LITHIC SLOPE SORTING ON POST FOREST FIRE SURAFACES
7. Munson Scullin, Wendy. IDENTIFICATION OF BUILDING MATERIALS USING PHYTOLITHS
8. Nycz, Christine, Steven L. DeVore. FINDIND ETZANOA: AN ARCHEOLOGICAL MAGNETIC SURVEY NEAR ARKANSAS CITY, KANSAS
9. Rowe, Christopher, Michael Chodoronek, Matthew Douglass. VIEWS FROM AFAR: REMOTE FIELD APPLICATIONS OF PHOTOGRAMMETRY IN SURVEY

Session [12] Room: ***Amos Dean Ballroom D***
3:00-5:00 pm
[POSTER SYMPOSIUM] ARCHAEOLOGY OF THE CENTRAL ROCKY MOUNTAINS: ROCKSHELTERS, TIPI RINGS, AND PALEOINDIANS.
Organizers: Mackenzie J. Cory and Marcel Kornfeld

1. Garhart, Zachary, James Goulding. PREHISTORY OF THE PRYOR'S: FROM ROCKSHELTERS TO TIPI RINGS
2. Cory, MacKenzie J. SCRATCHING THE SURFACE: RESULTS OF THE 2015 STONE CIRCLE EXCAVATION AT LAST CANYON (24CB879)
3. Goulding, James, Zachary Garhart. MARIAN'S SHELTER: ONE OF PRYOR'S BEST
4. Mankin, Brooke. BRANGER ROCKSHELTER, PRYOR MOUNTAINS, SOUTHERN MONTANA
5. Moore, Amanda, Heather Hilson, Christie Huber, Sarah Jacobs, Bradley Saint, Anthony Vizina, Keatton Wilson. EXAMINING EARLY PALEOINDIAN STRATA AT HELL GAP: THE 2015 FIELD SEASON
6. Lynch, Elizabeth, Sarah Jacobs Rebecca Heidenreich, Aundrea Sheri Thompson. HELL GAP IN 3D: CLOSE RANGE PHOTOGRAMMETRIC RECORDING OF A BISON BED
7. Curcija, Zack. A FOLSOM POINT PRODUCTION AREA AT HELL GAP
8. Hampton, Alex. EVALUATION OF POTENTIAL FOR AN OUTDOOR MUSEUM AT THE HELL GAP SITE
9. Bossio, Laura, Mary Lou Larson. CHIPPED STONE AT THE HELL GAP SITE: INFORMAL TOOLS, DEBITAGE, AND HEAT TREATMENT AT HELL GAP
10. Fitzpatrick, Tony. STABLE ISOTOPE ANALYSIS AT HELL GAP: PROJECT GOALS
11. Martin, Houston L. BEYOND THE EXCAVATIONS: ARCHAEOLOGICAL INVENTORIES OF THE HARTVILLE UPLIFT DURING THE 1960S INVESTIGATIONS AT HELL GAP
12. Curran, Robert, Marcel Kornfeld. WILLOW SPRING(S): SOUTHERN LARAMIE BASIN'S LONGEST (STRATIFIED?) OCCUPATION SITE
13. Grunwald, Allison, George Frison. FAUNAL ANALYSIS OF THE HANSON SITE, A FOLSOM LITHIC WORKSHOP

FRIDAY MORNING (October 16, 2015)

Session [13] Room: ***Amos Dean Ballroom A***
[SYMPOSIUM] HEALTH OF THE POST CIVIL-WAR SEVENTH CAVALRY.
Organizers: P. Willey and Patrick J. Collison

8:40 Willey, P.. SEVENTH CAVALRY MEDICAL AND ENLISTMENT RECORDS
9:00 Collison, Patrick. PULMONARY DISEASE IN THE SEVENTH CAVALRY, 1866-1883
9:20 Cheverko, Colleen, Kristina Zarenko. MALARIA PREVALENCE IN THE SEVENTH CAVALRY
9:40 ***** BREAK *****
10:00 Collison, Patrick. GASTROINTESTINAL DISEASE IN THE SEVENTH CAVALRY, 1866-1883
10:20 Willey, P. THE FIGHTING SEVENTH CAVALRY: INTERNECINE INJURIES IN THE POST-CIVIL WAR MILITARY
10:40 Zarekno, Kristina, Colleen Cheverko, Patrick J. Collison, P. Willey. HEALTH OF THE POST-CIVIL WAR SEVENTH CAVALRY: ROUND TABLE DISCUSSION
11:00 Zarekno, Kristina, Colleen Cheverko, Patrick J. Collison, P. Willey. HEALTH OF THE POST-CIVIL WAR SEVENTH CAVALRY: ROUND TABLE DISCUSSION CONT.

Session [14] Room: ***Amos Dean Ballroom B***
[SYMPOSIUM] CONTEMPORARY AMERICAN INDIAN ANTHROPOLOGY ON THE NORTHERN PLAINS.
Organizers: David Posthumus and Laura Scheiber

8:20 Noack Myers, Kelsey.CULTURAL RESOURCE PRESERVATION ON ROCKY BOY'S INDIAN RESERVATION
8:40 Nathan, Rebecca, Edward Herrmann. WHERE MEN GET THEIR MEAT: REDISCOVERING THE GRAPEVINE CREEK BUFFALO JUMP COMPLEX, CROW RESERVATION, MONTANA
9:00 Scheiber, Laura. (RE)CONTEXUALIZING HEART MOUNTAIN, APSAALOOKÉ: PAST AND PRESENT
9:20 Belle, Nicky. DANCE AS TEXT: THE DECOLONIZING OF THE PERFORMATIVE SELF
9:40 ***** BREAK *****
10:00 Park, Indrek. I AM SOCIALLY MANDAN: SHIFTING TRIBAL IDENTITY AMONG THE THREE AFFILIATED TRIBES

10:20 Posthumus, David C. LAKOTA CULTURE AND SPIRITUAL EXPERIENCE: APPLYING HALLOWELLIAN NOTIONS OF PHENOMENOLOGY AND ONTOLOGY TO NINETEENTH-CENTURY LAKOTA BELIEF AND RITUAL

10:40 Meyers, Richard. INTELLECTUAL APPROACHES TO THE EFFECTS (MERITS) OF SOCIAL SCIENCE: UNDERSTANDING THE TENSION BETWEEN ANTHROPOLOGY AND AMERICAN INDIANS/NATIVE AMERICANS

11:00 Braun, Sebastian. QUO VADIS? A FUTURE FOR PLAINS ANTHROPOLOGY

Session [15] Room: ***Amos Dean Ballroom C***
[GENERAL SESSION] PALEOINDIAN RESEARCH.
Chair: Edward Knell

8:20 Knell, Edward, Matthew E. Hill, Jr. THE ORGANIZATION OF CODY COMPLEX TOOL ASSEMBLAGES IN THE GREATER NORTHERN PLAINS AND ROCKY MOUNTAINS

8:40 Knudson, Ruthann. RENIER, SCOTTSBLUFF, AND HARDIN BARBED

9:00 Asher, Brendon P. CLOVIS AND FOLSOM PROJECTILE POINT DISTRIBUTIONS, BREAKAGE, AND MATERIAL TYPES ACROSS THE CENTRAL PLAINS

9:20 Frison, George, George Zeimens. CONTINUED INVESTIGATIONS A THE POWARS II PALEOINDIAN RED OCHRE MINE

9:40 ***** BREAK *****

10:00 Carlson, KC, Faisal Muhammad, Alesha Marcum-Heiman, Stephanie Stutts, Brian Carter, Lee Bement. WHERE SPECIALIZED BISON HUNTING MEETS BROAD SPECTRUM FORAGING: THE PALEOINDIAN AGE BULL CREEK SITE, OKLAHOMA PANHANDLE

10:20 Muhammad, Faisal, Alesha Marcum-Heiman, KC Carlson, Stephanie Stutts, Brian Carter, Lee Bement. RAVENSCROFT: LATE PALEOINDIAN KILL SITE ON THE OKLAHOMA PANHANDLE

10:40 Wernecke, D. Clark, Michael B. Collins. EXCAVATIONS AT THE GAULT SITE, TEXAS AND EVIDENCE FOR OLDER THAN CLOVIS STRATA

11:00 Collins, Michael (Texas State), D. Clark Wernecke (Texas State, Gault School of Archaeological Research). GAULT SITE, TEXAS, BEFORE CLOVIS

Session [16] Room: ***Amos Dean Ballroom D***
9:00-11:00 am
[POSTER SYMPOSIUM] THE WALL RIDGE SITE- THE ARCHAEOLOGY OF A CENTRAL PLAINS TRADITION DISPERSED HOUSEHOLD.
Organizer: Joseph A. Tiffany (Office of the State Archaeologist, U Iowa)

1. Tiffany, Joseph A., Shirley Schermer. INTRODUCING THE WALL RIDGE SITE
2. Tiffany, Joseph A., James L. Theler. WALL RIDGE MATERIAL CULTURE
3. Perry, Michael. WALL RIDGE LITHIC ARTIFACTS IN MODERN PERSPECTIVE
4. Lensink, Stephen. THE CHANGING RADIOCARBON CHRONOLOGY FOR THE NEBRASKA VARIANT OF THE CENTRAL PLAINS TRADITION IN LIGHT OF RECENT AMS DATES FOR THE WALL RIDGE SITE (13ML176)
5. Theler, James L. FAUNAL REMAINS FROM WALL RIDGE (13ML176): A GLENWOOD PHASE LODGE IN MILLS COUNTY, IOWA
6. Green, William. PLANT REMAINS FROM WALL RIDGE (13ML176), A GLENWOOD (NEBRASKA VARIANT) SITE IN SOUTHWESTERN IOWA

Session [17] Room: ***Amos Dean Ballroom D***
9:00-11:00 am
[POSTER SYMPOSIUM] STUDENT POSTER COMPETITION.
Organizer: Plains Anthropological Society Student Affair Committee

7. Allen, Christian. AN ARCHAEOLOGICAL ANALYSIS OF WICHITA BURIAL GOODS FROM 34JF1 SITE EXCAVATIONS
8. Boehm, Andrew. BISON BEHAVIOR DURING THE HOLOCENE
9. Borzea, Kristi. A RE-ANALYSIS OF THE 1938 AND 1955 EXCAVATIONS OF HERMIT'S CAVE, EDDY COUNTY, NEW MEXICO
10. Garnett, Justin. EXPERIMENTS IN FENDING ATLATL DARTS WITH BASKETMAKER S-SHAPED STICKS
11. Grund, Brigid. LEARNING CURVES AND PROJECTILE WEAPONRY: HOW A SHIFT FROM ATLATL TO SELF BOW EXACERBATES SOCIAL DISPARITY
12. Grunwald, Allison. FAUNAL ANALYSIS OF THE HANSON SITE, A FOLSOM LITHIC WORKSHOP

Session [18] Room: ***Amos Dean Ballroom D***
9:00-11:00 am
[POSTER SESSION] CERAMIC RESEARCH

13. Day, Zachary, Matthew Douglass, LuAnn Wandsnider. PILOT STUDY ON VIABILITY OF X-RAY DIFFRACTION ON CENTRAL PLAINS TRADITION POTTERY
14. Thies, Meagan E. DECORATIVE FUNCTION AND PREHISTORIC LIFEWAYS: A FUNCTIONAL ANALYSIS OF PREHISTORIC CERAMICS FROM WESTERN IOWA

FRIDAY AFTERNOON (October 16, 2015)

Session [19] Room: ***Amos Dean Ballroom A***
[SYMPOSIUM] OUTREACH AND RESEARCH OUTCOMES FROM COMMUNITY-BASED ARCHAEOLOGICAL 'ARTIFACT ROADSHOWS'.
Organizers: Dennis Kuhnel and Matthew Douglass

1:00 Kuhnel, Dennis. GRASSLANDS "ARTIFACT ROADSHOWS" IN CONTEXT: AN HISTORIC OVERVIEW OF CHALLENGES AND OPPORTUNITIES CONCERNING PUBLIC AND PROFESSIONAL ENGAGEMENT WITH ARCHAEOLOGICAL RESOURCES ON PRIVATE AND PUBLIC LANDS
1:20 Hittner, Luke. INTERPRETING INTANGIBLES: HOW ETHICAL PUBLIC OUTREACH CREATES ARCHAEOLOGICAL ALLIES
1:40 Douglass, Matthew, Maia Behrendt, Matthew Magnani. OUTREACH AND RESEARCH OUTCOMES FROM COMMUNITY-BASED ARCHAEOLOGICAL 'ARTIFACT ROADSHOWS'
2:00 Chodoronek, Michael, Sam Porter. 3D DIGITIZATION OF PRIVATE COLLECTIONS DURING ARTIFACT ROADSHOWS.
2:20 Rowe, Christopher. BEST OF BOTH WORLDS: ACCESSING PRIVATE LANDS THROUGH PUBLIC OUTREACH, A PROSPECTUS
2:40 ***** BREAK *****
3:00 Snuggs, Erin. LOVABLE LOOTERS: INTERPRETING ARCHAEOLOGICAL ETHICS AND PRIVATE ARTIFACT COLLECTIONS AT THE NATIONAL GRASSLANDS VISITOR CENTER
3:20 Robinson, Joanna. ALL ABOUT THE ATLATL: PROMOTING ARCHAEOLOGICAL STEWARDSHIP IN PLACE-BASED

INTERPRETIVE PROGRAMMING AT BADLANDS NATIONAL PARK

3:40 Doershuk, John F., John Eicher, Bonnie Pitblado. PANEL DISCUSSION

Session [20] Room: ***Amos Dean Ballroom B***
[GENERAL SESSION] POSTCONTACT ERA.
Chair: William Billeck.

1:00 Billeck, William. A SMITHSONIAN REPATRIATION TO THE DESCENDANTS OF SITTING BULL
1:20 Blakeslee, Donald. ETZANOA: AN ANCESTRAL WICHITA COMMUNITY
1:40 Grantham, Larry. A FORMAL ATTRIBUTE ANALYSIS OF OSAGE CERAMICS AND IMPLICATIONS FOR OSAGE ETHNOGENESIS
2:00 Kurtz, William. SONGS AS HISTORY-LAKOTA SONGS FROM THE LITTLE BIG HORN BATTLE
2:20 Pierce, Greg. ELEMENTAL ANALYSIS AS AN ALTERNATIVE DATING METHOD
2:40 ***** BREAK *****
3:00 Steussy, Cally. LOOK TOWARDS THE MOUNTAINS
3:20 Stokely, Michelle D. TRICKSTER'S ELEPHANT SHIELD
3:40 Thornhill, Cassidee. FINDING EQUUS CABALLUS IN THE ARCHAEOLOGICAL RECORD
4:00 Wood, W. Raymond. THE FAMILY OF JOSEPH GARREAU AND THE UPPER MISSOURI RIVER FUR TRADE

Session [21] Room: ***Amos Dean Ballroom C***
[SYMPOSIUM] STUDENT PAPER COMPETITION.
Chair: Laura Scheiber.

1:00 Bernemann, Amanda. COLD-SEASON ONEOTA SUBSISTENCE AT THE CHRISTENSON SITE (13PK407)
1:20 Crable, Barb. SITE FORMATION AND BONE WEATHERING OF THE SCHEUERMAN MAMMOTH BONE ASSEMBLAGE
1:40 Goodwin, Whitney A. COMPLEMENTARY TECHNIQUES FOR THE ESTIMATION OF ORIGINAL FIRING TEMPERATURES OF PLAINS CERAMICS: EXPERIMENTAL AND ARCHAEOLOGICAL RESULTS
2:00 Harvey, Kyle. CERAMICS IN THE RED WING LOCALITY: ANALYSIS OF THE SILVERNALE SITE (21GD03) ASSEMBLAGE
2:20 Jollymore, Kay. STONE CIRCLE INVESTIGATIONS AT A HYPER-SALINE LAKE IN SASKATCHEWAN

2:40 ***** BREAK *****
3:00 Shelton, Jeff. LITHIC TECHNOLOGY AND FEATURE ANALYSIS AT 14WY1, THE TROWBRIDGE SITE
3:20 Stumborg, Devon. THE WOLF WILLOW SITE: A GEOARCHAEOLOGICAL PROBLEM
3:40 Wolff, Shana. CARBON AND OXYGEN ISOTOPIC VALUES OF BOS TAURUS AND OVIS ARIES: BUTCHERED REMAINS FROM FORT FRED STEELE, WYOMING

Session [22] Room: ***Amos Dean Ballroom D***
1:00-3:00 pm
[POSTER SESSION] LITHIC RESEARCH

1. Biles, Ashton and Lee Bement. CORNER TANGS ON THE SOUTHERN PLAINS: ANALYSIS OF THE BRAUER COLLECTION
2. Halperin, David. A STUDY OF THE YOUNG SITE (23PL4) BLADELETS: LOCAL PRODUCTION OR TRADE?
3. Kirkwood, Damian R., Rick Weathermon. YOU PUT A UNIT WHERE?? TESTING A CHERT QUARRY IN THE HARTVILLE UPLIFT, WYOMING.
4. Pettigrew, Devin, Marvin Kay. ATLATL DART AND ARROWHEAD MICROWEAR FROM THE WOO-PIG EXPERIMENT

Session [23] Room: ***Amos Dean Ballroom D***
1:00-3:00 pm
[POSTER SESSION] HISTORIC PERIOD

5. Cannon, Molly, Kenneth Cannon, Carlie Ideker, Mike Martin. RECENT GEOARCHAEOLOGICAL INVESTIGATIONS AT THE SAND CREEK MASSACRE NATIONAL HISTORIC SITE: IMPLICATIONS FOR SITE INTERPRETATION
6. Drass, Richard, Stephen Perkins, Susan Vehik. ARTIFACTS AND FORTIFICATION FEATURES AT THE LONGEST SITE, AN 18th-CENTURY WICHITA VILLAGE ON THE RED RIVER
7. Newton, Cody. SOME PRELIMINARY RESULTS FROM THE FORT VASQUEZ (5WL568) COLLECTION ANALYSIS
8. Staggs, Holly. SCOTCH-IRISH HOMESTEADS: AN INVESTIGATION INTO THE EARLY SETTLEMENT AND DEVELOPMENT OF THE OZARKS

Session [24] Room: ***Amos Dean Ballroom D***
3:00-5:00 pm
[POSTER SESSION] FAUNAL RESEARCH

1. Asher, Brendon, Chris Widga, Steve Holen, David May, Greg McDonald. GEOLOGY AND PALEONTOLOGY OF A SABERTOOTHED CAT (SMILODON FATALIS) AND GIANT ARMADILLO (HOLMESINA SEPTENTRIONALIS) ASSEMBLAGE FROM LOVEWELL RESERVOIR, NORTH-CENTRAL KANSAS
2. Brush, Emily, Holmes Semken, Jr. and Matthew G. Hill. TAXONOMIC STRUCTURE AND PALEOECOLOGICAL IMPLICATIONS OF BARN OWL PELLET CONTENTS FROM ASH HOLLOW, WESTERN NEBRASKA
3. Crable, Barb, Kale Bruner, Jack Hofman, Rolfe Mandel. FORMATIONAL HISTORY AND BONE WEATHERING OF THE SCHEUERMAN MAMMOTH SITE
4. Gibson, Wesley. FAUNAL AND SPATIAL ANALYSIS OF 25FT376: A BISON PROCESSING CAMP FROM SOUTHWESTERN NEBRASKA
5. Hill, Matthew G., Christopher C. Widga, Marlin F. Hawley. MIDDLE HOLOCENE BISON IN THE UPPER MIDWEST
6. Hill, Matthew G., Christopher C. Widga. EXTINCTION DYNAMICS OF MIDCONTINENTAL CERVALCES
7. Holen, Kathleen, Steven R. Holen. COMPARISON OF PROBOSCIDEAN BONE NOTCHES TO EXPERIMENTAL DYNAMIC AND STATIC NOTCHES ON COW BONE
8. Tharalson, Kirsten, Elizabeth Braden. SEXING BISON AT THE CERTAIN SITE, WESTERN OKLAHOMA
9. Widga, Chris, Stacey Lengyel, Jeff Saunders, Greg Hodgins, Doug Walker, Al Wanamaker. MAMMOTHS AND MASTODONS IN NORTH AMERICA: NEW DATA ON THE CHRONOLOGY AND PALEOECOLOGY OF EXTINCTION IN THE MIDCONTINENT
10. Wilson, Kurt, Lawrence C. Todd. EXPLOITATION OF MEDIUM-SIZED ARTIODACTYLS AT A LATE PREHISTORIC SITE, WASHAKIE WILDERNESS, NORTHWESTERN WYOMING
11. Wismer, Meredith. AN EXAMINATION OF POCKET GOPHER USE AT THE WOODLAND PERIOD RAINBOW SITE (13PM91)

SATURDAY MORNING (October 17, 2015)

Session [25] Room: ***Amos Dean Ballroom A***
[SYMPOSIUM] A "RUFF" LIFE: CANID-HUMAN RELATIONSHIPS IN THE PLAINS.
Organizers: Brandi Bethke and Sarah E. Wolff

9:00 Wolff, Sarah E. LADY AND THE TRAMP: DOGS AS SOCIAL STATUS SIGNALS IN THE POST-CIVIL WAR FRONTIER MILITARY
9:20 Shimek, Rachael Lea. IN IT FOR THE SHORT HAUL: ECOLOGICAL MODELING OF DOG TRACTION ON THE GREAT PLAINS
9:40 ***** BREAK *****
10:00 Latham, Kate. WORKING LIKE DOGS
10:20 Bethke, Brandi. AFTER THE ELK-DOG: THE CHANGING ROLE OF DOGS IN BLACKFOOT SOCIETY
10:40 Walker, Danny N., Mike Metcalf. CANID REMAINS FROM NORTHERN PLAINS ARCHAEOLOGICAL SITES: IDENTIFICATIONS AND INTERPRETATIONS
11:00 Widga, Chris, Dennis Lawler. ARCHAIC DOGS OF THE EASTERN PLAINS AND MIDWEST: A METHODOLOGICAL FRAMEWORK FOR UNDERSTANDING DOMESTICATION

Session [26] Room: ***Amos Dean Ballroom B***
[GENERAL SESSION] PLAINS.
Chair: Douglas Bamforth

8:40 Bamforth, Douglas. THE KING SITE (25DW166) AND MAIZE HORTICULTURE WEST OF THE 100TH MERIDIAN
9:00 Brooks, Robert . THE STALKER SITE (34GT9): THE 1980-1982 PHILLIPS UNIVERSITY EXCAVATIONS
9:20 Feagins, Jim D. LARGEST BIFACE FROM THE CENTRAL PLAINS PLUS ANOTHER EXAMPLE OF THE EASTWARD CACHING OF SMOKY HILL SILICIFIED CHALK
9:40 ***** BREAK *****
10:00 Laughlin, John, Jessica Starks, Halston Meeker, Spencer Pelton, Richard Adams, Joshua Boyd. TEN THOUSAND YEARS IN TEN DAYS: ARCHAEOLOGICAL WORK ON THE MORIAH RANCH, WYOMING
10:20 Marcum-Heiman, Alesha, Leland Bement, KC Carlson. INVESTIGATIONS AT HOOT OWL ROCKSHELTER (34CI72) FINDINGS FROM THE BLACK MESA AREA OF OKLAHOMA

10:40 Scheiber, Laura, Amanda Burtt. RE-DEFINING LATE PREHISTORIC MOUNTAIN SHOSHONE OCCUPATIONS: EVIDENCE FROM THE CALDWELL CREEK SITE (48FR7091) OF NORTHWESTERN WYOMING
11:00 Skov, Eric. AN EMPIRICAL EVALUATION OF SLING ACCURACY: EFFECTIVENESS OF SLINGS AND COMPARISON TO OTHER WEAPON TECHNOLOGIES

Session [27] Room: ***Amos Dean Ballroom C***
[SYMPOSIUM] CURRENT RESEARCH IN IOWA ARCHAEOLOGY.
Organizer: William Whittaker

8:00 Anderson, Mark L., John F. Doershuk. THE RUMMELLS-MASKE SITE, 13CD15, A LOST SITE REDISCOVERED.
8:20 Benn, David. PROPOSED NORTHERN PRAIRIES SPIRITUAL TRADITION OF THE WOODLAND PERIODS
8:40 Collins, James. COMPLETELY DIFFERENT AND ENTIRELY UNEXPECTED: THE YOUNIE SITE (13SX126)
9:00 Dolan, Brennan. FEN-GRAINED ANALYSIS: A SAMPLE OF FEN ARCHAEOLOGY FROM NORTHERN IOWA
9:20 Haury-Artz, Cherie. ANALYSIS OF FAUNAL REMAINS FROM AN HISTORIC IOWAY INDIAN SITE (13VB124) IN VANBUREN COUNTY, IOWA
9:40 ***** BREAK *****
10:00 Henning, Dale R., and Lance Foster. BLOOD RUN: A UNIQUE ONEOTA SITE?
10:20 Pope, Melody, William E. Whittaker, Angela R. Collins, sLeslie Bush, Joe Artz. THE PALACE SITE (13PK966): A MIDDLE ARCHAIC LOCALITY IN THE DES MOINES RIVER VALLEY OF CENTRAL IOWA
10:40 Blikre, Lowell. EROSION AND DEPOSITION ALONG THE IOWA RIVER VALLEY WALL: THE EFFECTS OF GEOLOGICAL PROCESSES ON THE PRESERVATION OF MIDDLE ARCHAIC AND OLDER SITES
11:00 Davis, Warren D., Stephen Valdez, John G. Hedden. GLENWOOD LOCALITY ARCHITECTURAL VARIATION: A LOT OF DIFFERENCE IN A LITTLE TIME AND SPACE
11:20 Lonergan, Maureen, Madeleine A. Hoofnagle, Sara L. Anderson, John F. Doershuk. WOODLAND CERAMICS IN IOWA'S PRAIRIE LAKES REGION: 13DK96
11:40 Whittaker, William. DISTRIBUTION OF HISTORIC INDIAN SITES IN IOWA

Session [28] Room: ***Amos Dean Ballroom D***
9:00-11:00 am
[POSTER SYMPOSIUM] RECENT INVESTIGATIONS OF WOODPECKER CAVE: THE UNIVERSITY OF IOWA FIELD SCHOOL.
Organizer: James McGrath

1. McGrath, James, Rebekah Truhan, James G. Enloe. THE HIDDEN STRATIGRAPHY OF WOODPECKER CAVE: A GIS DERIVED, MODEL-BASED APPROACH TO ESTABLISHING STRATIGRAPHY IN VISUALLY HOMOGENEOUS ARCHAEOLOGICAL DEPOSITS
2. Buck, Tyler. FEEDING PREHISTORIC IOWA
3. Funk, Deidre. ASSESSING THE SEASONALITY OF USE OF A LATE WOODLAND ROCKSHELTER
4. Skeens, Jeremy L. FUNCTIONAL ANALYSIS OF CERAMIC SHERDS FROM WOODPECKER CAVE
5. Skibbe, Adam, James McGrath. AN APPLICATION LIDAR SCANNING TECHNOLOGY FOR ROCK SHELTER ARCHAEOLOGY: A CASE STUDY FROM WOODPECKER CAVE
6. Stroth, Luke. A FIRE CRACKED PUZZLE: APPLICATIONS OF XR-F DATA IN UNDERSTANDING THE INTEGRITY OF AN ARCHAEOLOGICAL SITE THROUGH REFIT AND SPATIAL ANLYSIS
7. Stoecken, Jacob. LITHIC ANALYSIS OF WOODPECKER CAVE

SYMPOSIA ABSTRACTS

ORAL SYMPOSIA:

[Session 2 Thurs AM; Session 9 Thurs PM] **PEOPLE OF THE WILLOWS: RESEARCH IN THE STUDY OF HIDATSA ORIGINS, ARCHAEOLOGY, HISTORY, AND CULTURE.**
Organizers: Kacy L. Hollenback (Southern Methodist U), Jay T. Sturdevant (National Park Service, Midwest Archaeological Center). Symposium Chair: Calvin Grinnell (Tribal Historic Preservation Office)

This session brings together investigators, cultural experts, and land managers to discuss themes in Hidatsa research. Papers presented focus on Hidatsa origins, history, material culture, oral tradition, contemporary practice, in addition to existing and future research needs of the Hidatsa Nation on the Fort Berthold Indian Reservation in North Dakota. The

papers included here (1) contribute to current understandings of the Hidatsa, and (2) make theoretical and methodological contributions to Plains anthropology. The session is dedicated to the memory of Stanley A. Ahler, as well as all members of the Hidatsa Nation.

[Session 7 Thurs PM] **NEW APPROACHES AND REVISED METHODS IN THE ANALYSIS OF GREAT PLAINS CERAMICS.** *Organizers: Sarah Trabert (U Oklahoma) and Donna C. Roper (Kansas State)*

Ceramics analysis has served as an important foundation for much of the post-Archaic period research in the Great Plains. It is important however, to continually re-evaluate existing methodologies and adapt our approaches as knowledge and technologies continue to grow and change. This session brings four papers together that highlight a few of the many ways that archaeologists working in our region are using existing methodologies, such as petrography, in new ways and how the technology surrounding ceramic characterization and residue analyses are being adapted to better serve the unique materials and research questions in our region. This session was originally conceived with the assistance of Donna Roper who had hoped to co-chair and present. Donna's commitment to Great Plains archaeology, and ceramics analysis in particular, were unparalleled. A tribute to Donna will immediately follow this session as her friends and colleagues join together to remember her brilliant career and life.

[Session 13 Fri AM] **HEALTH OF THE POST CIVIL-WAR SEVENTH CAVALRY.** *Organizers: P. Willey (Chico State) and Patrick J. Collison (U South Dakota)*

The Seventh Cavalry constitutes the most researched military unit in the U.S. Army. Previous studies indicate that its troopers epitomize the men who joined other regiments during the post-Civil War period, making the regiment an archetype for the U.S. Army during the period. This symposium's presentations extend previous studies, embracing demographic approaches and health matters. Using Seventh Cavalry enlistment, regimental returns, and medical records from 1866 to 1884, we document the health of the troopers. The results provide a broad-based, anthropological approach to the study of health and disease. This symposium begins with an introduction to the regiment's posting locations, demography and epidemiology. After that introduction, more detailed papers deal with pulmonary and gastrointestinal illnesses, malaria, and internecine injuries follow.

[Session 14 Fri AM] **CONTEMPORARY AMERICAN INDIAN ANTHROPOLOGY ON THE NORTHERN PLAINS.** *Organizers: David Posthumus (U South Dakota) and Laura Scheiber (Indiana U)*

American Indian anthropology on the Plains continues to be a vibrant and dynamic field. This symposium explores themes anchored in contemporary anthropological research among the Native American peoples of the Northern Plains. The participants demonstrate the continuing contribution of American Indian anthropology to anthropological knowledge, method, and theory by examining significant contemporary issues, such as language preservation and revitalization, ethnicity and identity, expressive culture, archaeology, historic preservation, ontology, and ritual. These issues are explored through traditional anthropological fieldwork, ethnohistory, and collaborative efforts with Native American communities. The scholars presenting in this symposium have worked with members of many tribes, including the Three Affiliated Tribes of Fort Berthold (Mandan, Hidatsa, and Sahnish/Arikara) in North Dakota, the Lakota of the Cheyenne River, Pine Ridge, and Rosebud Reservations in South Dakota, the Apsaalooké of the Crow Reservation in Montana, and the Chippewa Cree of the Rocky Boy Reservation in Montana.

[Session 19 Fri PM] **OUTREACH AND RESEARCH OUTCOMES FROM COMMUNITY-BASED ARCHAEOLOGICAL 'ARTIFACT ROADSHOWS'.** *Organizers: Dennis Kuhnel (USDA Forest Service National Grasslands Visitor Center) and Matthew Douglass (U Nebraska-Lincoln)*

The National Grasslands Visitor Center (NGVC) is a federal government institution partly dedicated to the public education and interpretation of the archaeological and cultural resources of all twenty National Grasslands (Grasslands). These Grasslands, administered by the USDA Forest Service and located mostly in the Great Plains, comprise nearly four million acres of public land. The Grasslands are often intermingled with private land holdings, creating cultural resource management challenges. In the rural communities that border Grasslands private artifact collections are common. The prevalence of these collections is aided by the abundance of regional cultural surface deposits. This symposium will report on a number of “Artifact Roadshows” hosted at Grasslands border communities by the NGVC and various partners, including notably the University of Nebraska-Lincoln. Attention will be given to the broader interpretive framework of NGVC efforts to encourage public/professional collaboration in conserving and documenting the deep-heritage of the Grasslands and Great Plains.

[Session 25 Sat AM] **A "RUFF" LIFE: CANID-HUMAN RELATIONSHIPS IN THE PLAINS.** *Organizers: Brandi Bethke (U Arizona) and Sarah E. Wolff (U Arizona)*

Since the peopling of North America dogs and other canids such as wolves and coyotes have been an essential component of human life. For those inhabiting the Plains canids have been guards and hunting partners, they have provided fur, meat, raw materials, transport, knowledge, and companionship, and they have also played an important role in ceremonial and religious life. Drawing from archaeology, history, and ethnography this collection of papers explores the multifarious roles of canids within the lives of both indigenous and immigrant groups inhabiting the Plains. Overall this session aims at promoting a greater appreciation for understanding the importance of canids within Plains scholarship.

[Session 27 Sat AM] **CURRENT RESEARCH IN IOWA ARCHAEOLOGY.** *Organizers: William Whittaker (Office of the State Archaeologist, U Iowa)*

Iowa straddles the boundary between the Plains and Eastern Woodlands, and includes everything from bison processing sites in the west, to Oneota villages in the Mississippi valley, to historic Indian and Euroamerican sites. These papers reflect the diversity of Iowa archaeology.

POSTER SYMPOSIA:

[Session 5 Thurs AM] **SUMMER 2015 ARCHAEOLOGICAL RESEARCH AND OUTREACH IN THE GUNNISON BASIN, COLORADO.** *Organizers: Bonnie Pitblado (U Oklahoma)*

The posters in this session report the results of field research and educational outreach efforts conducted in the Upper Gunnison Basin (UGB) of Southwest Colorado in summer 2015. University of Oklahoma archaeologists (faculty, staff, and graduate and undergraduate students) completed the work. Archaeological contributions include the quantification of quartzite chipped stone at sites in the quartzite-rich UGB; the identification of chert quarries (comparatively rare in the UGB); a critical assessment of sticky typological issues related to UGB Archaic projectile points; an overview of a newly identified Paleoindian site; and an evaluation of archaeological attributions of "Ute" affiliation to sites in the region. A final contribution reports on three “artifact road

shows" conducted as educational and research tools in Crested Butte, Gunnison, and Creede, Colorado, respectively.

[Session 12 Thurs PM] **ARCHAEOLOGY OF THE CENTRAL ROCKY MOUNTAINS: ROCKSHELTERS, TIPI RINGS, AND PALEOINDIANS.** *Organizers: Mackenzie J. Cory (Indiana U) and Marcel Kornfeld (U Wyoming)*

The Paleoindian Research Lab (PiRL) investigations from the Pryor Mountains of southern Montana to Hell Gap in southeastern Wyoming produced a wealth of new archaeological data from the Pleistocene through the Holocene. Testing of several Pryor Mountain shelters recovered chipped stone, bone, and heating features, as well as new rockshelters. In addition the project tested a stone circle site. The focus of investigation at the stratified Paleoindian Hell Gap site was the lowest cultural components, Agate Basin through Goshen. The recovery from these components at Hell Gap sheds new light on Paleoindian occupation and chronology. The posters in this session provide preliminary results of these studies.

[Session 16 Fri AM] **THE WALL RIDGE SITE- THE ARCHAEOLOGY OF A CENTRAL PLAINS TRADITION DISPERSED HOUSEHOLD.** *Organizers: Joseph A. Tiffany (Office of the State Archaeologist, U Iowa)*

Wall Ridge (13ML176) is an isolated Glenwood phase lodge site of the Central Plains tradition located in the Loess Hills of southwest Iowa. The Glenwood culture stands alone as the only major prehistoric culture regionally which is still virtually unstudied from an integrated economic and paleoecological perspective. The Wall Ridge site was the first Glenwood lodge carefully excavated with stratigraphic control, fine screening, flotation, and extensive soil sampling from the present ground surface to the floor and sub-floor pits, thus, providing the data needed for a comprehensive paleoecological and economic study. Symposium presenters provide results on economic systems and adaptive patterns of dispersed horticulturist systems focusing on seven research problems. These are: 1) seasonality; 2) duration of occupation; 3) size and composition of the resident group; 4) economic/subsistence activities; 5) resource stress; 6) intersocietal relations, and 7) comparison with other maize-based horticulturists.

[Session 28 Sat AM] **RECENT INVESTIGATIONS OF WOODPECKER CAVE: THE UNIVERSITY OF IOWA FIELD SCHOOL.** Organizers: James McGrath (U Iowa)

Woodpecker Cave (13JH202) is a small limestone rock shelter located off a tributary of the Coralville Reservoir approximately 12 km north of Iowa City. Initial excavations of the site occurred in 1956 lead by Warren Caldwell of the Smithsonian Institution River Basin survey and suggested Middle to Late Woodland period occupations. Subsequent excavations of Woodpecker Cave began in 2012 as part of a University of Iowa archaeological field school in an attempt to assess Caldwell's initial interpretations of the site and to provide a learning laboratory for students. This symposium highlights the archaeological research undertaken by participating students both independently and as part of the field school.

PAPER/POSTER ABSTRACTS & PARTICIPATION

Adair, Mary J. (U Kansas) [General Session 4]. NEW INTERPRETATIONS FROM OLD COLLECTIONS; GLENWOOD AREA ARCHAEOBOTANICAL REMAINS FROM 13ML129. Site 13ML129, a Nebraska phase earthlodge located in the Glenwood region of Iowa, was excavated in 1971 as part of the Highway 34 compliance project. At the time, data from this earthlodge contributed to an understanding of the regional chronology, lodge variability and settlement patterns. Although subsistence was not part of the original research goals, limited waterscreening recovered archaeobotanical remains that documented the presence of both native annuals and introduced tropical cultigens. Approximately 2 liters of matrix from an interior lodge feature was fortuitously saved during excavation and recently floated using now standard sub-millimeters mesh screens. The recovery of large quantities of both wild and domesticated plants provides an opportunity to address subsistence, farming and the broader issue of foodways from contemporary perspectives.

Adams, Richard, see Laughlin, John

Allen, Christian (U Oklahoma) [Poster Symposium 17]. AN ARCHAEOLOGICAL ANALYSIS OF WICHITA BURIAL GOODS FROM 34JF1 SITE EXCAVATIONS. Excavation of Oklahoma Archaeological site 34JF1, commonly known as the Longest Site, began in 1965. The site is located along the Red River in Jefferson County, OK, in the southern most part of the state. With permission for the NAGPRA and Wichita Tribe the Oklahoma Archaeological Survey was allowed to complete analysis of the site, including burial analysis of seven Wichita Indian burials. During my

research I will be analyzing the burial goods, or the artifacts that are associated with the burial. Burials designated 1 “‘ 2 have been extensively damaged from cultivation, however burials 3 “‘ 7 remain relatively intact. My presentation of the burial goods will be purely descriptive of the materials found and their association with the grave and body. Some uncovered burial objects include stone pipes, lithic flakes and projectile points, stone mono, iron projectile points, shell and glass beads, pottery and shaft abraders.

Anderson, Mark L. (Office of the State Archaeologist, U Iowa), John F. Doershuk (Office of the State Archaeologist, U Iowa) [Symposium 27]. THE RUMMELLS-MASKE SITE, 13CD15, A LOST SITE REDISCOVERED. In the early 1960s, Cedar County collectors Wayne Rummells and Dick Maske recovered several distinctive projectile points from the surface of a recently cultivated field. They brought them to the Office of the State Archaeologist at the University of Iowa where they were quickly identified as Clovis points. An excavation was conducted in the fall of 1966 and tentative results were published in the Plains Anthropologist in 1972. Time passed, files became dispersed, and 13CD15 drifted into find spot status and out to the periphery of Paleo-Indian research. A turn of events in 2011 lead to a renewed attempt to clarify the existence, condition, and status of this site, and the assemblage of 21 Clovis points recovered from the surface survey and test excavations. This presentation reviews the site’s history, compilation of the 1960s testing, recent site relocation, current investigations, and plans for additional exploration of Iowa’s oldest archaeological site.

Andrew, Holly (U Oklahoma) and Bonnie Pitblado (U Oklahoma) [Poster Symposium 5]. 2015 PREHISTORIC ARTIFACT ROADSHOWS IN SOUTHWESTERN COLORADO: CASE STUDIES IN CULTIVATING CITIZEN-SCIENTIST PARTNERSHIPS. In summer 2015, University of Oklahoma (OU) archaeologists sponsored two prehistoric artifact roadshows in the Upper Gunnison Basin (UGB) in Gunnison and Crested Butte and one south of the UGB in Creede. These well-publicized events invited members of the public to share with us prehistoric artifacts they had acquired, so that we could offer observations about the finds. Our goals in hosting the events included engaging in public outreach, which is, of course, intrinsically important. But beyond this, we also actively attempted to cultivate partnerships with roadshow visitors that could advance our long-term UGB archaeological research program. In our poster, we explain how we achieved our goals and some of the ways visitors provided us with archaeological insights and even offers of field assistance. We also

suggest ideas for how any archaeologist could tailor similar events to recruit citizens to tackle a range of archaeological research problems.

Ankele, William R., see Dudley, Meghan J.

Ankele, William R., see Tharalson, Kirsten

Artz, Joe Alan, see Bristow, Emilia

Artz, Joe Alan, see Pope, Melody

Asher, Brendon P (U Kansas) [General Session 15]. CLOVIS AND FOLSOM PROJECTILE POINT DISTRIBUTIONS, BREAKAGE, AND MATERIAL TYPES ACROSS THE CENTRAL PLAINS. Clovis and Folsom artifact distributions, particularly projectile points, are not homogenous throughout the Central Plains. Uneven artifact distributions are in part attributed to diverse land use and hunting techniques that resulted in distinct artifact breakage patterns. Lithic material use and transportation is also unique. These differences are partially driven by human response to changing ecosystems during the terminal Pleistocene. Models of Clovis and Folsom land use are explored to account for the observed spatial patterning in artifact distributions. Other factors, including site visibility and geomorphic processes, collector intensity, recording, and recognition bias are considered.

Asher, Brendon (U Kansas), Chris Widga (Illinois State Museum), Steve Holen, David May, Greg McDonald [Poster Session 24]. GEOLOGY AND PALEONTOLOGY OF A SABERTOOTHED CAT (SMILODON FATALIS) AND GIANT ARMADILLO (HOLMESINA SEPTENTRIONALIS) ASSEMBLAGE FROM LOVEWELL RESERVOIR, NORTH-CENTRAL KANSAS. The remains of extinct Ice Age animals along the north shoreline of Lovewell Reservoir in Jewell Co., KS have been professionally investigated for over 40 years. Test excavations and sediment cores at one locality (14JW103) indicate the presence of a paleo-gully inset into the Wisconsin-aged Gilman Canyon Formation. Taxa from this locality include: Camelops sp., Equus sp., Proboscidea, Smilodon fatalis, and Holmesina septentrionalis. The co-association and ultimate deposition of the fossils is the result of complex geological and taphonomic processes, and the exact relationship of the faunal material with the paleo-gully is not entirely understood. This complexity complicates chronological and paleoecological inferences. This locality is the northernmost record for Holmesina septentrionalis, and on the northern edge of the Rancholabrean

distribution of Smilodon. These are the youngest occurrences of both taxa in the Midcontinent. Such changes in regional community structure should be carefully considered in macro-scale studies of the Pleistocene extinctions.

Bamforth, Douglas (U Colorado-Boulder) [General Session 26]. THE KING SITE (25DW166) AND MAIZE HORTICULTURE WEST OF THE 100TH MERIDIAN. This paper gives an overview of the King Site, just east of Chadron in the Nebraska Pine Ridge. Results here are preliminary, but we have found a pottery kiln, multiple trash-filled pits, and at least one residential structure, all dated to the mid- to late 1100s. The collection includes evidence for a wide variety of craftwork and other activities. Charcoal from the kiln and the pits includes charred maize and recovery of a bison scapula hoe implies that people grew this locally. The pottery at the site is Central Plains Tradition style, but important aspects of the site differ from classic CPT patterns. These differences suggest that the people who lived at the site may have been western Plains hunter-gatherers experimenting with farming far to the west of other horticultural groups.

Beck, Margaret (U Iowa) [Symposium 7]. SOURCING LIMESTONE TEMPER: A KEITH PHASE CASE STUDY. Keith phase (Late Woodland) ceramics in Kansas often contain calcite temper, derived from lenses of crystalline calcite in limestone outcrops. The petrographic analysis of 10 sherds from 4 Keith phase sites revealed considerable variation in calcite and limestone inclusions as well as other differences in mineralogy and coarseness of the matrix. The systematic study of regional limestone outcrops may help archaeologists address manufacturing locations and exchange of Keith phase ceramics in more detail.

Behrendt, Maia, see Douglass, Matthew

Belle, Nicky (Indiana U) [Symposium 14]. DANCE AS TEXT: THE DECOLONIZING OF THE PERFORMATIVE SELF. This paper examines the relationship of various modern understandings of "Indianness" and chosen representations of the self within contemporary American Indian dance communities. Beyond this, I look to examine the manifestation of these identities in modern powwow clothing. The dance arena has proven to be a unique context for the expression of social identity and decolonization, and in many ways a "safe-place" to communicate Native survival to the settler. Within the powwow, traditional roles have been adapted and modified to correspond to modern culture, while drawing on historic

societal norms. My work critically engages the influence of ideas about race and ethnicity and brings current ideas about identity to bear on men's traditional dance and the ways it has consistently challenged colonialism, racism, and isolation. The point at which ideas of tribalism and intertribalism, warrior status, humility, and masculinity intersect is evident in the performance of the individual dancer.

Belle, Nicky (Indiana U), Laura L. Scheiber (Indiana U) [Symposium 2]. THE ROCKS AT JOLIET. Archaeologists have a long-standing interest in the timing of the Crow separation from the Hidatsa sometime in the distant past. Numerous attempts to trace this migration have relied on pottery and house types from several sites in Montana and Wyoming. Although demonstrating these long-term relationships has proven difficult, other sources point to continued contact through time. Narratives have been told and recounted to future (and present) generations.Â This paper examines a set of stories that are being told at a rock outcropping in Joliet, a small town in south central Montana.Â For hundreds of years, the Crow people have been using this site to tell stories of their tribal history and to recount deeds of battle and of interaction with various neighboring tribal groups.Â Of particular importance to this paper is a panel that recounts the transference of the Hot Dance from the Hidatsa to the Crow in the 1880s.

Bement, Lee, see Ashton, Biles

Bement, Lee, see Carlson, KC

Bement, Lee, see Marcum-Heiman, Alesha

Bement, Lee, see Muhammad, Faisal

Benn, David (Bear Creek Archaeology) [Symposium 27]. PROPOSED NORTHERN PRAIRIES SPIRITUAL TRADITION OF THE WOODLAND PERIODS. The Northern Prairies Spiritual tradition was a belief system shared by ancestral Siouan speakers primarily of the Chiwere group (Winnebago, Missouri, Ioway and Otto), the Dakota group (Yankton-Yanktonai, Assiniboine-Stoney, Santee, Teton), the Mandan group, and the Crow-Hidatsa group who lived and hunted throughout the northern half of the midwestern prairie-plains during the Woodland culture periods. Evidence for this tradition consists of animal and anthropomorphic spirit beings described in oral traditions and manifested as effigy mounds, soil geoglyphs, petroglyphs/pictographs, and boulder figures. The

Northern Siouans tended to emulate the powers of spirit beings by fabricating their images on earthen or rock surfaces for ritual activities, but they seem not to have assumed the persona of said spirit beings. By contrast, leaders of Southern Siouan speaking groups (Dhegiha) tended to dress and act as powerful (Sky) spirit beings, thus presumably assuming their persona.

Bernemann, Amanda (U Iowa) [Symposium 21]. COLD-SEASON ONEOTA SUBSISTENCE AT THE CHRISTENSON SITE (13PK407). The Moingona phase Oneota site Christenson (13PK407), excavated in 1983 and 2001, was identified as a winter site through analysis of the deer remains. The winter season of occupation differentiates the Christenson site from other Moingona phase sites. This reanalysis of the 2001 faunal assemblage confirms the early- to late- winter season of death and provides an opportunity to study cold-season Oneota diet. Identification and analysis of the faunal remains shows a reliance on deer and elk supplemented by smaller mammals, birds, and turtles. Additional analysis of modifications and breakage patterns of the large ungulate remains provides evidence for the production of grease for additional consumption. This study provides further understanding into the seasonal subsistence strategies of the Oneota in this region.

Beston, Cleva, see Bull Chief, Lila

Bethke, Brandi (U Arizona) [Symposium 25]. AFTER THE ELK-DOG: THE CHANGING ROLE OF DOGS IN BLACKFOOT SOCIETY. Dogs played an important role in the social, cultural, and economic life of peoples inhabiting the Northern Plains for thousands of years. However, despite functioning as pack animals, guards, religious figures, and even companions, dogs were never as integral to Blackfoot culture as the horse became. Through a framework that integrates archaeology, history, and contemporary ethnography this work provides substantive new insights into the evolving relationships between dogs and the Blackfoot from prehistory to the present day. The fundamental differences between dogs and horses prove to be one of the major sources change between pre- and post-Contact Blackfoot peoples. By exploring the relationship that the Blackfoot had with these two similar, but vastly different animals one is able to more clearly articulate the impact that the horse made on human-animal relationships on the plains.

Bethke, Brandi, Session 17 Organizer

Bethke, Brandi, Session 25 Organizer

Biles, Ashton (U Oklahoma) and Lee Bement (Oklahoma Archaeological Survey) [Poster Session 22]. CORNER TANGS ON THE SOUTHERN PLAINS: ANALYSIS OF THE BRAUER COLLECTION. This poster is about a collection of Corner Tang Knives from the Brauer Collection from Oklahoma Panhandle, housed at the Sam Noble Museum in Norman, Oklahoma. The collection of Corner Tang Knives was found in the turn of the 20th Century. A descriptive analysis will be conducted, including basic shape and size attributes. The materials from the way which the knives were constructed will be identified to help identify the geographic territory of the groups making these artifacts. The collection will be compared with other Corner Tang Knives from the Southern Plains. Comparing these knives with other Corner Tang Knives of the Southern Plains can help suggest what these knives were used for-be it butchering or harvesting.

Billeck, William (Smithsonian) [General Session 20]. A SMITHSONIAN REPATRIATION TO THE DESCENDANTS OF SITTING BULL. Unreported in 1890 accounts of the death of Sitting Bull, Dr. Horace Deeble, U.S. Army Surgeon at Fort Yates, North Dakota, took a lock of hair and cloth leggings from Sitting Bull's body with no right to do so. Deeble loaned these items to the Smithsonian in 1896 and the museum's records had limited information on how these items had actually been acquired. Sitting Bull's descendants submitted a repatriation claim to the Smithsonian's National Museum of Natural History for the lock of hair and leggings and they were returned to his surviving great-grandchildren, the lineal descendants with the highest standing under the repatriation laws. The repatriation research involved tracing the acquisition of the items and researching competing claims from Sitting Bull's many relatives to determine which ones were truly the closest living lineal descendants.

Blakeslee, Donald (Wichita State) [General Session 20]. ETZANOA: AN ANCESTRAL WICHITA COMMUNITY. In 1601, a Spanish expedition visited a large settlement in what is now southern Kansas. Eyewitnesses reported that it extended for about five miles and contained 2,000 houses. It was an extended community, similar in its layout to contemporary Caddoan sites, with agricultural fields between clusters of houses. Even so, the Spanish visitos estimated the population at around 20,000 people and indicated that they might not have seen the whole community. This presentation reports the results of field school activity there in 2015 and on the development

of the Etzanoa Conservancy, a public effort to conserve and interpret the site.

Blikre, Lowell (Bear Creek Archaeology) [Symposium 27]. EROSION AND DEPOSITION ALONG THE IOWA RIVER VALLEY WALL: THE EFFECTS OF GEOLOGICAL PROCESSES ON THE PRESERVATION OF MIDDLE ARCHAIC AND OLDER SITES. During investigations sponsored by the Iowa Department of Transportation, multiple sites were examined in the Iowa River valley and the surrounding uplands about 10 km upstream from its confluence. Radiocarbon dates and diagnostic artifacts from sites along the valley margin provide data regarding the effects of the Hypsithermal on the preservation of older archeological sites in this area. Within the study area, no Middle Archaic or older diagnostics have been recorded along or near the upland escarpment; while below the escarpment, alluvial landforms with multiple soils contain cultural components at least as old as the Middle Archaic. Artifacts with indications of water transport are also common in secondary contexts. These artifacts are interpreted to include displaced remnants of upland cultural components that eroded during the Hypsithermal. Upland erosion during the Hypsithermal removed sites from the escarpment but increased deposition on the adjoining valley floor preserved cultural components in these landforms.

Boehm, Andrew (Southern Methodist) [Poster Symposium 17]. BISON BEHAVIOR DURING THE HOLOCENE. Prey behavior is a critical factor in determining hunting strategies. Predictable prey require less search time and are more likely to be hunted. Given that bison remains are common in many Plains sites, we assume bison were predictable prey and they their behavior changed little over time. Behavioral consistency could explain interpretations that bison hunting remained relatively unchanged from 10,000 to 2000 BP. Using stable isotope data, this study evaluates the nature of bison behavior throughout the Holocene. Regional variability is then evaluated in the Northern, Central, and Southern Plains.

Borzea, Kristi (U Wyoming) [Poster Symposium 17]. A RE-ANALYSIS OF THE 1938 AND 1955 EXCAVATIONS OF HERMIT'S CAVE, EDDY COUNTY, NEW MEXICO. Rockshelters and caves typically protect evidence of prior habitation better than open areas such as plains or river valleys. It has long been known that humans, as well as other animals, seek refuge in caves and rock shelters. Therefore it is no surprise that in 1938 C.B. Schultz, a Paleontologist from the University of Nebraska, chose to pursue excavations in a region full of caves and rock shelters. This

region was in the United States southwest, within the Guadalupe Mountain range. One of the localities selected for excavation by C.B. Schultz was Hermit's Cave. I have analyzed original field notes from the Hermit's Cave excavations which occurred in 1938, and again in 1955. Un-calibrated radiocarbon dates on wood and charcoal from the lowest stratigraphic level of Hermit's Cave, analyzed in 1958, range from 11,850 +/- 350 to 12,900 +/-350 years before present (13,619 +/- 770 to 11,990 +/- 505 calibrated years before present) (Rubin and Alexander 1958:1485). With this poster I will present the information that I have analyzed from the site, and propose that further research of the site and or field notes should occur.

Bossio, Laura (U Michigan), Mary Lou Larson (U Wyoming) [Poster Symposium 12]. CHIPPED STONE AT THE HELL GAP SITE: INFORMAL TOOLS, DEBITAGE, AND HEAT TREATMENT AT HELL GAP. Heat treatment of stone during the tool production is a practice used by Native Americans However, such practices are not well documented for the Northwestern Plains. Our paper considers the meaning and spatial distribution of heat treatment for chipped stone from the 2015 excavation season. While the majority of stone is not heat treated a small number of tools and debitage are. We discuss the types, raw material and condition of these artifacts, their distribution near charcoal and charcoal stains, and chronostratigraphy. Production debris and tools include angular debris, shatter, flakes, heat spalls, a retouched heat spalls, and utilized flakes. These artifacts include the Early to Middle Paleoindian stratigraphic units and cultural complexes of Goshen, Folsom, Agate Basin, Hell Gap, and Alberta. Our analysis from the Folsom components of the site enhances our understanding of Paleoindian stone tool production.

Bowerman, Melissa, see Brink, Jack

Boyd, Joshua, see Laughlin, John

Braden, Elizabeth, see Tharalson, Kirsten

Bradshaw, Kayla (SWCA Environmental Consultants/St. Cloud State) [General Session 1]. WYOMING STATE SPATIAL AND TABULAR DATA ON LOOTING AND ITS APPLICATION IN UPCOMING RESEARCH. This paper analyzes Wyoming Cultural Records Office spatial and tabular data pertaining to known sites that have been collected, vandalized, defaced, and/or manually excavated. This data is integral to the identification of trends and

high priority/heavily looted areas of the state, upon which upcoming research focuses. Also discussed is a synopsis of my plan for this research; including the implementation and analysis of an anonymous survey of residents (n = 2,040) and oil and gas workers within these high priority areas, Wyoming Archaeological Society, and Wyoming Association of Professional Archaeologists members, with the overall goal of assessing the relationship between knowledge about laws protecting cultural resources and the impacts of looting/vandalism within Wyoming. Combined with non-survey components, the intended outcome is to gather and analyze data to aid in developing effective means of decreasing the destruction of Wyoming's cultural resources while increasing public knowledge regarding the importance of site preservation.

Braun, Sebastian (Iowa State) [Symposium 14]. QUO VADIS? A FUTURE FOR PLAINS ANTHROPOLOGY. Plains anthropology has seen numerous changes over the past 150 years. These changes, brought on by the evolving discipline as well as its social, political, and funding environment, seem to have accelerated over the last few decades. This paper attempts to give a short overview and explores where Plains anthropology might be headed in the future. Discussion very welcome.

Brink, Jack (Royal Alberta Museum). Melissa Bowerman (Royal Alberta Museum) [General Session 10]. INVESTIGATING THE ROCKS OF MEDICINE WHEELS OF ALBERTA. Medicine wheels are one of the more enigmatic stone feature sites of the northern Plains. The great majority of medicine wheels, about 50 of them, are located within Alberta. This paper reports on new research looking at the specific rocks used to construct wheels. We address the question whether or not specific type, size or colour of rocks may have been preferentially selected for building medicine wheels. Six wheels have now been studied. Every visible rock has been recorded for these three attributes. In addition, off-site rock content has been examined to provide a base for comparison. Data are still being reviewed, but preliminary analysis indicates a clear size difference of rocks used for central cairns versus those used for encircling outer rings. Radiating spoke lines also differ in size from central cairn rocks. Also, a number of medicine wheels are clearly accretionary structures, built over a long period of time and intended for continuous use.

Bristow, Emilia (U Iowa), Joe Alan Artz, (EarthView Environmental, Inc.) [General Session 1]. MATCHING MAPS TO LANDSCAPES: USING GIS TO VISUALIZE THE MORMON TRAILS ACROSS

IOWA. Two major waves of Mormon emigration to Salt Lake City passed through Iowa in the mid-1800s. In 1846-47, those fleeing Nauvoo, Illinois, crossed the Mississippi into southeastern Iowa, trekking west to the Missouri River and into Nebraska. The second, 1856-60, arrived by rail in Iowa City, then proceeded to the Missouri along routes well north of the earlier ones. As part of a larger project to synthesize the cultural resources of the Trails, we digitized the main routes and numerous alternates and branches into a GIS. Overlain on Iowa's statewide 1 m LiDAR imagery, these approximated lines often parallel natural pathways such as long interfluvial ridges, suggesting the actual location. Well-documented trail ruts are also visible in LiDAR; we have tentatively identified others, some of which will be ground trothed this fall. Least cost path analysis also provides evidence for hypothetically visualizing the actual routes of the Mormon exodus.

Brooks, Robert (Oklahoma Archaeological Survey) [General Session 26]. THE STALKER SITE (34GT9): THE 1980-1982 PHILLIPS UNIVERSITY EXCAVATIONS. In 1980-1982 Phillips University conducted excavations at the Stalker site (34GT9) in Grant County, Oklahoma. Regrettably, analysis of the material recovered from these investigations languished at the Oklahoma Archeological Survey for over 30 years. In the spring of 2014 funding was awarded by the State Historic Preservation Office to analyze the Stalker site material. Analysis of the modest material record from Stalker revealed the site to be a temporary residential place occupied principally for hunting some 1100 years ago. Comparison of Stalker to nearby sites collected in the 1970s-1980s found significant differences in the site assemblages, suggesting that perhaps the Stalker site residents were from a different cultural group than those living on the north side of the Salt Fork of the Arkansas River.

Brown, Leslie, see Fitzpatrick, Tony

Bruner, Kale, see Crable, Barb

Brunette, Jeremy (Los Alamos National Laboratory), Matthew Douglass (U Nebraska-Lincoln), Zachary Day (U Nebraska-Lincoln) [General Session 1]. CREATING UNITY: DEVELOPING A COMMUNITY OUTREACH TOOL THROUGH PUBLIC PARTICIPATION IN THE RECREATION OF SULPHUR SPRINGS, INDIAN TERRITORY. Sulphur Springs, Indian Territory, (present-day Oklahoma) in what is now Chickasaw National Recreation Area, presents a unique example of community formation within a tourism context. Located around a series of

mineral and fresh-water springs, Sulphur Springs was an attempt by ambitious entrepreneurs to create a health destination on land owned by the Chickasaw Nation. With the coming of the Dawes Act, the federal government was convinced to purchase the town's improvements in 1902, and again in 1904.The land purchased was transformed into a National Park, thus causing the town to relocate outside of park boundaries. Through the use of a detailed GIS based upon Sanborn Fire Insurance maps and open source software; coupled with collaborative, community-based archaeology, Sulphur Springs is being reconstructed digitally. This paper discusses the effectiveness of utilizing community memory and resources through social media to create an interactive digital archive.

Brush, Emily (Iowa State), Holmes Semken, Jr. and Matthew G. Hill (Iowa State) [Poster Session 24]. TAXONOMIC STRUCTURE AND PALEOECOLOGICAL IMPLICATIONS OF BARN OWL PELLET CONTENTS FROM ASH HOLLOW, WESTERN NEBRASKA. Comparison of intact barn owl pellet contents from four roosts with a large, time-averaged accumulation of deteriorated pellets located along Ash Hollow, western Nebraska, provide an opportunity to explore variation and differences in taxonomic structure among the data sets relating to sample size, time-averaging, and fidelity with published biogeographic distributions. Results implicate the application of microfauna as environmental proxies in an area juxtaposed to the early postglacial microfauna samples from the Clary Ranch Late Paleoindian sites.

Brush, Emily, see Todd, Lawrence C.

Buck, Tyler (U Iowa) [Poster Symposium 28]. FEEDING PREHISTORIC IOWA. Faunal remains are an invaluable resource in determining aspects about a site such as seasonality, resource abundance, and the extent of occupation. The analysis of faunal remains from Woodpecker Cave (WPC), a rock shelter site occupied throughout the Late Woodland, begins to address such questions. The WPC faunal assemblage features evidence of processing such as butchery marks, marrow extraction, and tendon collection predominantly of white-tailed deer. This analysis has integrated the faunal collections of the WPC excavations during the 1950s by Warren Caldwell with those of the 2012-2014 University of Iowa field schools. Here we present the results from this analyses and an interpretation of the faunal remains processing at WPC.

Buehler, Kent (Oklahoma Archaeological Survey) [General Session 3]. WHAT LIES BENEATH: FORENSIC ARCHAEOLOGY OF A

TRIPLE HOMICIDE IN OKLAHOMA. On May 29th, 1992, Wendy Camp, her six-year-old daughter Cynthia Britto, and sister-in-law Lisa Kregear left Oklahoma City for a custody visitation with Wendy's young son in Shamrock, Oklahoma. They never returned. Thus began a 21 year long mystery involving a bitter custody battle, a matriarchal crime family, an episode of the television series Unsolved Mysteries, and a decades-long criminal investigation. In April 2013, information from an informant led investigators to an old backhoe pit on a farm near Jennings, Oklahoma. Excavation of the pit by the author led to the recovery of the bodies of the three victims along with a great deal of associated evidence. In 2014, this case received the Oklahoma State Bureau of Investigation's "Director's Award for Law Enforcement" as the most significant case solved that year. The contribution of the forensic archaeology to the successful prosecution of this case is presented.

Bull Chief, Lila (Crow Tribe of Indians), Cleva Beston [General Session 10]. APSAALOOKÉ PERSPECTIVE ON MEDICINE WHEELS. The purpose of this research is to give a cultural perspective of the Apsaalooké (Crow) on medicine wheels and to provide a comparison of medicine wheels found within the Big Metal Project area with medicine wheels found outside of that area. Research of the material includes historical reviews from elders, interviews and literary resources. The historical review is limited to only Apsaalooké material. The review covers theories of what the medicine wheel was originally used for as well as stories from the Apsaalooké culture. The review will also cover astronomical alignments and the stories associated with Apsaalooké astronomy. A comparison of medicine wheels found in south east portion of the reservation where the proposed Big Metal Project area will be compared to other medicine wheels found outside of the area. The comparison will be made using data collected from recent surveys and past excavations. To view this material from a cultural standpoint will clear any misconceptions of the medicine wheel and a better understanding of the importance of these structures in the Apsaalooké culture. The comparison of these structures will show precedence and origin for improved management of future findings.

Burnett, Paul (SWCA), Lawrence C. Todd (Park County Historic Preservation Commission), Kyle Wright (Shoshone National Forest) [Poster Session 6]. EVOLUTION OF THE SHOSHONE NATIONAL FOREST PREHISTORIC ARCHAEOLOGICAL SITE PROBABILITY MODEL. Based on inventory data collected from 2002-2008, in 2009 we developed an archaeological probability model for the Greybull River drainage on the Shoshone National

Forest in northwestern Wyoming. In 2014, using data from inventory in recently burned areas and other site data from the Forest, we expanded the model to encompass the northern portion of the Shoshone. Based on evaluation of 2014 results, in 2015 we again modified the model to include the entire Forest (ca. 1,000,000 ha). Using an iterative approach, we compare results in different environmental settings to identify areas of potential model improvement. This modeling program has informed basic research and discovery of archaeological sites, and provides a framework for approaching landscape-level archaeological sensitivity in the wake of ongoing forest impacts. Particularly in back country settings where little or no archaeological work has been conducted, these models have proved of exceptional value in post-fire inventory and assessment.

Burtt, Amanda, see Hawley, Kirsten

Burtt, Amanda, see Scheiber, Laura

Burtt, Amanda, see Seifers, Ryann

Bush, Leslie, see Pope, Melody

Calabrese, Cal (National Park Service, Midwest Archaeological Center) [Symposium 2]. MIDWEST ARCHEOLOGICAL CENTER KNIFE RIVER INDIAN VILLAGES RESEARCH PROGRAM IN RETROSPECT. The Knife River (KNRI) Archeological Program evolved from test excavations undertaken in the Knife-Heart Region, an area dense with sites and reasonably undamaged by reservoirs. As a participant in this project, my interest in Middle Missouri archeology evolved, eventually leading to a position at the Midwest Archeological Center (MWAC) in 1973. KNRI was established in1974. Immediate needs for salvage excavations preceding bank stabilization gave us our first opportunity to work at KNRI. Funding was limited, and ability to add MWAC staff impossible. An agreement was reached with the University of North Dakota to develop a joint, multiphase project. Commitments were made by MWAC for multiyear project funding without funds in the NPS budget. Project termination at the end of Phase I of the research was the result of political wrangling rather than lack of funds.

Cannon, Molly (Utah State), Kenneth Cannon, Carlie Ideker, Mike Martin [Poster Session 23]. RECENT GEOARCHAEOLOGICAL INVESTIGATIONS AT THE SAND CREEK MASSACRE NATIONAL HISTORIC SITE: IMPLICATIONS FOR SITE

INTERPRETATION. The eastern Colorado Plains are characterized by rolling, short grass prairie dissected by intermittent creeks. This subtle landscape obscures one of our nation's greatest tragedies - an unprovoked dawn attack by the Colorado Volunteers on the winter village of Cheyenne and Arapaho. The massacre at Sand Creek in 1864 occurred along the banks of the Sand Creek, a tributary of the Arkansas River. After a series of investigations spanning more than two decades, consensus in site interpretation is still lacking. Our recent geoarchaeological investigations utilizing LiDAR, minimally invasive field investigations, and terrain modeling present new data, which contribute to the interpretation at the site. Our findings suggest that the present course of the creek has not been significantly altered since 1864. However, historic Euroamerican modifications to the landscape have considerably impacted the 1864 landforms at the site. We present our field methods and findings in an illustrative poster.

Cannon, Kenneth, see Cannon, Molly

Carlson, KC (Augustana College), Faisal Muhammad (U Oklahoma), Alesha Marcum-Heiman (U Oklahoma), Stephanie Stutts (U Oklahoma), Brian Carter (Oklahoma State), Lee Bement (Oklahoma Archaeological Survey) [General Session 15]. WHERE SPECIALIZED BISON HUNTING MEETS BROAD SPECTRUM FORAGING: THE PALEOINDIAN AGE BULL CREEK SITE, OKLAHOMA PANHANDLE. The 2015 field season at the Paleoindian age Bull Creek camp in the Oklahoma panhandle added new data concerning site structure, integrity, and interpretation. The identification of additional cooking/heating features and associated activity areas in stratified contexts provide clues to changes in site layout and use through time, including seasonal variation of site occupation. Combined with the results of the 2009 excavation, the activities conducted in the lower levels in this portion of the site are aligned with secondary butchery of bison and marrow extraction during a winter occupation. The upper level contains remains of a diverse fauna from a summer occupation. Lithic reduction or other activity areas have not yet been identified for either occupation level in this expansive site. The discovery of disarticulated bison skeletal remains dating to approximately 11,600 RCYBP in a layer approximately 1 m below known cultural material hints at a possible Clovis-age occupation of the site.

Carlson, KC, see Marcum-Heiman, Alesha

Carlson, KC, see Muhammad, Faisal

Carr, Erin (U Nebraska-Lincoln) [General Session 1]. GEOPHYSICAL ANALYSIS OF THREE SOD HOUSES ON THE FRENCH TABLE IN CUSTER COUNTY, NEBRASKA. “Free land!” they cried during the Homestead Act of 1862 when millions of people migrated to the Midwest to claim their 160 acres of free land. Once on the Great Plains, settlers had little to no resources of which to build a house, or “improvements” to the land as stated by the Homestead Act. One specific resource that was readily available to these settlers was sod. With the use of a plow, people started to build sod homes, or “soddies”, that became an ephemeral historic structure that was common in the Great Plains between the late 1800s and early 1900s. These were temporary structures that would later be replaced with frame or brick houses while the sod houses were left to deteriorate, be removed for agricultural purposes, or (rarely) preserved. This poster will be examine the non-destructive, surface level, geophysical techniques that were used to preserve three non-standing sod houses in Custer County, Nebraska from 2014 and 2015 surveys.

Carrico, Ian, see Seifers, Ryann

Carroll, Sean (U Wyoming), Damian R. Kirkwood, Rick L. Weathermon [Poster Session 6]. UPDATED FINDINGS ON THE DMZ SITE (48PL1794): A SERIES OF ROCKSHELTER AND TERRACE OCCUPATIONS IN EASTERN WYOMING. The DMZ Rockshelters site is located within the southern portion of the Wyoming Military Department’s Camp Guernsey Joint Training Area near the Hartville Uplift in eastern Wyoming. Previous archaeological work in the area identified a single small surface lithic scatter above a 600 meter long cliff face. Fieldwork undertaken by UW Anthropology in 2014 identified multiple collapsed and extant rock shelters and associated terrace deposits above, below, and along the cliff face. Preliminary testing indicates that the site was occupied sporadically from the Archaic through the Late Prehistoric time periods. A probable Canid burial was identified within one of the extant shelters. One of the more unique aspects of the site may come from its past geomorphological formational processes. Radio-carbon dates used in conjunction with geomorphology may allow for the recreation of past landscapes and provide additional insights into the use of the area by prehistoric peoples.

Carter, Brian, see Carlson, KC

Carter, Brian, see Muhammad, Faisal

Chraponski, Lucas, see Seifers, Ryann

Cheverko, Colleen (Ohio State), Kristina Zarenko (U South Carolina). MALARIA PREVALENCE IN THE SEVENTH CAVALRY. Though now eradicated in the continental United States, malaria had the potential to disrupt troop strength and performance within the post-Civil War Seventh Cavalry because it afflicted soldiers during and immediately after the American Civil War. This paper analyzes the medical and enlistment records of Seventh Cavalry troopers to provide insights into the patterns of malaria in the Seventh Cavalry. Approximately 20 percent of Seventh Cavalry troopers were diagnosed with malarial infections at least once. Within these diagnoses, there are statistically significant temporal and geographic trends that correspond to troop activity. For example, more individuals exhibited symptoms of malaria during the fall and when the cavalry was positioned in the southern states. However, personal attributes of the individual soldiers do not seem to affect their risk of contracting malaria, as there is no relationship between malaria infection and birthplace, rank, age at enlistment, and stature. The results of this study correspond to other historic knowledge of malaria infections during contemporaneous time periods.

Cheverko, Colleen (Ohio State) [Symposium 13]. DISCUSSANT

Chodoronek, Michael, Sam Porter [Symposium 19]. 3D DIGITIZATION OF PRIVATE COLLECTIONS DURING ARTIFACT ROADSHOWS. 3d technologies are rapidly advancing. These allow new forms of analysis and easy visualization of heritage in remote settings. Here we present on efforts over the course of 3 years to collect digital information on projectile points within the context of artifact roadshows. We explore what worked and what did not work and why. Finally we introduce a new approach using photogrammetry ideally suited to the roadshow format as well the results of recent efforts on the Buffalo Gap National Grasslands South Dakota.

Chodoronek, Michael, see Rowe, Christopher

Clauter, Jody (U Wyoming) [Symposium 7]. MOVEMENTS OF POTTERY AND PEOPLE: PETROGRAPHIC THIN-SECTION ANALYSIS FROM THE ELK MOUNTAIN SITE (48CR301). The Elk Mountain site (48CR301), also called the Garrett Allen site, is located in south-central Wyoming in the Carbon Basin. Excavations commenced every year from 1969 until 1980 and were highly

productive with many different types of artifacts recovered in large numbers. Despite its productivity, analyses were never completed on particular artifact classes. Recently, the University of Wyoming Archaeological Repository received grant funding to produce a petrographic thin-section study from three vessels recovered during the early excavations. The results indicate that a Woodland vessel was likely made from non-local materials similar to those found in the South Platte River basin of Colorado and Nebraska. However, two other smoothed surfaced vessels probably were made locally, but do not correspond well with established ceramic types in southern Wyoming. It is hypothesized these vessels may represent the movement of Plains groups into the area who carried pots or ceramic manufacturing traditions with them.

Collins, Angela R., see Pope, Melody

Collins, James (U Iowa) [Symposium 27]. COMPLETELY DIFFERENT AND ENTIRELY UNEXPECTED: THE YOUNIE SITE (13SX126). The Younie Site is situated on and within a loess-covered ridge spur along the east bluff of the Big Sioux River in Sioux County, Iowa. Excavations at the site have identified four cultural components in stratified geological context within 1.7 m of the site surface. Component I is a Late Plains Woodland and/or Late Prehistoric occupation on the unplowed site surface; Component II, radiocarbon dated to 3670Â±20 RCYBP, is a Late Archaic occupation; Component III, radiocarbon dated to 5490Â±20 RCYBP, is a Middle Archaic occupation; and Component IV presents as an ephemeral short term occupation that is . . . much older. As currently interpreted, Components I”“III occupy Bignell (Holocene) Loess; while Component IV is situated either at the base of the Bignell Loess, or within the Brady Soil. Neither Bignell Loess nor the Brady Soil has been previously documented in the State of Iowa.

Collins, Michael (Texas State), D. Clark Wernecke (Texas State, Gault School of Archaeological Research) [General Session 15]. GAULT SITE, TEXAS, BEFORE CLOVIS. The lowest cultural component at the Gault Site resides in 80 cm of alluvium that rests on bedrock and underlies a sequence of Clovis, Late Paleoindian, and Archaic components more than 2 meters in thickness. The Older-than-Clovis (OTC) cultural materials are of chert and consist of bifacial, unifacial, and flake forms as well as some 60,000 pieces of debitage. Technologically and typologically these materials are distinct from Clovis, are associated with extinct faunal remains, and are

constrained by more than 20 OSL dates indicting an age range from 13,200 to 16,000 calendar years B.P.

Collins, Michael, see Wernecke, D. Clark

Collison, Patrick (U South Dakota). PULMONARY DISEASE IN THE SEVENTH CAVALRY, 1866-1883. Diseases involving the lungs accounted for a significant proportion of the morbidity and mortality suffered by U.S Army enlistees during the Plains Indian Wars of the 1800s. Based on the troopers' medical records, the diagnosis, location, length of illness, and outcome can be determined accurately for this population of over 8000 young men. Even in an era before modern advances in microbiology, radiology, and therapeutics, and under difficult physical conditions, Army Surgeons were able to diagnose these illnesses correctly and treat at least some of them successfully. In this presentation we review the types of lower respiratory diseases that afflicted Seventh Cavalry troopers during their years of service on the Great Plains and southeastern United States. Clinical entities vary on a continuum of severity, from the benign and self-limited (cough, pleuritis), to the more uncertain (bronchitis, asthma), to the debilitating and often fatal (pneumonia, tuberculosis). In order to understand the medical context in which these conditions were encountered, we also review the history of the diagnostic and therapeutic techniques physicians utilized for lung ailments in the nineteenth century. We are also able to better understand the epidemiology of these historically important diseases by their distinctive patterns of incidence, location, and seasonality.

Collison, Patrick (U South Dakota) [Symposium 13]. GASTROINTESTINAL DISEASE IN THE SEVENTH CAVALRY, 1866-1883. It has been observed, by Napoleon Bonaparte no less, that "An army marches on its stomach." This means that the welfare and effectiveness of an armed force depends upon what they put into and what comes out of the soldiers' intestinal tracts. Medical records of the Seventh Cavalry troopers who served in the Plains Indian Wars indicate that gastrointestinal diseases were a significant source of morbidity, making up 17% of all medical encounters. These conditions ranged in severity from mild and self-limited entities like diarrhea and indigestion to debilitating and life threatening bouts of cholera and dysentery. The troopers were also prone to several disabling anatomic abnormalities, particularly hemorrhoids and anal fissures, probably related to a high prevalence of constipation and the rigors of daily horseback riding. In this report we will review the gastrointestinal diseases that afflicted the men of the Seventh Cavalry, and explore

ways in which these conditions were related to broader aspects of military life: diet and nutrition, daily activity, sanitation and waste disposal, interpersonal proximity, and even climate.

Collison, Patrick J. (U South Dakota) [Symposium 13]. DISCUSSANT

Collison, Patrick, Session 13 Organizer

Cooley, Delaney (U Oklahoma) [Poster Symposium 5]. SEARCHING HIGH AND LOW: AN EXPLORATION OF UTE OCCUPATION IN COLORADO. The prehistoric and protohistoric Ute of Colorado primarily occupied the Rocky Mountains. Historic documents, however, indicate that the adoption of equestrianism in the late 17th century facilitated an intense, but somewhat brief, expansion onto the Plains of eastern Colorado. Despite the fact that this expansion and occupation of western Colorado are known to have occurred, archaeologists have struggled to identify Ute mobility patterns in the archaeological record and to consistently identify sites. Although some efforts have furthered our understanding of settlement strategies, researchers use inconsistent methods to assign Ute cultural affiliation. Using History Colorado's COMPASS database, this preliminary investigation summarizes the location, type, and nature of assemblages for Colorado sites coded as Ute to better understand how, specifically, researchers assigned that affiliation. The ultimate goal is to better understand the nature of Ute occupation across Colorado, thereby establishing a stronger foundation for future research focused on identity and mobility.

Cory, Mackenzie J. (Indiana U) [Poster Symposium 12]. SCRATCHING THE SURFACE: RESULTS OF THE 2015 STONE CIRCLE EXCAVATION AT LAST CANYON (24CB879). Although Last Canyon (24CB879) is primarily known as a rock shelter site in the western foothills of the Pryor Mountains of south-central Montana. However, previous surveys showed that the cul-de-sac below the shelter also received extensive use. Following the completion of excavations within the shelter interior in 2013 the focus of investigation at Last Canyon shifted to subsurface testing within the confines of the cul-de-sac. This process continued into the 2015 field season in which the Paleoindian Research Lab (PiRL) completed an excavation of a previously mapped stone circle. Local middle school students under the supervision of PiRL crew members excavated approximately 15 m2 of the circle to an average depth of 10 cm below the surface. In this poster I document the excavation and the results of the subsequent lab analysis of the recovered material.

Cory, Mackenzie J., Session 12 Organizer

Crable, Barb (U Kansas) [Symposium 21]. SITE FORMATION AND BONE WEATHERING OF THE SCHEUERMAN MAMMOTH BONE ASSEMBLAGE. The Scheuerman mammoth site, 14SC327, was discovered in 2011 during terrace building in Scott County, KS. Bones of a single mammoth were located 40 - 50 cm below the land surface in late-Wisconsinan Peoria Loess. AMS dating of the skeleton provided an age of 13,468 +- 40 radiocarbon years bp. The Odyssey Archaeological Research crews have excavated 73 bones including a tusk, mandible, long bones, ribs, a scapula, pelvic elements and vertebrae. This paper concerns the interpretation of site formation through study of bone surface weathering, element representation and distribution. Taphonomic attributes are recorded for buried downside and exposed upside of 28 bones, based on Behrensmeyers weathering stages. This single mammoth assemblage is of interest because of the upland setting away from water sources. The cause of death remains unknown. At present there are no clearly associated lithic artifacts and no clear evidence for human modification of bones.

Crable, Barb (U Kansas), Kale Bruner (U Kansas), Jack Hofman (U Kansas), Rolfe Mandel (U Kansas) [Poster Session 24]. FORMATIONAL HISTORY AND BONE WEATHERING OF THE SCHEUERMAN MAMMOTH SITE. The Scheuerman mammoth site, 14SC327, was discovered in 2011 as a result of construction of agricultural terraces in Scott County, west-central KS. The bones were located 40 - 50 cm below the land surface in late-Wisconsinan Peoria Loess. Bone collagen yielded an uncalibrated 14C AMS dating of the skeleton provided an age of 13,468Â±40 B.P. years B.P. The KU Odyssey Achaeological Research crews have excavated a total of 73 bones including a tusk, mandible, long bones, ribs, a scapula, pelvic elements and vertebrae. This poster addresses site formation through study of bone surface weathering and element representation, orientation, and distribution.

Crows Breast, Elgin (THPO Mandan, Hidatsa, Arikara Nation) [Symposium 9]. DISCUSSANT

Curcija, Zack (Northern Arizona U) [Poster Symposium 12]. A FOLSOM POINT PRODUCTION AREA AT HELL GAP. This poster evaluates a Folsom projectile point production area at the stratified Hell Gap site in southeastern Wyoming. Two broken Folsom point preforms and six fragmentary channel flakes were

recovered in a concentrated area at Hell Gap Locality I during the 2015 field season. These diagnostic Folsom artifacts are spatially and stratigraphically associated with a Folsom point channel flakes found during Harvard Peabody's 1960s excavations. The channel flake appears to belong to the same nodule or to corresponding channel flakes from the same perform as a channel flake unearthed in 2015. We also analyze another isolated channel flake discovered adjacent to Locality I in 1980. The eight channel flakes discussed in this poster represent the complete assemblage of Folsom point channel flakes discovered at the site. These channel flakes in conjunction with the broken Folsom preforms delineate the only Folsom projectile point production station at Hell Gap.

Curran, Robert (Paleoindian Research Lab, U Wyoming), Marcel Kornfeld (PaleoIndian Research Lab, U Wyoming) [Poster Symposium 12]. WILLOW SPRING(S): SOUTHERN LARAMIE BASIN'S LONGEST (STRATIFIED?) OCCUPATION SITE. Willow Spring(s) is a multi-component site with the first occupation being Folsom or possibly even Clovis. First excavated by William Mulloy of the University of Wyoming from 1962 to 1967, the collection has remained dormant since. Mulloy's interests turned to Easter Island and the recovered artifacts remained unreported with few exceptions (Charles Reher MA thesis refers to ceramics at the site). The most recent, historic occupations are by the US military stationed at Fort Sanders in the 1870s and a historic stage station of the same period, and subsequent rural ranching activities. Much of the middle Holocene is represented by chronologically diagnostic artifacts. In this poster we provide an overview of the past occupations through relative chronology, evaluate the stratigraphic integrity of the excavated material, and briefly describe the recovered assemblage for the purpose of a preliminary assessment of site function.

Dalpra, Cody (U Oklahoma) [Poster Symposium 5]. THE DISTRIBUTION OF QUARTZITE TOOLSTONE THROUGHOUT PREHISTORY AND ACROSS THE LANDSCAPE, UPPER GUNNISON BASIN, COLORADO. In the Upper Gunnison Basin (UGB) of Colorado prehistoric people utilized quartzite at very high frequencies, with many site assemblages containing 95 percent or more quartzite tools and debitage. Clearly, for most inhabitants of the UGB, quartzite was the toolstone of choice despite the presence of other raw material options, including chert and obsidian. That said, the percentages of quartzite at UGB sites were certainly not identical throughout time and across space. To more clearly understand the variability in prehistoric use of quartzite in the UGB,

this poster uses existing site data culled from History Colorado's COMPASS database to explore the issue.

Damkjar, Stefan, see Gibson, Terrance

Davis, Warren D. (St. Cloud State), Stephen Valdez (Office of the State Archaeologist, U Iowa), John G. Hedden, (Office of the State Archaeologist, U Iowa) [Symposium 27]. GLENWOOD LOCALITY ARCHITECTURAL VARIATION: A LOT OF DIFFERENCE IN A LITTLE TIME AND SPACE. Architectural variation in Central Plains Tradition earth lodges is well documented. The wide range in house size, entry way length, basin depth and size, as well as wall and interior post patterns have been noted by researchers throughout the Central Plains. These variations have been postulated to represent changes in construction styles through time, varying uses of the structures, or by differing cultural groups practicing the same general patterns in localized styles. A review of the earth lodges investigated in the Glenwood Locality during the U.S. 34 project in the late 1960s and early 1970s provides a method to examine these variations in a small geographical area. Recent additional radiocarbon dates for these sites provides additional insight into temporal variation that may have affected the construction styles.

Dawe, Bob (Royal Alberta Museum) [General Session 10]. AN UNUSUAL ROCK ART PANEL AT WRITING-ON-STONE, ALBERTA. Writing-On-Stone straddles the Milk River in southern Alberta, just north of the Sweetgrass Hills in Montana. Over a hundred aboriginal rock art sites have been identified comprising one of the largest inventories of rock art on the Plains. Recent investigations here have discovered an unusual petroglyph panel in an isolated rock shelter, site DgOw-79. This panel consists of a lattice-like geometric pattern based on a motif couplet which is repeated numerous times, one principle element of which has been interpreted as a vulva. Vulvaform glyphs are not uncommon in Plains rock art, but only a few have been identified elsewhere at Writing-On-Stone. The geometric pattern presented by this glyph is a marked departure from any of the thousands of individual glyphs at Writing-On-Stone. The Vulva Haven glyph is compared to the other depictions of vulvas in the northern Plains. The function of the depiction of so many vulvaforms in this panel, although the subject of considerable speculation, remains enigmatic.

Day, Zachary (U Nebraska-Lincoln), Matthew Douglass (U Nebraska-Lincoln), LuAnn Wandsnider (U Nebraska-Lincoln) [Poster Session

18]. PILOT STUDY ON VIABILITY OF X-RAY DIFFRACTION ON CENTRAL PLAINS TRADITION POTTERY. Recent research has questioned the long-held idea that populations for what archaeologists term the Central Plains tradition (CPt) were organized in small villages with distinct borders, instead arguing for a more fluid distribution of autonomous farmsteads following major streams throughout the Central Plains. This prompts various questions regarding the interactions among the CPt populations with emphasis on scale, degree and nature of the interactions. To begin looking at these interactions, we have designed a pilot study using X-Ray Diffraction (XRD) as a composition analysis method of ceramics from CPt sites located in Nebraska's Sand Hills region. We will be comparing the groupings of the ceramics' composition with elemental profile groupings obtained on the same ceramics with X-Ray Fluorescence (XRF). If proven accurate, we can start examining distributions of CPt ceramics over a larger area, and by extension, the broader interactions amongst CPt communities and populations

Day, Zachary, see Brunette, Jeremy

Deegan, Alisha (Knife River Indian Villages National Historic Site, National Park Service) [Symposium 9]. DISCUSSANT

DeVore, Steven L. (National Park Service, Midwest Archeological Center) [Poster Session 11]. MAGNETIC INVESTIGATIONS OF THE MCKINNEY SITE AT THE TOOLESBORO STATE PRESERVE IN LOUISA COUNTY, IOWA. A magnetic survey was conducted at the McKinney Site in southeastern Iowa by the National Park Service and the Iowa Office of the State Archaeologist Office staffs. The investigations were conducted as part of the OSA archeological investigations of a potential Hopewell enclosure identified at the site. The enclosure was originally identified in 1841 by John B. Newhall. The magnetic survey was conducted with a dual fluxgate gradiometer. The magnetic investigations covered 7.12 acres. The magnetic data revealed numerous Oneota pit features along with the possible horseshoe shaped Hopewell enclosure.

DeVore, Steven L., see Nycz, Christine

DeVore, Steven L., see Sturdevant, Jay

Doershuk, John F. (Office of the State Archaeologist, U Iowa) [Symposium 19]. DISCUSSANT

Doershuk, John F., see Anderson, Mark L.

Dolan, Brennan (Iowa DOT) [Symposium 27]. FEN-GRAINED ANALYSIS: A SAMPLE OF FEN ARCHAEOLOGY FROM NORTHERN IOWA. Archaeologists consider a number of variables when they attempt to locate sites on a landscape, and this research suggests that fens should be one of those variables. This paper explores three aspects of fen archaeology. First, a review is made of a sample dataset looking at evidence of the use of fen localities by prehistoric Iowans. Second, an assessment is made of the reasons why prehistoric people would have been drawn to these places on the landscape. Third, this research considers some of the places where fens are found, and how these locations are sometimes assessed in archaeological surveys. This preliminary research argues that fens are worthy of in-depth study not only by biologists and ecologists, but also archaeologists.

Douglass, Matthew (U Nebraska-Lincoln), Maia Behrendt, Matthew Magnani [Symposium 19]. OUTREACH AND RESEARCH OUTCOMES FROM COMMUNITY-BASED ARCHAEOLOGICAL 'ARTIFACT ROADSHOWS'. The USDA Forest Service and the University of Nebraska have initiated “Artifact Roadshows” to document and digitize artifacts collections obtained from private lands in the Great Plains. Artifact collections obtained from private lands are a common source of information about the past. Public knowledge about archaeological sites on abundant private lands is likely greater than that of the professional archaeological community. Through Roadshow events, we have been able to learn about collector motivations, educate on best practices for documenting sites, and have helped land owners and collectors to learn about the history of the artifacts they have collected. In this talk we will discuss efforts to digitize these remains for public and research consumption via an online digital archive. The result will provide a document of finds on public lands that can aid in regional comparison and research on projectile point variation and Great Plains occupation histories.

Douglass, Matthew, see Brunette, Jeremy

Douglass, Matthew, see Day, Zachary

Douglass, Matthew, see Rowe, Christopher

Douglass, Matthew, Session 19 Organizer

Dow, Jessica (U Kansas), Lauren Johnson (U Kansas) [Poster Session 11]. KNOWLEDGE NETWORKS AND SOFT TECHNOLOGY ANALYSIS METHODS: APPLICATION IN PLAINS HUNTER-GATHERER STUDIES. This poster presents methods for exploring prehistoric knowledge networks and soft technology using data from the archaeological record, ethnographic collections, experimental archaeology, and neurology. The network analysis approach allows a high degree of flexibility of sources and subject matter, as well as the potential for extended collaboration between archaeologists and researchers in other fields. By building network maps of this type and then focusing on specific inquiries we can identify patterns of knowledge transmission, areas where knowledge needs overlap, key skills and information that run across multiple activities, areas of specialization that may exist within a particular community of practice, and see where particular technologies fit within the vast landscape of human knowledge, skill and cognition. We have applied this approach to a small portion of Great Plains soft technology as an example of how network analysis can be used in cognitive archaeology research.

Drass, Richard (Oklahoma Archaeological Survey, U Oklahoma), Stephen Perkins (Oklahoma State), Susan Vehik (U Oklahoma) [Poster Session 23]. ARTIFACTS AND FORTIFICATION FEATURES AT THE LONGEST SITE, AN 18th-CENTURY WICHITA VILLAGE ON THE RED RIVER. Excavations in 2013 at the Longest site (34JF1) represent the first extensive archeological work on the fortification at this Wichita (Taovaya) village. This Red River site became a major center of trade between native groups and various Europeans and Americans for 50 years (1757-1811). European visitors provided brief historical accounts of the village layout and the fort. Analyses of the materials recovered from the fortification provide insights into its construction and use. The small sample of artifacts from within the fort suggests it was not occupied except during attacks. The few European artifacts are similar to those found during earlier excavations. Lithic tools and debris are not abundant and indicate use of chert from distant sources in central Texas and northern Oklahoma. Ceramics are rare and most represent Caddo-type pots. A few plant remains and bone, the most common material recovered in the fort, provide some information on subsistence activities.

Dudley, Meghan J. (U Oklahoma) and William R. Ankele (U Oklahoma) [Poster Symposium 5]. CODENAME PELKO: A REASSESSMENT OF PELICAN LAKE AND ELKO PROJECTILE POINTS IN THE NORTHERN AND SOUTHERN

ROCKY MOUNTAINS. Many Archaic projectile points from the Rocky Mountains and the Great Plains are often poorly defined stylistically and chronologically, particularly in contrast to those from the earlier Paleoindian Period. As a result, we suspect that corner-notched points are often classified as different types based solely on geographic location and not necessarily on variation that exists in the point style. Consequently, any corner-notched dart point in the northern Rocky Mountains and Plains is designated as a Pelican Lake point, while their counterparts in the south are called Elko points. We reassess the typological categories of Pelican Lake and Elko to determine whether or not they are significantly different enough from one another to merit the continued use of these terms.

Earley, Frank Lee, see Huffman, Thomas

Eicher, John (U Iowa) [Symposium 19]. DISCUSSANT

Ellis, Chelsea (U Oklahoma) [General Session 3]. THE MCLEMORE SITE: A BIOARCHAEOLOGICAL STUDY OF LIFESTYLE AND MORTALITY. This study examines the skeletal material from the McLemore site (34WA5), located in Washita County, Oklahoma. Recent advances in the study of pathologies and their morphological indicators prompted the reexamination of this burial population that was last analyzed in 1989. Previous analyses of this collection did not indicate the practice of cranial modification, nor did they seek answers to questions regarding infant mortality at McLemore. This project employed a comprehensive analysis of the McLemore skeletal collection including paleodemography and paleopathology in order to build a broader discussion regarding life and death at the McLemore site. The results of this project provide a more inclusive understanding of burial practices of the Washita River Phase, as well as the health and lifestyle of Late Prehistoric Wichita peoples.

Enloe, James G., see McGrath, James

Evans, Chaz (The Archaeological Conservancy) [General Session 10]. THE POWER OF PLACE: MAKING LEGENDS AT LEGEND ROCK. Legend Rock, located 20 miles northwest of Thermopolis in Hot Springs County Wyoming, has long been a gathering place for humans. Rock Art styles indicate that the site may have been utilized from the late Paleoindian period (Bies 2015) right up to historic time. Radiocarbon dates firmly place the site's use between 6,005 B.P and 205 B.P. Since the creation of the park, Legend Rock has been surrounded by private property. The cliff face on this private property contains numerous rock art panels representative of the Dinwoody Tradition rock art style. These panels are an extension of

what Legend Rock represents as a whole and more importantly, a landscape of use. Thanks to the incredible generosity of Mr. Richard D. Wagner, approximately 25 acres of the site will be donated to The Archaeological Conservancy, which will now afford protection of the entire rock art site, and open up the complete locality for future research. This paper explores The Archaeological Conservancy's role in preservation and conservation, and how we can easily work together with academics, developers, and private citizens to protect our nation's dwindling archaeological resources.

Feagins, Jim D. (St. Joseph Museums) [General Session 26]. LARGEST BIFACE FROM THE CENTRAL PLAINS PLUS ANOTHER EXAMPLE OF THE EASTWARD CACHING OF SMOKY HILL SILICIFIED CHALK. The Hetzel biface is thought to be the largest chipped-stone biface/blank found in the Central Plains. This biface is 53.7 cm x 18.0 cm x 2.65 cm in size. It was manufactured from silicified chalk--formed by the ancient replacement of chalk with silica (usually jasper) within the Smoky Hill Chalk member of the Niobrara Chalk formation. The source of this SHSC toolstone is northwest Kansas and south Nebraska. The Hetzel biface was cached just north of Topeka, Kansas--some 299 km from its nearest source. This isolated biface is compared with six large bifaces from another eastern SHSC cache--Connie's Cache--14DP431. This cache was isolated on a bluff top overlooking Jordon Creek approximately 27 km SW of St. Joseph, Mo. This location is 349 km east of the nearest outcrop source. Manufacturing technologies, source differences, and other attributes are compared among the cache bifaces.

Fedyniak, Kris, see Lints, Andrew

Fitzpatrick, Tony (U Wyoming) [Poster Symposium 12]. STABLE ISOTOPE ANALYSIS AT HELL GAP: PROJECT GOALS. Stable isotope analysis of faunal remains from archaeological sites can provide a range of information about diet, mobility, and other aspects of paleoecology. Hell Gap provides a unique location for stable isotope study due to the accretional stratigraphic record over extended period at the Pleistocene to Holocene transition. Fauna from over 4,000 years at a non-kill site can show diachronic changes in animal diet, seasonality, migration, and climate. This information can not only provide the backdrop of life at Hell Gap, but can be combined with previous and future isotopic data from around the state and the rest of the country to show ecological factors in the lives of Paleoindians. Initial work will involve carbon and oxygen stable isotope analysis from bison bone to assess diet and climate

throughout the history of the site, and possible herd affiliation at various time periods. Future phases of research will also be described.

Fitzpatrick, Tony (U Wyoming), Leslie Brown (U Wyoming) [General Session 3]. FEMORAL LENGTH ESTIMATION IN NATIVE NORTH AMERICAN POPULATIONS. Stature estimation for native populations in North America have historically been problematic, though recent research has allowed for the creation of more precise formulae. Incomplete bones, however, can hinder stature estimation. There are a number of methods which can provide estimates of the overall length of the bone, and thus stature, based on segments of a bone. A method that uses a simple to collect measurement based on easily identifiable skeletal markers, designated as Upper Epicondylar Length, was initially tested on skeletal remains in Africa. It was subsequently tested on modern populations in the United States and continues to show moderately high correlations with both femur length and stature. This research, an extension of the work completed in the United States on modern individuals, reflects the first stage of the project. The results herein will include data collected at the University of Wyoming Human Remains Repository.

Foster, Lance, see Henning, Dale R.

Frison, George (U Wyoming), George Zeimens (Western Plains Historic Preservation Association) [General Session 15]. CONTINUED INVESTIGATIONS A THE POWARS II PALEOINDIAN RED OCHRE MINE. The Powars II includes multiple prehistoric cultural facies as determined by salvage investigations during the 2014-15 field seasons. The Paleo red ochre mine exposed on a talus slope was dominated by Clovis people based on numerous projectile points and various stages of preforms collected from eroded deposits. Diagnostic artifacts for Goshen, Midland, Folsom, Agate Basin and Hell Gap cultural complexes are also represented. Several hundred stone tools were also collected from the eroded and mixed deposits at the bottom of the slope. A small test excavation in 1986 determined that intact cultural deposits are present in the mine on the slope above. A terrace located across from the mine contains over 2m of stratified deposits representing Paleo, Early Archaic, Late Archaic and Late Prehistoric occupations. A very large deposit of high quality chert and orthoquartzite is present at another location on the same terrace and apparently was the main source of raw stone material especially for the Clovis artifacts. Precise spatial and temporal dimensions of Powars II remains to be determined, but it is

a large site and affords a rare opportunity for multidisciplinary research along numerous line of investigation.

Frison, George, see Grunwald, Allison

Funk, Deidre (U Iowa) [Poster Symposium 28]. ASSESSING THE SEASONALITY OF USE OF A LATE WOODLAND ROCKSHELTER. Woodpecker Cave is a rockshelter containing deposits suggesting occupations during the Late Woodland period (~800-1200 BP). Late Woodland Native Americans lived primarily in maize farming villages. If farming was the primary means of subsistence, why were people living in a rockshelter away from the farming villages? One possible explanation is that the rockshelter was a seasonal occupation site during the fall and winter to take food stress off the village area after the harvest. This study examined evidence of seasonality via seasonal physiological and behavioral characteristics of various species present in the faunal assemblage from Woodpecker Cave. The study found data supporting the hypothesis that Woodpecker Cave was a fall/winter occupation site.

Gardner, Dudley (WAARI), Martin Lammers [General Session 4]. A BRIEF OVERVIEW OF EXCAVATIONS ON APISHIPA (1200 TO 800BP) SITES ALONG PURGATORY RIVER CANYON, COLORADO. Since 2001 we have been actively excavating and surveying along the Purgatory River in southeastern Colorado. Here we would like to present a brief synthesis of what we have learned and provide a summary of the macro-botanical analysis for the sites we excavated along the northern reaches of the Purgatory River.

Garhart, Zachary (U Wyoming), James Goulding [Poster Symposium 12]. PREHISTORY OF THE PRYOR'S: FROM ROCKSHELTERS TO TIPI RINGS. Pryor Mountains contain hundreds of archaeological sites including tipi ring sites, quarry sites, camp sites, rock cairn trails, vision quest structures, pictograph and petroglyph sites, remains of several types of wooden structures, and rockshelter sites. Over the past several years the primary goal of the Pryor Mountain Project was to relocate and test rock shelters on Bureau of Land Management lands within the Pryor Mountains. In 2015 five previously recorded rockshelters were tested and 25 new rockshelters were recorded. All but one of the tested shelters contains archaeological deposits described in this presentation. A tipi ring at Last Canyon site was also excavated.

Garnett, Justin (U Missouri) [Poster Symposium 17]. EXPERIMENTS IN FENDING ATLATL DARTS WITH BASKETMAKER S-SHAPED STICKS. On the southwestern periphery of the Great Plains there exists a class of artifacts dating to the Basketmaker II period which have been classified as “shaped sticks,” “grooved clubs, or “fending sticks.” Since at least the early 1940s, some have maintained that although such sticks were similar in form to ethnographically known throwing sticks, these were likely used to fend incoming atlatl darts from the body of an individual engaged in combat. Using dimensional reproductions of s-shaped sticks and Basketmaker atlatl and dart sets equipped with rubber blunts, test subjects wearing protective gear, and high speed video the author evaluates S-shaped sticks as tools for fending atlatl darts, as well as testing them as rabbit sticks. They serve well in the latter capacity, and not so well in the former. This study underscores the importance of a “hands on” experimental approach in interpreting the human technological and behavioral past.

Gibson, Terrance (Western Heritage) [General Session 1]. IN SEARCH OF THE INVISIBLE IN ARCHAEOLOGY. When working in the field, archaeologists tend to focus on archaeological objects and features that they can see, and ignore everything else. Often, when they do find visible remains, they can’t use all the information available in the archaeological record anyway, because they simply don't collect it. Yet, humans have left electromagnetic imprints beyond the visible on sites that last for thousands of years, and these traces can still be detected and interpreted meaningfully even now. In the 21st century, scientific and technological advancements have provided scientists with a surprising variety of ways to detect and measure these invisible electromagnetic traces, using the right kinds of tools and interpretive methods. This paper will discuss the presenter's experience in studying archaeological phenomena beyond the visible using old and new tools, the surprising results, and how the phrase "Go Geek or Go Home" probably represents the future of archaeology.

Gibson, Terrance (Western Heritage), Stefan Damkjar [Poster Session 11]. DEVELOPING NEW ARCHAEOLOGICAL TOOLS IN THE 21ST CENTURY. During the spring of 2015 Western Heritage began research in detecting and measuring invisible traces in the archaeological record. Called the Quantum Archaeology Initiative, the first project sought to develop a research instrument that could be used to detect and analyze faint archaeological magnetic anomalies simultaneously from different distances. Such a device was incompatible with current magnetometer configurations, requiring

the collaboration of archaeology and electrical engineering to produce a new archaeological measurement device. This included the design of custom electronic components, adopting the latest advances in magnetic sensor and data management technology. This poster illustrates the process that was followed, starting from an initial design concept and ending with a final product, ready for field testing. The entire exercise often strayed far from traditional archaeology, but ultimately the special needs of the discipline resulted in the design of a flexible instrument platform suitable for future wide-ranging archaeological research.

Gibson, Terrance, see Jollymore, Kay

Gibson, Wesley [Poster Session 24]. FAUNAL AND SPATIAL ANALYSIS OF 25FT376: A BISON PROCESSING CAMP FROM SOUTHWESTERN NEBRASKA. 25FT376 is an archaeological site located on Spring Creek in Southwestern Nebraska. The two dates obtained from bone collagen, 6480+/-20 rcybp and 6490+/-20 rcybp, place the assemblage within the Early Plains Archaic and during the latter part of the Logan Creek Complex. This is a study of the faunal remains from the site. The assemblage is evaluated using utility indexes and mineral density indexes along with an analysis of general assemblage characteristics to determine what kind of activities occurred at the site. A spatial analysis is also conducted to investigate some of the patterns in the faunal concentrations. My analysis suggests that this assemblage represents a small scale bison processing camp where emphasis was placed on obtaining marrow resources and lends strength to the argument that a purely broad-spectrum foraging strategy was not the only strategy used during the Early Plains Archaic.

Gilder, Stephón, see Seifers, Ryann

Goodwin, Whitney A. (Southern Methodist) [Symposium 21]. COMPLEMENTARY TECHNIQUES FOR THE ESTIMATION OF ORIGINAL FIRING TEMPERATURES OF PLAINS CERAMICS: EXPERIMENTAL AND ARCHAEOLOGICAL RESULTS. Often overlooked, variability in firing practices allows us to make otherwise unattainable inferences about technological skill level, knowledge, and practice among past potters. This paper explores and revises methods for determining original firing temperatures of Plains pottery. Experiments presented here demonstrate that techniques used in other regions, such as stepwise clay oxidation analysis, do not work for Plains ceramics. Instead, a revised protocol was developed and paired with magnetic

susceptibility to produce estimates within 100C of original temperatures. Archaeological ceramics from central and eastern North Dakota are used as a case study. Analysis indicates an unexpected amount of low-fired pottery (<500C). Taken together with the results of particle size analysis and workability studies of local clay rich sediments, these findings suggest that Woodland and Northeastern Plains Village potters may have employed low-firing temperatures, in combination with less desirable, but available organic rich sediments, as a strategy to produce workable vessels.

Goulding, James, Zachary Garhart (U Wyoming) [Poster Symposium 12]. MARIAN'S SHELTER: ONE OF PRYOR'S BEST. Marian's Shelter is located in a secondary drainage to Burnt Tiber Creek in the Pryor Mountain Wild Horse Range. The shelter is adjacent and a few meters above the drainage bed. The site was first recorded by Montana State University in 1969 during the Pryor Mountain Project. The 2015 re-investigation consisted of re-recording the shelter, mapping, and excavating two 1 x 1 meter units. Artifacts recovered include chipped stone tools and debitage as well as bone. Among the chipped stone tools were a tang knife and Early Plains Archaic projectile point. The stratigraphy of the site displays externally derived alluvial deposition through low energy flooding and several outside conduits as well autogenic roof fall.

Goulding, James, see Garhart, Zachary

Grantham, Larry (Gauss Archaeology LLC) [General Session 20]. A FORMAL ATTRIBUTE ANALYSIS OF OSAGE CERAMICS AND IMPLICATIONS FOR OSAGE ETHNOGENESIS. For a number of years, people have speculated about the genesis of the Osage. Carl Chapman proposed a number of these, and these changed over the years. In recent years, others have entered the realm of speculation on origins. Through all of this, no one since Chapman has examined the ceramics. In order to logically discuss the topic, it is absolutely necessary to do so. Certainly the ceramics would be the most revealing of probable archaeological connections. In that light a formal attribute analysis of Osage ceramics was conducted. I will discuss the ceramic attributes and the decorative motifs. The implications for each possibility was then examined. It is now possible to arrive at a probable connection of Osage with an archaeological phase in the Midwest.

Green, William (Logan Museum of Anthropology, Beloit College) [Symposium 2]. REVISITING THE WISCONSIN ORIGIN HYPOTHESIS FOR THE AWAXAWI AND HIDATSA-PROPER

SUBGROUPS OF THE HIDATSA. Did the Awaxawi and Hidatsa-proper subgroups of the Hidatsas originate in Wisconsin? In the 1990s, Stan Ahler raised this possibility in his technical and popular publications about the Knife River Indian Villages. He contended that "the archaeological data readily support the concept that the Hidatsa-proper and Awaxawi subgroups of the Hidatsas developed directly from Late Woodland hunters/farmers/gatherers who resided in southern and central Wisconsin in the eleventh and twelfth centuries" and he stated that native traditions agree with this scenario "on virtually all points" (Ahler and Swenson 1993:138). Reviewers were not convinced. It is useful to revisit and begin testing this hypothesis with the benefit of an additional 20-plus years of work in Wisconsin and points west. Several lines of evidence are consistent with Ahler's proposition, but it is still not possible to support the hypothesis conclusively.

Green, William (Logan Museum of Anthropology, Beloit College) [Poster Symposium 16]. PLANT REMAINS FROM WALL RIDGE (13ML176), A GLENWOOD (NEBRASKA VARIANT) SITE IN SOUTHWESTERN IOWA. Wall Ridge macrobotanical remains permit insights into one household's subsistence economy and related local and regional paleoethnobotanical issues. Plant material was analyzed from 76 flotation-processed matrix samples from interior storage pits as well as non-feature contexts. Most wood charcoal derives from elm and ash, trees that were common in local sheltered hillslopes and better-drained portions of the nearby Missouri River floodplain forest. Little barley is the most abundant seed type at the site; other cultigens are present as well. Maize, mostly 8- and 10-row, was found in every sample. The assemblage suggests occupation during most of the year if not continuously throughout the year. Intra- and intersite botanical variability indicates multiple plots, crop diversity and possibly rotation, and fallowing. Such flexible farming strategies would result in periodic shifts in emphases among different crops and would be reflected in precisely the kind of archaeobotanical variability exhibited within and among Glenwood sites.

Grinnell, Calvin, Sessions 2 and 9 Chair

Grund, Brigid (U Wyoming) [Poster Symposium 17]. LEARNING CURVES AND PROJECTILE WEAPONRY: HOW A SHIFT FROM ATLATL TO SELF BOW EXACERBATES SOCIAL DISPARITY. At different periods throughout human prehistory, atlatls were replaced by self bows as primary hunting weapons on all continents except Australia. Previous scholars have hypothesized

that this shift may have occurred when changes in environment/subsistence strategies and/or a rise in social complexity and warfare favored the bow over the atlatl. Quantitative, diachronic data obtained from atlatl and self bow target shooting suggest that physical constraints and distinct patterns of learning inherent to using each weapon may have acted as causal factors of technological change under shifting environmental conditions when considered under a framework of human behavioral ecology. Furthermore, these data imply that the transition from atlatl to bow would have necessitated changes in age and sex/gender-based divisions of labor for prehistoric children, women, and men.

Grunwald, Allison (U Wyoming) [Poster Symposium 17]. FAUNAL ANALYSIS OF THE HANSON SITE, A FOLSOM LITHIC WORKSHOP. Located in the Bighorn Basin of northern Wyoming, the Hanson Site is thought to be the remnant of a Folsom lithic workstation. Evidence of hearths, toss zones, lithic concentrations, and butchering areas were demonstrated by earlier analyses, and with the present study we identify and quantify the identifiable faunal material. Results indicate the procurement of at least four bison (three older individuals and one calf), at least one pronghorn, one bighorn sheep, and a variety of smaller mammals including jackrabbit. Though seasonality data is limited to a single bison mandible, this study supports a previous conclusion that the site was the result of an extended occupation during which various species were procured on an ad hoc basis.

Grunwald, Allison (U Wyoming), George Frison (U Wyoming) [Poster Symposium 12]. FAUNAL ANALYSIS OF THE HANSON SITE, A FOLSOM LITHIC WORKSHOP. Located in the Bighorn Basin of northern Wyoming, the Hanson Site is thought to be the remnants of a lithic workstation periodically used by Folsom peoples. Evidence of hearths, toss zones, lithic concentrations, and butchering areas were revealed by earlier analyses, and with this study we identify and quantify the identifiable faunal material recovered from the site. Results indicate the procurement of at least four bison, three older individuals and one calf, at least one pronghorn, one bighorn sheep, and a variance of smaller mammals. Though seasonality data is limited to a single mandible, this study supports a previous conclusion that the site was the result of an extended occupation during which various species were procured on an ad hoc basis.

Halperin, David (U Kansas) [Poster Session 22]. A STUDY OF THE YOUNG SITE (23PL4) BLADELETS: LOCAL PRODUCTION OR TRADE? The Young Site (23PL4) is a Kansas City Hopewell

occupation located north-west of Kansas City on a tributary of the Missouri River. Since excavation in the early 1970s there has only been limited study of artifacts, and bladelets have not previously been analyzed. Bladelets are abundant throughout the Hopewell interaction sphere, and their analysis has been used to discuss the larger issues of trade, site activities, tool use, and lithic resource usage. The 443 Bladelets from the Young Site are used to address the question of whether the bladelet assemblage reflects local production or the trade of non-local bladelets. Both local production and trade may be represented at the Young Site. The position of the Young Site in relation to other Kansas City Hopewell sites and lithic sources is also summarized.

Hampton, Alex (U Wyoming) [Poster Symposium 12]. EVALUATION OF POTENTIAL FOR AN OUTDOOR MUSEUM AT THE HELL GAP SITE. The Hell Gap archaeological site (48GO305) near Guernsey, Wyoming is currently under consideration for the designation of National Historic Landmark by the National Park Service. One of the ideas to improve visitor education at the site is to create an outdoor museum to further the place-based learning environment of Hell Gap. My poster represents the conclusion of a pilot project to assess how an outdoor museum would function at the site. Locality I was chosen as the study area both due to it being the focus of the most recent excavations and due to it being the most readily accessible area for the public.

Hansen, Craig (National Park Service, Knife River Indian Villages National Historic Site) [Symposium 9]. DISCUSSANT

Hansen, Craig, see Sturdevant, Jay

Harty, Jennifer (Metcalf Archaeology) [Symposium 2]. UNCOVERING TRADE IN OLD SANISH. Continuous trade in the area of the old Sanish town site prior to inundation is well documented. Precontact sites along the beach suggest trade in lithic raw materials beginning in the Paleoindian era. Recent landowner finds across the bay from Crow Flies High Butte suggest it continued into the Fur Trade. The area was well known to the Hidatsa and likely served as a center for inter-tribal trade. Recently, tokens and trade items from the early to mid-Fur Trade have been identified in suface and near-surface finds, suggesting the potential for a fur trade post. Because the items are in a private collection and recovered from private land, access has been limited, but this paper will present what is currently known about the items, land, and the potential for future research.

Harvey, Kyle (U Iowa) [Symposium 21]. CERAMICS IN THE RED WING LOCALITY: ANALYSIS OF THE SILVERNALE SITE (21GD03) ASSEMBLAGE. This analysis will focus on three multi-component sites in the Red Wing locality (AD 1000-1400) of Southeastern Minnesota and Southwestern Wisconsin. Previous researchers in this locality have primarily utilized collections from the Bryan (21GD04) and Mero 1 (47PI2) sites. A descriptive analysis was conducted of 601 rim sherds from the Silvernale (21GD03) site and 31 rim sherds from Bryan with a focus on rim and neck forms, orifice diameters, manufacturing techniques, and decorations. This research is part of a larger project to investigate the transition from Late Woodland to Oneota in this locality and to determine the amount of influence outside groups had on this process. The results of this paper generally support an argument for Oneota (Bartron phase) evolving out of a base of Mississippian and Plains influenced people (Silvernale phase).

Haskell, Samuel, see Seifers, Ryann

Haury-Artz, Cherie (Office of the State Archaeologist, U Iowa) [Symposium 27]. ANALYSIS OF FAUNAL REMAINS FROM AN HISTORIC IOWAY INDIAN SITE (13VB124) IN VANBUREN COUNTY, IOWA. The Ioway village known as Iowaville (13VB124) was occupied in the late eighteenth and early nineteenth centuries, at a time when major changes were occurring for the Ioway culture and for the native fauna and landscapes of Iowa. The faunal assemblage from test excavations at the site reflects a pattern of traditional hunting and resource use that included a wide variety of native species, horse was the only non-native animal represented. Cultural modifications on bone specimens indicate that they practiced traditional butchering techniques such as disarticulating joints rather than slicing through bone, and striping meat from bone rather than making perpendicular cuts. The Ioway clearly had access to a variety of trade goods, nevertheless, they continued a tradition of making and using bone and antler ornaments and fine tools. The presence of bone manufacturing debris in the assemblage indicates that many of these items were manufactured on site.

Hawley, Kirsten (Indiana U), Laura L. Scheiber (Indiana U), Amanda Burtt (Indiana U), Cally Steussy (Indiana U), Adam Stevens (Indiana U) [Poster Session 6]. THE HEART MOUNTAIN ARCHAEOLOGY PROJECT: IN THE SHADOW OF FORETOP'S FATHER. Heart Mountain is a major geological landmark in the Bighorn Basin of northwestern Wyoming that for years was under

private ownership. Recently, 13,000 acres on the north and east side of the mountain was purchased by the Nature Conservancy. The Indiana University field school began the first formal archaeological survey in 2015. This research is part of a larger goal to bring Crow (Apsaalooké) tribal members back to Heart Mountain, which they call Foretop's Father. This was the 5th year of the Heart Mountain pipe ceremony, in which tribal members and community members hiked up the mountain and participated in a renewal ceremony led by tribal elders. Our work documenting the archaeological landscape around and on the mountain is a critical piece of the overall data set we are bringing together. In this poster we summarize the results of our recent partnership with the Nature Conservancy and Crow tribal members.

Hedden, John G., see Davis, Warren D.

Heidenreich, Rebecca, see Lynch, Elizabeth

Henning, Dale R., and Lance Foster (THPO, Iowa Tribe of Kansas and Nebraska) [Symposium 27]. BLOOD RUN: A UNIQUE ONEOTA SITE? Blood Run, a National Historic Landmark site, is the largest known Oneota site, with components on both sides of the Big Sioux River. A number of unique qualities mark the site. There are at least five geographically-separate mound/village units, all with evidence for close association of the houses and mounds. Tribal legends, historic documentation and archaeological evidence combine to identify the Omaha/Ponca as the primary residents at contact; the Ioway/Oto and Arikara often resided there as well. Blood Run functioned as an important ceremonial and exchange center through the late 17th century, apparently functioning as a primary source for catlinite objects through that period of time. The evidence for these and other unique qualities of Blood Run will be discussed and illustrated with powerpoint.

Heredos, Jacob, see Seifers, Ryann

Herrmann, Edward, see Nathan, Rebecca

Hill, Jr., Matthew E., see Knell, Edward

Hill, Jr., Matthew E., see Trabert, Sarah

Hill, Matthew G. (Iowa State), Christopher C. Widga (Illinois State Museum), Marlin F. Hawley (Illinois State Museum) [Poster Session 24]. MIDDLE HOLOCENE BISON IN THE UPPER MIDWEST.

Comprehensive analyses of bison remains from Itasca, Minnesota, and Nye and Interstate Park, Wisconsin, offer new information on the paleoecology of the Bison “occidentalis” in the Upper Midwest. These sites are taphonomically complex attritional assemblages, not catastrophic kill sites as originally described. Ten recent AMS radiocarbon dates on bison bone collagen span about 1,500 years, from 8540 cal. B.P. to 6890 cal. B.P., and when coupled with age-frequency mortality data, indicate that the region sustained resident herds during the middle Holocene. Serial stable isotope analyses ($\delta^{13}C$, $\delta^{18}O$, and $^{87}Sr/^{86}Sr$) of tooth enamel carbonate suggest midwestern bison at this time were not obligate grazers like contemporary animals in the Great Plains. Rather, they were flexible herbivores who were able to utilize a variety of local habitats, and did not migrate seasonally.

Hill, Matthew G. (Iowa State), Christopher C. Widga (Illinois State Museum) [Poster Session 24]. EXTINCTION DYNAMICS OF MIDCONTINENTAL CERVALCES. Radiocarbon AMS and stable isotope analysis on twelve midwestern Cervalces (stag moose) remains offer new information on the paleoecology of the taxon as it approached extinction. Dates span 17,000 years, from 30,000 cal. B.P. to 12,800 cal. B.P. with a hiatus during the last glacial maximum (27,000-17,000 cal. B.P.). Cervalces is present in the region during the Farmdalian inter-stadial and BÃ¸lling/AllerÃ¸d, and goes extinct at the beginning of the Younger Dryas. Collagen $\delta^{13}C$ values are essentially unchanged through time, and indicate that the diet did not change substantially (i.e., conservative niche) over ca. 17,000 years despite significant changes in vegetation and climate. Regionally, Cervalces is present during period of relatively high moisture conditions, when regional vegetation was dominated by spruce parkland or mixed spruce and ash forests. Extinction is co-eval with the disappearance of Proboscidea, occurring prior to grassland expansion during the early Holocene.

Hill, Matthew G., see Brush, Emily

Hilson, Heather, see Moore, Amanda

Hittner, Luke (U Nebraska-Lincoln) [Symposium 19]. INTERPRETING INTANGIBLES: HOW ETHICAL PUBLIC OUTREACH CREATES ARCHAEOLOGICAL ALLIES. In the United States, there is no greater boon to the cause of conservation than education and interpretation about heritage resources on public lands. This paper explores the ethical and professional aspects of consciously deciding to interact with private artifact collections in a

controlled environment. Specifically, we explore the 2013-2015 "Artifact Roadshows" case studies sponsored by the University of Nebraska-Lincoln and the USDA Forest Service in the western Great Plains. Along with efforts to provide digital documentation and curation of collected artifacts, the goal to foster relationships of understanding between professional heritage specialists and private artifact collectors is considered significant for the future conservation of heritage resources. Bridging the epistemological divide through the institution of interpretation on heritage resources, the tangible and the intangible, provides opportunities for the creation of grassroots avocational communities.

Hodgins, Greg, see Widga, Chris

Hofman, Jack (U Kansas), Chris Hord (Kansas Anthropological Association) [General Session 10]. A PROBABLE PAWNEE HUNTING CAMP ON THE SMOKY HILL RIVER, KANSAS. Fieldwork is documenting a tepee ring site located on the Smoky Hill River in western Kansas. This site may have been visited by Fremont in 1844, and it reportedly continued in use until the 1860s. Stone rings marked the prior locations of tepees until the early 20th Century when surface stones were removed and used for building. The land owner marked the centers of tipi ring circles with iron pins when the stones were removed. To date more than 20 of these pins have been located and mapped. The site may be stratified with multiple levels of tepee rings. This is one of few documented tepee ring sites or Pawnee hunting camps in the region. The site is located near the southern terminus of the "Pawnee Trail," used by Pawnee bands when traveling from their villages to bison hunting areas in the Smoky and Arkansas River valleys.

Hofman, Jack, see Crable, Barb

Holen, Kathleen (Center for American Paleolithic Research), Steven R. Holen [Poster Session 24]. COMPARISON OF PROBOSCIDEAN BONE NOTCHES TO EXPERIMENTAL DYNAMIC AND STATIC NOTCHES ON COW BONE. The differentiation of notches produced on prey animal limb bones by hammerstone percussion versus static pressure from animal teeth is important archaeological evidence in analyzing site formation processes and confirmation of human versus carnivore involvement in carcass processing. Quantification of the shape of the notch as seen from the cortical view has shown promise in determining the modifying agent, however, lack of adequate reference samples has been problematic. This poster shows the results of the comparison of a

sample of notches on Proboscidean limb bones with both hammerstone and static loading notches created experimentally on bovid limb bones. This experiment indicates that notch shape can be useful in determining whether dynamic or static pressure was used to modify a bone assemblage.

Holen, Steven R., see Asher, Brendon

Holen, Steven R., see Holen, Kathleen

Hollenback, Kacy L. (Southern Methodist U) [Symposium 2]. "WE WERE ONCE A NUMEROUS PEOPLE": *MAAXAAGIHDIA* [SMALLPOX] AMONG THE HIDATSA. Historical accounts of the 1837-1838 smallpox epidemic yield insight into native responses to the disaster. Yet these accounts suffer from biases, mostly towards life within the fur trade posts and the Mandan settlements located immediately adjacent. Less is known about Hidatsa experiences during the epidemic and the responses of the three ethnic sub-groups. Drawing on oral histories presented to Gilbert L. Wilson between 1911 and 1918, as well as archaeological evidence, this paper explores Hidatsa experiences with and responses to smallpox in the nineteenth century.

Hollenback, Kacy L., Sessions 2 and 9 Organizer

Holven, Adam (Tetra Tech), Britt McNamara, Jason Reichel [Poster Session 11]. BREAKING THE SOD: A CALL FOR SUBSURFACE TESTING ON HIGH PLAINS UPLANDS. High-Plains cultural resource management has often relied on pedestrian surveys to identify Native American archaeological resources. While pedestrian surveys are useful in determining the presence of artifacts and stone features in areas with good surface visibility, these surveys are less conclusive in areas with poor surface visibility. Recent surveys conducted in western North Dakota employed pedestrian surveys at 7.5-meter intervals coupled with shovel probing at 20-meter intervals in areas with poor surface visibility. Pedestrian surveys conducted in grasslands identified very few artifacts on landforms considered to have a moderate to high potential to contain archaeological resources. However, shovel probing on these landforms identified the presence of several isolated finds and artifact scatters. Most artifacts were located well below the surface and would not be visible even with excellent surface visibility, indicating that shovel probing may be more appropriate to assess the presence of archaeological resources on these landforms.

Hord, Chris, see Hofman, Jack

Huber, Christie, see Moore, Amanda

Huffman, Thomas (U of the Witwatersrand), Frank Lee Earley (Arapahoe Community College) [General Session 1]. CADDOAN ARCHAEOLOGY ON THE HIGH PLAINS: A GEOPHYSICAL SURVEY OF THE WALLACE AND HOBSON SITES, CENTRAL COLORADO. A geophysical survey using a fluxgate gradiometer supports the recent re-interpretation of pole-and-daub structures at the Wallace site near Pueblo, Colorado. Rather than small circular dwellings, as originally reported, the "houses" were the central kitchens of much larger rectangular lodges. In all, the shape of four lodges could be delineated: the original House 1 complex; House 5 with an east-west orientation; the burnt House 7; and a new House 8 that was also oriented east-west. One structure at the nearby Hobson farmstead was also rectangular. These structures show that the Wallace and Hobson settlements were affiliated with the Upper Republican cluster and not with Apishapa.

Ideker, Carlie, see Cannon, Molly

Ives, John W., see Lints, Andrew

Jacobs, Sarah, see Lints, Andrew

Jacobs, Sarah, see Moore, Amanda

Johnson, Lauren, see Dow, Jessica

Jollymore, Kay (U Saskatchewan), Terrance Gibson (Western Heritage) [Poster Session 11]. MAGNETOMETRY AND TIPI RINGS: OPTIMIZING EXCAVATION RESULTS IN STONE CIRCLE INVESTIGATIONS. Stone circles are notoriously difficult to date; the recovery of datable material and/or chronologically diagnostic artifacts is often either fortuitous in the case of limited excavation or requires extensive excavation. In an attempt to maximize productivity, magnetic surveys were carried out at three sites in south-central Saskatchewan to aid in identifying those locations where dateable material is most likely to be found. The results of the gradient magnetic surveys will be presented in relation to mapped stone circles and areas where subsurface investigations were carried out. The value of using magnetic assessments for future stone circle research is explored, highlighting the geophysical method's ability to

identify those locations where subsurface investigations (excavation) should be focused.

Jollymore, Kay (U Saskatchewan) [Symposium 21]. STONE CIRCLE INVESTIGATIONS AT A HYPER-SALINE LAKE IN SASKATCHEWAN. Stone circle investigations were carried out in an area of south-central Saskatchewan which has received little previous research. The area is unusual in that sites are focused around a large lake which has been hyper-saline for about the last 2,000 years but was previously freshwater in nature. Thus an important research goal was to date sites adjacent to the lake to determine if they relate to the lakes saline or freshwater characteristics. Excavations were carried out at three sites, after magnetometry was employed to identify possible hearths. Here I discuss some of the results of these excavations, how this research has added to regional knowledge, problems that were encountered, and directions for future research.

Kay, Marvin, see Pettigrew, Devin

Keyser, James (Oregon Archaeological Society) [General Session 10]. CHEVAL BONNET: A CROW "CALLING CARD" IN THE BLACKFEET HOMELAND. Cheval Bonnet is a small petroglyph site on Cut Bank Creek, just east of the Blackfeet Indian Reservation that shows a Crow Indian coup counting scene and three other horses, two of which can be identified as the products of Crow artists by their form and the stylized war bonnet worn by each animal. Located in a hidden canyon adjacent to a major stream crossing, the site represents a “calling card” similar to other biographic images drawn both as petroglyphs and arborglyphs during the late Historic period.

Kirkwood, Damian R. (U Wyoming), Rick Weathermon [Poster Session 22]. YOU PUT A UNIT WHERE?? TESTING A CHERT QUARRY IN THE HARTVILLE UPLIFT, WYOMING. In the late summer of 2015 as part of a Phase 2 Cultural Resource Management project for the Wyoming Army National Guard, University of Wyoming Anthropology began reinvestigation of 48PL363 and 48PL1955. The sites contain a large multi-component prehistoric complex located on Wyoming Military’s Camp Guernsey Joint Training Center in the Hartville Uplift. The complex contains deep stratified deposits, dense surface lithic scatters, numerous stone circles, and multiple chert extraction locations. UW placed a 1x1 meter test unit in one of the smaller quarry pits to investigate the nature of the deposits and determine research potential within these

types of features. The excavation collected over 250 kilograms of limestone and chert blocks, cores, debitage and other cultural material. This poster presents a brief overview of the site complex and the initial analyses of the quarry test.

Kirkwood, Damian R., see Carroll, Sean

Knell, Edward (California State-Fullerton), Matthew E. Hill, Jr. (U Iowa) [General Session 15]. THE ORGANIZATION OF CODY COMPLEX TOOL ASSEMBLAGES IN THE GREATER NORTHERN PLAINS AND ROCKY MOUNTAINS. This paper explores variability in Late Paleoindian Cody complex tool assemblages to evaluate the organizing role site type, environmental zone, and season of site occupation had on Cody tool assemblages. Frequency counts of individual tools from 28 sites were aggregated into eight types, and then subjected to principal component and cluster analysis to identify meaningful units of analysis. Site type is the primary influence, with hunting/processing tools dominant at bison kill/processing sites and all-purpose tools at campsites. Environmental zone is correlated to site type: most hunting/processing tools occur at kill/processing sites in the plains-grasslands; most all-purpose tools at campsites in the foothills-mountains; hunting/processing and all-purpose tools are equally common at alluvial valley sites. Season of occupation is a minor influence on assemblage variability. This study adds to the Knell-Hill Cody land use model results by better integrating how Cody tool assemblages varied in relation to the land use strategies.

Knudson, Ruthann (Knudson Associates) [General Session 15]. RENIER, SCOTTSBLUFF, AND HARDIN BARBED. The Renier site outside Green Bay, Wisconsin, was first reported by Ronald and Carol Mason in 1960 as a Scottsbluff cremation burial site. There are fragments of at least 25 identifiable artifacts from the site, with over 30 other flaked artifact fragments. The tools are heavily burned, and most are of Hixton Silicified Sediment. Calcined and burned human bone fragments from a single individual were associated with the artifacts. The points were originally identified as being of Eden or Scottsbluff styles, based on the then-available comparative literature. A recent detailed study of the artifacts indicates that they are probably related to other Hardin Barbed assemblages in Wisconsin, which also reflect heavy use of Hixton lithic material. Their technology and style reflect only generally materials called Scottsbluff or Nezu on the northern Plains and north into the boreal forests, and not at all to Eden points.

Kornfeld, Marcel, see Curran, Robert

Kornfeld, Marcel, Session 12 Organizer

Krause, Richard (Tennessee Valley Archaeological Research) [Symposium 2]. THE HIDATSA: ONE OF NORTH DAKOTA'S FIRST NATIONS. In the 1950s, the Extended Variant of the Middle Missouri Tradition was considered the product of an Initial Variant predecessor. In the 1970s, Donald Lehmer attributed the Extended Variant to immigrant eastern plains villagers. Early in the 21st century, Stan Ahler documented the acculturation of resident late Woodland groups, termed the Charred Body Complex. He included them in a northern version of the Initial Variant. In Ahler's view, this northern Initial Variant fused with a southern version to produce the Extended Variant. This paper offers an examination of ceramics from Charred Body components. The ceramics from each are analyzed from the perspective of the practices that indicate acculturation and the implications of the pattern of ceramic acculturation they express. Implied is a Mandan Origin in the Initial Variant's southern expression, and through the Charred Body complex, a Hidatsa origin in the Initial Variant's northern and later expression.

Kuhnel, Dennis (USDA Forest Service National Grasslands Visitor Center) [Symposium 19]. GRASSLANDS "ARTIFACT ROADSHOWS" IN CONTEXT: AN HISTORIC OVERVIEW OF CHALLENGES AND OPPORTUNITIES CONCERNING PUBLIC AND PROFESSIONAL ENGAGEMENT WITH ARCHAEOLOGICAL RESOURCES ON PRIVATE AND PUBLIC LANDS. Archaeological, cultural resource management and heritage interpretation communities have an obligation to educate the public about conservation ethics and laws. Recent efforts by the University of Nebraska-Lincoln and the USDA Forest Service National Grasslands Visitor Center in Wall, South Dakota have worked to expand upon this by seeking public involvement in community-based and archaeology-focused outreach and research events. Public knowledge is an important and often untapped source of information on Plains archaeology. It has long been known by federal officials and professional archaeologists that private artifact collections are commonplace in rural communities that border USDA Forest Service National Grasslands. This presentation will tell the story of how a small group of USDA Forest Service cultural heritage interpreters and their academic partners banded together to create a series of "Artifact Roadshows" to foster public/professional

collaboration in conserving and documenting the deep-heritage of the Great Plains and National Grasslands.

Kuhnel, Dennis, Sessaion 19 Organizer

Kurtz, William (Bureau of Indian Affairs) [General Session 1]. RELOCATING AND RECORDING MOUNDS THROUGH FIRE AND LIDAR. This presentation will examine several prairie restoration projects at Prairie Island Indian Community in Minnesota. Several mound groups were mapped here by Lewis in 1885 but the location of the mounds had been lost due to 100 years of cultivation. These mound groups are now located in restored prairie. Twenty-two of sixty-eight mounds at three sites have been relocated using prescribed fire and LiDAR. In addition, two unrecorded mounds in Iowa and one in Minnesota have been located and recorded by the presenter during wildfires.

Kurtz, William (Bureau of Indian Affairs) [General Session 20]. SONGS AS HISTORY-LAKOTA SONGS FROM THE LITTLE BIG HORN BATTLE. This presentation will examine 18 Lakota songs about the Battle of the Little Big Horn. These Lakota songs have been passed down and are from Pine Ridge and Standing Rock. The presenter will use his experience as a member of a Lakota drum group to interpret and translate these songs for their meaning. These first person narratives of the battle can be used as a source of history that has not been utilized before.

Kvamme, Kenneth L. (U Arkansas) [General Session 1]. RECENT GEOPHYSICAL FINDINGS AT CHIEF LOOKING'S VILLAGE, NORTH DAKOTA. During the summer of 2015 the Archeo-Imaging Lab of the University of Arkansas conducted two weeks of additional geophysical surveys at this important site. Previously, the Lab conducted exploratory magnetometry and resistivity surveys in 1997, and fully surveyed the village by magnetic gradiometry in 2008. This year's endeavors focused on a village-wide electrical resistivity survey, and multiple large blocks of ground-penetrating radar and electromagnetic induction over targeted areas. The results of these surveys were startling in their clarity and in the new insights they offer about house form and their distributions. This survey was a collaboration with the PaleoCultural Research Group of Broomfield, Colorado, and Minnesota State University, Moorhead, and greatly benefited from concurrent investigation and testing of anomalies by students from the latter institution and Colorado State University.

Lammers, Martin, see Gardner, Dudley

Larson, Mary Lou, see Bossio, Laura

Latham, Kate (U Alberta) [Symposium 25]. WORKING LIKE DOGS. The use of dogs for pulling travois and carrying packs on the Great Plains is well documented in ethnographic and ethnohistoric accounts but the antiquity of these types of dog transport is unknown. The travois and packs described in historic documentation of dog transport were commonly of a perishable nature and are not expected to survive in most archaeological settings. Some authors have suggested that pulling travois or carrying packs should leave a signature on the skeletons of dogs used for these purposes. Multiple indicators of such stressors have been suggested based upon observations of archaeological dog remains and veterinary literature on dogs and other draft animals. This paper evaluates the use of certain spinal pathologies as indicators of dog transport and the difficulties of distinguishing occupational etiologies from natural disease processes in archaeological dog assemblages.

Laughlin, John (Wyoming State Historic Preservation Office), Jessica Starks (Wyoming State Historic Preservation Office), Halston Meeker (Colorado State), Spencer Pelton (U Wyoming), Richard Adams (Colorado State), Joshua Boyd (TRC Solutions) [General Session 26]. TEN THOUSAND YEARS IN TEN DAYS: ARCHAEOLOGICAL WORK ON THE MORIAH RANCH, WYOMING. In 2013, the Wyoming State Historic Preservation Office partnered with the University of Wyoming and Colorado State University to present a grant application to the Wyoming Cultural Trust Fund. The grant would provide partial funding in support of archaeological survey work and student training on the Moriah Ranch, located approximately 80 miles north of Laramie. The Moriah Ranch was purchased by the State of Wyoming in 2012, and encompasses nearly 13,000 acres of land. Presented here are the final survey results, which includes the recordation of 37 new archaeological sites spanning ten thousand years of time. Additionally, the preliminary results of testing in 2015 at Moriah's Duck Creek site (a site spanning Paleoindian to Protohistoric times) will be presented.

Lawler, Dennis, see Widga, Chris

Lengyel, Stacey, see Widga, Chris

Lints, Andrew (Institute of Prairie Archaeology, U Alberta), John W. Ives (Institute of Prairie Archaeology, U Alberta), Kris Fedyniak (Royal Alberta Museum) [Symposium 7]. SCRATCHING THE SURFACE OF A PRECONTACT PLAINS RITUAL PHENOMENON. With an estimated temporal range spanning from 900 to 1400 AD, the Devils Lake Sourisford (DLS) pottery tradition has been viewed as a northern expression of Mississippian cultural influence found within the Northernmost Great Plains. Owing to the recovery of these vessels in direct association with human remains and the paucity of available vessels for analyses, understanding this phenomenon has posed a complicated challenge for archaeologists. However, advancements in pottery analyses have provided the opportunity to extract data previously unavailable. Submission of a single DLS vessel from Saskatchewan for multiple pottery analyses including carbonized food residues, D-Stretch Rock Art image analysis, high definition photography, and portable XRF scanning has provided incredible insight towards the design, creation, and use of DLS pottery for ritual activities. Combination of these analyses has concluded that this ceremonial item was treated with a red ochre pattern and that both maize, and wild rice, contributed to the items prepared within the vessel.

Lonergan, Maureen (U Iowa), Madeleine A. Hoofnagle (U Iowa), Sara L. Anderson (U Iowa), John F. Doershuk (Office of the State Archaeologist, U Iowa) [Symposium 27]. WOODLAND CERAMICS IN IOWA'S PRAIRIE LAKES REGION: 13DK96. Two seasons of field school excavation at prehistoric archaeological site 13DK96 in the Prairie Lakes region of northwest Iowa have yielded a large assemblage of ceramic, faunal, and lithic materials from a Middle/Late Woodland context. Site 13DK96 is located in a landscape position between small lakes immediately west of Big Spirit Lake; this setting protected the site from prairie fires, prohibited the use of the area for large-scale agricultural purposes in the historic/modern eras, and provided site occupants with direct access to extensive forest, wetland, and large lake resources. AMS radiocarbon assays, diagnostic projectile points, and distributional analyses of decorated ceramics provide data to compare with other excavated Prairie Lakes locales and contribute to the understanding of the regional ceramic sequence. This greater resolution informs on the temporal and cognitive messaging that these wares represent. The lithic assemblage reveals details on raw material procurement and onsite manufacturing preferences.

Lynch, Elizabeth (U Wyoming), Sarah Jacobs (St. Cloud State) Rebecca Heidenreich (Utah State), Aundrea Sheri Thompson (U Wyoming)

[Poster Symposium 12]. HELL GAP IN 3D: CLOSE RANGE PHOTOGRAMMETRIC RECORDING OF A BISON BED. Documentation of in-situ artifacts at the stratified Paleoindian Hell Gap site in southeast Wyoming is highly accurate. However, once the cultural items are removed from their context much of the visual matrix is lost. During the 2015 field season we took stereo-overlapping photographs of a bison bone bed in 5 cm levels until the entire bone bed was uncovered. Resulting images were used to build 3-D models of the excavation and document bone articulations and variation in sediments. The photographs were used to build virtual excavation units for future laboratory analysis. In this presentation we show the methods used for creating the models. We also show how additional research could be carried out using the current images and aid in lab analysis of the bison bone.

Magnani, Matthew, see Douglass, Matthew

Mandel, Rolfe, see Crable, Barb

Mankin, Brooke (U Wyoming) [Poster Symposium 12]. BRANGER ROCKSHELTER, PRYOR MOUNTAINS, SOUTHERN MONTANA. Branger is a small rockshelter in Carbon County of southern Montana. The shelter is situated on the northwest edge of the Pryor Mountains in a west-facing Madison/Mission Canyon Formation Limestone cliff face in an unnamed, west-trending ephemeral drainage. The site was originally excavated by a local family in 1965 and formally recorded in 1967. That record indicates that the lowest occupation of the shelter is of Middle Archaic or McKean age, followed by subsequent occupation episodes. However, the exact location and depth of the Branger excavation was unknown, as was the potential for undisturbed deposits still remaining. The purpose of the 2015 testing was to document the shelter stratigraphy, the level of disturbance by the previous excavation, and the potential for intact remaining sediment. The testing yielded a stratified depositional sequence, chipped stone, and faunal remains that included a badger skull.

Marcum-Heiman, Alesha (Oklahoma Archaeological Survey), Leland Bement (Oklahoma Archeological Survey), KC Carlson (Augustana College) [General Session 26]. INVESTIGATIONS AT HOOT OWL ROCKSHELTER (34CI72) FINDINGS FROM THE BLACK MESA AREA OF OKLAHOMA. The Black Mesa area of Oklahoma’s panhandle presents a rich and diverse material record spanning the Paleoindian through historic periods. Despite this abundance, a history of unsystematic collecting has deterred the attention of professional archaeologists resulting in a dearth of

knowledge for area chronology and history of occupation. Recent excavations at Hoot Owl Rockshelter (34CI72) conducted by the Oklahoma Archaeological Survey reveal multiple pre-Hispanic occupations to be present within intact deposits despite evidence of severe looting. Radiocarbon dates and diagnostic artifacts indicate occupations date to the Late Archaic and Plains Village periods. Subsistence data and analysis of lithic materials exhibit extensive utilization of the copious resources locally available. Obsidian, rock art motifs, and other aspects of material culture present at Hoot Owl Rockshelter and in the Black Mesa research area are suggestive of persistent ties to the Southwestern, U.S.

Marcum-Heiman, Alesha, see Carlson, KC

Marcum-Heiman, Alesha, see Muhammad, Faisal

Martin, Houston L. (UC Davis) [Poster Symposium 12]. BEYOND THE EXCAVATIONS: ARCHAEOLOGICAL INVENTORIES OF THE HARTVILLE UPLIFT DURING THE 1960S INVESTIGATIONS AT HELL GAP. Hell Gap is a renowned Paleoindian-aged archaeological site on the edge of the Rocky Mountains in east-central Wyoming. Much has been written about past and present investigations of the site by both Harvard/Peabody Museum and University of Wyoming archaeologists. However, less attention has been given to the results of the 1960s exploration of the Hartville Uplift and surrounding landscape, during which Harvard/Peabody Museum archaeologists conducted surveys within Goshen and Platte Counties. I will present a preliminary examination of the results of their investigations using maps from the original investigation. The number of sites recorded and their context will be described, and their current status will be established. Learning more about these sites will help lay the foundation for planned research concerning prehistoric land use on the Hartville Uplift, as well as reveal potential gaps in our current knowledge of archaeological sites in east-central Wyoming.

Martin, Mike, see Cannon, Molly

May, David, see Asher, Brendon

McDonald, Greg, see Asher, Brendon

McGrath, James (U Iowa), Rebekah Truhan, James G. Enloe (U Iowa) [Poster Symposium 28]. THE HIDDEN STRATIGRAPHY OF WOODPECKER CAVE: A GIS DERIVED, MODEL-BASED APPROACH TO ESTABLISHING STRATIGRAPHY IN

VISUALLY HOMOGENEOUS ARCHAEOLOGICAL DEPOSITS. The sediment stack at Woodpecker Cave (13JH202) does not possess an easily discernible stratigraphic sequence. Woodpecker Cave's deposits are visually homogeneous colluvium derived from glacial loess mobilized from above the rock shelter. The lack of visible stratigraphy has necessitated the creation of a digital model from which to analyze the spatial provenience of a variety of mapped objects in order to differentiate between sections of the sediment stack that may have originated from different anthropogenic or geologic inputs. Of principal interest to this study are the spatial positions, orientations, and densities of plotted finds, two-shot plotted finds, and mapped roof spall. This study suggests that while the matrix composition remains the same throughout the sequence at Woodpecker Cave, patterns of intrusive geologic and anthropogenic materials change through time and space and are detectable in GIS.

McGrath, James, see Skibbe, Adam

McGrath, James, Session 28 Organizer

McNamara, Britt, see Holven, Adam

Meeker, Halston, see Laughlin, John

Metcalf, Mike, see Walker, Danny N.

Meyers, Richard (South Dakota State) [Symposium 14]. INTELLECTUAL APPROACHES TO THE EFFECTS (MERITS) OF SOCIAL SCIENCE: UNDERSTANDING THE TENSION BETWEEN ANTHROPOLOGY AND AMERICAN INDIANS/NATIVE AMERICANS. Anthropology, as an academic discipline, endured a variety of self-implosions with regards to its relationship with American Indians and research. The predicament of achieving a more balanced relationship of knowledge production and sharing between Academe and tribal nations/communities is an ongoing process. This paper will address challenges that affect contemporary anthropological research on the plains. It will begin to unravel some of the antagonistic opinions held towards anthropology, and reveal the origins of the conflicting discourses that exist. Much of this tension lies in the polemical relationships of representation among the "researchers" and the "researched"; as well as, the philosophical issues between the concepts of "objectivity" and "subjectivity." These concepts lie at the core to social science "data" and ethnographic knowledge; and, they evoke a lot of

misunderstanding that ultimately gives anthropology a bad reputation that is no more valid or deserving than any other academic discipline.

Milton, Emily (Iowa State), Lawrence C. Todd (Park County Historic Preservation Commission), Kyle Wright (Shoshone National Forest) [Poster Session 11]. SPATIAL RECONNAISSANCE: A REEVALUATION OF PREFERENTIAL LITHIC SLOPE SORTING ON POST FOREST FIRE SURAFACES. Three years of archaeological surveys on the 2013 Hardluck fire in the Washakie Wilderness of Wyoming have continued to reveal a rich prehistoric landscape in a high-elevation area. The intensive techniques employed by the Greybull River Sustainable Landscape Ecology (GRSLE) project have enabled the collection of new data for the updated evaluation of previous work modeling small scale depositional lithic sorting due to variations in slope and vegetation intensity. Using Zingg index particle size and percent slope values created for each individual artifact, multiple Hardluck sites are tested for Local Indicators of Spatial Autocorrelation (LISA) using GeoDa and ArcMap 10.3. Results indicate significant depositional variation between sites, contributing to an enhanced taphonomic understanding of post-fire landscapes.

Mitchell, Mark D. (Paleocultural Resesarch Group) [Symposium 2]. HIDATSA AND MANDAN COMMUNITY VARIATION. Hidatsa history is multi-stranded. In the nineteenth century, each of the three Hidatsa bands or divisions—the Hidatsas proper, the Awaxawi, and the Awatixaâ—recognized distinctive origins and histories. Moreover, differences existed in the divisions' economic and cultural practices. Historical and cultural differences also were present among the four Mandan divisions. First articulated almost 90 years ago by the ethnographer and ethnohistorian Alfred W. Bowers, this crucial insight "that Hidatsa and Mandan histories and cultural practices only can be understood in sub-ethnic terms" represents a powerful framework for studying community variation in the northern Middle Missouri. This paper surveys differences among and between Hidatsa and Mandan communities and makes suggestions for future research on community variation.

Moore, Amanda (Montana State), Heather Hilson (U Edinburgh), Christie Huber (U Texas, Austin), Sarah Jacobs (St. Cloud State), Bradley Saint (U Kansas), Anthony Vizina (U Wyoming), Keatton Wilson (U Wyoming) [Poster Symposium 12]. EXAMINING EARLY PALEOINDIAN STRATA AT HELL GAP: THE 2015 FIELD SEASON. Nineteen sixties excavations at the Hell Gap site

in southeastern Wyoming illuminated the Paleoindian cultural sequence and contributed significantly to the understanding of Paleoindian life. Intervening years produced new data some of which questioned the early results. The 2015 field season provides the first field evidence since the 1960s to evaluate Paleoindian chronology and site formation processes of the earliest Hell Gap site components. Excavations resulted in recovery of several flake concentrations indicating on-site tool manufacturing, including Folsom point production, ochre, and significant faunal remains including hereto unidentified taxa. This poster presents the preliminary results of 2015 field season.

Mossett, Amy (Member of Mandan-Hidatsa Tribes, Fort Berthold) [Symposium 9]. DISCUSSANT

Muhammad, Faisal (U Oklahoma), Alesha Marcum-Heiman (U Oklahoma), KC Carlson (Augustana College), Stephanie Stutts (U Oklahoma), Brian Carter (Oklahoma State), Lee Bement (Oklahoma Archaeological Survey) [General Session 15]. RAVENSCROFT: LATE PALEOINDIAN KILL SITE ON THE OKLAHOMA PANHANDLE. This presentation is a summary of archaeological investigations at the Late Paleoindian Bison kill site 34BV198 also known as Ravenscroft. Investigations were aimed at finding the age of the kill site, the season in which the kill took place, the number of individual bison killed in the event, the manner in which they were butchered, and the culture complex responsible. Radiocarbon dating has validated the age of the site, fetal material has validated the season, increasing numbers of bison crania and analyzed bone continue to reveal the number and method of bison butchered, finally, the finding of a projectile point places us closer to identifying the culture complex responsible for the kill event.

Muhammad, Faisal, see Carlson, KC

Munson Scullin, Wendy (Midwest Ethnohorticulture) [Poster Session 11]. IDENTIFICATION OF BUILDING MATERIALS USING PHYTOLITHS. Charred remains of grasses from structures are ideal materials for phytolith analysis for the purpose of identifying or at least indicating the species of grass used in construction. This is possible because the number of species of grass that are suitable for construction in both growth habit and in performance after cutting are limited and highly context-dependent. Sample sizes of 1-3 cm in length are adequate, but smaller samples can be identified using phytolith analysis, so despite being a destructive process it minimizes loss of sample.

Nathan, Rebecca (Crow Tribal Historic Preservation Office), Edward Herrmann (Indiana U) [Symposium 14]. WHERE MEN GET THEIR MEAT: REDISCOVERING THE GRAPEVINE CREEK BUFFALO JUMP COMPLEX, CROW RESERVATION, MONTANA. The unique landscape of Grapevine Creek presents a fascinating diversity of archaeological resources, including the confluence of two prehistoric trails, dozens of archaeological sites and multiple buffalo jumps. Although bison bone beds were not previously identified, their presence in the drainage is suggested by a long history of Crow oral traditions, drive lines and habitation sites in the drainage. In 2015, our team of archaeologists and Crow tribal monitors identified five jump sites, associated drive lines and habitation sites, and two bison bone beds within a five square kilometer study area. During excavation at a remote jump site (24BH264), we recovered buried bison bone elements and diagnostic artifacts in situ within landslide deposits under a cliff. This paper presents the results of this research and suggests that Grapevine Creek represents one of the densest buffalo jump complexes in the Plains, and perhaps in North America.

Newton, Cody (U Colorado-Boulder, SWCA) [Poster Session 23]. SOME PRELIMINARY RESULTS FROM THE FORT VASQUEZ (5WL568) COLLECTION ANALYSIS. Fort Vasquez (1836-1841) was the first of four trading posts founded along the South Platte River on the Colorado Front Range. It was extensively excavated between 1963 and 1970 by Trinidad State College and Colorado State University. However, a complete analysis of the collection was not performed following the conclusion of excavations. This poster will present the preliminary results of a recent comprehensive analysis of the fur trade era deposits from Fort Vasquez, which is part of a larger research project undertaken to better understand the influence Native American societies had on the fur trade of the western Great Plains and adjacent Rocky Mountains.

Noack Myers, Kelsey (Tribal Archaeologist, Chippewa Cree) [Symposium 14]. CULTURAL RESOURCE PRESERVATION ON ROCKY BOY'S INDIAN RESERVATION. Home to the Chippewa (Ojibwa) and Cree (Nei-yahw) tribe, Rocky Boy's Reservation is the smallest and youngest of the Montana Indian Reservations. The Cultural Resources Preservation Department (CRPD) houses the Tribal Historic Preservation Office (THPO) and provides a multitude of services to the reservation community related to cultural research, education, and events. The CRPD is also able to provide employment opportunities for elders, working-age adults, and

student interns while documenting cultural resources on reservation and maintaining government-to-government relationships to preserve resources on ancestral homelands off-reservation.

Nycz, Christine (National Park Service, Midwest Archeological Center), Steven L. DeVore (National Park Service, Midwest Archeological Center) [Poster Session 11]. FINDIND ETZANOA: AN ARCHEOLOGICAL MAGNETIC SURVEY NEAR ARKANSAS CITY, KANSAS. First described in 1601, by Spaniard Juan de Oñate, the Native American settlement of Etzanoa reportedly consisted of about 20,000 ancestral Wichita. The settlement consisted of a string of villages that stretched for at least five miles, with more settlements beyond this core area. According to the early account, Etzanoa was comprised of up to 2,000 grass houses. The location of Etzanoa is thought to be located along the Walnut River near Arkansas City, Kansas. As part of a joint venture between the National Park Service (Midwest Archeological Center) and Wichita State University (Department of Anthropology), dual fluxgate gradiometers were used to survey six localities within the village site. These geophysical investigations reveal several subsurface features that could potentially be related to this early Native American settlement.

Oetelaar, Gerald (U Calgary) [General Session 10]. NATURAL DISASTERS AND CULTURAL INNOVATIONS: THE INTRODUCTION OF STONE BOILING ON THE NORTHERN PLAINS. The climactic eruption of Mount Mazama in 7627±150 cal yr B.P. exposed a number of vulnerabilities in the social and subsistence strategies of human populations residing on the northern Plains. The long-term unpredictability in the availability of subsistence resources culminated in the depletion of the stored food supplies and forced the resident human groups to seek the assistance of relations living beyond the limits of the ash fall. As a result of this population displacement, the former occupants of the northern Plains acquired new food preparation techniques and strategies for the long term storage of essential resources. To avoid similar disasters in the future, the interacting groups also expanded their social safety nets through the establishment of extensive trade networks. Using data from deeply stratified archaeological sites occupied before and after the ash fall, I explore this relationship between natural disasters and cultural innovations.

Oliver, J. Matthew (U Oklahoma) [Poster Symposium 5]. CHERT QUARRIES OF THE UPPER GUNNISON BASIN, SOUTHWEST COLORADO. Archaeologists have long known that quartzite

artifacts overwhelmingly dominate the archaeological record of most of the Upper Gunnison Basin (UGB) of Colorado, with only small percentages of typical assemblages consisting of other materials, including chert. Yet chert does occur in the UGB, and in some parts of the Basin it is very well represented. For example, in the Lake Fork Valley, chert artifacts increasingly dominate chipped stone assemblages as one moves south and to higher elevations. Eventually, quartzite all but disappears and assemblage composition approaches 100% chert. It is therefore important to understand where UGB chert originates both within and outside the Basin. This poster overviews current knowledge of UGB prehistoric chert quarries and non-utilized sources of the material, setting the stage for future studies of the role of chert in the Basin across the landscape and through time.

Ollie, Naomi (SWCA) [Poster Session 6]. PREHISTORIC USE OF PINE RIDGE, CONVERSE AND NATRONA COUNTIES, WYOMING: A SYNTHESIS OF STONE FEATURES AND ECOLOGICAL TRAITS WITHIN AN ARCHIPELAGO OF THE PLAINS. Pine Ridge is a north-south trending ridge approximately 40 miles long located along the southwest margin of the Powder River Basin in Wyoming. The ridge is comprised of the Lebo Member of the Fort Union Formation and is more resistant to weathering than the surrounding formations thus it provides topographic relief within the Power River Basin. Today the ridge supports ponderosa pine stands and the landform provides year-round elk habitat. Based on known archaeological sites, the ridge supported numerous camp sites as well as probable ceremonial sites. This paper examines the archaeological record of Pine Ridge including site density, site type, and site distribution to formulate hypotheses about settlement and landuse patterns that make this area a unique part of the Powder River Basin.

Park, Indrek (Indiana U) [Symposium 9]. LINGUISTIC LANDSCAPES IN HIDATSA CULTURE. This paper examines the categorization and significance of landscape terms and place names in Hidatsa culture. The lexical typology of basic geographic features in Hidatsa overlaps only partially with the equivalent nomenclature in English. In addition to descriptive physical topography, the traditional Hidatsa landscape is filled with places whose terminology and reference is either cultural (resources), commemorative (historical events), or sacred (mythical events). Of the four types of places—descriptive, utilitarian, commemorative, and sacred—the last, sacred, has been the primary argument in territorial disputes. Unlike more nomadic plains tribes, the Hidatsa had a relatively clear

notion of the boundaries of the territory that they considered their own, comprising a series of sacred sites, whose outermost locations marked the limit of their traditional territory. Fort Laramie Treaty of 1851 honored such claims and designated the enclosed area as the territory belonging to the Three Affiliated Tribes.

Park, Indrek (Indiana U) [Symposium 14]. I AM SOCIALLY MANDAN: SHIFTING TRIBAL IDENTITY AMONG THE THREE AFFILIATED TRIBES. Since 1862, the Mandan, Hidatsa, and Arikara have resided on a single reservation in North Dakota. Although each tribe has a distinct language and culture, throughout the twentieth and into the twenty first century many of the distinctions are fading due to shared pan-Indian practices and intermarriage among the three tribes. Individuals born to intertribal marriages tend to identify with the predominant tribal group in their respective community of primary residence. As a side effect, it has become possible for individuals to shift between different tribal identities according to changing social settings.

Pelton, Spencer, see Laughlin, John

Perkins, Stephen, see Drass, Richard

Perry, Michael (U Iowa) [Poster Symposium 16]. WALL RIDGE LITHIC ARTIFACTS IN MODERN PERSPECTIVE. Previous analyses of Wall Ridge chipped stone artifacts were conducted without the benefit of modern geographic information system (GIS) software. The distribution of lithic artifacts was analyzed using GIS, revealing that the majority of tools were left in the southwestern quarter of the lodge, while cache pits were preferred for the disposal of flaking debris. Analysis of the flaking debris identified a wide variety of raw material types used for flintknapping. Most flintknapping predictably involved the use of locally available raw materials but raw materials from sources throughout the upper Midwest are present in the assemblage reflecting wide-ranging contact or trade.

Peterson, Lynelle (Ethnoscience) [General Session 10]. PATTERNED BEHAVIOR ASSOCIATED WITH TWO STONE RINGS IN CENTRAL NORTH DAKOTA. Ethnoscience Inc. completed data recovery excavation of two stone ring features threatened by mine expansion. The features exhibit remarkable similarity in construction, artifact type and distribution. This paper provides a brief description of these features and discusses possible rules of behavior associated with the interior of tipi lodges.

Pettigrew, Devin (U Arkansas), Marvin Kay (U Arkansas) [Poster Session 22]. ATLATL DART AND ARROWHEAD MICROWEAR FROM THE WOO-PIG EXPERIMENT. Microwear traces on stone tools give clues to their ancient use, for instance, as knives or as projectiles. When closely observed and recorded, modern experiments with stone tools provide samples for comparison with artifacts. An experiment was undertaken with replica atlatl darts and arrows shot into a fresh pig carcass. Velocities of the projectiles were recorded with a slow motion camera and video analysis program, and with a radar gun, while impacts were recorded with a second slow motion camera for detailed playback. Markings on the darts show the orientation of points on impact, and shot markers allowed impacts to be traced to damaged bone. Although multi-directional microwear, such as crystallization and striations, might previously have been interpreted as knife use, points shot only once in the experiment and seeing no other usage also exhibit multi-directional microwear. Observation of the videos explains why.

Picha, Paul (State Historical Society of North Dakota) [Symposium 9]. WINDS OF THE UPPER MISSOURI: FRANCES DENSMORE AND ETHNOMUSICOLOGY AMONG THE HIDATSA INDIANS. Frances Densmore's 1912, 1915, and 1918 investigations of musical traditions among the Hidatsas remain vital a century after their inception. Recent scholarship, including Travels with Frances Densmore (2015), provides a glimpse of the relations among music, culture, and history with respect to the Hidatsas. Densmore's seminal 1923 publication, Mandan and Hidatsa Music, embodies an array of features that were later expanded by Alfred W. Bowers in his classic work Hidatsa Social and Ceremonial Organization (1963). Two examples drawn from Hidatsa music serve to clarify these features from an ethnological and historical perspective. Finally, Densmore's contributions to Hidatsa ethnomusicology in particular are foundational to what Bruno Nettl (2015, Third Edition) has encapsulated in The Study of Ethnomusicology: Thirty-Three Discussions.

Pierce, Greg (Office of the Wyoming State Archaeologist) [General Session 20]. ELEMENTAL ANALYSIS AS AN ALTERNATIVE DATING METHOD. There are multiple issues related to the examination of Protohistoric and Historic sites, not the least of which is accurately dating the associated cultural material. In the absence of temporally diagnostic artifacts or reliable radiocarbon dates one must look for other means of dating an artifact, a site, or an

assemblage. Investigations into the elemental composition of glass trade beads from the 18th and 19th centuries have shown that changes in manufacturing led to variable elemental compositions in these items that can be used to accurately date some samples to within a fifty year time span. To assess the feasibility of using this form of analysis on the High Plains, the elemental composition of glass beads from six assemblages was analyzed. This paper will present the results of this work and discuss the utility of glass beads as temporal markers on the Plains.

Pitblado, Bonnie, see Andrew, Holly

Pitblado, Bonnie (U Oklahoma) [Symposium 19]. DISCUSSANT

Pitblado, Bonnie, Session 5 Organizer

Pope, Melody (Office of the State Archaeologist, U Iowa). William E. Whittaker (U Iowa), Angela R. Collins (Office of the State Archaeologist, U Iowa), Leslie Bush, Joe Artz (EarthView Environmental, Inc.) [Symposium 27]. THE PALACE SITE (13PK966): A MIDDLE ARCHAIC LOCALITY IN THE DES MOINES RIVER VALLEY OF CENTRAL IOWA. The Palace site (13PK966) is a buried Middle Archaic site located in central Iowa in the Des Moines River valley. The site was excavated by the OSA Research Division in 2009-10 and contains several occupations and a single burial dating between 5300 and 4000 cal. BCE. Investigations provided a comprehensive and detailed view of how a Middle Holocene landscape was used and insights into hunter-gatherer practices, including mobility, foodways, and site use. In this paper we provide an overview of our findings and highlight similarities and differences between the Palace site and Middle Archaic Plains and Eastern Woodlands sites.

Porter, Sam, see Chodoronek, Michael

Posthumus, David C. (U South Dakota) [Symposium 14]. LAKOTA CULTURE AND SPIRITUAL EXPERIENCE: APPLYING HALLOWELLIAN NOTIONS OF PHENOMENOLOGY AND ONTOLOGY TO NINETEENTH-CENTURY LAKOTA BELIEF AND RITUAL. Alfred Irving Hallowell's scholarly roots reach back into the formative years of Americanist anthropology, and his influence continues to grow and blossom in many guises in the twenty-first century. He is considered a pioneering figure in psychological, worldview, phenomenological, and ontological approaches in cultural anthropology and ethnohistory. Indeed,

Hallowell was turning to ontology at least fifty years before the so-called “œontological turn” in anthropology we are witnessing today. In this paper I draw on Hallowell’s brilliant ethnographic studies of the Berens River Ojibwa (or Saulteaux), applying his insights on worldview, personhood, and ontology to an ethnohistorical analysis and (re)reading of nineteenth-century Lakota belief and ritual. This paper explores how direct experience and participation in ritual action had a formative impact on Lakota culture and the relational ontology underpinning pre-reservation Lakota religious belief.

Posthumus, David C., Session 14 Organizer

Reichel, Jason, see Holven, Adam

Robinson, Joanna (USDA Forest Service National Grasslands Visitor Center) [Symposium 19]. ALL ABOUT THE ATLATL: PROMOTING ARCHAEOLOGICAL STEWARDSHIP IN PLACE-BASED INTERPRETIVE PROGRAMMING AT BADLANDS NATIONAL PARK. Atlatl demonstrations and programs have long provided an engaging opportunity to pique public interest in archaeology and Native American history. This presentation involves the development and presentation of a series of interpretive atlatl programs conducted at the Sage Creek Campground of Badlands National Park, through a partnership with the USDA Forest Service NGVC. Sage Creek is a natural setting with known cultural resources where wild bison roam freely. Many archaeologists are concerned that public interpretation and outreach may unintentionally encourage the looting of archaeological sites. As heritage interpreters we have an obligation to promote proper archaeological conservation and stewardship practices. This presentation will use the example of the development and implementation of the Sage Creek atlatl program as a vehicle to demonstrate how archaeological stewardship and conservation ethics can successfully be incorporated into interpretive atlatl programs.

Roper, Donna, see Scott Cummings, Linda

Roper, Donna, Session 7 Organizer

Ross, Wendy, see Sturdevant, Jay

Rowe, Christopher (U Wyoming) [Symposium 19]. BEST OF BOTH WORLDS: ACCESSING PRIVATE LANDS THROUGH PUBLIC OUTREACH, A PROSPECTUS. Archeologists in the United States are often restricted to public lands, yet archaeological resources are

not. Potentially a vast wealth of data exists on private land which may alter our current knowledge of a region. One method by which the extent of any deficit in data may be evaluated is through the implementation of "Artifact Roadshows." These events have proven to be mutually beneficial for both the participant and research parties involved. A preliminary event hosted by the Vore Buffalo Jump has indicated that private collectors may have significant interest in a collaborative research project in northeastern Wyoming. The primary goal of upcoming research is to determine if the known cultural resources from public lands represent an accurate sample of the region in question, or are in some way biased and lack information that can be gained from private collections. Secondary goals include the creation of an interactive research database, introducing and involving undergraduate Archeology students with both public outreach and artifact identification, and to encourage private collectors to properly record and store the collections they acquire.

Rowe, Christopher (U Wyoming), Michael Chodoronek, Matthew Douglass [Poster Session 11]. VIEWS FROM AFAR: REMOTE FIELD APPLICATIONS OF PHOTOGRAMMETRY IN SURVEY. Non-traditional Photogrammetry is fast becoming an increasingly popular and welcome addition to field recording methods. Here, we report on the adaptation of photogrammetry using Photoscan by Agisoft to reconstruct badlands sites in South Dakota. This poster demonstrates the ability for this technology to be adapted remotely, with minimal investment in equipment. The resulting models enable 3-D visualization and analysis and are suitable for remote file sharing and consultation without the need for all parties to make physical site visits. The three-dimensional capabilities of photogrammetry are especially beneficial because it offers the ability to efficiently track site morphology over time within the dynamic landscape of the badlands.

Rutecki, Dawn M. (PaleoResarch Institute and Indiana U) [General Session 4]. COOKING AND CONSUMPTION: WHAT FTIR CAN TELL US ABOUT SPIRO LIFEWAYS. Fourier Transform Infrared Spectroscopy (FTIR) provides analytical potential to isolate structurally different compounds in absorbed residue of artifacts. This information is especially valuable when used with legacy collections that may lack the depth of information usually retained in current excavations. The site of Spiro Mounds, OK, at the southern edge of the Plains, presents a useful case study to examine the potential information gained from use of FTIR on ceramics from extant collections. Disruption, looting, and WPA excavations of such

a large, significant site have left numerous questions about the site's use and corresponding activities. This paper discusses the potential of FTIR to provide useful data to better address food consumption at Spiro. Further, this research demonstrates that new analyses of legacy collections have the potential to generate new knowledge from long-curated collections.

Saint, Bradley, see Moore, Amanda

Saunders, Jeff, see Widga, Chris

Scheiber, Laura (Indiana U) [Symposium 14]. (RE)CONTEXUALIZING HEART MOUNTAIN, APSAALOOKÉ: PAST AND PRESENT. Heart Mountain is an impressive geological anomaly visible across the Bighorn Basin of northwestern Wyoming. Identified on the earliest fur trapper maps, it has served as a recognizable landmark for centuries. The Crow (Apsaalooké) tell stories of vision questing, buffalo hunting, camping, traveling, and fighting at Heart Mountain, and it was within the boundaries of the Crow Reservation until 1868. Mining brought white settlers, although the Crow still regularly traveled to the basin through the early 1900s. Known as Foretop's father or Ihkapáliish Iilapxe, it was (and still is) considered to be the adopted father and protector of the Crow people. A well-known contemporary dance is also said to be a re-enactment of a Crow battle that occurred at Heart Mountain. Using oral histories as well as documentary evidence from newspaper accounts, fur traders, and ethnographers, this paper will explore multiple co-existing narratives as they relate to this remarkable landscape.

Scheiber, Laura (Indiana U), Amanda Burtt (Indiana U) [General Session 26]. RE-DEFINING LATE PREHISTORIC MOUNTAIN SHOSHONE OCCUPATIONS: EVIDENCE FROM THE CALDWELL CREEK SITE (48FR7091) OF NORTHWESTERN WYOMING. Interpreting past hunter-gatherer use of mountains has been hampered through the years by difficult access, excessive ground vegetation, and wilderness restrictions. With the regular occurrence of forest fires that have exposed hundreds of sites during the last decade, our knowledge of campsite structure and landscape use has dramatically improved. We now know that remote campsites often contain tens of thousands of artifacts that represent a greater commitment to mountain resources and places than previously considered. In this paper, we focus on investigations at the Caldwell Creek site (48FR7091) in the Absaroka Mountains of Wyoming. In addition to an overwhelming number of lithic flakes, a 2011 fire also

revealed diagnostic Mountain Shoshone artifacts, including projectile points, a variety of Shoshone knives/bifaces, and the largest number of Intermountain Ware ceramics found in the state. We discuss these assemblages as well as the recording methodologies employed to document the site.

Scheiber, Laura, see Belle, Nicky

Scheiber, Laura, see Hawley, Kirsten
Scheiber, Laura, see Seifers, Ryann

Scheiber, Laura, Session 14 Organizer

Schneider, Blair, see Sturdevant, Jay

Schneider, Fred [Symposium 2]. EXOTIC NATIVE PLANT MATERIALS OBTAINED BY THE HIDATSA THROUGH TRADE. The completion of a Hidatsa Ethnobotany has revealed the records of the Hidatsa in the late 19th and early 20th centuries receiving native plant materials of four exotic species from their Crow kin and trading partners. One of these species was obtained through down-the-line trade from the Crow and had its ultimate origins among the Nez Perce and/or Flathead. There is also the suggestion that the Hidatsa made use of a fifth exotic plant whose closet source would have been in southeastern Manitoba, extreme northeastern and southeastern North Dakota and/or from an isolate source in the Black Hills of South Dakota. Five tribes are identified as possible sources of this plant material. The paper provides the suggestion that trade of native plant material may have had a greater role in exchange systems of the northern and northwestern Plains tribes than has been previously recognized.

Schermer, Shirley, see Tiffany, Joseph A.

Scott Cummings, Linda (PaleoResearch Institute), Donna C. Roper (Kansas State) [Symposium 7]. RADIOCARBON DATING THE CENTRAL PLAINS. Radiocarbon dating ceramic food residues has yielded both concordant and non-concordant dates. Logically, food residues should contribute to understanding subsistence and provide accurate dates. First, however, it is essential to understand the contents of food residues, including origin of the foods being dated. Presence of fish and other aquatic resources, whether plant or animal, have the potential to introduce an age offset. The question, then, becomes whether to pursue calculating age offsets (and how that might be done) or to seek a chemical solution to remove the

offending older carbon. The fact that food residues have been shown to date older than annuals leads to questions of chronometric hygiene, including the value of food residues to provide accurate dates for site chronologies. Our most recent research, individually and collectively, addresses these factors and provides a series of dates to guide additional research going forward.

Scullin, Michael (Midwest Ethnohorticulture) [Symposium 9]. HOW DOES YOUR GARDEN GROW? BUFFALOBIRD-WOMAN'S GARDEN—YIELDS AND VARIABILITY. Although Buffalobird-woman (Maxidiwiac) has left us a wealth of information on horticulture in the Northern Plains, she does not address the reality of maintaining gardens on the Northern Plains. Buffalobird-woman was an individual who remembered her past with a very selective fondness. She told Gilbert Wilson next to nothing about wars, weather, grasshoppers epidemics, and various other catastrophic events. And Wilson, who was educated to be both Presbyterian minister and anthropologist, was not able to ask the pertinent questions. Thus the reliability of gardening as a resource is seldom mentioned or even alluded to. Our sample plot (based on Buffalobird-woman's account) has a mixed past, but over the last almost 40 years, and through its many permutations, almost all of the things which can go wrong have gone wrong. Variability within the environment as well as within a garden plot is the topic.

Seifers, Ryann (Indiana U), Laura L. Scheiber (Indiana U), Amanda Burtt (Indiana U), Samuel Haskell (Indiana U) Jacob Heredos (Indiana U), Ian Carrico (Indiana U), Stephón Gilder (Indiana U), Lucas Chraponski (Indiana U) [Poster Session 6]. CONTINUED INVESTIGATIONS AT THE CALDWELL CAMPSITE (48FR6917), A LONG-TERM BASECAMP IN THE ABSAROKA MOUNTAINS. The Caldwell Campsite (48FR6917) is located at the confluence of two creeks and bisected by a major forest service trail in the Washakie Wilderness that connects the Double Cabin trailhead to Indian Ridge (the location of several well-known sheeptraps). It was first recorded in 2012 as part of post-fire inventories following the 2011 Norton Point forest fire. Through systematic survey and several test pits, we have learned that the base camp used by the archaeological crew and by countless outfitters over the years also has rich archaeological deposits. Compared to neighboring areas, the burn event was not as severe, leaving a patchy surface today. Much of our additional knowledge of sub-surface deposits in 2015 comes from very active ground squirrel activity. In this poster we will discuss our continued study of the site, including

a discussion of diagnostic projectile points and sourcing of obsidian artifacts.

Semken, Jr., Holmes, see Brush, Emily

Shelton, Jeff (St. Cloud State) [Symposium 21]. LITHIC TECHNOLOGY AND FEATURE ANALYSIS AT 14WY1, THE TROWBRIDGE SITE. The Trowbridge Site, a key Kansas City Hopewell site, has been the focus of varied archaeological studies since the 1940s (Bell 1976, Johnson 1976, Reid 1976, Wedel 1959). This study is part of a broader re-analysis of the Trowbridge site assemblages. This research takes an in-depth look at two of the storage pits excavated in the 1960s. Working with the lithic debitage contained within, I discuss the implications of the lithic materials found, and how they inform us about the lithic technology and feature formation.

Shimek, Rachael Lea (U Wyoming). IN IT FOR THE SHORT HAUL: ECOLOGICAL MODELING OF DOG TRACTION ON THE GREAT PLAINS. Domestic dogs are considered almost ubiquitous in time and space, but a holistic understanding of their relationship with humans is far from complete. This paper presents an optimality model of the costs and benefits of dog traction in order to examine the topic from a non-traditional perspective. First, the model predicted a relationship between dog traction use and the cost of feeding dogs. Second, level of mobility was expected to condition dog traction use. These two hypotheses were tested with ethnographic data from western North American hunter-gatherer groups. No significant association between the degree of hunting reliance (a proxy for the cost of feeding dogs) and dog traction use was found. There was also no significant association between level of mobility and dog traction. This behavioral ecology modeling approach has shed new light on the unique relationship between humans and dogs.

Skeens, Jeremy L. (U Iowa) [Poster Symposium 28]. FUNCTIONAL ANALYSIS OF CERAMIC SHERDS FROM WOODPECKER CAVE. Four field seasons of excavations by the University of Iowa field school have recovered hundreds of ceramic pottery sherds from the Woodpecker Cave site. Previous typological analyses of the ceramic assemblage have supported the hypothesis that the site was host to long-term seasonal occupations spanning hundreds of years. Woodpecker Cave provides a unique opportunity to study variation in technologies used during ceramic production in eastern Iowa, spanning the Middle Woodland and Late Woodland periods. Further

analysis of the ceramic assemblage can provide insight into production strategies within the region. Examining temper, vessel morphology, and carbonization within the collection of sherds allows for analysis of the technological choices made during vessel production and the actual function of the vessels after production. Attempts to partially refit vessels will aid in determining overall shape and size, and provide a better understanding of the soot and carbon patterns present in the collection.

Skibbe, Adam (U Iowa), James McGrath (U Iowa) [Poster Symposium 28]. AN APPLICATION LIDAR SCANNING TECHNOLOGY FOR ROCK SHELTER ARCHAEOLOGY: A CASE STUDY FROM WOODPECKER CAVE. As terrestrial LiDAR systems become more accessible we will continue to see increased diversity in its application. In this study, we applied this technology to capture 3D representations for the Woodpecker Cave (13JH202) field site. During two scanning periods the scanner was deployed at several scanning locations. From the point cloud data collected during these scans we are able to visualize, measure, and quantify the cave, site topography, and depth of the most recent excavation.

Skov, Eric (CEMML - Ft. Riley) [General Session 26]. AN EMPIRICAL EVALUATION OF SLING ACCURACY: EFFECTIVENESS OF SLINGS AND COMPARISON TO OTHER WEAPON TECHNOLOGIES. Slings were a widespread technological phenomenon within prehistoric, historic, and some modern cultures. In spite of their prevalence in the North American ethnographic record, slings' archaeological signature is slight, and the due given them by most American archaeologists has corresponded to that scarcity. However, these tools have held important roles within societies, and an understanding of these weapons' potential can be instructive on such topics as children's play, small game hunting and warfare. This presentation reviews prior experimentation concerning velocity, range and wounding potential before moving on to the present analysis of sling accuracy. Accuracy data was obtained from published competition results from slinging clubs in Mallorca, then compared to scores from ISAC atlatl competitions and experimental results with primitive bows.

Snuggs, Erin (Chadron State) [Symposium 19]. LOVABLE LOOTERS: INTERPRETING ARCHAEOLOGICAL ETHICS AND PRIVATE ARTIFACT COLLECTIONS AT THE NATIONAL GRASSLANDS VISITOR CENTER. Public education and interpretation are critical tools that can be used in the fight to preserve our nation's archaeological history. In 2015, a goal of the

USDA Forest Service National Grasslands Visitor Center (NGVC) was to incorporate archaeological ethics into interpretive programming. To accomplish this goal, the NGVC acquired on loan from the University of Wyoming Archaeological Repository artifacts from a donated looter's collection. This collection became the basis of several interpretive programs tailored to educate potential collectors about the value of archaeological conservation ethics. This presentation will discuss the challenges and successes of these interpretive programs.

Staggs, Holly (National Park Service) [Poster Session 23]. SCOTCH-IRISH HOMESTEADS: AN INVESTIGATION INTO THE EARLY SETTLEMENT AND DEVELOPMENT OF THE OZARKS. The early settlers in the Ozarks Mountains of southern Missouri were predominantly of Scotch-Irish ancestry that developed a unique frontier culture in this rural region. My presentation will focus on the early settlement and development in the Ozarks with emphasis on newly discovered homestead sites at Ozark National Scenic Riverways (OZAR). Six homestead sites were recorded this spring during a post-burn inventory at the park. This survey data along with census records and oral histories will be used to better understand these frontier communities. Early homesteads on the Current and Jacks Fork Rivers provide a wealth of information on group identity, vernacular architecture, and 19th and 20th century material culture. This paper outlines the preliminary findings of this investigation which will shed light upon the early Scotch-Irish settlement patterns and regional adaptations in the Ozarks.

Starks, Jessica, see Laughlin, John

Steussy, Cally (Indiana U) [General Session 20]. LOOK TOWARDS THE MOUNTAINS. In the summer of 1942, thousands of Japanese and Japanese-Americans uprooted from their homes on the West Coast in the wake of Pearl Harbor arrived at what would become Wyoming's third-largest and shortest-lived city: the Heart Mountain internment camp. For three years, the residents lived in the shadow of Heart Mountain, one of Wyoming's most recognizable landmarks and for centuries an important site in the lives of Native American tribes in the region. This paper explores how the residents of the camp viewed this important landmark, both as a symbol and as a physical, natural space with a history of its own, drawing primarily on artworks and newspaper articles created and written by residents during the three-year period of the camp.

Steussy, Cally, see Hawley, Kirsten

Stevens, Adam, see Hawley, Kirsten

Stoecken, Jacob [Poster Symposium 28]. LITHIC ANALYSIS OF WOODPECKER CAVE. Excavations during the 2014 field school season led to the recovery of 405 lithic specimens, weighing a total of 1748.61 grams. Of these 405 lithic specimens, 92 were individually plotted using an EDM Total Station in order to determine their exact GPS coordinates in relation to a designated datum point within the rock shelter. Of the 92 individually-plotted specimens, 43 were recovered as numbered artifacts; the remaining 49 specimens were recovered as esquilles. The additional 313 specimens were, for the most part, recovered during the screening process. The majority of the small screened flakes possessed very little technological or chronological information potential. There were also several examples of retouched technology, including 6 possible projectile points.

Stokely, Michelle D. (Indiana U NW) [General Session 20]. TRICKSTER'S ELEPHANT SHIELD. James Mooney spent many years in Oklahoma's Indian Territory, documenting Native American history and culture as related to him by senior members of the Kiowa, Plains Apache, Southern Cheyenne, and Arapaho tribes. Among the topics of discussion were painted tipis and war shields, significant items of personal and group identity that were disappearing from reservation and allotment life. Mooney's notes provide vital clues to indigenous understandings and practices in the mid- and late 1800s but did he really understand what was being revealed? One shield, made by an Arapaho but owned by an Apache, suggests that he did not. Was Bashae's war shield and cover really made by an Arapaho "trickster" using images that "impressed the simple Apaches" as Mooney concluded, or did it convey a more complex understanding of supernatural powers and their relationships to humans? When is an elephant more than an elephant?

Stroth, Luke (U Iowa) [Poster Symposium 28]. A FIRE CRACKED PUZZLE: APPLICATIONS OF XR-F DATA IN UNDERSTANDING THE INTEGRITY OF AN ARCHAEOLOGICAL SITE THROUGH REFIT AND SPATIAL ANLYSIS. This poster explores the potential applications of using pXRF data to assess site integrity. One such application is to facilitate refit analysis, by grouping elements into potential refit groups based on similarities in chemical composition. The subject of

the refitting analysis was the fire-cracked rock assemblage from the University of Iowa Field School at Woodpecker Cave (13JH202), a site known to have been disturbed by previous excavation. The assemblage was selected because of their ubiquity throughout the site, their association with discrete occupational surfaces, and their nature to fragment and create refits. While the analysis provided relatively small amounts of refits, I argue that this was due to the nature of the assemblage rather than the sorting method. Overall, pXRF analysis was demonstrated to be a technically effective, if time-consuming, method. Further applications of pXRF data are presented, such as the utility of projecting pXRF data in three-dimensional space.

Stuart, Glenn (U Saskatchewan) [General Session 4]. ARCHAEOLOGICAL PALYNOLOGY OF THE WOLF WILLOW SITE. Interest in the paleoethnobotany of Northern Plains' precontact sites has increased, yet its practice remains rather uncommon. A paleoethnobotanical research program entailing macrobotanical, phytolith, and pollen analysis is being developed for Wanuskewin Heritage Park near Saskatoon, Saskatchewan. A synopsis of this program and results to date is presented here. Given the relative dearth of palynological analyses of samples derived directly from archaeological sites on the Northern Plains, one of the first goals of the research program was to document the feasibility of archaeological pollen studies at the Park. Pollen analysis of the Wolf Willow site (FbNp-26), a multicomponent campsite, indicates that palynological analysis of site-context samples is indeed feasible. Further, the results not only reveal distinctions between feature and non-feature contexts, but that each of three thermal features analyzed is also palynologically distinctive. It is argued that this variation reflects differing patterns of resource use.

Stumborg, Devon (U Saskatchewan) [Symposium 21]. THE WOLF WILLOW SITE: A GEOARCHAEOLOGICAL PROBLEM. The Wolf Willow site is a multi-component site situated on an alluvial terrace in the Opimihaw Creek valley within Wanuskewin Heritage Park near Saskatoon, Saskatchewan, Canada. Excavations have been carried out at the site since 2010, under the direction of Dr. Ernie Walker. A significant hiatus in cultural occupation spanning approximately 2000 years lies between cultural levels 2 (Prairie Side-Notched) and 3 (McKean), which is manifested in some areas of the site by gravel deposits. Particle size analysis of sediments from Wolf Willow has been undertaken by the presenter and other students at the University of Saskatchewan, under the direction of Dr. Alec Aitken. Through this analysis, it is hoped that the modes of

transport of the Wolf Willow site's sedimentary units will be ascertained.

Sturdevant, Jay (National Park Service), Steven L. DeVore (National Park Service, Midwest Archeological Center), Blair Schneider (U Kansas) [Symposium 9]. NEW GEOPHYSICAL INSIGHTS INTO VILLAGE LANDSCAPES AT KNIFE RIVER INDIAN VILLAGES NATIONAL HISTORIC SITE. As one of the best preserved groups of villages on the Upper Missouri River, the Knife River Indian Villages NHS includes an extensive inventory of archeological landscape features. Recent geophysical and LiDAR surveys have expanded our understanding of the archeological landscapes at the Knife River villages. This paper will present findings from broad scale remote sensing investigations that identified unrecorded archeological features at the four primary village sites - Big Hidatsa, Sakakawea, Lower Hidatsa, and Taylor Bluff. These findings may provide new insights into the cultural practices and community organization of people that lived at these sites during times of dramatic culture change on the Upper Missouri.

Sturdevant, Jay (National Park Service), Brenda K. Todd (National Park Service, Denver Service Center), Wendy Ross (National Park Service, Theodore Roosevelt National Park), Craig Hansen (National Park Service, Knife River Indian Villages National Historic Site) [Symposium 9]. PRESERVATION PRACTICE AT KNIFE RIVER INDIAN VILLAGES NATIONAL HISTORIC SITE. USING NEW PLANNING FRAMEWORKS TO IDENTIFY AND ADDRESS IMPACTS TO AN ARCHEOLOGICAL LANDSCAPE. Knife River Indian Villages National Historic Site was set aside to preserve, research, and interpret the archeological and cultural landscapes of the Hidatsa-Mandan villages at the confluence of the Knife and Missouri Rivers. Both park enabling legislation and NPS policy direct park staff to preserve archeological resources unimpaired for future generations. However, defining what preservation means and how it is put into practice presents a challenge for park managers as they attempt to preserve archeological resources in balance with natural processes. In 2013, the park began a comprehensive Archeological Resources Management Plan as part of the new NPS planning framework. These efforts focus on increasing tribal and public involvement in a long term resource management strategy incorporating both NPS and traditional tribal values. This paper will explore these issues and discuss the ways that this planning strategy may guide resource preservation and maintain relevancy into the future.

Sturdevant, Jay, Sessions 2 and 9 Organizer

Stutts, Stephanie, see Carlson, KC

Stutts, Stephanie, see Muhammad, Faisal

Tharalson, Kirsten (U Oklahoma) and William R. Ankele (U Oklahoma) [Poster Symposium 5]. FOLLOWING THE LAKE FORK OF THE GUNNISON RIVER: 10,000 YEARS OF OCCUPATION IN THE GUNNISON BASIN, COLORADO. The Lake Fork of the Gunnison River Valley in Southwest Colorado comprises many previously recorded archaeological sites and undoubtedly many others yet to be documented. Of the recorded sites in this region, the majority are located immediately adjacent to the river, and many contain multiple components. The Old Ryan Ranch (ORR) site, newly recorded in summer 2015, is one such locality. Occupation of ORR ranges from the Late Paleoindian period to the site's historic use by the Ryan family and shows evidence for numerous prehistoric occupations in-between. This poster presents the results of 2015 documentation of ORR, interpretations of use of the site through time, and situates it within the broader context of similar sites previously documented in the same region.

Tharalson, Kirsten (U Oklahoma), Elizabeth Braden (U Oklahoma) [Poster Session 24]. SEXING BISON AT THE CERTAIN SITE, WESTERN OKLAHOMA. The Certain Site (34BK46) is a Late Archaic bison kill in Western Oklahoma containing multiple arroyo trap localities. With an MNI estimated at over 200 bison, the Certain Site provides a large sample of metapodials for analysis. Demographics of hunted fauna can aid in the overall understanding of archaeological sites and the people who carried out the hunts. It is important to use the osteological remains of these hunts to determine sex ratios of large game animals to aid our understanding of seasonality, prey preference, and herd condition. Bison exhibit high degrees of sexual dimorphism, female bison are typically smaller than their male counterparts, these differences are apparent in the size of bison metapodials. Using bivariate statistical analysis, metapodial size dimensions are compared to determine the sex of the bison hunted at the Certain Site.

Theler, James L. (Mississippi Valley Archaeology Center, U Wisconsin-La Crosse) [Poster Symposium 16]. FAUNAL REMAINS FROM WALL RIDGE (13ML176): A GLENWOOD PHASE LODGE IN MILLS COUNTY, IOWA. The invertebrate (46

taxa) and vertebrate (71 taxa) faunal remains recovered at Wall Ridge are reviewed. The faunal assemblage indicates a wide range of habitats were exploited including open water, riparian edge, woodlands and prairies. The harvest of freshwater mussels, crayfish, frogs, and certain bird species along with large numbers of fish are indicative of a warm season occupation. Resource stress is suggested by the utilization of very small fish, frogs, and crayfish along with the occurrence of deer and elk fawns taken in the late spring/early summer.

Theler, James L., see Tiffany, Joseph A.

Thies, Meagan E. (Illinois State) [Poster Session 18]. DECORATIVE FUNCTION AND PREHISTORIC LIFEWAYS: A FUNCTIONAL ANALYSIS OF PREHISTORIC CERAMICS FROM WESTERN IOWA. In this presentation I will discuss the research design for my proposed Master's Thesis project. I hope to conduct a functional analysis of prehistoric Iowa ceramics from the Sharp's site to understand the relationship between decorative elements and ceramic technology. In his 1971 work on the Sharp's site, Dr. Joseph A. Tiffany used ceramic design attributes to link ceramic typologies spatially and temporally. Prior research has rested on dates from two sites containing ceramics similar to those found at the Sharp's site. These dates were found problematic. Over the next year, I will obtain C14 dates from three decorated sherds in the Sharp's site assemblage and I will conduct a functional analysis of the Sharp's site ceramics using the Performance-based Life History Approach. Recent work has shown ceramic analysts should first acquire a functional understanding of ceramics in order to ask more specific questions about the past. By conducting a functional analysis of the Sharp's site ceramics, I believe we can gain a better understanding of the relationship of ceramic technology to decorative elements and lifeways in prehistoric Western Iowa.

Thompson, Aundrea Sheri, see Lynch, Elizabeth

Thornhill, Cassidee (U Wyoming) [General Session 20]. FINDING EQUUS CABALLUS IN THE ARCHAEOLOGICAL RECORD. The introduction of Equus caballus (modern horse) into North America during European-American contact significantly altered Native American life on the Plains. The horse influenced a variety of cultural practices including the distance at which resources could be exploited, the amount of material goods that could be transported and war practices. Considering the importance of the horse it should be expected that horse remains would be prevalent in the

archaeological record. Despite the impact of the horse on native Plains societies there is a paucity of horse remains in the archaeological record in Wyoming. In this paper I explore the distribution of horse remains in Wyoming and potential reasons for the low representation of Equus caballus remains in the archaeological record on the Plains.

Tiffany, Joseph A. (Office of the State Archaeologist, U Iowa), Shirley Schermer [Poster Symposium 16]. INTRODUCING THE WALL RIDGE SITE. This poster presents an overview of the Wall Ridge project, an in-depth interdisciplinary research study of a single component Glenwood phase farmstead of the Central Plain Central Plains tradition. Presently, the Glenwood phase (A.D. 1300-1450) stands alone as the only major prehistoric culture regionally which is virtually unstudied from an integrated paleoecological perspective. Modern data recovery and excellent preservation at Wall Ridge provide the basis for an unparalleled and long needed contextual site analysis. Project background; field methods; house, features and stratigraphy; and the site setting are discussed, and modeling of household organization and duration of the occupation are summarized. Other symposium contributors report on the material culture, subsistence activities, resource distribution and evidence for climatic change.

Tiffany, Joseph A. (Office of the State Archaeologist, U Iowa), James L. Theler (Mississippi Valley Archaeology Center, U Wisconsin-La Crosse) [Poster Symposium 16]. WALL RIDGE MATERIAL CULTURE. This poster summarizes the ceramics, bone, and shell tools from the Wall Ridge site; lithics are the subject of a separate poster presentation. The pottery reflects a typical Nebraska variant assemblage, direct rim vessels (McVey ware) predominate and only a few examples of collared vessels (Beckman and Swoboda wares) and other forms are present. The frequency of red slipping and shell tempering is high compared to other Glenwood phase lodge sites. Shoulder designs are examples of Majors Opposed Diagonal. The pottery was used to establish site duration and in a seriation of 35 lodge sites. Bone and shell tools reflect a typical range of Nebraska variant tools including a fish gorge, antler bow guard, and highly curated scapula tools. Among the shell tools are a fish lure and a new artifact type we term applicators, used for coloring hides.

Tiffany, Joseph A., Session 16 Organizer

Todd, Brenda K., see Sturdevant, Jay

Todd, Lawrence C. (Park County Historic Preservation Commission), Emily Brush (Iowa State), Kyle Wright (Shoshone National Forest) [Poster Session 6]. FORTY DAYS IN THE WILDERNESS: 2015 PARK COUNTY HISTORIC PRESERVATION COMMISSION ARCHAEOLOGICAL INVENTORY AND ASSESSMENT ON THE SHOSHONE NATIONAL FOREST, WYOMING. Portions of the Washakie Wilderness, Shoshone National Forest, Wyoming are among the most remote in the continental US. A partnership between the Park County Historic Preservation Commission (PCHPC) and the Shoshone National Forest undertakes basic inventory for these difficult to access back country areas, and to provide rapid assessment as part of post-fire evaluations. In 2015, using a variety of funding sources, PCHPC-led teams spent 45 field days on the Washakie Wilderness conducting site testing, historic structure architectural assessment, post-fire inventory, archaeological site probability model evaluation, and high elevation/ice patch investigations. Among the material from over 40 sites examined (>30,000 items recorded in the less than 200 ha inventoried) are artifacts ranging from Paleoindian (Cody Complex), to Protohistoric age. Although considered remote and little used today, the montane and alpine settings of the Greater Yellowstone Ecosystem have a complex archaeological record requiring integrated research and management.

Todd, Lawrence C., see Burnett, Paul

Todd, Lawrence C., see Milton, Emily

Todd, Lawrence C., see Wilson, Kurt

Toom, Dennis (U North Dakota) [Symposium 2]. THE SAGEHORN VILLAGE ENIGMA. Surely the most conspicuous archaeological manifestations of the Hidatsa and Mandan peoples were their large, permanent summer villages. By 1804, the remnant populations of the Hidatsas and Mandans had been reduced to five primary villages on or near the Missouri River in the vicinity of its confluence with the Knife River. The recently discovered presence of a sixth major village on the Missouri in the Knife River area, most likely a late eighteenth century contemporary of the other five, came as quite a shock to University of North Dakota archaeologists who thought they were testing a much earlier Clark's Creek phase village. This sixth village was the Sagehorn site, now viewed as an enigmatic occupation relative to the other five historically documented villages. Here we examine the nature of the Sagehorn village site and attempt to shed some light on its age and ethnic identification.

Trabert, Sarah (U Oklahoma), Matthew E. Hill, Jr. (U Iowa) [Symposium 7]. PXRF ON THE PLAINS: A CAUTIONARY TALE OF FRUSTRATION, DISAPPOINTMENT, AND OPTIMISM. Small numbers of micaceous ceramics have been recovered from Dismal River (AD 1600-1750) sites on the Central High Plains. Previous researchers have long assumed that these ceramics originated in northern New Mexico. They appear in low frequencies and are typically small in size, further limiting the sample available for destructive mineral or chemical characterization analyses. One nondestructive methodology gaining ground elsewhere for ceramic characterization is portable X-ray Fluorescence (pXRF). To test the usefulness of pXRF in this region, we subjected a sample of Dismal River micaceous ceramics to both Neutron Activation Analysis (NAA) and pXRF to determine if it were possible to identify similar compositional groups using both techniques. An explanation of the methods used, the challenges encountered, and where this technique might be useful (and not so useful) to archaeologists working in the region is discussed.

Trabert, Sarah, Session 7 Organizer

Truhan, Rebekah, see McGrath, James

Valdez, Stephen, see Davis, Warren D.

Vehik, Susan, see Drass, Richard

Vizina, Anthony, see Moore, Amanda

Walker, Danny N. (U Wyoming), Mike Metcalf (Metcalf Archaeology) [Symposium 25]. CANID REMAINS FROM NORTHERN PLAINS ARCHAEOLOGICAL SITES: IDENTIFICATIONS AND INTERPRETATIONS. We all consider canid remains to be a common presence in archaeological sites from the Northern Plains. However, a critical need when studying these remains is proper taxonomic identifications. Unless one knows whether the animal is a dog, coyote, or wolf, or a combination of two or more of these species, proper cultural interpretations cannot be made. Canid remains recovered from four archaeological sites in Wyoming and North Dakota are discussed in this context of proper identification followed by cultural interpretations.

Walker, Doug, see Widga, Chris

Wanamaker, Al, see Widga, Chris

Wandsnider, LuAnn, see Day, Zachary

Weathermon, Rick L., see Carroll, Sean

Weathermon, Rock L., see Kirkwood, Damian R.

Wernecke, D. Clark (Texas State, Gault School of Archaeological Research), Michael B. Collins (Texas State) [General Session 15]. EXCAVATIONS AT THE GAULT SITE, TEXAS AND EVIDENCE FOR OLDER THAN CLOVIS STRATA. As the first of two papers, this presentation will examine two excavation areas, Area 12 and Area 15, at the Gault Site in Central Texas. The site is well known for its Clovis component but also has materials below the Clovis strata. The background, objectives and methodology of the excavations will be discussed followed by an in-depth review of the physical stratigraphy with archaeological evidence and dating data (OSL and radiocarbon). Most of the deposits at Gault back to ca. 5,000 years have been disturbed by looting and collecting. However, earlier deposits, 5,000-15,000 years old are intact and well stratified.

Wernecke, D. Clark, see Collins, Michael

Whittaker, William (U Iowa) [Symposium 27]. DISTRIBUTION OF HISTORIC INDIAN SITES IN IOWA. Extensive archival research reveals the general location of historic Indian occupations in Iowa in the 19th century. These results are compared with the archaeological record and treaty boundaries to determine the geographic range of Indian nations, types of activities and their settings, as well as areas of inter-tribal conflict and Euroamerican conflict.

Whittaker, William, see Pope, Melody

Whittaker, William, Session 27 Organizer

Widga, Chris (Illinois State Museum), Dennis Lawler (Illinois State Museum) [Symposium 25]. ARCHAIC DOGS OF THE EASTERN PLAINS AND MIDWEST: A METHODOLOGICAL FRAMEWORK FOR UNDERSTANDING DOMESTICATION. The analysis of ancient dogs is evolving from a framework focused on identification of domesticated canids to one where their morphology, genetics, and life history are considered collectively. This approach requires a network of specialist collaborators and

regional- to continental-scale geographic scopes. Within this framework, we discuss recent work on Archaic-period dogs and wolves from the Great Plains and Midwest with an emphasis on the morphology (i.e., geometric morphometrics) and paleopathology of skeletal elements. Wild canids show morphological and pathological characteristics consistent with known hunting behaviors. In domesticated dogs however, minor joint-related osteophyte formation is common and evidence for severe trauma is infrequent. We also discuss evidence for morphological selection (i.e., greater elbow stability) in dogs. The present morphological and paleopathological evidence suggests working dogs were often used as pack animals, but hunting-related injuries were rare.

Widga, Chris (Illinois State Museum), Stacey Lengyel, Jeff Saunders, Greg Hodgins, Doug Walker, Al Wanamaker [Poster Session 24]. MAMMOTHS AND MASTODONS IN NORTH AMERICA: NEW DATA ON THE CHRONOLOGY AND PALEOECOLOGY OF EXTINCTION IN THE MIDCONTINENT. The North American Midcontinent has one of the highest densities of terminal Pleistocene proboscideans on the continent. Although regionally dominated by the American Mastodont (Mammut americanum), three species of mammoths (Mammuthus primigenius, M. columbi and M. jeffersonii) are also sympatric. A recent census of Proboscidea in regional museum collections produced a dataset of >1600 specimens, vouchering 631 different localities. Although single-animal localities are by far the most common, multi-animal and multi-taxic assemblages are also present. During the Last-Glacial-Maximum (LGM), Mammuthus is the dominant proboscidean across the landscape. Mammut is rare or absent from the region during this time. During the subsequent post-LGM period, Mammut becomes the dominant taxon in forested and parkland habitats east of the Mississippi River and throughout the Ozark uplift. At this time, Mammuthus are more common in grassland habitats in the western part of the study area, although they maintain small local populations in forested and parkland areas until regional extirpation at 13,470 cal BP (~11,630 14C BP). Two mastodons from Schimelphenig Bog, WI (~12,700 cal BP; ~10,800 14C BP) are the only proboscideans from the region to survive into the Younger Dryas. Most multi-animal death assemblages occur within 500 years of the terminal extinction date. Against this regional background, demonstrated human or carnivore impacts on proboscideans are extremely rare, despite the ubiquity of natural death assemblages.

Widga, Chris, see Asher, Brendon

Widga, Chris, see Hill, Matthew G.

Wiewel, Adam S. (U Arkansas) [Symposium 9]. DIGITAL PHOTOGRAMMETRY AND RUBBERSHEETING: USING AERIAL PHOTOGRAPHS TO EXAMINE SITES ALONG THE MISSOURI RIVER IN NORTH DAKOTA. In recent decades near-surface geophysical instruments have become a standard remote sensing method for identifying and documenting archaeological sites. Aerial photographs offer a distinct remote sensing approach that may be equally beneficial to archaeologists. In fact, historical aerial photographs provide the clearest views of many sites that have been impacted by factors such as erosion, cultivation, and development, which are all common problems along the Missouri River. Importantly, aerial photographs are often available at little to no cost. Digital photogrammetry provides a well-established means for compositing and orthorectifying imagery with stereoscopic overlap. In other situations, rubbersheeting offers the best approach for georeferencing aerial imagery, although this technique can be especially difficult when using historical imagery. Panoramic image stitchers facilitate the latter method. I discuss these topics, describing the benefits and difficulties of each method, using archaeological sites in and around the Knife River Indian Villages National Historical Site.

Willey, P. (Chico State) [Symposium 13]. SEVENTH CAVALRY MEDICAL AND ENLISTMENT RECORDS. Medical and enlistment records of the Seventh Cavalry (1866-1884) provide perspectives on the demography and health of post-Civil War troopers. National Archives and Records Administration documents show more than 20,000 medical “complaints” and more than 8,000 enlistment records in the regiment during that period, distributed across regiment’s three major posting regions (Central Plains, South, and Northern Plains). The demographic information included birthplace, age, and stature. Large proportions of enlistees reported being born in foreign countries and northeastern U.S., fewer hailing from the Midwest and former Confederate states. Enlistments generally began at 21 years, the youngest regular minimum enlistment age. Troopers stood medium-short, averaging about 66 inches tall. Medical records documented more than 150 different illnesses, the most common ones being diarrhea, contusions, malarias, catarrh, and boils.

Willey, P. (Chico State) [Symposium 13]. THE FIGHTING SEVENTH CAVALRY: INTERNECINE INJURIES IN THE POST-CIVIL WAR MILITARY. The Seventh Cavalry’s renown derives from its

involvement in major battles with Native Americans, most notably at the Battle of the Little Bighorn. Although engagements with hostile forces resulted in injuries and deaths, other injuries occurred away from battlefields, in barracks and towns, caused by comrades and citizens. Assessing internecine injuries, most targeted the head and face, followed by the shoulders and upper limbs. More than one-third of the injuries resulted from firearms. Injuries occurred most frequently in winter, least in spring. Injuries increased during the two decades following the Civil War, peaking about 1880, when the Seventh was stationed on the Northern Plains. Foreign-born troopers suffered more injuries than native-borns, older troopers more than younger, and taller troopers more than shorter.

Willey, P. (Chico State) [Symposium 13]. DISCUSSANT

Willey, P., Session 13 Organizer

Wilson, Keatton, see Moore, Amanda

Wilson, Kurt (Iowa State), Lawrence C. Todd (Park County Historic Preservation Commission) [Poster Session 24]. EXPLOITATION OF MEDIUM-SIZED ARTIODACTYLS AT A LATE PREHISTORIC SITE, WASHAKIE WILDERNESS, NORTHWESTERN WYOMING. Comprehensive analysis of several thousand, highly fragmented faunal remains from limited testing of four, informal surface-hearth areas at high elevation (2630 m) montane site 48PA3128 documents intensive exploitation of medium-sized artiodactyls. Associated Intermountain ceramics suggest a Shoshonean affiliation and suggests linkages between this site and other near-by localities. Most of the remains probably are bighorn sheep. Skeletal element patterning indicates complete or nearly complete transport of carcasses to the location for additional processing, most prominently extraction of within-bone nutrients. Fetal remains point to at least some of site use took place during late winter or early spring. Discard of exhausted carcass parts into fires, either as part of work space maintenance, or perhaps to incorporate the processed bone as part of the fire's fuel, resulted in differential burning and further fragmentation of many specimens.

Wismer, Meredith (U Iowa) [Poster Session 24]. AN EXAMINATION OF POCKET GOPHER USE AT THE WOODLAND PERIOD RAINBOW SITE (13PM91). The Rainbow site (13PM91) is a multi-component Woodland site situated within the tallgrass prairie of northwest Iowa. Excavated in the late 1970's, the site remains an important example due to its substantial faunal collection. The

current study focuses on a concentration of pocket gophers (Geomys bursarius) found within Cultural Horizon C (~1400-1370 BP). Recent reanalysis of the faunal assemblage reveals a presence of 885 pocket gopher specimens accounting for a minimum of 124 individuals within this horizon, of which 94% are cranial and mandible elements. Initial reports noted the majority of pocket gopher remains in this level were associated with Structure 1, a lodge. This surprising number and spatial concentration of remains suggests that humans were responsible for their accumulation. In this presentation, evidence for the use of pocket gophers through time at the Rainbow site is examined, along with what role they played within the faunal subsistence base.

Wolff, Sarah E. (U Arizona) [Symposium 25]. LADY AND THE TRAMP: DOGS AS SOCIAL STATUS SIGNALS IN THE POST-CIVIL WAR FRONTIER MILITARY. While dogs had been part of military campaigns since ancient times, it wasn't until the late Victorian era that dogs were integrated into military life, not as instruments of warfare, but as hunting companions woven into U.S. Army life. During this time, dog breeding became a hobby of the social elite in cities and forts on the Western frontier. In military forts, well-bred hunting dogs were the pride-and-joy of many officers and officers' wives. Some of the most common dog breeds on forts include greyhounds, wolfhounds, mastiffs, large terriers, and large hounds. On the Western frontier only officers owned dogs, which is an interesting contrast to the Civil War. During the Civil War, companies of enlisted men sometimes adopted an animal, frequently a dog, as their mascot. In this presentation, I will further investigate these topics and expand on the critical role dogs played in the frontier military.

Wolff, Sarah E., Session 25 Organizer

Wolff, Shana (U Arizona) [Symposium 21]. CARBON AND OXYGEN ISOTOPIC VALUES OF BOS TAURUS AND OVIS ARIES: BUTCHERED REMAINS FROM FORT FRED STEELE, WYOMING. Fort Fred Steele (1868-1886) represents a part of the historic western frontier. In this preliminary study faunal remains from Fort Steele are measured for $\delta^{13}C$ carbonate (VPDB) and $\delta^{18}O$ carbonate (VPDB) values in order to gain insight into drinking water sources and grazing habits. Adult cattle grazed on native C_3 vegetation dominantly, and drank from local meteoric water sources. Young adult and juvenile cattle, as well as sheep, have a distinctly different diet and water source from the adult cows. Higher proportions of C_4 plants are found in their diet suggesting either

close grazing to the fort or C_4 supplemental nutrients supplied by the fort. These smaller herbivores were also drinking from stored water sources.

Wood, W. Raymond (U Missouri) [Symposium 2]. THE HIDATSAS: CULTURE HISTORY REVEALED. The Hidatsas and the Mandans were, historically, equally important semi-sedentary gardening residents along the Missouri River in what is today northwestern North Dakota. Yet the ethnography and archaeology of the Hidatsas has lagged behind that of the Mandans for many years. Happily, that is no longer the case, thanks to a cadre of archaeologists and the National Park Service. Ethnographic studies of the Hidatsas began in the closing quarter of the 19th century, and it was Alfred Bowers that began limited archaeological work in the 1930s. No significant work on their sites began, however, until the University of Missouri/Dana College project in the 1960s in village sites in traditional Hidatsa homeland. Later, Stanley A. Ahler initiated a multidisciplinary approach to their history and prehistory, including excavations in three Hidatsa villages in conjunction with the establishment of the Knife River Indian Villages National Historic Site by the National Park Service.

Wood, W. Raymond (U Missouri) [General Session 20]. THE FAMILY OF JOSEPH GARREAU AND THE UPPER MISSOURI RIVER FUR TRADE. Joseph Garreau (c. 1764-1852+) left St. Louis for a trading expedition on the Upper Missouri for the second time in 1793 with Jacques D'Eglise, never to return home. He married an Arikara woman at the Grand River village where he reared two sons: Antoine and Pierre (c. 1789-1881). The latter he adopted when his wife bore a son by her husband-warrior who had been killed. The father and both sons remained in the fur trade until their deaths in the late 1800s, and Pierre especially figures in many of the accounts of trade on the upper river. Pierre even purchased bison robes from the famous Hunkpapa, Sitting Bull. Joseph and Pierre rarely were described in flattering terms in accounts, including those of Lewis and Clark and Prince Maximilian. Pierre died in 1881, overcome by the smoke in his cabin when it caught fire at Like-a-Fishhook Village.

Wright, Kyle, see Burnett, Paul

Wright, Kyle, see Milton, Emily

Wright, Kyle, see Todd, Lawrence C.

Zarekno, Kristina (U South Carolina) [Symposium 13]. DISCUSSANT

Zeimens, George, see Frison, George

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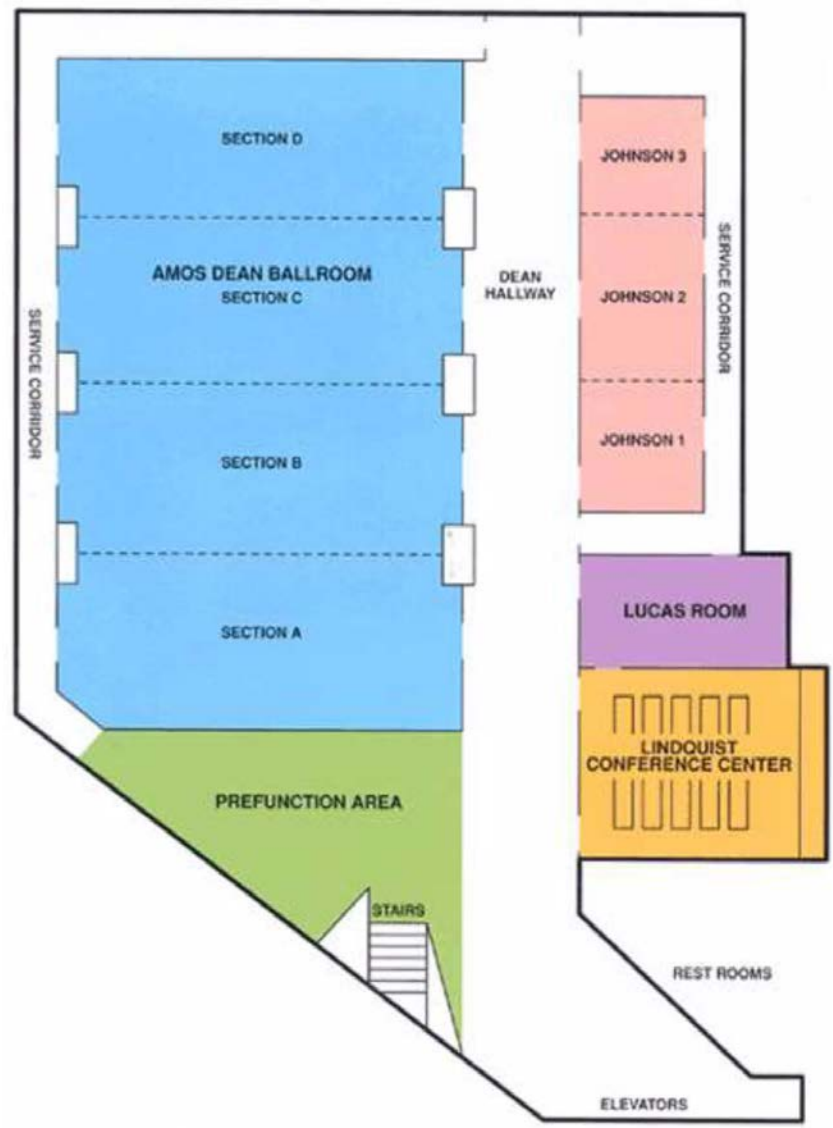
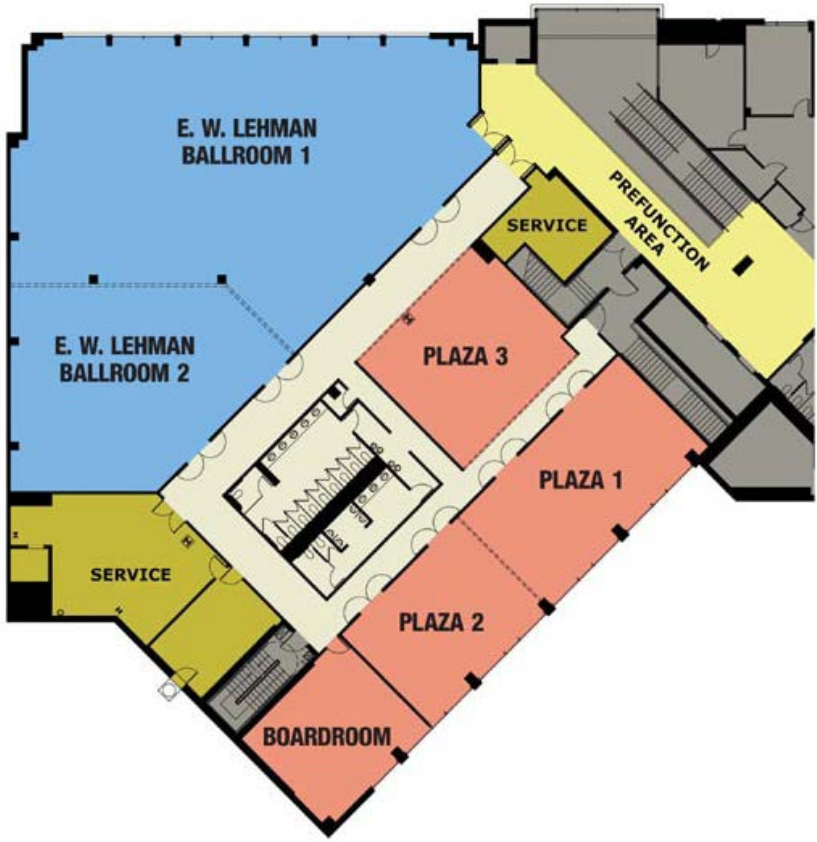
1999 Rhonda Fair, University of Oklahoma
1998 Jesse Ballenger, University of Oklahoma
1997 Susan Tanner, University of Nebraska
1995 Bruce Low, University of Saskatchewan
1992 Elizabeth Miller, University of Nebraska
1990 Jeffrey Huebner, University of Texas-Austin
1986 Judith Habicht-Mauch**e,** Harvard University

Sheraton Iowa City Hotel Meeting Space



Hotel Vetro Banquet Space
(201 South Linn Street)



ABBREVIATED CONFERENCE SCHEDULE				
Room:	**Amos Dean A**	**Amos Dean B**	**Amos Dean C**	**Amos Dean D**
Wednesday AM/PM	*Meskwaki Archaeology Field Trip (11:00-5:00 pm)*			
Wednesday Evening	*Early Bird (Ballroom A, B, C) (7 pm)*			
Thursday AM	**1** GIS & Geophysics	2 People of Willow-I	**3** Bioarch. 4 Plants & Residue	**5** Gun. Basin **6** Wyoming Arch.
Thursday PM	7 Ceramic Research 8 Roper Memorial	9 People of Willow-II	10 Records in Rock	11 Site & Survey/ 12 Rocky Mnt.
Thursday PM & Evening	*OSA Self-Guided Tour (1:30-4:00 pm)* *Iowa City Walking tour (3:00-6:00 pm)* *Old Brick Reception (6:00-8:30 pm)*			
Friday AM	13 Health 7th Cavalry	14 Native American	15 Paleoindian	16 Wall Ridge/ 17 Student Poster/ 18 Ceramics
Friday PM	19 Artifact Roadshow	20 Post Contact	21 Student Paper	22 Lithic/ 23 Historic 24 Fauna
Friday Evening	*Business Meeting (Ballroom B, C) (5:00-6:00 pm)* *Banquet (Hotel Vetro Ballroom 1) (6:30 pm)*			
Saturday AM	25 Canids	26 Plains	27 Iowa	28 UI Field
Saturday PM	*International Archaeology Day (UI Pentacrest) (12:00-5:00 pm)*			