



Image courtesy of the Shoshone Nation and James Keyser

# 78th Annual Plains Anthropological Conference

November 10 - 14, 2021  
Boulder, Colorado



## Radiocarbon Dating and Isotopic Analysis

Beta Analytic provides high-quality and timely results for several services including radiocarbon dating, stable isotope analysis, and nitrate source tracking. Beta's subsidiary, Isobar Science, offers high-precision isotopic analysis using multicollector inductively coupled plasma mass spectrometry MC-ICP-MS coupled with laser ablation (LA-)MC-ICP-MS.

### Radiocarbon Dating, Stable Isotope Analysis, and Nitrate Source Tracking



Bones & Teeth



Wood



Shell & other Carbonates



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Plants & Seeds



Water

### Geochronology, Geochemical Fingerprinting, and Environmental Source Tracking



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Lead Isotopes



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University of Colorado **Boulder**

Department of Anthropology

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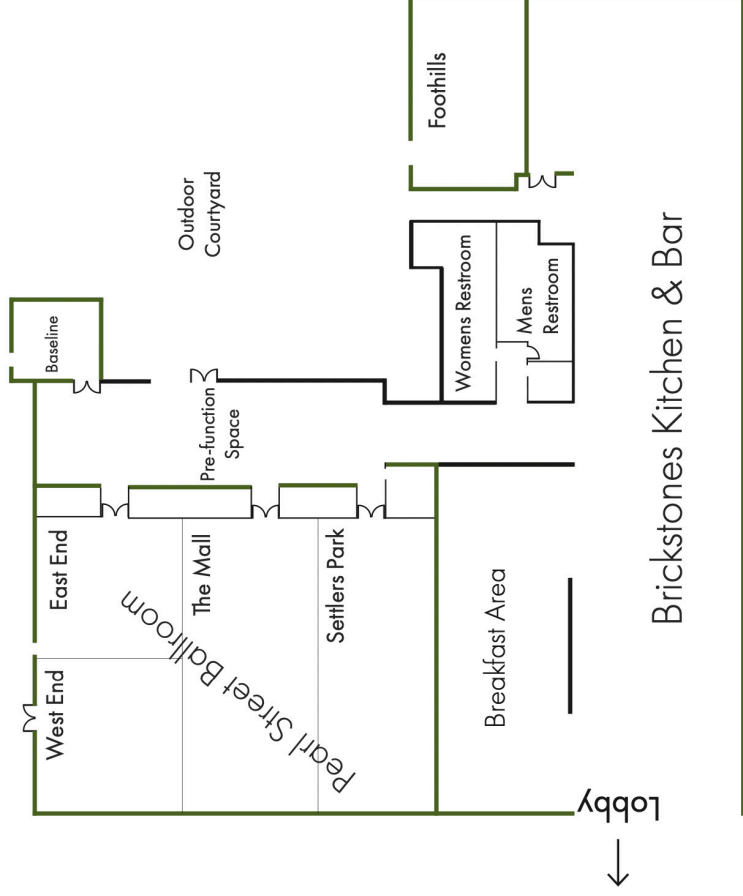
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COLORADO STATE UNIVERSITY

ANTHROPOLOGY AND  
GEOGRAPHY

# EMBASSY SUITES BY HILTON BOULDER





# ACKNOWLEDGMENTS

## **Conference Hosts:**

Anthropology Department  
University of Colorado Boulder

## **Conference Committee**

Douglas B. Bamforth, organizer  
Carlton Shield Chief Gover, co-organizer  
Kelsey Hoppes, co-organizer  
Devin Pettigrew, co-organizer

## **Plains Anthropological Society Essential Support**

Chris Johnston, treasurer  
Courtney Ziska, web master

## **High Queen of All Things Conference-Related**

Diana Wilson, Anthropology Office Manager

## **Volunteers**

|               |                 |
|---------------|-----------------|
| Andrew Aceves | Matthew Menden  |
| Connor Ball   | Sami Peoples    |
| Olivia Bulik  | Nicholas Puente |
| Kaitlyn Davis | Lana Ruck       |
| Amy Gillaspie | Katie Zilligan  |

Stop by our Vendors and Exhibitors:  
**(in the West End)**

Atlatl Archaeology  
Eliot Werner Publications  
Mammoth Run Casting  
Memorial Fund for Mary Jane Schneider  
University Press of Colorado  
University of Utah Press  
Wichita State University Department of Anthropology

# GENERAL INFORMATION

## Conference Headquarters

All conference events except for the tours on Wednesday and Saturday and the Mahaffy Cache reception on Thursday afternoon will be held in the convention hotel, the Embassy Suites, 2601 Canyon Boulevard, Boulder, CO 80302. The Embassy Suites connects across a breezeway/courtyard to the Hilton Garden Inn, our other convention hotel.

## Parking

Paid parking is available at the Embassy Suites, with a reduced daily rate for those staying at the hotel. There is also limited street parking and parking associated with shopping areas around the hotel.

## Transportation to and from Denver International Airport

Boulder is easy to get to by car from I-25 or I-70. Denver International Airport (DIA) is a major transport hub and is about 45 minutes away. You can travel from DIA to the hotel on public transportation (the Regional Transit District bus route AB2 from the airport to the Boulder Junction at Depot Square station has a stop across the street from the hotel; note that this is NOT the AB1 bus, which goes to the Downtown Boulder bus station, about a mile from the hotel). You can also get Uber and Lyft rides from DIA.

We have made arrangements for discounted transport with a local airport shuttle service, GreenRide. They will take you directly from the terminal at DIA to the conference hotel. If the hotel is sold out and you have to book a room nearby, GreenRide may also be able to drop you there - check the options offered on their Plains Conference registration page. Prices are best when they are spread over a group (follow the link to find out about this). You can book one-way or round-trip through this link:

<http://greenrideco11.hudsonltd.net/a/multiaff/grc11?code=PACONF>

## Registration

The registration and information table is in the pre-function lobby outside the convention rooms in the Embassy Suites. It will be open Wednesday, 10 November, from 5:00 to 8:00 PM, Thursday, 11 November from 9:00 AM to 5:00 PM, and Friday, 12 November from 9:00 AM to 5:00 PM and may be closed during the lunch breaks.

## Presentation Preview Area

Computers are available for use by conference attendees at the hotel business centers.

## Sessions

All symposia, round table, and paper sessions are in the Settlers Park, Mall, and East End rooms on the ground level of the hotel.

## Poster Sessions

All poster sessions are located in the West End room on the ground level of the hotel.

## Session Moderators and Presenters

Moderators and organizers need to bring their own pc laptop computers to their sessions to attach to the data projectors. Make sure to arrive with enough time before your session to check your equipment. Session moderators must adhere to the presentation schedule and keep presenters on time. Please give each presenter a two-minute warning before the end of their allotted time. All papers are 20 minutes in length. If a presenter is a "no-show" the session moderator will call a break for the appropriate amount of time. We ask moderators to remind all attendees to silence cell phones. Presenters and moderators should arrive at the meeting room 20 minutes prior to the beginning of the session in order to load your presentation onto the session computer unless it has been pre-loaded by the moderator/organizer. All presentations must be in Microsoft Office format.

## Vendors & Exhibits

Vendor and exhibit space is in West End room on the ground floor of the hotel. The room is open 9:00 AM to 5:00 PM on Thursday and Friday. The room will be accessible starting at 7:30 AM for use by vendors/exhibitors.

## Conference Merchandise

We will be selling conference t-shirts, coffee mugs, masks, and hats at the registration table. Supplies are limited.

## Social Media

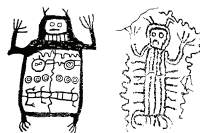
Find us on social media @PlainsAntho for posts and updates about the 2021 Plains Anthropological Conference. Tag us on your own posts using #PlainsConference!

## Smart Phone App

The Plains 2021 schedule is available on a mobile app for your android and iPhone smart phones. Download PAC 2021.

## Breaks and Refreshments

Coffee, water, and other light refreshments will be available in the pre-function area outside the meeting rooms in the Embassy Suites on Thursday and Friday during the morning and afternoon breaks. Other food and drinks are available at the restaurants and bars in the Embassy Suites and the Hilton Garden Inn, and in many restaurants a short distance from the convention hotel.





# Conference Event Highlights

## Wednesday (November 10)

### **Pre-Conference Tour - Magic Mountain:**

Magic Mountain/ Denver Museum of Nature and Science Tour (Wednesday): Located in a sheltered valley south of Golden, Colorado, the Magic Mountain site is well known for its lengthy Middle and Late Holocene record. For more than 30 years following the 1966 publication of Cynthia Irwin-Williams and Henry Irwin's landmark monograph, data from the site were crucial for systematizing the archaeological record of the South Platte River basin. More recent projects—including the current Denver Museum of Nature & Science and Paleocultural Research Group project—have focused on the site's extensive and complex Early Ceramic period component.

The tour will include two stops. On the field portion of the tour, led by Rolfe Mandel and Mark Mitchell, discussion will focus on the geoarchaeology of the site. A 4-in sediment core extracted during 2018 will be available for viewing. Participants should be prepared for one-quarter to one-half mile of off-trail walking over moderately uneven ground.

On the museum portion of the tour, led by Steve Nash and Michele Koons, participants will have an opportunity to view selected artifacts from Magic Mountain. Selected Paleoindian-age artifacts from multiple sites in Colorado and elsewhere will also be available for viewing, including a truly spectacular collection of points and bifaces.

**The bus will load at 10:30 a.m. in the patio between the Hilton and Embassy.**

**Registration:** The registration table will be open in the pre-function area outside the meeting rooms in the Embassy Suites from 5:00 pm to 8:00 pm.

**Board Meeting:** The Plains Anthropological Society Board of Directors will meet Wednesday, November 10, at 6:00 PM in the Private Dining Room on the ground floor of the Embassy Suites Hotel.

**Early Bird Party:** The Early Bird Party will be held from 7:00 PM to midnight in the Settlers Park Room, on the ground floor of the Embassy Suites. There will be free food, beer, and several non-alcoholic beverages along with a cash bar.

## Thursday (November 11)

**Registration:** The registration table will be open in the pre-function area outside the meeting rooms in the Embassy Suites from 9:00 AM to 5:00 PM.

**Exhibits, Vendors:** 9:00 AM to 5:00 PM in the West End room.

**Posters:** West End room (see program for schedule).

## **Thursday (November 11- continued)**

**Papers/Presentations:** 9:00 AM to 4:40 PM in East End, the Mall, and Settlers Park.

### **Special Session: STUDENT PAPER COMPETITION**

(Session 8, East End room, 1:30 to 3:00).

**CU Museum Reception:** From 4:00 to 6:00, there will be a reception in the University of Colorado Museum of Natural History to view the Mahaffy Cache exhibit. We will serve light refreshments and non-alcoholic beverages. A shuttle bus will leave the hotel starting at 3:30 - load on the patio between hotels.

**Evening Reception:** The annual reception for conference attendees is planned from 8:00 to 11:00 PM, in the Settlers Park room in the Embassy Suites Hotel. Appetizers, free beer, ice tea, and lemonade will be provided. Other drinks will be available at a CASH-ONLY bar. Marilyn Martorano will demonstrate how to identify and play a lithophone, a sorely neglected Indigenous instrument, and will allow attendees to play one themselves

## **Friday (November 12)**

**Registration:** The registration table will be open in the pre-function area outside the meeting rooms in the Embassy Suites from 9:00 AM to 5:00 PM.

**Exhibits, Vendors:** 9:00 AM to 5:00 PM in the West End room.

**Posters:** West End room (see program for schedule).

**Papers/Presentations:** 9:00 AM to 4:40 PM in East End, the Mall, and Settlers Park.

### **Special Session: STUDENT POSTER COMPETITION**

(Session 10, East End room, 9:00 to 11:00 AM).

**Student Workshop: PITCHLAB WORKSHOP** with Dr. Steve Nash, from the Denver Museum of Nature and Science. Pitch Lab is a training that applies the techniques of professional comedians to improve presentations, and to increase engagement and develop story telling skills. There will be a free buffet lunch available to the first 30 participants who sign up.

**Student Affairs Committee Meeting:** The committee will meet 4:30-5:00 at the end of the Student Poster Session in Cook West to recruit new members.

**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 Mall Room. 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 East End.

## **Friday (November 12- continued)**

**Pre-Banquet Cash Bar:** A cash bar will be set up after the business meeting at 6:00, in the pre-function area outside the meeting rooms in the Embassy Suites Hotel.

**Conference Banquet:** The Conference Banquet will begin at 7:00 PM in the Mall/Settler's Park Ballroom of the Embassy Suites Hotel. Banquet tickets must have been purchased prior to the conference. Awardees for the Distinguished Service Award, the Student Paper Competition, and the Student Poster Competition will be announced.

### **Post-Banquet Keynote Speaker:**

We invite all conference attendees to the presentation by our post-banquet speaker in the Ballroom (Settler's Park and Mall) following the banquet, approximately 8:00 PM .

This year's keynote address speaker is Dr. Robert Kelly. Robert Kelly is Professor of Anthropology at the University of Wyoming, past president of the Society for American Archaeology, past editor of *American Antiquity*, author of *The Lifeways of Hunter-Gatherers*, *Archaeology* and *Archaeology: Down to Earth*. He has conducted archaeological research in the western US for nearly 50 years.

## **Saturday (November 13)**

### **Post-Conference Tour - Lindenmeier Site:**

Our walking tour of the Lindenmeier Folsom site (5LR13), a National Historic Landmark, will span the entire length of the site, well over 800 m. We will visit multiple site locales, including the original 1924 find spot, major Smithsonian Institution excavation blocks including the "Bison Pit" and Areas I and II (1934-1940 excavations), and Pit 13 (excavated by the Colorado Museum of Natural History in 1935). We will also review the new excavation area undertaken this past summer by Colorado State University and under the direction of the tour leader, Jason LaBelle.

The tour will discuss Folsom site structure and activity areas and situate Lindenmeier within the abundant Folsom literature. Furthermore, LaBelle will emphasize the site's important historical context within American archaeology and the formation of PaleoIndian studies in the 1930s-1940s.

Tour participants should dress for cool to cold November weather, arriving with warm coats/hats/gloves and appropriate boots/shoes for walking across open grassland and potentially down into the site arroyo. Expect it to be breezy to windy! Total distance covered will be 1.5-2.0 miles roundtrip, with moderate physical exertion -- mostly related to traversing the slope into the arroyo and walking at altitude (6600 ft asl). Pit toilets will be available at the site's parking area.

**The bus will load at 9:30 a.m. in the patio between the Hilton and Embassy.**

# 78th Plains Anthropological Conference Program

Boulder, Colorado  
2021

**WEDNESDAY, November 10, 2021**

## **MAGIC MOUNTAIN/DMNS TOUR:**

buses load at 10:30 in alley between hotels

## **Early Bird Party - Settler's Park**

**7:00 to 11:00**

**THURSDAY MORNING, November 11, 2021**

## **Session 1, The Mall**

**Symposium:** *Recent Research at the Magic Mountain Site, Jefferson County, Colorado*

Organizer and Moderator: Mark Mitchell, Paleocultural Research Group

**8:40 - 9:00** Michele Koons: *The Magic Mountain Community Archaeology Project: History of Research, Collaborative Efforts, and Community Outreach*

**9:00 - 9:20** Brianna Dalessandro: *The integration of ground-penetrating radar and magnetometry at the Magic Mountain site in Golden, Colorado*

**9:20 - 9:40** Rolfe Mandel: *Geoarchaeology of Magic Mountain (5JF223): A Stratified Site on the Front Range of the Southern Rocky Mountains, North-Central Colorado*

**9:40 - 10:00** **BREAK**

**10:00 - 10:20** Mark Mitchell: *Chronology of Magic Mountain's Early Ceramic Occupation*

**10:20 - 10:40** Chris Johnston and Mark Mitchell: *Chipped Stone Raw Material Utilization During the Early Ceramic at the Magic Mountain Site*

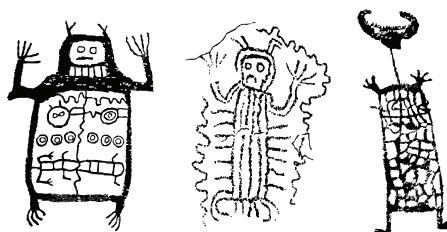


Image courtesy of the Shoshone Nation and James Kayser

## **Session 2, West End**

**Poster Symposium:** *Decades of Discovery: Archaeology and Camp Life at Hell Gap 1960 to 2021*

Organizer: Brayden Wirick, University of Wyoming.

**9:00 - 11:00**

Elizabeth Lynch and Clare Bowen O'Connor: *Hell Gap National Historic Landmark VR Museum Data Management Plan*

Brayden Wirick: *Blood, Sweat, and Doodles: Hell Gap Map Graffiti in the 1960s*

Kimberly J. Sutherland: *Twisted: An Experimental Study in Yucca Cordage Making at the Hell Gap Site*

Shane McDonnell: *Atlatl History and Throwing at Hell Gap 2021*

Erin Woolley: *Hell Gap '61 Revisited: An Ethnographic Analysis of Archival Images from the Hell Gap Excavations in the Early 1960s*

Clifford White, Falon Norford, Lee Olinger, Rachel Shimek, MacKenzie J. Cory, Brayden Wirick, Kim Sutherland, Shane P. McDonnell, L. F. Berg, Laurie Cale, Tony A. Fitzpatrick, Liana Flecker, Briana Houghton, Kenneth Humphrey, Matt T. Morris, Allison White, Marcel Kornfeld, Mary-Lou Larson: *Digging Deeper: Discoveries from the Hell Gap 2021 Field Season*

## **Session 3, East End**

**Presentation and Conversation Hour:** *Archaeology for a Changing Colorado*

Presenters / moderators: Matt Goebel and Holly Norton

**9:00 - 10:40**

Conversation: Economic Impacts and other benefits of Archaeology



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## Session 4, Settlers Park

### General Session: *Plains Archaeology 1*

Moderator: Amanda J. Butler

- 8:40 - 9:00** Alanis Ramos Berrios, Leland Bement, Brandi Bethke, Scott Hammerstedt, and Jennifer Haney: *Just Getting There is Half the Story: The Golden Eagle Site, A Possible Ancestral Puebloan Homestead in the Black Mesa Area of Oklahoma.*
- 9:00 - 9:20** Amanda J. Butler and Jeff Kruchten: *Cahokia's Caddoan Connections: Listening and Learning from Pawnee Histories*
- 9:20 - 9:40** Bob Dawe: *Evidence of the Practice of Ritual Birthing Imparted to Carved Bison Effigies in the Northern Plains*
- 9:40 - 10:00** **BREAK**
- 10:00 - 10:20** Jack W. Brink: *Battle in the Foothills: Rock Art at the Williams Coulee Site*
- 10:20 - 10:40** Fred Schneider: *Intertribal Trade for Native Plant Material Exotic to North Dakota by the Mandan, Hidatsa, and Arikara Tribes: An Update*
- 10:40 - 11:00** Robert Hoard: *Drilled Bear Canine Teeth from an Archaeological Site in East-Central Kansas*

## Session 5, The Mall

**Forum: *Inclusivity and Opportunity: Introducing the Plains Conference Code of Conduct***

Presenters and Moderators: Lien Pomeroy, Teresa Wroe, Plains Anthropological Society Board Members.

**11:00 - 12:00**

## THURSDAY NOON HOUR

### STUDENT WORKSHOP, East End

**12:00 - 1:00**

This year our student workshop features a Pitch Lab Workshop hosted by Dr. Steve Nash. Pitch Lab is a training that applies the techniques of professional comedians to improve presentations, and to increase engagement and develop story telling skills. Traditionally targeted at sales and marketing teams, Pitch Lab has been expanding to train academics in public speaking skills and science communication. Visit [pitchlab.io/services](https://pitchlab.io/services) to learn more.

## THURSDAY AFTERNOON

### Session 6, Settlers Park

#### General Session: *Plains Archaeology 2*

Moderator: Lee Bement

- 1:00 - 1:20** Leland Bement, Brandi Bethke, Debra Green, and Kristi Wyatt A *Mammoth Bone Chisel from the Devil's River Region of Texas*
- 1:20 - 1:40** Jason M. Labelle: *Kill, Camp, and Return: A Report on the 2021 Excavation of the Lindenmeier Folsom Site, Larimer County, Colorado*
- 1:40 - 2:00** Michael Toft: *Mallory, To Be Or Not To Be McKean*
- 2:00 - 2:20** **BREAK**
- 2:20 - 2:40** Erin R. Hughes: *Mississippian Influences on the Great Plains: The Transition from Corner to Side Notched Arrow Points in the Central Plains Tradition.*
- 2:40 - 3:00** Cherie Haury-Artz: *Shopping Local – Mammal Procurement Patterns at Joy Creek Major (13PM7), Northwest Iowa*

### Session 7, The Mall

#### Symposium: *Revisiting Tobias: A Great Bend Aspect, Ancestral Wichita Village in Rice County, Kansas*

Organizer and Moderator: Nikki Klarmann, Kansas Historical Society and Michigan State University

- 1:00 - 1:20** Nikki Klarmann: *Archaeological Investigations at the Tobias Site (14RC8) in Rice County, Kansas*
- 1:20 - 1:40** Geoffrey Jones: *Magnetic Susceptibility Survey at the Tobias Site*
- 1:40 - 2:00** Rob Bozell: *Evidence of the Practice of Ritual Birthing Imparted to Carved Bison Effigies in the Northern Plains*
- 2:00 - 2:20** Mary Adair: *A Synthesis of Tobias Site Archaeobotanical Remains*
- 2:20 - 2:40** **BREAK**
- 2:40 - 3:00** Timothy Weston: *Modified Bone from the 2019 KATP Excavations at the Tobias Site (14RC8) Rice County, Kansas*
- 3:00 - 3:20** Robert Hoard and M. Steven Shackley: *Obsidian and Other Exotic Raw Materials for Chipped Stone Tools at the Tobias Site and Other Great Bend Aspect Sites Archaeological Site in East-Central Kansas*
- 3:20 - 3:40** Shelby Beltz: *Wear Patterns and Hafting Techniques of Scapula Hoes at Great Bend Aspect Sites*
- 3:40 - 4:00** Nikki Klarmann: *Future Research and Preservation Plans for the Tobias Site*

## Session 8, West End

### General Poster Session: *Method and Theory*

**1:00 - 3:00**

Paul Burnett: *Spatial Modeling of Prehistory in Northwestern Colorado*

Ella Crenshaw and Delaney Cooley: *Public Archaeology in the Wake of the Pandemic: Creating a More Accessible OKPAN*

Tatyanna Ewald: *Dental Polish as a Method for Determining Seasonality for Bison*

Steven R. Holen and Kathleen Holen: *Human Induced Percussion Technology: A Synthesis of Bone Modification as Archaeological Evidence*

Addison P. Kimmel and Steven A. Katz: *Facing the Challenges of Collaborative Archaeology*

Michael W. Krause: *Following Suit: A Cross Bar Ranch Suitability Model*

R. A. Varney and Linda Scott Cummings: *Using XRF to Predict and Pollen to Identify Agricultural Sediments*

## Session 9, East End

### Symposium: *Student Paper Competition*

Organizer and Moderator: Kacy Hollenbeck, Southern Methodist University

Judges: Kacy Hollenbeck, Sarah Trabert (University of Oklahoma),

Wendi Field Murray (Wesleyan University), Scott Brosowske (Courson

Archaeological Research), Bill Billeck (Smithsonian Institution / Editor, Plains

Anthropologist), Matt E. Hill (University of Iowa), Edward Knell (California State University Fullerton)

**1:40 - 2:00** Clifford White: *Did Water Availability Impact Clovis Settlement Strategies on the Great Plains?*

**2:00 - 2:20** Lisa (Elizabeth) Brazelton: *Cultural Resilience in Generational Traditions: Interviews with Three Lakota Elders*

**2:20 - 2:40** Rachel Thimmig : *On- and Off-Reservation Life: A Reexamination of Crow-Flies-High Village*

**2:40 - 3:00** Steven P. Keehner: *The Movement of People, Material Objects, or Ideas? Testing Models of Information Exchange and Cultural Emergence Among Middle Woodland Pottery Communities in the Eastern Central Plains*

## Mahaffy Cache Reception, CU Boulder Museum of Natural History

**4:00 to 6:00** (bus departs at 3:30 in alley between Hilton and Embassy)

## Plains Conference Reception Settler's Park

**8:00 to 11:00**





## **FRIDAY MORNING, November 12, 2021**

### **Session 10, East End**

**Panel Discussion:** *Archaeology & Indigenous Cultural Heritage Preservation: A Panel Discussion with Indigenous THPO's, NAGPRA Officers, Educators, and Attorneys*

Organizers / Moderators: Carlton Shield Chief Gover (Pawnee Nation / University of Colorado Boulder) and Emily Van Alst (Indiana University Bloomington)

**9:00 - 12:00**

**Break from 10:20 - 10:40**

Co-Organizer & Moderator, Emily Van Alst

Pawnee Nation THPO, Matt Reed

Oglala Lakota College Graduate Studies Director, Richard Meyers

Crow Agency THPO, Aaron Brien

NARF Attorney, Brett Lee Shelton

Iowa Tribe of Kansas and Nebraska Vice Chairman and THPO, Lance Foster

Co-Organizer & Moderator, Carlton Shield Chief Gover

Northern Arapaho THPO, Un-decided Representative

Pawnee Nation NAGPRA Officer, Marti Only-A-Chief

CPAWS-SK Board member, Honey Constant

### **Session 11, West End**

**Symposium:** *Student Poster Competition*

Organizer: Brendon Asher, Eastern New Mexico University

Judges: Brendon Asher, Michael Fosha (South Dakota Archaeological Research Center, retired), Cherie Haury-Artz (University of Iowa Office of the Iowa State Archaeologist)

**9:00 - 11:00**

Amy Dixon: *An Exploration of Historical Narratives of the Battle of Greasy Grass, Little Bighorn, or Custer's Last Stand*

Brittany Čanji: *The Days After Colorado's Darkest Day: The Use of Drone Technology in Historic Archaeology*

Riley Limbaugh: *The Days After Colorado's Darkest Day: Using Weapons and Ammunition to Date Conflicts and Identify Participants in Battle*

Jennifer Banks: *Recent Pedestrian Survey of 14CO3*

Kelsey Hoppes: *An Attribute-Based Approach to Ceramic Decoration at the Lynch Site (25BD1)*

Kelton A. Meyer: *Countryside Folsom in the Northern San Luis Valley, Colorado: Revisiting the Reddin Site*

Raymond V. Sumner: *The Days After Colorado's Darkest Day: The Use of LIDAR in Historic Archaeology*

## **Session 11, West End (continued)**

### **Symposium: *Student Poster Competition***

Spencer Little: *A Mobiliary Art Ground Stone from Southeastern Colorado*

Sarah Buckser, Karissa Hughes, Victoria Bowler Monagle, William Taylor,  
Courtney Hofman: *Human-Canid Interactions at Black's Fork, Wyoming*

## **Session 12, The Mall**

### **General Session: *19th and 20th Century***

Moderator: LuAnn Wandsnider

**9:20 - 9:40** Alison Hadley, Kathryn Ligenza, Andy Hilburn, and Cindy Salazar: *Greenspace Access and Environmental Perceptions: An Ongoing Multidisciplinary Project in a U.S.-Mexico Border Town*

**9:40 - 10:00** Spencer R. Pelton: *The Deer Creek Station Burial: An 1865 Military Interment on the Oregon Trail*

**10:00 - 10:20** **BREAK**

**10:20 - 10:40** James V. Ralston and Lauren W. Ritterbush: *Uncovering the "First" Government Agency for the Kanza Tribe*

**10:40 - 11:00** LuAnn Wandsnider: *Extreme Events and Fertility in Late 19th Century Custer County, Nebraska*

**11:00 - 11:20** Adam Wiewel, Nikki Klarmann, and Jay Sturdevant: *Brown v. Board of Education National Historical Site: Archeological Investigations and Geophysical Survey*

## **Session 13, Settlers Park**

### **General Session: *Method and Theory***

Moderator: Devin B. Pettigrew

**9:00 - 9:20** Mackenzie J. Cory: *Towards a Future of (Pre)historic Childhood Research on the Northwest Plains*

**9:20 - 9:40** Warren Davis and John G. Hedden: *A Review of the Association of Iowa Geomorphological Guidelines in Support of Cultural Resource Investigations in Iowa: The Rocky Run Creek Sites*

**9:40 - 10:00** Richard A. Krause: *The Culture History Theory of Artifacts*

**10:00 - 10:20** **BREAK**

**10:20 - 10:40** Devin B. Pettigrew: *What Can You Hunt With an Atlatl? Improving Validity in Realistic Experiments*

**10:40 - 11:00** Kali Wade: *Phytolith Analysis as a Method for Assessing the Spatial Boundaries of Sites*

**11:00 - 11:20** Ken Cannon: *Ken Pierce: A Tribute*

**11:20 - 11:40** Savannah A. Gann and Crystal A. Dozier: *Power Hammer Coring: Applications and Considerations in Archaeological Testing*

## FRIDAY AFTERNOON, November 12, 2021

### Session 14, The Mall

**General Session:** *Early Colonial Era*

Moderator: Susan Vehik

- 1:00-1:20** Crystal A. Dozier: *Updates from 2021 Wichita State University Field School at Etzanoa (14CO3)*
- 1:20-1:40** Nolan Johnson and Talon O'Connor: *Welcome to the Courthouse and Jail Rocks: The 2019 Volunteer Excavation at 25MO201 a Dismal River Occupation in Morrill County, Nebraska*
- 1:40-2:00** Susan C. Vehik: *Little River Focus, Council Circle Structures, and Marine Shell Beads*
- 2:00-2:20** **BREAK**
- 2:20-2:40** Cummings, Linda Scott: *Spanish Wheat Technology and Puebloan Resistance – the Phytolith Evidence.*
- 2:40-3:00** Mark D. Mitchell: *Small Village or Special Use Site? Initial Results of the 2021 Field Investigation at Harmon Village, Morton County, North Dakota*
- 3:00 - 3:20** Donald Blakeslee: *Unmanning Quivira*
- 3:20 - 3:40** Alice B. Kehoe: *Big Towns in Mid-Continent*
- 4:00 - 5:00** *Conversation hour*  
*Current issues in working on the early Colonial era.*

### Session 15, East End

**General Session:** *Collaborative and Public Archaeology*

Moderator: Sarah Trabert

- 1:00-1:20** Charles A. Bello: *Application of the Unified Federal Review Process: Case Studies from Indian Country*
- 1:20-1:40** Brandi Bethke, Sarah Trabert, and Gary McAdams: *Remembering ichaskhah (Camp Creek): Collaborative Methodologies for Documenting Wichita Allotment Period Sites in Oklahoma*
- 1:40-2:00** Vidal E. Gonzales, Robert Hitchcock, and Melinda C. Kelly: *How Do Cultural Tourism and Heritage Management in a Southwestern National Monument Affect its Affiliated Pueblo Tribes?*
- 2:00-2:20** Mark Howe and Alison Hadley: *Falcon Reservoir: From Paleoindian to Today and Archeological Management*
- 2:30-4:00** *Conversation hour*  
*Collaborative practice in archaeology and anthropology*

## Session 16, West End

### General Poster Session: *Plains Archaeology*

**1:00 - 3:00**

Alan M. Slade and Clark D. Wernecke: *Clovis Fluted Points in Texas: A Further Update to the TCFPS, 4th Edition*

Delaney Cooley, Sarah Trabert, and Matt Oliver: *Sourcing Obsidian from Ancestral Wichita Sites in Oklahoma*

Kevin Gilmore: *The Bayou Gulch Site: Terminal Early Ceramic Period Intensification and Incipient Horticulture at the Foot of the Front Range, Colorado.*

Matthew E. Hill, Melissa G. Torquato, and Erik Otárola-Castillo: *Long-term Changes in Diet Breadth and Prey Choice among Great Plains and Rocky Mountain Hunters*

Nolan Johnson, MaKenzie Coufal, and Talon O'Connor: *Neither Wind nor Snow: 2020 Testing at 25DW131 the Fort Robinson Dump*

Derick P. Juptner and Matthew E. Hill: *Living off the Land: Assessing Subsistence Patterns at the Lovitt (25CH1) Dismal River Type Site in Southwestern Nebraska using Zooarchaeological Analyses.*

Stephen C. Lensink and John F. Doershuk: *Recent AMS Dates from a Mill Creek Village Context in Northwest Iowa*

William B. Lees: *Finding the Civil War Battle of Honey Springs, Muscogee Nation, Oklahoma*

William T.T. Taylor, Emily Lena Jones, Brandi Bethke, Sarah Trabert, Patrick Roberts, and Ludovic Orlando: *Early Dispersal of Domestic Horses into the Great Plains and Northern Rockies*

Ryan Weaver, R. A. Varney, and Linda Scott Cummings: *Assessing Two Models of Early Paleoamerican Migration. Did Glacial Bodies Prevent Migrations into the Americas?*

Maria Nieves Zedeño, Danielle Soza, Francois Lanoe, Joshua Reuther: *After the Ashfall: New Information on the Early Archaic Occupation at the Billy Big Spring Site*



### **Business Meeting, East End**

**5:00 to 6:00**

### **Cash Bar, Preconference Area**

**6:00 to 7:00**

### **Banquet, Mall/Settlers Park**

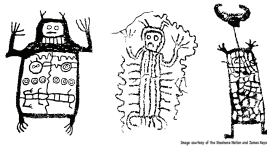
**7:00 to 9:00**



**SATURDAY MORNING, November 13, 2021**

**LINDENMEIER SITE TOUR:**

bus loads at 09:30 in alley between hotels



# ABSTRACTS

## SYMPOSIA

**Session 1 (Thursday 9:00 to 10:40, The Mall)**

*Recent Research at the Magic Mountain Site, Jefferson County, Colorado*

Organizer: Mark Mitchell

The Magic Mountain site, located in a sheltered valley south of Golden, Colorado, is well known for its stratified Holocene record. For more than 30 years following the 1966 publication of Cynthia Irwin-Williams and Henry Irwin's landmark monograph, data from the site were crucial for systematizing the archaeological record of the South Platte River basin. Although Magic Mountain's importance as a comparative touchstone has diminished in the last 20 years, crucial questions remain about the site's earliest occupations and about its extensive Early Ceramic component. In 2016 the Denver Museum of Nature & Science and Paleocultural Research Group initiated a multi-year, interdisciplinary public archaeology project at the site designed to better understand its history of occupation and its role in the regional settlement system. This session provides an overview of project activities, describes the site's geomorphic history and soil-stratigraphic record, and presents data on aspects of its Early Ceramic occupation.

**Session 2 (Poster Session; Thursday 9:00 to 11:00, West End)**

*Decades of Discovery: Archaeology and Camp Life at Hell Gap 1960 to 2021*

Organizer: Brandon Wirick

The Hell Gap archaeological site was first excavated in the 1960s and has the most complete sequence of Paleoindian cultures in North America. Hell Gap excavations established the foundation of North American Paleoindian chronology through in-depth investigated chronostratigraphy. Today, Hell Gap continues to be essential for Paleoindian research and for providing an archaeological experience for field school students from around the world. Presentations for this symposium include posters from the Hell Gap Digital

Archives, experimental archaeology at Hell Gap, and results of archaeological discoveries from the 2021 season. Our symposium provides an intimate, behind-the-scenes glimpse at camp life after excavation is done for the day, an update on the Hell Gap virtual reality tour, and archaeological analysis of the discoveries unearthed at Hell Gap during field excavations in 2021.

### **Session 7 (Thursday 1:20 to 4:00, The Mall)**

*Revisiting Tobias: A Great Bend Aspect, Ancestral Wichita Village in Rice County, Kansas*

Organizer: Nikki Klarmann

The Tobias site (14RC8) is an ancestral Wichita village occupied circa 1400-1700 CE, located in central Kansas. The site is likely within the region of Quivira encountered by Coronado's expedition in 1541 CE and has been a National Historic Landmark since 1964 and a part of the Tobias-Thompson Complex, a National Register Historic District since 1966. The Kansas Archeology Training Program (KATP) field school was conducted excavations at the Tobias site in 1977 and 1978, and again in 2019. Many of the artifacts collected in the 1970s had not been analyzed. As part of the 2019 investigations, several artifact categories from the 1977 and 1978 excavations were analyzed as well as those materials recovered in 2019. This symposium will detail the excavations from the 1970s and 2019 and evaluate the fauna, flora, modified bone tools, stone sourcing, geomorphology, and geophysical survey results.

### **Session 10 (Friday 9:00 to 12:00, East End)**

*Archaeology and Indigenous Cultural Heritage Preservation: A Panel Discussion with Indigenous THPO's, NAGPRA Officers, Educators, and Attorneys*

Co-organizers: Carlton Shield Chief Gover and Emily Van Alst

Professional archaeology and Indigenous communities have historically had tumultuous relationships. Navigating the complex landscapes between Western and Indigenous worldviews present in archaeological projects can especially be daunting to early-career archaeologists and anthropology undergraduate and graduate students. This panel brings together Indigenous cultural staff and educators from across the Great Plains to discuss how archaeologists can successfully collaborate with Indigenous communities to create better working relationships and environments.

## **PAPERS AND POSTERS**

(session number follows abstract)

**Adair, Mary J.** (University of Kansas). *A Synthesis of Tobias Site Archaeobotanical Remains.*

The 2019 field project at the Tobias site (14RC8) by the KHS and the KATP included the systematic recovery of small particles using flotation. This method allowed for an examination of archaeobotanical remains from feature, midden, and extra-mural locations. Previous investigations in 1965 and 1971 by the Smithsonian Institution and in 1977 and 1978 by the KHS also recovered plant remains, although most were recovered by hand during excavation. An identification of the archaeobotanical remains from all investigations provides greater insights into the selection and variety of crops, wild plants, and the potential for the adoption of European introduced foods. (7)

**Banks, Jennifer** (Wichita State University). *Recent Pedestrian Survey of 14CO3.* Field documentation is an important aspect of archaeology with diverse methods that can be applied depending on ground visibility, project context, and research questions. In June 2021, students from Wichita State University conducted a pedestrian survey east of Arkansas City in Cowley County, Kansas. The goal of this survey was to locate other features and site boundaries related to the archaeological site of Etzanoa, also known as the Country Club Site (14CO3). Etzanoa is a large Ancestral Wichita site that was likely occupied between 1450 and 1700. This period correlates with the Great Bend Aspect, Lower Walnut Focus. Although there were no significant concentrations of artifacts found within the survey area, several diagnostic artifacts were identified. This presentation will discuss these artifacts in context with other recent investigations at Etzanoa. (11)

**Bello, Charles** (Federal Emergency Management Agency, Denver, Colorado). *Application of the Unified Federal Review Process: Case Studies from Indian Country.*

This paper outlines the role of the Unified Federal Review (UFR) process in Indian Country. In 2013 the (Superstorm) Sandy Recovery Improvement Act amended the Stafford Act by adding Section 429 – which enhanced approaches taken for FEMA's environmental & historic preservation project reviews – improving decision-making & allowing more predictable outcomes from planning and implementing disaster recovery projects. Importantly, it also mandated increased engagement and collaboration with Tribal Nations. The Unified Federal Review establishes consistent and best practices for environmental and historic preservation project reviews whenever multiple federal agencies are engaged in disaster recovery efforts. The UFR staff builds relationships with other Federal/State/Territorial/Tribal regulatory agencies, departments, etc. to unify and expedite project reviews. (15)

**Beltz, Shelby** (Wichita State University / Kansas Historical Society). *Wear Patterns and Hafting Techniques of Scapula Hoes at Great Bend Aspect Sites. The Great Bend aspect (1400-1700 A.D.)* is split into three clusters with two main foci, the Little Rive Focus and Lower Walnut Focus. Wedel (1959) identified differing hafting techniques for scapula hoes between the two foci. The Lower Walnut Focus in Cowley County, Kansas was seen to have a hole bored into the glenoid fossa that would have fit the shaft of a handle. The Little River Focus in Rice and McPherson counties were found to have the head of the scapula cut off. This study hoped to further identify the hafting techniques used between the two foci as well as the wear pattern produced due to the differing hafting types. This study utilized four sites, two from Rice county (14RC8 and 14RC9) and two from Cowley county (14CO3 and 14CO501). A total of 183 specimen were analyzed using metric and nonmetric traits. (7)

**Bement, Leland** (Oklahoma Archeological Survey), **Brandi Bethke** (Oklahoma Archeological Survey), **Debra Green** (Oklahoma Archeological Survey), and **Kristi Wyatt** (University of Oklahoma). *A Mammoth Bone Chisel from the Devil's River Region of Texas.*

A piece of thick cortical bone consistent with the thickness of long bones from mammoth or mastodon was transformed into a bitted instrument. The bit end is highly polished although the bit itself is blunted through use. The proximal end is battered, displaying two longitudinal flake removals down one surface. Deep scars from a burin-like instrument identify the means of tool manufacture, while a high polish on all distal tool surfaces suggests use on a soft material. The tool is interpreted to have functioned as a chisel in the disarticulation and removal of flesh and connective tissue. Zoom analysis combined with AMS dating are performed to identify the possible bone source and age of this implement. Photogrammetric 3D imaging, modeling, and printing provide access to any researchers who want to study this tool. (6)

**Berrios, Alanis Ramos** (Oklahoma Archeological Survey), **Leland Bement** (Oklahoma Archeological Survey), **Brandi Bethke** (Oklahoma Archeological Survey), **Scott Hammerstedt** (Oklahoma Archeological Survey), and **Jennifer Haney** (Oklahoma Archeological Survey). *Just Getting There is Half the Story: The Golden Eagle Site, A Possible Ancestral Puebloan Homestead in the Black Mesa Area of Oklahoma.*

Nestled between a towering sandstone cliff face and the encroaching Cimarron River is a site with attributes of an ancestral Puebloan homestead. The Golden Eagle site, 34Ci528, displays vestiges of a well-known trajectory from pithouse to surface jacal dwelling to rectilinear horizontal rock and mortar structure. The site, however, is not in the Puebloan heartland. It is in the Black Mesa area of the Oklahoma Panhandle. Testing of the site in 2019 determined that habitation occurred on the terrace in front of a small overhang. Additional work (definitely not a field school) in 2021 expanded the excavation area and uncovered a possible pithouse structure radiocarbon dated to 872 – 976 cal AD. Geophysical survey using gradiometer and ground penetrating radar suggests the pit structure is up to 5 meters in diameter. Additional anomalies were also identified and will be discussed along with a description of the artifact assemblage and subsistence. (4)



**Bethke, Brandi** (Oklahoma Archeological Survey); **Sarah Trabert** (University of Oklahoma); **Gary McAdams** (Wichita and Affiliated Tribes). *Remembering ichaskhah (Camp Creek): Collaborative Methodologies for Documenting Wichita Allotment Period Sites in Oklahoma.*

The Wichita and Affiliated Tribes have a long history of occupation in Oklahoma. This includes evidence of both pre- and post-contact habitations along Camp Creek and Sugar Creek near Anadarko in Caddo County. Wichita peoples camped, built grass houses and arbors, and held social gatherings in these spaces leading up to and following the passing of the General Allotment Act (or Dawes Act) in 1887. After allotment, communal camp and dance grounds were especially important focal points for community building. Allotment Period sites are critical to understanding the multigenerational connections between ancestral and contemporary Wichita peoples. This history is also important to the community today. However, few archaeological sites from the allotment period have been documented. This paper presents a collaborative methodology for identifying and recording allotment period sites by consulting with archival sources, interviewing members of the Wichita community, and conducting pedestrian surveys along Camp Creek and Sugar Creek. (15)

**Blakeslee, Donald** (Wichita State University). *Unmanning Quivira.*

Charles Mann's book 1491 was a broad scale attempt to illuminate the large and thriving societies of the New World prior to contact. Unfortunately, he left the Great Plains out of that picture, saying it was both sparsely populated and provincial in the extreme. The archaeological record and early Spanish documents, however, paint a far different picture. Etzanoa, a town in the place called Quivira, had a population of around 20,000, and it was only one of a number of such towns that we archaeologists mistook for clusters of villages. Quivira controlled a territory larger than the Republic of Ireland and had a population of well over 100,000 people. Moreover, it was home to a significant number of people who could converse in Nahuatl, the language of the Aztec empire. (14)

**Bozell, Rob** (History Nebraska). *Unmodified Animal Bone Recovered from 1970s and 2019 Excavations at the Tobias Site.*

Unmodified vertebrate remains recovered from Tobias in the 1970s and 2019 are considered. Despite fine-screen recovery, a significant taxonomic diversity increase was not observed in the 2019 data. Both samples indicate dominant reliance on bison meat. Bone smashing suggests Tobias villagers also processed elements for marrow and possibly grease. Box turtle remains are quite common followed by comparatively modest amounts of deer, pronghorn, smaller mammals, and birds. Fish bones are rare. Comparison with broadly contemporaneous Wichita sites indicates bison and turtle consistently dominate samples although in varying proportions. Contemporaneous Caddoan (Pawnee and Arikara) and Siouan (Kansa, Oto, Omaha) towns to the north produce faunas distinct from these Wichita sites with higher proportions of dog, fish, birds, small mammals and deer but in varying amounts. The Tobias samples offer an important dataset in understanding the range of diversity in animal procurement among protohistoric semi-sedentary villagers in the central and southern Plains. (7)

**Brazelton, Lisa (Elizabeth)** (University of Alabama). *Cultural Resilience in Generational Traditions: Interviews with Three Lakota Elders*.

On June 25, 1876, collective Indigenous peoples of the Great Plains defeated General George Armstrong Custer in the Battle of the Greasy Grass, also known as the Battle of Little Bighorn. The defeat of Custer's army was led by the Lakota under the command of Crazy Horse (Tasunke Witco) and Sitting Bull (Tatanka-lyotanka). Here, I document how the triumphant Lakota ancestors are commemorated annually on June 25th on the plains of the Pine Ridge Reservation with the Lakota Pony Races. My ethnographic research (2018) explores the pony races as symbolic resiliency in honoring Lakota traditions, instilling cultural pride, celebrating strength, and practicing agency on the reservation. This paper includes interviews with three Lakota elders who each work tirelessly to instill generational hope through practices of cultural resilience that include commemorating Custer's defeat, traditional storytelling through the publication of children's books written in dual languages, and traditional plant gathering. (9)

**Brien, Aaron** (Crow Agency THPO). Discussant. (10)

**Brink, Jack W.** (Royal Alberta Museum, retired). *Battle in the Foothills: Rock Art at the Williams Coulee Site*.

The Williams Coulee site in southwestern Alberta, is a strikingly visual rock art site. The site lies within the protective cover of a small rockshelter, thus the red ochre pictographs have avoided severe weathering and are among the best preserved in Alberta. Ten anthropomorphic figures are present, six of which are shield-bearing warriors. Most of the anthropomorphs are engaged in combat, others are stoically posed or stand-alone figures. One faint figure has a greatly swollen belly and holds a rattle, possibly depicting a pregnant woman – an unusual motif in Plains rock art. Weapons displayed include lances, a bow and arrow, and a spike mace. Outside of the Writing-on-Stone region, Williams Coulee offers some of the most complete and most complex narrative scenes that are typical of Plains Biographical tradition art. Williams Coulee is pre-contact in age, with converging lines of evidence suggesting an approximate date of A.D. 1500. (4)

**Buckser, Sarah** (University of Colorado at Boulder), **Karissa Hughes** (Oklahoma University), **Victoria Bowler Monagle** (University of New Mexico), **William Taylor** (University of Colorado at Boulder), **Courtney Hofman** (Oklahoma University). *Human-Canid Interactions at Black's Fork, Wyoming*.

The colonial extinction of Indigenous American dogs and the ambiguity of morphological distinctions among canid species, complicates characterizing human-canid relationships in early North America. At Black's Fork, a ritual inhumation of one of the continent's earliest Indigenous domestic horses was found with the remains of three canid skulls identified as coyote, but presenting morphological traits also suggestive of dogs. To create a species ID and life history for these canids we used morphological and osteometric analysis, 3D-structured light scanning, digital modeling, and mtDNA analysis. Results indicated these canids died healthy, gracile adults. MtDNA analysis suggested all samples were coyote in origin, identifying female coyote parentage. Lack of dental pathology, evidence of butchery, coyote mtDNA, and general good health suggests these

canids are coyotes or coyote-dog hybrids. Further research should explore the relationship between domestic horses and wild canids in the transition to horse pastoralism in the northern Rockies. (11)

**Burnett, Paul** (SWCA Environmental Consultants). *Spatial Modeling of Prehistory in Northwestern Colorado*.

Northwestern Colorado has been the subject of a relatively large number of cultural resource inventories in recent history, which is leading to new understandings of archaeological systematics in the region. While many interesting patterns are emerging, including improved interpretations of interregional mobility and changes in occupational intensity through time, this presentation focuses on the spatial aspects of archaeological patterning as understood through archaeological probability models. The purpose of this study is to provide new interpretations of archaeological site patterning in this part of the state, improving our understanding of prehistoric land use and site visibility while also providing a tool for use in landscape-based management of these resources amidst continued infrastructure development and the ongoing challenges of wildland fire management. (8)

**Butler, Amanda J.** (Minnesota State University Moorhead), **Jeff Kruchten** (University of Illinois/Illinois Historic Preservation Office). *Cahokia's Caddoan Connections: Listening and Learning from Pawnee Histories*.

The founding of Cahokia, and thus Mississippian culture, was the result of complex entanglements of histories and relations among different persons (human and other-than-human), places, substances, powers, and things. There is a growing body of research that connects important aspects of the origins of a Mississippian religious movement to ancestral Caddo peoples. The people of Cahokia have many living descendants that make up minimally 26 federally recognized tribes living throughout much of the Plains, Southeast, and Midwest today. Among these nations, some oral histories, practices, and ethnographic documentation indicate stronger probable ties to Cahokia than others. Drawing from northern Caddoan, particularly Pawnee, ethnohistories and oral histories we discuss the bundled aspects of this Cahokian religious movement and its differential experiences with regard to the Collins Complex and Emerald Acropolis in Illinois. (4)

**Čanji, Brittany** (CMPA, Colorado State University). *The Days After Colorado's Darkest Day: The Use of Drone Technology in Historic Archaeology*.

Camp Rankin and Julesburg station located in northeastern Colorado, became the focal point of the Native American response to the 1864 Sand Creek Massacre. The location was a prime target for the military response in early 1865 due to its isolated location, abundant warehouses, and limited defenses. Despite its relationship to Sand Creek Massacre, the battle has not been studied by professional historians or archaeologists and is not well-known. To overcome this deficiency, the Julesburg Project is applying multiple emerging technologies to understand the battlefield at both the individual site and the landscape level. One method key being applied is drone technology utilizing thermal, multispectral, and RGB sensors. Initial work with these sensors focused on identifying sites through identifying the remnants of structures and other features. Additionally, the work is allowing for the refinement of the use of drones in historical archaeology at sites across the Great Plains. (11)

**Cannon, Ken** (Cannon Heritage Consultants, Inc.). *Ken Pierce: A Tribute*. Dr. Kenneth L. Pierce arrived in the Greater Yellowstone Ecosystem in 1965 shortly after being hired by the US Geological Survey in 1963 tasked with mapping the poorly understood deposits left by glaciers in the region. Landscape patterns from this study lead to another crucial study in the understanding of uplift associated with the Yellowstone Hot Spot. Understanding these large-scale geologic processes were crucial to more fine-grained studies of landforms for which archaeological deposits were preserved in the GYE. His first collaboration with archaeologists was on the Jackson Lake Archaeological Project. Interdisciplinary archaeological studies continued in Yellowstone National Park and Jackson Hole. Archaeological data was also crucial in providing controls on Yellowstone Lake levels which showed a much more vigorous flow of the Yellowstone River, as well as changes in shoreline levels related to uplift and subsidence of the caldera over the past 14ka. (13)

**Constant, Honey** (Canadian Parks and Wilderness Society- Saskatchewan Board Member / University of Saskatchewan). Discussant. (10)

**Cooley, Delaney** (University of Oklahoma), **Sarah Trabert** (University of Oklahoma), and **Matt Oliver** (University of Oklahoma). *Sourcing Obsidian from Ancestral Wichita Sites in Oklahoma*.

This poster presents the preliminary results of our sourcing analysis of obsidian from Ancestral Wichita sites across the state of Oklahoma. We submitted 64 samples from 39 sites to Dr. M. Steven Shackley who conducted an energy dispersive x-ray fluorescence (XRF), making this project one of the first to systematically investigate obsidian procurement and distribution at Wichita affiliated sites. Results indicate most material came from sources in the American Southwest; however, obsidian from Wyoming, Idaho, and California was also identified. Data from this project will be used to investigate Ancestral Wichita participation in exchange systems across the Southern Plains and neighboring regions. (16)

**Cory, Mackenzie J.** (Indiana University). *Towards a Future of (Pre)historic Childhood Research on the Northwest Plains*.

I examine how childhood in the past has been studied in the Northwest Plains region by taking a holistic approach inclusive of the four subfields of anthropology. Generally, these studies focus on the physicality of the child as a biosocial actor, the materiality of the child's belongings as social objects, or the symbolism of the imagined child in the social consciousness. Unfortunately the existing paradigms often result in incomplete understandings of childhood, especially when the concept of children's culture is taken into consideration. I suggest a research model that draws from anthropology as well as history, Indigenous studies, and developmental psychology with the goal of better understanding childhood and children in their full complexity as social actors. Such a shift would not only result in a more robust understanding of the past but also align the region with larger trends towards multidisciplinary within childhood studies. (13)

**Crenshaw, Ella** (Sam Noble Museum of Natural History) and **Delaney Cooley** (University of Oklahoma). *Public Archaeology in the Wake of the Pandemic: Creating a More Accessible OKPAN*.

The COVID-19 pandemic has posed unprecedented challenges that have forced education and outreach organizations to adapt to rapidly changing circumstances. With health and safety an utmost priority, the Oklahoma Public Archaeology Network (OKPAN) was forced to re-evaluate our existing programming, which up to that point consisted primarily of in-person events, including archaeological skill workshops, public presentations, and classroom visits. While we were able to shift several initiatives to a digital platform, others were scaled back in favor of developing our online presence. Altering our programming has had favorable results, generating more accessible content and expanding our reach in Oklahoma and beyond. Here we will discuss the changes to the initiatives, our evaluation methods, and the resulting metrics. These results are used to inform our long-term outreach model, which we will apply as we begin to recover from the pandemic. (8)

**Cummings, Linda Scott** (Paleoresearch Institute). *Spanish Wheat Technology and Puebloan Resistance – the Phytolith Evidence*.

Acceptance of new technology and new cultural behaviors is not a given. Introduction of crops is expected to be accompanied by introduction of tools necessary to process the crops. In this case, introduction of wheat by Spanish missionaries into the New World, (North, Central, or South America), is expected to have been accompanied by introduction of threshing sledges because they were used to thresh wheat in Spain and countries around the Mediterranean. Adobe examined from the Pecos church and from a Spanish mission in California yielded cut phytoliths indicating that wheat had been threshed using a threshing sledge (verification of technology), and straw had been incorporated into the adobe. When comparing the sizes of phytolith sheet elements from straw and the sizes of bits of straw from these two churches, we found the Pecos church (3rd church) adobe contained very large pieces of straw, suggesting a failure to embrace the new technology as part of the cultural paradigm. In contrast, California missions continued to be used, and phytolith evidence there is similar to that from Old World adobe, indicating acceptance. The Pueblo Revolt of 1580 documents rejection of Spanish conquest and Catholicism. Although a final effort was made by the Spanish to reconquer the Pueblos, that effort also failed, and it is adobe from the newer church that we sampled. Because our recovered botanic record that did not match the fine work elsewhere (in the Old World and California), it is obvious that the local population in New Mexico did not accept the introduction of a new religion and new agricultural practices. (14)

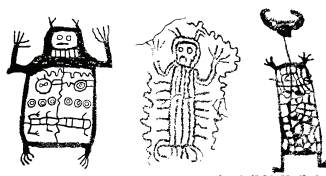


Image courtesy of the Smithsonian and Zane Hoyer

**Dalessandro, Brianna** (University of Denver). *The Integration of Ground-Penetrating Radar and Magnetometry at the Magic Mountain Site in Golden, Colorado.*

This presentation discusses the importance of the integration of geophysical methods in archaeology and how they can be used to re-create prehistoric landscapes. An integration of magnetometry and ground-penetrating radar was used at the Magic Mountain site in Golden, Colorado to study the geological environment that was present during the Late Archaic and Early Ceramic time periods. This integration sought to map interpretable geological formations in order to more completely re-create the prehistoric environment. This re-creation of the paleo-environment provides information about the prehistoric peoples who inhabited the site, how the site was used over time, and helps us better place the Magic Mountain site in a theoretical context. (1)

**Davis, Warren** (University of Iowa Office of the State Archaeologist), **John G. Hedden** (University of Iowa Office of the State Archaeologist). *A Review of the Association of Iowa Geomorphological Guidelines in Support of Cultural Resource Investigations in Iowa: The Rocky Run Creek Sites.*

In 1992 the Association of Iowa Archaeologists unanimously approved a set of guidelines for geomorphological investigations in support of cultural resource management projects. These guidelines were designed to help standardize archaeological investigations in Iowa. A 1993 Iowa DOT Phase I survey of U.S. 30 in Crawford County was one of the first projects implementing these guidelines, covering nine miles of improvements in the East Boyer River valley. Systematic bucket auger testing in association with pedestrian survey identified a single buried site at 2.4 m below surface near the confluence of Rocky Run Creek and the East Boyer River. Nearly 30 years later, a new IDOT bridge project over Rocky Run Creek placed this site in the area of impact, which facilitated further investigation in the fall of 2020. This paper discusses the results of these new investigations in the context of other similar sites identified in the last 30 years. (13)

**Dawe, Bob** (Royal Alberta Museum). *Evidence of the Practice of Ritual Birthing Imparted to Carved Bison Effigies in the Northern Plains.*

Carved stone bison effigies have been reported from numerous sites across the Plains. These objects were apparently used as charms in ceremonies to call buffalo and enhance hunting success. This paper reviews three bison effigies from two northern Plains sites that show indications of purposeful fracture that are interpreted here as evidence of ritual birthing. Such symbolic magic is reviewed as a critical component of a belief system drawn on to ensure the fecundity of the bison herd. (4)

**Dixon, Amy** (Southern Methodist University). *An Exploration of Historical Narratives of the Battle of Greasy Grass, Little Bighorn, or Custer's Last Stand.*

Historical narratives are often told from the victor's perspective. However, for the Battle of Greasy Grass, colonial discourse, specifically of the American public and press, has overshadowed Lakota, Northern Cheyenne, and Arapaho oral histories. Their victory was recast and altered to portray the Battle of Little Bighorn as Custer's Last Stand and as a colonial tool to frame the Indigenous peoples of the northern Plains as enemies of the U.S. Government. This paper explores how the original



popular portrayal came to be through analyses of primary historical documents, as well as secondary sources from the 20th and 21st centuries to examine how the national narrative has changed to reincorporate Native perspectives. (11)

**Dozier, Crystal A.** (Wichita State University). *Updates from 2021 Wichita State University Field School at Etzanoa (14CO3)*.

Etzanoa (14CO3), also called the Cowley Country Club Site, is an important Great Bend Aspect site in south-central Kansas. Following interruptions in 2020, Wichita State University was able to host a robust archaeological field school in June of 2021, co-directed by Dr. Donald Blakeslee and Dr. Crystal Dozier. This presentation provides context of the site, with updates on site extent exploration, excavation progress, and artifactual studies. (14)

**Ewald, Tatyanna** (Atlatl Archaeology, Inc.). *Dental Polish as a Method for Determining Seasonality for Bison*.

Analysis of microwear patterns on teeth has been proven to determine an animal's diet and therefore seasonality at death. This is based on the recognition that food characterizing general dietary patterns leaves unique signatures on the enamel of teeth. Unfortunately, this has been limited to broader inferences regarding diet, such as seasonal grazing and browsing. This research evaluates dental polish in archaeological bison as a means of determining seasonality for these specimens. Dental polish analysis is applied to bison teeth to assess signatures left by grasses with variable moisture content and exogenous grit to infer the season at death for these specimens. Correlations of dental polish with seasonal patterns were identified based on modern observations which determined four seasonal categories within southern Alberta based on these variables. Subsequently, dental polish of bison from several archaeological assemblages in the northern plains were examined, allowing for assessment of seasonality for these individuals. (8)

**Foster, Lance** (Iowa Tribe of Kansas and Nebraska Vice Chairman and THPO). *Discussant*. (10)

**Gann, Savannah A.** (Wichita State University) and **Crystal A. Dozier** (Wichita State University). *Power Hammer Coring: Applications and Considerations in Archaeological Testing*.

Accessing deeply buried sediments is one of the key logical problems in archaeological testing. While hand corers or augers are useful testing probes, they are limited by relatively shallow depths, small core diameter, and strength of the individual. In this presentation, we provide context for the use of a power hammer coring mechanism, with the Eijkelkamp percussion drilling set as key instrument. This gas-powered corer has variable core diameters from 2cm to 50cm, variable depths from 50cm to 3meters, and can provide open cores for in-field examination or sleeved cores for laboratory analysis. The equipment can be run by 2-3 individuals and transported short distances by hand or longer distances by light utility vehicles. We highlight how the equipment functions, with particular note to safety, logistics, and cost, utilizing examples from archaeological sites from Kansas to Texas to demonstrate the various applications for geoarchaeological testing. (13)

**Gilmore, Kevin** (HDR). *The Bayou Gulch Site: Terminal Early Ceramic Period*. Intensification and Incipient Horticulture at the Foot of the Front Range, Colorado. With funding from the Colorado State Historical Fund, HDR and ERO Resources Corporation analyzed the artifact collection and from the Bayou Gulch Site (5DA265) and produced a final excavation report and a NRHP nomination form. The site contains components representing the Early Archaic through Protohistoric periods, with a particularly large Early Ceramic period assemblage that suggests decreasing mobility, increasing intensification of resources and incipient horticulture (corn pollen and a possible bison scapula hoe) during the AD 11th and 12th centuries. This period represents a century of mesic conditions, low climate variability and average to greater than normal precipitation that was abruptly terminated in the mid-12th century by the most significant drought in the 1795-year tree-ring record for the area. Proxy population in eastern Colorado, which had increased for 1000 years, also apparently collapsed at this time, with sites dating to the Middle Ceramic Period representing smaller, more mobile groups. (16)

**Goebel, Matt** (Clarion Associates) and **Holly Norton** (History Colorado). *Archaeology for a Changing Colorado*.

Clarion Associates, Crow Canyon Archaeological Center, and the Office of the State Archaeologist recently completed a two-year study on the economic impact of archaeological practices across the state of Colorado. Included in the analysis was cultural resource management, the role of federal projects, universities, non-profits, and even volunteers at sites and labs across the state. A “popular report” which explains the diversity of practices in the field of archaeology, as well as a more technical report that delves into the data available to understand the economic impacts of archaeological endeavors in the state, have been produced to meet the needs of a wide variety of audiences. This presentation will focus specifically the data analyzed to identify the economic impacts of the study for a professional audience, as well as discuss ways that as a community we can refine this data for future iterations of the report. Finally, this study can serve as a model to other states or regional and national organizations on how to illustrate multiple values of archaeology to elected officials, lay citizens, and decision makers. (3)

**Gonzales, Vidal E.** (Santa Clara and Isleta Pueblos), **Robert K. Hitchcock** (University of New Mexico), **Melinda C. Kelly** (Kalahari Peoples Fund). *How Do Cultural Tourism and Heritage Management in a Southwestern National Monument Affect its Affiliated Pueblo Tribes?*

The impacts of cultural tourism and management in Bandelier National Monument in north-central New Mexico are examined relative to area's affiliated Pueblo tribes. Established in 1916, Bandelier contains thousands of archaeological and historic sites which have been the subject of archaeological inquiry since the 1880s. Currently the monument covers 3,677 acres (136.29 km<sup>2</sup> or 46.35 mi<sup>2</sup>) but there are plans to expand it. The descendants of the people who occupied Bandelier between AD 1100 and AD 1500 continue to reside in the region, including those in Cochiti, San Felipe, Kewa, and Zia Pueblos, who are Keres speakers, and ones at San Ildefonso and Santa Clara who are Tewa speakers. Bandelier is one of the most highly visited national



monuments in the Southwestern United States. We discuss a new management scheme that aims to include affiliated Pueblo tribes in the handling of their own cultural heritage known as the Bandelier Preservation Corps (BPC), a powerful consultation and collaborative mechanism between the monument, its employees, and the Pueblos. The Bandelier Preservation Corps is a partnership with the Rocky Mountain Youth Corps (RMYC) which works to create a youth work force of Pueblo young people who themselves are the descendants of the Ancestral Puebloans who constructed and lived in the sites at Bandelier. These institutions, along with the Park Service and universities such as the University of New Mexico have had positive effects for the Pueblos and for the management and interpretation of archaeological sites in Bandelier and adjacent areas. (15)

**Hadley, Alison** (Texas A&M International University), **Kathryn Ligenza** (Texas A&M International University), Andy Hilburn (Texas A&M International University), and **Cindy Salazar** (Texas A&M International University). *Greenspace Access and Environmental Perceptions: An Ongoing Multidisciplinary Project in a U.S.-Mexico Border Town*.

Access to greenspace, generally defined as open-air space with some biophysical component, is a key issue for planners, scientists, and everyday urban residents across the world. Access to greenspace has been positively linked to mental and physical health and wellbeing, community cohesion, and important ecological functions. Our research examines access to both public and private greenspace in Laredo, Texas, a mid-sized city on the South Texas border. Our research applied GIS, a walkability index, and a park quality survey to measure the size, quality, and access to private and public greenspaces. We found that older homes and lower socioeconomic status neighborhoods had larger private greenspace and walkable access to public greenspace. However, newer homes and those in higher socioeconomic status neighborhoods had higher quality public greenspaces. Our future goal for this research is to take an anthropological approach gauging Laredoans' perceptions and valuation of public and private greenspace. (12)

**Haury-Artz, Cherie** (University of Iowa Office of the State Archaeologist). *Shopping Local – Mammal Procurement Patterns at Joy Creek Major (13PM7), Northwest Iowa*.

In 2019 flooding at Joy Creek Major (13PM7) exposed the basal portions of dozens of large Mill Creek features. Archaeological sampling yielded more than 900 identifiable mammal bone specimens. All the mammals occupy habitats within the geographical range of Northwest Iowa. Bison were the primary resource followed by deer, canids, and elk. Except for skulls, all anatomical portions of bison are represented, including low utility elements such as feet and tails. This, coupled with the presence of discarded butchering units such as articulated segments of vertebral columns, implies that these animals were killed nearby, and entire carcasses were processed at the site. Hide processing tools were abundant in the assemblage. These, along with articulating caudal vertebra, and smaller, furbearing mammals suggests that processing of hides and furs was an integral part of village life. These products may have been part of Mill Creek regional or extra-regional trade relationships. (6)

**Hill, Matthew E. Jr.** (University of Iowa), **Melissa G. Torquato** (Purdue University), and **Erik Otárola-Castillo** (Purdue University). *Long-term Changes in Diet Breadth and Prey Choice among Great Plains and Rocky Mountain Hunters*. Great Plains and Rocky Mountain hunters responded to large-scale climate change, increasing demographic pressure, and regional variability in environmental conditions when making decisions about which prey to hunt. Archaeologists have hypothesized people followed a trend toward resource intensification through time. For example, long-held hypotheses including the assumption that Plains Paleoindians were specialist big-game hunters. On the other hand, later groups, especially Woodland and Late Prehistoric peoples, have been assumed to use a broader range of resources while using more regionally variable subsistence practices. Using faunal evidence from more than 200 zooarchaeological assemblages, we assessed the variability of dietary diversity via species richness and evenness, including the relative ratios of different sized prey, across major habitat setting. We identify some habitat difference dietary diversification in the sample but there is no evidence for a uniform increase through time. (16)

**Hoard, Robert J.** (Kansas Historical Society). *Drilled Bear Canine Teeth from an Archaeological Site in East-Central Kansas*. A minimum of 14 drilled bear canine teeth associated with five human teeth and fragmented bone from a surface exposure in east-central Kansas indicate contact with people participating in the Hopewell social network in the American Midwest. Drilled, polished, ground, and scored bear teeth, along with a range of exotic and symbolic artifacts, are characteristic of Hopewell burial sites. A Kansas site, 14LY405, where the bear teeth were found, marks the southwestern extent of the known distribution of sites with a specific kind of drilled bear canine and helps define the boundary of the Hopewell social network in the Great Plains. The nature of the assemblage has implications for NAGPRA consultation. (6)

**Hoard, Robert J.** (Kansas Historical Society) and **M. Steven Shackley** (University of California, Berkeley, and Geoarchaeological XRF Laboratory, Albuquerque). *Obsidian and Other Exotic Materials at the Tobias Site and Other Great Bend Aspect Sites*. Analysis of the sources of raw materials for chipped and ground stone tools and pottery from the Late Ceramic Little River focus Great Bend aspect Tobias site (14RC8) in central Kansas provides information on social contact through trade or, possibly, direction of travel for hunting or treks for other resources. In particular, analysis of obsidian artifacts indicates the dominance of the Jemez Mountains volcanic field obsidian sources in northern New Mexico. Tobias site materials are compared to other Little River focus sites and to Lower Walnut focus Great Bend aspect sites in south central Kansas, as well as earlier sites in Kansas. (7)

**Holen, Steven R.** (Center for American Paleolithic Research) and **Kathleen Holen** (Center for American Paleolithic Research). *Human Induced Percussion Technology: A Synthesis of Bone Modification as Archaeological Evidence*. Animal bone modification by humans has long been part of the archaeological

record; however, debate continues as to whether this evidence alone is sufficient to interpret human activity. This is especially true if such evidence is used in support of archaeological sites older than 16 ka in the Americas. We synthesize data representing over three decades of research including experimental bone breakage and archaeological excavations of proboscidean assemblages. Replicable features of percussion and use wear patterns on bone elements are described along with interpretive methods which demonstrate analogous, concurrent and anomalous patterns that represent human behavior. Geological contexts that rule out alternative causes of percussion breakage are described. We conclude that bone modification by percussion can be strong evidence of human behavior when interpreted in the light of experimental reference samples, analogous archaeological sites and geological context. The age and geographic location of a site does not invalidate this evidence. (8)

**Hoppes, Kelsey R.** (University of Colorado Boulder). *An Attribute-Based Approach to Ceramic Decoration at the Lynch Site (25BD1)*.

Plains farmers occupied a 200-acre community, the Lynch site (25BD1) and a number of other large sites in northeastern Nebraska during the 13th and 14th centuries. Incised and cord-impressed decorations on the pottery from Lynch include patterns, techniques, and motifs that can be found on Central Plains tradition, Oneota, and Mill Creek vessels. This poster examines the range of decorative variation, taking an attribute-based approach rather than a typological approach to analysis. The kind of analysis makes it possible to examine sherd by sherd how potters combined design elements from different traditions on individual pots, focusing on decorations on the lip, rim, and shoulder to explore which attributes from other groups were adopted onto one's vessel. This research is a first step in identifying the sources of the population that must have aggregated at Lynch in the later 13th century. (11)

**Howe, Mark L.** (Pike - San Isabel National Forests & Cimarron and Comanche National Grasslands) and Alison Hadley (Texas A&M International University). *Falcon Reservoir: From Paleoindian to Today and Archeological Management*. Falcon Reservoir in Southwest Texas shares a common border with Mexico. Recently, and over the last few years, increased looting, destruction of sites by reservoir lake levels and other events have exposed new and older archeological sites. As part of the work at Falcon and working with local avocational archeologists and professionals has shown an increase in recording these new sites. Over the last few years as part of an Environmental Analysis (EA) for Falcon, a Class II survey was completed that found new Archaic and Historic sites (Spanish Colonial). Other areas that an avocational has surveyed found Paleoindian sites and artifacts in Mexico that correlate to Paleoindian sites in the United States nearly opposite of where these have been found across the river. This paper will examine new sites and the problems of documentation, looting and jurisdiction and what to do when situations of ownership arrive on the borderlands. (15)

**Hughes, Erin R.** (Illinois State Archaeological Survey). *Mississippian Influences on the Great Plains: The Transition from Corner to Side Notched Arrow Points in the Central Plains Tradition.*

One of the cultural markers of the Central Plains Tradition (CPT) is the side-notched arrow point. These points replaced the previous corner-notched points as the arrow tip of choice for CPT people. This pattern of change is well established in archaeological literature; however, little has been done to explore why this change occurred and how it can be traced through the archaeological record. This paper discusses how the spread of side-notched points on to the Great Plains during the CPT was influenced by point styles associated with the Mississippian mound center of Cahokia. Arrow points recovered from feature contexts from Plains Woodland and CPT sites across the Central and Southern Plains were compared to points from Mississippian sites at and around Cahokia to better understand the spread of point types and likely associations among the adoption of a new technology and and co-occurring changes in cultural influences during the CPT. (6)

**Johnson, Nolan** (History Nebraska), **MaKenzie Coufal** (History Nebraska), **Talon O'Connor** (History Nebraska). *Neither Wind nor Snow: 2020 Testing at 25DW131 the Fort Robinson Dump.*

In late December of 2020, History Nebraska undertook archeological testing at 25DW131 the Fort Robinson Dump. The work was performed as part of a campground expansion for the Nebraska Game and Parks Commission. Two backhoe trenches were excavated in the area where utility lines were to intersect a feature of 25DW131. A single test unit was placed to sample the character of the feature encountered. Artifacts collected from the general area of disturbance as well as the test unit showed the tested portion of the dump is primarily associated with the US Army occupation of Fort Robinson between WWI and WWII. (16)

**Johnson, Nolan** (History Nebraska) and **Talon O'Connor** (History Nebraska). *Welcome to the Courthouse and Jail Rocks: The 2019 Volunteer Excavation at 25MO201 a Dismal River Occupation in Morrill County, Nebraska.*

History Nebraska led a volunteer excavation at 25MO201 on September 28-29, 2019. The excavation was designed to give members of the interested public a field experience as well as to gather information about 25MO201, a prehistoric component of the larger Courthouse and Jail House Rock National Register of Historic Places (NRHP) Site. 25MO201 is a Dismal River occupation on the north slope of Courthouse and Jail Rocks. The site has seen repeated surface collections but the 2019 excavation was the first subsurface testing there. This paper presents the results of the testing, elaborates on previous work at the site, and incorporates analysis of previously surface-collected artifacts. The paper also compares 25MO201 to other Dismal River sites in the region and defines it temporally and functionally in regard to Dismal River culture as a whole. (14)

**Johnston, Christopher M.** (Paleocultural Research Group), **Mark D. Mitchell** (Paleocultural Research Group). *Chipped Stone Raw Material Utilization During the Early Ceramic at the Magic Mountain Site.*

Researchers have suggested several models of seasonal mobility for populations living along the Colorado Front Range during the Early Ceramic period. The basis of these models are people utilizing mountain resources in the summer and spending the winters at lower elevations near the Front Range. Stone tool raw materials are one way to test these models and to examine mobility more generally. Excavations in the 1990s by Centennial Archaeology Inc., and the 2017-2018 work by the Denver Museum of Nature & Science and PCRG has produced an extensive chipped stone assemblage. This paper will present data on the chipped stone assemblage from the recent DMNS-PCRG work at the site. These data are then compared with other Early Ceramic sites in the South Platte basin and used to evaluate mobility models during this period. (1)

**Jones, Geoffrey** (Archaeo-Physics, LLC). *Magnetic Susceptibility Survey at the Tobias Site.*

Magnetic susceptibility is a physical property with distinct archaeological implications. Enhanced susceptibility in soils is associated with burning and concentration of organic materials – activities integral to human settlement. Geophysical survey with susceptibility instruments has unusual but underutilized potential to map meaningful archaeological patterning both in detail and at very large scales. Investigations at the Tobias Site in central Kansas illustrate the potential of magnetic susceptibility survey at very different scales. It was used for an 80 acre reconnaissance of settlement patterning, and on a much smaller smaller scale for high-resolution mapping of high densities of features. The results of these surveys were correlated with densities of surface-collected artifacts and tested with excavation by the 2019 Kansas Archeology Training Program field school. (7)

**Juptner, Derick P.** (University of Iowa), and **Matthew E. Hill** (University of Iowa). *Living off the Land: Assessing Subsistence Patterns at the Lovitt (25CH1) Dismal River Type Site in Southwestern Nebraska Using Zooarchaeological Analyses.*

The Dismal River aspect refers to the ancestral Apachean (Ndee) groups that inhabited the central Great Plains between AD 1400-1700s. In this poster, we highlight subsistence patterns of Dismal River occupation of the Lovitt site (25CH1) in southwestern Nebraska, type site of the Dismal River aspect, which dates to approximately AD 1520-1660. Our findings show a pattern of alternating between the hunting of big game and utilization of local small game dependent on seasonality and opportunity. We convey this through several zooarchaeological methods looking at prey choice and diet breadth. Ultimately, we stress the utility of analyzing faunal remains to better identify Dismal River occupations on the central Great Plains. (16)

**Keehner, Steven P.** (University of Iowa). *The Movement of People, Material Objects, or Ideas? Testing Models of Information Exchange and Cultural Emergence Among Middle Woodland Pottery Communities in the Eastern Central Plains.*

During the Middle Woodland Period (2100 - 1600 BP) in the Eastern Central Plains (ECP), potters began producing ceramic vessels with decorative designs resembling those produced by Hopewell potters in the Eastern Woodlands. In fact, the similarities are so remarkable, archaeologists attributed their presence at sites in the ECP to either migrations or diffusion from Hopewell groups in the Eastern Woodlands. However, a lack of context specific chronology and unidirectional comparisons to Hopewell groups that once lived in modern-day Illinois, raise problems with this narrative. This paper provides a summary of these issues, presents new AMS dates associated with ceramics from the Infinity (14MY305) and Perry (14JF315) sites, and combines regional ECP data to tests models of information exchange and migration. The results provide a more accurate understanding of temporal ceramic developments in the region, implications for interregional social dynamics and group identities, and beneficial paths for future research. (9)

**Kehoe, Alice B.** (Independent Scholar). *Big Towns in Mid-Continent.*

George Odell (in La Harpe's Post) and Donald Blakeslee (Etzana) identified the pattern of "big towns" in the Late Precontact Arkansas River Valley: series of households along a river terrace, up to several kilometers long. La Harpe described, 1718, a "big town" of Wichita on the Arkansas near Tulsa OK, where traders were welcomed and could camp for some time. Juliana Barr describes such towns, and how they were defended at a distance, for Caddoans generally. Towns consisting of households dispersed along river terraces may have been the basic pattern for mid-continent America since Hopewell; not until Odell and Blakeslee found descriptions in early colonial documents were such towns recognized archaeologically. Cahokia's line of "nodal sites" along the eastern edge of the American Bottom may have formed such a linear dispersed trading town before the building of a Mexican Tollan in the center of the eastern floodplain. (14)

**Kimmel, Addison P.** (University of Iowa) and **Steven A. Katz** (Atwell, LLC). *Facing the Challenges of Collaborative Archaeology.*

Archaeologists have an obligation to conduct research that is relevant and responsive to the desires, interests, values, and concerns of Indigenous descendant communities. Current best practices for collaborative, community-based archaeologies emphasize long-term engagement and "full collaboration," including the co-production of knowledge and total stakeholder involvement. The present-day structures and demands of archaeology—especially in CRM and graduate student research contexts—can serve to make such fully-collaborative work difficult if not impossible. Oftentimes, these difficulties result in a complete abdication of collaboration or even consultation beyond the bare minimum required by law. However, archaeologists must strive in all instances to work alongside Native communities in respectful, responsive, and mutually beneficial ways even if this work may sometimes fall short of the loftiest ideal. Here the

authors present two case studies that demonstrate how this kind of “middle-range” collaboration can help us move toward a more ethical, inclusive, and respectful archaeology. (8)

**Klarmann, Nikki** (Kansas Historical Society and Michigan State University). *Archaeological Investigations at the Tobias Site (14RC8) in Rice County, Kansas*. The Tobias site, as part of the Little River Archaeological District, or Tobias-Thompson Complex in central Kansas, is part of the region where ancestors of the Wichita and Affiliated Tribes, now headquartered in Oklahoma, called home between 1400-1700 CE. The site was investigated by Waldo Wedel of the Smithsonian in 1940, 1965, 1967, and 1971. In 1977 and 1978, the Kansas Archeology Training Program (KATP) field schools were at Tobias, and in 1980, 80-acres of the site was purchased by the State of Kansas. The site then sat relatively untouched until 2015 when the National Park Service held a geophysical survey workshop at the site. In 2019, the KATP field school returned to Tobias. This paper serves to summarize the various archaeological investigations at the Tobias site and introduce topics that will be addressed by the papers within this symposium. (7)

**Klarmann, Nikki** (Kansas Historical Society and Michigan State University). *Future Research and Preservation Plans for the Tobias Site*. The impetus for a return to the Tobias site was to take advantage of access and control of this state-owned property for research but also to protect it from potential sale. It is important to continue protecting archaeological sites like Tobias, which remains under state ownership. Early plans for a visitor center failed to gain funding. Future interpretation of the site is dependent on funding, and publicizing the site raises concerns over looting. Furthermore, the Wichita and Affiliated Tribes must be included in the management and interpretation of the site. A summary report detailing the 1977, 1978, and 2019 investigations is forthcoming. There are no current plans to conduct additional excavations at the Tobias site, however, we invite researchers to utilize the data and research from Tobias to further explore what life was like for the people living along the Great Bend of the Arkansas River between 1400-1700 CE. (7)

**Koons, Michele L.** (Denver Museum of Nature & Science). *The Magic Mountain Community Archaeology Project: History of Research, Collaborative Efforts, and Community Outreach*.

The Magic Mountain Community Archaeology Project took place on-site from 2016-2018 and continues to engage communities today. Magic Mountain, located in Golden, Colorado, has served as a crossroads of culture for millennia. From the hunter-gatherers who lived there for over 9,000 years, to the gold-seekers of the late 1800s, to those who recreate on the trail system in the area today, there is a collective awareness that the place is special. The project taps into a shared sense of place by exploring the stories of the people who lived there long ago and making these relevant to people residing in the region today. This paper highlights the history of research at the site, the research and community collaborations formed for this project, and the public engagement efforts undertaken. (1)



**Krause, Richard A.** (Tennessee Valley Archaeological Research, TVAR). *The Culture History Theory of Artifacts*.

Archaeologists developed and refined Culture History in the waning years of the 19th and first half of the 20th century. In the 1960's, processualists criticized their efforts as theory deficient. Yet they productively used Culture History's basic units of analysis and classification. If Culture History was theory deficient why did a generation of processualists productively use its basic units and principles of classification? Why do contemporary archaeologists still use them productively? My answer is: "because the practitioners 'of Culture History created an empirical theory of artifacts". In my presentation I will examine and describe this theory. Culture History, Empirical Theory, Description and Classification. (13)

**Krause, Michael W.** (The University of Oklahoma). *Following Suit: A Cross Bar Ranch Suitability Model*.

Suitability models have proven to be a promising new avenue in the articulation and analysis of influential resources across various landscapes. These models are a means through which specific variables found throughout an environmental setting are organized into suitable domains. This poster presents the preliminary structure for a thesis centered around these methods and introduces one possible example of where such a model might be useful for understanding human occupation on the Southern Plains. This research will organize specific environmental, ecological, and biological variables into suitable domains for the local fauna and compare these findings with faunal assemblages documented in published archaeological reports. If in fact these faunal domains can be shown to exhibit many of the same or similar environmental attributes as areas of human occupation, this model could provide valuable new insights, as well as greater nuance regarding human settlement patterning in the Texas Panhandle. (8)

**LaBelle, Jason M.** (Colorado State University). *Kill, Camp, and Return: A Report on the 2021 Excavation of the Lindenmeier Folsom Site, Larimer County, Colorado*.

The Colorado State University archaeology field school tested the Eastern Locality of the Lindenmeier (5LR13) Folsom site during the past summer. Our research evaluated whether the Eastern Locality represents a contemporaneously occupied Folsom "kill/camp", like the Agate Basin and Cattle Guard sites. This area of Lindenmeier is poorly known, as the classic site report (Wilmsen and Roberts 1978) primarily focused on the Smithsonian Institution's excavation of Areas I and II located 400 m further west. Our shovel testing, 1x1 m test units, and geological trenches confirmed the location of former Smithsonian trenches (i.e., the "Bison Pit") and the location of the 1924 Coffin Family find spot (retooling/hide processing camp). Fragmentary bison bone, along with chipped stone tools and flakes, confirms a Folsom age for these deposits. Testing revealed a Folsom-age paleosol present in multiple areas of the Eastern Locality, suggesting the high likelihood for additional buried deposits. (6)



**Lee, Craig** (INSTAAR), **Michael Neeley** (Montana State University), **Aaron Brein** (Crow Tribe), **Beth Horton** (Yellowstone National Park), **Dave McWethy** (Montana State University), and **Greg Pederson** (U.S. Geological Survey). *Drivelines, Effigies and Intercept Hunting Strategies in the Greater Yellowstone*. Drivelines and stone effigies are familiar parts of the engineered landscapes of the High Plains. While they have been documented in some alpine areas along the Rocky Mountain Front in the Greater Yellowstone Area (GYA), they are far from ubiquitous. On the High Plains they are primarily associated with bison hunting, whereas in the alpine they are associated with bighorn sheep. This paper shares a review of driveline hunting technology from High Plains sites proximate to the GYA as well as a newly reported driveline and hunting blind in association with an ice patch in the GYA. Heretofore, no definitive stone features, including drivelines and hunting blinds, have been reported in association with GYA ice patches. In the occurrence shared here, the ice patch is presumed to be an animal attractant and the driveline and blind are positioned to serve as an intercept. (16)

**Lees, William B.** (University of West Florida). *Finding the Civil War Battle of Honey Springs, Muscogee Nation, Oklahoma*.

I present conclusions on a legacy project conducted in the 1990s at the Honey Springs Battlefield, Muscogee Nation, Oklahoma. Combatants were Native American, Black, and White regiments. Proxy stakes were control of the Arkansas River valley in the Indian Territory; direct stakeholders were the divided Native American residents and refugees from the Indian Territory traumatized by internecine warfare of the worst kind. The method was a metal detector survey conducted by the Oklahoma Historical Society during planning for the Honey Springs Battlefield National Historic Landmark as a public history site. Presented are the delineation of three areas of conflict, analysis of the critical internal structure of each conflict area, KOCOA terrain analysis, and triangulation of archaeology, terrain, and memory to consider the progression and outcome of this event. Terrain, imbalances in artillery, and differentials in the commitment of troops explain US victory. (16)

**Lensink, Stephen C.** (University of Iowa Office of the State Archaeologist) and **John F. Doershuk** (University of Iowa Office of the State Archaeologist). *Recent AMS Dates from a Mill Creek Village Context in Northwest Iowa*.

Exploration of potential connections between northwest Iowa Mill Creek sites and Cahokia offers intriguing opportunities for understanding interactions involved with the emergence of fortified villages following corn-centered agricultural subsistence-settlement adaptations. Site 13PM7, while badly damaged by flooding, provides ready access to the exposed basal portions of dozens of large Mill Creek features which have been archaeologically documented and sampled. Numerous 13PM7 artifact and contextual studies are underway and this poster will share details of the research plan being followed and preliminary results. A suite of new AMS radiocarbon results for assays on annual plants from 13PM7 and related northwest Iowa sites contextualize emerging village lifeways and frame potential Cahokia interactions. (16)

**Limbaugh, Riley** (CMPA, Colorado State University). *The Days After Colorado's Darkest Day: Using Weapons and Ammunition to Date Conflicts and Identify Participants in Battle*.

In early 1865, the Cheyenne, Arapaho, and Lakota responded to the 1864 Sand Creek Massacre with a six-week offensive campaign against a 150-mile stretch of the Overland Trail adjacent to the South Platte River in Colorado. Overshadowed by more well-known events of the Indian Wars, no professional historian or archaeologist has researched these sites. As a result, the exact location of these sites and details of the battle are not well-known. The Julesburg Project, using archaeological survey, metal detecting, and private and museum collections is identifying ammunition and firearms related material to better understand the battle. These artifacts when combined with historical records can allow for the development of an understanding of the use sites by the military over time. Furthermore, this analysis can allow for the association of specific units with artifacts and allow for a more refined understanding of the events at conflict sites on the Great Plains. (11)

**Little, Spencer** (Colorado State University). *A Mobiliary Art Ground Stone from Southeastern Colorado*.

Southeastern Colorado is recognized for its relative abundance of indigenous rock art sites, but there are few published reports of mobiliary (portable) rock art in this region. Especially uncommon in the archaeological record are engraved glyphs on portable ground stone tools. A ground stone artifact bearing abstract pecked images on its reverse face was donated to the Pueblo Heritage Museum in 2020. While "mobiliary art" artifacts appear infrequently in the record, there are interesting examples from the Great Plains and Mountain West which highlight the diversity of this broad artifact class. This poster serves as a description of this newly documented artifact, including detailed photography, measurements, and basic assessments of use wear and authenticity, while offering comparisons with other known mobiliary rock art objects. (11)

**Lynch, Elizabeth M.** (University of Wyoming), **Clare Bowen-O'Connor** (University of The Bahamas). *Hell Gap National Historic Landmark VR Museum Data Management Plan*.

Many virtual reality projects occur in archaeology because researchers are exploring the newest technology to stay abreast of mainstream technological trends or learn new skills. Project design may occur in tandem with fieldwork, as in the case of the Hell Gap Virtual Reality Tour. We created a VR tour of the landscape and excavations at the National Landmark during fieldwork between 2018 to 2021. The primary goals are to promote Wyoming archaeology and improve citizen access to the site in the off-season. User experience analysis indicated that the VR tour would be an excellent teaching tool that showcased the National Historic Landmark and Wyoming cultural heritage. A Wyoming Cultural Trust grant allowed us to revisit the on-the-fly project design to create a sustainable VR program that would serve as the foundation for an interactive museum of the site. Our poster presents a process for creating user-defined VR archaeological applications. (2)

**Mandel, Rolfe D.** (University of Kansas). *Geoarchaeology of Magic Mountain (5JF223): A Stratified Site on the Front Range of the Southern Rocky Mountains, North-Central Colorado.*

The Magic Mountain site in Golden, Colorado has long been recognized as one the most important stratified archaeological sites on the Front Range of the Southern Rocky Mountains. Archaic artifacts have been recorded at Magic Mountain, but the site's richest and most extensive cultural deposits represent multiple Early Ceramic period occupations dating to ca. 1800-800 B.P. Recent geoarchaeological investigations at Magic Mountain revealed potential for stratified Early Archaic and Paleoindian cultural deposits at the site. A buried landscape marked by a prominent paleosol developed in alluvium occurs beneath a 1.8 m-thick mantle of colluvium. Radiocarbon ages determined on soil organic matter (SOM) indicate that the paleosol was buried soon after 9000 B.P., and temporally undiagnostic artifacts occur on and within the paleosol. This paper describes the soil-stratigraphy of the site, and the results of  $\delta^{13}\text{C}$  analysis of SOM are used to infer bioclimatic change for the period of record. (1)

**McDonnell, Shane** (University of Wyoming). *Atlatl History and Throwing at Hell Gap 2021.*

Atlatl experimentation continues to be a part of the learning experience during Hell Gap summer field season. Spears and atlatls have been manufactured during past workshops, atlatl competitions have been held under the auspices of the Wyoming Atlatl Association and Social Club, and annual demonstrations and visitor exhibitions have been organized. The atlatl, or spear thrower, is a tool that creates leverage to throw a dart at a velocity higher than a human arm can throw. The atlatl and darts were tools hypothesized to be used by Paleoindians throughout the American Plains, including people that would have occupied Hell Gap. This poster serves as an informational guide on the history of atlatls and their use throughout the American Plains. My poster highlights various atlatl throwing techniques, types of atlatls and darts used, and the technique that proved to be most effective in throwing distance, and accuracy during our experimentation. (2)

**Meyer, Kelton A.** (Center for Mountain and Plains Archaeology, Colorado State University). *Countryside Folsom in the Northern San Luis Valley, Colorado: Revisiting the Reddin Site.*

The Reddin Folsom site (5SH77) is a well-known but underreported Paleoindian surface scatter strewn over 300,000 m<sup>2</sup> at center of the Closed Basin, a prominent hydrologic feature of the northern San Luis Valley, Colorado. Surveys and test excavations by the Smithsonian Institution and University of Wyoming (1979-1983) revealed at least three widespread concentrations of broken Folsom weaponry and production debris, suggesting either aggregation or repetitious use of the landscape for hunting, camping, and retooling activities. Folsom flintknappers at Reddin relied on a diverse suite of lithic raw materials procured from outcrops of high-quality jaspers, quartzites, petrified woods, and volcanic rocks available in the interior ranges of the Southern Rockies and Southwest regions. This poster introduces a new PhD dissertation project aiming to clarify the Folsom occupation(s) at Reddin with analysis of existing BLM collections and new fieldwork. (11)

**Meyers, Richard** (Oglala Lakota College Graduate Studies Director). Discussant. (10)

**Mitchell, Mark D.** (Paleocultural Research Group). *Chronology of Magic Mountain's Early Ceramic Occupation.*

A primary research focus of the Magic Mountain Community Archaeology Project was the site's extensive Early Ceramic period occupation. Over the course of two field seasons, Denver Museum of Nature & Science and Paleocultural Research Group crews sampled 14 Early Ceramic features, which included earth ovens, basins filled with burned rock and sediment, a small storage pit, and a burned rock discard pile. A total of 32 radiocarbon dates were obtained on samples recovered from 12 of the 14 features. Dated materials included charred seeds, cactus spines, and twigs and branches of woody shrubs. Feature ages range from about 1950 B.P. to 1000 B.P., indicative of intermittent occupation throughout the Early Ceramic period. Intra-feature age comparisons provide data on feature use and site formation processes. (1)

**Mitchell, Mark D.** (Paleocultural Research Group). *Small Village or Special Use Site? Initial Results of the 2021 Field Investigation at Harmon Village, Morton County, North Dakota.*

Harmon Village is a Plains Village site located on the right bank of the Missouri River roughly 15 km north of Mandan, North Dakota. Lidar and magnetic data collected during 2019 suggest that the site—which has a commanding view of the river's floodplain—consists of about a dozen earthlodges encircled by a bastioned fortification. Material culture obtained during a 2021 testing project carried out by Paleocultural Research Group and the State Historical Society of North Dakota demonstrate that a single component dated to the middle decades of the eighteenth century is present. Excavation also revealed a unique artifact assemblage unlike any other previously obtained from a Plains Village site in the Heart River region. A primary focus of subsequent analyses will be to determine whether Harmon Village was a small village that was under construction at the time of its abandonment or an intermittently occupied special purpose site. (14)

**Only-A-Chief, Marty** (Pawnee Nation NAGPRA Officer). Discussant. (10)

**Pelton, Spencer R.** (Office of the Wyoming State Archaeologist). *The Deer Creek Station Burial: An 1865 Military Interment on the Oregon Trail.*

Deer Creek Station was a trading post and military subpost located in modern Glenrock, WY adjacent to the Oregon Trail. Military occupation of the Station between 1862 and 1865 was related to tending the first transcontinental telegraph line and providing emigrant protection. The military interred several soldiers at Deer Creek Station during its occupation, one of whom was inadvertently discovered in 2020 during utility improvements. Stable isotopes, skeletal pathologies, and associated artifacts suggest the individual was a member of the Kansas 11th Cavalry buried in the summer of 1865. This presentation is a summary of investigations at the Deer Creek Station Burial site. (12)

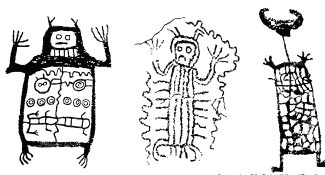
**Pettigrew, Devin B.** (University of Colorado Boulder). *What Can You Hunt With an Atlatl? Improving Validity in Realistic Experiments.*

Recent research suggests that stone-tipped projectiles would be rather ineffective against Pleistocene proboscideans, but like many ancient weapons, the atlatl and dart (spear-thrower) is characterized by extreme variability. The controlled tests from which these interpretations draw reduce this variability, while realistic experiments in the same data suffer from inappropriate targets and projectiles. Realistic experiments can be designed to keep weapon variability in play, but this makes causal mechanisms hard to observe. Presented here is an improved protocol for testing variable ancient hunting weaponry against appropriate targets. The results provide data on hunting efficacy, skeletal lesions, use-wear, and more. Regarding efficacy, finer-grained stones produce sharper armatures that dramatically reduce resistance during penetration. Heavy darts with high energy and sharp armatures can penetrate entirely through fresh goat and bison carcasses. Heavy, well-designed atlatl darts would likely be effective against proboscideans, as previously demonstrated by George Frison. (13)

**Pomeroy, Lien** (University of Colorado Office of Institutional Equity and Compliance). Discussant. (5)

**Ralston, James V.** (Unaffiliated Scholar) and **Lauren W. Ritterbush** (Kansas State University). *Uncovering the “First” Government Agency for the Kanza Tribe.* In 1827 the United States government established a subagency for the Kanza tribe along the Kansas River. A multiethnic community quickly sprouted around the federal installation, which was maintained until 1834. This frontier settlement marked the first permanent Euroamerican presence in Indian Territory on lands that would later fall within the bounds of the present state of Kansas. This community reflected important cultural forces associated with rapid and complex changes in the region in the first half of the 1800's. Historical records document part of the story of federal presence among the Kanza, yet additional clues are sought through the archaeological record. Initial investigations have uncovered evidence of at least one structure believed associated with the subagency. Our findings provide guidance for further investigations of the federal installation, as well as of the broader community and dynamics relations in the region. (12)

**Reed, Matt** (Pawnee Nation THPO). Discussant. (10)



**Schneider, Fred** (University of North Dakota, Retired). *Intertribal Trade for Native Plant Material Exotic to North Dakota by the Mandan, Hidatsa, and Arikara Tribes: An Update*.

Trade on the Great Plains has long held the interest of anthropologists and archaeologists. There is however an area of trade that has lagged behind the others. I will speak to the documented intertribal exchange of native plant materials exotic to North Dakota to the Mandan, Hidatsa and Arikara. I will also address the somewhat usual situation of trade of plants locally available to these three tribes by their enemies. My research reveals that the Mandan received 5 exotic plants, the Hidatsa received 8 exotic plants and the Arikara received 8 exotic plants. There are several other tentative exotic plant identities. Some of this plant material travelled hundreds of miles to reach their destinations. In some instances a single tribe was involved in the exchange while, in other instances several tribes could be involved. This work is part of a long-term effort in preparing ethnobotanies for the three tribes. (4)

**Shelton, Brett Lee** (Native American Rights Fund). Discussant. (10)

**Shield Chief Gover, Carlton** (Pawnee Nation / University of Colorado Boulder). Discussant. (10)

**Slade, Alan M. and Clark D. Wernecke** (Texas Archeological Research Laboratory/ The Gault School of Archaeological Research). *Clovis Fluted Points in Texas: A Further Update to the TCFPS, 4th Edition*.

In 1985, Dr. David Meltzer initiated a survey of Clovis fluted points in Texas. That survey continues to the present, and as of 2007 when the 3rd edition of the survey was published there was over 544 Clovis fluted points recorded by the Texas Clovis Fluted Point Survey (TCFPS). Clovis fluted points occur throughout the state, with concentrations on the High Plains, Coast, and along an arc through central Texas following the Balcones Escarpment along which high quality chert and freshwater sources were readily available. The majority of Texas Clovis fluted points were made of Edwards chert from central Texas, with a minority fashioned of Alibates agatized dolomite and Tecovas jasper from the High Plains. This presentation will introduce the 4th TCFPS that will now come under the control and curation of staff at the Texas Archaeological Research Laboratory (TARL). It is anticipated that the number of Clovis fluted points from Texas will be increased as will the number of counties from where the points were reported. Finally, there will be a request for information on more Clovis fluted points that can be added and how to go about providing that information. (16)

**Sumner, Raymond V.** (CMPA, Colorado State University). *The Days After Colorado's Darkest Day: The Use of LIDAR in Historic Archaeology*. Julesburg Station (5SW26) and Camp Rankin (5SW24) located along the South Platte River in northeastern Colorado, became the focal point of the Lakota, Arapaho, and Cheyenne response to the 1864 Sand Creek Massacre. The location was chosen as the initial and last battle of a six-week campaign in early

1865 due to its isolated location and abundant stage company warehouses. Remarkably, the site has not been studied by professional historians or archaeologists and is not addressed in tribal oral histories so specific details of the battle are not well-known. The Julesburg Project is utilizing both terrestrial and aerial LIDAR for archaeological prospection, site and artifact documentation, and to assist in the development of visualization tools to assist in telling the story of the First Battle of Julesburg. More broadly, the Project is demonstrating the power of LIDAR in understanding historical archaeology sites across the Great Plains. (11)

**Sutherland, Kimberly J.** (University of Wyoming). *Twisted: An Experimental Study in Yucca Cordage Making at the Hell Gap Site.*

Yucca fiber is versatile. It can be used to produce a range of cordage styles, function, and widths. During the 2021 field season, the Hell Gap field school and crew participated in an experiment to explore, create and use a variety of cordage from prepared yucca fiber. Overall, my project had four goals: to better understand the techniques needed in making and using yucca cordage, to investigate the characteristics of yucca cordage, to study lithics use-wear associated with cordage manufacture, and to analyze a single sherd of pottery from Hell Gap Locality IV/Well Section for evidence of cord impression. By using stone tools to strip yucca, we gained some understanding of the techniques, the time needed, technical details, and lithic use-wear created in manufacturing yucca cordage. (2)

**Taylor, William T.T.** (University of Colorado Boulder), **Emily Lena Jones** (University of New Mexico), Brandi Bethke (University of Oklahoma/Oklahoma Archaeological Survey), Sarah Trabert (University of Oklahoma), Patrick Roberts (Max Planck Institute for the Science of Human History), Ludovic Orlando (University of Toulouse). *Early Dispersal of Domestic Horses into the Great Plains and Northern Rockies.*

The domestic horse (*Equus caballus*) radically transformed Indigenous cultures across the American Southwest and the Great Plains. However, the question of when and how horses were first integrated into native lifeways remains poorly understood, with extant models derived largely from European historic records. Here, we analyze archaeological horse remains from across the Great Plains and American Southwest. Radiocarbon dating reveals a rapid 17th century dispersal of Spanish domestic horses from New Spain into the northern Rockies and central Plains, likely facilitated by Indigenous networks of exchange – and undocumented by European records. Osteological and biomolecular analysis (including stable isotopes, ancient animal DNA, and paleopathology) indicate that Native societies rapidly developed new methods of pastoral management, integrated horses into ceremonial practices and culture, and practiced mounted horseback riding across a wide swath of western North America prior to the arrival of European observers. (16)



**Thimmig, Rachel** (Brown University). *On- and Off-Reservation Life: A Reexamination of Crow-Flies-High Village*.

The primary settler-colonial period on the Plains, the Reservation Period (1850s-present), receives far less attention than early contact and Fur Trade sites. The archaeology that has been done comes from government-sponsored salvage excavations conducted in the 1940s and 1950s. One such site, Crow-Flies-High Village (32MZ1), occupied between 1884-1893, was the second locale of the Crow-Flies-High band that resisted reservation life for over two decades. Carling Malouf's salvage excavation uncovered rectangular cabins and an abundance of "White" objects with "little of Native origin," which led to his conclusion of a loss of Indigenous identity. This research reexamines the Crow-Flies-High Village materials through the lens of contemporary theoretical critiques including change as persistence, survivance, futurity, practice, and memory, to provide a more comprehensive and complex understanding of the Mandan, Hidatsa, and Arikara colonial experience. (9)

**Toft, Mike** (Independent Scholar). *Mallory, to Be or Not to Be McKean*.

The distinctive Mallory point has been included in the McKean Complex for almost fifty years, yet this association remains somewhat problematic and has led to uncomfortable interpretations. This paper presents evidence from two surface sites in Logan County, Colorado, that further strains the Mallory/Mckean association. (6)

**Van Alst, Emily** (Indiana University Bloomington). Discussant. (10)

**Varney, R.A., and Linda Scott Cummings** (PaleoResearch Institute). *Using XRF to Predict and Pollen to Identify Agricultural Sediments*.

Although there are no single elements that we have found to accurately predict the location (either laterally or vertically) of agricultural fields, testing sediment cores with XRF reveals a pattern of spikes in elemental concentration that, when combined with an indicator of sediment porosity, suggests agricultural activity. Spikes in argon concentration correlate with soil porosity. Elements that include potassium, phosphorus, and sulfur are expected to increase in agricultural sediments if the plants are left to rot in place after harvest. After identifying signatures that likely represent agriculture, we sample sediment at depths corresponding to those spikes for pollen analysis. Then we rely on recovery of maize pollen or other pollen representing cultigens to provide direct evidence of agriculture. In an example from fields identified in northern New Mexico, this combination of XRF and pollen analysis yielded maize pollen in 15 of the 16 samples identified by XRF as most probably representing agricultural sediments. (16)



**Vehik, Susan C.** (University of Oklahoma). *Little River Focus, Council Circle Structures, and Marine Shell Beads.*

Marine shell beads are very rare in Little River focus contexts. While Olivella beads from west coast settings are occasionally present, there is almost no Gulf Coast marine shell artifacts. The exception is 10 tubular beads of Florida Horse Conch from a council circle structure at 14RC13, the Kermit Hayes No. 2 site. The beads are associated with several skeletons representing individuals who died as a result of conflict but whose cultural association is unclear. Apart from remains of weapons used to kill these individuals, there are few items of material culture by which to determine cultural affiliation. This paper is an initial exploration into the tubular marine shell beads and their possible affiliations and origins. (14)

**Wade, Kali** (Atlatl Archaeology Ltd.). *Phytolith Analysis as a Method for Assessing the Spatial Boundaries of Sites.*

While researchers have traditionally addressed settlement and occupations using material culture that is obvious to the naked eye, such as faunal remains, lithic remains or stone foundations, plant remains can reveal important aspects of human activities as well. In studying the periphery of sites, increased quantities of phytoliths can define permanent settlements and their boundaries (Cabanes et al. 2012), hunter-gatherer settlement patterns (Esteban et al. 2018), and/or deliberate landscape management by Indigenous communities (Armstrong et al. 2021). At Hardisty, Alberta, soil micromorphology blocks provide an appropriate context to examine phytoliths in situ to investigate human behaviours and the extent of habitation in this established bison pound and aggregation site. Findings will include phytolith quantities to assess site boundaries and quantities with morphological identifications to assess spatial areas and environment. Results are forthcoming but a discussion of technique will showcase prospective research questions and their methodological application on the Northern Plains. (13)

**Wandsnider, LuAnn** (University of Nebraska Lincoln). *Extreme Events and Fertility in Late 18th Century Custer County, Nebraska.*

Members of contemporary populations often respond to extreme weather events, such as hurricanes, through relocation. In addition, family fertility often falls immediately after the event, usually rebounding two to four years later after a return to pre-event conditions. Do we see these same fertility profiles across historic Custer County Nebraska, as residents endured the severe winter of 1880-1881, hailed out crops through the 1880s, the blizzard of January 1888, the Panic of 1893, and a major drought in 1894-1895? Newspapers and community histories highlight the support provided by neighbors, impromptu relief societies, and, in the case of the drought, families and a caring public further east. I consider this question for Custer County, relying on 1885 and 1900 Censuses to construct annual estimates for fertility by township before, during, and after the extreme events. I conclude with expectations for continuing generational impacts owed to epigenetic follow-on effects. (12)

**Weaver, Ryan** (PaleoResearch Institute), **R. A. Varney** (PaleoResearch Institute), **Linda Scott Cummings** (PaleoResearch Institute). *Assessing Two Models of Early Paleoamerican Migration. Did Glacial Bodies Prevent Migrations into the Americas?*

There is considerable debate amongst scholars concerning the timing of migrations in North and South America of Beringian hunter/gathers. It is well-established that humans were in the Americas by at least 13.2 KA (Goebel, Waters, O'Rourke, 2008); however, considerable archaeological, genetic, geological, climatological evidence indicates that the first people were on the continent during or prior to the Last Glacial Maximum (Boeda et al 2014). Insight from a new climate model focusing on Beringia, Canada and the Pacific Northwest, strongly re-affirm these conclusions and suggests that several migrations may have occurred over the last 35 Ka (Weaver 2021). Sporadic migrations likely contributed to the presence of distinct cultural technocomplexes in North America just prior to the Holocene. In our paper, we also present compelling counter-arguments for Stanford and Bradley's (2015) migration model which posits that terminal Pleistocene cultures in North America were derived from an Upper-Paleolithic, European technocomplex (Solutrean). (16)

**Weston, Timothy** (Kansas Historical Society). *Modified Bone from the 2019 KATP Excavations at the Tobias Site (14RC8) Rice County, Kansas.*

Archeological excavations were undertaken in 2019 at the Tobias site (14RC8), by the Kansas Archeology Training Program. Tobias is one of the most prominent members of a cluster of well-known Great Bend Aspect sites along the Little Arkansas River, and is part of the Little River Archeological District/Tobias-Thompson Complex, a National Historic Landmark. It has been the location of numerous excavation projects for more than eight decades and is perhaps best known for its association with the Coronado Expedition of 1541. The 2019 KATP investigations produced a diverse array of artifact classes, including modified bone. That collection is dominated by unidentifiable fragments, but also contains significant numbers of scapula hoes, hoe fragments, awls, and other recognizable tool types. That robust inventory of bone tools, coupled with minimal evidence of modification with metal, suggests that the Tobias occupation took place early in the contact period. (7)

**White, Clifford** (University of Wyoming). *Did Water Availability Impact Clovis Settlement Strategies on the Great Plains?*

This research examines the tethering of the Clovis people to water. County level water data from the 2010 US Census are used to evaluate the amount of available water in selected counties on the Great Plains. Clovis occupation data, obtained from the Paleoindian Database of the Americas (PIDBA) Locational database, are used to evaluate Clovis occupations and the frequency of their occurrence. The relationship between Clovis sites and water is important because water was a key factor in structuring their settlement strategies. By

looking at available water, we can begin to reconstruct the settlement and mobility strategies of Clovis people on the Great Plains. The principles of uniformitarianism give us the opportunity to examine water availability in naturally occurring rivers, streams, springs, and lakes and apply that information to the current evidence we have of the occurrence of Clovis people on the Great Plains. (9)

**White, Clifford, Falon Norford, Lee Olinger, Rachel Shimek, Mackenzie J. Cory, Brayden Wirick, Kim Sutherland, Shane P. McDonnell, L. F. Berg, Laurie Cale, Tony A. Fitzpatrick, Liana Flecker, Briana Houghton, Kenneth Humphrey, Matt T. Morris, Allison White, Marcel Kornfeld, Mary-Lou Larson** (University of Wyoming). *Digging Deeper: Discoveries from the Hell Gap 2021 Field Season*.

More than a half century after Paleoindian artifacts were first discovered at Hell Gap Locality I, the site continues to yield data relevant for interpreting Paleoindian prehistory. In the summer of 2021 students and volunteers from across the United States to excavate Agate Basin, Folsom, and Goshen components of the site. During the 2021 field season 1436 mapped and recovered objects expand our understanding of activities performed at Hell Gap. Recovered artifacts include bison bone including a concentration of cranium fragments, ochre, chipped stone debitage and tools, and two osseous needle fragments. The distribution of these objects in the context of previous excavations is beginning to clarify the use of the site. In this presentation we highlight the artifacts and archaeological data collected during the 2021 field season. This poster shows the current state of Hell Gap investigations. (2)

**Wiewel, Adam** (National Park Service), **Nikki Klarmann** (Kansas Historical Society), **Jay Sturdevant** (National Park Service). *Brown v. Board of Education National Historical Site: Archeological Investigations and Geophysical Survey*. Brown v. Board of Education NHS commemorates the U.S. Supreme Court's 1954 decision to end legal racial segregation in public education and preserves significant resources like Monroe Elementary School in Topeka, Kansas. Before opening to the public on the ruling's 50th anniversary, the Midwest Archeological Center completed several investigations of the former school and adjacent grounds. Among them were a geophysical survey in 1999, ground-truthing excavations in 2000, and eight monitoring projects between 2001 and 2003. Prior to the 2022 Kansas Archeology Training Program field school, ground-penetrating radar and resistance surveys were undertaken in 2021. The findings—among them the foundation of the first Monroe Elementary School, which served African American students from 1874 to 1927, and remnants of contemporaneous homes—will be tested by the KATP field school. Combined with previous investigations, this research will shed light on a working-class African American neighborhood from the turn of the 20th century. (12)

**Wirick, Brayden** (University of Wyoming Paleoindian Research Lab and Hell Gap Digital Archives). *Blood, Sweat, and Doodles: Hell Gap Map Graffiti in the 1960s*. Archaeologists often take detailed field notes on everything that happens at a site. Doodles left in field notebooks are a different type of historical documentation: they show what was happening in an idle archaeologist's head. While digitizing maps and notes from Hell Gap's 1960s excavations, I noticed pictures drawn in the margins of historic field maps. The wide range of doodles I observed included Latin phrases, abstract designs, animals, and intricate drawings incorporating the compass rose on the field map. The details and variations exhibited in these doodles represent the amount of time a person may have put into these field maps outside of drawing the artifacts found on the site. Were the details incorporated in these doodles a way to pass time, or did they mean something more? My poster showcases what was drawn and identifies what traits, if any, are consistent with "doodlers". (2)

**Woolley, Erin** (University of Wyoming). *Hell Gap '61 Revisited: An Ethnographic Analysis of Archival Images from the Hell Gap Excavations in the Early 1960s*. Archival images often convey information that is difficult to interpret without the necessary context. Hell Gap excavation photos are in the process of being digitized through a grant from Save America's Treasures. The archival images of the excavations from 1961 to 1966 showcase more than just artifacts. The slides and negatives portray camp life and social interactions between members of the excavation crew. A specific culture can be observed from these images of camp life. This poster explores methods to develop an ethnographic analysis based purely on these images. I examine several photos with the goal of evaluating the actions of the image subjects, as well as identifying the bias of the photographer. Additionally, I will assess my own bias as an archivist. Understanding the multiple frames of reference provides a glimpse into the culture of camp life of the 1960s at Hell Gap. (2)

**Wroe, Teresa** (University of Colorado Office of Institutional Equity and Compliance). Discussant. (5)

**Zedeño, Maria Nieves** (The University of Arizona), **Danielle Soza** (The University of Arizona), **Francois Lanoe** (The University of Arizona), **Joshua Reuther** (University of Alaska Museum of the North). *After the Ashfall: New Information on the Early Archaic Occupation at the Billy Big Spring Site*.

The Early Archaic period of the Northwestern Plains is sparse but nonetheless present in significant multicomponent sites. Many of these sites represent the return of people, plants, and animals after a 200-500 year hiatus caused by the eruption of Mount Mazama, which wiped out much of the nonarbooreal vegetation in the region. Research at Billy Big Spring site in the Blackfeet Reservation, MT reveals that hunters returned to the area at approximately 7,100 cal BP, settling right atop the ashfall. The site also indicates that Mazama ash was differentially preserved within a small area, ranging from a thick layer near the kettle pond to a microscopic trace on the dry shore. Results further suggest that sites with occupations dated before and after 7,700 cal BP might preserve traces of Mazama ash not previously identified in the stratigraphy. This research potentially informs larger processes of place persistence and ancestral landscape attachments. (16)

## KEYNOTE SPEAKER

**Dr. Robert Kelly, University of Wyoming**

**Title: A Pre-Columbian Population Decline in North America.**



*Abstract: In this talk I will present a new radiocarbon database (>104,000 ages) of the lower 48 states, describing the process of its construction and issues in “big data” compilation in archaeology. Using the database, we then present some new, preliminary research for a pre-Columbia population decline, centered on AD 1150, but occurring at different times in different places.*

*Biographic information: Robert Kelly is Professor of Anthropology at the University of Wyoming, past president of the Society for American Archaeology, past editor of American Antiquity, author of The Lifeways of Hunter-Gatherers, Archaeology and Archaeology: Down to Earth. He has conducted archaeological research in the western US for nearly 50 years.*

## Presidents

|      |  |
|------|--|
| 1969 | Wedel, Waldo R. – Smithsonian Institution                            |
| 1970 | Wedel, Waldo R. – Smithsonian Institution                            |
| 1971 | Wedel, Waldo R. – Smithsonian Institution                            |
| 1972 | Krause, Richard – University of Missouri                             |
| 1973 | Gradwohl, David M. – Iowa State University                           |
| 1974 | Frison, George – University of Wyoming                               |
| 1975 | Henning, Dale R. – University of Nebraska                            |
| 1976 | Hamilton, Henry W. – Missouri Archaeological Society                 |
| 1977 | Schneider, Frederick E. – University of North Dakota                 |
| 1978 | Wilson, Michael C. – University of Calgary                           |
| 1979 | Jantz, Richard L. – University of Tennessee                          |
| 1980 | Davis, Leslie – Montana State University                             |
| 1981 | Loendorf, Larry – University of North Dakota                         |
| 1982 | Parks, Douglas – Mary College  |
| 1983 | Harvey, Amy E. – Stephens College                                    |
| 1984 | Sims, E. Leigh – Manitoba Museum of Man and Nature                   |
| 1985 | Witty, Thomas A., Jr. – Kansas State Historical Society              |
| 1986 | Anderson, Duane – Office of the State Archaeologist of Iowa          |
| 1987 | Vehik, Susan – University of Oklahoma                                |
| 1988 | Vehik, Susan – University of Oklahoma                                |
| 1989 | Schneider, Mary Jane – University of North Dakota                    |
| 1990 | Schneider, Mary Jane – University of North Dakota                    |
| 1991 | Hofman, Jack L. – Oklahoma Archeological Survey                      |
| 1992 | Hannus, L. Adrien – Augustana College                                |
| 1993 | Tiffany, Joseph A. – California State Polytechnic University, Pomona |
| 1994 | Lintz, Christopher – Mariah Associates                               |
| 1995 | Bozell, Robert – Nebraska State Historical Society                   |
| 1996 | Toom, Dennis – University of North Dakota                            |
| 1997 | Lees, William – Oklahoma Historical Society                          |
| 1998 | Reher, Charles – University of Wyoming                               |
| 1999 | Brink, Jack – Provincial Museum of Alberta                           |
| 2000 | Artz, Joe – Office of the Iowa State Archaeologist                   |
| 2001 | Stanley, Lori A. – Luther College                                    |
| 2002 | Walker, Danny N. – Wyoming State Archaeologist <b>Office</b>         |
| 2003 | Reeves, Brian O. K. – Lifeways Canada, Ltd.                          |
| 2004 | Hartwell, William T. – Desert Research Institute                     |
| 2005 | Amick, Daniel S. – Loyola University                                 |
| 2006 | Kornfeld, Marcel – University of Wyoming/Frison Institute            |
| 2007 | Bement, Leland – Oklahoma Archeological Survey                       |
| 2008 | Tiffany, Joseph – Mississippi Valley Archaeological Center           |
| 2009 | Peterson, Lynelle – Ethnoscience, Inc.                               |
| 2010 | Billeck, William T. – Smithsonian Institution                        |
| 2011 | Dawe, Bob – Royal Alberta Museum                                     |
| 2012 | Miller, Mark E. – Wyoming State Archaeologist Office                 |

## **Presidents (cont)**

|      |   |
|------|---|
| 2013 | Greer, Mavis – Greer Services Archeological Consulting  |
| 2014 | Mitchell, Mark D.—Paleocultural Research Group          |
| 2015 | Bleier, Amy C.—State Historical Society of North Dakota |
| 2016 | Hollenback, Kacy—Southern Methodist University          |
| 2017 | Trabert, Sarah – University of Oklahoma                 |
| 2018 | Sturdevant, Jay – Midwest Archaeological Center         |
| 2019 | Adair, Mary – University of Kansas                      |
| 2020 | Adair, Mary – University of Kansas                      |
| 2021 | Pool, Kelly – Metcalf Archaeology                       |

## **Distinguished Service Award Recipients**

|      |   |
|------|---|
| 2020 | Lawrence L. “Larry” Loendorf              |
| 2019 | John (Jack) W. Brink, Raymond J. DeMallie |
| 2018 | Christopher Lintz                         |
| 2017 | Susan Vehik                               |
| 2016 | Alice Kehoe                               |
| 2015 | Donna C. Roper                            |
| 2014 | (no award)                                |
| 2013 | Joseph A. Tiffany                         |
| 2012 | F. A. Calabrese                           |
| 2011 | Richard A. Krause                         |
| 2010 | Les Davis                                 |
| 2009 | Patricia J. O’Brien                       |
| 2008 | (no award)                                |
| 2007 | Thomas A. Witty, Jr.                      |
| 2006 | Stanley A. Ahler                          |
| 2005 | Dale Henning                              |
| 2004 | Thomas Kehoe                              |
| 2003 | Mary Jane and Fred E. Schneider           |
| 2002 | Don Wyckoff                               |
| 2001 | James H. and Delores A. Gunnerson         |
| 2000 | (no award)                                |
| 1999 | Richard G. Forbis                         |
| 1998 | David M. Gradwohl                         |
| 1997 | Larry and Janice Tomsyck                  |
| 1996 | (no award)                                |
| 1995 | George C. Frison                          |
| 1994 | Robert E. Bell                            |
| 1993 | William J. Mayer-Oakes                    |
| 1992 | W. Raymond Wood                           |
| 1991 | Waldo R. Wedel and Mildred Mott Wedel     |



## Conference Locations

|      |      |  |
|------|------|--|
| 78th | 2020 | Boulder, Colorado (cancelled)                                      |
| 77th | 2019 | Bloomington, Indiana   |
| 76th | 2018 | San Antonio, Texas   |
| 75th | 2017 | Bismarck, North Dakota   |
| 74th | 2016 | Lincoln, Nebraska  |
| 73rd | 2015 | Iowa City, Iowa  |
| 72nd | 2014 | Fayetteville, Arkansas   |
| 71st | 2013 | Loveland, Colorado   |
| 70th | 2012 | Saskatoon, Saskatchewan  |
| 69th | 2011 | Tucson, Arizona  |
| 68th | 2010 | Bismarck, North Dakota   |
| 67th | 2009 | Norman, Oklahoma   |
| 66th | 2008 | Laramie, Wyoming   |
| 65th | 2007 | Rapid City, South Dakota   |
| 64th | 2006 | Topeka, Kansas   |
| 63rd | 2005 | Edmonton, Alberta  |
| 62nd | 2004 | Billings, Montana  |
| 61st | 2003 | Fayetteville, Arkansas   |
| 60th | 2002 | Oklahoma City, Oklahoma  |
| 59th | 2001 | Lincoln, Nebraska  |
| 58th | 2000 | St. Paul, Minnesota (joint with Midwest Archaeological Conference) |
| 57th | 1999 | Sioux Falls, South Dakota  |
| 56th | 1998 | Bismarck, North Dakota   |
| 55th | 1997 | Boulder, Colorado  |
| 54th | 1996 | Iowa City, Iowa  |
| 53rd | 1995 | Laramie, Wyoming   |
| 52nd | 1994 | Lubbock, Texas   |
| 51st | 1993 | Saskatoon, Saskatchewan  |
| 50th | 1992 | Lincoln, Nebraska  |
| 49th | 1991 | Lawrence, Kansas   |
| 48th | 1990 | Oklahoma City, Oklahoma  |
| 47th | 1989 | Sioux Falls, South Dakota  |
| 46th | 1988 | Wichita, Kansas  |
| 45th | 1987 | Columbia, Missouri   |
| 44th | 1986 | Denver, Colorado   |
| 43rd | 1985 | Iowa City, Iowa  |
| 42nd | 1984 | Lincoln, Nebraska  |
| 41st | 1983 | Rapid City, South Dakota   |
| 40th | 1982 | Calgary, Alberta   |
| 39th | 1981 | Bismarck, North Dakota   |
| 38th | 1980 | Iowa City, Iowa  |
| 37th | 1979 | Kansas City, Missouri  |



## Conference Locations (cont)

|      |      |   |
|------|------|---|
| 36th | 1978 | Denver, Colorado  |
| 35th | 1977 | Lincoln, Nebraska   |
| 34th | 1976 | Minneapolis, Minnesota (joint with Midwest Archaeological Conference) |
| 33rd | 1975 | Lincoln, Nebraska   |
| 32nd | 1974 | Laramie, Wyoming  |
| 31st | 1973 | Columbia, Missouri  |
| 30th | 1972 | Lincoln, Nebraska   |
| 29th | 1971 | Winnipeg, Manitoba  |
| 28th | 1970 | Tulsa, Oklahoma   |
| 27th | 1969 | Lawrence, Kansas  |
| 26th | 1968 | Lincoln, Nebraska   |
| 25th | 1967 | St. Paul, Minnesota   |
| 24th | 1966 | Lincoln, Nebraska   |
| 23rd | 1965 | Topeka, Kansas  |
| 22nd | 1964 | Lincoln, Nebraska   |
| 21st | 1963 | Taos, New Mexico  |
| 20th | 1962 | Lincoln, Nebraska   |
| 19th | 1961 | Lawton, Oklahoma  |
| 18th | 1960 | Norman, Oklahoma  |
| 17th | 1959 | Lincoln, Nebraska   |
| 16th | 1958 | Lincoln, Nebraska   |
| 15th | 1957 | Lincoln, Nebraska   |
| 14th | 1956 | Lincoln, Nebraska   |
| 13th | 1955 | Lincoln, Nebraska   |
| 12th | 1954 | Lincoln, Nebraska   |
| 11th | 1953 | Lincoln, Nebraska   |
| 10th | 1952 | Lincoln, Nebraska   |
| 9th  | 1951 | Lincoln, Nebraska   |
| 8th  | 1950 | Lincoln, Nebraska   |
| 7th  | 1949 | Lincoln, Nebraska   |
| 6th  | 1948 | Lincoln, Nebraska   |
| 5th  | 1947 | Lincoln, Nebraska   |
| 4th  | 1940 | Norman, Oklahoma  |
| 3rd  | 1936 | Mount Vernon, Iowa  |
| 2nd  | 1932 | Lincoln, Nebraska   |
| 1st  | 1931 | Vermillion, South Dakota  |

## Native American Student Award Winners

|      |   |
|------|---|
| 2020 | <i>Maura Fournier</i> (Metis; University of Winnipeg)   |
| 2019 | Carlton Shield Chief Gover (Pawnee Nation of Oklahoma;<br>University of Colorado)   |
| 2018 | <i>Justin Roy Lund</i> (Navajo Nation; University of Oklahoma)  |
| 2017 | <i>Morgan Fluker</i> (Kaw Nation of Oklahoma; Kansas State University)<br><i>Martin Lopez</i> (Apsaalooke [Crow] of Montana; University of Montana)   |
| 2016 | <i>Melanie McKay-Cody</i> (Chickamauga Cherokee;<br>University of Oklahoma)<br><i>Tyrone Peterson</i> (Navajo Nation and the Pascua Yaqui Tribe;<br>University of Iowa)   |
| 2015 | <i>John Reynolds</i> (Rosebud Sioux Tribe; St. Cloud State University)  |
| 2014 | <i>Justin Roy Lund</i> (Navajo Nation; University of Oklahoma)  |
| 2013 | <i>Melanie McKay-Cody</i> (Chickamauga Cherokee; University of Kansas)  |
| 2012 | <i>Royce Freeman</i> (Mandan, Hidatsa, Arikara Nations;<br>University of Oklahoma)  |
| 2011 | <i>Michael B. Catches Enemy</i> (Oglala Nation; St. Cloud State University)   |
| 2010 | <i>Donna Longhorn</i> (Shawnee/Delaware; University of Oklahoma)  |
| 2009 | <i>Brad Kroupa</i> (Mandan, Hidatsa, and Arikara Nation;<br>University of Indiana)  |
| 2008 | <i>Wilena Old Person</i> (Blackfoot; University of Montana-Missoula)  |
| 2007 | <i>Brenda Covington</i> (Colville/Spokane; University of Montana)   |
| 2006 | <i>Jason Hale</i> (Prairie Band Potawatomi; Washburn)   |
| 2005 | <i>La Rae Buckskin</i> (Manitoba Métis; University of Idaho,<br>Peterborough, Ontario)  |
| 2004 | <i>Gloria McCarty</i> (Muskogee; University of Oklahoma)<br><i>John T. Haj</i> (Delaware; University of Tulsa)  |
| 2003 | no award given  |
| 2002 | <i>Julie Bartlett</i> (Oglala Lakota; University of Winnipeg)   |
| 2001 | <i>Laura Cocker</i> (Manitoba Métis Federation; University of Winnipeg)<br><i>Jana Vee Cornelius-Baird</i> (Seminole-Creek Tribe of Oklahoma;<br>University of Oklahoma)  |
| 2000 | <i>Claudette Rocan</i> (Métis; University of Winnipeg)<br><i>Martin Earring</i> (Minneconju-Oglala, Cheyenne River Sioux Tribe;<br>University of South Dakota)  |
| 1999 | <i>Rebecca Amen</i> (Omaha Tribe; University of Nebraska, Lincoln)  |
| 1998 | <i>Paulette F. Steeves</i> (Cree/Cherokee/Micmac; University of Arkansas)<br><i>Jacquelin St. Clair</i> (Seminole Nation of Oklahoma;<br>University of Wyoming)   |
| 1997 | <i>Florence Whitehorse-Taylor</i> (Kiowa of Oklahoma;<br>University of Oklahoma)<br><i>Alix Reynolds</i> (Manitoba Métis Federation; University of Winnipeg)<br><i>Shanna Olinger</i> (Yankton Sioux Tribe; Montana State University) |
| 1996 | <i>Evelyn Siegfried</i> (Bigstone Cree Band; University of Calgary)<br><i>James Bird</i> (Eastern Cherokee; University of Oklahoma)   |
| 1995 | <i>Michelle Fox</i> (Red Lake Chippewa; University of North Dakota)   |
| 1994 | <i>Dawn Makes Strong Move</i> (Winnebago Tribe of Nebraska;<br>University of South Dakota)  |

## Student Paper Award Winners

- 2020 meeting and competition cancelled
- 2019 *Evelyn Pickering* (University of Arizona): Creation and Creative Recreation: Blackfeet Resilience Capacity on the Northern Plains (Graduate Student Award)
- 2018 *Amanda Anne Burt* (Indiana University): Unlikely Allies: Modern Wolves and the Diets of Pre-contact Domestic Dogs (Graduate Student Award);  
*Travis Jones* (Georgia University): Revisiting Huff Village: Toward Generational Timescales for Plains Villages (Graduate Student Award);
- 2017 *Abigail Fisher* (Southern Methodist University): When is a Wolf a Dog? Combined Geometric Morphometrics and Stable Isotope Analysis for Differentiating Wild from Domestic Canids on the North American Great Plains (Graduate Student Award)
- 2016 *Ryan Breslawski* (Southern Methodist University): Seasonal Bison Hunting by Paleoindians on the Northwestern Plains: Revisiting Fetal Prey Remains from Horner II and Casper (Graduate Student Award);  
*Seamus Anderson* (Texas Tech University): Death, Divination, and Obligation: Owls in 19th Century Kiowa Culture (Undergraduate Student Award)
- 2015 *Whitney Goodwin* (Southern Methodist University): Complementary Techniques for the Estimation of Original Firing Temperatures of Plains Ceramics: Experimental and Archaeological Results (Graduate Student Award), published in *Ethnoarchaeology* 8(2):180-204 (2016).
- 2014 *Adam Wiewel* (University of Arkansas): Examining Agricultural Surplus at Huff Village, North Dakota: Combining Archaeological and Geophysical Data (Graduate Student Award)
- 2013 *Sarah E. Wolff* (University of Arizona): Protecting a National Icon: The First Use of the Antiquities Act of 1906 to Declare Devils Tower National Monument (Graduate Student Award)
- 2012 *Elsa Perry* (University of Lethbridge): Correlating Etching Tool Materials with Petroglyphs at Writing on Stone (Undergraduate Student Award), published in *Plains Anthropologist* 60(223):72-83 (2015)
- 2011 *William Reitze* (University of Arizona): Salvaging a Sandia Site: Reinvestigation of the Lucy Site, Central New Mexico (Graduate Student Award)
- 2010 *Travis Hill* (Colorado State University): Qualifying Comfort: Intentional Design in Unhafted End Scrapers at the Lindenmeier Folsom Site, Northern Colorado (Undergraduate Student Award);  
*Kacy Hollenback* (University of Arizona): Social Memory of Disaster: Exploring Historic Smallpox Epidemics among the Mandan and Hidatsa (Graduate Student Award)
- 2009 *Brigid Grund* (University of Colorado): Understanding the Great Plains Paleoindian Projectile Point Chronology: Radiocarbon Dating and Potential Coevality of Point Types (Undergraduate Student Award)  
*Maureen Boyle* (Indiana University): Beyond Linearity in Western Historical Narratives: The Wild West as Temporal Frontier (Graduate Student Award)

- 2009 *Wendi Field Murray* (University of Arizona): Feathers, Fasting, and the "Eagle Complex": A Contemporary Analysis of the Eagle as a Cultural Resource in the Northern Plains (Graduate Student Award), published in *Plains Anthropologist* 56(218):143-153 (2011)
- 2008 *Jeremy Planteen* (University of Wyoming): The Wild West Show: Rethinking the Influence of the Miller's 101 Ranch Wild West Show and Early Film on the Native American Stereotype (Graduate Student Award)  
*Shana Wolff* (Laramie County Community College): An Analysis of Plants Traditionally Used by Plains American Indians as Topical Antiseptics for Antimicrobial Effectiveness (Undergraduate Student Award)
- 2007 *Naomi Ollie* (Colorado State University): Many Mountains Moving: Tales of Mass-Wasting and Archaeology in the Absaroka Range, Greater Yellowstone Ecosystem (Graduate Student Award)  
*Sarah Trabert* (Kansas State University): Steed-Kisker Ceramics: Analysis of the Scott Site (14LV1082) Assemblage (Undergraduate Student Award), published in *Plains Anthropologist* 54(212):289-299 (2009)
- 2006 *Jayme Job* (Minnesota State University-Moorhead): Sourisford Salamanders: Renewal Iconography of the Devils Lake-Sourisford Ceramic Complex (Undergraduate Student Award), published in *Plains Anthropologist* 54(209):75-82 (2009)  
*Michael P. Jordan* (University of Oklahoma): Religion and Reservation Life: Kiowa Revitalization Movements of the 1880s (Graduate Student Award)
- 2005 *Patti Kinnear* (University of Colorado): Cooperation and Conflict: Examining Alternative Views of Archaeology on the Great Plains (Undergraduate Student Award), published in *Plains Anthropologist* 53(206):161-177 (2008)  
*Tomasin Playford* (University of Manitoba): Establishing Site Seasonality: Importance, Problems and a Potential Solution (Graduate Student Award)
- 2004 *Raven Carper* (University of Montana): A Study of the Utility of a 'Symmetry Index' in the Assessment of Biface Production Goals, published in *Lithic Technology* 30(2):127-144 (2005)
- 2003 *Lucy Burris* (Colorado State University): Western Harvester Ants: Archaeology's Little Helpers
- 2002 *Jodi Jacobson* (University of Tennessee): Identification of Mule Deer (*Odocoileus hemionus*) and White-tail Deer (*Odocoileus virginianus*) Post-cranial Remains as a Means of Determining Human Subsistence Strategies, published in *Plains Anthropologist* 48(187):287-297 (2003)
- 2001 *Charles Egeland* (Colorado State University): From Cutmarks to Behavior: The Reliability of Cutmarks for Inferring Processing Intensity, published in *Plains Anthropologist* 48(184):39-51 (2003)  
*Chad Goings* (University of Arkansas): A Predictive Model for Lithic Resources in Iowa, published in *Plains Anthropologist* 48(184):53-67 (2003)

- 2000 *Paula Renaud* (University of Wyoming): Sticks, Stones, and Cyberwaves: Creating an International Community of Aboriginal Philosophy in the 21st Century
- 1999 *Rhonda S. Fair* (University of Oklahoma): Becoming the White Man's Indian: An Examination of Native American Tribal Web Sites, published in *Plains Anthropologist* 45(172):53-67 (2000)
- 1998 *Jesse Ballenger* (University of Oklahoma): Late Paleoindian Land Use in the Oklahoma Panhandle: Goff Creek and Nall Playa, published in *Plains Anthropologist* 44(168):189-207 (1999)
- 1997 *Susan Tanner* (University of Nebraska): An Analysis of Use-Wear on Nebraska Phase Ceramics
- 1996 No Award
- 1995 *Bruce Low* (University of Saskatchewan): Swan River Chert: Its Geological Occurrence, Geographical Distribution, and Archaeological Collection - A Ubiquitous Pre-Contact Lithic Resource of the Northern Plains/Southern Boreal Forest, published in *Plains Anthropologist* 41(156):165-174 (1996)
- 1994 No Award
- 1993 No Award
- 1992 *Elizabeth Miller* (University of Nebraska): Evidence for Prehistoric Scalping in Northeastern Nebraska, published in *Plains Anthropologist* 39(148):211-219 (1994)
- 1991 No Award
- 1990 *Jeffrey A. Huebner* (University of Texas-Austin): Late Prehistoric Bison Populations in Central and Southern Texas
- 1989 Unknown
- 1988 Unknown
- 1987 Unknown
- 1986 *Judith Habicht-Mauche* (Harvard University): Southwestern-Style Culinary Ceramics on the Southern Plains: A Case Study of Technological Innovation and Cross-Cultural Interaction, published in *Plains Anthropologist* 32(116):175-189 (1987)

### Student Poster Award Winners

- 2020 meeting cancelled, no posters presented
- 2019 *Danielle Soza* (University of Arizona, graduate) Soil Chemistry and Stone Ring Sites: Preliminary Results from Four Horns Lake, Montana  
*Sylvia M. Sandstrom* (Minnesota State University-Moorhead, undergraduate) The Boller Site Platter--A Northern Plains Ceramic Anomaly
- 2018 *Paul Buckner, Madeline Kunkel, and Jessica McCaig* (Colorado State University)  
*Matthew Colvin* (University of Georgia)
- 2017 *Samantha Nadal and Cynthia Strong* (Cornell College)  
*Evelyn Pickering* (University of Arizona)
- 2016 *Jennifer K. Deats* (University of Colorado, Boulder)
- 2015 *Justin Garnett* (University of Missouri, Kansas City)



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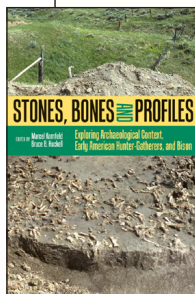
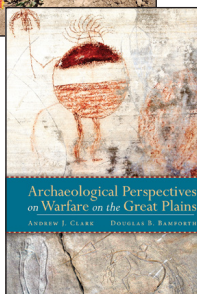
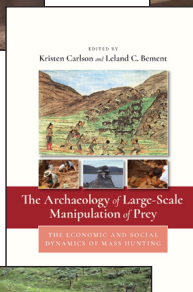
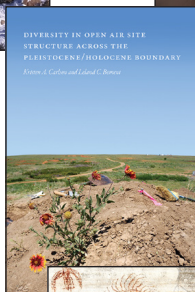
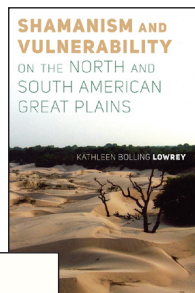
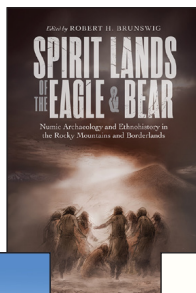
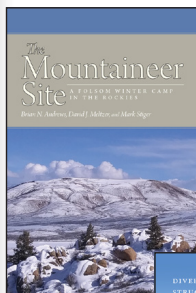
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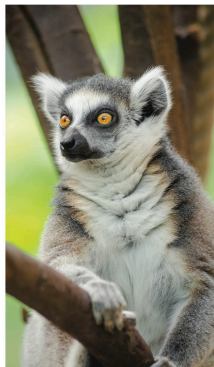
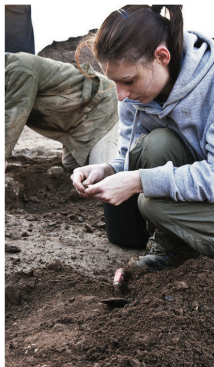
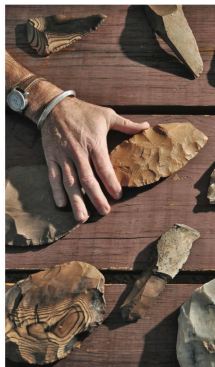


**University of Colorado Boulder**



# Anthropology

UNIVERSITY OF COLORADO **BOULDER**



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