SANTA FE, NEW MEXICO

OCTOBER 14-17, 2026

PALEOAMERICAN ODYSSEY

CENTER FOR THE STUDY OF THE FIRST AMERICANS

TEXAS A&M UNIVERSITY

Program & Abstracts

Program for the Paleoamerican Odyssey Conference

PUBLISHED BY THE

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PALEOAMERICAN ODYSSEY

2026

Program & Abstracts

SANTA FE COMMUNITY CONVENTION CENTER

THE CENTER FOR THE STUDY OF THE FIRST AMERICANS

Welcomes You to Paleoamerican Odyssey 2026!

One of the most meaningful archaeological endeavors is to understand the late Pleistocene dispersal of modern humans across the world. The last place to be occupied by humans was the Western Hemisphere. Archaeologists have been excavating sites across the Americas for over a century, gathering evidence to decipher this story working with geologists, geneticists, and scientists from a host of other fields. While archaeologists vigorously debate the timing and process of the peopling of the Americas, they all are united in their quest to learn about this last dispersal of humans into new lands.

About every fifteen years, the Center for the Study of the First Americans convenes a major conference to discuss new discoveries and developments about the late Pleistocene peopling of the Americas. The first was the 1989 *World Summit Conference*, organized by Rob Bonnichsen (founder and first director of the Center) in Orono, Maine. In 1999, Rob in alliance with other groups, held the *Clovis and Beyond Conference* in Santa Fe, New Mexico. Fourteen years later in 2013, the first *Paleoamerican Odyssey Conference* was organized by the Center for the Study of the First Americans, the Southeastern Paleoindian Survey, and the Paleoindian and Paleoecology Program at the Smithsonian Institution. These conferences summarize the current state of knowledge about the peopling of the Americas, energize our field, encourage interdisciplinary connections, and set new directions for research.

Now, thirteen years since our last conference, the Center for the Study of the First Americans has organized the second *Paleoamerican Odyssey Conference*. New information generated about the peopling of the Americas since the first *Paleoamerican Odyssey Conference* in 2013 is changing how we view the First Americans. The archaeological genetic revolution took place after 2013, with genomic analysis of human individuals and their dogs creating a biological outline of the ancestry of the First Americans and estimates for their arrival south of the Ice Sheets. New information generated about the coastal and inland corridors more clearly defines the timing of their opening and viability. The Western Stemmed Tradition of the Intermountain West now appears to be coeval with Clovis. Many new archaeological sites excavated in the Americas place the arrival of humans between 23,000 and 16,000 years ago. New dating and other studies tell us much about the timing and cause of the extinction of megafauna at the end of the Pleistocene and the role of humans in this event.

This conference is a mix of professional archaeologists and scientists from other allied disciplines, students, avocational archaeologists, and many from the interested public. It is also a mix of many different ideas about the timing and process of the peopling of the Americas. Unravelling the story of the First Americans is an ongoing process. As the next ten to fifteen years pass, new sites will be found, more genetic information will become available, debates will erupt, and novel ideas will emerge that will refine and change our understanding of the earliest Indigenous people to enter, explore, and settle the Americas.

Thank you for coming. Learn, discuss, and enjoy!

Michael Waters

Michael Waters, ***DIRECTOR***

Jessi Halligan

Jessi Halligan, ***ASSOCIATE DIRECTOR***

Kurt Rademaker

Kurt Rademaker, ***FACULTY ASSOCIATE***

Center for the Study of the First Americans
TEXAS A&M UNIVERSITY

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CONFERENCE INFORMATION

LOCATION OF THE SANTA FE COMMUNITY CONVENTION CENTER

The convention center is located at 201 West Marcy Street, Santa Fe, New Mexico.

CONVENTION CENTER AND CONFERENCE HOURS OF OPERATION

DAY (DATE)	TIME OPEN	TIME CLOSE	ACTIVITIES
WEDNESDAY (OCTOBER 14)	12 PM	6 PM	REGISTRATION
THURSDAY (OCTOBER 15)	7 AM	8 PM	LECTURES & POSTERS
FRIDAY (OCTOBER 16)	7 AM	8:30 PM	LECTURES & POSTERS
SATURDAY (OCTOBER 17)	7 AM	5:30 PM	LECTURES

REGISTRATION

The conference registration desk is in the main lobby of the convention center. You can pick up your registration materials here. If you have any questions during the conference, personnel at the registration desk are available to help. The registration desk hours are listed below:

WEDNESDAY, OCTOBER 14 / 12 PM - 6 PM
THURSDAY, OCTOBER 15 / 7 AM - 4 PM
FRIDAY, OCTOBER 16 / 7 AM - 4 PM
SATURDAY, OCTOBER 17 / 7 AM - 3 PM

YOUR BADGE IS YOUR TICKET

Please wear your conference badge to all scheduled events. Your badge is your entrance ticket. No one can be admitted without a conference badge.

PALEOAMERICAN ODYSSEY HAPPY HOUR

JOIN US FOR A FREE DRINK AND REFRESHMENTS ON THURSDAY AND FRIDAY

On Thursday and Friday after the final lecture, bars will be open and we will provide one free drink to each attendee each day. In your packet you will find one drink coupon for Thursday and one coupon for Friday. You must present these to receive your free drink. Additional drinks will be available for purchase. Happy Hour coincides with the poster sessions and serves as the perfect venue to connect with colleagues, discuss current research, examine posters, and engage with the poster presenters.

CONFERENCE SOUVENIRS

Souvenirs are available for purchase in the lobby at the registration desk.

CONFERENCE VOLUME AND OTHER BOOKS PUBLISHED BY THE CENTER FOR THE STUDY OF THE FIRST AMERICANS

The Texas A&M University Press is the official publisher of the Center's *Peopling of the Americas Series*. They will have a booth in the main lobby where you can purchase the conference volume and other Center books.

FOOD AND BEVERAGE

Coffee, water, and other beverages, as well as breakfast and lunch foods, are for sale on site in the hallway corner between Sweeney Hall and the restrooms.

CONFERENCE ORGANIZATION OVERVIEW

All events will happen sequentially each day (Thursday, Friday, and Saturday). We have 35 lectures organized into seven themed sessions and 213 poster presentations organized into nineteen themed symposia.

LECTURES: In the morning and afternoon there are 30-minute lectures by leaders in the field of the peopling of the Americas each day (Thursday, Friday, and Saturday). At the end of each session, 30 minutes are available for the audience to ask the presenters questions.

LOCATION OF LECTURES: All lectures are held in the main Sweeney Hall (Sweeney C, D, E, and F).

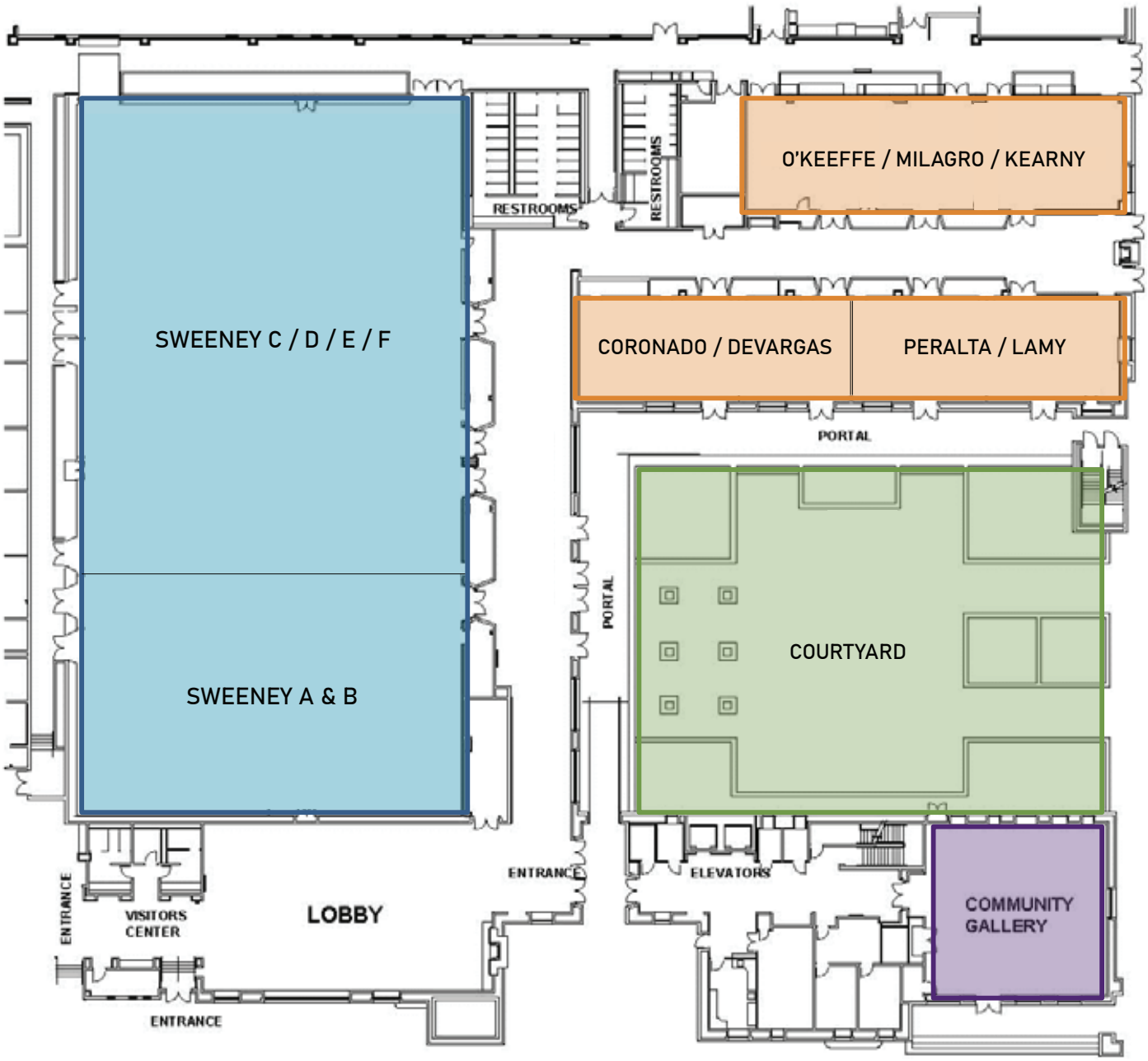
POSTERS: Poster presentations take place Thursday and Friday immediately following the last lecture of the day. Posters are on display for 2.5 hours. Poster presenters will be at their posters to talk about their research. The posters are a great place to have deep discussions and learn about exciting research.

LOCATION OF POSTER SYMPOSIA: All poster symposia are presented in four different locations in the convention center. The location of a poster symposium is listed in the program under the name of the symposium. The poster boards are numbered sequentially with a PB number ranging from 1 to 121. A PB number has been assigned to each poster. These numbers will be displayed on the poster board in each room to help you locate a specific poster you want to examine. See the program for the Poster Symposia Location and Poster Board numbers.

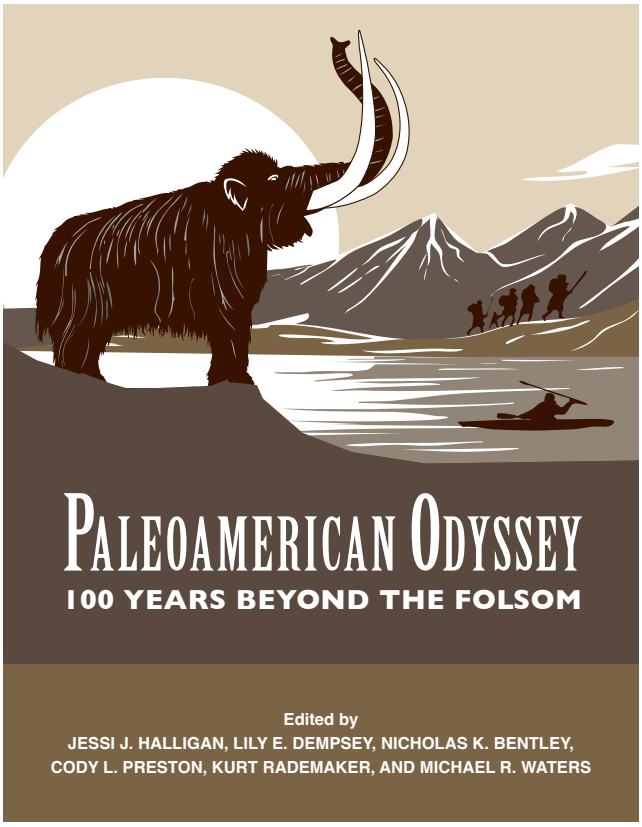
POSTER SYMPOSIA LOCATIONS AND POSTER BOARD NUMBERS

POSTER SYMPOSIA LOCATION	POSTER BOARD NUMBERS
SWEENEY A&B	PB-1 TO PB-72
O'KEEFFE / MILAGRO / KEARNY	PB-73 TO PB-97
CORONADO / DEVARGAS	PB-98 TO PB-109
PERALTA / LAMY	PB-110 TO PB-121

MAP OF SANTA FE CONVENTION CENTER



CONFERENCE VOLUME



PALEOAMERICAN ODYSSEY—100 YEARS BEYOND FOLSOM

EDITED BY

Jessi J. Halligan
Lily E. Dempsey
Nicholas K. Bentley
Cody L. Preston
Kurt Rademaker
Michael R. Waters

In the thirteen years since the first *Paleoamerican Odyssey Conference*, new research has deepened our understanding of the peopling of the Americas. Revolutionary genetic methodologies, combined with developments in archaeology, geology, and paleoecology, have generated new insights into the timing and patterns of early dispersal events and the technologies, lifeways, and adaptive strategies of the First Americans during the late Pleistocene and early Holocene. We now know that humans first migrated from northeastern Asia into the Western Hemisphere via the now-submerged Bering Land Bridge. Upon arrival in North America, they moved south either along the deglaciated Pacific Coast, through the Ice Free Corridor, or both, to what is now continental North and South America. However, as archaeologists continue to shed light onto the movements of the First Americans, the story becomes ever more complicated.

Paleoamerican Odyssey – 100 Years Beyond Folsom presents twenty-nine original papers in the field of Paleoamerican studies. These works provide summaries of the late Pleistocene archaeology of every major region in the Americas and explore exciting new discoveries from newly reported and reinvestigated sites, new chronological models for major cultural complexes in North and South America, and cutting edge technologies and theoretical models for understanding the Indigenous first peoples on this continent. This book has 584 pages, 130 color plates, 50 drawings, 50 maps, 60 graphs, and a comprehensive index.

CONFERENCE RULES

SANTA FE COMMUNITY CONVENTION CENTER RULES

- ***NO*** food or drink is permitted in the auditorium during the presentations.
- ***NO*** audio or visual recordings of presentations are allowed.
- ***NO*** display of any materials is permitted without prior approval of the conference staff.
- ***NO*** solicitations or sales of any kind are allowed without prior approval of conference staff, and no signs or exhibits are allowed unless approved by the Santa Fe Community Convention Center and the conference staff.
- ***NO*** demonstrations, public speeches, performances or exhibits are allowed on Santa Fe Community Convention Center property without prior approval from the Santa Fe Community Convention Center and the conference staff.
- ***NO*** concealed weapons are allowed on Santa Fe Community Convention Center property.

CONFERENCE CODE OF CONDUCT

The Center for the Study of the First Americans (CSFA) organized the *Paleoamerican Odyssey Conference* to give participants opportunities to learn, make connections, exchange ideas, and have fun. CSFA is committed to fostering a professional and respectful environment at the conference. To achieve this objective, attendees agree to the following policy.

The following behaviors are prohibited at the *Paleoamerican Odyssey Conference* and events:

- **Harassment of any kind.**
- **Physical or verbal abuse.**
- **Unwelcome comments and/or exclusionary behaviors to other attendees.**
- **Intimidation or stalking.**
- **Any illegal activities.**

Failure to comply with this policy can result in expulsion from the conference.

FUNDING ACKNOWLEDGMENT

Funding to put on this conference comes from your registration, the Robert and Sharon Wilson Outreach Endowment, and a generous donation from the Elfrieda Frank Foundation.

CONFERENCE ORGANIZERS AND STAFF

CONFERENCE ORGANIZING COMMITTEE

Michael Waters
Jessi Halligan
Kurt Rademaker
Center Board Members

SENIOR CONFERENCE STAFF

Staci Williams
Rebekah Luza

CONFERENCE STAFF

Christina Ryder
Caitlin Doherty
Nicholas Bentley
Alyssa Pietraszek
Jacob Hage
Dexton Brooks
Lily Dempsey

CONFERENCE STUDENT ASSISTANTS

Victoria Schwarz
Trevor Gittelhough
Joel Wittel
Tomás Arce
Cody Preston
Lindsey Williams
Emma Scott

PALEOAMERICAN ODYSSEY RESEARCH AND EDUCATION ENDOWMENT

Any revenue generated by the 2026 *Paleoamerican Odyssey Conference* will help grow the Paleoamerican Odyssey Research and Education Endowment. This fund exclusively supports students working with the Center for the Study of the First Americans, providing resources for educational and research activities. This endowment is dedicated to developing and enhancing the skills of the next generation of archaeologists.

PALEOAMERICAN ODYSSEY CONFERENCE PROGRAM

THURSDAY / OCTOBER 15, 2026

LECTURES

LOCATION: SWEENEY C / D / E / F

8:30 - 9:00 Welcome and Introduction

SESSION 1: GENETIC EVIDENCE OF THE FIRST AMERICANS

9:00 - 9:30 *What We Know about the Archaeology and Genetics of the Peopling of the Americas* — Eske Willerslev, J. Víctor Moreno-Mayar, and David J. Meltzer

9:30 - 10:00 *Correlating the Genetic History of Dogs and People following Their Arrival into the Americas* — Lachie Scarsbrook

SESSION 2: LATE PLEISTOCENE ARCHAEOLOGY OF BERINGIA

10:00 - 10:30 *Back to the Source: Exploring Northeast Asia for the Origins of the First Americans* — Ted Goebel

10:30 - 11:00 *The Shég' Xdaltth'í' Site in Central Alaska and its Contribution to the Peopling of Beringia* — Kelly Graf

11:00 - 11:30 *Beringian Archaeology, Genetics, and Northeast Asian - North American Connections* — Ben A. Potter

11:30 - 12:00 *Late Upper Paleolithic Archaeology of Coastal Northeast Asia and its Relation to the Late Pleistocene Peopling of the American: An Update* — Masami Izuho

12:00 - 12:30 Speaker discussion and Q&A

12:30 - 2:00 Lunch

SESSION 3: ROUTES AND PROCESS OF HUMAN DISPERSAL SOUTH OF THE ICE SHEETS

2:00 - 2:30 *From Saddle to Corridor: How Deglaciation of Coalescent Ice Sheets Contributed to Sea Level Rise and the Opening of the Ice-Free Corridor* — Jorie Clark

2:30 - 3:00 *The Mythical Corridor—Rapidly Shifting Perspectives* — John W. Ives, Todd J. Kristensen, Robin Woywitka, Gabriel Yanicki, and Dale Fisher

3:00 - 3:30 *Initial Human Migration into the Americas: The Known and the Unknown* — Todd J. Braje and Jon M. Erlandson

3:30 - 4:00 *Archaeological and Paleo-environmental Insights into the Post-Glacial Emergence of Land, Sea, Biota and People on the Pacific Coast of Canada* — Duncan McLaren, Bryn Letham, Christopher Hebda, Lindsay Worden, Angela Dyck, and Daryl Fedje

4:00 - 4:30 Speaker Discussion and Q&A

POSTER PRESENTATIONS

4:30 - 7:00 Poster Session 1

POSTER SYMPOSIUM 1: BRIDGING CONTINENTS: CURRENT RESEARCH IN GREATER BERINGIA AND THE PEOPLING OF THE AMERICAS

LOCATION: SWEENEY A / B

ORGANIZERS: IAN BUVIT / ROLFE MANDEL

PB-1 *Multilayer Settlements of the Transbaikal (Russia)* — A. V. Konstantinov, M. V. Konstantinov

PB-2 *The Ust'-Menza Upper Paleolithic Complex and its Place in the Pleistocene Peopling of the Americas* — Irina Razgil'deeva, Viktor Golubtsov, Steve Hackenberger, Ian Buvit

PB-3 *The Culture of Population of the Northern Baikal Region at the End of the Last Glacial Maximum, Late Upper Paleolithic* — A.V. Tetenkin, I. I. Razgildeeva, A. A. Ulanov

PB-4 *Human Occupation Record of the Arctic East Siberia (West Beringia) in Light of the Latest Research* — Vladimir V. Pitulko, Elena Y. Pavlova

PB-5 *Stone Age of Kamchatka and Adjacent Territories: General and Specific* — Irina Yurievna Ponkratova

PB-6 *Complex Tattoo Traditions that Vary across North Pacific Cultures (Analysis of Different Technologies and Tool Sets)* — Ludmila Lbova, Irina Ponkratova

PB-7 *The Lower-Middle Paleolithic Diring Yuriakh Site (Sakha Republic, Siberia) and the Pre-Clovis Peopling of the New World* — James C. Hartley

PB-8 *Geometric Morphometrics Reveal a Morphological Relationship between Yubetsu Microblade Cores in Northeast Asia and Eastern Beringia* — Nicholas Gala, Masami Izuho

PB-9 *Cultural Markers and Ecological Tools: Reassessing the Spread of the Microblade Technology in Late Pleistocene Transbaikal NE Asia* — Karisa Terry

PB-10 *Tool Use at Huadian Xianrendong Cave: Micro-Wear Evidence for Late Pleistocene Hunter-Gatherer Adaptations in Northeast Asia* — Yanyu Shen, Chunxue Wang

PB-11 *Recognizing Bifacial "Thinning" Technology in Central Japan and North America* — Fanxiu Meng

PB-12 *Regional Diversity of Stemmed Points in the Late-Glacial Japanese Archipelago: Implications for Diverse Regional Adaptive Strategies* — Jun Hashizume

PB-13 *Stone Boiling as an Adaptive Technology in Northeastern Asia and Beringia: Implications from Upper Paleolithic Fire-Cracked Rocks in Hokkaido, Japan* — Yuichi Nakazawa, Takuto Kanai, Kengo Matsumoto, Yasuo Hosaka, Toshiro Yamahara

PB-14 *Pleistocene Pottery Makers of Paleo-Sakhalin-Hokkaido-Kuril Peninsula and their Relations to Human Dispersals to the Americas* — Fumie Iizuka, Masami Izuho, Daigo Natsuki, Loren G. Davis, David B. Madsen

PB-15 *On the Origins of the Coastal Route from Asia to North America: A Synthetic Model* — Ben Fitzhugh

PB-16 *Modeling Northeast Asian Upper Paleolithic Human Demographics as Spatiotemporal Evidence for an Ancestral Native American Source* — Ian Buvit

PB-17 *Are There Traces of Dyuktai Ancestry in the Clovis Toolkit?* — Stuart Fiedel

PB-18 *Following the Dental Breadcrumbs: Integrating Dental Morphology, Genomics, and Archaeology in the Peopling of the Americas* — G. Richard Scott, Dennis H. O'Rourke, Arielle J. Pastore, John F. Hoffecker

PB-19 *The Eastern Beringian Pre-Clovis Record: Addressing the Visibility Problem in Colonizing Populations* — Ben Potter, Jeffrey Rasic, Joshua Reuther, Francois Lanoë, Fiona Papile, Charles Holmes

PB-20 *Bone Needles and Needle Manufacture in Pleistocene Eastern Beringia* — François Lanoë, Briana Doering, Jeff Rasic, McKenna Litynski, Joshua Reuther, Ben Potter, Gerad Smith, Charles Holmes, Barbara Crass, Fiona Papile

PB-21 *Pleistocene Themes of Alaska Native Oral History: Place Names and Traditional Knowledge* — Gerad Smith

PB-22 *Tracing the Continuity and Evolution of the Yubetsu Method of Microblade Production into North America* — Charles E. Holmes, Yu Hirasawa

PB-23 *Bone-Fueled Fires and Activity Areas at the Swan Point Site, Alaska* — Barbara A. Crass, Charles E. Holmes

PB-24 *The Early Allerød Lithic Assemblage from Shég' Xdaltth'i' (Central Alaska): A Distinct Bifacial Technology and Evidence for Trans-Beringian Connections* — Kyle Kohlstedt, Ted Goebel, Kelly E. Graf, Angela K. Gore, Jeffrey T. Rasic, Julie A. Esdale

PB-25 *The Search Continues: Recent Investigations of Southern Alaska's Paleoindian Record and Late Holocene Environment* — John T. White

PB-26 *Bluefish Caves Revisited: A Geoarchaeological Assessment of a Potential Pre-Clovis Site in the Yukon Territory of Northwestern Canada* — Rolfe D. Mandel, Justin A. Holcomb

PB-27 *Taphonomic Synthesis of Bluefish Caves (Yukon Canada): Four Cavities, Four Faunal Assemblages, Four Different Stories* — Lauriane Bourgeon, Lauren Norman, Ariane Burke, Rolfe D. Mandel

PB-28 *Reanalysis of the Lithic Assemblages from Bluefish Caves 1 and 2: Insights into Technological Organization and Site Function* — Kale Bruner

PB-29 *Paleoenvironmental Insights from Sedimentary Ancient DNA during the Pleistocene-Holocene Transition at Bluefish Caves* — Caroline Kisielinski, Lauren E. Y. Norman, Justin Tackney, Kristine Beaty, Archana Singh, Shawna Fitzwater, Rolfe D. Mandel, Dennis H. O'Rourke

PB-30 *Understanding Human Use of Bluefish Caves: Integrating Legacy and Contemporary Data for Research, Collaboration, and Outreach* — Lauren Norman, Caroline Kisielinski, Kathryn Borthwick, Olivia Frye, Rolfe Mandel

PB-31 *Magnetic Detection of Ephemeral Sites in the Americas from Alaska to Patagonia* — Thomas M. Urban, Jeff Rasic, Raven Garvey

POSTER SYMPOSIUM 2: OPENING THE GATEWAY: EMERGING PERSPECTIVES ON THE EARLY HUMAN OCCUPATION OF NORTHWESTERN SOUTH AMERICA

LOCATION: SWEENEY A / B
ORGANIZER: BRUNELLA MUTTILLO

PB-32 *Beneath the Jungle and Rock: Mapping Caves in the Darién Gap Using Machine Learning and GIS* — Tomás Arce

PB-33 *Bifacial Multi-Functional Tools as Markers of an Early Human Presence in Western Colombia* — Martha C. Cano, Carlos E. López

PB-34 *Extending the Chronology of Human Presence and Rock Art in Chiribiquete (Colombian Amazon): New Radiocarbon Dates and Archaeological Evidence from Poza Roja* — Carlos Castaño-Uribe, Pablo Aristizábal Espinosa, Carlos A. Monsalve, Saán Flórez Correa, Laura Reales Herrera, Gilberto Artioli, Gregorio Dal Sasso, Andrea Busnardo, Roberta Olivero Neilson, Giulia Ricci, Lara Maritan, Brunella Muttillo, Francesco Sauro

PB-35 *First Evidence of Bertholletia Excelsa (Lecythidaceae) in Archaeological Context of Serranía de la Lindosa (Colombian Amazon) Associated with the Early Holocene* — Danna Camila Cifuentes-Fandiño, Gaspar Morcote-Ríos, Francisco Javier Aceituno, José Iriarte

PB-36 *The Archaeological Signal of the Early Peopling of Northwestern South America: Radiocarbon Chronology and Paleoenvironmental Diversity* — Miguel Delgado, Angélica Triana

PB-37 *El Abra 1: Multiproxy Evidence of Late Pleistocene Human Occupation in the Sabana de*

Bogotá, Colombia — Juan Miguel Kosztura, Ana María Aguirre Ocampo, Javier Aceituno, José Iriarte, Gaspar Morcote

PB-38 *Revisiting the Early Archaeological Contexts of the Magdalena Valley (Colombia): Recent Advances in Early Peopling Research* — Carlos E. López, Martha C. Cano

PB-39 *Paleobotanical Evidence of Brosimum Lactescens (Moraceae) Associated with Late Pleistocene Archaeological Sites (12.6 cal ka BP) in the Serranía de la Lindosa (Colombian Amazonia)* — Gaspar Morcote-Ríos, José Iriarte, Francisco Javier Aceituno

PB-40 *Two Valleys, Two Worlds: Contemporaneity and Technological Variability in Early Colombia* — Brunella Muttillo, Giuseppe Lembo, Kurt Rademaker, Martha Cecilia Cano, Carlos López

PB-41 *Archaeological Survey in the Ubaté Valley (Colombian Andean Highlands): Exploring the Potential for Preceramic Occupation* — Brunella Muttillo, Pedro Alexander Rivera Pérez, Giuseppe Lembo

PB-42 *Taphonomic Reassessment of a Possible Pleistocene Megafauna-Human Association at Tibitó, Colombia* — Jo Osborn, Brunella Muttillo, Kurt Rademaker

POSTER SYMPOSIUM 3: LITHIC SOURCING CONTRIBUTIONS TO THE STUDY OF THE FIRST AMERICANS

LOCATION: SWEENEY A / B
ORGANIZER: RYAN M. PARISH

PB-43 *Southeastern Paleoindian Mobility and Social Networks Revealed through Chert Sourcing at the Carson-Conn-Short Site, Tennessee* — Ryan M. Parish, J. Scott Jones, Mark R. Norton, John B. Broster

PB-44 *Confirmation of Clovis "Supply Chain" Long Distance Chert Sourcing Using Reflectance Spectroscopy at the Mueller-Keck Sites* — Paul Keck, Brad H. Koldehoff, Ryan M. Parish

PB-45 *Non-Destructive Geochemical Analysis of the Busse Clovis Cache: A Large-Object LA-ICP-QQQ-MS Approach to Paleoindian Lithic Sourcing* — Charles A. Speer, Jason M. LaBelle

PB-46 *Obsidian and Vitrophyre Sourcing from the Cooper's Ferry/Nipéhe Site, Idaho: Early Use of Volcanic Glass in the Americas* — Alexander J. Nyers, Loren G. Davis

PB-47 *Tracing Clovis Landscapes: Chert Sourcing at the Copelin Valley Site in Kentucky* — Shaylee Scott, Ryan Parish, Ashley Smallwood, Tom Jennings, Steve Boles, Perry Hagan

PB-48 *Paleoindian Conveyance of Eocene Chert in the Wyoming Basin* — Chase M. Mahan, Spencer R. Pelton, Todd A. Surovell

PB-49 *Late Pleistocene and Early Holocene Chert Provenance in Florida: Comparing the Efficacy of Petrography and LA-ICP-MS* — Adam M. Burke, Bryan E. Tomlin

PB-50 *Identification of Red Munsungun and Normanskill Cherts in Paleoamerican Sites across Northeastern North America Using Neutron Activation Analysis (NAA)* — Nathaniel Kitchel, Brandi McDonald, Jonathan Lothrop, Barry Keegan

PB-51 *Quarrying and Knapping Fort Payne Chert over the Millennia* — Steven Meredith

POSTER SYMPOSIUM 4: THE SOUTHEASTERN PALEOAMERICAN SURVEY (SEPAS) AND EARLY INDIGENOUS RESEARCH IN SOUTH CAROLINA AND THE SOUTHEASTERN UNITED STATES

LOCATION: SWEENEY A / B
ORGANIZERS: JOSEPH A. LINDLER JR. / CHRISTOPHER R. MOORE / ALBERT C. GOODYEAR

PB-52 *The First and Last Pre-Clovis Occupations of the Topper Site, Allendale County, South Carolina* — Albert C. Goodyear, Christopher R. Moore, Joseph A. Lindler Jr., Douglas A. Sain, James K. Feathers

PB-53 *End Pleistocene and Younger Dryas Stadial Advance and Effects on Fauna and Humans* — I. Randolph Daniel Jr., Christopher R. Moore, Albert C. Goodyear

PB-54 *The Search for Tampa Bay's Earliest People: A Predictive Model for Pleistocene and Early Holocene Archaeological Sites in a Submerged Karst Landscape* — Kendal Jackson, Robert J. Austin, Sam B. Upchurch, Mark J. Brooks, Albert C. Goodyear

PB-55 *The Creation of the South Carolina Haw River Database* — Joseph A. Lindler Jr., Albert C. Goodyear, Christopher R. Moore

PB-56 *Public Outreach and Pre-Clovis: Recommendations Using Evidence at Nipper Creek Heritage Preserve (38RD18)* — Lelia Rice, Joseph A. Lindler Jr., Reece Spradley

PB-57 *1937-2026: History of Documenting Fluted Points in South Carolina* — Sarah Mielke, Megan Pangrass, Joseph A. Lindler Jr., Joseph E. Wilkinson

PB-58 *Breaking Ground at Topper (38AL23): Revisiting the 1985 and 1986 Excavations* — Joseph A. Lindler Jr., Reece Spradley

PB-59 *Blood Residue Evidence for Megafaunal Persistence and Extinction across the Clovis-Dalton Transition in the Southeast* — Christopher R. Moore, Albert C. Goodyear, I. Randolph Daniel Jr., Mark J. Brooks, Larry R. Kimball, Sean G. Taylor, Joseph A. Lindler Jr., Cam M. Walker, John L. Fagan

PB-60 *Pre-Clovis at Topper (38AL23): A Technological Analysis of the Lithic Assemblage from a Pleistocene Terrace in the American Southeast* — Douglas A. Sain, Albert C. Goodyear

POSTER SYMPOSIUM 5: ADVANCES IN THE STUDY OF THE EARLY PREHISTORY OF THE GREAT PLAINS

LOCATION: SWEENEY A / B

PB-61 *Genomic Analysis and Divergence of the Blackfoot Lineage* — María Nieves Zedeño, Ripan S. Malhi, John Lindo, Michael DeGiorgio, Francois Lanoë

PB-62 *Ute Paths and Deep Time: Thinking toward a Collaborative Paleoindian Archaeology in Colorado* — Noah Powell

PB-63 *The Stolle Mammoth: Zooarchaeological, Isotopic, and Paleoecological Insights into a Clovis-Era Mammoth from the Southern High Plains* — Tara Larson

PB-64 *Montane Foragers of the Late Pleistocene: Evidence, Insights, and Ongoing Investigations of a Multi-Locality Alpine Clovis Landscape in Montana* — Scott Dersam, Sari B. Dersam

PB-65 *Uncovering New Details about Hell Gap Lithic Tools in the Jones Miller Collection and Archives of the Denver Museum of Nature and Science* — Michael E. Herrmann

PB-66 *Comparative Zooarchaeological Analysis of Two Excavation Units at the Jones-Miller Paleoindian Bison Kill Site in Northeast Colorado* — S.J. Casillas, Monica Eckels, Jamie Hodgkins

PB-67 *Late Pleistocene Landscapes and Faunal Records at Scott Spring: A Synergistic Geoarchaeological Investigation along the Colorado Front Range* — Craig M. Lee, Rolfe Mandel, John 'Jack' Fisher

PB-68 *Lindenmeier's Neighbors: Patterns in Fluted Point Distribution along the Plains to Foothills Transition of Northern Colorado* — Jason M. LaBelle, Clifford L White

PB-69 *Assessing Stratigraphic Integrity at the Gault Site: Microdebitage Displacement and Geoarchaeological Evidence across Clovis and Older-than-Clovis Deposits* — Sergio J. Ayala, Anna Gilmer, Robert Lassen

PB-70 *Photogrammetry and Museums: Enhancing Exhibits with 3D Models* — Cenetria Crockett, Kyle Montgomery, Saphira Laughter, Kylie Colvill

PB-71 *Why Basally Thinned Sunrise and Charlie Lake Point Types Both Merit a Distinct New Name, Type Site, and Complex Assignment* — L. Kim Thompson, David Meyer

POSTER SYMPOSIUM 6: THE PALEOINDIAN DATABASE OF THE AMERICAS (PIDBA) 2026: CURRENT UNDERSTANDING AND FUTURE DIRECTIONS

LOCATION: O'KEEFFE / MILAGRO / KEARNEY
ORGANIZERS: D. SHANE MILLER / DAVID G. ANDERSON

PB-73 *When the Fluting Stopped: Complex Late Paleoindian Period Bifaces from August Pine Ridge, Belize* — Mike McBride, Jon C. Lohse, Victoria C. Pagano, Sébastien Perrot-Minnot

PB-74 *Clovis Bifaces from a Sonoran Private Collection: A Collaborative Reanalysis* — Ramón Guzmán Armenta, Guadalupe Sánchez Miranda, Ismael Sánchez-Morales

PB-75 *Fantastic Beasts and Where to Find Them: Distributions of Pleistocene Faunal Specimens in Mississippi as a Complement to PIDBA Data* — Derek T. Anderson

PB-76 *The Paleoindian Database of the Americas (PIDBA) 2026 Update* — David G. Anderson, D. Shane Miller

PB-77 *Revisiting the Mississippi Paleoindian and Early Archaic Point Survey: Late Pleistocene–Early Holocene Data from the Gulf Coastal Plain, USA* — C. Dylan Colucci, Derek T. Anderson

PB-78 *Younger Dryas Placemaking and the Establishment of the Mississippi River as a Cultural Boundary by San Patrice Hunter-Gatherers* — Thomas A. Jennings, Charlotte D. Pevny, Jessi J. Halligan, Ashley M. Smallwood

PB-79 *Untangling Recovery Bias and Aggregation Loci in the Southeastern United States: A Hotspot Analysis of Archaeological Sites and Clovis Point Recovery* — D. Shane Miller, Jason O'Donoughue, Katherine McMillan Barry, David G. Anderson

PB-80 *Incorporating the Western Stemmed Tradition into the Paleoindian Database of the Americas* — Jackson C. Mueller, Richard L. Rosencrance, Shelby G. Saper, Geoffrey M. Smith

PB-81 *Far Western Clovis Points: Perception and Typology* — Michael F. Rondeau, John W. Dougherty

PB-82 *The Maryland Fluted Point Survey* — Zachary Singer, Craig Ilgenfritz, Kenneth Andrasko, Thomas McLaughlin, Stephanie Soder, Matthew McKnight

PB-83 *Discerning Point Shape Evolution from a Large PIDBA Dataset* — David K. Thulman

PB-84 *Paleoindian Points in the Tennessee River Basin: A Drainage Basin-Centered Analysis of PIDBA Data* — Jesse W. Tune

PB-85 *Systematic Reviews about the Earliest Indigenous Peoples of North America through DINAA (Digital Index of North American Archaeology) and PIDBA (Paleoindian Database of the Americas)* — Joshua J. Wells, Eric C. Kansa, Sarah W. Kansa, David G. Anderson, D. Shane Miller

PB-86 *Points, Sites, and Ice Age Settlement in New York State: Emerging Patterns from the New York Paleoindian Database Project* — Susan Winchell-Sweeney, Jonathan C. Lothrop, Alexandra DeCarlo

PB-87 *PIDBA is More than a Tally of Points: Emergence, Synergy, and Context for the Peopling of the Americas* — J. Christopher Gillam, Holly M. Gillam

PB-88 *An Update of the Ohio Fluted Point Survey* — David S. Lamp, Joseph A.M. Gingerich, Jonathan E. Bowen, Gary Argabright

PB-89 *Two Distinct Points and Their Relationship: Cumberland and Beaver Lake Points in the Midsouth United States* — Sonya M. Gentile

POSTER SYMPOSIUM 7: FIRST AMERICANS AND TROPICAL LANDSCAPES: MULTI-PROXY EVIDENCE FOR PALEOINDIAN-EARLY HOLOCENE ADAPTATIONS FROM SOUTHERN BELIZE ROCKSHELTERS

LOCATION: O'KEEFFE / MILAGRO / KEARNEY
ORGANIZERS: HEATHER B. THAKER / KEITH M. PRUFER

PB-90 *Late Pleistocene–Early Holocene Chronology and Context of Mayahak Cab Pek and Saki Tzul Rockshelters in Southern Belize* — Heather B. Thakar, Keith Prufer, Mark Robinson

PB-91 *Trans-Holocene Human Ecology and Culture in the Southern Lowlands of Belize: Insights from Paleoethnobotanical Analyses at Mayahak Cab Pek and Saki Tzul Rockshelters* — Heather B. Thakar, Keith Prufer

PB-92 *Strontium Isotope Evidence for Paleoindian and Archaic Migration in Southern Belize* — Monica Warner, Paige Lynch, Keith M. Prufer

PB-93 *Broad-Spectrum Foraging and Risk Reduction in the Neotropics during the Late Pleistocene–Early Holocene* — Dale Earl

PB-94 *First Americans in Transition: Migration, Maize, and Early Farming in Southern Belize* — Keith M. Prufer, Esther Brielle

PB-95 *Nutritional Adaptations to Early Maize Cultivation: Earliest Isotopic Evidence of Maize-Based Animal Provisioning in the Neotropics* — Nadia C. Neff, Geraldine Busquets-Vass, Erin E. Ray, Mark Robinson, Amy E. Thompson, Jose Mes, Douglas J. Kennett, Seth D. Newsome, Keith M. Prufer

PB-96 *Early Lime Technology: Example from Southern Belize* — Erin E. Ray, Nadia C. Neff, Keith M. Prufer

POSTER SYMPOSIUM 8: GROWING THE RECORD OF PLEISTOCENE PLANT USE IN THE AMERICAS

LOCATION: CORONADO / DEVARGAS
ORGANIZER: KATELYN MCDONOUGH

PB-98 *Where Are the Plants? Testing Biases in Pleistocene Archaeobotanical Records* — Katelyn McDonough, Madeline Mackie, Emily B. P. Milton, Daniela Osorio, Briana Doering, Nathaniel Kitchel, Bryn Sullivan

PB-99 *The Wishbone Site Seed Profile: Haskett Plant Use in the Younger Dryas Wetlands of the Great Salt Lake Desert* — Daron Duke, Eric Wohlgemuth, Angela Armstrong-Ingram

PB-100 *Geophyte Use in Terminal Pleistocene Northern Great Basin: Starch Residue Evidence from Lowland and Upland Sites in Southern Oregon, USA* — Stefania L. Wilks, Lisbeth A. Louderback

PB-101 *Coprolites as Archives of Foodways: Macrobotanical Evidence from Last Supper Cave, Nevada* — Bryn Sullivan, Katelyn McDonough

PB-102 *Archaeobotanical Insights into Paleoindigenous Occupations at Bonneville Estates Rockshelter, Nevada, USA* — David Rhode, Aurélie Liard, Kelly Graf, Ted Goebel

PB-103 *Late Pleistocene and Early Holocene Plant Use in the Lower Pecos Canyonlands* — Charles W. Koenig, J. Kevin Hanselka, Leslie L. Bush, Char Farfadet, J. Phil Dering

PB-104 *Preliminary Results of Pleistocene-Holocene Transition Ground Stone Tool Residue Analyses in the Southern Columbia Plateau* — Haden U. Kingrey, John C. Blong

PB-105 *Re-Evaluating the Evidence for Wild Potato Use in South-Central Chile* — Lisbeth A. Louderback, Michael D. Martin, Bryn Dentinger, Nicole M. Herzog, Bruce M. Pavlik, Tom D. Dillehay

PB-106 *The Indigenous Oral Narrative, Theft of Pine Nuts: A Proxy for Reconstructing Ancient Biogeography in the Great Basin, USA* — Constance Millar, David H. Thomas, Misty Benner, Donna Cossette, Herman Fillmore, Diane Teeman, Wilson Wewa

PB-107 *Revisiting Cupola and Anderson Ponds: Comparing Micro- and Macrobotanical Data from the Midsouth* — Kandace Hollenbach, Kelly Santana, Madison Moore, Stephen Carmody, Sally Horn, Alison Damick

PB-108 *Plants and People in the Terminal Pleistocene Great Basin: Multiproxy Analysis of Human Coprolites from the Paisley Caves, Oregon* — John C. Blong, Lisa-Marie Shillito, Dennis L. Jenkins, Helen L. Whelton, Ian D. Bull

PB-109 *Holocene Woody Landscape and Fuel Management in the Bonneville Basin: A Charcoal Analysis of the Early Archaic Levels of Bonneville Estates Rockshelter* — Aurélie Liard, David Rhode, Kelly Graf, Ted Goebel, Auréade Henry

POSTER SYMPOSIUM 9. LATE PLEISTOCENE OCCUPATIONS AND LANDUSE IN THE MIDWEST, MIDSOUTH, AND SOUTHEASTERN U.S.

LOCATION: PERALTA / LAMY

PB-110 *A Multi-Disciplinary Overview of the Depositional and Post-Depositional Processes at the Schaefer Mammoth Site, Wisconsin, USA* — Daniel J. Joyce

PB-111 *The Death of the Proposed Late Pleistocene Chesrow Complex, Wisconsin, USA* — Daniel J. Joyce

PB-112 *A Preliminary Geoarchaeological Predictive Model for Identifying Proboscidean Sites in Kenosha County, Wisconsin, USA* — Daniel J. Joyce, William M. Balco, Scott D. Kirk, Michael F. Kolb

PB-113 *Wisconsin's Horicon Basin: A Mammoth Hunting Destination – Bones, Rock Images, Petroform, and Favorable Geology* — Jim Uhrinak

PB-114 *A Clovis-Age Radiocarbon Date from the Kimmswick S*ite — Robert A. Barlow

PB-115 *Early Foragers in the Midcontinent: Large-Scale, Regional Patterns in the Clovis Record of the Western Great Lakes* — John M. Lambert, Thomas J. Loebel

PB-116 *Geoarchaeology of the Pleistocene-Holocene Transition at the Belson Site: A Wetland Overlook in the Great Lakes Region of Southwestern Michigan* — Todd Grote, Brendan Nash, Thomas Talbot, Henry Wright, Matthew Michalski, Ian Beggen, Victoria Kvasnikov, Devin Kubina, Elliot Greiner, Ed Quigley, Joe Meris, Jeff Brown

PB-117 *The Nolin River Paleoindian Complex: Documenting an Extensive Paleoindian Presence in Central Kentucky* — Steven L. Boles, Ashley Smallwood, Thomas Jennings

PB-118 *The Nolin River Paleoindian Complex, KY: Searching for Buried Paleoindian Deposits* — Gage Delrosario, Grant Delrosario, Ashley M. Smallwood, Thomas A. Jennings, Steven L. Boles

PB-119 *An Experimental Replication Study of Lithic Reduction Strategies of Jasper Sourced from the Flint Run Paleo-Indian Complex, Virginia* — Kurt Fredrickson, Robert D. Richards Jr., Michael Johnson

PB-120 *Pre-Clovis Archaeology in Florida: The Old Vero Site, Wakulla Springs, Page-Ladson, and Latvis-Simpson Demonstrate Early Broad Resource Utilization* — C. Andrew Hemmings

PB-121 *My One Hundred and Five Favorite Artifacts from the Little River Clovis Complex-Christian County, Kentucky* — Carl Yahnig

FRIDAY / OCTOBER 16, 2026

LECTURES

LOCATION: SWEENEY C / D / E / F

7:50 - 8:00 Announcements

SESSION 4: LATE PLEISTOCENE OCCUPATIONS OF THE AMERICAS

8:00 - 8:30 *Buried Treasure: Hidden Footprint Archives in the American Southwest* — Matthew Bennett, Sally Reynolds, and David Bustos

8:30 - 9:00 *Legacies of the Late Pleistocene and Early Holocene Transition in South America* — Tom D. Dillehay

9:00 - 9:30 *Geology of Monte Verde Area, Northwestern Patagonia, Chile: The Last 42 ka* — Mario Pino

9:30 - 10:00 *Cooper's Ferry/Nipéhe: A Keystone Late Pre-Clovis Site in North America* — Loren G. Davis

10:00 - 10:30 *The Page-Ladson Site, Florida, and the Contributions of Submerged Landscapes Archaeology to First Americans Research* — Jessi J. Halligan, Morgan F. Smith, Neil N. Puckett, Adam M. Burke, Nicholas K. Bentley, and Trevor H. Gittelhough

10:30 - 11:00 *Late Pleistocene Human Occupations of the Paisley Caves* — Dennis L. Jenkins

11:00 - 11:30 *The Late Pleistocene Peopling of North America—Converging Geological, Archaeological, and Genetic Evidence* — Michael R. Waters

11:30 - 12:00 Speaker Discussion and Q&A

12:00 - 1:30 Lunch

SESSION 5: CLOVIS, WESTERN STEMMED, AND FISHTAIL TRADITIONS OF THE AMERICAS AND MEGAFAUNAL EXTINCTION

1:30 - 2:00 *Current Assessments of the Clovis Complex and its Role in the Peopling of the Americas* — Heather L. Smith and Ashley M. Medlin

2:00 - 2:30 *Domestic Spaces at the La Prele Site, Converse County, Wyoming* — Todd A. Surovell, Madeline E. Mackie, Spencer R. Pelton, Matthew J. O'Brien, Paul Sanders, and Robert L. Kelly

2:30 - 3:00 *The Last Clovis Frontier: Understanding the Late Pleistocene Human Occupation in Northwest Mexico* — Guadalupe Sánchez, Ismael Sánchez-Morales, Kayla B. Worthey, Ramón Guzmán, and Vance T. Holliday

3:00 - 3:30 *The What, Where, and When of the Western Stemmed Tradition* — Richard L. Rosencrance, Geoffrey M. Smith, and Katelyn N. McDonough

3:30 - 4:00 *Echoes of the First Americans: The Significance of Fell Points in the Peopling of the New World* — Hugo G. Nami

4:00 - 4:30 *Timing, Causes, and Ecological Consequences of Pleistocene Mammal and Bird Extinctions in North America: A Regional Analysis* — Emily L. Lindsey, Gregory B. P. Davies, Regan E. Dunn, Robert Feranec, Benjamin T. Fuller, Advait M. Jukar, Melissa I. Pardi, Christina M. Ryder, John R. Southon, Catalina P. Tomé, and Michael R. Waters

4:30 - 5:00 Speaker Discussion and Q&A

POSTER PRESENTATIONS

5:00-7:30 Poster Session 2

POSTER SYMPOSIUM 10: ADVANCING ARCHAEOLOGICAL SCIENCE IN FIRST AMERICANS RESEARCH

LOCATION: SWEENEY A / B
ORGANIZERS: JUSTIN A. HOLCOMB / CAROLINE KISIELINSKI / NICHOLAS K. BENTLEY

PB-1 *The What, Why, and How of Archaeological Micromorphology in Pleistocene Archaeology* — Justin A. Holcomb, Rolfe D. Mandel

PB-2 *Recovery of Sedimentary Ancient DNA from Museum Archived Archaeological Sediments Provides Novel Lens into the Past* — Caroline Kisielinski, Lauren E.Y. Norman, Justin Tackney, Kristine G. Beaty, Archana Singh, Shawna Fitzwater, Kale Bruner, Rolfe D. Mandel, Dennis H. O'Rourke

PB-3 *Micromorphological Investigations of Possible Hearth Features from the Late Pleistocene / Early Holocene Component at Page-Ladson* — Nicholas K. Bentley

PB-4 *Late Pleistocene Lifeways at the Connley Caves, Oregon* — Katelyn N. McDonough, Richard L. Rosencrance, Dennis L. Jenkins, Geoffrey Smith, Justin A. Holcomb, Bryan Hockett, Alex Nyers, Stefania Wilks, Miranda Harding

PB-5 *Traditional and Zooarchaeology — Mass Spectrometry Identifications Reveal Bone Raw Material Procurement Strategies for Needles and Awls across Wyoming* — McKenna Litynski, Todd A. Surovell, Sarah A. Allaun, Spencer R. Pelton

PB-6 *Between a Rockshelter and a Hard Place: Site Formation and Depositional History at Uchcumachay* — Victoria Schwarz, Kurt Rademaker

PB-7 *Hold My Deer: A Multi-Isotopic ($\delta^{13}C$, $\delta^{15}N$, and $\delta^{34}S$) Perspective on High Andean Ecosystem Use, Pleistocene-Present* — Emily B. P. Milton, Sam Brown, Sarah Meinekat, Daniela Osorio, Melina Seabrook, Katherine Moore, Kurt Rademaker, Dorothée Drucker

PB-8 *High-Resolution Geoarchaeology in Archaeological Rockshelters from Central Brazil* — Nicolás Batalla, Ximena S. Villagran, Francisco Pugliese, André Strauss

PB-9 *Reconstructing Human-Environmental Interactions at Last Supper Cave, NV, through Ancient DNA Analysis and Radiocarbon Dating of Coprolites* — Amelia P. Muscott, Caroline Kisielinski, Katelyn McDonough, Geoffrey M. Smith, Darren Larsen

PB-10 *Sew What? Using ZooMS to Determine Taxa Selection for Bone Needles and Other Osseous Artifacts* — Mia Harbort, Kelly E. Graf, Todd Surovell, Sarah Allaun, Mariya Antonosyan, Bryan Hockett

PB-11 3*D Scanning Late Upper Paleolithic Lithic Technology in Hokkaido, Japan: Building the Pleistocene ROOTS Archive for the PSHK Region* — Loren G. Davis, Masami Izuho, Fumie Iizuka, Alexander J. Nyers

PB-12 *Pleistocene ROOTS: An Open Online Digital Archive for First Americans Technology* — Loren G. Davis, Alexander J. Nyers

PB-13 *New Multiproxy Biomolecular Methods for Identifying Dietary Profiles in Coprolites from Paisley Caves, Oregon – Combining Signals from Lipids, VOCs and DNA* — Lisa-Marie Shillito, John C. Blong, Dennis L. Jenkins, Helen L. Whelton, Ian D. Bull

PB-14 C*haracterizing Spatial Patterning of Proboscidean Sites across the Big Bend Region of Southwest Texas* — Haley Bjorklund, Rolfe Mandel, Bryon Schroeder

PB-15 *Using Low-Frequency Sound to Identify Submerged Anthropogenic Material Remotely* — Morgan F. Smith

PB-16 *Detecting Human Traces through Molecular Geoarchaeology: Biomarker Analysis of Late Quaternary Sediments from Spirit Eye Cave, Far West Texas* — Jasmine Kidwell, Julie Hoggarth, William Hockaday, James Fulton, Bryon Schroeder

PB-17 *Assessing Collagen Preservation and Radiocarbon Dating Reliability in North American Megafauna Using Near-Infrared Spectroscopy* — Christina Ryder

POSTER SYMPOSIUM 11: THE EVOLVING RECORD OF THE DESERT SOUTHWEST

LOCATION: SWEENEY A / B
ORGANIZERS: DAVID KILBY / CHRISTOPHER MERRIMAN

PB-18 *Building a Legacy: The Contributions of Blackwater Draw to the Clovis Phenomenon* — Brendon P. Asher

PB-19 *The Terminal Paleoindian Allen Complex in New Mexico: Investigations at LA 184760, a Paleoindian Bison Kill Along the Shores of Paleolake Otero in White Sands National Park* — Joseph M. Birkmann, Christopher W. Merriman, Dave Rachal

PB-20 *The Genevieve Lykes Duncan Site: A Deeply Buried Clovis Campsite in the Big Bend Region of Southwest Texas* — Erika Blecha, Rolfe Mandel, Bryon Schroeder

PB-21 *Gypsum Overlook: An Early Holocene Occupation in the Tularosa Basin of New Mexico* — Matthew Cuba, Brian Andrews, Andrew R. Boehm, Joel Butler, Michael Diehl, Vance T. Holliday, Jason Windingstad, David J. Meltzer

PB-22 *Paleo-Lake Trinity, South-Central New Mexico: Late Quaternary Geochronology and Paleoindian Geoarchaeology* — Vance T. Holliday, Jason Windingstad, Christopher W. Merriman

PB-23 *The Geographic Distribution of Alibates Agatized Dolomite in the Clovis and Folsom Records* — Alistair Henderson

PB-24 *The Late Pleistocene-Early Holocene Occupation of Spring Valley, White Pine County, Nevada* — Jesica Huddleston, Loren Huddleston, Christopher W. Merriman

PB-25 *Evidence for Paleoindian Bison Jumps at Bonfire Shelter, Texas* — David Kilby, Ashley Eyeington, Marcus Hamilton, Charles Koenig, James Ramsey, Christopher Ringstaff

PB-26 *Ongoing Analysis of Younger Dryas and Bølling-Allerød Paleoamerican Occupations of Eagle Cave, Texas* — Charles W. Koenig, J. David Kilby, Charles D. Frederick, Madeline E. Mackie, Christopher W. Ringstaff, J. Kevin Hanselka, Lorena Becerra-Valdivia

PB-27 *The Nature of the Clovis Occupation at the Mockingbird Gap Site, Socorro County, New Mexico* — Christopher W. Merriman, Briggs Buchanan, Marcus J. Hamilton, David Kilby

PB-28 *Reconstructing Paleoindian Landscapes: Geoarchaeology and Geophysical Survey in the Jornada del Muerto, New Mexico* — Gwen Olivier, Matthew M. Mele

PB-29 *The Blue Canyon Site, A Clovis Quarry and Camp in Central New Mexico* — Nadine Navarro, Bruce B. Huckell, Christopher W. Merriman, Joseph M. Birkmann, M. Steven Shackley

PB-30 *What Can Gypsum Blisters Tell Us about Early Archaic Environments? Evidence from Gomolak Overlook, Tularosa Basin, New Mexico* — Dave Rachal, Matthew Cuba, Brad Beacham

PB-31 *Paleoindian Occupation of the Estancia Basin: Understanding Land Use against the Landscape Change of the Pleistocene Holocene Transition* — William Reitze

PB-32 *A GIS-Based Examination of Paleoindian Land-Use in the Upper Buttermilk Creek Valley, Bell and Williamson Counties, Texas* — Christopher W. Ringstaff, Stefanie L. Mills

PB-33 *Beyond the Kill Site: Surface Evidence of a Clovis Camp at El Fin del Mundo Site* — Ismael Sánchez-Morales, Guadalupe Sánchez, Vance T. Holliday

PB-34 *Las Tortugas Clovis Site, Sonora* — Guadalupe Sánchez Miranda, Kayla B. Worthey, Ben Wilder, Jonathan Mabry

PB-35 *Lime Ridge: Nearly 50 Years Later* — Meghann M. Vance

PB-36 *Piedmont Flood Histories Preserved in Dune-Dammed Playas Shed Additional Light on Post-Clovis Abandonment of the Sonoran Desert* — Jason D. Windingstad

PB-37 *Evidence for Pre-Clovis Occupation at the San Esteban Rockshelter in the Big Bend Region of Southwest Texas* — Rolfe D. Mandel, Bryon Schroeder, Erika S. Blecha, Susan M. Mentzer, Justin A. Holcomb

PB-38 *The Clovis Assemblage in the Nielsen Brothers' Legacy Collection from the St. John's, Arizona Region* — Matthew J. Rowe, Christoffer Nielsen, Butch Nielsen, Frederick Nielsen, Devany Hernandez, Eileen Anderson, Elizabeth Frias, Ethan McPherson, Gabe Lykins, Kathleen Hennelly, Sydney Allen

PB-39 *Fossil Prints in 3D: Traces Preserved in Time* — David Bustos, Matthew R. Bennett, Sally C. Reynolds, Edward A. Jolie, Thomas M. Urban, Danial Odess

PB-40 *Humans Experienced Abrupt Environmental Changes at White Sands during the Last Glacial Maximum* — Kathleen B. Springer, Jeffrey S. Pigati, Jessica E. Tierney, Jeffrey S. Honke, Gonzalo Jiménez-Moreno, David Bustos, Thomas M. Urban, Daniel Odess, Edward A. Jolie, Alison J. Smith, Abigail J. Hunt, Patrick J. Martinez, Vincent L. Santucci, Sally C. Reynolds, Matthew R. Bennett

PB-41 *Dawson and Beyond: Situating the Paleoamerican Experience on the Northern Colorado Plateau* — Tim Riley

PB-42 *Archaeomagnetic Assessment of the Form and Function of Fire Cracked Rock Features and Heating Histories of Burned Rock from Texas* — Mark D. Harvey, Shelby A. Jones

PB-43 *An Analysis of the Confidence of Previously Identified Paleoindian Affiliated Sites in Northwestern New Mexico* — Cody Walton, Erik Simpons, Kim Adams, Chris Lowry, Danielle Schneider, Mark Williams

POSTER SYMPOSIUM 12: RECENT DEVELOPMENTS IN THE PALEOAMERICAN ARCHAEOLOGY OF NORTHEASTERN NORTH AMERICA

LOCATION: SWEENEY A / B
ORGANIZERS: NATHANIEL R. KITCHEL / HEATHER M. ROCKWELL

PB-44 *Implications of Fluted Point Use-Life at the Bull Brook Site, Ipswich, Massachusetts* — Richard A. Boisvert, Jennifer C. Ort

PB-45 *Recent Palaeoindian Research in New Brunswick, Canada* — Joshua Cummings, Trevor Dow, Kenneth Holyoke, Gabriel Hrynick

PB-46 *An Update on Paleoindian Period Site 38.99, Kennebec County, Maine* — Stuart A. Eldridge, Jaime M. Donta

PB-47 *Old Dates and Nice Flakes: Recent CRM Discoveries in the Uplands of New England* — Erin Flynn

PB-48 *Collections Evidence for Paleoindian Pursuits in Connecticut's Quinnipiac River Valley* — Anthony Gambardella

PB-49 *Planes and Plains – The Auburn Airport (Michaud) Paleoindian Site Cluster, Maine* — Gemma Hudgell, Arthur Spiess

PB-50 *The Doyle Locality: A Recently Identified Paleoamerican Stone Tool Manufacturing Workshop in the Munsungun Lake Formation, Piscataquis County, Maine* — Heather Rockwell, Nathaniel Kitchel

PB-51 *What Lies Beneath: Ground Penetrating Radar and Vibracore Survey of the Inundated Liebman Site, an Early Paleoindian Site in Lebanon, Connecticut* — David E. Leslie, Cassie Aimetti, Zachary L. F. Singer, Andy Fallon

PB-52 *Microscopic Usewear Analysis on Ice Age Stone Tools in the New York Region* —

Thomas J. Loebel, Jonathan C. Lothrop, Susan Winchell-Sweeney, Alexandra DeCarlo

PB-53 *Results of Protein Residue Analysis on Ice Age Stone Tools in the New York Region* — Jonathan C. Lothrop, John Fagan, Cam Walker, Alexandra DeCarlo, Susan Winchell-Sweeney

PB-54 *Along the River's Edge: Current Research at the Little Toad Site, Avon, Connecticut* — Stephanie Scialo, Sarah P. Sportman, David E. Leslie

PB-55 *Illuminating Ice Age Fauna Exploitation in Maryland: Protein Residue Analysis of 75 Paleoindian Stone Tools from Maryland* — Zachary Singer, Cam Walker, John Fagan, Craig Ilgenfritz, Kenneth Andrasko, Thomas McLaughlin, Stephanie Soder, Matthew McKnight

PB-56 *Allen's Meadow: A Paleoindian Camp in the Norwalk River Valley, Wilton, Connecticut* — Ernest A. Wiegand

POSTER SYMPOSIUM 13: CONTRIBUTIONS TO THE EARLY PREHISTORY OF THE GREAT BASIN AND FAR WESTERN NORTH AMERICA

LOCATION: SWEENEY A / B

PB-57 *Younger Dryas-Age Human Footprints at the Trackway Sites, Great Salt Lake Desert, Utah* — Daron Duke, D. Craig Young

PB-58 *A Terminal Pleistocene Puppy? Virtual Analysis of a Juvenile Canid from Cooper's Ferry, Idaho* — Kirsten Paulson

PB-59 *Technological Variation between Western Stemmed Tradition and Cascade Tradition Projectile Point Technologies in the Northern Great Basin* — Shelby G. Saper

PB-60 *The Lithic Assemblage of an Early Holocene Campsite in the Northern Great Basin* — Aiden J. Hlebechuk

PB-61 *Late Paleoindian Projectile Points from CRM Surveys in Nevada: Summary of Results from Over 40 Years Ago* — Steven R. James

PB-62 *Challenging Old Paradigms: Pre-Clovis in the Northwestern Great Basin* — Wm. Jerry Jerrems, Alberto Conti

PB-63 *The Conveyance of Paleoindian Toolstone to Pluvial Lake Mojave, California* — Alexandra Jonassen

PB-64 *Establishment of the Western Stemmed Tradition in the Southwestern Great Basin* — Jeanne Day Binning

PB-65 *Terminal Pleistocene/Early Holocene Crescent Projectile Points from the Western United States* — Mike Lenzi

PB-66 *A Fluted Obsidian Biface from Santa Barbara County, California* — Jasmine Kidwell, Barry A. Price, Marc Linder, Scott Engblom, Alex Nyers, Jennifer Thatcher, Michael Rondeau, Jon M. Erlandson

PB-67 *Evaluating Radiocarbon Reliability and Crescent Chronology in Terminal Pleistocene/Early Holocene Far Western North America* — Natalie M. Marud, Geoffrey Smith

PB-68 *How Likely are We to be Underestimating Paleoindian Populations? Landscape Taphonomy and Dates-as-Data in the Bonneville Basin* — Daniel A. Contreras, Brian F. Codding

PB-69 *In Search of the Pleistocene Willamette Valley* — Andrew R. Pauly, Loren G. Davis

PB-70 *The Terminal Pleistocene-Early Holocene Single-Piece Shell Fishhook Assemblage from Isla Cedros, Baja California, México* — Matthew R. Des Lauriers, Antonio Porcayo-Michelini, Loren G. Davis, Alex Nyers

PB-71 *Hooked on History: Modern Experimentation on Prehistoric Single Piece Shell Fishhook Effectiveness* — Dylan Sparkman, Matthew Des Lauriers, Antonio Porcayo-Michelini

PB-72 *Building a Case for Very Early Human Presence on the Outer Northwest Coast: Weaving Multiple Contextual Threads at Laxnuganaks/'Ngwünaks (Moore Islands), British Columbia, Canada* — Bryn Letham, Jacob Earnshaw, Spencer Greening, Ian Sellers, Duncan McLaren, Eric Letham, Rasha Elendari, Brendan Eshom, Daryl Fedje, Christopher F.G. Hebda, Nick Waber

POSTER SYMPOSIUM 14: ADVANCES IN LITHIC ANALYSIS FOR EARLY SOUTH AMERICAN ARCHAEOLOGY

LOCATION: O'KEEFFE / MILAGRO / KEARNEY
ORGANIZERS: ANTONIO PÉREZ-BALAREZO / NORA V. FRANCO / MARINA GONZÁLEZ-VARAS

PB-73 *Paiján Lithic Technology and Maritime Mobility at Pampa Lechuza, a Late Pleistocene Desert Oasis in Peru* — Jalh Dulanto, Antonio Pérez-Balarezo, Ximena Suárez-Villagran, Lorena Becerra-Valdivia, Daniel Vergara

PB-74 *Projectile Point Variability and Fishing-Hunting Strategies in the Paiján Desert-Oasis Occupation of Pampa Lechuza, Peru* — Renzo D. Córdova, Rodrigo A. Inga, Jalh Dulanto, Antonio Pérez-Balarezo

PB-75 *Fracture, Recycling, and Raw Material Constraints in Paiján Bifacial Preforms from Pampa Lechuza, South-Central Peru* — Christian Becerra Escobar, Aixa Battistini, Antonio Pérez-Balarezo, Jalh Dulanto

PB-76 *Lithic Technology and 3D Documentation of the Rafael Larco Paiján Collection from Pampa de los Fósiles, Peru* — Sebastián Daniel Vidal Cuéllar, Antonio Pérez-Balarezo

PB-77 *Fishtail Point Variability across South America: A Continental-Scale Collaborative Database and 2D Geometric Morphometric Approach* — Antonio Pérez-Balarezo, Nora V. Franco, Marina González-Varas, Marcelo Cardillo, Marcellus de Almeida, Caitlin Doherty, Nora Flegenheimer, Celeste Weitzel, Natalia Mazzia, Flavia Morello, Rafael Suárez, Laura Miotti, Bruno Mendez, Angelo Constantine

PB-78 *Rethinking Unifacial Technologies in Early Tropical South America through 3D Morphometrics and Technology* — Marina González-Varas

PB-79 *Beyond Typology: A Critical Reassessment of Early Lithic Assemblages in the Colombian Andes* — Brunella Muttillo

PB-80 *Computational 3D Analysis Differentiates Pedra Furada Lithics from Local Geofact Control Samples in Northeastern Brazil* — Marcellus de Almeida, Antonio Pérez-Balarezo, Antoine Muller, Antonio Carlos de Barros Corrêa, Mario Pino

PB-81 *Revisiting La Moderna Megamammal Kill/Processing Site: A Techno-Morphological and Use-Wear Reanalysis of the Stone Tool Assemblage* — Pablo G. Messineo, Nélida Pal, Gustavo G. Politis

PB-82 *Fell Cave Lithic Industry, Discussing the Techno-Economic Assemblage of the Pleistocene-Holocene Transition (Patagonia, Chile)* — Flavia Morello, Luis Alberto Borrero, Consuelo Huidobro, Victor Sierpe, Fabiana Martin

POSTER SYMPOSIUM 15: INVESTIGATION OF LATE PLEISTOCENE SITES AND ENVIRONMENTS OF CENTRAL AND SOUTH AMERICA

LOCATION: O'KEEFFE / MILAGRO / KEARNEY

PB-83 *Early Paleoindian Biface Production Analysis Using Three Distinct Debitage Assemblages at August Pine Ridge, Belize* — Victoria C. Pagano, Jon C. Lohse, Abigail Antinossi, Mike McBride

PB-84 *The Occupation of the Evergreen Forest in West Patagonia Extends into the Pleistocene-Holocene Boundary* — César Augusto Méndez Melgar, Amalia Nuevo-Delaunay, Pablo Marcelo Fernández, Omar Reyes, Antonio Maldonado

PB-85 *Camelid Genomes from the Pleistocene to the Present: Investigating Early Human–Camelid Interactions at Cuncaicha and Panaulauca* — Sarah Noe, Kurt Rademaker, Katherine M. Moore, Jo Osborn, Emily B. P. Milton, Lars Fehren-Schmitz

PB-86 *Investigating the Taphonomy of Giant Ground Sloths from Santa Elina: Insights for Human-Megafauna Interactions in Pleistocene of Brazil* — Thaís R. Pansani, Briana Pobiner, Gabriela Farfan, Anna K. Behrensmeyer, Julie Aufort, Hermínio I. de Araújo-Júnior, Michael Gallagher, Sebastian Schöder, Águeda Vialou, Mírian L. A. F. Pacheco

PB-87 *Genes, Tools, Ice, and Tides: How Building Permeable Landscapes Shaped the Human Occupation of Fuego-Patagonia* — Marta Alfonso-Durruty, Christina M. Balentine, Flavia Morello, Manuel San Roman, Miguel Vilar, Nicole Misarti, Deborah A. Bolnick

PB-88 *Late Pleistocene and Early Holocene Wetlands in Pampa del Tamarugal: Megafauna and Early Human Occupation in the Atacama Desert* — Mario A. Rivera, Orlando Acosta Lancellotti

PB-89 *Reassessing Lajeado dos Fósseis: New Evidence for Early Human Occupation and Megafauna Interaction in Southern Brazil* — Giulia Marciani, Marcos César Pereira Santos, Fernanda Schneider, Jones Fiegenbaum, Italo Marques de Castro, Diego Dias Pavei, Antoine Lourdeau, Mirian Carbonera, Daniel Loponte, Stefano Benazzi, Neli Teresinha Garlace Machado

PB-90 *LGM Occupation of Central Argentina Loessic Plains and Deserts (18-28 ky BP)* — Marcelo Javier Toledo

POSTER SYMPOSIUM 16: INVESTIGATING PALEOAMERICAN USE OF NOW-SUBMERGED CAVES IN QUINTANA ROO, MEXICO

LOCATION: O'KEEFFE / MILAGRO / KEARNEY
ORGANIZERS: DOMINIQUE RISSOLO / JAMES C. CHATTERS

PB-91 *Paleoamerican Ochre Mines in the Submerged Caves of the Yucatan Peninsula, Quintana Roo, Mexico* — Silvina Vigliani, Samuel Meacham, Eduard G. Reinhardt, Brandi MacDonald, James C. Chatters, Dominique Rissolo, Roberto Junco

PB-92 *Evidence for Systematic Water Collection by Paleoamericans of the Northern Yucatan Peninsula, Quintana Roo, Mexico* — James C. Chatters, Alberto Nava Blank, Alejandro Alvarez, Samuel S. Meacham, Dominique Rissolo, Helena Barba Meinecke

PB-93 *A Light in the Darkness: Woods Exploited for Torches by Paleoamericans of the Yucatan* — Kathryn Puseman, Julien Fortin, James C. Chatters

PB-94 *Automating Photogrammetry-GIS Integration for Spatially Linked 3D Documentation of Submerged Paleoamerican Cave Sites in Quintana Roo, Mexico* — Julien Fortin, Samuel Meacham, Andreas Rosland, Wetherbee Dorshow, Loren Clark, Dominique Rissolo, James C. Chatters

PB-95 *Simulating Human and Megafauna Access in the Now-Submerged Late Pleistocene/Early Holocene Caves of Quintana Roo, Mexico* — Loren Clark, Julien Fortin, Dominique Rissolo, Scott McAvoy, Silvina Vigliani

PB-96 *Recent Advances in Visual Analytics and Virtual Taphonomy of Submerged Late Pleistocene and Early Holocene Human and Faunal Deposits in the Submerged Caves of the Yucatan Peninsula* — Dominique Rissolo, James C. Chatters, Alberto Nava-Blank, Blaine W. Schubert, Joaquin Arroyo-Cabrales, Vid Petrovic, Keila Bredehoeft,

Scott McAvoy, Helena Barba Meinecke, Falko Kuester

PB-97 *Artifact Recovery and Sampling in a Deep, Lightless, Underwater Setting: Methods Devised by the Hoyo Negro and Yucatan Prehistory Projects* — Alberto Nava Blank, Alejandro Alvarez, Roberto Chavez, Julien Fortin, James C. Chatters

POSTER SYMPOSIUM 17: PALEOINDIAN SETTLEMENT ON THE MARGINS: THE SMITH MOUNTAIN PALEOINDIAN COMPLEX IN VIRGINIA

LOCATION: CORONADO / DEVARGAS
ORGANIZERS: JOSEPH A.M. GINGERICH / WILLIAM A. CHILDRESS

PB-98 *An Unfamiliar Dalton Microlithic Tool Assemblage near the End of its Appalachian Lithic Source Tether at Smith Mountain Gap, VA* — William A. Childress, Jeanette Cole

PB-99 *Comparative Study of Early Narrow Lanceolate and Stemmed Points/Bifaces in the Eastern U.S. as Manifested at Smith Mountain Gap, Virginia* — William A. Childress, Joseph A.M. Gingerich

PB-100 *A High Strain Zone Microcrystalline Lithic Material Used for Tools by Paleoamericans at Smith Mountain Gap, Virginia* — William A. Childress, William Henika, Christopher Bailey

PB-101 *A High-Resolution Younger Dryas Boundary Datum in Stratified Paleoamerican Deposits at Smith Mountain Lake (44PY152), Virginia* — Christopher R. Moore, Joseph A.M. Gingerich, William A. Childress, Malcolm A. LeCompte, Allen West, Mohammed Baalousha, Michael Bizimis, Terry A. Ferguson, Siddhartha Mitra, Chad S. Lane, Theodore R. Them II, M. Scott Harris, Victor Adedeji, Kurt A. Langworthy, Mahbub Alam, Paul A. Schroeder, Aaron Thompson, Jordan Jeffreys, Marc J. Defant

PB-102 *The Cultural Succession of the Paleoindian-Early Archaic Period at Smith Mountain* — William A. Childress, Joseph A.M. Gingerich, Michael Johnson, Jeanette Cole

PB-103 *Lithic Sourcing and Trends in Mobility within the Smith Mountain Paleoindian Complex* — Joseph A.M. Gingerich, William A. Childress, Mathew Boulanger, Yvonne French

PB-104 *Stratigraphy and Radiocarbon Dating of the Smith Mountain Paleoindian Complex* — Joseph A.M. Gingerich, Daniel Wagner, William A. Childress

POSTER SYMPOSIUM 18: LATE PLEISTOCENE ANIMALS AND THEIR EXTINCTION

LOCATION: CORONADO / DEVARGAS

PB-105 *Bye Bye, Birdie: An Investigation into the Taxonomy of Extinct North American Birds of Prey* — Hannah von Suskil, Kristine Korzow

PB-106 *Genetic Insights into Pleistocene Felids: Ancient DNA Recovery from Smilodon Fatalis* — Sathira Deegala, Kristine Korzow, Michael Waters

PB-107 *America's Founding Fossils: Graphical and Tactile Explorations of the Founding Fathers' Obsession with Pleistocene Megafauna* — Bernard K. Means

PB-108 *Potential Causes for Differing Equid Population Dynamics in North America, Beringia, and Eurasia* — Larkin R. C. Chapman

PB-109 *Stable Isotope Evidence for Ecophysiological Stress during Late Pleistocene Megafaunal Decline in Eastern Beringia* — Audra Darcy, Corrin Laposki, Gideon Hartman

POSTER SYMPOSIUM 19: CASES STUDIES IN THE LATE PLEISTOCENE AND EARLY HOLOCENE ARCHAEOLOGY OF THE AMERICAS: NEW DIRECTIONS

LOCATION: PERALTA / LAMY
ORGANIZERS: ADAM M. BURKE

PB-110 *Early Holocene Exploration and Landscape Adaptation: A Case Study of Two Nimíipuu*

Camp Sites in the Bitterroot Mountains, USA — Jordan J. Thompson, John C. Blong, Rachel A. Horowitz, Roger Amerman

PB-111 *Incorporating Petrographic Chert Provenance into Existing Models of Late Pleistocene and Early Holocene Landscape Use in Florida* — Adam M. Burke

PB-112 *Salty Sediments: Microstratigraphy and Site Formation at Quebrada Jaguay 280* — Sarah Meinekat, Emily B. P. Milton, Daniela Osorio, Susan Mentzer, Chris Miller, Peter Leach, Dan Sandweiss, Kurt Rademaker

PB-113 *Submerged Ancient Landform Investigations and Analyses from the Private Sector* — Neil N. Puckett

PB-114 *Understanding Historical Relationships among Early Paleoindian Technologies: A Preliminary Investigation of Stemmed and Fluted Technological Relationship* — Ashley Medlin

PB-115 *Western Stemmed Tradition Settlement and Mobility Strategies in the Harney Basin, Oregon: Weed Lake Ditch and Beyond* — Jordan Pratt

PB-116 *Wets Virginia, Mountain Bog-Ma: Reevaluating Paleoenvironmental Proxy Records at Cranberry Glades* — Marion M. Coe

PB-117 *Late Quaternary Alluvial Stratigraphy, Paleosols, and Paleoenvironment of the North Sulphur River, Texas* — Joshua L. Keene, Karl W. Kibler, Ken Lawrence, Ashley Eyeington

PB-118 *The Archaeology of High-Altitude Lake Systems in Colombia* — Carlos Reina, Carlos del Cairo, Juan David Sarmiento Rodríguez, Jesús Alberto Aldana Mendoza, Juliana Quintero, Héctor Vargas, Maria Jose Gonzalez Severiche, Morgan Smith

PB-119 *Bone, Antler, and Ivory Technologies in Siberia and Beringia: Implications for North American Paleo Traditions* — Joshua J. Lynch

PB-120 *The Agnew Cache: Clovis Wedge-Shaped Blade Core Technology at the Hogeye Site, Central Texas* — Caitlin Doherty, Michael R. Waters, Brad O. Agnew

PB-121 *A Second Clovis Blade Cache at the Hogeye Site, Central Texas* — Caitlin Doherty, Michael R. Waters

SATURDAY / OCTOBER 17, 2026

LECTURES

LOCATION: SWEENEY C / D / E / F

7:50 - 8:00 Announcements

SESSION 6: TERMINAL PLEISTOCENE ARCHAEOLOGY OF THE AMERICAS

8:00 - 8:30 *The Spatiotemporal Distribution of Terminal Pleistocene/Early Holocene Stemmed Points across Western North America* — Edward J. Knell, Matthew E. Hill, Jr., Richard L. Rosencrance, Erik Otárola-Castillo, Jackson C. Mueller, and Jon M. Erlandson

8:30-9:00 *The Post-Clovis Younger Dryas Record of the Eastern Woodlands* — Thomas A. Jennings and Ashley M. Smallwood

9:00-9:30 *Peopling Central America: Stone Tool Technologies, Site Distributions, and New Understandings of the Earliest Occupants of the New World Neotropics* — Jon C. Lohse, Mike McBride, Sébastien Perrot-Minnot, and Victoria C. Pagano

9:30-10:00 *Early Peopling and Anthropogenesis in Northwestern South America (Colombia): A Review* — Francisco Javier Aceituno

10:00-10:30 *Brazilian Archaeological Perspectives for the Early Peopling of the Americas* — Lucas Bueno, Adriana Dias, Antoine Lourdeau, and Andrei Isnardis

10:30-11:00 *Clocking the Terminal Pleistocene Peopling of the Andes* — Kurt Rademaker

11:00-11:30 *The Bottleneck in the Andean/Pacific Corridor of Southwest South America Shaped the Late Pleistocene Occupation of North Central Chile* — César Méndez

11:30-12:00 Speaker Discussion and Q&A

12:00-1:30 Lunch

SESSION 7: FRONTIERS AND MOVING FORWARD

1:30-2:00 *What We Still Don't Know about the Archaeology and Genetics of the Peopling of the Americas* — David J. Meltzer, J. Víctor Moreno-Mayar, and Eske Willerslev

2:00-2:30 *The Peopling of the Americas: Current Understanding and Future Directions* — David G. Anderson, D. Shane Miller, Thaddeus G. Bissett, J. Christopher Gillam, Eric C. Kansa, Sarah Whitcher Kansa, Ashley M. Smallwood, Joshua J. Wells, and Stephen J. Yerka

2:30-3:00 *The Peopling of South America 2026: There is No Silver Bullet* — Gustavo G. Politis

3:00-3:30 *Mountains Matter: Why Peopling Models Need a Third Dimension* — Bonnie L. Pitblado

3:30-4:00 *Habitability and the Exploration of South America: Between the Expected and the Unexpected* — Luis Alberto Borrero

4:00-4:30 Close

ABSTRACTS FOR LECTURES

Francisco Javier Aceituno

Early Peopling and Anthropogenesis in Northwestern South America (Colombia): A Review

This paper discusses the process of the early peopling of northwestern South America from a multiproxy approach, including recent theories and data from archaeology and bioarchaeology. The archaeological record suggests two major population events. The first, after the Last Glacial Maximum (LGM), was between ∼15 and ∼14 ka cal BP, at a moment of climatic improvement that coincides with the peopling model of the Pacific route. The second peopling event occurred between the Younger Dryas and the beginning of the Holocene, with a human expansion through the Colombian Andes and the Colombian Amazon. The explanation of this archaeological eclosion is difficult because of the combination of local processes with the possible arrival of small populations whose geographic origin is not very clear, since it has been suggested that they arrived from the north as well as from the south. Genetics and paleogenetics indicate a diverse population that a priori matches the model of arrival of new peoples in the second moment. A very important fact of this second moment is the adaptive plasticity of these groups that spread in the last ice episode of the Pleistocene. In Colombia, as in other places in the Americas, there are also data that coincide with the LGM, although the Colombian evidence is less solid.

David G. Anderson, D. Shane Miller, Thaddeus G. Bissett, J. Christopher Gillam, Eric C. Kansa, Sarah Whitcher Kansa, Ashley M. Smallwood, Joshua J. Wells, and Stephen J. Yerka

The Peopling of the Americas: Current Understanding and Future Directions

Recent decades have brought significant new discoveries and conceptual shifts in understanding the late Pleistocene peopling of the Western Hemisphere, yet substantial challenges remain. Climate change, erosion, development pressures, and evolving legal, ethical, and collaborative frameworks all demand careful consideration moving forward. Decades of investigation have generated vast quantities of primary data—site records, artifact assemblages, special samples, field and laboratory documentation, and published and unpublished analyses, papers, and reports. A critical ongoing challenge is ensuring broad, equitable access to these materials for research, resource management, public education, and meaningful consultation and collaboration with Indigenous and traditional communities. Distributed networking across diverse datasets offers a promising path forward, though the approach requires careful planning and sustained cooperation and coordination. Platforms such as PIDBA (Paleoindian Database of the Americas) and DINAA (Digital Index of North American Archaeology) represent important infrastructure for large-scale data integration and analysis. PIDBA has been undergoing substantial updating in recent years, and contributions of relevant materials, ideas, and perspectives from many parties have proven crucial to this effort. PIDBA and DINAA are truly collaborative efforts, involving help from hundreds of people. Maintaining these communities and the data and informatics platforms compiled and built by them in perpetuity is essential to better understand the earliest human occupation of the hemisphere.

Matthew Bennett, Sally Reynolds, and David Bustos

Buried Treasure: Hidden Footprint Archives in the American Southwest

Discoveries at White Sands has shown how human footprints can demonstrate presence, behavior and lifeways. Their proposed age is challenging for some but has been corroborated by multiple lines of evidence. While this debate around footprint age is important to the peopling of the Americas it misses the true value of the footprints. They provide, in the absence of more traditional cultural artifacts, evidence of human behavior – interacting with Pleistocene megafauna, transporting resources via primitive travois and moving across the landscape in different ways. Using multiple footprint sites across the American Southwest we explore this archive and its potential to contribute to the debate on the peopling of the Americas.

Luis Alberto Borrero

Habitability and the Exploration of South America: Between the Expected and the Unexpected

Studies of human peopling of the Americas rely both on models and hard data obtained at specific sites. Many legitimate controversies characterize these studies. Usually, they constitute alternative ways of looking at the same evidence, but often they highlight important chronological differences. Part of the problem is how to recognize older sites. We discuss relevant ethnographic and ethnohistoric information for the peopling of South America. This evidence suggests that archaeological markers of early exploration are difficult to identify since they should result from short occupations at non-optimal places. Most of our search models are efficient for relatively large and obstrusive sites, thus limiting our capacity to obtain a full image of the early human settlement. Activities represented by small sites resulting from specific resource exploitation or 'stop-and-go' stations, which are among the most expected site types for the exploration of new lands are rarely recorded. Only specific search of small ephemeral sites will inform about the full process of exploration of the continent.

Todd J Braje and Jon M. Erlandson

Initial Human Migration into the Americas: The Known and The Unknown

With the collapse of Clovis-first in the late 1990s, the coastal migration theory (a.k.a. the kelp highway hypothesis) emerged as the most viable route for the initial human migration into the Americas. During the Last Glacial Maximum, ecological reconstructions suggest that coastlines of the far North Pacific Rim toggled seasonally between sea ice in winter and ice-free mosaics of productive kelp forest and estuarine habitats in summer. The search for archaeological evidence for a late Pleistocene Pacific Coast dispersal has been slowed by theoretical and methodological challenges, however, including postglacial sea level rise, inundation of vast swaths of the continental shelf, and a mix of sedimentation and erosion across much of the American Far West. We review the current evidence, challenges, and debates surrounding a potential coastal migration into the Americas, emphasizing the need for high standards of evidence while advocating for a broader and more inclusive approach to evaluating multiple hypotheses. Considering current archaeological data, insights from paleogenomics, and coastal paleolandscapes, we propose a research framework that focuses on the period between 21,000 and 16,000 years ago and prioritizes the Pacific Coast as the most likely pathway for the initial peopling of the Americas.

Lucas Bueno, Adriana Dias, Antoine Lourdeau, and Andrei Isnardis

Brazilian Archaeological Perspectives for the Early Peopling of the Americas

Research on the ancient peopling of the Americas extends beyond the realms of stones, bones, fossils, and molecules. In addition to the materials gathered in the field, analyzed in laboratories, and interpreted by archaeologists, various socio-political factors play a crucial role in shaping hypotheses, models, and the predominance of certain academic proposals. In this presentation, we will synthesize insights from research conducted at archaeological sites in Brazil, focusing on themes such as chronology, migration routes, and cultural diversity. We will then examine how these findings have been incorporated into the international academic discourse, while highlighting the ideological and conceptual barriers that have shaped the debate throughout the 20th century.

Jorie Clark

From Saddle to Corridor: How Deglaciation of Coalescent Ice Sheets Contributed to Sea Level Rise and the Opening of the Ice-Free Corridor

During the last deglaciation, the ice-sheet surface that occurred between the higher domes of the Cordilleran and Laurentide ice sheets experienced rapid lowering. Climate and ice-sheet modelling suggest that this so-called saddle collapse may have contributed from 6 m to 11 m of global sea level rise over 500 years to 3,000 years. Saddle collapse is initiated when an imposed warming increases surface melting of the saddle region, causing the ablation zone to expand and the ice surface to lower to warmer altitudes. This process then crosses a tipping point whereby with no further imposed warming, surface melting rapidly accelerates as the saddle continues to lower to warmer altitudes. Surface melting peaks when the ice-free corridor (IFC) between the two ice domes opens. Dating the age of the opening of the IFC is thus critical to determining the end of the contribution of saddle collapse to global sea level rise and the beginning of the availability of the corridor for migration. In this talk, I will first summarize the saddle collapse mechanism and the corresponding contribution to global sea level rise suggested from ice-sheet modeling. I will then summarize the dating constraints on the age of the opening of

the IFC and discuss their implications to sea level rise from saddle collapse and to migrations through the IFC.

Loren G. Davis

Cooper's Ferry/Nipéhe: A Keystone Late Pleistocene Site in North America

The Cooper's Ferry/Nipéhe site in western Idaho provides an exceptionally rich record of American Upper Paleolithic (AUP) lifeways spanning ~16,000–13,000 cal BP and offers one of the most comprehensive records of pre-Clovis occupation in North America. Its well-stratified deposits, cultural features, and radiocarbon-dated projectile points, including the oldest known examples in the Americas, make Cooper's Ferry/Nipéhe a key site for understanding the technological and behavioral adaptations of early North American peoples during the late Pleistocene. The site also contains a diverse faunal assemblage showing that AUP peoples hunted a wide range of animals, from late Pleistocene megafauna to smaller prey, highlighting both their adaptive flexibility and broad-based use of available resources. Together, the lithic technology, faunal evidence, and spatial patterning at Cooper's Ferry provide a vivid picture of early hunting lifeways. In this paper, we review the evidence for early hunting at Cooper's Ferry and show how the site's record firmly establishes a pre-Clovis archaeological presence in the Americas. In doing so, we underscore the significance of Cooper's Ferry/Nipéhe as a critical site for understanding the initial peopling of the Americas and the lifeways of its earliest inhabitants.

Tom D. Dillehay

Legacies of the Late Pleistocene and Early Holocene Transition in South America

Archaeologists have given little attention to how learning curves, cognitive mapping, memory, and ecological knowledge contributed to the initial peopling and subsequent colonization processes across the Americas, largely viewing them as unknowns. Considered here are three examples of cultural and ecological processes that likely enhanced the cognitive and organizational capacities of people transitioning from the late Pleistocene to the early Holocene in South America: niche construction, plant manipulation, and place-making. The implications of these examples are particularly relevant to South America because some of the first pulses of socio-economic complexity—permanently occupied sites, experimentation with cultivated plants, social networks and aggregation—developed only a few millennia after people first arrived. It is believed some of these pulses can be partially explained by some of these capacities.

Ted Goebel

Back to the Source: Exploring Northeast Asia for the Origins of the First Americans

The peopling of the Americas was a complex process that played out over 20,000 years or more, from the early formation of ancestral human populations in northeast Asia (> 35,000 years ago) to their eventual dispersal north into the Arctic, east across the Bering Land Bridge, and finally south throughout the rest of the Americas. In this presentation, we examine the first chapter in this saga, reviewing the Paleolithic archaeological record of China, Japan, Korea, Mongolia, and Russia to address the question, "Who Were the Ancestors of the First Americans?" Along the way, we reconcile the archaeology of early Asia with the prevailing genetic model — unmasking potential archaeological progenitors and discovering likely 'homelands' — all the while considering links with the Pre-Clovis record of Beringia as well as North and South America.

Kelly E. Graf

The Shég' Xdaltth'í' Site in Central Alaska and its Contribution to the Peopling of Beringia

The Shég' Xdaltth'í' site is a new multicomponent site located in the Tanana Flats wetland area of central Alaska about 55 km south-southeast of Fairbanks. It rests on an ancient glaciofluvial terrace of the Tanana River that is mantled by more than 3 meters of unconsolidated sands and silts. The site preserves three major archaeological components in these deposits, component 1 dating to nearly 14,000 years ago, component 2 dating from about 13,000-12,700 years ago, and component 3 dating to about 5,000 years ago. This presentation will concentrate on the earliest component, describing the wide array of materials (lithic, bone, and osseous) and features found and discussing the processes and behaviors leading to archaeological signatures observed. The data, so far, suggests the site was used as a base camp, and site inhabitants were not among the region's first explorers, but they knew the landscape. Findings will be discussed in the context of the peopling of Beringia and the Americas.

Jessi J. Halligan, Morgan F. Smith, Neil N. Puckett, Adam M. Burke, Nicholas K. Bentley, and Trevor H. Gittelhough

The Page-Ladson Site, Florida, and the Contributions of Submerged Landscapes Archaeology to First Americans Research

Underwater excavations at the Page-Ladson site, an inundated sinkhole in northwestern Florida, have uncovered multiple terminal Pleistocene archaeological components in datable and intact stratigraphy which have refined our understanding of early people in the Southeastern US. However, recent research on areas drowned by rising waters from Ice Age glacial melt has made it clear that portions of former landscapes and archaeological resources have survived submergence in almost every locality. Evidence from these sites and resources contribute to our understanding of the peopling of the Western Hemisphere, the extinction and extirpation of megafauna at the end of the Pleistocene, human reactions to climate change and sea level rise before, during, and after the Younger Dryas, and funerary rituals and Indigenous watercraft. Further, preserved ancient landforms are repositories of climatic, paleontological, geological, and ecological data. We will summarize the recent work at Page-Ladson and its contributions to Pleistocene archaeology. We then place Page-Ladson into the context of submerged landscape research, highlighting recent and ongoing studies both inland and offshore. Particular attention is paid to the importance of landscape archaeology that focuses on addressing the false dichotomy of terrestrial and underwater cultural resources.

John W. Ives, Todd J. Kristensen, Robin Woywitka, Gabriel Yanicki, and Dale Fisher

The Mythical Corridor—Rapidly Shifting Perspectives

While a heavily glaciated region like the Ice-Free Corridor will always present significant research challenges, much has changed in our understanding of the "Corridor" since 2013. Extensive earth science research has provided refined chronologies for deglaciation, proglacial lake formation and decanting, and large mammal habitability. Cordilleran Ice System-Laurentide Ice System separation was complete by ~13,800 cal yr BP (with rapid ice retreat to the Canadian Shield by ~13,000 cal yr BP); there was a human presence in the southern Corridor by 13,450 cal yr BP; and the entire Corridor was inhabited by large mammals no later than 13,200 cal yr BP. We discuss new understandings of fluted point, stemmed point, and ancillary technologies in the Corridor, the distribution and character of caches, and local versus distant tool stone use based on detailed provenience studies. This work is contextualized with recent genetic data for founding lineages, consideration of societal options for endogamy or exogamy in situations featuring extremely low human population densities, and the deeper human history potentially reflected in widespread Indigenous oral traditions. We conclude with ideas for systematic search strategies for discovering a broader range of early Corridor sites, including the possibility of a pre-LGM entry through the Corridor.

Masami Izuho

Late Upper Paleolithic Archaeology of Coastal Northeast Asia and its Relation to the Late Pleistocene Peopling of the Americas: An Update

Paleogenetic evidence suggests that ancient Native Americans diverged from a mix of East Eurasian and Ancient North Eurasian groups, as early as ~23,000 years ago, followed by a period of isolation. Migration to the south of the continental Ice Sheets likely occurred between ~17,500 and 14,600 years ago, but precise locations and mechanisms remain unclear. Archaeological evidence indicates human presence south of the ice sheets by ~16,000 cal BP (Davis et al. 2019), before the ice-free corridor opened. This suggests migration may have included coastal routes. Those Pre-Clovis period sites feature blade-based, flake-based, bifacial lithic reductions as well as osseous technologies, including bifacial stemmed projectile points, differ from Beringian sites and are also dated earlier. Given the possibility of Pacific coastal migration, late Pleistocene technologies in the coastal northeast Asia warrant comparison with early technologies south of the Ice Sheets. The Paleo-Sakhalin-Hokkaido-Kurile Peninsula (PSHK) is key to understanding the late Pleistocene peopling of the Americas, with over 188 sites with similar technological assemblages appearing by the same to earlier time periods. This presentation provides late Pleistocene sites, technologies, paleogenetics, and paleoenvironmental studies from PSHK, highlighting their relevance to the late Pleistocene peopling of the Americas.

Dennis L. Jenkins

Late Pleistocene Human Occupations of the Paisley Caves

The Paisley Caves are a complex of eight west-facing caves and rockshelters cut by pluvial Lake Chewau-

can wave action into the soft brecciated basalt flows of 5-Mile Point in the Summer Lake basin of south-central Oregon. The site was made famous by Luther Cressman's (1940) claims of obsidian artifacts stratigraphically associated with extinct megafaunal remains (horse, camel, bison) in a cultural feature. Periodically vandalized over the next 60+ years, the site remained the best possible location for establishing the co-occurrence of humans and extinct megafauna in the Great Basin. New investigations by the University of Oregon began in 2002 and continue in the present. Multi-disciplinary studies include ancient DNA, human versus animal biomarkers (sterols, bile acids), protein residues, botanical (macro, pollen, phytoliths, starches) and faunal remains (large and small mammal paleontology, birds, fish), human subsistence, consumed and parasitic insects, and artifacts (chipped and ground stone, bone, fiber, wood), obsidian sourcing and hydration, and extensive radiocarbon dating (n=~400). There is no reasonable doubt that humans occupied the site from ~14,500 years ago and coincided with extinct megafauna 1500-2000 years.

Thomas A. Jennings and Ashley M. Smallwood

The Post-Clovis Younger Dryas Record of the Eastern Woodlands

This paper reviews the paleoenvironmental and cultural changes that occurred during the post-Clovis Younger Dryas (12,850-11,700 BP) period in the North American Eastern Woodlands. Geographically, we divide the region into three broad subregions: the Southeast; the western, unglaciated Great Lakes; and the Northeast. These ecologically diverse subregions experienced dynamic and varied paleoenvironmental changes including fluctuating and retreating coastlines, glacial advances and retreats, temperature and precipitation shifts, megafaunal extinctions and spatial range reorganization, and major shifts in forest composition and distributions. Hunger-gatherer populations responded in a variety of ways, best traced through changes in diagnostic projectile point forms. We summarize evidence for in-place cultural evolution, the eastern spread of Plains traditions, shifts in subsistence adaptations and mobility strategies, examples of population constriction and resurgence, and our increasing understanding of early social and ritual lifeways.

Edward J. Knell, Matthew E. Hill, Jr., Richard L. Rosencrance, Erik Otárola-Castillo, Jackson C. Mueller, and Jon M. Erlandson

The Spatiotemporal Distribution of Terminal Pleistocene/Early Holocene Stemmed Points across Western North America

We developed Bayesian radiocarbon chronology models for 20 western North American terminal Pleistocene/early Holocene (16,250-7500 cal BP) stemmed point types to improve understanding of their regional and continental spatiotemporal distribution. The ^{14}C samples come from three geographic regions: the Pacific Coast (PC), the Intermountain West (IMW), and the Great Plains and Rocky Mountains (GPRM). Cooper's Ferry/Nipéhe points are the earliest, dating to the late Glacial. Channel Island Amol, Haskett, Taan, and Xil first appear during the Bølling-Allerød interstadial and temporally overlap but do not necessarily predate Clovis (nor does Clovis necessarily predate them), leading us to reject a strict adherence to the Clovis First model. Several new stemmed point types first appear during the Younger Dryas (YD): Agate Basin, Channel Island Barbed, Cody, Cougar Mountain, and Hell Gap. Stemmed point type richness peaks early in the early Holocene (EH) with the addition of Lind Coulee, Packard, Parman, Wilson, Windust, and Windust/square. Lovell Constricted, Pryor Stemmed, Silver Lake, and Xilju appear later in the EH. Hypothesis testing reveals that: 1) Haskett from the IMW is not older than Agate Basin or Hell Gap from the GPRM, and 2) square-base Cody points from the GPRM predate Windust/square from the IMW, suggesting an east-to-west movement of square-base technology. Despite our progress, we consider the results preliminary as the size of some radiocarbon samples likely affects the accuracy and precision of certain age models.

Emily L. Lindsey, Gregory B. P. Davies, Regan E. Dunn, Robert Feranec, Benjamin T. Fuller, Advait M. Jukar, Melissa I. Pardi, Christina M. Ryder, John R. Southon, Catalina P. Tomé, and Michael R. Waters

Timing, Causes, and Ecological Consequences of Pleistocene Mammal and Bird Extinctions in North America: A Regional Analysis

Dozens of species of large mammals and birds ("megafauna") disappeared from North America at the end of the Pleistocene. These extinctions were part of the largest global extinction event of the Cenozoic, but the timing of these losses is too poorly-constrained to distinguish between potential causes including climate change, hu-

man predation, and other factors. To better understand the causes and dynamics of these extinctions, our team obtained hundreds of new, high-precision radiocarbon dates on extinct mammals and birds from across the continental U.S. and southern Canada. In many regions of the continent, mammal extirpations appear to be nearly synchronous, with megafauna in southern California, the Southwestern United States and the Midcontinent all disappearing within a two-century span during the time of Clovis. Later persistence of some taxa in the northeastern United States and southern Canada may reflect relict populations tracking dwindling habitat. In southern California (the only region with a well-resolved bird record), avian megafauna were extirpated coincident with the large mammals, approximately 13,000 years ago. Comparison with regional paleoclimatic, archaeological, and vegetation records suggests that these extinctions were likely caused by synergistic interactions between climate change and human activities, including droughts, hunting, and human-ignited wildfires, which disrupted ecosystems and caused food webs to collapse. Notably, several species of mammalian and avian megafauna previously presumed to be "Pleistocene survivors" appear to have either first entered non-Beringian North America in the early Holocene, or retreated to refugia after the extinction before repopulating their prior range in the mid- to late-Holocene. This suggests that the Pleistocene extinction event in North America was even more catastrophic than previously thought, wiping out nearly all large-bodied taxa from most of the continent for thousands of years.

Jon C. Lohse, Mike McBride, Sébastien Perrot-Minnot, and Victoria C. Pagano

Peopling Central America: Stone Tool Technologies, Site Distributions, and New Understandings of the Earliest Occupants of the New World Neotropics

Stone tools and other remains dating to the terminal Pleistocene have been recovered from dozens of sites across Central America. However, only a very small handful of sites contain assemblages with diagnostic lithic specimens including complete points, manufacturing failures, or associated toolkits. These sites are disproportionately important for helping archaeologists infer possible cultural influences and processes involved in how the land bridge connecting the Western Hemisphere was settled. Current evidence suggests that culture-bearers from South and North America intermingled across at least parts of Central America between 13,000 and 12,000 years ago, that neither coastline was preferred as the exclusive route for movements, and that regionalized populations were established at least by this time. This paper summarizes available data, including latest findings from August Pine Ridge, Belize, which likely represents the largest assemblage of material culture currently available from Central America for this period.

Duncan McLaren, Bryn Letham, Christopher Hebda, Lindsay Worden, Angela Dyck, and Daryl Fedje

Archaeological and Paleo-Environmental Insights into the Post-Glacial Emergence of Land, Sea, Biota and People on the Pacific Coast of Canada

The Last Glacial Maximum on the Pacific Coast of Canada was regionally and temporally variable. Between 23,000 and 19,500 years ago, conditions were warm enough to support animal and plant communities. During the time frame between 19,500 and 18,500 years ago, our knowledge of biota on the coast is scarce or absent. After 18,500 years ago, pollen records indicate that ice free conditions appeared first on outer coastal areas. By 14,500 years ago, inner coastal areas were ice free sustaining large mammal populations, anadromous fish and forest cover. We present recent results of our research program focused on the timing of interstadial events, dynamics of sea level change, vegetation and animal community succession, and the appearance of culturally produced materials on the landscape.

David J. Meltzer, J. Víctor Moreno-Mayar, and Eske Willerslev

What We Still Don't Know about the Archaeology and Genetics of the Peopling of the Americas

The population history of the Americas based on the genetic and archaeological records is broadly consistent, but the devil is in the details. There are archaeological sites far older than expected, and the early sites that are known are widely scattered in space and time, making it difficult to identify links between them or broader patterns. In the genomic record there are genetic signals of an Australasian ancestry in ancient and modern populations in South America yet absent anywhere else in the Americas or Siberia; traces of 'ghost' populations (genetic markers of an otherwise unknown group) that contributed to Native American ancestry; and more complexity in the lineage splits and movements of Native American populations than detected to date. It is challenging to fully reconcile the earliest archaeological and genomic records, not

least because these are independent proxies each with their own limitations, and because we lack any ancient genomes older than Clovis in age. And both the archaeological and genetic records are largely silent on the question of why people moved, what occurred when different groups encountered one another, why some groups vanished, and how these processes relate to the record and variation of material culture seen archaeologically.

César Méndez

The Bottleneck in the Andean/Pacific Corridor of Southwest South America Shaped the Late Pleistocene Occupation of North Central Chile

The initial peopling of southwestern South America can be understood by recognizing the pivotal role of the Andes—both as a longitudinal corridor and as a barrier—in shaping human mobility, settlement, resource acquisition, and population dispersal during the late Pleistocene. Extending across highly diverse climatic and ecological zones, this massif imposed multiple environmental challenges and contributes today to heterogeneous archaeological records that require careful evaluation of site contexts and formation processes. Within this broader framework, North Central Chile—the narrowest passage of the Andean/Pacific corridor—emerges as a critical geographic bottleneck that likely concentrated early human activity and preserved the diversity of cultural expressions. Recent advances in early archaeological data, including reliable archaeological records dating to around 13,000 cal BP in several localities, justify a comprehensive reassessment of both shared regional patterns and localized variability. Evidence from this region, encompassing faunal exploitation, residential activities, raw material acquisition, processing loci, and mortuary practices, underscores the complexity of early occupations and benefits from updated geoarchaeological and taphonomic approaches that better situate human dispersal within a time of landscape and environmental transformations.

Hugo G. Nami

Echoes of the First Americans: The Significance of Fell Points in the Peopling of the New World

Isolated finds of Fell points were first reported in the 19th century in Buenos Aires Province, Argentina, and the Republic of Uruguay, within the southern cone of South America. However, their significance only began to be recognized in the 1930s, when Junius Bird discovered them in stratigraphic contexts associated with extinct fauna at Fell and Pali Aike caves near the Strait of Magellan, in southern Chile. These discoveries, which included the so-called "fishtail" points, provided crucial insights into the lifeways and movements of early American populations. For nearly five decades, these artifacts remained enigmatic and were often overshadowed by the well-established prominence of Paleo-American projectile points from North America. Similar specimens found across distant locations in Central and South America further complicated questions about their origins and dispersal. Over the past four decades, extensive research has illuminated various aspects of the hunter-gatherer groups who manufactured and used these points. Advances in archaeology have enhanced our understanding of their chronology, continental distribution, and potential areas of origin and dispersal, significantly contributing to broader studies of Paleoamerican archaeology. This presentation synthesizes findings from investigations conducted since the mid-1980s, addressing multiple topics related to these iconic projectile points. The research underscores how Fell points continue to open new avenues for understanding the early human groups in South America. As enduring echoes of the earliest signs of human settlement in the Americas, these artifacts remain central to unraveling the continent's ancient past.

Mario Pino

Geology of Monte Verde Area, Northwestern Patagonia, Chile: The Last 42 ka

The Monte Verde area and its associated archaeological sites are in the Región de Los Lagos, Chile (649726 m E, 5403790 m S). The first formal geological data were published in 1988. Although the fundamental understanding has not changed, after 28 years it seems necessary to clarify certain points, as part of our research has not been fully understood. In the Monte Verde area, in the last 42 ka, two lithostratigraphic units outcrop, separated by an erosional unconformity. The older Salto Chico Formation—which extends regionally—is composed of gravel and sand in varying proportions, but without a mud matrix. Its minimum thickness is 20 m. In contrast, the Monte Verde Formation outcrops in a small depression approximately 500 m long associated with the Chinchihuapi creek. Its thickness does not exceed 1 m. Its layers consist of gravel with a sandy matrix, sand, mud, peat, and swamp iron oxides. Within this Formation, there are various lateral interfingering and vertical

concordance and erosional relationships. The geomorphological expression of these Formations consists only of two terraces, both covered by the same organic soil, which occasionally shows at its base lenses of tephra weathered to clay.

Bonnie L. Pitblado

Mountains Matter: Why Peopling Models Need a Third Dimension

Archaeologists have long construed ice sheet and sea-level positions as the primary geographic features relevant to the Pleistocene peopling of the Western Hemisphere. This paper suggests that a third major feature of the landscape also played an important role in the peopling of the Americas: mountains. For reasons that include the familiarity of their environments, to their rich and diverse resources, to their visibility, mountains likely inspired and facilitated the peopling of the Western Hemisphere. Understanding that mountains mattered to the First Americans may point archaeologists to new research questions, testable hypotheses, and eventually, a more precise alignment of peopling models with archaeological evidence.

Gustavo G. Politis

The Peopling of South America 2026: There is No Silver Bullet

In the last decades, the archaeological record from South America has challenged the main models about the expansion of Homo sapiens on the continent. After the almost universal acceptance of pre-13,000 cal. BP human occupation of the Americas (the Clovis First Model), the focus of the discussion shifted to evaluate the evidence of human colonization in South America before or during the Last Glacial Maximum. However, most of the support of a deep chronology is based on only one line of evidence, used as a "silver bullet," and at the same time, the results of experimental archaeology, primarily related to cut marks on bones, have been taken as definitive proofs of human action on extinct mega-mammals. In this presentation, I will critically discuss these two research strategies and evaluate their weight in the current debate in South America. I will also explore how the new genomic results are integrated with the archaeological data. Finally, I will summarize the main agreements and disagreements concerning the expansion of humans in South America, and I will identify the main gaps and pending issues in this always lively debate.

Ben A. Potter

Beringian Archaeology, Genetics, and Northeast Asian - North American Connections

Recent Beringian archaeological and genetic data have converged in ways that illuminate long-held problems of biogeographic expansions of humans into Siberia and the Americas. From a Beringian standpoint, archaeogenetic patterning and adaptive strategies across the region are explicated in the context of models of the peopling of the Americas. Models of metapopulation formation, admixture events, and geographic locations based on genetic anchor points provide a framework to investigate adaptation to and movement through Beringia. Of special interest is shifting subsistence strategies, including predation on mammoth, bison, elk, caribou and fish. Specific routes from Beringia into North America south of continental ice sheets are considered under the light of current evidence.

Kurt Rademaker

Clocking the Terminal Pleistocene Peopling of the Andes

In the past two decades, early archaeological discoveries have steadily accumulated in the Andes, the planet's longest mountain system. In this presentation, I will summarize chronological and material evidence from the major terminal Pleistocene archaeological sites of the Andean highlands, one of the most challenging environments in the Americas. Sites dated to the terminal Pleistocene are known from the Andean highlands in Colombia, Ecuador, Peru, Bolivia, Chile, and Argentina, spanning nearly 40° of latitude and 2500 to 4500 meters above sea level. By the end of the Pleistocene, early South Americans had acquired extensive knowledge of Andean highland landscapes and resources. Based on radiocarbon chronologies and Bayesian modeling reported here, the best-dated early sites indicate widespread occupation of the Andes between 12,400 and 12,100 years ago. The apparent synchrony in early sites suggests extremely rapid dispersal through the highlands. Alternatively, contemporaneity may be a consequence of initial dispersal coinciding with a plateau in the radiocarbon calibration curve and relative imprecision of chronologies. Resolving the timing and routes of the initial peopling of the Andean highlands, and western South America more generally, will be possible with continued fieldwork to find and excavate new sites and with more and better radiocarbon dating.

Richard L. Rosencrance, Geoffrey M. Smith, and Katelyn N. McDonough

The What, Where, and When of the Western Stemmed Tradition

The Western Stemmed Tradition (WST) refers to a variety of stemmed projectile points and associated tools found in late Pleistocene and early Holocene contexts across the American Far West. The WST is best viewed as a widespread cultural tradition featuring similar technological expressions manifested in diverse ecological settings west of the Rocky Mountains, including the Great Basin, Columbia Plateau, Snake River Plain, and Pacific Coast. The earliest stemmed points in the American Far West date to ~16,000 years ago, with a major fluorescence beginning ~13,000 years ago and ending ~9000 years ago. Formal flake tools such as scrapers, gravers, notches, and burins are common at WST sites, while ground stone tools are uncommon but present. Perishable technologies at WST sites include fine and coarse cordage, basketry, wooden traps, eyed bone needles, bone leisters, and more. Our review of subsistence data at late Pleistocene WST sites shows people used diverse plant and animal foods attuned to local ecosystems. Recent developments in WST site discovery, radiocarbon dating, and technological analyses establish the WST, and early Far Western archaeology, as a critical component of understanding the peopling of the Americas.

Guadalupe Sánchez, Ismael Sánchez-Morales, Kayla B. Worthey, Ramón Guzmán, and Vance T. Holliday

The Last Clovis Frontier: Understanding the Late Pleistocene Human Occupation in Northwest Mexico

Archaeological investigations over the past 25 years in the state of Sonora have shown that terminal Pleistocene Clovis bands expanded south into Northwestern Mexico. The northwestern half of the state of Sonora contains a vast Clovis archaeological record consisting of a dozen Clovis sites and more than 149 reported projectile points and Clovis preforms; 119 of these specimens are found within Clovis sites and the rest are isolated finds. Only 34 Clovis points and preforms have been reported in Mexico outside of Sonora, nine in the state of Chihuahua and the remaining 25 in the rest of Mexico. Among the Clovis sites found in Sonora, the most important is El Fin del Mundo, which contains a stratified buried gomphothere (*Cuvieronus*) hunting locality, along with a camp area and a lithic quarry. The Sonoran Clovis groups utilized both local volcanic raw materials commonly found in the coastal plain such as rhyolite, rhyodacite and basalt, and fine cryptocrystalline cherts. In Sonora, the Clovis groups inhabited lowlands of the coastal plain, hunted Pleistocene megafauna, and likely exploited the vast and diverse marine and terrestrial resources of the Gulf of California.

Lachie Scarsbrook

Correlating the Genetic History of Dogs and People following Their Arrival into the Americas

Recent palaeogenomic studies have shown correlations between the ancestry of dogs and the spread of ancient human populations across Eurasia. These processes extend as far back as 15,000 years ago, where dogs were being exchanged between genetically- and culturally-distinct hunter-gatherer populations. As dogs were introduced during the early peopling of Americas, it is likely similar co-evolutionary histories exist across the continent. To test this, we analysed spatial autocorrelation in pre-contact dog and human mitochondrial genomes from across North and South America. We found remarkable concordance in the origin and spread of mitochondrial haplotypes, which often accompanied major cultural transitions, such as the adoption of maize agriculture between 7,000 and 5,000 years ago in Central and South America. Combined, our results reveal the long-term and integral role that dogs played in a multitude of human societies across the world.

Heather L. Smith and Ashley M. Medlin

Current Assessments of the Clovis Complex and its Role in the Peopling of the Americas

Over the last century, our understanding of Clovis as a culture, as well as a technological complex, and its role in the peopling of the Americas has varied widely and been hotly debated. The past decade has seen researchers develop new hypotheses and test old ones to explain the Clovis phenomenon using an array of evidence including genetic, paleoenvironmental, paleoethnobotanical, faunal, geoarchaeological, and technological data. This paper provides a synthesis of recent developments in our discipline's understanding of Clovis' chronological, geographical, and adaptive contexts as an update to our last meeting at the *Paleoamerican Odyssey Conference* in 2013. We address how patterns in Clovis lithic technology, and specifically fluted points, are organized over time and space. Discussion focuses on recent research investigating relationships between

Clovis and other groups present during the latest Pleistocene and earliest Holocene.

Todd A. Surovell, Madeline E. Mackie, Spencer R. Pelton, Matthew J. O'Brien, Paul Sanders, and Robert L. Kelly

Domestic Spaces at the La Prele Site, Converse County, Wyoming

Dating to around 12,900 BP, the La Prele site in Converse County, Wyoming preserves a remarkable record of late Pleistocene human behavior. Over ten years, we have excavated five contiguous blocks preserving a mammoth kill and four nearby hearth-centered activity areas within the context of a large camp. In this presentation, we explore variability among the four domestic spaces we have excavated, all of which appear to have been occupied contemporaneously. These activity areas exhibit significant variation in a number of key characteristics, including artifact density and types, lithic raw material, diagnostic artifacts present, faunal assemblages, and spatial organization. As a well-preserved single component site buried by low energy overbank deposits, La Prele provides the opportunity to look at social and economic aspects of early Paleoindian lifeways rarely afforded by the archaeological record.

Michael R. Waters

The Late Pleistocene Peopling of North America—Converging Geological, Archaeological, and Genetic Evidence

Converging evidence from geology, archaeology, and genetics provides a robust understanding of the timing and process of the late Pleistocene peopling of North America. Geology provides information on when barriers and opportunities were created that would prevent or allow human migration from Asia to North America and then into the unglaciated portions of the continent south of the Canadian ice sheets. Archaeology provides empirical evidence of the presence and movement of humans across North America in time and space. Genetics provides the ancestral population history of the First Americans defining their place of origin, population splits as they migrated, and estimates of their arrival south of the ice sheets. The evidence from each of these disciplines provides unique and overlapping evidence of this story that together shows that people first arrived south of the ice sheets into unglaciated North America by ~15,700 years ago. Over the next 1700 years people expanded across North America and successfully settled its many different environments. Geological, archaeological, and genetic evidence also shows that pre-Last Glacial Maximum occupation of North America is unlikely.

Eske Willerslev, J. Víctor Moreno-Mayar, and David J. Meltzer

What We Know about the Archaeology and Genetics of the Peopling of the Americas

In the years since the 2013 Paleoamerican Odyssey conference, there has been a sea change in our understanding of the peopling of the Americas. This was a result of the ability to recover ancient genomes, which provide a far richer understanding of human population history than was previously possible using uniparental markers (mitochondrial and Y chromosome DNA). Since the first ancient American genome was published in 2014 (the Clovis-age Anzick child), scores more genomes have been sequenced from North and South America. Together with the emerging understanding of the population history of northeast Asia, these provide a broad picture of the peopling of the Americas. All ancient and present-day Native American individuals sequenced to date trace their genomic ancestry to an admixture of two populations, one from east Asia, the other northern Siberia. At some point thereafter ancestral Native Americans became isolated in northeast Asia, then subsequently made their way across Beringia. Their subsequent history is one of wide-ranging dispersals, extended periods of continuity, episodes of population replacement, and evidence of divergence, gene flow and admixture as groups expanded within the Americas. Native American population history, as independently derived from genetic evidence, is broadly consistent with the geological and archaeological records.

ABSTRACTS FOR POSTER PRESENTATIONS

Marta Alfonso-Durruty, Christina M. Balentine, Flavia Morello, Manuel San Roman, Miguel Vilar, Nicole Misarti, and Deborah A. Bolnick

Genes, Tools, Ice, and Tides: How Building Permeable Landscapes Shaped the Human Occupation of Fuego-Patagonia

Situated in the southernmost reaches of South America, Fuego-Patagonia (~49-56°S) is a vast area characterized by highly variable landscapes and strong biogeographic barriers to human migration. To the west are labyrinthine channels and fjords famous for their treacherous tides, while further east, glaciers and icefields limit landscape permeability. Despite these barriers, people have inhabited Fuego-Patagonia for ~12,000 years, with the diverse landscapes influencing where, when, and how people occupied the space and interacted with one another. Studies of ancient and present-day Fuegian-Patagonians show genetic differentiation between marine and terrestrial groups living in the western archipelagoes and eastern mainland, respectively, as well as between marine groups living north and south of the Beagle Channel. However, while landscape permeability and thus population movement was restricted by the presence of biogeographic barriers, technological developments, particularly canoes, transformed some of these barriers into spaces of intense human interaction. In this study, we take an interdisciplinary approach using evidence from archaeology, linguistics, stable isotopes, ethnohistory, and genomics to investigate how biogeographic barriers, technology, and sociocultural practices shaped human movements within Fuego-Patagonia. We argue that technological innovations enabled the peoples of Fuego-Patagonia to build permeable landscapes that facilitated both sociocultural and genetic exchange.

Marcellus de Almeida, Antonio Pérez-Balarezo, Antoine Muller, Antonio Carlos de Barros Corrêa, and Mario Pino

Computational 3D Analysis Differentiates Pedra Furada Lithics from Local Geofact Control Samples in Northeastern Brazil

The lithic assemblages from Toca do Boqueirão da Pedra Furada, Piauí, Brazil, remain central to debates over the early peopling of the Americas because their anthropogenic status has repeatedly been questioned. This poster presents a computational 3D assessment of whether pieces from the lowest levels of the site can be distinguished from local naturally fractured stones. We analyze 99 3D-scanned lithic pieces from BPF Phase 1 and compare them with 107 geofacts collected from two nearby taphonomic contexts: a rockfall area at the base of a cliff and a weathered conglomerate outcrop. Twelve variables quantify artifact geometry, including scar density and distribution, proportion of flaked surface, edge-angle variation, scar volume, rugosity, and scar curvature. Statistical comparisons show that the archaeological sample differs significantly from the geofact controls in most variables. BPF pieces exhibit more recurrent and spatially coherent removals, sharper and more regular edges, and shallower, smoother scar surfaces. These results support intentional knapping as the most parsimonious explanation for the excavated assemblage and offer a replicable framework for addressing artifact-geofact debates in controversial early contexts.

David G. Anderson and D. Shane Miller

The Paleoindian Database of the Americas (PIDBA) 2026 Update

The Paleoindian Database of the Americas (PIDBA) is a collaborative and open effort to compile locational, image, and attribute data, along with scholarly bibliographic references for diagnostic Paleoindian artifacts. In preparation for the Paleoamerican Odyssey II conference, a major effort was made to update the information in PIDBA, involving materials provided through an extended review of the published literature, and with contributions of primary data from dozens of colleagues. The 2026 PIDBA sample, at ca. 90,000 artifacts, is several times the size presented in earlier updates. The primary mapping data, and maps generated from it, are openly available at https://github.com/PIDBA/PaleoamericanOdyssey2026. Anyone is welcome to make use of this information, as well as add to and refine the information. PIDBA is an example of a collaboratively

built linked dataset useful to better understanding early human settlement in the Americas, with data and contributions for this update from many scholars.

Derek T. Anderson

Fantastic Beasts and Where to Find Them: Distributions of Pleistocene Faunal Specimens in Mississippi as a Complement to PIDBA Data

Over the past 15 years, a renewed focus on Paleoindian and Early Archaic research in Mississippi has resulted in the documentation of hundreds of additional diagnostic stone tools for the PIDBA database and a refinement of the existing data. This, in turn, has led to new and ongoing analyses of early hunter-gatherer behavioral and technological adaptations and landscape use throughout the late Pleistocene and early Holocene based on distributions of over 2100 projectile points, sourcing of lithic materials, and analysis of point morphologies. Mississippi has a rich, but relatively unknown paleontological record as well. Inspired by PIDBA, and designed to complement its archaeological data, a growing database of over 6400 publicly held late Pleistocene faunal specimens from Mississippi has been created in order to develop regionally-specific models of species paleoenvironment and human-animal interaction at the end of the Ice Age.

Tomás Arce

Beneath the Jungle and Rock: Mapping Caves in the Darién Gap Using Machine Learning and GIS

This poster presents the results of the initial phase of a cave- and rockshelter-oriented survey strategy in two tropical low-visibility landscapes of Colombia: the Darién region (Atlantic slope) and the coastal plain of southern La Guajira. Building on the occurrence of fishtail projectile points in both areas, the project asks to what extent these landscapes functioned as key nodes in the initial peopling of northwestern South America. Methodologically, the research combines geographic information systems and geospatial data with supervised machine-learning models (Random Forest) to translate geomorphological, hydrological, and geological variables into continuous surfaces of relative suitability for the presence of caves and rockshelters. These probability maps guide a multi-scalar research design integrating systematic pedestrian survey, geophysical methods, and targeted test excavations. In this first pilot phase, field verification focuses on evaluating both the reliability of the predictive model through ground-truthing and the archaeological character of the identified contexts, assessing whether the detected localities correspond to caves and rockshelters with meaningful preservation potential. In doing so, the project provides an initial assessment of the capacity of Darién and southern La Guajira to document some of the earliest human occupations in tropical lowland settings and to reconsider the role of low-visibility cave and rockshelter contexts in models of early settlement in the South American tropics.

Brendon P. Asher

Building a Legacy: The Contributions of Blackwater Draw to the Clovis Phenomenon

Blackwater Draw Locality No. 1, the Clovis Type-Site, was first investigated by professional archaeologists over 90 years ago. Since that time, numerous individuals and institutions have conducted excavations at the iconic locality, contributing to our current knowledge of the Clovis culture. This poster reviews the rich history of archaeological research and excavations at the site over the last 90+ years and highlights significant discoveries that have been made. Ongoing projects and continued research are also discussed.

Sergio J. Ayala, Anna Gilmer, and Robert Lassen

Assessing Stratigraphic Integrity at the Gault Site: Microdebitage Displacement and Geoarchaeological Evidence Across Clovis and Older-Than-Clovis Deposits

Area 15 at the Gault Site (41BL323) preserves one of the most significant stratified records of Paleoindian and older-than-Clovis occupations in North America, with the deepest cultural components currently bracketed between ~16,000 and 20,000 cal BP based on OSL chronologies (Williams et al. 2018). This study evaluates the integrity of these deposits through two complementary analytical frameworks focused on site formation processes and vertical artifact patterning. First, the vertical distribution of diagnostic microdebitage associated with the Calf Creek Horizon is used to model post-depositional translocation within the Area 15 sequence. Results demonstrate highly constrained downward movement of Archaic-age materials, supporting the integrity of the overlying Archaic cap and indicating minimal-to-no intrusion into underlying Paleoamerican deposits. Second, geoarchaeological and micromorphological analyses provide independent evidence for depositional stability, including stratigraphic continuity, cumulic sediment development, pedogenic structure formation, and limited evidence for significant

bioturbation or argilliturbation across critical cultural horizons. Together, these datasets indicate that Clovis and older-than-Clovis occupations represent discrete buried occupation surfaces rather than products of generalized vertical mixing. The results reinforce the interpretation that Area 15 preserves intact Late Pleistocene archaeological contexts with substantial implications for the antiquity and continuity of early human occupation in the Americas.

Robert A. Barlow

A Clovis-Age Radiocarbon Date from the Kimmswick Site

The Kimmswick Site (23JE02), located in Missouri, has produced several artifacts associated with the Clovis culture and megafaunal remains. Establishing a reliable chronology during excavations in the late 1970s and early 1980s was not possible because of poor sample preservation and contamination. A recent radiocarbon determination of 11,490 ± 40 ^{14}C yr BP was obtained from bioapatite in enamel from *M. americanum* associated with the Clovis occupation. Because the assay derives from enamel bioapatite rather than collagen, additional analyses are necessary to evaluate the reliability of the date and its implications for the chronology of the site.

Nicolás Batalla, Ximena S. Villagran, Francisco Pugliese, and André Strauss

High-Resolution Geoarchaeology in Archaeological Rockshelters from Central Brazil

The landscapes of the vast Central Brazilian plateaus present a clear signal of human occupation and transformation since at least ~14.8 ka cal yr BP. The sedimentary deposits from rockshelter sites in this region, favored by exceptional preservation conditions, exhibit traces of two large sets of occupations, one linked to hunter-gatherer or forager populations (since the Pleistocene-Holocene transition), and another one to horticultural ceramic groups (since the Middle-Late Holocene transition). Two of these sites, Gruta do Gentio II (GGII) and Lapa do Boquete (LBQ), located in Minas Gerais state, originally dated to at least ~11.3 and ~13.5 ka cal yr BP, record a wide array of archaeological materials, including lithics, pottery, seeds, bones, basketry, textiles, and partially mummified human remains. A microcontextual, high-resolution geoarchaeological study is currently underway to tackle the depositional and post-depositional processes at these sites. Micromorphological, FTIR spectroscopy, and micro-XRF results reveal a wealth of anthropogenic deposits, with phytolith-, charcoal-, and ash-rich laminae/lenses, typically alternating massive laminae/lenses with mixes of the same materials, pointing towards successive deposition/reworking events. Post-depositional phosphatization at GGII, occurring in whitish cemented ash-rich layers separated by sharp contacts, point towards possible abandonment episodes.

Christian Becerra Escobar, Aixa Battistini, Antonio Pérez-Balarezo, and Jalh Dulanto

Fracture, Recycling, and Raw Material Constraints in Paiján Bifacial Preforms from Pampa Lechuza, South-Central Peru

Bifacial preforms are often treated as failed or abandoned objects, but their fractures, reduction stages, and subsequent reuse can provide direct evidence for technological decision-making. This poster examines bifacial preforms from Pampa Lechuza, a Paiján occupation in the coastal desert of south-central Peru, to evaluate how raw material properties, manufacturing stage, fracture patterns, and reconfiguration shaped bifacial production. The study first reassesses the full preform assemblage through explicit technological criteria for distinguishing stages of bifacial shaping. It then explores relationships among raw material, degree of formalization, and fracture type in order to test whether particular rocks favored more successful reduction trajectories or, conversely, generated recurrent failure patterns. Finally, selected reused pieces are examined through diacritic analysis to reconstruct episodes of technological reconfiguration after fracture or discard. Special attention is given to the active zones transformed into functional edges and to the kinds of tools produced from broken preforms. By integrating reduction-stage analysis, fracture classification, and diacritic reconstruction, this study reframes discarded preforms as evidence for raw-material management, technological flexibility, and tool-life histories within Paiján lithic production.

Nicholas K. Bentley

Micromorphological Investigations of Possible Hearth Features from the Late Pleistocene / Early Holocene Component at Page-Ladson

Page-Ladson is an inundated multi-component archaeological site in northwest Florida with evidence of human activity by at least 14,550 cal BP. During the very end of the late Pleistocene and early Holocene, the now-submerged site was subaerially exposed for a significant period of time; this subaerial exposure and subsequent landscape

stability led to the formation of the SU 5 Paleosol. Within this paleosol are distinct features containing greater quantities of charcoal and gastropods than the surrounding sediment. These were originally interpreted to be anthropogenic hearths by the site's original excavators. Recent excavations of the SU 5 paleosol have located four more of these features in close spatial association to Suwannee, Greenbrier, and Bolen projectile points. Since their original descriptions, the anthropogenic nature and possible uses of these features have been called into question. Here I present a detailed micromorphological analysis of samples taken from these features to better understand their formation and evaluate their anthropogenic nature.

Jeanne Day Binning

Establishment of the Western Stemmed Tradition in the Southwestern Great Basin

People belonging to the Western Stemmed Tradition (WST) arrived in North America via the northwestern coastline before Clovis peoples were present in the contiguous United States. We propose that in Southern California their journey east, into the Southwestern Great Basin, occurred at the very end of the Pleistocene. Obsidian hydration data, collected from artifacts of Bodie Hills obsidian, indicate that Clovis people were living in the Southwestern Great Basin prior to people of the WST. We conclude that people of the WST did not occupy the Southwestern Great Basin until after 12,000 years before present.

Joseph M. Birkmann, Christopher W. Merriman, and Dave Rachal

The Terminal Paleoindian Allen Complex in New Mexico: Investigations at LA 184760, a Paleoindian Bison Kill along the Shores of Paleolake Otero in White Sands National Park

The terminal Paleoindian period remains remarkably poorly understood in the North American Southwest, particularly when considered in comparison with the surrounding Rocky Mountain and Great Plains regions. This poster describes the results of Bruce B. Huckell's limited excavations at LA 184760, a small Allen bison kill along the shoreline of Paleolake Otero within White Sands National Park. One of the only well-documented Allen sites in the region, the assemblage from LA 184760 includes three parallel obliquely flaked points, simple flake tools, flaked stone debitage, and bison tooth enamel. We provide a summary of the artifactual material recovered, the results of new isotopic analysis on the bison enamel, a discussion of lake conditions and the local environment at the time of occupation, and contextualize the site more broadly within the terminal Paleoindian and earliest Archaic landscape of the Tularosa Basin.

Haley Bjorklund, Rolfe Mandel, and Bryon Schroeder

Characterizing Spatial Patterning of Proboscidean Sites across the Big Bend Region of Southwest Texas

Recent archaeological investigations by the Center for Big Bend Studies and the Odyssey Archaeological Research Program have confirmed a deeply buried Clovis component at ~12,800 cal. BP at the Genevieve Lykes Duncan site in the Big Bend Region (BBR) of southwest Texas. This is the first buried Early Paleoindian site in the region, confirming human presence in the BBR during the terminal Pleistocene. This finding calls for a systematic investigation of the preservation of Pleistocene age materials in the BBR to inform future targeted surveys of early archaeology. This project approaches that goal by investigating proboscidean localities, both archaeological and non-archaeological, which are highly visible when conducting ground survey. GIS methods will be applied to assess spatial patterning in proboscidean sites' geographic and stratigraphic contexts. Absolute dating of proboscidean localities, where applicable, will further inform these trends by distinguishing localities representing terminal Pleistocene preservation. The presence of patterning in the preservation of proboscidean localities will inform on regional trends in the preservation of intact Pleistocene-age deposits capable of containing terminal Pleistocene archaeology. Results and interpretations of field investigations and GIS analyses will be presented in this poster.

Alberto Nava Blank, Alejandro Alvarez, Roberto Chavez, Julien Fortin, and James C. Chatters

Artifact Recovery and Sampling in a Deep, Lightless, Underwater Setting: Methods Devised by the Hoyo Negro and Yucatan Prehistory Projects

Over the last 15 years, members of the Hoyo Negro and Yucatán Prehistory projects have recovered hundreds of bone, paleobotanical, and mineral samples from submerged caves in the Yucatán Peninsula. These efforts have yielded remarkable discoveries, including the early human skeleton known as "Naia," as well as several new species of Late Pleistocene megafauna.

This extended fieldwork has enabled us to refine and standardize our recovery procedures for fragile remains in complex underwater environments. The current version of our recovery methodology comprises three main phases: First, produce high resolution 3D models of the cave system and the target specimen, which are critical for planning and executing each operation. Second, design of custom recovery containers based on model data that stabilize and protect the remains during extraction and transport to the conservation facility. Finally, implement a diver centric handling protocol that minimizes mechanical stress on the specimen while strictly controlling ascent rates. This approach prevents the sample from accelerating upward from deep pits where many remains are found and simultaneously reduces the risk of uncontrolled ascent for the divers. Together, these tools and procedures provide a reproducible framework for the safe, efficient recovery of archaeological and paleontological materials from flooded caves.

Erika Blecha, Rolfe Mandel, and Bryon Schroeder

The Genevieve Lykes Duncan Site: A Deeply Buried Clovis Campsite in the Big Bend Region of Southwest Texas

Genevieve Lykes Duncan (GLD), located in the Big Bend region of SW Texas, has emerged as one of the most significant Paleoindian sites in the region. The site is in alluvium and consists of stratified Pre-Contact occupations, most of which are deeply buried. Investigations from 2010-2016 established the presence of buried Late Paleoindian and Early Archaic cultural deposits, mostly in the form of earth ovens. Currently, those features are among the earliest examples of hot rock oven technology known in North America. Excavations in 2021-2025 went below the oldest Late Paleoindian component and exposed a Clovis component that dates to ca. 12,750-12,600 cal BP. In addition to yielding a Clovis preform, GLD has produced hundreds of flakes and tens of bone fragments and pieces of ochre. The lithic material remains to be analyzed but ranges from local red claystone to clear chalcedony, and potentially exotic pink Alibates chert. Also, multiple features, including concentrations of debitage, bone fragments, ochre, and charcoal, were recorded in the Clovis component. The highly fragmented faunal remains mixed with ochre and charcoal suggests that GLD was a campsite and not a kill locality, though more excavation is needed to fully understand the significance of this site.

John C. Blong, Lisa-Marie Shillito, Dennis L. Jenkins, Helen L. Whelton, and Ian D. Bull

Plants and People in the Terminal Pleistocene Great Basin: Multiproxy Analysis of Human Coprolites from the Paisley Caves, Oregon

The nature of terminal Pleistocene human subsistence strategies in the Great Basin has been widely debated, with much of the debate centered on the role of dietary plant resources in food systems. The Paisley Caves in south-central Oregon provide a unique opportunity to investigate human subsistence strategies during the first several millennia that humans occupied the northern Great Basin. Excavations at the Paisley Caves produced an assemblage of human coprolites from terminal Pleistocene contexts, providing an important resource for a study of individual human diets during this time. This poster presents the results of pollen, phytolith, and plant macrofossil analyses of terminal Pleistocene coprolites from the Paisley Caves. The goal of these analyses is to test models emphasizing an early broad-based wetland-focused subsistence economy in the northern Great Basin, with the ultimate goal of better understanding the process of initial human settlement of the Great Basin and of the Americas.

Richard A. Boisvert and Jennifer C. Ort

Implications of Fluted Point Use-Life at the Bull Brook Site, Ipswich, Massachusetts

The Bull Brook site (19-ES-80) in Ipswich, Massachusetts, was a large, well known and complex Paleoindian aggregation site, strategically situated to support caribou hunting and posited to having been occupied only once. The artifact inventory and catalog from the site contain a wide array of metric, non-metric and contextual data. Descriptions and photographs of the preforms, fluted points and point fragments reveal a rich and varied record of manufacture, use, and reuse. Previous interpretations of the site have focused on its geographical setting and internal site structure. This study expands into the use-life history of the fluted projectile points in order to provide a more nuanced understanding of the hunting related behaviors at the site.

Steven L. Boles, Ashley Smallwood, and Thomas Jennings

The Nolin River Paleoindian Complex: Documenting an Extensive Paleoindian Presence in Central Kentucky

Starting in 2016, the lead author began documenting extensive private collections from the Copelin Valley site in

Hart County, Kentucky. During this multi-year effort, additional nearby Paleoindian sites were also documented via the invaluable aid of avocational archaeologist Perry Hagan. Since that time, over 100 Paleoindian sites have been documented, most within a 15 km radius of the Copelin Valley site. Starting in 2023, Smallwood and Jennings began testing Paleoindian sites in this region. Results from consecutive field schools from 2023-2025 revealed intact A and A/E horizons at the Copelin Valley site as well as several nearby sites.

Lauriane Bourgeon, Lauren Norman, Ariane Burke, and Rolfe D. Mandel

Taphonomic Synthesis of Bluefish Caves (Yukon, Canada): Four Cavities, Four Faunal Assemblages, Four Different Stories

Bluefish Caves (Sriijàanjik Ch'à'an), located in northern Yukon on the traditional territory of the Vuntut Gwitchin First Nation, has long been at the center of debate over early peopling of North America. Initial investigations by Jacques Cinq-Mars and colleagues (1970-1990's) proposed human occupation about 30,000 years ago, a hypothesis widely contested by the scientific community. A systematic taphonomic analysis of faunal assemblages from Caves I and II at the Université de Montréal (2012-2017) provided renewed support for human presence, identifying evidence of short-term hunting activities as early as 23,500 BP. Subsequent work by the University of Kansas Odyssey Archaeological Research Program (2019-2025) extended taphonomic analysis to the mammal and bird assemblages from Caves III and IV, revealing no evidence of human activity in either cavity. This paper synthesizes thirteen years of taphonomic research at Bluefish Caves, contrasting the archaeological signature of Caves I and II (both yielding stone tools and human-modified bones) with the paleontological character of Caves III and IV. We suggest that Caves I and II were preferentially selected by early humans for their larger dimensions and elevated view over former glacial Lake Old Crow and seasonal prey migration routes.

Kale Bruner

Reanalysis of the Lithic Assemblages from Bluefish Caves 1 and 2: Insights into Technological Organization and Site Function

Lithic artifacts recovered during excavation of Bluefish Caves 1 and 2 in the 1970-80s were reanalyzed to gain a better understanding of hunter-gatherer technological organization in the post-glacial ecological refugia of eastern Beringia. The small assemblage consists primarily of debitage but with burins, microblades and microblade cores also present. A combination of debitage attribute analysis, refitting and minimum nodule analysis yielded results that reflect a short-term logistical camp(s) where microblade production, biface reduction, tool edge maintenance, and utilization and maintenance of burins took place. Lithic material was highly conserved with multiple nodules of non-local chert transported unknown distance and nearly exhausted. Microblade cores were rejuvenated using the Campus method and discarded on site. These findings indicate the caves were utilized by a group or groups of highly mobile hunter-gatherers who share technological affinities to the Denali technocomplex.

Adam M. Burke

Incorporating Petrographic Chert Provenance into Existing Models of Late Pleistocene and Early Holocene Landscape Use in Florida

Past research in Florida has produced robust comparative datasets that are useful for interrogating a suite of varied questions related to hunter-gatherer behavior in the past. Paleoenvironmental reconstructions are often considered in combination with the spatial distribution of subsistence resource on the landscape (such as toolstones and water) as a means to evaluate, explain, and predict patterns in the distribution of diagnostic projectile points across both space and time. Much of this research approaches the study of past humans through spatial correlation and statistical testing of people and subsistence resources using large spatial datasets of archaeological sites, water courses, and toolstone-rich areas. These research models provide concrete insight into where people were on the landscape and how their locations were related to subsistence resources, but there is limited discussion of the movement that must have occurred within and between these areas of dense human occupation. This poster aims to improve these models by incorporating toolstone provenance data into the existing spatial-modeling framework. A preliminary comparison of Suwannee and Bolen projectile points from Florida (dating to the Younger Dryas and early Holocene, respectively) is presented, and past human mobility between densely-occupied resource-rich loci is synchronically and diachronically evaluated.

Adam M. Burke and Bryan E. Tomlin

Late Pleistocene and Early Holocene Chert Provenance in Florida: Comparing the Efficacy of Petrography and LA-ICP-MS

Recent research focused on chert provenance in Florida has contributed new data that improve our understanding of past human mobility on the Southeastern Coastal Plain during the late Pleistocene and early Holocene. Focusing on Suwannee and Bolen projectile points, these studies applied petrographic methods to ascribe toolstone provenance and inform the movement of raw materials on the landscape. While this research has provided new data and testable hypotheses, not all chert artifacts can be adequately or reliably characterized using petrography. This poster presents new geochemical data acquired with laser ablation- inductively coupled plasma-mass spectrometry (LA-ICP-MS) in an effort to further refine chert provenance ascriptions. Projectile points that were previously subjected to petrographic analyses (but could not be reliably ascribed to source) were analyzed with minimally-destructive LA-ICP-MS to characterize their geochemical makeup. These data are compared to both solution and LA-ICP-MS data collected on geologic samples from precontact chert quarries in Florida and Georgia to test the efficacy of geochemical approaches to provenance within the extant petrographic framework.

David Bustos, Matthew R. Bennett, Sally C. Reynolds, Edward A. Jolie, Thomas M. Urban, and Danial Odess

Fossil Prints in 3D: Traces Preserved in Time

This work explores how modern three-dimensional documentation methods are transforming the study and preservation of fossil footprints and trace fossils. Using photogrammetry, LiDAR, and digital modeling, researchers can capture fragile prints with exceptional detail, preserving evidence of ancient life and movement before erosion or human impacts erase them. These digital reconstructions provide new insights into biomechanics, behavior, paleoenvironmental conditions, and the interactions between humans and megafauna across Ice Age landscapes. The project highlights how 3D technologies not only advance scientific analysis, but also expand public education, virtual access, and long-term conservation of some of the world's most vulnerable fossil track sites.

Ian Buvit

Modeling Northeast Asian Upper Paleolithic Human Demographics as Spatiotemporal Evidence for an Ancestral Native American Source

The traditional Beringian Standstill hypothesis has faced increased scrutiny due to a lack of archaeological evidence in Alaska and Chukotka during critical periods. Alternative hypotheses propose ancestral Native American isolation occurred elsewhere—possibly the Arctic plain, northern China, southern Siberia, or the Paleo-Sakhalin-Hokkaido-Kuril (PSHK) Peninsula. Using archaeological ^{14}C dates and stone-tool trajectories (specifically microblade cores and bifacial projectile points), colleagues and I have tested these scenarios with computer simulations to model Last Glacial Maximum (LGM) human demographics in southern Siberia, Beringia, and the contiguous areas of Mongolia, Sakhalin, and Hokkaido. Here I include northern China, the Aldan River Valley, the Russian Far East, and the Upper Lena River Basin, employing summed probability distributions and kernel density plots for analysis. Results from the expanded database and Bayesian models demonstrate LGM population contraction in northern and most interior regions, paired with concurrent expansion in southern and coastal areas. From these data, I conclude that Ancestral Native Americans likely emerged from a coastal refugium on or around the PSHK Peninsula rather than elsewhere.

Martha C. Cano and Carlos E. López

Bifacial Multi-Functional Tools as Markers of an Early Human Presence in Western Colombia

Archaeological projects carried out over the past 40 years in the Middle Cauca River basin (western Colombia) have recovered a variety of lithic artifacts manufactured and used between the twelfth and the fourth millennium before present (BP). Cobble tools (used as hammerstones, handstones, and grinding bases) are common in these assemblages, as are bipolar percussion products and tools made from flakes with little to no retouch. Associated with these technologically simple types is a series of large, predominantly bifacial implements with notches or basal constrictions for hafting. While these groups were not the earliest to inhabit the Middle Cauca region, they were the first to focus on the use of wild and domesticated plants in mid-elevation humid montane forests, particularly in landscapes shaped by volcanic activity. However, some bifacial tools described as hoes or adzes in previous literature may have been misidentified; certain

oval specimens may instead be bifacial or plano-convex scrapers used in butchering activities. This peculiar assemblage, typical of lower elevations (around 1000 m asl), is only beginning to be identified in collections and requires more detailed contextual analysis.

S.J. Casillas, Monica Eckels, and Jamie Hodgkins

Comparative Zooarchaeological Analysis of Two Excavation Units at the Jones-Miller Paleoindian Bison Kill Site in Northeast Colorado

The Jones-Miller site is a Paleoindian bison kill located in northeast Colorado. It was discovered in 1972 during agricultural land modification by Robert Jones, Jr. This site was excavated by Dennis Stanford and colleagues throughout the 1970s, and dates to approximately 10,800 BP. Jones-Miller consists of the skeletal elements of over 300 *Bison antiquus*, a now extinct bison. Previous research has emphasized communal Paleoindian hunting strategies, bison behavior, and ecology, however analysis using modern zooarchaeological methods have not been conducted until now. This poster presents the first zooarchaeological comparative analysis of two 2 x 2 m excavation units within the larger 36 by 40-meter bone bed, units G106 and D106. Using standard zooarchaeological methods, both assemblages were analyzed for surface modification including breakage patterns, epiphyseal fusion, burning, weathering stages, and presence of toothmarks and cutmarks. The analyses suggest evidence for human processing associated with strategic communal Paleoindian hunting events. Additionally, epiphyseal fusion patterns and previously conducted dental analyses further support the interpretation of multiple seasonal kill events rather than a single kill event. Together, these findings contribute new insights into Paleoindian hunting and subsistence strategies at Jones-Miller during the late Pleistocene.

Carlos Castaño-Uribe, Pablo Aristizábal Espinosa, Carlos A. Monsalve, Saán Flórez Correa, Laura Reales Herrera, Gilberto Artioli, Gregorio Dal Sasso, Andrea Busnardo, Roberta Olivero Neilson, Giulia Ricci, Lara Maritan, Brunella Muttillo, and Francesco Sauro

Extending the Chronology of Human Presence and Rock Art in Chiribiquete (Colombian Amazon): New Radiocarbon Dates and Archaeological Evidence from Poza Roja

A newly identified rock art site in the Serranía de Chiribiquete was discovered in December 2024, yielding the first human skeletal remains ever recovered in this region, after over three decades of research. The site is located along a ~4 km rock cliff with overhanging escarpments, featuring over 3000 rock art representations in seven pictorial panels, and two unprecedented semicircular ritual spaces. Two natural funerary vaults were documented, containing human bone fragments and faunal remains. A series of radiocarbon dating on the bones (human and faunal) and charcoal associated to specific paint preparation areas below the panels have yielded two main periods of human frequentation: an older one ranging from 10,700 to 7400 BP and a younger between 2700 and 2010 BP. These results confirm that human occupation and ritual activity in Chiribiquete span from at least the early Holocene, suggesting that a revision of previous sites where older dates were disregarded for insufficient anthropic evidence should be now re-analyzed carefully (including the Pleistocene dates of the El Arco site). These new discoveries point to a longer and more continuous human presence and rock art in Chiribiquete than previously reported.

Larkin R. C. Chapman

Potential Causes for Differing Equid Population Dynamics in North America, Beringia, and Eurasia

Population dynamics of the genus *Equus* have been invoked to support both the overkill and climate change hypotheses for Pleistocene extinctions. During the terminal Pleistocene, data show that horses were extirpated on the continent of their origin while surviving in Eurasia, where there is good evidence for human exploitation, despite feral horses flourishing in the American West today. Using published radiocarbon dates, I explore differences and look for patterns in horse occurrence data in North America, Beringia, and Eurasia. I then compare these results with the stable isotope record and known terminal Pleistocene events. I use these results to draw inferences about one taxon's susceptibility and durability in the face of climate change and human expansion.

James C. Chatters, Alberto Nava Blank, Alejandro Alvarez, Samuel S. Meacham, Dominique Rissolo, and Helena Barba Meinecke

Evidence for Systematic Water Collection by Paleoamericans of the Northern Yucatan Peninsula, Quintana Roo, Mexico

Humans need water to live, but archaeologists rarely explore the technologies ancient hunter-gatherers might have used to assure access to this critical resource. In

2010, soon after the discovery of Hoyo Negro, a natural trap deep inside a now-submerged cave, divers observed parallel grooves along the pit rim, thinking they might be rope marks. This identification was confirmed in 2022, leading to 3-D documentation and measurement of these unusual features along with dating of abundant wood the water-gatherers had burned for light. Torchwood charcoal and nearby piles of small stones with disparate origins indicate that between 12,600 and 10,200 cal BP Paleoamericans lowered weighted containers of unknown form 30 meters to the groundwater surface, raising the full vessels to the pit rim on ropes just 5 mm in diameter. This activity wore at least 29 deep grooves into the flowstone coating the pit rim. Lack of any younger charcoal indicates the site ceased to serve as a water source after sea levels rose and a wetter climate supported the return of tropical evergreen forest to the northeast Yucatan Peninsula. This finding represents the first documented evidence for systematic water collection by Paleoamericans and bespeaks a well-developed cordage technology.

William A. Childress and Jeanette Cole

An Unfamiliar Dalton Microlithic Tool Assemblage near the End of its Appalachian Lithic Source Tether at Smith Mountain Gap, VA

Smith Mountain Gap (SMG) was a prehistoric gateway to Virginia's Piedmont and a biological ecotonal landmark between the Piedmont and Mountain biomes. Investigations of the earliest prehistoric settlers at SMG suggest that it was a cultural ecotone as well. The south bank successional occupation of the Roanoke below SMG is largely consistent with other Southeastern drainages described by Coe's Hardaway sequence combined with Clovis. North bank occupations, however, differ in site type and cultural orientation. One north bank occupation is characterized by reliance on distinctive Ridge and Valley blue-grey chert available in small irregular nodules ≤7.5 cm in diameter that were possibly from southwest Virginia or, more likely, Tennessee, or Kentucky. Tools are restricted in size to what can be reduced from these weathered nodules which often contain interior fracture planes. Projectile points are small with little similarity to Hardaway Dalton, but some resemble the Hope variant of San Patrice. Their accompanying assemblage consists of small, <3.3 cm flakes and bladelets about 30% of which display retouch indicating use as tools. Full-size formal unifaces of this chert are absent although isolates occur in small numbers in some south bank occupations. The point assemblage manifests heavy curation. Our poster documents this incursion.

William A. Childress and Joseph A. M. Gingerich

Comparative Study of Early Narrow Lanceolate and Stemmed Points/Bifaces in the Eastern U.S. as Manifested at Smith Mountain Gap, Virginia

Investigations of early settlement at SMG revealed a previously unreported presence of unfluted narrow lanceolates (ENLs) including weakly stemmed types in the middle to upper reaches of the Roanoke River, a major Southeastern drainage. These forms were initially hypothesized to be an extension of the Plano tradition of the Northeast but studies of variation in their morphology indicated three ENL variants which may not be formally or chronologically related to each other. As erosion from the Smith Mountain hydro project reached further and deeper into the levee sediments, recently discovered new data expands this gallery to include forms that may be earlier than Clovis and suggests pan- regional expressions of archetypal "pre-typic" forms based on a widespread general technological practice prior to the emergence of "styles" reflecting cultural identity and difference among regional groups. This poster, drawing on admittedly limited sample populations, will present this assemblage aided by comparative analysis to inform and support researchers in interpreting similar early assemblages from other regions.

William A. Childress, William Henika, and Christopher Bailey

A High Strain Zone Microcrystalline Lithic Material Used for Tools by Paleoamericans at Smith Mountain Gap, Virginia

Highly metamorphosed quartz and quartzite occurring in the Mesoproterozoic terranes of the Blue Ridge province of Virginia, was particularly favored during the Paleoindian and the earliest Early Archaic periods at Smith Mountain Gap. This poster will describe "shear zone" chalcedony also known as "mylonite" including its petrogenesis, lithology and use by Paleoamericans at the Smith Mountain Gap early site complex at the western terminus of the Middle Roanoke River drainage. We will also examine mylonite's early settlement significance in Virginia and potentially other parts of the larger crystalline Appalachian region while briefly documenting its similarity to Ramah chert brought into the Eastern U.S. from Labrador during later prehistoric periods.

William A. Childress, Joseph A.M. Gingerich, Michael Johnson, and Jeanette Cole

The Cultural Succession of the Paleoindian-Early Archaic Period at Smith Mountain

Smith Mountain shows a unique inventory of projectile points, where nearly every known projectile point type in the Middle Atlantic and sometimes the broader Southeast is represented. The presence of these types suggest a major corridor for early hunting and gathering groups along the mountainous margins of the state at the divide between the Blue Ridge and Piedmont regions. Early forms are comparable to early pre-Clovis triangles found at Cactus Hill and Meadowcroft and Southeast region variants such as Haw River and Hardaway Blades, Clovis is well represented as well as other Middle Paleoindian fluted forms. These earliest forms are followed by the Dalton Cluster which consist of classic Dalton and Hardaway side-notch and Plano forms that are radiocarbon dated at Smith Mountain. Various Early Archaic forms include Kirk, Palmer, Lost Lake, Thebes E-Notched, Big Sandy, bifurcates, and Kirk Stemmed. The complete sequence of regional point types coupled with exotic raw material use speaks to broader settlement patterns and a new understanding of certain technological traditions that existed in multiple regions across the East.

Danna Camila Cifuentes-Fandiño, Gaspar Morcote-Ríos, Francisco Javier Aceituno, and José Iriarte

First Evidence of Bertholletia Excelsa (Lecythidaceae) in Archaeological Context of Serranía de la Lindosa (Colombian Amazon) Associated with the Early Holocene

Charred fragments of Brazil nut or castaña (*Bertholletia excelsa*) seeds were recovered from archaeological contexts dating back 7200 years at sites discovered in the Serranía de La Lindosa (Guaviare, Colombia). These are the first records of this type of seed found in the Colombian Amazon. The application of field techniques such as flotation and dry sieving, along with laboratory experiments on modern specimens and the use of contemporary scientific reference collections of fruits and seeds, has allowed for the taxonomic identification of the archaeological remains. These findings highlight the close relationship between the Brazil nut or castaña tree and the ancient human groups that inhabited this Amazonian region.

Loren Clark, Julien Fortin, Dominique Rissolo, Scott McAvoy, and Silvina Vigliani

Simulating Human and Megafauna Access in the Now-Submerged Late Pleistocene/Early Holocene Caves of Quintana Roo, Mexico

During the Late Pleistocene/Early Holocene (LP/EH), humans and animals moved through complex cave systems underground that are emblematic of the modern state of Quintana Roo, Mexico. Currently, these now-submerged systems are observed by divers who move weightless through the silent caves, haloed in the white gleam of their flashlights. This sits in stark contrast to how LP/EH humans and animals would have navigated these once-dry caves. Reconstructing human and faunal access to the caves requires multidisciplinary and multi-resolution research methodologies that provide clear documentation of evidence of entrance and tunnel morphology, mining activities, navigational markers, and freshwater collection features. Our team seeks to combine the wealth of knowledge and observations provided by local cave divers with high resolution spatial analysis to refine our archaeological interpretations of human and faunal access and interaction within these cave systems. Building reconstructions and simulations the Late Pleistocene/Early Holocene underground environment allows us to then take our interpretations and scale them dynamically to answer both broad and detailed questions about human and faunal interaction with this unique and complex landscape.

Marion M. Coe

Wets Virginia, Mountain Bog-ma: Reevaluating Paleoenvironmental Proxy Records at Cranberry Glades

Until recently, limited modern archaeological research in West Virginia has resulted in a dearth of published data. The high frequency of rainfall and lack of dry rock shelters in this part of the Appalachian Mountains in West Virginia has created conditions unconducive to organic preservation, further constraining paleoenvironmental, chronological, and archaeological reconstruction of the region, especially during the late Pleistocene and early Holocene. Cranberry Glades, located in Pocahontas County in southeastern WV, are a series of high elevation, acidic bogs which are refugia for boreal-type ecology believed to have been formed at the Laurentide glacial margin during the Last Glacial Maximum. These undisturbed, continuously-accumulating bog deposits provide a record of the late Quaternary in a region that has experienced dramatic

human-driven landscape alterations. This project proposes an updated study of West Virginia environmental proxy records by collecting pollen cores from Cranberry Glades for the purpose of paleoenvironmental reconstruction and improving dating chronology in the region.

C. Dylan Colucci and Derek T. Anderson

Revisiting the Mississippi Paleoindian and Early Archaic Point Survey: Late Pleistocene–Early Holocene Data from the Gulf Coastal Plain, USA

The Mississippi Paleoindian and Early Archaic Point Survey was started in 1968 by Samuel O. McGahey and other archaeologists at the Mississippi Department of Archives and History, but progress towards growing the database slowed after Sam's retirement in 2003. Since then, two official updates to the survey have been presented (Anderson and Miller 2016; Colucci, Miller, and Anderson 2023). This poster presents the culmination of research efforts related to the survey since its inception in 1968. Here we focus on the styles, frequencies, and distributions of points that reflect human occupation of the region during the Late Pleistocene and Early Holocene and highlight recent additions that are to be included in forthcoming updates to the Paleoindian Database of the Americas (PIDBA).

Daniel A. Contreras and Brian F. Codding

How Likely Are We to be Underestimating Paleoindian Populations? Landscape Taphonomy and Dates-as-Data in the Bonneville Basin

Accurately reconstructing past human population dynamics is critical for explaining major patterns in the human past. Demand for demographic proxies has driven hopeful interest in the "dates-as-data" approach, which models past demography by assuming a relationship between population size, the production of dateable material, and the corpus of radiocarbon dates produced by archaeological research. However, several biases can affect assemblages of dates, complicating inferences about population size. One serious but addressable issue centers on landscape taphonomy — the ways in which geologic processes structure the preservation and recovery of archaeological sites and/or materials at landscape scales. Here, we explore the influence of landscape taphonomy on demographic proxies by using lake-level reconstructions to explore the relative abundance of near-shore environments at different levels of Lake Bonneville in the Terminal Pleistocene and Early Holocene, and available landform ages to assess the proportions of these landforms that are available to archaeological survey. We explore the ways in which this landscape taphonomy has structured the radiocarbon record of the Bonneville Basin, and how that is likely to affect dates-as-data (and other) approaches to estimating Paleoindian populations.

Renzo D. Córdova, Rodrigo A. Inga, Jalh Dulanto, and Antonio Pérez-Balarezo

Projectile Point Variability and Fishing-Hunting Strategies in the Paiján Desert-Oasis Occupation of Pampa Lechuza, Peru

Early Andean hunter-gatherer economies have often been reconstructed through contextual associations between tool types and faunal remains, supported by ethnographic analogy. Yet the repeated occurrence of Paiján projectile points across different ecological settings raises a more specific question: did similar point forms always reflect the same weapon systems and prey targets? This poster addresses that issue through an integrated zooarchaeological and morpho-technological study of the projectile points from Pampa Lechuza, a stratified Paiján occupation in a groundwater-fed oasis on Peru's south-central coast. We combine technological analysis, 2D geometric morphometrics, ballistic-performance criteria, and zooarchaeological evidence to evaluate whether morphological variability among lithic points may reflect differentiated hunting and fishing strategies. Rather than assuming that Paiján points were primarily designed for medium-sized terrestrial prey, we explore the possibility that part of the assemblage relates to marine capture technologies, including possible harpoon-like weapon systems. By linking projectile-point morphology to prey behavior, coastal fauna, and technological performance, this study moves beyond typological classification and examines how early foragers adjusted weapon design to the logistical demands of desert-maritime mobility.

Barbara A. Crass and Charles E. Holmes

Bone-Fueled Fires and Activity Areas at the Swan Point Site, Alaska

The Diuktai phase of the East Beringian tradition at Swan Point in the Tanana Valley, Alaska, has several unique activity areas associated with bone-fueled fires circa 14,300 cal BP. Specific activities include: (1) reduction of mammoth tusks for ivory raw material; (2) processing waterfowl (swans and geese) and mammals (e.g., hare, caribou, horse, mammoth); (3) stone tool use, maintenance, and application of the "Yubetsu method" to manufacture

microblades. Knowledge of the taphonomy of bone-fueled fires (Crass & Behm 2026) allows for the reconstruction of the activity areas and their spatial relationship to the bone-fueled hearths.

Cenetria Crockett, Kyle Montgomery, Saphira Laughter, and Kylie Colvill

Photogrammetry and Museums: Enhancing Exhibits with 3D Models

The technological age has given rise to digital archaeology, introducing advanced tools like photogrammetry to create detailed 3D models. As its use expands, museums are finding innovative ways to integrate these models for immersive exhibitions, increasing both artifact preservation and public access. This poster presents a case study from the Blackwater Draw National Historic Landmark and Museum. During the 2025 Field School, photogrammetry was used to create 3D models of the excavation units and select artifacts. This project demonstrates how such models can enhance exhibits by bringing the excavation experience directly to visitors and offering new ways to engage with digital archaeology.

Matthew Cuba, Brian Andrews, Andrew R. Boehm, Joel Butler, Michael Diehl, Vance T. Holliday, Jason Windingstad, and David J. Meltzer

Gypsum Overlook: An Early Holocene Occupation in the Tularosa Basin of New Mexico

The remains of several 8800-year-old structures and associated hearths/roasting features were recently discovered along the trailing edge of the White Sands gypsum dune field in southern New Mexico, on the White Sands Missile Range. Formed of anhydrite (burned gypsum), these had been exposed by erosion and in some instances form pedestals above the surrounding ground surface. Gypsum Overlook provides a glimpse into Early Holocene adaptations in a post Pleistocene warming climate. Gypsum Overlook provides evidence of a rare Early Holocene site and activities, and the earliest dated structures currently known from the American Southwest.

Joshua Cummings, Trevor Dow, Kenneth Holyoke, and Gabriel Hrynick

Recent Palaeoindian Research in New Brunswick, Canada

Compared to neighboring regions, New Brunswick has seemed to have a marginal record of Fluted-Point and Late Palaeoindian period occupation. Only two intact Palaeoindian components have been identified, and as a result the province's Palaeoindian record remains one primarily known from occasional find spots by avocational collectors. Recently, we have examined several large collections amassed by avocational archaeologists and expanded both the quantity and distribution of Palaeoindian material in New Brunswick. New Brunswick's location in Far Northeastern North America makes it relevant for understanding one of the latest episodes of colonization of North America. Based on recent work, we suspect that New Brunswick's apparent marginality is due to research bias, as opposed to an absence of Palaeoindian occupation. In this poster, we review work on the Palaeoindian period in New Brunswick, introduce new collections-based work, suggest future research, and speculate about New Brunswick's place in the Palaeoindian archaeological record and the peopling of the continent.

I. Randolph Daniel Jr., Christopher R. Moore, and Albert C. Goodyear

End Pleistocene and Younger Dryas Stadial Advance and Effects on Fauna and Humans

The end of the Pleistocene and onset of the Younger Dryas marked an abrupt climatic reversal coincident with major faunal losses and disruption to human populations. Extinctions of numerous megafaunal genera were unusually severe compared to earlier glacial–interglacial transitions. A recently completed fifty-year study of fluted points in the Carolinas documents parallel cultural changes among Paleoamerican groups. Analysis of Clovis and Redstone typologies shows a marked decline in post-Clovis Redstone forms, suggesting population contraction. Although declines in post-Clovis point types elsewhere in North America do not clearly follow this pattern, the issue remains poorly explored. Archaeological evidence from Siberia and Iberia, however, also indicates population bottlenecks, consistent with a widespread environmental or possibly extraterrestrial trigger. In the eastern United States, technological shifts accompany these demographic changes. Redstone points appear optimized for bayonet-like stabbing and repeated withdrawal during close-range dispatching of animals with handheld lances, rather than the earlier emphasis on spearing. ArcGIS mapping of county-level distributions in the Carolinas shows that Redstone points made from suspected North Carolina metavolcanic stone cluster near major Fall Line localities. Following severe population loss, these areas may have served as enduring natural landmarks, where scattered kin groups continued to interact.

Audra Darcy, Corrin Laposki, and Gideon Hartman

Stable Isotope Evidence for Ecophysiological Stress during Late Pleistocene Megafaunal Decline in Eastern Beringia

Terminal Pleistocene megafaunal extinctions remain a contentious topic, with hypotheses emphasizing human impacts, climate change, or a combination of both. However, the physiological mechanisms linking environmental change to herbivore population decline is overlooked. This study investigates isotopic indicators of dietary stress in large herbivores from interior Alaska during the Late Glacial – Holocene transition (~20,000 – 10,000 cal yr BP), a period that overlaps with the earliest human presence in eastern Beringia. We analyze stable carbon and nitrogen isotopes (δ^{13}Ccoll, δ^{15}N) in bone collagen and carbonate (δ^{13}Ccarb) to evaluate herbivore diet quality and metabolic response through time. Initial results show a temporal decline in δ^{15}N values, suggesting shifts in nitrogen availability and diet quality that impacted herbivore wellness. We further evaluate isotopic spacing between carbonate and collagen (Δ^{13}Ccarb–coll) as a proxy for digestive physiology and methane production, providing a measure of dietary stress under declining forage quality. By focusing on physiological responses preserved in skeletal tissues, this approach establishes a framework for linking environmental change to herbivore metabolic constraints. These results provide an ecophysiological basis for megafaunal decline and refine archaeological models of human–faunal interactions by constraining changes in resource quality and availability associated with human occupation of eastern Beringia.

Loren G. Davis, Masami Izuho, Fumie Iizuka, and Alexander J. Nyers

3D Scanning Late Upper Paleolithic Lithic Technology in Hokkaido, Japan: Building the Pleistocene ROOTS Archive for the PSHK Region

Pleistocene ROOTS (Repository of Original Technologies and Societies) is an open online digital archive being developed to publish high-resolution 3D-scanned models of archaeologically important artifacts together with expert-vetted contextual metadata. This poster presents the Hokkaido component of that effort, which focuses on collaborative 3D scanning of Late Upper Paleolithic lithic technologies from key sites in the Paleo-Sakhalin-Hokkaido-Kuril region. These early sites are especially important because they preserve some of Northeast Asia's earliest bifacially flaked stemmed projectile points and provide a critical comparative record for evaluating questions about the technological origins and broader relationships of early lithic traditions in the Americas. We introduce this work by sharing 3D scans of lithic artifacts from the Okushirataki-1 site in Hokkaido, a significant Late Pleistocene locality containing some of the earliest known bifacially flaked stemmed projectile points in Northeast Asia. By integrating 3D models with contextual metadata, provenience, chronometric associations, and technological description in open-access online data reports, Pleistocene ROOTS is designed to expand access to rare and difficult to access archaeological collections, support comparative lithic analysis, and create a durable digital foundation for future research on Late Pleistocene technological traditions across the North Pacific.

Loren G. Davis and Alexander J. Nyers

Pleistocene ROOTS: An Open Online Digital Archive for First Americans Technology

Pleistocene ROOTS (Repository of Original Technologies and Societies) is an open online digital archive developed to publish high-resolution 3D models of important artifacts together with expert-vetted contextual metadata. This project addresses a persistent problem in archaeology: knowledge about Pleistocene-aged artifacts is most often represented through static images, drawings, and descriptions, while direct access to artifact collections is limited by curation policy and geography. Pleistocene ROOTS provides a solution to this problem by creating DOI-linked 3D data reports that integrate high resolution 3D digital scan models with associated information about object provenience, stratigraphic context, feature association, chronometric relationships, raw material, technological description, associated media, and citation guidance. The first Pleistocene ROOTS entry focuses on early projectile points from Features 78 and 108 at the Cooper's Ferry/Nipéhe site in western Idaho. More broadly, Pleistocene ROOTS is intended to support comparative lithic analysis, 3D geometric morphometrics, typological study, teaching, public outreach, digital preservation, and future computational analyses based on well-structured artifact datasets. In doing so, the project offers a model for publishing rare archaeological materials in more transparent, accessible, and reusable digital form.

Sathira Deegala, Kristine Korzow, and Michael R. Waters

Genetic Insights into Pleistocene Felids: Ancient DNA Recovery from Smilodon Fatalis

Jaguars (*Panthera onca*) and Cougars (*Puma concolor*) are the only big cat species currently living in North America which was once home to a diverse assemblage of large felids, including lions, jaguars, cougars, and saber-toothed cats. Ancient DNA analysis provides a powerful tool for investigating the evolutionary history, genetic diversity, phylogeny and population relationships of extinct carnivores. Currently, genomic data are available for most of the extant felids allowing comparative studies across the Felidae family but limited genetic information is available from the extinct species for phylogenetic resolution and understanding the evolution of the family Felidae. No DNA has yet been successfully recovered and characterized from *Smilodon fatalis*, the North American saber-toothed cat despite its importance as one of the most iconic Pleistocene predators of the Americas. This study aims to explore the feasibility of extracting and analyzing ancient DNA from fossil remains of *Smilodon fatalis* in order to provide future insights into evolutionary relationships, population structure, and broader phylogenetic connections among extinct and modern felids. Successful recovery of genetic material from this species could contribute to a deeper understanding of felid evolution and the ecological dynamics of Pleistocene megafaunal communities in North America.

Miguel Delgado and Angélica Triana

The Archaeological Signal of the Early Peopling of Northwestern South America: Radiocarbon Chronology and Paleoenvironmental Diversity

Northwestern South America was the entry route for early hunter-gatherer groups into the subcontinent at the end of the Pleistocene. However, our understanding of the spatial and temporal patterns of early human expansion remains limited. In this study, we define the temporal framework of the initial human arrival and evaluate patterns of population growth within a paleoclimatic and paleoenvironmental context through statistical analyses of radiocarbon 14C dates ranging from 20,500 to 7500 ^{14}C BP. The results indicate a weak and discontinuous archaeological signal between 20,500 and 16,500 cal BP, during a period characterized by cold and dry climatic conditions associated with the Last Glacial Maximum (LGM) and the subsequent early glacial phase. After 13,800 cal BP, a robust and continuous archaeological signal emerges, coinciding with climatic amelioration associated with the Bølling–Allerød Interstadial. These findings suggest that the initial settlement likely occurred between 16,500 and 16,000 cal BP, followed by population expansion between 14,000 and 13,000 cal BP during the transition from warm to cold and dry climatic conditions associated with the Younger Dryas. Population density also fluctuated during the early phases of settlement in response to climatic, ecological, and sociocultural factors, before stabilizing after 10,000 cal BP.

Gage Delrosario, Grant Delrosario, Ashley M. Smallwood, Thomas A. Jennings, and Steven L. Boles

The Nolin River Paleoindian Complex, KY: Searching for Buried Paleoindian Deposits

The Copelin Valley site, Hart County, Kentucky has been documented as a large-scale Clovis occupation through the analysis of extensive private collections of Clovis points. This poster presents efforts to find Clovis artifacts in buried contexts. We present preliminary results of GIS landscape analyses including landforms with potential for buried Late Pleistocene deposits and stone outcrops. We then summarize preliminary results of survey and site testing, focusing on lithic materials recovered from a locality along the Nolin River that has yielded multiple overshot flakes.

Scott Dersam and Sari B. Dersam

Montane Foragers of the Late Pleistocene: Evidence, Insights, and Ongoing Investigations of a Multi-locality Alpine Clovis Landscape in Montana

The cultural use of Pleistocene mountain environments in North America is a little-understood phenomenon. There is little doubt that high-elevation lithic quarries and potential raw material exchange from alpine lithic sources were embedded aspects of Clovis behavior in the High Plains, but the dearth of Early Paleoindian sites in alpine ecosystems has prevented further clarification of these adaptations. Between 2021 and 2026, ongoing multidisciplinary research in the alpine environments of the Beartooth Mountains of Montana revealed five separate localities with abundant diagnostic Clovis lithic artifacts dispersed along a single high-elevation corridor between 8900 and 10,200 feet. To date, the five localities have yielded 10 Clovis points and point fragments, as well as multiple diagnostic artifacts, including blade and blade core technologies consistent with Clovis manufacture. A 2024 geoarchaeological investigation at one of the five localities

yielded sediments OSL-dated to 13,000 cal BP. These findings confirm a significantly earlier regional deglaciation of the Pinedale Glacier and support the hypothesis that Clovis populations could access, use, and reoccupy this mountain corridor as early as 13,000 years ago.

Matthew R. Des Lauriers, Antonio Porcayo-Michelini, Loren G. Davis, and Alex Nyers

The Terminal Pleistocene-Early Holocene Single-Piece Shell Fishhook Assemblage from Isla Cedros, Baja California, México

We here detail a sizable assemblage (~50) of single-piece shell fishhooks recovered from a series of archaeological sites on Isla Cedros that date to between ~13,300 cal BP and ~11,000 cal BP. Characteristics of manufacturing process, design elements, hafting mechanisms, size range, and comparisons to other fishhook assemblages from elsewhere on the Pacific Coast of Latin America are highlighted. These technological observations, combined with geography and chronology make a strong case for the common relationship of the several early Latin American shell fishhook traditions of both South America and México. These hooks are manufactured from mussel (*Mytilus* sp.) and abalone (*Haliotis* sp.) shell without the use of rotary drills. All work on these hooks is done through chipping through a combination of gentle bipolar cracking and then pressure snapping and finished by polishing with rough abrasive tools of a cylindrical form. These early Pacific Rim traditions are argued to represent a distinct and perhaps unrelated tradition to later fishhook assemblages in both Alta California and Polynesia.

Caitlin Doherty, Michael R. Waters, and Brad O. Agnew

The Agnew Cache: Clovis Wedge-Shaped Blade Core Technology at the Hogeye Site, Central Texas

Prismatic blades are known from Clovis cache, workshop, and campsite contexts across North America east of the Rocky Mountains. Seldom have they been found, however, in large number and/or in contexts reflective of individual knapping episodes conducive to the reconstruction of Clovis blade reduction sequences. Recently, a novel cache of Clovis blades was recovered by Brad Agnew at the Hogeye site in central Texas from a secure and thoroughly documented stratigraphic context. This discovery, together with the previously documented Clovis biface cache at the Hogeye, underscores the importance of the site in the Clovis landscape in east-central Texas during the terminal Pleistocene. Since summer 2025, the Center for the Study of the First Americans (CSFA) has analyzed the Agnew cache, consisting of 74 individual blades manufactured on Edwards chert. Here, we review our refit study of the Agnew blades, which has resulted in the reconstruction of at least five wedge-shaped blade cores. From these refit cores, we define discrete, step-by-step blade-core reduction sequences.

Caitlin Doherty and Michael R. Waters

A Second Clovis Blade Cache at the Hogeye Site, Central Texas

Evidently an important locality in the Clovis landscape of central Texas in the terminal Pleistocene, the Hogeye site has, to date, produced at least three Clovis caches. The first, originally reported fifteen years ago, produced a large number of Clovis bifaces. The second, the Agnew Cache, reported for the first time this year, contains 74 individual blades manufactured from at least five wedge-shaped blade cores of Edwards chert. Here, we present the third Clovis cache from the Hogeye site, which contains sixteen blades, also consistent with manufacture from wedge-shaped cores, and eleven large macroflakes. In this presentation, we provide a quantitative comparison of the Clovis blades from the Hogeye caches to blades from other known Clovis caches, including Keven Davis, Blackwater Draw, and Anadarko, and Clovis workshops, including Pavo Real and Gault.

Daron Duke, Eric Wohlgemuth, and Angela Armstrong-Ingram

The Wishbone Site Seed Profile: Haskett Plant Use in the Younger Dryas Wetlands of the Great Salt Lake Desert

The Wishbone site is a Haskett camp with a well-preserved central hearth and associated stone and bone artifact scatter on the playa of the Great Salt Lake Desert (GSLD). At the time, ca. 12,300 cal BP, the occupants sat on a dry interfluve among the streams and ponds of what is now referred to as the Old River Bed delta. The site is known for containing the earliest documented evidence for human use of tobacco, but there are other likely culturally introduced charred plant seeds from the hearth. These most notably include pitseed goosefoot (*Chenopodium berlandieri*) and red maids (*Calandrinia* spp.). In this poster, we discuss their potential use alongside tobacco and the main subsistence activity around the hearth—eating ducks. Abundant pondweed (*Potamogeton* spp.) seeds in the hearth are suggested to be the remnants of duck gut contents.

Daron Duke and D. Craig Young

Younger Dryas-Age Human Footprints at the Trackway Sites, Great Salt Lake Desert, Utah

Human footprints at two sites in the Great Salt Lake Desert show adults and children walking in the shallow water bodies of the Old River Bed delta (ORBD), a large distributary marsh complex that existed during the Pleistocene-Holocene transition. Radiocarbon dating of organic remains from footprint infills places them in the Younger Dryas between ca. 12,600 and 11,900 calibrated years ago, contemporaneous with an extensive Haskett archaeological record. We detail the dated materials and subsurface context of the prints and present the geoarchaeological model that stratigraphically bounds them. Found on the Hill Air Force Base-managed Utah Test and Training Range, the project highlights military stewardship efforts to protect significant cultural resources.

Jalh Dulanto, Antonio Pérez-Balarezo, Ximena Suárez-Villagran, Lorena Becerra-Valdivia, and Daniel Vergara

Paiján Lithic Technology and Maritime Mobility at Pampa Lechuza, a Late Pleistocene Desert Oasis in Peru

Pampa Lechuza is a stratified Late Pleistocene-Early Holocene site in a groundwater-fed oasis ~20 km inland from the modern shoreline of Peru's south-central coast. This poster examines how lithic technological organization structured the inland extension of early maritime lifeways. Excavations in UE02 and UE04 exposed ST09, a coherent occupation horizon formed on a stable surface above the sterile Pisco Formation substrate. The lithic assemblage is concentrated in ST09 and records a complete reduction sequence, including cores, early-stage debitage, bifacial thinning flakes, preforms, finished or near-finished Paiján stemmed points, and expedient tools. Chalcedony, quartz, and volcanic rocks indicate local provisioning, whereas rare obsidian pieces-mostly late-stage bifacial or finished implements-point to long-distance connections with the Quispisisa source. Associated shellfish, fish, seabirds, and pinnipeds demonstrate systematic transport of marine resources to the oasis. Integrating lithic analysis, geoarchaeology, Bayesian chronology, and faunal evidence, we argue that Pampa Lechuza was not a residual scatter or shoreline proxy, but a logistical inland node where freshwater access, tool manufacture and maintenance, and maritime resource transport converged within a desert-maritime mobility system.

Dale Earl

Broad-Spectrum Foraging and Risk Reduction in the Neotropics during the Late Pleistocene–Early Holocene

Subsistence strategies among Paleoamerican hunter-gatherers have been a central topic in archaeology for decades. In the Neotropics, evidence suggests that hunter-gatherers adopted broad-spectrum foraging strategies beginning in the Late Pleistocene and continuing into the Early Holocene, exploiting a wide range of faunal resources. Archaeologists have long assumed that this diversification reduced the risk of starvation by buffering groups against fluctuations in resource availability. However, previous research has not been able to quantify the extent to which dietary diversification actually reduced subsistence risk. This study introduces a novel approach for measuring changes in risk by applying a Markowitz portfolio model to shifts in subsistence investment strategies

Stuart A. Eldridge and Jaime M. Donta

An Update on Paleoindian Period Site 38.99, Kennebec County, Maine

Site 38.99 was initially recorded in 2008 in the course of testing within an existing electrical transmission corridor in the town of Windsor, Kennebec County, Maine. Additional testing in 2009 established the site's affiliation with the Paleoindian period, approximately 10-12,000 years ago, based on lithic source materials and artifact typology. Site 38.99, which sits on a terrace overlooking a tributary of the Sheepscot River, was relocated in 2020 and subject to further survey. Numerous lithic artifacts, including a Michaud-style fluted projectile point made of Munsungun chert, and one apparent cultural thermal soil feature, were recovered during the 2020 survey. Results of the 2020 excavation are discussed and articulated with materials from earlier surveys. Cultural materials recovered in 2020, including data recovered during flotation and radiocarbon dates from feature contexts, are detailed. Site 38.99 is contextualized within the wider Paleoindian cultural landscape in Maine and northern New England.

Stuart Fiedel

Are There Traces of Dyuktai Ancestry in the Clovis Toolkit?

Recent analyses of ancient genomes have transformed our understanding of Native Americans' origins. Two developments now appear to closely correspond in time (about 19,000-16,000 cal BP) and space (interior North-

east Asia) and are probably reflections of the same demographic and social processes: 1) rapid radiation of male lineages of the Q haplogroup, coincident with the appearance of ancestral Native American mtDNA clades; and 2) expansion of Dyuktai/Yubetsu archaeological assemblages, with microblades made on biface cores, across a vast region spanning from northern Japan, to northern China, to Lake Baikal. Given the genomic evidence, and the archaeological evidence of a 14,000-year-old Dyuktai occupation at Swan Point in Alaska, we must infer that the ancestral culture from which Clovis developed was either Dyuktai or some closely related and similar culture in western Beringia or Siberia. Faint vestiges of this ancestral tradition (e.g., smashed ovate biface preforms) are evident in Paleoindian assemblages south of the ice sheets. However, we still need to explain why microblades were dropped from the Clovis toolkit.

Ben Fitzhugh

On the Origins of the Coastal Route from Asia to North America: A Synthetic Model

Research into the peopling of the Americas increasingly supports a coastal migration route from Beringia into North America. Less attention has been given to where those migrants developed the requisite skills and technologies to survive and thrive on the coasts of Beringia before moving south, or what ultimately compelled them to move. Emerging evidence from archaeological, paleogenetic, and paleoecological sources in Northeast Asia makes it possible to propose possible 'incubator' locations for the development of these subarctic maritime strategies. Tropical and temperate East Asian boat use is evident well in advance of the LGM, but genetic data seems to preclude those mariners from direct Beringian ancestry. More likely, Beringian maritime developments arose independently or indirectly during the LGM, somewhere between Hokkaido and Prince William Sound. This poster examines the evidence, possible locations, and environmental mechanisms that may have cultivated persistent Beringian maritime lifeways during the LGM in isolation from other East Asian populations, and subsequently catalyzed migration during the early deglacial.

Erin Flynn

Old Dates and Nice Flakes: Recent CRM Discoveries in the Uplands of New England

Recent Section 106 compliance investigations in southern New England have identified significant Late PaleoIndian components, including the oldest radiocarbon-dated features currently known in Rhode Island and isolated lithic assemblages in Massachusetts. In northeastern Rhode Island, excavations at two multi-component sites located on isolated uplands within the Blackstone River Valley identified large pit features. Charcoal recovery from these contexts yielded radiocarbon dates suggesting occupation approximately 9500 BP, marking a critical chronological benchmark for the region. Simultaneously, surveys within a remote riverine upland setting in central Massachusetts' Deerfield River Valley recovered PaleoIndian stone tools, further expanding the known distribution of early Holocene activity. These findings contribute essential data to the regional record, offering fresh insights into PaleoIndian land-use strategies, social organization, and high-mobility settlement patterns. Moreover, this study highlights the efficacy of specific CRM testing strategies employed along linear transmission line rights-of-way. By evaluating the methodologies that led to these discoveries, this poster demonstrates how compliance-driven archaeology can successfully identify ephemeral upland sites and generate robust datasets to address broad theoretical questions regarding early post-glacial colonization.

Julien Fortin, Samuel Meacham, Andreas Rosland, Wetherbee Dorshow, Loren Clark, Dominique Rissolo, and James C. Chatters

Automating Photogrammetry-GIS Integration for Spatially Linked 3D Documentation of Submerged Paleoamerican Cave Sites in Quintana Roo, Mexico

The Centro Investigador de Sistema Acuífero del Quintana Roo (CINDAQ) has developed an automated photogrammetry-to-GIS workflow designed to support large-scale documentation and analysis of submerged Paleoamerican cave sites in Quintana Roo, Mexico. Building on years of standardized field and processing protocols, the system integrates python-based automation of photogrammetric modeling and GIS-based spatial management into a scalable Single Source of Truth (SSOT) framework. The workflow links 3D datasets, metadata, cave survey information, diver observations, and other analytical layers into a unified geospatial environment, enabling rapid access, interpretation, and long-term preservation of archaeological and paleontological data. Automation reduced processing complexity and significantly increased productivity, allowing non-specialist cave divers to contribute consistently to scientific documentation efforts. The resulting expansion of spatially linked 3D datasets has facilitated the identification of broader archaeological

and paleoecological patterns, including possible prehistoric activity travel routes in the caves, carnivore dens, and Late Pleistocene faunal distributions. By streamlining the integration of photogrammetry and GIS, this approach enhances collaboration, scalability, and data accessibility for the investigation of submerged Paleoamerican cave use and landscape archaeology.

Kurt Fredrickson, Robert D. Richards Jr., and Michael Johnson

An Experimental Replication Study of Lithic Reduction Strategies of Jasper Sourced from the Flint Run Paleo-Indian Complex, Virginia

In this study experimental replication of jasper biface Clovis point and flake core pathways were used to create and then comparatively analyze attributes of artifacts recovered from identified Clovis assemblages from the Thunderbird and Gault sites. This curated collection of experimental artifacts was compared to measurements taken from the Thunderbird collection at the Smithsonian, and from artifacts from ongoing excavations within the Flint Run Paleo-Indian complex. The overarching goal of the study was to create a reference collection that could assist in the analysis of the 70,000 lithic artifacts recovered from excavations of Jasper Ridge (44WR506), a hilltop occupation site within the complex. Artifacts recovered include flakes, bifaces, projectile points, flake cores, unifacial tools, blade-like flakes, and blade core rejuvenation tabs. The study focused on identifying traits differentiating hard hammer stone, soft hammer stone, and antler percussors in hopes statistical analysis of the experimental collection can shed light on local tool technology pathways. A great deal of research has been devoted to lithic analysis by researchers over the decades and this study incorporated and compared previous methods.

Nicholas Gala and Masami Izuho

Geometric Morphometrics Reveal a Morphological Relationship between Yubetsu Microblade Cores in Northeast Asia and Eastern Beringia

The archaeological record of the late Pleistocene of Asia and northwest North America is dominated by microblade core technology. Scholars have searched for connections in this technology as a proxy for the origin of the First Peoples of North America. Recently, one hypothesis has proposed an origin on the Paleo-Sakhalin-Hokkaido-Kurile (PSHK) peninsula, finding similarities in microblade core and stemmed projectile point morphologies on the peninsula and in early North American contexts. To date, this hypothesis has used chronological and technological similarities to draw this connection; we employ quantitative methods and draw on cultural evolutionary theory to test the validity of this hypothesis using Strict Yubetsu microblade cores found throughout Northeast Asia and Alaska. Drawing on an iterative founder effect model derived from population genetics, we examine the relationship of within-group variation of these cores and their geographic distance from predicted points of origin. The results support a relationship between geographic distance from Hokkaido and core within-group variance, whose presence lends support to the early events of the PSHK hypothesis.

Anthony Gambardella

Collections Evidence for Paleoindian Pursuits in Connecticut's Quinnipiac River Valley

The Quinnipiac River Valley remains an understudied region in Connecticut prehistory. Despite a lack of formal archaeological investigation, the area was host to prolific amateur collecting throughout the 20th century. Recent institutional collections research conducted in joint partnership with Southern Connecticut State University and the North Haven Historical Society has revealed evidence for previously obscured human presence at the end of the Pleistocene. This is evidenced by the presence of several Middle- and Late-Paleoindian projectile points in these collections. These artifacts, recovered and donated by avocational archaeologists underscore the importance of legacy collections research as they contribute to a more nuanced understanding of regional prehistory. This poster presents some early findings from the North Haven Historical Society and describes a preliminary methodology for working with institutions housing these distressed but important archaeological collections.

Sonya M. Gentile

Two Distinct Points and Their Relationship: Cumberland and Beaver Lake Points in the Midsouth United States

For decades there has been a suggested possibility that an unfluted point form may accompany Cumberland points as part of a larger lithic toolkit. Beaver Lake points have been proposed as the associated unfluted form of Cumberland points based on the geographic distribution and morphologies of the two point types. However, there has not been a concerted effort to investigate the possible association of them. The study presented here assesses

technological, morphological, and spatial components of the two points. Technological relationships are evaluated based on the organization of technology; specifically, how the points were manufactured, utilized, reworked, and discarded. Morphological relationships are evaluated based on point shapes and shape-based ratios. Spatial relationships are evaluated based on point distributions, co-occurrences, and proximities to landscape variables. Preliminary results are presented here and inform on future research objectives to determine if there is substantial evidence pointing to a connection between Cumberland and Beaver Lake points.

J. Christopher Gillam and Holly M. Gillam

PIDBA is More Than a Tally of Points: Emergence, Synergy, and Context for the Peopling of the Americas

The Clovis First paradigm has its roots in American archaeology as the first widely accepted cultural horizon of the Americas. However, this paradigm has been challenged for many decades from individual sites throughout the Western Hemisphere. Problems with dating aside, it is safe to assume that there were people here prior to the Clovis culture, even as the timing of their entry and expansion remain a topic of heated debate. PIDBA's temporal and distributional data provides a window into the past to explore the emergence, synergy, and context of the peopling of the Americas that is much more than a simple tally of points.

Joseph A.M. Gingerich, William A. Childress, Mathew Boulanger, and Yvonne French

Lithic Sourcing and Trends in Mobility within the Smith Mountain Paleoindian Complex

Unlike other Middle Atlantic localities, Smith Mountain shows a wide variety of raw material use. We document a broad range of raw materials being used during the Paleoindian period. This includes jaspers from the North from the Flint Run Paleoindian Complex, fall zone chalcedonies, shear zone mylonite, rhyolites and possible coastal plain chert from the Carolinas, Kentucky chert during the Early Paleoindian period, and probable use of various Tennessee cherts through the Paleoindian period. Geochemical sourcing, together with the analysis of excavated material, show changes in the use of toolstone over time. As we have so few repeatedly occupied Paleoindian localities in the east, these patterns inform us about broader settlement patterns and changes in mobility over time. We further use GIS analyses to examine least-cost pathways and the directionality of movements during the Paleoindian period.

Joseph A.M. Gingerich, Daniel Wagner, and William A. Childress

Stratigraphy and Radiocarbon Dating of the Smith Mountain Paleoindian Complex

Few stratified Paleoindian sites have been documented in eastern North America. We present a case study where stratified Paleoindian through Early Archaic deposits are present within the Smith Mountain Paleoindian Complex. We also assess the age of hypothesized Pre-Clovis point finds, which are common at several sites. Through particle size analysis, excavation, and radiocarbon dating we demonstrate the presence of multiple levels that show surface stability and contain distinct cultural components. The stratigraphy documented is present at multiple localities, suggesting that other locations throughout the Roanoke River Valley may also contain intact components.

Marina González-Varas

Rethinking Unifacial Technologies in Early Tropical South America through 3D Morphometrics and Technology

The Pleistocene-Holocene transition in tropical South America was marked by major environmental transformations, demographic expansion, and the emergence of diverse lithic traditions. Among these, unifacially shaped tools occupy a central yet still insufficiently understood place. Often described through broad typological categories such as "limaces" or plano-convex tools, these artifacts appear across different tropical regions, suggesting the existence of shared technical principles while also raising questions about regional variability, adaptation, and cultural transmission. This poster presents results from PhD research focused on the interregional comparison of unifacial lithic technologies in early South America. The study examines assemblages from Brazil, Peru, Ecuador, Colombia, and Venezuela, combining technological analysis, techno-structural reading, and 3D geometric morphometrics. By focusing on tool morphology, volumetric structure, production strategies, and the broader chaînes opératoires associated with these artifacts, this research moves beyond typological definitions and evaluates whether unifacial tools reflect a common technological phenomenon, distinct regional solutions, or both. These results contribute to broader discussions on technological diversity, mobility, and human adaptation in tropical environments.

Albert C. Goodyear, Christopher R. Moore, Joseph A. Lindler Jr., Douglas A. Sain, and James K. Feathers

The First and Last Pre-Clovis Occupations of the Topper Site, Allendale County, South Carolina

The Topper site is a prehistoric chert quarry in South Carolina used by multiple cultures over thousands of years. Excavations conducted between 1998 and 2012 identified the pre-Clovis Clariant complex, characterized by a core-and-flake technology dated by OSL and radiocarbon methods to approximately 30–50 ka. More recent investigations revealed a later occupation immediately beneath Clovis deposits containing small lanceolate bifaces in sediments dated by OSL to approximately 18–19 ka. Their stratigraphic position indicates that the earliest Clovis occupants were living on the final land surfaces of an older Pleistocene terrace. These lanceolates closely resemble other proposed pre-Clovis biface traditions from the eastern United States, including Miller Lanceolate, Haw River, Page-Ladson, and Cactus Hill forms. At Topper, they are referred to as Haw River points in recognition of the early use of that term. The in-situ occurrence and pre-13 ka age of these artifacts demonstrate that they are genuinely pre-Clovis and technologically distinct from later Clovis bifaces and preforms. In contrast, the older Clariant core-and-flake industry resembles Old World Paleolithic technologies, particularly Southeast Asian industries where bifaces are generally absent.

Todd Grote, Brendan Nash, Thomas Talbot, Henry Wright, Matthew Michalski, Ian Beggen, Victoria Kvasnikov, Devin Kubina, Elliot Greiner, Ed Quigley, Joe Meris, and Jeff Brown

Geoarchaeology of the Pleistocene-Holocene Transition at the Belson Site: A Wetland Overlook in the Great Lakes Region of Southwestern Michigan

The multicomponent Belson Site contains a record of cultural activity during the Pleistocene-Holocene transition in St. Joseph County, southwestern Michigan, including the only known Clovis components within the state. These layers are found within and just below the plowzone, meaning that at least some portion of the site remains relatively undisturbed and in primary context. Here, the geoarchaeological framework of Belson's Late Pleistocene and Early Holocene components are linked to regional landscape evolution, paleoenvironmental change and site-specific processes. Belson is located on a low, undulating glaciofluvial terrace overlooking an east-west trending outwash channel traced towards the Laurentide Ice Sheet's Saginaw and Huron-Erie margins. The former channel was abandoned prior to ~15 cal ka BP, subsequently becoming a resource-rich wetland that was attractive to early foragers who repeatedly visited the site. Intact sub-plow, and generally stratified, cultural materials are best preserved within Feature 2 – a bioturbated sandy loam to loamy sand soil matrix, currently thought to be of mixed aeolian, sheetwash and glacial origin, overlaying glaciofluvial pebbly sand. If confirmed, syndeposition of aeolian sediment with cultural material and episodic runoff (snowmelt and heavy rainfall) into a natural, shallow depression allowed the formation and preservation of the stratified components in Feature 2.

Ramón Guzmán Armenta, Guadalupe Sánchez Miranda, and Ismael Sánchez-Morales

Clovis Bifaces from a Sonoran Private Collection: A Collaborative Reanalysis

This poster presents the results of the documentation of a private archaeological collection from Sonora, Mexico, referred to as "Hermosillo 1". Within this collection we identified (n=55) bifacial implements consistent with Clovis technology including finished Clovis points, Clovis point preforms, and secondary bifaces. These artifacts were recovered from surface contexts within the sites of El Gramal, El Aguajito, Rancho Bojorquez, and Cueva del Tetabejo, as well as two new archaeological localities referred as El Sapo and La Verde. We also documented Clovis artifacts that were collected as isolated finds. Moreover, this analysis resulted in the location of a Clovis point that was part of the "Hermosillo 1" collection, and which is now curated at the Museo de las Culturas del Norte de México in Paquimé, Chihuahua. This project resulted in the documentation of novel terminal Pleistocene archaeological data from the Sonoran Desert of Northwest Mexico and highlights the significance and value of collaborative work between professional archaeologists and private collectors.

Mia Harbort, Kelly E. Graf, Todd Surovell, Sarah Allaun, Mariya Antonosyan, and Bryan Hockett

Sew What? Using ZooMS to Determine Taxa Selection for Bone Needles and Other Osseous Artifacts

This poster investigates the faunal assemblage of the Shég' Xdaltth'í' site, utilizing bone needles and other osseous artifacts excavated between 2013 and 2023 for ZooMS (Zooarchaeology by Mass Spectrometry) analysis. Shég' Xdaltth'í' is a multicomponent site in interior Alaska, situated in the Tanana River valley. Its occupa-

tion history documents four cultural layers, dating to 13.8 ka, 13 ka, 12.7 ka, and 5 ka. The osseous artifacts from the Late Pleistocene Component 1 assemblage (13.8 ka) include bone needle fragments, point fragments, a pendant, an awl fragment, and a few other pieces of worked bone, antler, or ivory. This analysis aims to identify the taxa represented by these artifacts, which we will compare to the remainder of the faunal assemblage to track variability in the pattern of taxa selection by some of the region's earliest inhabitants. The result of this study will be a better understanding of faunal procurement strategies for specialized osseous tool production

James C. Hartley

The Lower-Middle Paleolithic Diring Yuriakh Site (Sakha Republic, Siberia) and the Pre-Clovis Peopling of the New World

The pre-Clovis (before 13,400 cal BP) human record in the Americas is a disputed topic in archaeology. Recent finds and analyses suggest a human presence in the Americas at least 24,000 cal BP, with potentially older remains across both continents. Many pre-Clovis sites have been found. Some of these pre-Clovis sites are older than 24,000 cal BP, but they are not widely accepted. A comparably ancient site (Diring Yuriakh) was also found in Siberia, with the latest published dates around 417,000 years ago (Lower Paleolithic). While these sites are likely erroneous, they still suggest possible migrations prior to the last common ancestors of modern Native Americans. The debates will continue, and these new potential sites should not be accepted or rejected outright without any further analysis.

Mark D. Harvey and Shelby A. Jones

Archaeomagnetic Assessment of the Form and Function of Fire Cracked Rock Features and Heating Histories of Burned Rock from Texas

For decades, archaeomagnetism has been traditionally thought of through the lens of archaeomagnetic dating but advances in rock magnetic techniques and new equipment in our laboratory have allowed us to broaden the traditional definition of archaeomagnetism to include studies on fire cracked rock. These techniques allow us to study mineralogical variation and changes within the magnetic grains of fire cracked rock with the goals of either understanding feature form and function or understanding the temperature history of FCR (were the rocks heated by past humans and if so, to roughly what temperature). These new experimental methods are applicable to any time period of human occupation and have the potential to assist in site understanding. Here we present the results from two projects in Texas, one that looked at the magnetization of burned rocks within two earthen oven features to assess feature form and function, and a second that utilized magnetic susceptibility studies to understand the thermal histories of disarticulated FCR.

Jun Hashizume

Regional Diversity of Stemmed Points in the Late-Glacial Japanese Archipelago: Implications for Diverse Regional Adaptive Strategies

The origin of stemmed point technology is one of the key topics in models of the initial peopling of the Americas, and recent work has focused on the Paleo-Sakhalin-Hokkaido-Kuril (PSHK) region. However, the internal diversity of these technologies within the Japanese archipelago has yet to be fully analyzed in such an international context. This study examines the morphological and functional variation of stemmed points across three distinct regions: Hokkaido, Central Japan, and Western Japan. The analysis reveals significant regional clusters. Hokkaido specimens are characterized by large planforms and cross-sections. In contrast, specimens from Central Japan, while often elongated, exhibit small cross-sections, with many examples corresponding to ethnographic North American arrowhead metrics. Conversely, specimens from Western Japan are characterized by robust cross-sections despite their moderate lengths. These findings suggest that Late Glacial foragers in the Japanese archipelago developed highly specialized hunting tools tailored to local environments and prey. Such regional diversity implies that the technological similarities observed in the Americas may reflect diverse adaptive strategies rather than indicating a single, uniform tradition.

C. Andrew Hemmings

Pre-Clovis Archaeology in Florida: The Old Vero Site, Wakulla Springs, Page-Ladson, and Latvis-Simpson Demonstrate Early, Broad Resource Utilization

The 14,550-year-old occupation of Page-Ladson is now one of the least controversial Pre-Clovis sites in the Americas. Other sites in Florida, particularly the Old Vero Site and Wakulla Springs, have well dated contexts and materials that are older than Clovis and younger than Page-Ladson. Further, the wealth of recovered organic materials at these sites indicate considerable utilization of both marine, sharks and fish, and freshwater aquatic, alli-

gator, fish, and turtle, resources at particularly early dates. Most of the material from Vero was recovered in a 70 cm circular hearth within a 5 cm level 1.5 m away from the remains of a tapir with a bone point tip between its ribs. In the Aucilla River, botanical materials in mastodon digesta from Page-Ladson and Latvis-Simpson (ca. 38,000 years old) document the presence of numerous species also edible to humans and show solid evidence of mastodons self medicating against health issues. Materials from these sites, and a few others, are considered within a growing body of information regarding early human behavioral adaptations in the Southeast prior to 13,000 years ago.

Alistair Henderson

The Geographic Distribution of Alibates Agatized Dolomite in the Clovis and Folsom Records

Alibates agatized dolomite, sometimes called Alibates flint or Alibates chert, is a colorful, silica-rich material from the Texas Panhandle that has been commonly used for stone tool manufacture throughout prehistory. It is well-distributed throughout the Clovis and Folsom material records in dozens of sites, often hundreds of kilometers away from its source location. These maps represent the geographic distribution of Alibates in the Clovis and Folsom material records as a first step towards testing the possibility that Alibates was preferentially selected for its aesthetic qualities.

Michael E. Herrmann

Uncovering New Details about Hell Gap Lithic Tools in the Jones Miller Collection and Archives of the Denver Museum of Nature and Science

The Jones-Miller site was discovered by Robert B. Jones in 1972 while constructing an irrigation system on his property near Wray, Colorado. The site was subsequently investigated by Dennis J. Stanford and a group of collaborating scientists from 1973 to 1975, describing the site as a Hell Gap, Paleoindian bison kill and butchering site. The site yielded approximately 50,000 Bison antiquus bones, 110 lithic tools, primarily Hell Gap points, and a variety of bone tools, canid remains and other Paleoindian artifacts. The Jones-Miller assemblage and archival materials, now housed at the Denver Museum of Nature and Science (DMNS), include more than 30 file boxes containing correspondence, field notes, photographs, published papers, unpublished studies and an incomplete manuscript for a final project report. This poster presents the results of the current evaluation, tabulated tool descriptions, photos and source identifications, and summarizes the non-destructive techniques being evaluated for potential research. The author and colleagues at DMNS are presently investigating modern, nondestructive analytical techniques on the lithic assemblage that may be employed to support the historical source identifications. The poster also intends to inform the archeological community about the nature of artifacts and archival materials available at DMNS for archeological and archeological studies.

Aiden J. Hlebechuk

The Lithic Assemblage of an Early Holocene Campsite in the Northern Great Basin

In 2025, the Artemisia Archaeological Research Fund (AARF [University of Nevada, Reno]) completed a 1420-acre survey of Macy Flat, a dry lake in the northern Great Basin. Site AARF-S-33 is a near-surface, complex lithic scatter located along a shallowly buried gravel bar on the basin floor's margins. Diagnostic Western Stemmed Tradition (WST) artifacts indicate that the site was occupied primarily during the Early Holocene (11,700-8200 cal BP), a period of significant techno-environmental transition. Here, I present the site's assemblage, focusing on tool frequencies, raw-material proportions, and technological generalizations to situate AARF-S-33 within a context of WST land use during the Early Holocene in the northern Great Basin.

Justin A. Holcomb and Rolfe D. Mandel

The What, Why, and How of Archaeological Micromorphology in Pleistocene Archaeology

Over the past several decades, the use of archaeological micromorphology in geoarchaeology has expanded considerably, particularly outside the Americas. Despite its widespread adoption among European geoarchaeologists, micromorphological approaches remain underutilized in the Americas. In this paper, we introduce archaeological soil and sediment micromorphology (what), demonstrate its value (why), and provide practical guidance for its effective use in archaeological research (how). Archaeological micromorphology can help unravel site formation processes, assess stratigraphic integrity and preservation conditions, and help reconstruct paleoenvironments. As investigations of early sites across the Americas continue, we hope archaeologists will consider incorporating micromorphological analyses into archaeological research designs.

Kandace Hollenbach, Kelly Santana, Madison Moore, Stephen Carmody, Sally Horn, and Alison Damick

Revisiting Cupola and Anderson Ponds: Comparing Micro- and Macrobotanical Data from the US Midsouth

Macrobotanical plant remains from secure Late Pleistocene/Early Holocene contexts in the Southeast continue to be elusive, with relatively few new samples added to the existing body of data. Similarly, new sites for lake-sediment coring are difficult to locate. But in the past decade, analysts have returned to Cupola Pond in southeast Missouri and revisited previously collected cores from Anderson Pond in central Tennessee. These efforts included obtaining new radiocarbon dates that have adjusted chronologies, recording microcharcoal concentrations that suggest the incidence of Indigenous burning practices, and phytolith data that lend further detail to previous pollen data. Here we compare microbotanical and macrobotanical data to discuss the deep history of human-plant-landscape interactions in the Midsouth.

Vance T. Holliday, Jason Windingstad, and Christopher W. Merriman

Paleo-Lake Trinity, South-Central New Mexico: Late Quaternary Geochronology and Paleoindian Geoarchaeology

Paleo-Lake Trinity is a poorly known water body in the Jornada del Muerto Basin. It was formed by damming due to a ~0.76 my basalt flow and alluvial fan construction. The modern floor of the lake is 1425-1430 m elevation. One prominent shoreline is at ~1430 m. Lake beds are at least 40 m thick and dominated by gypsum. Recent cores and trenches exposed the upper 5 m, consisting of gypsum lake beds and sand, marl, and lenses of clay. Marl beds indicate a lake >24.9k cal yrs BP at least 1430.7 to 1432 m elevation. An intermittent lake was probably above 1435 m and up to 7 m deep in post-LGM time ~17.4 k cal yrs BP and persisted until ~13.0 k cal yrs BP, but was below 1435 m by that time based on archaeology. Another lake phase dates to ~10.4k cal yrs BP. Thirty-five Paleoindian archaeological sites (Clovis, Folsom, Plainview, late Paleoindian) overlooked the lake and were 0.1 to 3 km from its margin, demonstrating relatively intense use of the area by early foragers ~13k to ~9k cal yrs BP.

Charles E. Holmes and Yu Hirasawa

Tracing the Continuity and Evolution of the Yubetsu Method of Microblade Production into North America

Human dispersal models into North America use evidence based on genetics, ice-sheet distributions, stone tools, and chronological relationships that are well established through radiocarbon dating. One model suggests that lithic technology evolved continuously from the earliest East Beringian tradition (Diuktai Phase 14,200 cal BP) via the Chindadn tradition (circa 13,000-12,000 cal BP) to the Denali tradition (12,000-6,000 cal BP). Human remains from Denali tradition sites in Alaska belong to a distinct genetic group named “Ancient Beringians”. In this model, the East Beringian tradition populations (lacking genetic data), would be considered Ancient Beringians. However, evidence supporting the technological continuity from the Yubetsu method to the Campus/Denali method has not yet been specifically demonstrated. We apply comparative analyses to examine the technological continuity between these two methods: (1) microblade core technologies, (2) burin technologies, and (3) tool kit compositions.

Jesica Huddleston, Loren Huddleston, and Christopher W. Merriman

The Late Pleistocene-Early Holocene Occupation of Spring Valley, White Pine County, Nevada

Planning for the future site of the radio telescope Deep Synoptic Array prompted an archaeological survey of more than 65,000 acres at the northern end of Spring Valley, White Pine County, Nevada where few studies have been completed before. Survey results confirm the presence of fluted and stemmed point traditions representing Paleoamerican and Early Archaic occupations following a Late Pleistocene highstand of the now desiccated Spring Valley Lake. Using GIS-based spatial analyses, temporally diagnostic artifacts, flaked stone assemblage composition, and soil geomorphology this poster addresses questions about shifting settlement patterns and land use across the Pleistocene-Holocene transition. Results show that the fluted point (Clovis and Folsom) and Western Stemmed sites are all associated with paleo-shoreline gravel bars and alluvial fan/delta settings between 1720 and 1725 m. The Early Archaic sites are concentrated between 1707 m to 1716 m and are on deflated fine grained lake deposits or the overlying sand sheets and rolling dune fields. The shifts in settlement patterns suggest a transition from a focus on lake/wetland and riparian resources in the Late Pleistocene to upland terrestrial resources in the Early Holocene.

Gemma Hudgell and Arthur Spiess

Planes and Plains – The Auburn Airport (Michaud) Paleoindian Site Cluster, Maine

The Auburn-Lewiston Municipal Airport in southwest Maine is the center of a cluster of eleven Paleoindian sites, most with multiple loci. These sites were identified in advance of airport and industrial construction projects beginning in the 1980s, with about 50% of the landscape in a 2 km radius around the Airport now surveyed by professional archaeologists. Recent work suggests that more sites may still be preserved in this highly developed landscape. The Airport lies on an open plain of late glacial marine deltaic sand with patchy tree cover, allowing us to envisage the Younger Dryas setting and association of the sites. These are all habitation/campsites, located on dunes and on small hilltops, often in strategic positions overlooking streams. While their lithic assemblages differ slightly, most have red Munsungun chert and Jefferson or Mount Jasper rhyolite, indicating patterns of resource acquisition into north central Maine and northern New Hampshire, 300 to 500 km distant. Fluted point types include Bull Brook-West Athens Hill, Michaud-Neponset, and Nicholas-Cormier styles, covering 200 to 400 calendar years of probable seasonal reuse of the locale. Together, these loci likely represent a seasonal geographic focus for the hunting of migratory caribou, based on a few calcined bone identifications.

Fumie Iizuka, Masami Izuho, Daigo Natsuki, Loren G. Davis, and David B. Madsen

Pleistocene Pottery Makers of Paleo-Sakhalin-Hokkaido-Kuril Peninsula and Their Relations to Human Dispersals to the Americas

A hypothesis on the peopling of the Americas suggest that Upper Paleolithic foragers of the Paleo-Sakhalin-Hokkaido-Kuril (PSHK) Peninsula departed via the coast, ~22,000-18,000 cal BP, during the Last Glacial Maximum (LGM). However, some issues remain unresolved in this hypothesis. For example, it is uncertain whether the foragers who departed from PSHK possessed pottery technology, for which the earliest associated dates in PSHK are ~15,000 cal BP. To address this issue, we examine technologies, geochronology, and paleoenvironments from Incipient Jomon (ICP-J) contexts of Hokkaido dated to between 15,000-13,400 cal BP (Period I) and ~11,800 cal BP (Period II), while reviewing genomic data. The results suggest that foragers of Period I were likely descendants of UP foragers. With minor interactions with Paleo-Honshu Jomon, pottery and associated technologies may have emerged in-situ. Pottery from Period II likely appeared due to the arrival of Jomon under ameliorated conditions. We conclude that the UP foragers of PSHK, ancestors of Period I potters of PSHK, may have departed toward the Americas, and that pottery is absent at American sites because the dispersal predated the advent of pottery. However, if pottery emerged during the LGM, the visibility is low due to freeze-thaw processes in both PSHK and the Americas.

Kendal Jackson, Robert J. Austin, Sam B. Upchurch, Mark J. Brooks, and Albert C. Goodyear

The Search for Tampa Bay's Earliest People: A Predictive Model for Pleistocene and Early Holocene Archaeological Sites in a Submerged Karst Landscape

Tampa Bay is a drowned network of karst depressions on the central peninsular west coast of Florida that is well known as a locus of early human occupation in the Americas, with numerous submerged archaeological sites of terminal Pleistocene to Middle Holocene age. This poster summarizes the results of an initial phase of our multiphase project to identify and investigate early archaeological sites preserved beneath the Tampa Bay seabed. Existing archaeological data from 23 locations where PaleoIndian through Middle-Late Archaic artifacts have been recovered from 20th century dredge operations demonstrate a persistent human presence in and around the bay. We integrate these archaeological data with late 19th century pre-development historical bathymetry, sediment core records, and sub-bottom acoustic surveys to demarcate high-probability areas for intact sediment beds and archaeological deposits. Many of these target areas are situated along the margins of a large late-Pleistocene-age paleolake system and other karst subbasins that together represent a large-scale relict oasis. Ongoing and future phases of work will employ geophysical surveys, continued sediment coring, and diver investigation of target areas to characterize intact paleolandscape features and potential archaeological sites.

Steven R. James

Late Paleoindian Projectile Points from CRM Surveys in Nevada: Summary of Results from Over 40 Years Ago

In the late 1970s and early 1980s, I conducted systematic archaeological surveys in three regions of Nevada, recovering a variety of Great Basin Stemmed Projectile Points. Since the survey results are deeply buried in the gray literature of Cultural Resource Management (CRM) reports

I wrote at the time, the present poster is designed to shine some light on these data as part of Great Basin research into the Late Paleoindian period. One survey was on the edge of Pleistocene Lake Lahontan in the northern Black Rock Desert. Another systematic survey examined the valley floors in eastern Nevada for eight power plant siting locations in White Pine County near the town of Ely. Basal fragments of stemmed points were recovered from lithic scatters within Jakes, Steptoe, and White River valleys. The point bases exhibit basal grinding on the edges for hafting, a characteristic of stemmed points. The third survey location was in Big Smoky Valley south of Austin. A Scottsbluff type point was discovered in a lithic scatter. Test excavations later revealed the site was a short-term single component occupation. At the time of these surveys, Stemmed/Late Paleoindian points were just emerging as Pre-Archaic temporal markers in the Great Basin.

Thomas A. Jennings, Charlotte D. Pevny, Jessi J. Halligan, and Ashley M. Smallwood

Younger Dryas Placemaking and the Establishment of the Mississippi River as a Cultural Boundary by San Patrice Hunter-Gatherers

The end of the last Ice Age was a highly dynamic period during which significant paleoenvironmental and social reorganization occurred. In this poster, we explore these events as they affected the southern Lower Mississippi Valley (sLMV). During this period, the Mississippi River transitioned from a large braided Pleistocene channel to a more stable, but still shifting and unpredictable meandering flow pattern. Simultaneously, sea level rise drowned coastal lands and impacted coastal plain backswamp environments. We use PIDBA data from Mississippi and the Louisiana Paleoindian and Early Archaic Point Survey (LaPEAPS) to analyze changes in Paleoindian lifeways. We show that San Patrice hunter-gatherers, related to, interacting with, but distinct from their Dalton neighbors, became the first communities to establish the sLMV as their homeland. In doing so, the Mississippi River itself became a clear, but permeable social boundary marker defining the edge of Late Paleoindian hunter-gatherer territories.

Wm. Jerry Jerrems and Alberto Conti

Challenging Old Paradigms: Pre-Clovis in the Northwestern Great Basin

Northwestern Nevada is the location of what was the Pleistocene pluvial Lake Lahontan which included four western lake subbasins of Pyramid and Winnemucca lakes and the Black Rock and Smoke Creek deserts. Archaeological evidence suggests an early Paleoindian entry into the Great Basin to take advantage of what may have been a paleoecological refugium for wildlife in a mild and moister climatic regime. Pleistocene pluvial lakes were a unique aspect of the northern Great Basin and home to a wide variety of now extinct megafauna including horses, camels, mammoths, *Bison antiquus*, shrub ox, short-face bear, American lions, cheetahs, among others. Horse and camel butchering at the end of the Pleistocene, tools fashioned of extinct megafaunal remains recovered from the north shore of Pyramid Lake, grasshopper caching in Crypt Cave, and ancient rock art on the shore or Winnemucca Lake add to the intrigue of an ever developing mystery behind Great Basin's earliest ancestry. The dynamic nature of the lake's hydrologic oscillation and potential paleoecological refugium offered a unique landscape for the earliest inhabitants of the northwestern Great Basin.

Alexandra Jonassen

The Conveyance of Paleoindian Toolstone to Pluvial Lake Mojave, California

This study uses pXRF technology to delineate the conveyance of terminal Pleistocene–Early Holocene obsidian and fine-grained volcanic (FGV) toolstone and artifacts to pluvial Lake Mojave, California. Prior preliminary research indicates Paleoindians conveyed nonlocal Coso Volcanic Field (CVF) obsidian and Goldstone dacite to Lake Mojave from the northwest as well as nonlocal Shoshone Mountain obsidian from the north. This study uses a substantially larger database of geochemically sourced artifacts (n = 722) than the prior study, and includes tools, projectile points, and debitage from field and lab-based collections. Results support the prior conclusion that CFV and Shoshone Mountain obsidian and Goldstone dacite are most common nonlocal sources; however, the larger sample now reveals that artifacts from several additional nonlocal obsidian and FGV sources were conveyed to Lake Mojave from source areas in California and Nevada. Nonlocal toolstone was thus conveyed south through the Owens Valley and southwest across Fort Irwin to Lake Mojave, as well as south along a likely corridor east of Death Valley. The local Soda Mountains felsite was also substantially used. Ultimately, this study reveals that the Paleoindian lithic conveyance, land use, and technological strategies employed at Lake Mojave were considerably more complex than previously recognized.

Daniel J. Joyce

A Multi-Disciplinary Overview of the Depositional and Post-Depositional Processes at the Schaefer Mammoth Site, Wisconsin, USA

The Schaefer site was scientifically excavated in the early 1990s in Kenosha, Wisconsin, USA. The Schaefer mammoth was butchered by Paleoindians circa 14,300 – 14,500 years ago, before the commonly accepted earliest culture in North America—Clovis. This makes it one of the oldest sites of human habitation in North America, predating Clovis by 1500 years. Taphonomic analyses conducted by Johnson on Schaefer indicates that Schaefer was largely undisturbed by postdepositional processes. This fact is essential in indicating that the site was in situ and marks on bone were not made by other taphonomic processes such as fluvial action, trampling or carnivores. The bonebed had putative cut marks and associated non-diagnostic stone tools. Geoarchaeological studies were also conducted at the Schaefer site. Unfortunately, these data appeared in varied publications. Here, these disparate studies in taphonomy, geology, micro and macrofossils, as well as pollen studies are synthesized indicating an in situ site with a bonebed deposited in a shallow, low energy pond. This synthesis adds to the credibility of this site as a pre-Clovis cultural butchery site, challenging the once-accepted timeline of peopling of North America.

Daniel J. Joyce

The Death of the Proposed Late Pleistocene Chesrow Complex, Wisconsin, USA

In 1988, the Chesrow Complex was defined for southeastern Wisconsin as a chronological substitute for a landscape without any apparent remnants of Clovis present. The Chesrow Complex, initially defined by an extensive collection from a single locality, as well as several isolated local sites where amateurs initially found typical "Chesrow" points. These points were composed of many basally thinned lanceolate points made from local lithic sources. The many styles exhibited no internal consistency and corresponded with numerous late Paleoindian/Late Archaic points, such as Hi-Lo and Quad. These became the basis of this theoretical Complex and had many issues when first proposed. The Chesrow Complex was later falsely associated with the Schaefer and Hebior mammoths, as well as a caribou subsistence strategy based on very scant evidence. Since its inception, the definition and chronology of the Chesrow Complex have changed, and today, many consider it a legitimate complex, rather than a theoretical construct based on scant evidence, questionable data recovery, and interpretation.

Daniel J. Joyce, William M. Balco, Scott D. Kirk, and Michael F. Kolb

A Preliminary Geoarchaeological Predictive Model for Identifying Proboscidean Sites in Kenosha County, Wisconsin, USA

Kenosha County Wisconsin is home to the Schaefer and Hebior Mammoth butchering sites, as well as other isolated specimens of mammoth and mastodon from several locations. Investigations of these sites have demonstrated that depressions in former lake basins and abandoned channels where sequences of organic sediments (peats and mucks) have accumulated provide the best environments for the preservation of megafauna and associated artifacts. Identifying such locations on the landscape has proven difficult in the past; however, we present a predictive model utilizing soils data to couch paleo-lacustrine margins with the locations of previously identified proboscidean sites. Four townships (Paris, Bristol, Pleasant Prairie, and Somers) in Kenosha County, Wisconsin, were selected for this study. This predictive model aims to identify locations warranting further study in order to find additional mammoth and mastodon kill and butchering sites to better contextualize their chronology and the behaviors of the human populations that created them.

Paul Keck, Brad H. Koldehoff, and Ryan M. Parish

Confirmation of Clovis "Supply Chain": Long Distance Chert Sourcing Using Reflectance Spectroscopy at the Mueller-Keck Sites

The Mueller-Keck site complex represents two Clovis campsites within 1 km that were revisited to hunt and process fauna seasonally in southwestern Illinois. Previous analysis with visual comparison of the artifacts to extensive regional chert sample libraries and microscopic examination, presumptively identified a raw material known as Attica chert found in the Wabash River valley in west-central Indiana. Despite the numerous local chert sources available in southwestern Illinois, Clovis group(s) chose to transport their tool kit with them to these sites in the form of bifaces and tools from the Attica chert source 350 km away. Recent analysis performed by the University of Memphis using non-destructive reflectance spectroscopy of 103 Clovis points, bifaces, tools and debitage has further confirmed the Attica quarries as the source.

Joshua L. Keene, Karl W. Kibler, Ken Lawrence, and Ashley Eyeington

Late Quaternary Alluvial Stratigraphy, Paleosols, and Paleoenvironment of the North Sulphur River, Texas

Ongoing geoarchaeological investigations of the North Sulphur River floodplain, in association with a major reservoir construction project in northeast Texas, USA, have revealed a complex 20,000-year plus record of alluvial geomorphology. Efforts so far have included hundreds of stratigraphic profiles from backhoe trenches and excavation blocks, combined with geologic bores, geophysical survey, and lab-based paleoenvironmental and geochronological analyses from dozens of buried archaeological sites ranging in age from the late Holocene to the Younger Dryas (and potentially earlier). In addition to broad applications to understanding site formation and context, this provides an unprecedented opportunity to understand the dynamic sequence of floodplain aggradation, channel meandering and avulsion, and periodic stability and pedogenic development of an entire alluvial valley. Initial results indicate up to 10 meters of late Quaternary alluvial deposition, including at least five identifiable major paleosols and an abundance of terminal Pleistocene alluvium (22-11.7 ka) preserved below the North Sulphur River floodplain surface with little to no gaps in deposition. This greater volume of preserved alluvium with an uninterrupted late Pleistocene geochronological sequence is unique compared to other alluvial systems in Texas, providing greater potential for paleoenvironmental reconstruction and the preservation of Paleoamerican materials.

Jasmine Kidwell, Julie Hoggarth, William Hockaday, James Fulton, and Bryon Schroeder

Detecting Human Traces through Molecular Geoarchaeology: Biomarker Analysis of Late Quaternary Sediments from Spirit Eye Cave, Far West Texas

The Chihuahuan Desert of far west Texas represents one of North America's most promising yet least investigated regions for studying Late Quaternary climate, ecology, and human lifeways. The sedimentary archives of a dry cave in far west Texas, known as Spirit Eye Cave, were analyzed to reconstruct human-environment interaction since the late Pleistocene. Using molecular geoarchaeological methods, we analyzed biomarkers such as leaf wax *n*-alkanes, fecal stanols and bile acids, and markers of biomass burning. Biomarkers, or molecular fossils, record traces of past human presence, fire, hydroclimate, and ecology. These molecular data were integrated with radiocarbon kernel density estimations from far west Texas archaeological sites to examine how people responded to shifting environmental conditions. Analytical approaches include GC-MS, radiocarbon dating of the free lipid fraction, and compound-specific IRMS of δ13C and δD. Collectively, these proxy data detail ~17k years of environmental change and show elevated biomass burning and fecal biomarkers between ~14 and 13 cal kBP, which correlate with radiocarbon chronologies and may demonstrate human presence in the region, though additional data that precede these ~17 cal kBP records are needed. This study demonstrates the value of biomarker analyses for reconstructing arid landscapes and tracing human presence.

Jasmine Kidwell, Barry A. Price, Marc Linder, Scott Engblom, Alex Nyers, Jennifer Thatcher, Michael Rondeau, and Jon M. Erlandson

A Fluted Obsidian Biface from Santa Barbara County, California

An isolated, weathered, fluted obsidian biface was observed nestled amongst coarse sands and gravels in a dry creek in Santa Barbara County, California. The most striking features of the biface, fluting and overshot flaking, are consistent with technological attributes commonly recognized as Clovis. Very few fluted bifaces have been reported near the Pacific Coast, let alone within Chumash territory. Traditional morphometric analyses and 3D scanning aided in better visualization of the weathered attributes of the biface. Based on XRF analysis, the obsidian used to make the biface was sourced from the Coso Volcanic Field in Inyo County. With no stratigraphic context or organic datable materials available, relative dating using obsidian hydration of the biface was completed and the resulting measurements are consistent with a terminal Pleistocene or Early Holocene age, perhaps reflecting a later variant or subtype of Clovis. The XRF data suggest tool stone preference along with extensive knowledge of place and regional geology by the person who made this item. Though an isolated find, this biface contributes to the larger discussion of Clovis and Clovis-like technology as a community of practice, and the social ties that perpetuated their use by the earliest residents of the Pacific Coast.

David Kilby, Ashley Eyeington, Marcus Hamilton, Charles Koenig, James Ramsey, and Christopher Ringstaff

Evidence for Paleoindian Bison Jumps at Bonfire Shelter, Texas

Bonfire Shelter in the Lower Pecos Canyonlands is well

known for its deeply stratified record that includes layers of prehistoric fauna, some of which are directly associated with cultural features and artifacts. Bone Bed 2 is a series of strata that consists of abundant *Bison antiquus* bones mixed with occasional artifacts, including Folsom and Plainview projectile points. The most accurate archaeological interpretation of Bone Bed 2 has been debated over the years, particularly with regard to whether the bones are the result of bison driven over the edge of the overhang by Paleoindian hunters, and whether the deposit resulted from separate Folsom and Plainview-age events. These interpretations carry widely different implications for the organization of Paleoindian organization and hunting strategies. This poster combines recent geoarchaeology, zooarchaeology, and dating to argue that Bone Bed 2 is the result of at least two jump drives – one by Folsom and one by Plainview hunters – and these represent the earliest and southernmost examples of this bison hunting technique in the Americas.

Haden U. Kingrey and John C. Blong

Preliminary Results of Pleistocene-Holocene Transition Ground Stone Tool Residue Analyses in the Southern Columbia Plateau

Early dates from Cooper's Ferry and Paisley Caves have pushed back the archaeological timeline for when people were in the Pacific Northwest. Younger Dryas sites in the Columbia Plateau no longer represent early populations exploring the region, but Indigenous people who understood the landscape's flora and fauna for thousands of years. Little-to-no evidence is present of Plateau people pursuing plants during the Pleistocene-Holocene Transition (PHT; 12.9-7.7 kya) beyond the interpretation of ground stone tools as root and/or seed processing tools. Other interpretations of early ground stone tool usage have also included hide processing, bone greasing, salmon pulverizing, or tool production. This poster is the early results of use wear, starch grain, phytolith, and proteomic analyses to identify the function of ground stone tools from a collection of PHT Southern Columbia Plateau sites. The identification of native starches and/or phytoliths would support the hypothesis that ancient Plateau people used these tools to process plants, while the identification of bison or salmon protein would support the hypothesis that they were used for processing animal products. Both hypotheses represent several thousand years of not only generational ecological knowledge, but also resiliency through times of significant climate change in the region.

Caroline Kisielinski, Lauren E. Y. Norman, Justin Tackney, Kristine G. Beaty, Archana Singh, Shawna Fitzwater, Kale Bruner, Rolfe D. Mandel, and Dennis H. O'Rourke

Recovery of Sedimentary Ancient DNA from Museum Archived Archaeological Sediments Provides Novel Lens into the Past

Archaeological excavations are inherently destructive, preventing independent reanalysis of in situ deposits and highlighting the value of detailed field notes and provenience data. Museum archived geological and archaeological samples provide an opportunity to revisit previously excavated archaeological sites. Some established archival practices, however, may prevent successful application of future novel analytical techniques (e.g., genomics). We test the feasibility of recovering taxonomically informative DNA sequences from archeological sediment excavated from Bluefish Caves in the 1970-80s and archived in the Canadian Museum of History (CMH). Even though Bluefish Caves I and II were excavated down to bedrock, sediment samples were collected every ~5 cm and stored at ambient temperature at the CMH. We subsampled these archived sediments in 2025 and obtained floral and faunal genetic information using the Arbor Biosciences PalaeoChip. Despite these sediment samples being collected before the discovery of ancient DNA, and thus not cleanly according to current best practices, we observe authentic DNA sequences of extinct megafauna. To facilitate routine sampling and storage of archaeological sediments for future genetic analyses, we outline considerations and workflows for adequately clean sample collection. These findings demonstrate that ancient DNA bound to sediments can remain stable in ambient settings and underscores the importance of collecting and storing archaeological samples for future analysis.

Caroline Kisielinski, Lauren E. Y. Norman, Justin Tackney, Kristine Beaty, Archana Singh, Shawna Fitzwater, Rolfe D. Mandel, and Dennis H. O'Rourke

Paleoenvironmental Insights from Sedimentary Ancient DNA during the Pleistocene-Holocene Transition at Bluefish Caves

Eastern Beringia was an ecological refugium during the Last Glacial Maximum (LGM, 26,500-19,000 cal BP) and served as an entry point for first peopling migrations into North America during the Late Pleistocene. Paleoenvironmental reconstructions of eastern Beringia are necessary for contextualizing human behavior during these initial peopling events; however, high-resolution records are

sparse and many lack stratigraphic context. Sedimentary ancient DNA (sedaDNA) analysis is a palaeoecological tool capable of reconstructing biotic communities on hyperlocal scales providing complimentary insight to regional records (e.g., pollen analysis). Bluefish Caves, composed of four proximal rockshelters, is one of the easternmost archaeological sites in Beringia. Excavations of Caves I and II by Jacques Cinq-Mars in the 1970-80s yielded archaeological material including lithics and human modified faunal bones dated to the LGM (~24,000-21,000 cal BP). Conversely, Caves III and IV are paleontological sites, containing no evidence of human presence, thus providing the opportunity to study human impact on local environments. Here, we present preliminary sedaDNA results of floral and faunal presence from across Bluefish Caves. We compare community composition inferred from sedaDNA across all four caves to available faunal assemblages to determine taxonomic overlap between methods. We also compare sedaDNA taxonomic profiles between archaeological and paleontological localities to determine if sedaDNA analysis is sensitive enough to capture human influence on local environments. This work furthers the application of sedaDNA analysis to archaeological science by examining the practicality of using sedaDNA to indirectly identify human presence.

Nathaniel Kitchel, Brandi McDonald, Jonathan Lothrop, and Barry Keegan

Identification of Red Munsungun and Normanskill Cherts in Paleoamerican Sites across Northeastern North America Using Neutron Activation Analysis (NAA)

In northeastern North America, Ordovician cherts from the Munsungun Lake Formation (northern Maine) and the Normanskill Formation (eastern New York) are thought to co-occur at late Pleistocene Fluted-Point-Period (FPP) (Early and Middle Paleoindian) archaeological sites, sometimes hundreds of kilometers from both sources. When these identifications were made, cherts from the Munsungun Lake and Normanskill formations were thought to be visually distinct. Munsungun chert was typically considered to present as red or mottled red and green while Normanskill materials presented as black, gray, or green though visual overlap between each source was known to exist. Recent survey efforts within the Normanskill Formation have now identified Indigenous quarries of red and mottled red and green chert, complicating previous visual identifications of red Munsungun chert at FPP sites in the region. Here we report the results of ongoing efforts to discriminate between red Munsungun and Normanskill cherts using Neutron Activation Analysis (NAA). Our results show that NAA effectively distinguishes red cherts from the Munsungun Lake and Normanskill formations. NAA of artifacts from FPP sites across the region show that most artifacts from FPP sites in the region visually identified as red Munsungun chert are consistent with this attribution though some misidentifications do occur.

Charles W. Koenig, J. Kevin Hanselka, Leslie L. Bush, Char Farfadet, and J. Phil Dering

Late Pleistocene and Early Holocene Plant Use in the Lower Pecos Canyonlands

Macrobotanical remains are common components of dry rockshelter deposits in the Lower Pecos Canyonlands (LPC) of Texas. LPC paleoethnobotanical research has focused largely on the fiber and perishable assemblages dating to the past 6000 years, with the notable exception being the “Golondrina Hearth” from Baker Cave dating to ca. 10,000 cal BP. Excavations at Eagle Cave have provided new macrobotanical samples for understanding LPC Indigenous plant use during the Younger Dryas (ca. 12,500 cal BP) and the terminal Pleistocene/early Holocene (ca. 10,500-10,000 cal BP). Resources like mesquite (*Neltuma glandulosa*) and hackberry (*Celtis* spp.) are found in all analyzed samples. Other nuts and fruits (e.g., walnut [*Juglans* sp.], prickly pears [*Opuntia* spp.], Texas persimmon [*Diospyros texana*]) and desert evergreen succulents (Asparagaceae) are common in early Holocene samples but virtually absent from the Younger Dryas context. The presence of FCR in early Holocene strata indicates that desert succulents were being cooked in earth ovens. Comparisons between Eagle Cave and Baker Cave elucidate how Indigenous foragers were adapting subsistence strategies and technologies to changing environmental conditions.

Charles W. Koenig, J. David Kilby, Charles D. Frederick, Madeline E. Mackie, Christopher W. Ringstaff, J. Kevin Hanselka, and Lorena Becerra-Valdivia

Ongoing Analysis of Younger Dryas and Bølling-Allerød Paleoamerican Occupations of Eagle Cave, Texas

There are a growing number of Early Paleoamerican components identified within rockshelter and cave sites across the Western Hemisphere. Eagle Cave (41VV167) is a large rockshelter in the Lower Pecos Canyonlands of Texas, and

excavations by Texas State University in 2016 identified two late Pleistocene archaeological components dating to the Younger Dryas and Bølling-Allerød. The Younger Dryas assemblage consists of *Bison antiquus* bones in association with a hearth and dense lithic manufacturing debris. Bayesian modeling yields an age of 12,690–12,490 cal BP. Stratigraphically beneath the Younger Dryas component is an assemblage consisting of the fragmented remains of a sub-adult mammoth (cf. *Mammuthus columbi*) in association with approximately 100 pieces of lithic debitage, a cultural rock cluster, and additional remains of a juvenile *Bison antiquus*. Bracketing radiocarbon dates indicate this mammoth-associated component dates between 13,205 – 12,925 cal BP within the Bølling-Allerød. No temporally diagnostic lithic artifacts have been recovered from either assemblage. This poster summarizes ongoing analyses evaluating these two components.

Kyle Kohlstedt, Ted Goebel, Kelly E. Graf, Angela K. Gore, Jeffrey T. Rasic, and Julie A. Esdale

The Early Allerød Lithic Assemblage from Shég' Xdaltth'í' (Central Alaska): A Distinct Bifacial Technology and Evidence for Trans-Beringian Connections

Investigations at Shég' Xdaltth'í' have led to the discovery of a well preserved cultural layer unequivocally dating to 13,800 cal BP, coincident with the onset of the global Allerød interstadial and ~700 years before the appearance of Clovis in temperate North America. Ongoing excavations have yielded 36 flaked-stone tools, including 17 unifacial flake tools, 16 bifacial artifacts, one cobble plane, one adze/side scraper combination tool, and one burin spall from a biface. Raw materials are mostly rhyolite, but basalt, chert, quartzite, and schist occur. Unifacial tools include 11 invasively retouched side scrapers, five marginally retouched flakes, and one flake with use-wear. The bifacial artifacts include nine small fragments representing finished or near-finished bifaces of unknown shapes, one roughly worked piece of schist, and six complete (or nearly complete) finished bifaces with distinctive bipointed, diamond-shaped outlines. Details on the technology, design, and inferred use of these points are presented in the poster. The Shég' Xdaltth'í' points are unique for central Alaska, where most bifacial "Chindadn" points dating to the later Allerød interstadial are triangular or teardrop-shaped. Instead, they resemble specimens from early Allerød-aged sites in arctic northeast Asia, including Nikita Lake and Berelekh, suggesting a trans-Beringian connection at that time.

A. V. Konstantinov and M. V. Konstantinov

Multilayer Settlements of the Transbaikal (Russia)

Over the past 50 years, extensive, deep excavations (up to 14 meters) along the Chikoi and Menza rivers in the Transbaikal of southern Siberia have revealed a dense sequence of multi-layered prehistoric settlements. Spanning 20,000 to 2000 years ago, these stratified sites track continuous human occupation from the Sartan Glaciation through the Holocene. Paleolithic layers feature complex round and oval dwellings with central hearths adjacent to major rivers where inhabitants hunted late-Pleistocene megafauna and relied on an advanced microblade industry. Notable finds include an ornate osseous "bâton de commandement" and an intact bone knife. During the Mesolithic, bow-and-arrow hunting and single-hearth dwellings prevailed as the economy shifted toward deer hunting and fishing. The Neolithic transition is securely anchored by the emergence of ceramics around 7000 years ago, refuting controversial claims of earlier "Pleistocene ceramics." Finally, the upper Paleo-metal layers introduce bronze tools and domestic livestock alongside persistent microblade traditions. Together, these remarkably intact stratigraphic records provide an unparalleled, high-resolution evolutionary sequence of prehistoric technological, economic, and domestic life in the Lake Baikal basin.

Juan Miguel Kosztura, Ana María Aguirre Ocampo, Javier Aceituno, José Iriarte, and Gaspar Morcote

El Abra 1: Multiproxy Evidence of Late Pleistocene Human Occupation in the Sabana de Bogotá, Colombia

The El Abra rockshelter system has been a key reference in discussions about early peopling of northwestern South America, although recent debates have questioned the validity of the oldest dates. We present results from systematic excavations at El Abra 1 that integrate lithic technological analysis, phytoliths, and radiocarbon dating. Context 113 shows good stratigraphic integrity with bifacial tools made on high-quality fine chert with contiguous retouch. Two radiocarbon dates directly associated with these artifacts place the occupation between 13,056-12,825 and 13,011-12,831 cal BP, corresponding to the end of the Bølling-Allerød Interstadial and the beginning of the Younger Dryas. Phytolith analyses reveal an open landscape dominated by grasses with low arboreal representation, consistent with cold conditions of the El Abra Stadial. High presence of Pooideae (up to 13.43%) indicates thermal decrease,

while diatoms and freshwater sponge spicules suggest humid conditions. Low artifact densities are consistent with sporadic occupations linked to hunting activities. These results confirm the early chronologies originally proposed by Correal from a new locus and under a robust methodological approach, reaffirming the importance of the El Abra corridor in early Andean peopling.

Jason M. LaBelle and Clifford L. White

Lindenmeier's Neighbors: Patterns in Fluted Point Distribution along the Plains to Foothills Transition of Northern Colorado

The Lindenmeier site represents one of the largest Folsom occupations in North America, characterized by at least nine discrete clusters of faunal remains, debitage, and stone tools that indicate either repeated seasonal occupations or large-scale aggregation events. However, questions remain regarding how Lindenmeier articulates with the broader regional landscape — specifically, how Late Pleistocene foragers utilized the surrounding environment. This poster synthesizes over 90 years of regional research tracking the distribution of Clovis and Folsom fluted point sites alongside Pleistocene fauna (including mammoth and bison) within Larimer County, Colorado, a critical ecotone spanning the Great Plains, the foothills, and the Southern Rocky Mountains. Pedestrian survey data, site testing, and the systematic analysis of avocational collections reveal a ubiquitous but low-density Early Paleoindian presence concentrated along the mountain-plains border. Rather than the dense artifact concentrations characteristic of major base camps like Lindenmeier or the nearby Johnson site, the regional record predominantly consists of isolated projectile points and preforms. Ultimately, we evaluate whether these observed spatial patterns accurately represent past land-use strategies and settlement systems, or if they primarily reflect sampling biases inherent to previous archaeological investigations.

John M. Lambert and Thomas J. Loebel

Early Foragers in the Midcontinent: Large-Scale, Regional Patterns in the Clovis Record of the Western Great Lakes

Census of avocational and public collections for Early Paleoindian fluted points from the Midcontinent signals a substantial Clovis occupation across the western Great Lakes, including Illinois, the southern half of Wisconsin, and adjoining states. Here, we present data on more than 2400 fluted points documented over the course of several decades. Patterns of toolstone transport and discard suggest the development of a series of large, parallel, and often overlapping lithic transport systems related to patterns of seasonal- or annual-scale movement of the earliest human foraging groups in the region. The scale and directionality of lithic transport vary in important ways across the region, providing insight into the spatial dimension of Early Paleoindian social systems in the Midwest. The results reveal the value of longitudinal studies in building large-scale regional frameworks of hunter-gatherer adaptation and aid in site-level interpretations.

David S. Lamp, Joseph A. M. Gingerich, Jonathan E. Bowen, and Gary Argabright

An Update of the Ohio Fluted Point Survey

The last published update of the Ohio Fluted Point Survey was in 1982. At that time 1056 fluted points were known from Ohio. As updated here, at least 2145 have now been found in Ohio, ranking it 4th in the nation for documented fluted point finds. We use these data to provide new information about Paleoindian site distribution in the state. County-level data based on the location of over 500 Paleoindian sites show a broader distribution across the state than was previously known, highlighting new areas of Paleoindian activity. Paleoindian site distribution along the Wisconsin glacial boundary remains a consistent pattern first observed in earlier editions of the survey. Both long-standing and emerging patterns require further investigation.

François Lanoë, Briana Doering, Jeff Rasic, McKenna Litynski, Joshua Reuther, Ben Potter, Gerad Smith, Charles Holmes, Barbara Crass, and Fiona Papile

Bone Needles and Needle Manufacture in Pleistocene Eastern Beringia

Bone needles form a known (if uncommon) part of archaeological assemblages in Pleistocene North America, including in eastern Beringia. There, needles are significant as material correlates of tailored clothing, which was critical in harsh climatic conditions. In this poster, we update the eastern Beringian corpus with findings of used needles and needle-manufacturing byproducts from three sites in interior Alaska: Bachner, Broken Mammoth, and Carpenter, collectively dated to ca. 13.4-12.2 cal kyr BP. Specimens from these sites include both large and small needles, likely reflecting a wide range of animals whose skins were used. Zooarchaeological and proteomics analyses

show needles were primarily manufactured from large bird bones, including swans (*Cygnus*) and raptors (*Accipitridae*). Evidence of the manufacturing process includes grooved needle cores made of swan humeri, and butchery marks on swan wing bones that probably relate to the extraction of the humerus. Related specimens include swan-bone tubes that may have been used as needle cases. The eastern Beringian needles and needle-manufacturing byproducts have strong technological parallels in Late Holocene Alaska, demonstrating the diachronic adaptation of Native peoples to high-latitude climates and resources.

Tara Larson

The Stolle Mammoth: Zooarchaeological, Isotopic, and Paleoecological Insights into a Clovis-Era Mammoth from the Southern High Plains

The Stolle Mammoth, a Clovis-aged specimen recovered in 1977 from a playa basin on the Southern High Plains of Eastern New Mexico, offers a rare opportunity for the potential to reassess human-mammoth interactions in a region with limited archaeological data. Despite early indications of possible human involvement, the remains have never undergone comprehensive analysis until now. After excavation, geoarchaeologist Vance Haynes Jr. recommended further investigation into possible cut marks observed on bone surfaces, suggesting potential cultural modification. This study presents new zooarchaeological and isotopic data for the Stolle Mammoth, including taphonomic examination of bone surface modifications, ancient DNA, and isotopic analysis. These findings shed light on the potential for cultural activity at the site and reconstruct aspects of the mammoth's life history, mobility, and ecological context. The Stolle Mammoth provides a unique lens through which to explore the intersection of human behavior and megafaunal ecology on the Southern High Plains. This study also highlights the research potential of established museum collections, where archaeological materials from past excavations remain largely unexamined yet offer valuable opportunities for new archaeological insights.

Ludmila Lbova and Irina Ponkratova

Complex Tattoo Traditions That Vary across North Pacific Cultures (Analysis of Different Technologies and Tool Sets)

This research delves into the evolution of tattooing as a prominent sociocultural practice within indigenous cultures of the Far North Pacific region (the Far North of Asia and North America). The study traces its development from the late Pleistocene era to the 20th century, exploring how tattooing became intertwined with the rise of prestigious technologies, sacred rituals, and artistic expression in prehistoric societies. Tattoos in the North Pacific region retained their traditional forms, likely due to their geographical isolation and the persistent nature of local customs. Tattooing, which is practiced today, provides insight into social behavior and rituals as well as individual and group identity. Different elements of tattooing: tools, symbolism, social functions, cultural significance, aesthetic preferences, and foreign influences as an important indicator of the cultural complexity of a community. The research focuses on materials and techniques of tattooing through examination of pigments, tattooing tools, and methods of application. We synthesize archaeological materials studies, including use-wear analysis and pigment analysis, ethno-comparative analysis, and historical and cultural studies. Two technologically distinct stages are distinguished. Excavations of Stone Age sites have uncovered unworked flakes, ritual arrowheads, and traces of complex composite pigments, indicating the practice of body tattooing. Organic needles gave way to metal ones in the 18th century, and pigments were predominantly single-component, derived from materials such as charcoal, ash, or other natural substances.

Craig M. Lee, Rolfe Mandel, and John 'Jack' Fisher

Late Pleistocene Landscapes and Faunal Records at Scott Spring: A Synergistic Geoarchaeological Investigation along the Colorado Front Range

Scott Spring (5DA120), located just south of Denver, Colorado, preserves stratified late Pleistocene and Holocene deposits with important geoarchaeological and paleontological potential. Recent fieldwork included four trackhoe trenches exposing spring-associated sediments, loess, buried soils, and faunal remains. Trench 1 documented three intervals of stable land-surface development: Soil 1 from the present to ca. 15,000 years ago, Soil 2 from ca. 37,000–26,100 cal yr BP, and Soil 3 from >41,250–37,000 cal yr BP. Trench 2 exposed Peoria and Bignell loess, including the Brady Soil, and shows high potential for buried cultural deposits in the upper 2.40 m, though bioturbation is present. Late Pleistocene fauna include Mammuthus sp., *Camelops* sp., and *Bison* sp.; associated dates include 12,495 ± 42 and 21,842 ± 104 radiocarbon years BP. Although no artifacts or human-modified bone were identified, Scott Spring demonstrates strong potential for integrating geomorphology, soil stratigraphy, and faunal analysis to reconstruct late Quaternary High Plains landscapes.

Mike Lenzi

Terminal Pleistocene/Early Holocene Crescent Projectile Points from the Western United States

Crescents are generally lunate curated bifaces found in terminal Pleistocene/Early Holocene assemblages in the Western United States. They demonstrate a mental and cultural template of form, preferential toolstone selection, geographic distribution around aquatic environments, edge grinding along the midsection for hafting, and breakage patterns consistent with high-velocity impact. Lunate crescents stop being made following the desiccation of pluvial lakes in the Intermountain West but persist for a period of time as notched crescents (eccentrics) in California. Crescents reflect a specialized blunt projectile point tip for hunting waterfowl and other small game and provide insight into the broad diet breadth and prey choice of PaleoAmericans. They reflect a culture adapted to aquatic environments and were likely used by the descendants of a Paleocoastal migration along the Pacific Coast of North America.

David E. Leslie, Cassie Aimetti, Zachary L. F. Singer, and Andy Fallon

What Lies Beneath: Ground Penetrating Radar and Vibracore Survey of the Inundated Liebman Site, an Early Paleoindian Site in Lebanon, Connecticut

The Liebman Site is a Middle Paleoindian Site preserved beneath Lake Williams, a ~270-acre lake initially created by 19th century milling operations along Bartlett Brook in Lebanon, Connecticut. Originally discovered by John Parkos and excavated by John Pfeiffer in the 1990s when water levels were reduced, the site is inaccessible to traditional investigations. Prior excavations yielded 85 artifacts including 15 tools, comprising endscrapers, pieces esquillees, utilized flakes, and a Crowfield fluted point base. To better contextualize the stratigraphy and paleoenvironmental setting of the site, we surveyed the general area via ground penetrating radar using a real-time kinematic GPS encoded 350 MHz antenna via paddleboard and raft. Data was collected in transects perpendicular to relevant landforms, which revealed the presence of a possible floodplain, buried paleo-channel, and developing wetland, as well as the 19th century channel of Bartlett Brook. Following these results, a series of underwater vibracores were collected. This coring program was instrumental in assessing site formation of the Liebman Site, as well as the adjacent paleochannel and associated wetland sediments. Systematic radiocarbon dating and portable X-Ray Fluorescence of these sediments provide excellent data for the Pleistocene and Holocene site formation of the Liebman site and surrounding environs.

Bryn Letham, Jacob Earnshaw, Spencer Greening, Ian Sellers, Duncan McLaren, Eric Letham, Rasha Elendari, Brendan Eshom, Daryl Fedje, Christopher F.G. Hebda, and Nick Waber

Building a Case for Very Early Human Presence on the Outer Northwest Coast: Weaving Multiple Contextual Threads at Laxnuganaks/'Ngwünaks (Moore Islands), British Columbia, Canada

Rapidly changing landscapes during the late Pleistocene on the Pacific Northwest Coast present challenges to identifying and dating archaeological evidence. The earliest inhabitable regions were those furthest offshore, and dramatic sea level changes and unstable physical landscapes mean that sites are likely ephemeral, partially preserved, and difficult to access today. We present research results from Laxnuganaks/'Ngwünaks (Moore Islands), outer coastal islands in northern British Columbia that were ice-free by 16,000 years ago and which were an origin site for a major lineage of several north coast First Nations. Excavations at a rockshelter revealed a rich early Holocene archaeological component, though below that we recovered a small assemblage of earlier flakes and flaked cobbles that are suggestive of human agency. Attempts to radiocarbon date these earlier contexts have failed, leaving us with a tantalizing – but uncertain – record of early postglacial human occupation. We present sediment and stratigraphic analysis, pollen evidence, and other contextual clues that build an argument that this could be one of the earliest archaeological sites on the Northwest Coast. We reflect on the value of presenting these data for evaluation and suggest that the case for the earliest sites may emerge from close attention to more subtle archaeological signatures.

Aurélie Liard, David Rhode, Kelly Graf, Ted Goebel, and Auréade Henry

Holocene Woody Landscape and Fuel Management in the Bonneville Basin: A Charcoal Analysis of the Early Archaic Levels of Bonneville Estates Rockshelter

The onset of the Holocene in the American Intermountain West was marked by intense environmental desertification. Despite increasing aridity, the region was not abandoned and has remained occupied to the present day. Bonneville

Estates Rockshelter provides a clear example of this continuity, with numerous occupations recorded during this period, corresponding to the Early Archaic chronocultural complex. These occupations are also the most intensive and longlasting recorded at the site. A charcoal analysis was conducted to improve paleoenvironmental reconstructions and document changes in woody vegetation during this aridification process. The study also produced the first data on fuel management practices within this chrono-geographical context, further refining our understanding of Early Holocene populations in the region. In particular, the results highlight the alternation between plant communities dominated by *Ephedra* (jointfir) during the driest periods and *Artemisia* (sagebrush) during periods of milder weather. Beyond its ecological importance, which is absent from other palaeoenvironmental records, *Ephedra* appears to be a key taxon within the Early Archaic economy due to its ability to retain moisture more effectively, giving it excellent firewood properties that reduce the amount of wood required during periods when biomass is restricted.

Joseph A. Lindler Jr., Albert C. Goodyear, and Christopher R. Moore

The Creation of the South Carolina Haw River Database

South Carolina contains a variety of early projectile point/knife forms (PPKs) that contribute to our understanding of the Indigenous record in the Southeast. As datasets expand, structured databases have become essential for systematic documentation and analysis. The South Carolina Haw River Database was developed as a complement to the SC Fluted Point Database to specifically document a proposed pre-Clovis PPK classified as Haw River types. Haw River points are small lanceolate bifaces recognized in the Southeastern United States that are morphologically distinct from Clovis, often heavily weathered, and tentatively interpreted as early Indigenous and possibly pre-Clovis in origin, forms currently lacking firm chronometric control. The database currently includes over 80 documented specimens composed of multiple raw material types and recovered from South Carolina, North Carolina, Georgia, and Florida through both archaeological investigations and private collections. This poster presents the spatial distribution, morphological variability, and metric characteristics of Haw River points and compares them to other Paleoindian PPK types, including Clovis and Redstone. These data provide a framework for refining typological definitions and improving identification criteria within early Indigenous assemblages.

Joseph A. Lindler Jr. and Reece Spradley

Breaking Ground at Topper (38AL23): Revisiting the 1985 and 1986 Excavations

The Topper site (38AL23) is an Indigenous quarry site that has been internationally recognized as one of the oldest sites in the North America based on the findings of Dr. Albert C. Goodyear and other archaeologists over the course of four decades of excavations and research. Excavations have revealed important and controversial findings that have caused archaeologists to reevaluate our understandings of when the earliest Indigenous occupations first occurred in the Southeastern United States. This poster focuses on the first excavations at 38AL23 in 1985 and 1986 excavations of the first 46 square meters that were not fully analyzed until recently. Reviewing the original findings of these investigations and their original identifications made in the field by archaeologists, we will examine how these original perceptions have changed since their recovery 40 years ago. We will also discuss how the legacy collection of 38AL23 can continue to be valuable sources of data for archaeologists as well as an instructional aid for students and other researchers moving forward while this project proceeds towards a final report of the 1985 and 1986 field excavations.

McKenna Litynski, Todd A. Surovell, Sarah A. Allaun, and Spencer R. Pelton

Traditional and Zooarchaeology by Mass Spectrometry Identifications Reveal Bone Raw Material Procurement Strategies for Needles and Awls across Wyoming

Bone needles and awls are critical components of the thermoregulation toolkit and thus offer insight into how early human populations solved the adaptive challenges of Late Pleistocene and Early Holocene global expansion. Despite the significance of such perforation tools, the decisions motivating raw material procurement remain understudied. This poster presents the results of traditional morphometric and Zooarchaeology by Mass Spectrometry (ZooMS) taxonomic identifications from a sample of bone awls and needles across twenty different Wyoming archaeological sites representing diverse time periods including Early Paleoindian through Late Prehistoric occupations. Results reveal that bone procurement for needle and awl manufacture was primarily influenced by a combination of opportunism and skeletal metric attributes as opposed to bone mechanics. While site faunal assemblages often mirrored tool material selection, there were also notable exceptions as in the case of needles manufactured from the

remains of carnivores and an awl produced from the bone of sandhill crane. By contributing to our understanding of the processes and reasoning behind creating material culture from the remains of animals, our research sheds light on broader topics related to thermal adaptations, faunal resource utilities, and social dynamics.

Thomas J. Loebel, Jonathan C. Lothrop, Susan Winchell-Sweeney, and Alexandra DeCarlo

Microscopic Usewear Analysis on Ice Age Stone Tools in the New York Region

A significant shortcoming in current models of Ice Age lifeways in New York and the broader Northeast is our poor understanding of how the First Peoples used different kinds of flaked stone tools, and by extension, how these tools and toolkits articulated with their mobile lifeways. Applied to multiple sites on a regional scale, high-power microscopy of these flaked stone toolkits provides insights on (1) site function, (2) the organization of activities within and across sites, and (3) the "invisible" organic component of the cultural adaptations of these Late Pleistocene foragers. Coupled with protein residue analysis of these same tools (Lothrop et al. 2026, this meeting), this study offers new insights on the roles of Ice Age toolkits for Indigenous peoples on the subarctic landscapes of the New York region, circa 12,800-11,600 calendar years before present.

Carlos E. López and Martha C. Cano

Revisiting the Early Archaeological Contexts of the Magdalena Valley (Colombia): Recent Advances in Early Peopling Research

The Magdalena River's inter-Andean valley in northwestern South America is regarded as a pivotal migration corridor for the initial peopling of the subcontinent during the xeric phases of the Late Pleistocene. While the Holocene record of the lower basin is truncated by pervasive alluvial dynamics—with no evidence of anthropogenic contexts predating 6000 BP—the Middle Magdalena Valley reveals a robust pattern of early occupation. These sites are frequently associated with paleo-terraces elevated approximately 50 meters above the contemporary fluvial base level. This poster synthesizes the primary findings from early lithic assemblages recovered from both surface scatters and stratified contexts, characterizing the cultural trajectories of the populations that inhabited the region between 11,000 and 4000 BP. Although archaeological and geoarchaeological research in the area began three decades ago, investigations in both the field and the laboratory have been intermittent. However, recent studies have revitalized the regional record, incorporating specialized lithic re-analyses conducted in collaboration with French and Italian institutions, alongside new data from Cultural Resource Management (CRM) projects. Emphasis is placed on technological advancements in lithic analysis and recent radiocarbon assays that corroborate the significant chronological depth of these early occupations.

Jonathan C. Lothrop, John Fagan, Cam Walker, Alexandra DeCarlo, and Susan Winchell-Sweeney

Results of Protein Residue Analysis on Ice Age Stone Tools in the New York Region

Due to acidic soils, Ice Age Indigenous sites in northeastern North America rarely yield preserved remains of vertebrate prey that these First Peoples may have exploited. Taxonomic identification of animal proteins preserved on flaked stone tools provides one option for addressing this lack of data. Crossover immuno-electrophoresis (CIEP) constitutes a standardized technique for identifying ancient animal proteins that may be present on stone tools by testing against extant animal antisera for antigen-antibody reactions. In this paper, we present results of a regional CIEP testing program conducted on formal flaked stone tools from nine fluted point sites and localities in New York and western Connecticut. These results shed new and surprising light on potential prey species and lifeways of the New York region's Ice Age Peoples between circa 12,800 and 11,600 calendar years before present.

Lisbeth A. Louderback, Michael D. Martin, Bryn Dentinger, Nicole M. Herzog, Bruce M. Pavlik, and Tom D. Dillehay

Re-Evaluating the Evidence for Wild Potato Use in South-Central Chile

The earliest evidence of wild potato use anywhere in the world comes from Monte Verde (southern Chile), where tuber fragments were recovered from hearths at MVII. Those tubers were tentatively assigned to a wild potato species (*Solanum maglia*) based on their starch granule morphology, which, according to Ugent et al., could be distinguished from the granule morphology of the domesticated potato (*S. tuberosum*). That identification was subsequently called into question by Spooner et al., correctly pointing out that there is considerable variation in the size and shape of *Solanum* starch granules. This project extends this work by conducting a systematic study of starch granules from tuber reference materials of *Solanum* species

that occur within a few hundred kilometers of Monte Verde. All reference materials were obtained from the USDA/ARS Potato Genebank and the International Potato Center and include *S. chacoense*, *S. kurtzianum*, *S. maglia*, *S. tuberosum* subsp. *andigenum*, and *S. tuberosum* subsp. *chilotanum*. We will present our approach to starch granule identification, and in combination with genetic analysis, evaluate whether the diagnostic features used by Ugent et al. allow for an unequivocal assignment of the Monte Verde archaeological tubers to a single species.

Joshua J. Lynch

Bone, Antler, and Ivory Technologies in Siberia and Beringia: Implications for North American Paleo Traditions

Organic technologies are central to the construction, maintenance, and use of hunting equipment among northern hunter-gatherers, yet they are unevenly represented in early archaeological records because of differential preservation. This poster reports comparative results from multiple Siberian and Beringian osseous assemblages dating to the late Pleistocene and early Holocene. The analyzed sample includes bone, antler, and ivory projectile points, foreshafts, slotted implements, awls, and other worked organic artifacts. Reported data include raw material identifications, metric and morphological attributes, evidence for shaping and finishing, hafting-related modifications, breakage patterns, and microscopic use-wear observations. These results indicate that osseous implements were integral to composite weapon systems and also participated in repair, maintenance, hide-working, and animal-processing activities. The Siberian and Beringian record therefore demonstrates that lithic assemblages alone provide an incomplete basis for reconstructing technological organization in cold-region forager societies. This better-preserved organic record offers a comparative framework for evaluating North American Paleo traditions, where bone, antler, and ivory artifacts are often absent or underrepresented. The poster argues that these missing technologies have significant implications for interpreting toolkit design, mobility, risk management, and technological continuity across northeast Asia, Beringia, and northern North America.

Chase M. Mahan, Spencer R. Pelton, and Todd A. Surovell

Paleoindian Conveyance of Eocene Chert in the Wyoming Basin

Paleoindians are traditionally characterized by high residential mobility, a model primarily supported by the long-distance transport of high-quality lithics. While these networks are well-documented across the Great Plains and Great Basin, the Wyoming Basin remains an analytical outlier despite its abundance of high-quality Eocene cherts. This study evaluates Paleoindian mobility by synthesizing a comprehensive compilation of Eocene geology and knappable toolstone from the Greater Green River Basin to determine how this resource-rich environment fits into existing paradigms for the peopling of the Americas. By comparing Eocene chert in Paleoindian site assemblages to a null model of regional procurement and major "high visibility" toolstone, I address whether Wyoming Basin mobility reflects the traditional "high-mobility complex" or more localized foraging patterns dictated by the regions unique resource density and paleoenvironment. Ultimately, providing much-needed lithic source data and geological context for Eocene bedrock formations reveals how the Wyoming Basin record contributes to long-held notions of Indigenous hunter-gatherer movement and land use during the Late-Pleistocene.

Rolfe D. Mandel and Justin A. Holcomb

Bluefish Caves Revisited: A Geoarchaeological Assessment of a Potential Pre-Clovis Site in the Yukon Territory of Northwestern Canada

The Bluefish Caves site is a cluster of four small rockshelters in the Yukon Territory of Canada. Caves I, II, and III were excavated during the 1970s and 80s under the direction of Jacques Cinq-Mars and yielded faunal remains dating to ca. 30-10 ka contained in loess. Only Caves I and II had artifacts associated with faunal remains, and Cave IV was not excavated. Radiocarbon ages determined on cut-marked bones identified during a recent taphonomic analysis of the faunal assemblage suggests that humans occupied the site as early as 24 ka. Hence, Bluefish Caves may be the oldest recorded archaeological site in North America. Here, we report results of recent excavations that included efforts to gain a better understanding of the stratigraphy, site formation processes, and spatial integrity of cultural deposits. In sum, Cave III was reopened but failed to yield artifacts, and no intact loess deposits remain at Caves I and II due to previous excavations. Cave IV was excavated and produced Pleistocene faunal remains in colluvial deposits but no loess or artifacts. Micromorphological analysis at Cave IV suggests no significant evidence of solifluction below the upper 20 cm of the Pleistocene colluvium, and limestone clasts and soft, smooth lime-

stone floors in Caves I and II cannot account for previously documented bone modifications. Although site formation processes are more complicated than previously understood, the possibility of a human presence as early as 24 ka shouldn't be dismissed.

Rolfe D. Mandel, Bryon Schroeder, Erika S. Blecha, Susan M. Mentzer, and Justin A. Holcomb

Evidence for Pre-Clovis Occupation at the San Esteban Rockshelter in the Big Bend Region of Southwest Texas.

The San Esteban site is a large rockshelter in the arid northern Chihuahuan Desert of the Big Bend region, southwest Texas. A spring-fed *tinaja* is located immediately in front of the rockshelter, creating a setting that would have attracted game and people to the site throughout the Holocene and terminal Pleistocene. Excavations conducted by the University of Kansas Odyssey Archaeological Research Program in 2020-2025 revealed that the rockshelter contains stratified sedimentary deposits, primarily loess, ranging in age from ca. 18,000 cal BP to <1000 cal BP. In addition to exposing robust Early Archaic cultural deposits and younger archaeological components, the Odyssey team documented multiple superposed and adjacent combustion features dating to ca. 15,500-10,900 cal BP in loess at the back of the rockshelter. One of the features contained a charred ulna from an extinct Condor (*Gymnogyps californianus*), along with burned elements of bison (*Bison* spp.) too degraded for dating, purified collagen from the condor ulna yielded a radiocarbon age of 15,483-15,094 cal BP. This poster will lay out the case for a Pre-Clovis occupation at San Esteban, based on multiple proxies.

Giulia Marciani, Marcos César Pereira Santos, Fernanda Schneider, Jones Fiegenbaum, Italo Marques de Castro, Diego Dias Pavei, Antoine Lourdeau, Mirian Carbonera, Daniel Loponte, Stefano Benazzi, and Neli Teresinha Garlace Machado

Reassessing Lajeado dos Fósseis: New Evidence for Early Human Occupation and Megafauna Interaction in Southern Brazil

Understanding the timing and pathways of early human dispersal into South America remains a central research challenge. Increasing evidence points to complex and regionally variable occupation histories, requiring high-resolution datasets from key understudied regions. Lajeado dos Fósseis (RS-I-50), located in the Sanga da Cruz (Ibicuí River basin, Rio Grande do Sul, Brazil), represents one such critical context. The site was first identified during the PRONAPA (Programa Nacional de Pesquisas Arqueológicas) and later investigated and dated within the framework of the PROPA (Projeto Paleoindígena) in the 1970s. It subsequently became central to debates on early human occupation due to the reported association between lithic artefacts and Pleistocene megafauna. However, previous research highlighted major uncertainties concerning stratigraphic integrity, depositional processes, and the reliability of this association, given the complex alluvial context and limited documentation. A new international research programme initiated in 2025 combines systematic survey, targeted excavation, and an integrated analytical framework to reassess the site and its regional significance. This approach includes geoarchaeology, micromorphology, OSL and radiocarbon dating, lithic technological analysis, zooarchaeology, taphonomy, and sedimentary ancient DNA. Preliminary results confirm a well-preserved stratified alluvial sequence and suggest a Late Pleistocene age. By directly addressing longstanding issues of context, chronology, and association, Lajeado dos Fósseis offers significant potential to refine models of early human occupation and human–megafauna interactions in southern Brazil.

Natalie M. Marud and Geoffrey Smith

Evaluating Radiocarbon Reliability and Crescent Chronology in Terminal Pleistocene/Early Holocene Far Western North America

Crescents are distinctive stone tools found in terminal Pleistocene and early Holocene contexts across the American Far West, but their age range remains ambiguous because few radiocarbon dates are associated with crescents. Furthermore, many of the available dates come from poorly documented or indirect contexts. I evaluate the reliability of published radiocarbon dates associated with crescents to identify which ones provide the strongest evidence for the age of crescents, drawing from established chronological hygiene approaches. My results demonstrate that the dates vary widely in reliability and should not be treated as equally useful. The most reliable evidence places crescents in time between 11,285–11,940 cal BP and 9440–9710 cal BP. This study highlights the need to critically evaluate radiocarbon associations before using them to build regional archaeological chronologies.

Mike McBride, Jon C. Lohse, Victoria C. Pagano, and Sébastien Perrot-Minnot

When the Fluting Stopped: Complex Late Paleoindian Period Bifaces from August Pine Ridge, Belize

Recent and ongoing research at August Pine Ridge, Belize is documenting an astonishing assemblage of complex bifaces representing human occupation and social interactions that took place in Central America from approximately 13,000 to 8,000 years ago. As the Fluted Biface Horizon and the Pan-American production of such fluted bifaces ceased, we see new distinctive regional lithic technologies emerge in the Late Paleoindian and Early Archaic periods (ca. 12,000 – 8,000 years ago). Rather than ranges of thousands of kilometers of fluted biface technological behaviors, we observe these new and varied applications in ranges of hundreds of kilometers or less. This poster will present an overview of the documentation and analysis of at least five understudied or completely novel biface morphologies as part of the Pine Ridge Preceramic Project. With scores of lithic specimens recovered locally from the August Pine Ridge area available for study, we endeavor to advance new diagnostic elements in order to group various "types" and show possible developmental progressions among similar morphologies. We additionally propose evidence of these technological behaviors being shared among the Early Holocene occupants of Northern Belize and other areas of Northern South America, Central America, and the Caribbean.

Katelyn N. McDonough, Richard L. Rosencrance, Dennis L. Jenkins, Geoffrey Smith, Justin A. Holcomb, Bryan Hockett, Alex Nyers, Stefania Wilks, and Miranda Harding

Late Pleistocene Lifeways at the Connley Caves, Oregon

Ongoing interdisciplinary research at the Connley Caves in central Oregon is shedding new light on Indigenous lifeways over the last 13,000 years. Located on the ancestral lands of the Klamath, Northern Paiute and Modoc, the Connley Caves contain stratified deposits documenting millennia of recurrent visits by Indigenous communities, including some of the most robust late Pleistocene assemblages in western North America. Here we present results from over a decade of renewed investigations, integrating lithic technological and sourcing studies, geoarchaeology, paleoethnobotany, and faunal analyses, spanning microscopic to landscape-scale perspectives. The strength of this research lies in its multiproxy approach and close collaboration across specialties. Together, these datasets provide new insights into technology, subsistence practices, and human adaptation within dynamic pluvial lake and wetland environments at the end of the Pleistocene in the northern Great Basin. Results reveal evidence for seasonality and a range of activities, including a potential sewing camp, plant use, food preparation, elk, bison, rabbit, and greater sage-grouse hunting, and other practices, as well as dramatic environmental and climatic variability across the Pleistocene to Holocene transition. The assemblage also includes one of the largest professionally excavated Western Stemmed Tradition assemblages, contributing significantly to broader understandings of Pleistocene technologies and cultural adaptations.

Katelyn McDonough, Madeline Mackie, Emily B. P. Milton, Daniela Osorio, Briana Doering, Nathaniel Kitchel, and Bryn Sullivan

Where Are the Plants? Testing Biases in Pleistocene Archaeobotanical Records

Despite a deep history of subsistence studies, Pleistocene dietary information from the Western Hemisphere remains unsynthesized and plant foods are consistently underrepresented relative to faunal remains. This imbalance raises questions about whether plants are rare in the record due to their role in early food systems, taphonomic processes, or sampling biases. To address these issues, we are building a database of radiocarbon dated Pleistocene sites across the Americas and evaluating whether those sites preserve hearth features, if the hearths were sampled, and whether botanical analyses were conducted. This allows us to assess how many sites had potential for plant preservation, and, among those, how many yielded botanical remains. By comparing preservation potential with recovery, we test whether the apparent scarcity of plants reflects diet, taphonomic bias, sampling practices, or a combination of factors. The resulting database refines interpretations of Pleistocene foodways and identifies opportunities for future research avenues.

Bernard K. Means

America's Founding Fossils: Graphical and Tactile Explorations of the Founding Fathers' Obsession with Pleistocene Megafauna

America's Founding Fathers—notably Thomas Jefferson and Benjamin Franklin—were deeply interested in Pleistocene megafauna, especially the American mast-

odon (*Mammut americanum*). Their concern was not with understanding animals that lived long before them. In fact, Jefferson did not believe in extinction and even charged the Lewis and Clark on their Corps of Discovery Expedition to bring him back living mastodons or giant ground sloths. Rather, they wanted to disprove the Comte de Buffon's Theory of American Degeneracy. Still, their obsession with disproving Buffon led to the discovery of Jefferson's ground sloth (*Megalonyx jeffersonii*) and the excavation of the first complete American mastodon skeleton by their compatriot, artist Charles Willson Peale. Peale also mounted the first mastodon skeleton in his Philadelphia museum. Their discoveries contributed to an understanding of the animals that once roamed Pleistocene North America. This story has been explored in the STEM-friendly comic book Founding Monsters as well as an exhibit at The Peale based on this comic and developed with 3-D printed fossils and sculptural elements to create an accessible experience for all visitors, but especially those who are blind or of low vision. This poster details the comic and the exhibit.

Ashley Medlin

Understanding Historical Relationships among Early Paleoindian Technologies: A Preliminary Investigation of Stemmed and Fluted Technological Relationship

The relationship among the earliest Paleoindian technocomplexes in the Americas: Clovis, Western Stemmed (WST), and Fell (Fishtail), is unclear; especially regarding when and how each developed. The overarching aim of this research project is to test if there is a historical relationship among bifacial point technologies associated with the three complexes and other late Pleistocene stemmed points in the Americas to inform on the late Pleistocene spread of stone technologies across the Americas. For this phase of the project, my goal is to understand the historic relationship between WST in the Great Basin and Clovis fluted points in North America as well as how the early stemmed points found at the Gault and Debra L. Friedkin sites in Texas vary morphologically and technologically relative to WST and Clovis. I collected metric measurements and geometric morphometric (GM) shape data from 3D scans of Clovis and stemmed points from various institutions throughout North America. This project will provide an overview of the project's comparative assemblages and focal methodologies, as well as preliminary results of GM shape analysis and Multivariate Analysis of Variation using shape data. Discussion will address major factors of variability among these early industries.

Sarah Meinekat, Emily B. P. Milton, Daniela Osorio, Susan Mentzer, Chris Miller, Peter Leach, Dan Sandweiss, and Kurt Rademaker

Salty Sediments: Microstratigraphy and Site Formation at Quebrada Jaguay 280

Quebrada Jaguay 280 (QJ-280), a Pleistocene-Holocene coastal site in southern Peru, is a key archaeological context for understanding early maritime adaptations in the Americas. Previous excavations have revealed middens rich with coastal resources, including surf clams, fish, crustaceans, and local toolstone. Alca obsidian and *Opuntia* sp. cactus seeds, which originate from higher elevations, establish an early connection between the coast and the interior ecosystems of the Central Andes. Recent mining activity in the adjacent quebrada damaged the site's upper deposits, leaving only the earliest deposits intact. Our 2017 excavations targeted the remaining contexts using new approaches, including photogrammetry and geospatial mapping, high-precision AMS dating, sclerochronology, and micromorphology. This poster presents the recent geospatial data and a microanalytical study that combined micromorphology, μXRF, and μFTIR. These data reveal new insights into site use, function, maintenance, and formation processes. Our findings are relevant to the unique preservation history of QJ-280 and other early sites in coastal settings. While bioturbation and diagenesis have affected the preservation of organic materials (shell and charcoal), observations suggest the site functioned as a short-term, repeatedly occupied camp. Our micro-analysis at QJ-280 contributes a deeper understanding of human use of Pacific coastal ecosystems during the settlement of the Americas.

César Augusto Méndez Melgar, Amalia Nuevo-Delaunay, Pablo Marcelo Fernández, Omar Reyes, and Antonio Maldonado

The Occupation of the Evergreen Forest in West Patagonia Extends into the Pleistocene- Holocene Boundary

Human occupations in the continental evergreen forests of Central West Patagonia (South America) were long thought to date no earlier than the Late Holocene. Excavations at the El Toro rockshelter, located in the Cisnes River valley, a corridor linking the eastern steppe and the core of the humid evergreen forest, have been interpreted as evi-

dence of repeated short-term visits, likely associated with the pursuit of the Andean deer *Hippocamelus bisulcus*. These occupations occurred during periods of reduced moisture and diminished forest cover no earlier than 2800 cal BP. However, new radiocarbon dates obtained from charcoal and from bones bearing clear cutmarks recovered in unpublished excavated units now indicate ages between 11,500 and 10,500 cal BP. These results extend the chronology of human presence in temperate forests of Patagonia by several millennia, revealing an unprecedented archaeological scenario for the region. This earlier-than-expected record compels reevaluation of (1) the timing and routes of initial peopling in West Patagonia, (2) the discontinuities in hunter-gatherer occupation of temperate forests after the initial occupation, and (3) the potential role of early populations in structuring habitats using fire. Ongoing research, together with emerging findings from other localities in the forests of the Southern Cone, will contribute to clarifying this archaeological puzzle.

Fanxiu Meng

Recognizing Bifacial "Thinning" Technology in Central Japan and North America

Bifacial thinning technology is widely recognized as a defining characteristic of Clovis bifacial production in North America, yet the presence and organization of possible thinning strategies in Japanese bifacial assemblages remain insufficiently understood. This study examines bifacial shaping technologies in central Japan and North America from a comparative perspective, focusing on whether assemblages of central Japan exhibit formalized thinning trajectories comparable to those in Clovis contexts. The analysis compares collections from Sagamino Upland site cluster in central Japan and the Blackwater Draw site in North America, using quantitative measurement of refinement (thickness/width) to evaluate thinning intensity. Debitage and refitting analyses from the assemblages of central Japan are further applied to identify the integration of operational techniques and distinctive technological characteristics. The results suggest that Clovis assemblages exhibit comparatively standardized thinning strategies associated with formalized bifacial forms, whereas assemblages of central Japan demonstrate greater variability in shaping techniques and reduction trajectories. These differences likely reflect regional variation in lithic material constraints, tool use-life, and broader technological organization. The study highlights the importance of comparative approaches for understanding variability in bifacial technologies across regions.

Steven Meredith

Quarrying and Knapping Fort Payne Chert over the Millennia

Archaeological testing of Mossy Bluff (1Ct610), a multi-component site above the Muscle Shoals on the Tennessee River, in northwest Alabama, has provided a diachronic sample of how knappable stone was procured and used in an area where it is most abundant. Cores, preforms, and debris from quarrying, manufacture, and discard of tools at an outcrop of the Fort Payne chert and the Tuscumbia Limestone reveal direct quarrying from outcrops in at least two intervals of time in the Archaic period and recycling of earlier debitage in the Late Mississippian/Protohistoric period. This poster is dedicated to the memory of Dr. John W. Cottier, who always insisted that I "do some geology!" when doing archaeology. Background photo is of the Tennessee River taken from the Mossy Bluff site.

Christopher W. Merriman, Briggs Buchanan, Marcus J. Hamilton, and David Kilby

The Nature of the Clovis Occupation at the Mockingbird Gap Site, Socorro County, New Mexico

Located in the northern Jornada del Muerto of south-central New Mexico, the Mockingbird Gap site is one of the largest Clovis occupations in North America. The site covers a roughly 1000 x 300-meter area along a northeast-southwest trending gravel ridge on the southeastern bank of Chupadera Draw. The Clovis occupation is divided into north and south concentrations separated by a shallow swale that bisects the gravel ridge. Persistent survey, mapping and collection efforts by geologist and archaeologist Robert Weber coupled with excavation projects in the late 1960 and the early 2000s have produced an extensive, well documented assemblage of over 200 diagnostic Clovis bifaces. In addition, the site has also yielded dozens of Clovis channel flakes, hundreds of flaked stone tools, tens of thousands of pieces of debitage, and tooth enamel morphologically consistent with bison. One of the lingering questions about the site is whether it represents repeated use by fewer people over a longer time period, or an aggregate occupation by more people for a relatively shorter duration. Focusing on the projectile points and preforms, we use technological attribute analyses and raw material provenance studies combined with GIS based spatial analyses to address this question.

Pablo G. Messineo, Nélida Pal, and Gustavo G. Politis

Revisiting La Moderna Megamammal Kill/ Processing Site: A Techno-Morphological and Use-Wear Reanalysis of the Stone Tool Assemblage

La Moderna is a megamammal/kill and processing site located along Azul Creek, in the Pampas of Argentina. It was excavated in 1972–1973 by Floreal Palanca and in 1982–1984 by one of us (GP). New excavations are currently underway. At the site, a close association was documented between bones of a glyptodont (*Doedicurus clavicaudatus*) and lithic tools/flakes, mostly on crystalline quartz. The accurate chronology could not be established because of the wide range of radiocarbon dates obtained (~14,530–7416 cal yr BP). This broad chronological span resulted from contamination of bone collagen. The archaeological materials were recovered from a stratigraphic unit transitional between the Late Pleistocene and the Early Holocene, at the same stratigraphic position as the nearby Campo Laborde site (~12,600 cal yr BP), supporting a Late Pleistocene age for La Moderna. A preliminary micro-wear analysis was carried out by Politis and Olmos (1986) on the lithics excavated during 1982–1984. In this presentation, we reanalyze this collection and incorporate additional lithic materials from the Palanca excavations. We integrate a techno-morphological and use-wear analysis (via high-resolution microscopy) on tools and flakes made on crystalline quartz and other lithic raw materials to discuss the technological strategies used by these early hunter-gatherers.

Sarah Mielke, Megan Pangrass, Joseph A. Lindler Jr., and Joseph E. Wilkinson

1937-2026: History of Documenting Fluted Points in South Carolina

South Carolina contains a deep Indigenous history dating back thousands of years, resulting in the documentation of early fluted projectile points found across the state. Over 800 projectile points have been recorded in the SC Fluted Point Database, consisting of various raw materials and types found both in and around South Carolina. The database, which includes points such as Clovis, Redstone, Suwanee, and Cumberland, has been instrumental in providing archaeologists across the Southeast with information regarding design and functionality of projectile points associated with the region. This dedicated database has impacted and improved projectile point research such as source material location identification, tool production, and blood residue studies, which have offered broad insight into some of the earliest Indigenous peoples and their lifestyles in South Carolina. We aim to explore the over fifty years of data collection and the evolution of this database by visually presenting the data that began with Jim Michie in 1977 to the current state of the database through the lens of archaeology and museum studies, where we will present a timeline of the database to identify strengths and weaknesses of the database as well as offer remediation plans for future documentation.

Constance Millar, David H. Thomas, Misty Benner, Donna Cossette, Herman Fillmore, Diane Teeman, and Wilson Wewa

The Indigenous Oral Narrative, Theft of Pine Nuts: A Proxy for Reconstructing Ancient Biogeography in the Great Basin, USA

We explore the deep history of pinyon pine (Pinus monophylla) in the Great Basin (GB) by combining Indigenous and Western scientific ontologies to address 61 Theft of Pine Nuts (TPN) oral-history narratives transcribed over the last 152 years. Contemporary Paiute, Shoshone, and Wá·šiw storytellers still tell these narratives, which our five Indigenous coauthors heard growing up. Prior efforts have assessed Indigenous oral histories that describe catastrophic geologic events, but TPN also provides valuable new paleoecological insights into late Pleistocene (LP) and Holocene biogeography. We provide evidence that "ice-barrier" accounts in the Indigenous narratives may have been transmitted since LP times. TPN points to ancient pinyon pine homelands located within the current pinyon distribution and also north of the current known range. These extramarginal pinyon locations corroborate and expand a Western science hypothesis of LP or Holocene refugial pinyon populations that subsequently became extirpated in the northern GB. As foretold by the narratives, new field and model evidence shows that pinyon pine may indeed have extended north of its current known range. Considered judiciously and in concert with independent corroboration, we argue that traditional oral-histories (often dismissed as "myths") may convey reliable eyewitness observations valuable in reconstructing paleoenvironmental events and conditions.

D. Shane Miller, Jason O'Donoughue, Katherine McMillan Barry, and David G. Anderson

Untangling Recovery Bias and Aggregation Loci in the Southeastern United States: A Hotspot Analysis of Archaeological Sites and Clovis Point Recovery

Previous research has shown that proxies for modern re-

covery bias, including population density, landcover, and survey intensity, poorly predict Clovis biface frequency in the southeastern United States, whereas proximity to lithic raw material sources, physiographic boundaries, and major rivers significantly correlates with high Clovis point density (Miller 2016). Separately, Getis-Ord Gi* hotspot analyses of state site file data spanning the Paleoindian through Early Woodland periods reveal pronounced spatial clustering, with hotspots potentially reflecting core ranges of past populations (Anderson et al. 2025). Here, we conduct parallel hotspot analyses on two datasets: (1) total recorded archaeological sites by county from state site files, and (2) Clovis biface densities from the Paleoindian Database of the Americas (PIDBA). By comparing these spatial structures, we identify where Clovis point hotspots coincide with or diverge from overall site density hotspots. Coincident hotspots suggest genuine loci of intensive past land use such as seasonal aggregation areas for dispersed Late Pleistocene populations. Divergent patterns help isolate the effects of recovery bias from behavioral signatures, including preferential discard near accessible raw material sources, moving toward resolution of the aggregation-versus-preferential-discard problem.

Emily B. P. Milton, Sam Brown, Sarah Meinekat, Daniela Osorio, Melina Seabrook, Katherine Moore, Kurt Rademaker, and Dorothée Drucker

Hold My Deer: A Multi-Isotopic ($\delta^{13}C$, $\delta^{15}N$, and $\delta^{34}S$) Perspective on High Andean Ecosystem Use, Pleistocene-Present

Widespread archaeological evidence throughout the Americas suggests people began living in mountainous environments by the Late Pleistocene. We investigate subsistence adaptations and environmental change on the Andean Plateau by applying stable isotope analysis, Zooarchaeology by Mass Spectrometry, and AMS radiocarbon dating to human and faunal remains recovered from the Cuncaicha rockshelter in southern Peru. We present some of the first proteomic data for the region, alongside 23 new XAD-purified radiocarbon dates and $\delta^{13}C$, $\delta^{15}N$, and $\delta^{34}S$ measurements from 66 animal and 5 human individuals. Our results, beginning around 12,000 years ago and spanning to the present, show herbivore niche partitioning, local hunting practices, and baseline nitrogen and carbon variation. Our data suggests resource stability supported human adaptation to high-elevation and cold environments. $\delta^{34}S$ effectively rules out the possibility of marine contributions to Early and Late Holocene human diets and, further, appears to be a reliable method to investigate the procurement of fauna from diverse hunting ranges. These findings emphasize the relevance of deep-time archaeological records for understanding early and ongoing human-environment dynamics in the Americas.

Christopher R. Moore, Joseph A. M. Gingerich, William A. Childress, Malcolm A. LeCompte, Allen West, Mohammed Baalousha, Michael Bizimis, Terry A. Ferguson, Siddhartha Mitra, Chad S. Lane, Theodore R. Them II, M. Scott Harris, Victor Adedeji, Kurt A. Langworthy, Mahbub Alam, Paul A. Schroeder, Aaron Thompson, Jordan Jeffreys, and Marc J. Defant

A High-Resolution Younger Dryas Boundary Datum in Stratified Paleoamerican Deposits at Smith Mountain Lake (44PY152), Virginia

Geoarchaeological investigations at site 44PY152 near Smith Mountain Lake, Virginia, document stratified Late Pleistocene–Early Holocene archaeological occupations preserved within ~1.9 m of floodplain alluvium. These deposits contain in situ and eroding fluted Paleoamerican and Early Archaic projectile points. We analyze a contiguous, high-resolution sedimentary sequence to evaluate the presence and stratigraphic integrity of microspherules and platinum-group element (PGE) anomalies associated with the onset of the Younger Dryas. Analyses include Bayesian radiocarbon modeling, SEM-EDS, single-particle ICP-TOF-MS, LA-ICP-MS, laser granulometry, bulk organic carbon and nitrogen, soot carbon, stable carbon isotopes, magnetic susceptibility, and mercury. Results reveal a discrete 1-cm-thick microspherule-rich layer accompanied by pronounced PGE mass anomalies and synchronous increases in metal-bearing nanoparticles. Chondrite-normalized elemental patterns indicate selective platinum enrichment decoupled from largely conservative rare earth element behavior, while nanoparticle compositions are enriched in highly siderophile elements. Together, these data are consistent with Younger Dryas Boundary proxy assemblages reported at multiple sites. This proxy suite defines a precise chronostratigraphic datum for the onset of the Younger Dryas at 44PY152. Subtle excursions in soot $\delta^{13}C$ and Hg immediately above the datum suggest associated environmental variability. The microspherule–PGE horizon provides a high-resolution marker for correlating archaeological sequences across the Younger Dryas transition.

Christopher R. Moore, Albert C. Goodyear, I. Randolph Daniel Jr., Mark J. Brooks, Larry R. Kimball, Sean G. Taylor, Joseph A. Lindler Jr., Cam M. Walker, and John L. Fagan

Blood Residue Evidence for Megafaunal Persistence and Extinction across the Clovis-Dalton Transition in the Southeast

Immunological residue investigations of Paleoamerican stone tools from the southeastern United States provide a novel approach for evaluating late Pleistocene human–megafauna interactions in regions with poor faunal preservation. Building on prior analyses of 120 artifacts from North and South Carolina, which identified Proboscidean residues on Clovis points, Equidae on Redstone points, and Bovidae across multiple Paleoamerican types, this study expands sampling to include more Dalton points and additional Redstone specimens. We analyze these artifacts using crossover immunoelectrophoresis (CIEP) with a targeted antiserum panel to assess the presence of Proboscidea, Equidae, and Bovidae residues. Results are evaluated in the context of projectile point typology as a proxy for relative chronology, with consideration of artifact condition, curation history, and microwear where applicable. Preliminary results indicate continued Bovidae presence across all assemblages, while Equidae persists into post-Clovis contexts and may extend into Dalton times. Proboscidean residues remain restricted to Clovis and possibly earliest Paleoamerican contexts, suggesting their absence or rarity in later assemblages. These data provide an artifact-based framework for constraining megafaunal persistence and disappearance in the Southeast and demonstrate the utility of immunological residue analysis for refining extinction chronologies where paleontological records are limited.

Gaspar Morcote-Ríos, José Iriarte, and Francisco Javier Aceituno

Paleobotanical Evidence of Brosimum Lactescens (Moraceae) Associated with Late Pleistocene Archaeological Sites (12.6 cal ka BP) in the Serranía de la Lindosa (Colombian Amazonia)

The genus *Brosimum* comprises trees distributed from Mexico and the Antilles to southern Brazil, occurring in humid tropical forests. One of the species within this group is *Brosimum lactescens*, an arboreal species whose fruits are consumed and dispersed by different mammals, including humans. During excavations carried out between 2014 and 2025 in the Serranía de La Lindosa, Colombian Amazonia, dozens of carbonized seed remains were recovered through the application of flotation techniques and the use of modern scientific reference collections. Radiocarbon dates obtained from archaeological samples indicate the exploitation and consumption of this species by the earliest human occupations, from 12,600 cal ka BP to 300 cal ka BP. Its continuous presence in different archaeological sites suggests that *Brosimum lactescens* played an important role in the subsistence of human groups inhabiting the northwestern Amazon.

Flavia Morello, Luis Alberto Borrero, Consuelo Huidobro, Victor Sierpe, and Fabiana Martin

Fell Cave Lithic Industry, Discussing the Techno-Economic Assemblage of the Pleistocene-Holocene Transition (Patagonia, Chile)

This study presents a comprehensive analysis of the lithic materials recovered at Fell Cave between 1936 and 1980, including collections housed at the Instituto de la Patagonia (Punta Arenas, Chile); the Musée du Quai Branly (Paris, France); and the American Museum of Natural History (New York City, USA). First, an assessment of collection history and a discussion of the sampling criteria for the earlier assemblage corresponding to the Pleistocene-Holocene transition will be presented. Secondly, a techno-economic analysis employing an Anglo-Saxon and French methodology is used to offer an integrated view of early lithic artifacts. Results include the reconstruction of operational chains (Fishtail projectile point and Preferential Levallois core method), the description of raw material economies, and the discussion of technological toolkits and archaeological contexts. Overall, this study provides a general and integrated re-evaluation of the Pleistocene-Holocene transition occupations. Acknowledgements FONDECYT 1231691, 11200857 & ANID/BASAL FB210018.

Jackson C. Mueller, Richard L. Rosencrance, Shelby G. Saper, and Geoffrey M. Smith

Incorporating the Western Stemmed Tradition into the Paleoindian Database of the Americas

The Paleoindian Database of the Americas (PIDBA) has been a useful tool to investigate the widespread distribution of early projectile points across eastern North America for decades. But PIDBA is composed primarily of fluted points, which are rare west of the Rocky Mountains. There, the terminal Pleistocene and early Holo-

cene archaeological record is dominated by the Western Stemmed Tradition (WST) which comprises various stemmed projectile point types. A consequence of this discrepancy is that the Far West appears empty relative to the dense concentrations of early points in the Plains and further east. We present preliminary efforts in comprehensively identifying WST sites across the Great Basin, with a dataset primarily derived from Nevada and Oregon. We discuss data acquisition methods, initial site distribution patterns, and discuss avenues for future research. Our research promotes a more comprehensive representation of the Far West in nationwide data sets and Peopling of the Americas research overall.

Amelia P. Muscott, Caroline Kisielinski, Katelyn McDonough, Geoffrey M. Smith, and Darren Larsen

Reconstructing Human-Environmental Interactions at Last Supper Cave, NV, through Ancient DNA Analysis and Radiocarbon Dating of Coprolites

During the Holocene, the Great Basin environment was dynamic, with geological and archaeological records documenting substantial shifts in climate and human activity. Yet, direct linkages between variable hydroclimate and human behavior remain difficult to confirm. Last Supper Cave, a well-studied archaeological site in northwest Nevada, provides the opportunity to holistically investigate human-environmental interactions by studying changes in human diet and cave use in response to shifting climate conditions. To reconstruct dietary changes, we utilized ancient DNA (aDNA) analysis, which complement traditional methods by capturing broad, ecosystem-wide taxonomic insights independent of preserved macrofossils. We extracted DNA from 48 Holocene-age human coprolites and analyzed metagenomic shotgun sequence data to examine the response of early Great Basin peoples to megadrought. Additionally, we expanded on the cave's existing occupational chronology through radiocarbon dating of coprolites to test a proposed hiatus during the mid-Holocene, when peak drought conditions are recorded across the region. Dietary and occupational changes are presented alongside a ~12,000-year-long record of drought and paleoenvironmental conditions derived from sediment cores from nearby Summit Lake, ~15 km from Last Supper Cave. Taken together, we leverage these records to investigate human resilience to climate and ecological changes and to discuss the broader applications of aDNA in archaeology for contextualizing early human activity.

Brunella Muttillo

Beyond Typology: A Critical Reassessment of Early Lithic Assemblages in the Colombian Andes

This poster reassesses early lithic assemblages from Colombia, focusing on key Andean highland and inter-Andean lowland sites. New chronological data indicate broadly contemporaneous occupations characterized by markedly different lithic systems, pointing to distinct technological trajectories and adaptive strategies. Using a techno-economic and contextual approach, this study moves beyond typology to examine reduction strategies, raw material economy, and technical behavior. Reanalysis of legacy Andean highland collections reveals significant inconsistencies in data quality and interpretation. The application of technological and taphonomic criteria helps refine the artifact/geofact distinction in early contexts. This has major implications: the absence of unequivocal artifacts at Tibitó calls into question its status as an archaeological site, while the lack of clear anthropic material in the earliest levels of El Abra significantly affects its chronology. In contrast, lithic assemblages from the Middle Magdalena valley exhibit more structured technological organization, combining expedient and curated strategies, diversified knapping methods, and efficient raw material exploitation. These results support a critical reassessment of long-standing cultural labels such as "Abriense" and "Tequendamiense," whose typological foundations often obscure variability and hinder effective understanding. A context-based, integrative approach is essential to build more reliable narratives of early human dispersal and adaptation in northern South America.

Brunella Muttillo, Giuseppe Lembo, Kurt Rademaker, Martha Cecilia Cano, and Carlos López

Two Valleys, Two Worlds: Contemporaneity and Technological Variability in Early Colombia

The inter-Andean valleys of Colombia have long been regarded as key corridors for early human dispersals into northern South America, yet these regions still require refined chronologies and detailed analyses of material culture. Because faunal remains are generally not preserved, lithic assemblages constitute the main evidence for reconstructing these early occupations. This poster presents new chronological and technological data from the Middle Magdalena and Middle Cauca valleys, two regions separated by the Central Cordillera and characterized by contrasting environments ranging from tropical lowlands to sub-Andean forests. New ra-

diocarbon dates securely place both occupational sequences within the Early Holocene. The analyses reveal marked technological differences despite their broad chronological contemporaneity. Assemblages from the Magdalena Valley are dominated by curated technologies based mainly on chert and quartz. In contrast, those from the Middle Cauca basin display more expedient technologies associated with volcanic raw materials, together with notched bifacial tools interpreted as linked to plant-processing activities. By reassessing the earliest occupational levels, this study investigates whether these technological patterns were already established during the initial phases of settlement. Expanding the chronological dataset and reevaluating lithic variability contribute to broader discussions on regional diversity and adaptive strategies during the early peopling of northern South America.

Brunella Muttillo, Pedro Alexander Rivera Pérez, and Giuseppe Lembo

Archaeological Survey in the Ubaté Valley (Colombian Andean Highlands): Exploring the Potential for Preceramic Occupation

Archaeological surveys in the Ubaté Valley (Altiplano Cundiboyacense, Colombia) have documented a rich, multi-period surface record from rock shelters and natural terraces. The region is characterized by a high density of rock art, as well as widespread surface distributions of lithic and ceramic materials, with a notable concentration at the Novoa 1 rockshelter, where a small test pit was also excavated. The lithic assemblage, primarily produced on locally available high-quality chert, shows affinities with expedient technological strategies documented in preceramic contexts of the Colombian highlands, suggesting the possible presence of early human occupation. Despite extensive modern disturbance and the absence of intact stratigraphic contexts, the archaeological evidence indicates repeated human presence and long-term landscape use, spanning from possible preceramic occupations to Muisca, Colonial, and more recent periods. Although currently limited to surface and disturbed deposits, the geomorphological setting, proximity to water sources, and availability of raw materials suggest a high potential for evidence for early occupation. The Ubaté Valley therefore represents a promising area for future systematic research aimed at reconstructing early settlement dynamics and human adaptation in the northern Andes.

Yuichi Nakazawa, Takuto Kanai, Kengo Matsumoto, Yasuo Hosaka, and Toshiro Yamahara

Stone Boiling as an Adaptive Technology in Northeastern Asia and Beringia: Implications from Upper Paleolithic Fire-Cracked Rocks in Hokkaido, Japan

The archaeological record to support human dispersal from northeastern Asia to Beringia and North America has been largely dependent on the specific sets of chipped stone technologies, represented by wedge-shaped microblade cores (i.e., Yubetsu method) and stemmed points. While lithic hunting equipment undoubtedly played a significant role in the peopling of the New World, under severe environmental stress in the arctic and subarctic, heat-assisted technology must be considered. In the present poster, we explore the role of stone-boiling technology in Late Pleistocene northeast Asia through a morphological analysis of fire-cracked rocks from the selected Upper Paleolithic sites of Hokkaido, dated to ca. 27,800-15,500 cal BP. Results suggest that heated cobbles were used for boiling water to process animal resource, including the rendering of grease from mammal bones. Such practices would have been an efficient technological strategy for maximizing caloric intake from faunal resources in cold environments. Grease rendering assisted by stone boiling may have supported delayed return system by enabling the conservation of energy-rich food resources among hunter-gatherers both in Beringia and northeastern Asia. These findings will provide insight into the broader technological adaptations that may have contributed to Late Pleistocene human dispersal into the New World.

Nadine Navarro, Bruce B. Huckell, Christopher W. Merriman, Joseph M. Birkmann, and M. Steven Shackley

The Blue Canyon Site, A Clovis Quarry and Camp in Central New Mexico

Opportunities to learn more about Clovis technological behavior at lithic material procurement and workshop sites are rare, particularly in the Southwest. The Blue Canyon site is a rare example of such a site—an artifact scatter covering some 16,000 m^2 and consisting of Clovis projectile points and preforms, end scrapers, bifaces, blades, and lithic debitage located on BLM land southwest of Socorro, New Mexico. Remarkably, the site contains only Clovis diagnostics. Testing has revealed that the scatter is exposed on and slightly buried within an alluvial fan situated at the base of the Black Canyon

quarry, a source of hydrothermally altered rhyolite commonly known as Socorro Jasper, which comprises over 95 percent of the artifact assemblage. The most abundant nonlocal material is obsidian, occurring in the form of small debitage and cores, which has been geochemically characterized and sheds light on Clovis lithic procurement strategy as well as procurement range. This artifact assemblage suggests that both tool manufacture and replacement, as well as domestic tasks, occurred here.

Nadia C. Neff, Geraldine Busquets-Vass, Erin E. Ray, Mark Robinson, Amy E. Thompson, Jose Mes, Douglas J. Kennett, Seth D. Newsome, and Keith M. Prufer

Nutritional Adaptations to Early Maize Cultivation: Earliest Isotopic Evidence of Maize-Based Animal Provisioning in the Neotropics

The adoption of maize as a dietary staple shaped human societies. While a reliable carbohydrate-rich source, its inherent nutritional limitations posed substantial challenges. Maize is deficient in lysine, an essential amino acid crucial for maintaining balanced health. Maize-dependent diets, therefore, necessitated complementary dietary strategies. We report amino acid stable carbon isotope data from 39 directly dated humans from southern Belize (6100-1100 BP) to investigate how early populations mitigated nutritional deficiencies. Concentration-dependent mixing model results indicate that protein supplementation from maize-eating animals contributed maize-derived lysine to human diets through trophic magnification (elevated proportions of isotopically distinct nutrients in tissues from trophic transfer). Our results indicate that such strategies were in place by 6100 BP, consistent with evidence of early maize cultivation but predating reliance by ~2000 years. Our findings highlight early coevolutionary dynamics linking maize cultivation and human-animal provisioning relationships, deepening understandings of adaptive food systems during agricultural transitions and offering insights into nutritional strategies underpinning sustainable subsistence.

Sarah Noe, Kurt Rademaker, Katherine M. Moore, Jo Osborn, Emily B. P. Milton, and Lars Fehren-Schmitz

Camelid Genomes from the Pleistocene to the Present: Investigating Early Human–Camelid Interactions at Cuncaicha and Panaulauca

Terminal Pleistocene occupations in the Central Andean highlands provide some of the earliest evidence for sustained human use of high-elevation settings in the Americas. Camelids were among the most important large-bodied prey animals available to early highland populations and later became the only large-bodied domesticate in the Americas. To investigate the deeper history of these relationships, this project analyzes the first camelid genomes spanning the Pleistocene to the present from Cuncaicha and Panaulauca, two high-elevation Central Andean cave sites with Terminal Pleistocene occupations and long records of human use. By tracking camelid ancestry, diversity, and lineage continuity through this long sequence, this study examines how camelid populations changed across the transition from wild prey to managed herds in the Central Andes. By linking early highland occupation, prey population history, and domestication, this study uses camelid genomes to clarify how the first peoples of the Andes encountered, relied on, and eventually reshaped one of the most important animal resources in highland South America.

Lauren Norman, Caroline Kisielinski, Kathryn Borthwick, Olivia Frye, and Rolfe Mandel

Understanding Human Use of Bluefish Caves: Integrating Legacy and Contemporary Data for Research, Collaboration, and Outreach

Bluefish Caves (Yukon, Canada) is a critical Pleistocene site whose record remains fragmented across legacy documentation and rapidly expanding contemporary datasets. This poster presents an interactive ArcGIS StoryMap designed as a research-facing synthesis platform and a public outreach tool. The StoryMap functions as a navigable narrative scaffold in which legacy materials (field notes, maps, specimen logs, photographs) are linked to current archaeological, paleoenvironment, and genomic datasets through a shared metadata framework and systematic cross-references. This approach centers collaboration through efficient dissemination of resources and facilitates iterative community engagement to support novel research of a foundational archaeological site. By making relationships among datasets legible across dimensions of provenience, methodology, and interpretive history, the platform is designed to accelerate scholarly discovery, reduce duplication of effort, and support transparent, reproducible evaluation of evidence by interdisciplinary collaborators. Ethical dissemination is equally central to the project's success: Tiered access workflows distinguish public, partner-restricted, and internal research views, aligning scholarly communication with data sovereignty priorities developed in collaboration with

the Vuntut Gwitchin First Nation and territorial partners. The result is a living platform that brings archival labor into active academic circulation. This supports synthesis, training, and accountable knowledge mobilization as digitization and new analyses continue.

Alexander J. Nyers and Loren G. Davis

Obsidian and Vitrophyre Sourcing from the Cooper's Ferry/Nipéhe Site, Idaho: Early Use of Volcanic Glass in the Americas

Archaeological excavations at the Cooper's Ferry/Nipéhe site in western Idaho uncovered obsidian and vitrophyre debitage and tools in deposits well dated between ~13,750-9500 cal BP. We studied the geochemistry of 126 pieces of volcanic glass debitage for x-ray fluorescence analysis at the Northwest Research Obsidian Studies Laboratory. These analyses show that Cooper's Ferry/Nipéhe artifacts originated from multiple regional volcanic sources, including Timber Butte, Coyote Wells, Silver Lake/Sycan Marsh, Indian Creek, and an unknown source locality. Additionally, multiple artifacts were sourced to the Lochsa Vitrophyre locality. The majority of the debitage was traced to Timber Butte, followed by the Lochsa Vitrophyre source—the two sources that were also linked to the oldest pyroclastic toolstones at the site.

Gwen Olivier and Matthew M. Mele

Reconstructing Paleoindian Landscapes: Geoarchaeology and Geophysical Survey in the Jornada del Muerto, New Mexico

This research integrates regional geoarchaeology and site-scale geophysical survey to examine how late Quaternary landscape dynamics shaped Paleoindian occupation and preservation along the Chupadera Arroyo system in central New Mexico. At the regional scale, a multi-proxy geoarchaeological study reconstructs alluvial stratigraphy, chronosequences, and paleoenvironmental conditions within the upper and middle transport zones of Chupadera Arroyo, testing whether environmental variability influenced the distribution and frequency of archaeological sites through time. These data provide a broader framework for interpreting human–environment interactions across a repeatedly occupied drainage system. At the site scale, geophysical investigations at Mockingbird Gap, one of the most artifact-dense Clovis localities in North America, use ground-penetrating radar and electrical resistivity to map buried paleo-topography within adjacent Chupadera Draw. Survey results indicate a deeply incised, Clovis-age drainage system and associated geomorphic surfaces that likely structured occupation and site formation. Together, these approaches link regional paleoenvironmental reconstruction with high-resolution subsurface mapping, demonstrating how drainage evolution influenced settlement patterns, preservation, and the organization of Paleoindian activity across the landscape.

Jo Osborn, Brunella Muttillo, and Kurt Rademaker

Taphonomic Reassessment of a Possible Pleistocene Megafauna – Human Association at Tibitó, Colombia

Tibitó (Altiplano Cundiboyacense, Colombia) has long been considered one of the oldest archaeological sites in northwest South America, as well as one of very few South American sites presenting evidence of direct association between humans and Pleistocene megafauna. Pioneering excavations led by Gonzalo Correal from 1979-1980 reported associations between Pleistocene megafauna and lithic artifacts, as well as evidence of human modifications to faunal remains. We present preliminary results from new taphonomic analysis of faunal materials from the original excavations, housed at the Instituto de Ciencias Naturales, Universidad Nacional de Colombia. Examining remains which include proboscidean (*Notiomastodon*) and *Equus* species, we employ taphonomic and fracture analysis to evaluate assemblage formation processes. Our analysis is contextualized with new assessment of the lithic assemblage and radiocarbon dating. Our ongoing research offers new perspectives on site formation at Tibitó and contributes to ongoing discussions regarding early human presence and megafauna interactions in Pleistocene South America.

Victoria C. Pagano, Jon C. Lohse, Abigail Antinossi, and Mike McBride

Early Paleoindian Biface Production Analysis Using Three Distinct Debitage Assemblages at August Pine Ridge, Belize

This poster presents the analyses of three distinct debitage assemblages that are associated with complex biface production. These assemblages reflect the peopling of the Americas as represented at August Pine Ridge in northern Belize. Our analysis includes the categorization of raw material types, especially a locally dominant type called APR Purple that is not from the Northern Belize Chert Bearing Zone; flake technology (through an assessment of flake types); and stratigraphic relationships of recovered materials as a means of understanding stone

tool production, site integrity, and how these changed from Early Paleoindian through Early Archaic times. Preliminary findings of this integrated approach indicate that the area's sandy deposits, while mixed in many cases, have potential to contain relatively isolable contexts and/or technological assemblages dating to the Terminal Pleistocene.

Thaís R. Pansani, Briana Pobiner, Gabriela Farfan, Anna K. Behrensmeyer, Julie Aufort, Hermínio I. de Araújo-Júnior, Michael Gallagher, Sebastian Schöder, Águeda Vialou, and Mírian L. A. F. Pacheco

Investigating the Taphonomy of Giant Ground Sloths from Santa Elina: Insights for Human-Megafauna Interactions in Pleistocene of Brazil

At Santa Elina, Brazil, two Pleistocene layers (Units III ~27 kya BP and II ~13 kya BP) contain lithics associated with giant sloth remains. Taphonomic analysis of 39 fossil bones highlights their predominantly fragmentary condition (89.74%), weathering stages ranging from 0–4, irregular and perpendicular fracture patterns, and absence of abrasion and deformation, indicating pre-burial exposure, post-depositional breakage, but minimal transport and disturbance of the remains. Some black osteoderms and one rib suggest possible burning. To investigate this, we performed a multiproxy analysis integrating micromorphological, mineralogical, molecular, and elemental approaches (SEM, XRD, FTIR, EDS, and XRF), comparing results with reference data on burned armadillos. EDS and XRF data show no significant iron or manganese impregnation, ruling out oxide staining. XRD data show reduced apatite crystallinity in black fossils relative to brown ones, similar to dry and burned armadillo osteoderms. FTIR indicates that only one black osteoderm (Unit II) exhibits strong collagen degradation, pronounced narrowing of phosphate bands, and weak OH^- bending and stretching peaks consistent with high-temperature burning. The rib (Unit II) shows heat-induced cracking and enrichment in carbon and oxygen, suggesting low- to moderate-temperature burning. In conclusion, our data suggest possible burning of giant sloth remains in Santa Elina at ~13 kya BP that could be anthropogenic.

Ryan M. Parish, J. Scott Jones, Mark R. Norton, and John B. Broster

Southeastern Paleoindian Mobility and Social Networks Revealed through Chert Sourcing at the Carson-Conn-Short Site, Tennessee

Chert sourcing at the Carson-Conn-Short site (40BN190) in Tennessee reveals a knowledge of and reliance on local tool stone resources and the exploitation of the resource-rich Lower Tennessee River Valley. The identification of tool stone at the site from greater distances is indicative of broader social networks and possibly aggregation events at the site. The use of reflectance spectroscopy to accurately and non-destructively identify chert source is a powerful tool in reconstructing human behavior. The results contrast Paleoindian mobility models for other regions of North America where groups appear to center their movements around high-quality cryptocrystalline tool stone sources. From a regional perspective, this quarry centric model does not fit the Southeast as a reliance upon local chert types within areas rich in subsistence resources more accurately describes site distribution.

Kirsten Paulson

A Terminal Pleistocene Puppy? Virtual Analysis of a Juvenile Canid from Cooper's Ferry, Idaho

Research conducted in 2023 by Kirsten Paulson summarized findings and interpretations of a lithic and faunal assemblage recovered from Feature 110 at Cooper's Ferry. Within this feature, a canid cranium and mandible were found in situ. Comparative analysis was conducted to determine the species of the mandible. Metric comparisons indicated that the specimen most closely aligns with a coyote or potential coyote-domestic dog hybrid; however, species identification remains uncertain without ancient DNA (aDNA) analysis. Due to the fragility of the cranium, the specimen remained encased within the sediment block in which it was recovered and was not removed for direct examination. Instead, the block was CT scanned and digitally processed using 3D Slicer software, allowing the cranium to be virtually "excavated" and reconstructed as a three-dimensional model. This non-destructive approach preserved the specimen's morphology while enabling future analysis without risking damage to the original specimen. As of 2026, cranial measurements indicate the specimen is unusually small compared to wolves and coyotes and falls outside expected wild canid ranges. Instead, the data points toward a different story – one more consistent with early domestic dogs. Cranial measurements suggest the remains of a juvenile dog dating back ~11,300 calibrated years before present.

Andrew R. Pauly and Loren G. Davis

In Search of the Pleistocene Willamette Valley

Oregon's Willamette Valley is among the Pacific North-

west's environmentally richest subregions. The routine occurrence of Rancholabrean megafaunal remains within 12-16 ka BP deposits throughout the valley testifies to the longevity of its biotic productivity and the existence of intact Late Pleistocene deposits within the valley. While both fluted and stemmed projectile points presumably dating to the Late Pleistocene / Early Holocene (LPEH) have been found in surficial contexts within the valley, intact archaeological deposits in stratified contexts dating to this period have thus far eluded researchers. Recent decades have seen intensified academic interest in the relationship between fluted and stemmed point traditions in the Pacific Northwest, the range of LPEH human subsistence, and the impact of the infamous Missoula Floods on human and nonhuman inhabitants of the Columbia basin. The Confederated Tribes of Grand Ronde (CTGR) have expressed interest in having Geoprobe-based geoarchaeological survey conducted on their properties in the South Yamhill drainage. Previous efforts have demonstrated the efficacy of this method in locating LPEH deposits within the Willamette Valley. Thus, I will be conducting Geoprobe-based geoarchaeological survey on CTGR lands in the upper South Yamhill valley in an effort to locate and describe LPEH deposits of high archaeological potential.

Antonio Pérez-Balarezo, Nora V. Franco, Marina González-Varas, Marcelo Cardillo, Marcellus de Almeida, Caitlin Doherty, Nora Flegenheimer, Celeste Weitzel, Natalia Mazzia, Flavia Morello, Rafael Suárez, Laura Miotti, Bruno Mendez, and Angelo Constantine

Fishtail Point Variability across South America: A Continental-Scale Collaborative Database and 2D Geometric Morphometric Approach

Fishtail points are among the most widespread artifacts associated with Late Pleistocene occupations in South America, yet their continental-scale variability has rarely been examined through standardized quantitative methods. This poster presents an exploratory 2D geometric morphometric and technological analysis of Fishtail point variation based on published datasets, selected unpublished records, and standardized photographs of museum and reference collections. Current coverage includes specimens from Peru, Colombia, Ecuador, Venezuela, Brazil, Chile, Uruguay, Argentina, the Pampas, and Patagonia. We examine blade outline, stem morphology, shoulders, basal concavity, lateral symmetry, size, and resharpening-related shape change, with attention to miniature and oversized specimens. These data are interpreted alongside technological observations on fluting or basal thinning, reduction intensity, breakage, raw material, and artifact life history. Rather than treating Fishtail points as a homogeneous type, the study asks whether shape and size differences reflect regional trajectories, function, curation, raw-material constraints, distinct life histories, or technological transmission. The collaborative database offers a preliminary continental framework for comparing Fishtail-point technologies beyond typology.

Vladimir V. Pitulko and Elena Y. Pavlova

Human Occupation Record of the Arctic East Siberia (West Beringia) in Light of the Latest Research

Arctic East Siberia remains one of the world's least archaeologically studied regions. For decades after its discovery in 1970, the Berelekh site was the sole known Paleolithic site there, suggesting initial human settlement of West Beringia around 13,000 years ago. Groundbreaking recent research has rewritten this history. The discovery of the Yana complex of sites and the Zhokhov site, along with numerous sites associated with mass concentrations of mammoths, proves that human settlement began shortly after 50,000 years ago. There are three distinct settlement phases: 50,000–29,000, 29,000–11,700, and 11,700–8,000 years ago. The Pleistocene warm climate stages (Greenlandic Interstadials starting GI 12) correlate well with the human habitation in the area. Its initial occupation was due to the spreading of the population bearing the Western Eurasian genome. A constantly increasing influx of Asian lineages ends up with total replacement of the ancient human groups near the Holocene boundary. The youngest stage aligns precisely with the major climatic shift between the terminal Pleistocene and the early Holocene. Survival and success in this harsh, changing environment depended entirely on technological innovation. These technological adaptations, from the mammoth tusk weapons to sled dogs, enabled continuous human occupation through millennia of profound environmental change. Research is supported by RSF project No. 24-68-00031.

Irina Yurievna Ponkratova

Stone Age of Kamchatka and Adjacent Territories: General and Specific

A discussion of the general and specific characteristics of the Stone Age population of Kamchatka and adjacent territories is important for determining the place of the peninsula's Stone Age in human history, understanding possible cultural connections, and directions of population migration in ancient times. We conduct a

comparative analysis of archaeological materials from Yakutia, the Kolyma River basin, Chukotka, Primorye, Amur Oblast, Sakhalin, the Kuril Islands, America, Japan, Korea, and China. It is suggested that almost all regions (with the exception of Kamchatka, the Sakhalin Islands, and the Japanese archipelago) are characterized by a succession of stages, and sometimes even the coexistence of cultures, from the late Pleistocene to the late Holocene. Gaps in the settlement of Kamchatka, Sakhalin, and likely the northern outskirts of Yakutia and the territories of the Russian Far East, indicate that these regions were inhabited sporadically by different population groups. This may be due to the peculiarities of the physical and geographical conditions of the late Pleistocene and early Holocene. Kamchatka was settled later than the adjacent eastern and southern territories, approximately 13,300 years ago. We propose a connection between this first group and the population of the Americas through reverse migration.

Ben Potter, Jeffrey Rasic, Joshua Reuther, Francois Lanoë, Fiona Papile, and Charles Holmes

The Eastern Beringian Pre-Clovis Record: Addressing the Visibility Problem in Colonizing Populations

For decades, archaeologists have debated what a credible pre-Clovis record would look like. Interior Alaska provides the answer: a robust, replicated series of numerous lithic assemblages and faunal remains in clear stratigraphic contexts and anchored by hundreds of radiocarbon dates spanning 14-13,000 cal BP. We synthesize data from several key sites in central Alaska (eastern Beringia) to argue that this robust record reveals characteristics of established settlement (such as repeated site occupation, structured seasonal land use, and acquired knowledge of raw material sources) and likely postdates initial colonization, perhaps by centuries. By demonstrating what established settlement looks like, Alaska's record provides (1) a valuable reference for interpreting the midcontinent's fragmentary pre-Clovis evidence and (2) patterning useful for exploring the relationships between demographic reality and archaeological visibility in pioneering populations.

Noah Powell

Ute Paths and Deep Time: Thinking toward a Collaborative Paleoindian Archaeology in Colorado

Paleoindian archaeology has lagged behind the broader discipline in adopting collaborative frameworks, often citing temporal distance between contemporary Indigenous peoples and terminal Pleistocene populations as justification. This poster explores how such frameworks might be meaningfully applied to deep-time research by tracing the history of archaeologist-Ute engagement in the Colorado Rocky Mountains—ancestral Ute homelands and an active locus of Paleoindian research. Drawing on case studies from the twentieth century to the present, it traces the evolution of engagement from extractive salvage-era practices through the collaborative advances that followed NAGPRA. From this foundation, the poster considers opportunities for incorporating Ute perspectives into Paleoindian inquiry through collaborative question formation, multivocal inference-making, and ethnographic analogy applied to questions of deep-time subsistence and landscape use. These approaches are framed within a recognition of Indigenous peoples' cultural and political stakes in the interpretation of North America's earliest inhabitants. Colorado offers a rich context for thinking through what collaborative frameworks might look like in terminal Pleistocene research, and what they might contribute to the field.

Jordan Pratt

Western Stemmed Tradition Settlement and Mobility Strategies in the Harney Basin, Oregon: Weed Lake Ditch and Beyond

The age and distribution of stemmed point technology in the Far West is important for a full understanding of late Pleistocene and Early Holocene archaeology in North America, especially for those interested in the initial settlement of the Americas. This poster provides an overview of recent research on the Western Stemmed Tradition (WST) in the Harney Basin, southeastern Oregon. First, we present analysis of the lithic and osseous artifacts recovered from Weed Lake Ditch, a stratified open-air site dating to the Younger Dryas period. The site is located on the margins of pluvial Lake Malheur and includes an assemblage of Haskett points, crescents, bone needles and beads, and many non-diagnostic stone tools. Second, we report raw material source provenance data for artifacts from Weed Lake Ditch. To date over 30 unique raw-material sources have been identified at the site. This new data greatly expands our knowledge and is used to explore the mobility and settlement strategies used by the site's Indigenous occupants. Finally, we situate Weed Lake Ditch within the larger regional context, comparing it with other WST sites in the northwestern Great Basin.

Keith M. Prufer and Esther Brielle

First Americans in Transition: Migration, Maize, and Early Farming in Southern Belize

Previous research has suggested that the introduction of improved maize varieties into the Maya lowlands of southern Belize corresponded with a documented migration of peoples from the Isthmo-Colombian region of lower Central America and northern South America prior to 5300 BP. Here, we present new genetic, isotopic, and paleobotanical data that refine the chronology of Middle Holocene ancestry and a three-millennia-long trajectory of early farming that culminated in maize becoming a dietary staple by 4000 BP. By 7500 BP, maize was being consumed as a seed crop and by 6000 BP, it was being consumed by animals that were likely human-managed. Our data indicate that farming was already practiced before the arrival of migrant communities, but maize adoption intensified after their arrival and before archaeologically detectable population expansion.

Neil N. Puckett

Submerged Ancient Landform Investigations and Analyses from the Private Sector

Cultural Resource Management (CRM) archaeology supports both public and private projects by conducting archaeological research that aligns with regulatory requirements. Traditionally, CRM research seldomly included submerged landscape analyses. Yet, as our understanding of changing environments and shifting sea levels has expanded, so has regulatory oversight that includes drowned and preserved landscapes. CRM archaeologists have subsequently expanded their approaches to investigate and document drowned landscapes. As many of the waters of North America reached modern levels between the mid-to-late Holocene, identifying and mapping submerged ancient landforms is essential for learning about early Holocene and late Pleistocene archaeology. This poster discusses current and developing CRM approaches to investigating submerged landscapes. High-resolution geophysical survey, including both low and high-frequency seismic studies have identified late Pleistocene and early Holocene features in waters across North America. Coring has supplemented these studies to place the features in both temporal and environmental contexts. Shallower waters present their own challenges, requiring novel approaches to testing including the development of systematic, rapid submerged test-pit survey. The poster demonstrates the effectiveness of these approaches and summarizes some of the results.

Kathryn Puseman, Julien Fortin, and James C. Chatters

A Light in the Darkness: Woods Exploited for Torches by Paleoamericans of the Yucatan

Divers working with the Proyecto Prehistórico Yucatán regularly observe charcoal deposits in the submerged cave systems of the Yucatan in association with a variety of cultural features such as mines, cairns, trails and human footprints. Charcoal deposits selected for collection consist of charcoal burned in place. A selection of charcoal fragments has been submitted for AMS radiocarbon dating and identification using wood anatomical features. Results demonstrate a chronological pattern of wood use during two time-intervals with distinct wood assemblages. Charcoal fragments yielding the oldest dates from about 12,600 – 10,200 cal BP are dominated by *Amyris* (candlewood, torchwood) and *Protium* (copal), both of which are highly resinous woods. These most likely represent use of wood for torches by Paleoamerican groups exploring the underground caves for ochre mining and to find sources of water during this time when sea levels were lower and the environment was more arid. After about 9500 cal BP, recovery of *Amyris* drops in frequency and a greater diversity of taxa is present, perhaps reflecting the development of the modern jungle at this time and indicating a change in how caves were used after that ecological change took place.

Dave Rachal, Matthew Cuba, and Brad Beacham

What Can Gypsum Blisters Tell Us about Early Archaic Environments? Evidence from Gomolak Overlook, Tularosa Basin, New Mexico

Gomolak Overlook, an Early Archaic site buried within a paleochannel between two stabilized gypsum dune phases in New Mexico's Tularosa Basin, preserves one of the region's earliest dated occupations, with hearths dating to 8100–8400 cal BP. Buried and modern gypsum dunes are capped by hardened gypcrete surfaces ("gypsum blisters") that seal environmental signals within a ~25,000-year paleoclimate sequence constrained by radiocarbon, OSL, and isotope analyses. Blister geochronology and isotopic data indicate progressive drying from 25,000 to 8000 years ago, driven by increased evaporation, rising temperatures, and declining Pacific-derived winter moisture, promoting gypsum blister formation during the early Holocene (~11,000–8000 cal BP). Increasing aridity reshaped resource distribution and Early Archaic mobility, with paleochannels guiding movement to and from the Lake Otero margin across sparsely vegetated dunes.

By ~7000 years ago, continued warming and intensified summer monsoonal precipitation drove expansion of C3 shrub communities and renewed dune mobility, burying the site beneath ~2 m of eolian sediment. After deposition ceased (~2500 cal BP), gypsum blister formation resumed (~1300–700 cal BP); forming and sealing rapidly at the soil–atmosphere interface, these features provide a dateable paleoclimatic record that contextualizes early human activity in the northern Chihuahuan Desert.

Erin E. Ray, Nadia C. Neff and Keith M. Prufer

Early Lime Technology: Example from Southern Belize

Some of the earliest evidence of lime plaster in the Americas comes from floors and lined storage pits at the site of San José Mogote dating to around 1400 BCE. In the Maya region, the earliest known examples date to the Early Preclassic (ca. 1100 BCE) at Cuello. Excavations at the rockshelter site of Saki Tzul in the foothills of the Maya Mountains revealed a carbonate floor dating to 7540 BCE, substantially earlier than other known examples in the region. This poster examines the chemical and physical composition of the floor material and compares it with Classic period lime plasters from sites north and south of the Maya Mountains. Fourier Transform Infrared Spectroscopy (FTIR) is used to distinguish pyrogenic from geogenic carbonates based on carbonate crystal structure. Pyrogenic carbonates formed through heating limestone to produce quicklime and subsequent rehydration exhibit disordered crystalline structures distinct from naturally occurring geogenic carbonates. Microscopic and elemental analyses further characterize the floor matrix and identify potential intentional additives.

Irina Razgil'deeva, Viktor Golubtsov, Steve Hackenberger, and Ian Buvit

The Ust'-Menza Upper Paleolithic Complex and its Place in the Pleistocene Peopling of the Americas

Ice-age discoveries in southern Siberia are key to reconstructing initial human spread into Northeast Asia and the Americas. This poster presents the Ust'-Menza Upper Paleolithic complex containing cultural remains radiocarbon dated to 30,000–12,000 cal BP. Located southeast of Lake Baikal, excavations have primarily occurred in floodplain alluvium deposited in relatively stable environments at the confluence of the Menza and Chikoi rivers where site preservation is excellent; notable disturbances are cryoturbation and some flooding. During the Pleistocene, humans would have encountered various resources on a series of fluvial terraces stepped at varying elevations above the active river channels. While most known for their remarkable Pleistocene dwelling features, excavations at Ust'-Menza also produced a suite of highly informative lithic artifacts. The oldest Upper Paleolithic layer, for example, revealed a toolkit lacking formal wedge-shaped microblade technologies. Instead, the stratum produced small bipolar cores, perhaps as evidence for raw material economization leading into the Last Glacial Maximum (LGM). Post-LGM assemblages (18,000–12,000 cal BP), however, shifted to wedge-shaped microblade cores akin to those from Swan Point, Alaska. While bifacial reduction was integral to these late-glacial microblade industries, Ust'-Menza assemblages lack the stemmed and lanceolate bifacial projectile points characteristic of the earliest archaeological sites south of the Laurentide Ice Sheet.

Carlos Reina, Carlos del Cairo, Juan David Sarmiento Rodríguez, Jesús Alberto Aldana Mendoza, Juliana Quintero, Héctor Vargas, Maria Jose Gonzalez Severiche, and Morgan Smith

The Archaeology of High-Altitude Lake Systems in Colombia

Archaeology conducted on a series of high-altitude lake systems in Colombia have revealed multi-component archaeological sites in a region with archaeological potential dating as far back as 13,525 cal BP. In this case, we are trying to understand the relationship between the communities settled in the Altiplano Cundiboyacense, located in the eastern mountain range of the Colombian Andes, and the bodies of water associated with lakes and lagoons. In the pre-Hispanic period, the entire area was occupied by the Muiscas, who strategically placed their sacred places, such as shrines and sanctuaries, near lakes and lagoons. The aim is to present an interdisciplinary approach to the archaeological characterization of lake landscapes, allowing us to understand, from the perspective of underwater archaeology, the historical processes that have included the rituality of lakes and lagoons and the processes of draining and plundering to which they have been exposed from the Colonial period to the present day.

William Reitze

Paleoindian Occupation of the Estancia Basin: Understanding Land Use against the Landscape Change of the Pleistocene Holocene Transition

Human occupation by Paleoindian groups in the Estancia

Basin was set against a backdrop of changing landscapes and resource availability. During the terminal Pleistocene Lake Estancia, a large structural basin lake in Central New Mexico, begin to desiccate. Following a dry Clovis period the final highstand of the lake corresponds to Folsom occupation in the basin. Droughts in the basin in the 1950s exposed dozens of archaeological sites which were collected by interested amateurs and student archaeologists who hoped resolve questions of the peopling of the New World and Clovis and Folsom chronology in the Desert Southwest. This poster presents research which synthesizes geoarchaeological data and reanalysis of large lithic collections in an effort to address human occupation of the Estancia Basin. Geoarchaeological data has been used to better refine the prehistoric landscapes through lake and draw records. Material cultural records were used to better assess occupation and mobility in the basin through lithic analysis of Paleoindian collections. Prominent sites in the basin, including Lucy, Martin, Bigbee, and Kinchloe are compared to each other, better resolved climatic records, and dozens of other sites to provide an updated view of the early occupation of the Desert Southwest.

David Rhode, Aurélie Liard, Kelly Graf, and Ted Goebel

Archaeobotanical Insights into Paleoindigenous Occupations at Bonneville Estates Rockshelter, Nevada, USA

Bonneville Estates Rockshelter is a large, protected overhang located on the highest remnant shoreline of Pleistocene Lake Bonneville in the eastern Great Basin, with a well-dated stratified record of human occupation spanning the terminal Pleistocene through the Holocene. Lowermost occupation Strata 19-17b' contain evidence of habitation dating from ~13,000-10,500 cal BP, while very sparse evidence of subsequent settlement in overlying Stratum 17b dates up to ~8500 cal BP. Plant macrofossils, concentrated in hearth features and scattered through the deposits, provide evidence for the earliest inhabitants' subsistence practices and occupation chronology. This poster describes the distribution of plant macrofossils in these lowermost strata, in relationship to specific hearth features and across the shelter surface. Specimens of a distinctive charcoal from limber pine (*Pinus flexilis*) returned radiocarbon dates pre-dating 13,000 cal BP in the basal strata. We examine the stratigraphic distribution of this distinctive charcoal in detail and consider hypotheses about its origin, probably reflecting use of 'old' pine wood for fuel.

Lelia Rice, Joseph A. Lindler Jr., and Reece Spradley

Public Outreach and Pre-Clovis: Recommendations Using Evidence at Nipper Creek Heritage Preserve (38RD18)

Public outreach is a core aspect of archaeology. It can be presented in a variety of approaches and perspectives from site to site. Certain periods of occupation are easier to engage with the public than others. This is especially true related to pre-Clovis archaeological sites and interpretation. Engagement is often tied directly to the publicity of the site in mainstream media and in academic circles. As a result of this, exhibits related to pre-Clovis archaeology are limited due to the rarity of the sites themselves related to these eras of early Indigenous occupation. This poster will showcase possible avenues of public engagement using evidence and artifacts recovered from the Nipper Creek Heritage Preserve (38RD18) in the 1970s. Recommendations will be made using the limited evidence from the site, current archaeology outreach programs at the South Carolina Department of Natural Resources (SCDNR) Cultural Heritage Trust Program how various archaeologists already discuss pre-Clovis occupations to the public.

Tim Riley

Dawson and Beyond: Situating the Paleoamerican Experience on the Northern Colorado Plateau

The Paleoamerican archaeological record of eastern Utah is relatively sparse with minimal density of both fluted and stemmed projectile points, particularly in comparison to neighboring regions such as the Great Basin and High Plains. Despite the scarcity of sites across the very diverse landforms encompassed by this region, several of the larger sites show a diversity of tool types and activities beyond the hunting activities reflected by projectile points. Sites like the Dawson Site suggest a complex interplay of nomadic bands around accessible water resources and contain both Western Stemmed and fluted points in overlapping contexts. This paper situates larger encampments such as the Dawson and Montgomery sites in a landscape of isolated finds of projectile points by private collectors and professional archaeologists. This study relies on the reposited Paleoamerican lithic tools at the Prehistoric Museum, situated on the northwestern corner of the Colorado Plateau and explores the interplay of elevational variation and limited accessible water resources on human occupation during this time period.

Christopher W. Ringstaff and Stefanie L. Mills

A GIS-based Examination of Paleoindian Land-Use in the Upper Buttermilk Creek Valley, Bell and Williamson Counties, Texas

The Buttermilk Creek Ranch is located within the Upper Buttermilk Creek Valley in Bell and Williamson Counties, Texas, near the well-known Gault and Debra L. Friedkin Sites. An archeological and geologic survey was conducted from March 2022 to March 2026, where over 1400 Global Navigation Satellite System (GNSS) positions were collected and imported into a Geographic Information System (GIS). Three archeological sites were recorded, including two upland lithic procurement sites (41BL1432 and 41WM1498) and one open campsite (41BL1434) in valley alluvium upstream of Gault. An overlay of geologic GNSS data on a Digital Elevation Model (DEM) provides a preliminary lithostratigraphic model of chert outcrops across the valley. The data reveals high-quality cherts in the upper Edwards Formation across the ranch, which contain the greatest density of chipped-stone debris palimpsests and workshop features. Given their proximity to Gault and Debra L. Friedkin, these high-grade chert exposures represent a primary source for high-quality stone based on artifacts with Paleoindian attributes. As investigations continue, this research aims to understand better the Paleoindian raw-material economy, land use, technological organization, mobility, and adaptation in the region and beyond, including the distribution and utilization of Edwards Formation cherts at Paleoindian sites across the broader Southwest.

Dominique Rissolo, James C. Chatters, Alberto Nava-Blank, Blaine W. Schubert, Joaquin Arroyo-Cabrales, Vid Petrovic, Keila Bredehoeft, Scott McAvoy, Helena Barba Meinecke, and Falko Kuester

Recent Advances in Visual Analytics and Virtual Taphonomy of Submerged Late Pleistocene and Early Holocene Human and Faunal Deposits in the Submerged Caves of the Yucatan Peninsula

The now submerged and semi-submerged cave systems of the eastern Yucatan Peninsula, Mexico, provide access to well preserved Late Pleistocene and Early Holocene deposits that reveal a wealth of information about the human prehistory and paleobiogeography of the region. Ongoing interdisciplinary research efforts aim to identify and reconstruct the processes that have formed and transformed these subterranean sites over millennia. In addition to ongoing studies involving evidence of human activity, human skeletal remains, and diverse assemblages of Pleistocene-Holocene fauna and botanical deposits, the development of digital workflows enables virtual access to remote sites. Rather than functioning simply as 3D models, multimodal and multiresolution digital twins enable virtual taphonomic analyses across scales – allowing domain experts to annotate, segment, extract, measure, and compare, while taking advantage of surface or volumetric views afforded by complementary imaging and remote sensing modalities. These include in situ single camera photogrammetry; integrated multicamera photogrammetry; structured-light scanning; SLAM-based LiDAR; ground penetrating radar; ex situ photogrammetry; X-Ray; and CT scanning.

Mario A. Rivera and Orlando Acosta Lancellotti

Late Pleistocene and Early Holocene Wetlands in Pampa del Tamarugal: Megafauna and Early Human Occupation in the Atacama Desert

The Pampa del Tamarugal (PDT), an endorheic basin in the hyperarid Atacama Desert of northern Chile, preserves evidence for major Late Pleistocene hydrological recharge events that sustained permanent wetlands, megafauna, and early human occupation. This study integrates paleoclimatic, hydrogeological, paleontological, archaeological, isotopic, and numerical modeling evidence to reconstruct the extent and significance of these wetlands. Results indicate that between at least 25.4 and 10.8 ka BP, wetter and more stable climatic conditions generated perennial streams from the Andean foothills, a shallow water table, riparian vegetation, and lacustrine environments in the depocenter of the basin. Groundwater flow simulations suggest that the Pintados and Bellavista paleowetlands formed a single, approximately 620 km² wetland system, produced by recharge only about twice modern values. The modeled perimeter is spatially consistent with reported remains of Gomphotheriidae, Hippidion, Megatherium, and Scelidotherium, as well as early human sites dated between 12.8 and 9.76 ka BP. These findings suggest that the final phase of the Late Pleistocene wet interval provided habitable corridors and reliable water sources for hunter-gatherer mobility in one of the driest deserts on Earth, while subsequent Holocene aridification likely reshaped settlement, mobility, and subsistence strategies significantly across northern Chile and the broader Atacama Desert region.

Heather Rockwell and Nathaniel Kitchel

The Doyle Locality: A Recently Identified Paleoamerican Stone Tool Manufacturing Workshop in the Munsungun Lake Formation, Piscataquis County, Maine

Archaeologists working in New England have long associated Munsungun Lake and the geologic formation bearing its name with red chert found in Paleoamerican sites since the work of Robson Bonnichsen in the early 1980s. Since the conclusion of Bonnichsen's excavations little archaeology has been undertaken in the Munsungun Lake region leaving many fundamental questions unanswered, including the source location of the red chert favored by Paleoamerican peoples. In this poster we report the results of excavations at a Paleoamerican stone tool manufacturing workshop located ~1 km from the only currently documented quarry area of red chert within the Munsungun Lake Formation. These quarries are located ~15 km from Bonnichsen's research area at Norway Bluff/Munsungun Lake. These results expand Paleoamerican chert procurement activities beyond the shores of Munsungun Lake and provide new insights into Paleoamerican stone tool manufacturing techniques, tool stone procurement, landscape use, and more in the region.

Michael F. Rondeau and John W. Dougherty

Far Western Clovis Points: Perception and Typology

Far West fluted points are highly variable in size, morphology and basal flaking patterns (Rondeau 2023). Because Far West fluted points are rarer than in the adjacent, classic Clovis region they have received less study, are less clearly defined and more likely to be inaccurately characterized. The California Fluted Lanceolate Uniform Testing and Evaluation Database (CalFLUTED) project has found that use-life caused variability has been confused with initial manufacturing variability. Clearing up this confusion demonstrates that nearly all Far Western fluted points fall within the range of Clovis point variability found in the projectile point assemblages of Clovis camps, lithic scatters and isolates of the "classic" region, but are not generally comparable to the single event assemblages of Clovis kill and cache sites, except in terms of some basal flake scar patterns. Pattern comparisons were facilitated by a basal scar typology that inadvertently emerged as a means to organize the recorded observations on over a thousand candidate specimens (Rondeau 2023:47). Additional implications and contributions of this typology are explored.

Matthew J. Rowe, Christoffer Nielsen, Butch Nielsen, Frederick Nielsen, Devany Hernandez, Eileen Anderson, Elizabeth Frias, Ethan McPherson, Gabe Lykins, Kathleen Hennelly, and Sydney Allen

The Clovis Assemblage in the Nielsen Brothers' Legacy Collection from the St. John's, Arizona Region

The Nielsen Brothers' Legacy Collection is an extraordinary, surface collected, lithic artifact assemblage from the St. John's, Arizona region. Among many notable features of the collection are complete Clovis points, many basal fluted-point fragments, and other lithic material such as blades, end scrapers, and debitage. This poster presents our analysis and description of the Clovis artifacts in the collection focused on materials from a single large site. We describe the site context, and report results from a systematic surface survey and field analysis of several randomly selected debitage clusters. We also develop hypotheses about land use and site distribution in the region. Investigation of the site and analysis of materials from the collection demonstrates there is a large concentration of Clovis materials in the St. John's region and further research is warranted to better understand Paleoindian artifact density, site patterning, and land use in this area. This research is a product of the 2026 University of Arizona, School of Anthropology, Collector-Collaboration Archaeological Field School. Results from this project further demonstrate the importance of partnerships between Responsible, Responsive, Resource Stewards and professional archaeologists in expanding our understanding of the paleo landscape and developing more complete pictures of regional archaeological records.

Christina Ryder

Assessing Collagen Preservation and Radiocarbon Dating Reliability in North American Megafauna Using Near-Infrared Spectroscopy

The extinction of 32 North American megafauna genera at the end of the Pleistocene is considered one of the most significant faunal turnovers in North America's history. Resolving the timing and mechanisms that led to its occurrence is extremely challenging, primarily because the fossil record has low temporal resolution and numerous radiocarbon dates are based on samples with poorly characterized collagen. In order to address these issues, we conducted non-destructive near-infrared collagen prescreening on thousands of specimens housed in legacy museum collections across North America to identify well-preserved candidates for AMS radiocarbon dating.

Through this process, we rapidly evaluated collagen preservation across large numbers of specimens without destructive sample preparation, prioritizing those most likely to yield reliable radiocarbon dates while identifying specimens compromised by poor preservation or consolidant and adhesive contamination. Here, we describe variation in collagen preservation across North America and examine the factors influencing preservation across different depositional contexts. When radiocarbon ages were successfully generated, we evaluated the accuracy of the NIR predictions against the actual values to provide an assessment of the method's performance across a broad range of depositional environments. Additionally, we discuss the utility of near-infrared spectroscopy to identify contamination from consolidants and adhesives, which is a significant challenge when working in museum collections.

Douglas A. Sain and Albert C. Goodyear

Pre-Clovis at Topper (38AL23): A Technological Analysis of the Lithic Assemblage from a Pleistocene Terrace in the American Southeast

Archaeological excavations at the Topper Site (38AL23) in Allendale County, South Carolina have revealed a substantial assemblage of chipped stone tools and lithic debris, including lithic items recovered beneath Clovis deposits that have been proposed as evidence of a pre-Clovis occupation. These findings raise critical questions regarding whether the assemblage resulted from human activity or natural processes, and whether post-depositional disturbance affected artifact associations. This study examined lithic items previously classified as flakes and bend breaks from the pre-Clovis deposits to determine their origin and assess evidence of human agency. Flake formation analysis was employed to evaluate lithic reduction technologies, (if any) selected for lithic tool manufacture, while a debitage attribute analysis identified characteristics distinguishing culturally produced flakes from naturally formed specimens. Results support a human origin for the pre-Clovis lithic assemblage recovered from the basal Pleistocene alluvial sands. The evidence further suggests the assemblage was likely produced through flake core and flake tool manufacture, as well as retouch modification activities.

Ismael Sánchez-Morales, Guadalupe Sánchez, and Vance T. Holliday

Beyond the Kill Site: Surface Evidence of a Clovis Camp at El Fin del Mundo Site

El Fin del Mundo (FdM) is an archaeological site in the Sonoran Desert of NW Mexico. The site is best known for its terminal Pleistocene megafauna kill locality (Locus 1) consisting of the semi-articulated skeletal elements of two gomphotheres (*Cuvieronius* sp.) associated with Clovis points and lithic debris in wetland deposits. However, most Clovis lithic artifacts from the site have been recovered from surface scatters of archaeological materials during systematic surveys conducted on the uplands within a 1 km radius to the south of Locus 1. These areas produced highly refurbished, damaged, and discarded Clovis points, multiple fragmentary unfinished bifaces consistent with Clovis bifacial reduction, numerous small end scrapers similar to those reported from other Clovis sites, and unretouched blades and by-products of blade production. The technological and typological characteristics of these artifacts separate them from the later Archaic component from the site. The varied stages of artifact use-life represented in the assemblage, the diversity of lithic implements, and their contexts are indicative of a Clovis campsite located on the better drained uplands near the gomphothere kill. This poster presents a summary description of this surface lithic assemblage and its relationship to the other loci of the site.

Guadalupe Sánchez Miranda, Kayla B. Worthey, Ben Wilder, and Jonathan Mabry

Las Tortugas Clovis Site, Sonora

The Las Tortugas site is located within an eolian landscape of the Altar Desert, inside the Pinacate Biosphere Reserve. This region is recognized as one of the driest places on the planet. The site is characterized by a surface-dispersed concentration of artifacts, fauna, and ecofacts, spread across an area measuring 500 by 100 meters. The site has undergone deflation, resulting in the establishment of a desert pavement. The wind is considered the primary factor affecting the postdepositional process. Among the artifacts discovered, the most significant is a complete Clovis projectile point crafted from jet-black rhyodacite. This rock is a local, silica-rich extrusive volcanic material found in the sierras of the Sonoran coastal plain, specifically between Guaymas and Caborca. Other identified artifacts include a quartz crystal biface, scrapers, cores, shells, and fire-cracked rocks. The site also contains important bone elements from extinct Pleistocene animals. Notable species represented are mammoth, western Scacamel, lamine, dwarf pronghorn, coyote, and turtles. To reconstruct the paleoenvironment of the Las Tortugas site dentine isotope studies have

been conducted on the faunal remains. These analyses provide insights into the environmental conditions and the biological history of the site during the Late Pleistocene.

Shelby G. Saper

Technological Variation between Western Stemmed Tradition and Cascade Tradition Projectile Point Technologies in the Northern Great Basin

How do researchers interpret the transition from one projectile point form to another? Some suggest that such changes mark a shift in ethnolinguistic populations while others attribute them to improvements in design among in situ groups. One transition that has received little attention is the shift from Western Stemmed Tradition (WST) to Cascade projectile points in the northern Great Basin. This change occurred during the terminal early Holocene, a period marked by warmer and more arid conditions when compared to the cooler and wetter conditions exhibited during the terminal Pleistocene. I apply standard metric analysis and statistics to consider variability between WST and Cascade points from the Connley Caves (35LK50), Oregon—a site that contains some of the densest and well-dated WST and Cascade components in the region. My work highlights a transitional point style with blended WST and Cascade attributes which may shed light on the nature of technological adoption during a dynamic period of Great Basin prehistory.

Victoria Schwarz and Kurt Rademaker

Between A Rockshelter and a Hard Place: Site Formation and Depositional History at Uchcumachay

Uchcumachay rockshelter (4110 meters above sea level), located in Junín, Peru, has long figured prominently in discussions surrounding early high-elevation occupation and possible associations between humans and extinct Pleistocene megafauna in the central Peruvian Andes. Excavations in the 1970s reported a deeply stratified sequence containing lithic artifacts and extinct fauna in the basal deposits, interpreted as evidence of Late Pleistocene occupation. However, limited chronological control and unresolved questions surrounding depositional integrity complicate the evaluation of these claims. This poster presents an ongoing reassessment of Uchcumachay focused on reconstructing site formation processes and assessing the stratigraphic integrity of archaeological deposits. New excavations applied a microcontextual geoarchaeological framework integrating geomorphological observations, stratigraphic analysis, and micromorphology to investigate the natural and anthropogenic processes that shaped the rockshelter sequence. Particular attention is given to identifying indicators of intact versus reworked deposits, assessing spatial variability between shelter interior and exterior contexts, and examining the effects of post-depositional disturbance on archaeological preservation. By developing a methodological framework for evaluating depositional integrity in high elevation Andean rockshelters, this project contributes to broader discussions surrounding the identification of intact archaeological deposits in the puna and the interpretation of early human occupation in the central Andes.

Stephanie Scialo, Sarah P. Sportman, and David E. Leslie

Along the River's Edge: Current Research at the Little Toad Site, Avon, Connecticut

Since 2024, the Connecticut Office of State Archaeology has led mitigation excavations at the Little Toad Site, located along the Farmington River in Avon, Connecticut. The site, located on an elevated terrace on the west riverbank, contains well-stratified precontact era deposits spanning over two meters in depth and 9000 years of human occupation. During the first season, a program of ground-penetrating radar, sediment coring, radiocarbon dating, and traditional excavation was critical for understanding site formation and stratigraphy. The excavations recovered over 11,000 artifacts including lithics, pottery, charred botanicals, and calcined bone. The deepest component of the site produced artifacts diagnostic of the Paleoindian Period (13,000–10,000 BP) in the Northeast, including lanceolate-type projectile points, channel flakes, end scrapers, and debitage made of high-quality chert and chalcedony. Charred botanicals from cultural features have returned radiocarbon dates consistent with the Late Paleoindian period. While work at the site is ongoing, its identification adds information to the current Paleoindian dataset within the Farmington River Valley, such as the Brian D. Jones Site just downriver, and provides insight into early migration routes and settlement patterns in southern New England as well as critical data regarding the location and formation of deeply buried Paleoindian sites.

G. Richard Scott, Dennis H. O'Rourke, Arielle J. Pastore, and John F. Hoffecker

Following the Dental Breadcrumbs: Integrating Dental Morphology, Genomics, and Archaeology in the Peopling of the Americas

For over a hundred years, researchers have debated

the origins and spread of the First Americans. Studies in archaeology, craniometry, genetics, and dental morphology have often yielded different interpretations of source populations, migration routes, and the number of founding groups that settled the Western Hemisphere. Recent breakthroughs in paleogenomics have transformed this dialogue, though many questions persist. In this review, we examine recent research that combines dental morphology with archaeological and genomic data to re-evaluate traditional models of Native American origins. Analyses of classic dental trait frequencies, individual probabilistic methods like rASUDAS2, and trait-specific studies reveal patterns inconsistent with conventional theories. Native American groups display a unique, enhanced dental complex that differs from East Asians but still shows signs of an Arctic founding population. These results support early divergence of ancestral Native American groups, with their population histories shaped in Beringia and along the North Pacific coast. Additional evidence indicates that rare dental variants and root traits are sensitive markers of population interactions and gene flow. Instead of replacing archaeology or genetics, dental morphology increasingly aligns with these fields and offers an independent perspective on the peopling of the Americas.

Shaylee Scott, Ryan Parish, Ashley Smallwood, Tom Jennings, Steve Boles, and Perry Hagan

Tracing Clovis Landscapes: Chert Sourcing at the Copelin Valley Site in Kentucky

This study conducts a raw material sourcing analysis of Clovis lithic artifacts from Copelin Valley, Hart County, Kentucky, a key Clovis occupation site. Over a decade of documenting private collections and recent archaeological investigations confirm the site's significance within the Paleoindian landscape. Using reflectance spectroscopy, a non-destructive technique, this research assesses chert source probabilities for over 100 Clovis points and tools. By integrating spectral data with geological sourcing frameworks, this study examines raw material procurement strategies and their implications for Clovis mobility and settlement. The findings reveal patterns in material selection, shedding light on occupation intensity, technological organization, and landscape use in the Copelin Valley. This thesis investigates whether Copelin Valley's Clovis inhabitants primarily relied on local Sonora chert for tool production and whether non-local materials were imported into the valley, reflecting broader mobility patterns.

Yanyu Shen and Chunxue Wang

Tool Use at Huadian Xianrendong Cave: Micro-Wear Evidence for Late Pleistocene Hunter-Gatherer Adaptations in Northeast Asia

Xianrendong Cave in Jilin, Northeast China, preserves well-dated Late Pleistocene lithic assemblages. This study presents use-wear analysis on stone tools to reconstruct subsistence behaviors and technological adaptations. Results indicate high frequencies of hide-scraping and butchery activities, alongside plant processing and woodworking. These patterns reflect a specialized, resource-intensive strategy tailored to cold, high-latitude environments. As a key site along the hypothesized Pleistocene dispersal route to the Americas, Xianrendong's tool-use data sheds light on the technological foundations of hunter-gatherer populations that may have crossed Beringia.

Lisa-Marie Shillito, John C. Blong, Dennis L. Jenkins, Helen L. Whelton, and Ian D. Bull

New Multiproxy Biomolecular Methods for Identifying Dietary Profiles in Coprolites from Paisley Caves, Oregon – Combining Signals from Lipids, VOCs and DNA

Coprolites from Paisley Caves (Oregon, USA) provide a direct archive of human diet, health, and environmental interaction in the Late Pleistocene and early Holocene. This poster presents a new integrated biomolecular approach, combining lipid biomarker and volatile organic compound (VOC) analysis to investigate coprolite composition. Lipid analysis primarily reflects the gut biochemistry of the producer and thus provides a robust means of identifying producer species, while VOC analysis captures a broader suite of compounds linked to decomposition processes and diet. aDNA in coprolites is often dominated by dietary inputs, with only minor contributions from the producer. Together, lipids, VOCs, and aDNA offer complementary lines of evidence, revealing a diverse range of consumed resources, including materials rarely visible in the traditional archaeological record, and indirect evidence of human interactions with dogs. Combined with analysis of physical contents, this integrated approach provides new opportunities to reconstruct dietary variability and patterns of landscape use, and to better understand how people lived in and adapted to different ecological settings.

Zachary Singer, Craig Ilgenfritz, Kenneth Andrasko, Thomas McLaughlin, Stephanie Soder, and Matthew McKnight

The Maryland Fluted Point Survey

This poster provides an overview of the statewide Maryland Fluted Point Survey. The first issue of Maryland Archeology in 1965 included a survey of fluted points. In 1968, Maryland's first State Archaeologist formalized a fluted point data form to compile information on Maryland fluted points. By 1979, the Maryland Fluted Point Survey had reported data on 71 fluted points recovered throughout Maryland. The Maryland Fluted Point Survey now includes data on more than 150 fluted points from Maryland. The Maryland Fluted Point Survey data is being synthesized to study the lifeways of the Paleoindians who lived in Maryland during the late Pleistocene and early Holocene between 13,000 and 10,000 years ago. Chronological comparisons are made based on fluted point typology. Land use strategies are investigated through geo-spatial comparisons of provenience within physiographic regions and on the county-level. Trends in raw material use and mobility throughout the Paleoindian period in Maryland are also examined.

Zachary Singer, Cam Walker, John Fagan, Craig Ilgenfritz, Kenneth Andrasko, Thomas McLaughlin, Stephanie Soder, and Matthew McKnight

Illuminating Ice Age Fauna Exploitation in Maryland: Protein Residue Analysis of 75 Paleoindian Stone Tools from Maryland

This poster highlights the results of a recent protein residue analysis of Paleoindian artifacts from Maryland. Archaeological Investigations Northwest, Inc. analyzed residues extracted from 75 artifacts from multiple archaeological sites and collections within Maryland. The analysis was done to identify possible protein residues using cross-over immunoelectrophoresis. Positive reactions to antisera provide the first direct archaeological evidence of mammal hunting and exploitation of extinct megafauna by Ice Age peoples in Maryland including proboscideans, bison, and horse.

Gerad M. Smith

Pleistocene Themes of Alaska Native Oral History: Place Names and Traditional Knowledge

This poster examines Indigenous place names as multidimensional repositories of paleogeographic knowledge in both interior and Southeast Alaska. These toponyms encode records of paleoecological events spanning the Holocene and extending into the Terminal Pleistocene. Drawing on Vine Deloria Jr.'s teachings on place, James Kari's Proto-Dene Lex Loci framework, Clifford Geertz's concept of Deep Play, and Indigenous perspectives asserting that "history begins with our place names," this analysis argues that Dene, Eyak, and Łingít toponyms have been carefully curated over millennia. This enduring continuity reflects a cultural practice of conserving established place names rather than replacing them. The performative transmission of these curated toponyms through traditional Travel and Emergence Narratives functions as a mechanism for linking identity to landscape, history, and ancestral memory, with each seasonal movement across the land reactivating the past.

Morgan F. Smith

Using Low-Frequency Sound to Identify Submerged Anthropogenic Material Remotely

In the last decade, keen observations on the correlation of resonant features and submerged landscape sites led to inquiries regarding the ability of sub-bottom profilers to structurally excite archaeological material, allowing for remote identification. Independent research teams pursuing laboratory and modelling studies have successfully demonstrated the underlying geophysical phenomena here is valid, but operationalizing the method in the field faces several hurdles. This paper will summarize work by an integrated team of geophysicists, archaeologists, acousticians, modelers, and mathematicians who have studied this method through three angles. The first includes controlled experiments in an anechoic tank at the US Naval Information Warfare Pacific Transducer Evaluation Center (TRANSDEC). The second highlights efforts to create a code to model the process, allowing for iterative experiments to isolate variables, such as lithic size and/or density, water depth, temperature, burial substrate, SONAR frequency, pulse length, and ping rate. The third summarizes work to operationalize the method in the field, openly discussing successes, failures, and challengers. Last, we summarize ways forward in this interesting methodological frontier.

Dylan Sparkman, Matthew Des Lauriers, and Antonio Porcayo-Michelini

Hooked on History: Modern Experimentation on Prehistoric Single Piece Shell Fishhook Effectiveness

Prehistoric fishhooks are among the most informative

artifacts available for reconstructing ancient maritime economies. Their morphology, raw materials, and manufacturing techniques illuminate subsistence strategies, ecological conditions, and cultural traditions across thousands of years. Understanding the capabilities and limitations of these fishhooks, we can begin to grasp the relationships and struggles of past people's oceanic gathering capabilities. The testing of these capabilities will be done by fishing with reproductions of single piece shell fishhooks from Southern California and Baja using modern fishing methods.

Charles A. Speer and Jason M. LaBelle

Non-Destructive Geochemical Analysis of the Busse Clovis Cache: A Large-Object LA-ICP-QQQ-MS Approach to Paleoindian Lithic Sourcing

The Busse Cache (14SN1), located in northwestern Kansas, is a Paleoindian lithic assemblage attributed to Clovis technological traditions, consisting of ~90 artifacts, including large bifaces, blades, flake tools, and production debris, primarily manufactured from high-quality Niobrara jasper with likely source areas ~100 km east. Despite its significance, the geographic origin of raw materials within the assemblage has not been systematically evaluated using high-resolution geochemical methods. This study presents trace element data generated via laser ablation–inductively coupled plasma–triple quadrupole–mass spectrometry (LA-ICP-QQQ-MS) using a 193 nm excimer laser system. Standard chamber-compatible artifacts were analyzed directly, while oversized specimens required a custom workflow incorporating high-resolution 3D scans, additive-manufactured fixtures, and a silicone interface to ensure stable ablation conditions on irregular surfaces. Time-resolved analyses produced reproducible trace element profiles suitable for comparison with regional lithic sources across the Central and Southern Plains. Preliminary results provide new constraints on raw material provenance within the Busse Cache and contribute to broader interpretations of Clovis mobility, caching behavior, and lithic provisioning strategies. This study establishes a minimally invasive and scalable protocol for sourcing large archaeological artifacts with complex geometries, with direct applications to museum collections and high-value materials.

Kathleen B. Springer, Jeffrey S. Pigati, Jessica E. Tierney, Jeffrey S. Honke, Gonzalo Jiménez-Moreno, David Bustos, Thomas M. Urban, Daniel Odess, Edward A. Jolie, Alison J. Smith, Abigail J. Hunt, Patrick J. Martinez, Vincent L. Santucci, Sally C. Reynolds, and Matthew R. Bennett

Humans Experienced Abrupt Environmental Changes at White Sands during the Last Glacial Maximum

Expanded excavations at White Sands National Park, located in the Tularosa Basin of south-central New Mexico, have unearthed 20 stratigraphic horizons containing in situ human footprints, megafaunal trackways, and linear features created by travois. Innovative radiocarbon dating of conifer pollen, combined with ages of aquatic seeds, refines the chronology of the footprint-bearing sequence to between 23.5 and 21.7 ka, and allows for the development of highly resolved paleoenvironmental and paleoclimatic records in a terrestrial setting. Multiple proxies, including biomarkers (leaf waxes and GDGTs), pollen and ostracode assemblages, mineralogy, and sedimentological evidence, were used to elucidate climate and environmental changes on local, extralocal, and regional spatial scales. Together, these data indicate a complete overturning of the environment from a perennial lake to a playa and capture a large aridification episode coincident with Dansgaard-Oeschger Event 2 at 23.2 ka, which shrank pluvial Lake Otero and allowed people to traverse the former shoreline area for nearly two millennia. This well-dated and highly resolved paleoclimate record provides compelling evidence that humans in North America experienced dramatic environmental changes during the Last Glacial Maximum.

Bryn Sullivan and Katelyn McDonough

Coprolites as Archives of Foodways: Macrobotanical Evidence from Last Supper Cave, Nevada

Great Basin archaeologists have long investigated the dynamic relationships among people, climate, and culture, yet many questions remain about past foodways and environmental change, in part due to the paucity of sites where organic residues are preserved. This study addresses these relationships through the analysis of nine coprolites from Last Supper Cave, spanning the terminal Pleistocene through middle Holocene. Coprolites provide a secure context for distinguishing between culturally and naturally deposited plant and animal remains, offering direct insight into individual diets and local landscapes. This poster presents macrobotanical findings that reveal the role of plants in past northern Great Basin lifeways. This project contributes to a larger study that aims to advance the field of coprolite research by integrating ra-

diocarbon, botanical, faunal, parasitological, and aDNA analyses. The Last Supper Cave analysis will be the first coprolite study from Nevada's High Rock country and is intended to become one of the most comprehensive coprolite studies to date, providing high-resolution data to inform our understanding of traditional foodways and impacts of climate change in the Great Basin.

Karisa Terry

Cultural Markers and Ecological Tools: Reassessing the Spread of the Microblade Technology in Late Pleistocene Transbaikal NE Asia

Microblade technology is central to understanding early human dispersals across Northeast Asia, Beringia, and northern North America during the late Pleistocene (roughly 25,000–14,000 cal BP). Researchers view this technology through two approaches: as a cultural marker documenting the radiation of specific human groups or ideas into neighboring regions, and as a techno-ecological adaptation. This specialized technological suite relied on pressure flaking to manufacture microblades used as insets in composite tools. Consequently, the emergence and spread of microblades can be linked to human migration, transmission of technical knowledge, and distinct foraging strategies. Previous studies trace the chronological emergence of the microblade technological suite in eastern Northeast Asia from the Paleo-Sakhalin-Kuril Peninsula (22,000 cal BP at Kamishiritaki 2) to the Transbaikal region southern Siberia (19,000 cal BP at Studenoe 2 and Ust'Menza 2) and northeastern Siberia (17,000 cal BP at Diuktai). After assessing regional timing and specific reduction techniques (Tougeshita and Shiritaki/Yubetsu methods) in the Transbaikal region of southern Siberia, the focus shifts to the emergent process of microblade technology here. It examines how the technology was integrated into the lifeways of foraging peoples during the Last Glacial Maximum through settlement locations, dwelling organization, seasonality, and faunal and lithic resource exploitation.

A. V. Tetenkin, I. I. Razgildeeva, and A. A. Ulanov

The Culture of Population of the Northern Baikal Region at the End of the Last Glacial Maximum, Late Upper Paleolithic

Kovrizhka IV (Eastern Siberia [Russia], Northern Baikal region, the valley of the Vitim River) has been identified as a series of base camps, 19–18 ka BP, for relatively long-term residence of a local group of inhabitants in the winter (cultural horizons 6, 2G and 2B) and spring (c.h. 3B) seasons on the beach line of the river near the cliff of a rocky cape protruding into the river, which played a role in hunting by driving game off the cliff. The construction of four excavated dwellings involved reinforcing the walls with stones, either along its entire circumference or in a partial manner. The presence in cultural horizons 3B and 2G of two arc-shaped layouts with a smaller and larger radius suggests the possibility of constructing double-walled dwellings. The hearths demonstrate a variety of heating methods. In two cases, the habitation began with sprinkling or painting the area with ochre (c.h. 2B and 2G). The range of observed activities included hunting, pressure knapping of microblades, fabrication of hunting weapons, finishing of lithic tools, bone processing, hide processing, food consumption, and symbolic activity. The existing data can be characterized as a stable lifestyle, which has been successful in terms of reproduction for approximately five centuries in the primary task of adaptation and survival in the conditions of the late LGM. The dominant microcore preparation method (Kovrizhka method) is characterized by the striking platform formation on the narrow end of the preform by removals from the lateral and terminal sides. The probable place of origin is the Studonoye Culture of Southern Transbaikalia. At the same time materials of the Kovrizkha assemblage have correlations with Paleo-Sakhalin-Hokkaido-Kurile Peninsula by such microblade core reduction methods as Yubetsu, as well as the usage of ochre (e.g. Yoshiizawa site, Shimaki site, Kiusu-5 site).

Heather B. Thakar, Keith Prufer, and Mark Robinson

Late Pleistocene–Early Holocene Chronology and Context of Mayahak Cab Pek and Saki Tzul Rockshelters in Southern Belize

Southern Mesoamerica remains poorly understood in Paleoindian research, despite its role as a major migration bottleneck. Recent evidence from the neotropics of Central America indicates multiple waves of Pleistocene and early Holocene immigrants contributed to the peopling of this region. This poster synthesizes previously published research on the chronology and context of Mayahak Cab Pek and Saki Tzul rockshelters in the Bladen Nature Reserve of southern Belize. Stratified deposits document some of the earliest known human occupation of Central America, prior to 12,000 BP. These occupations took place during major ecological transitions, as late Pleistocene mosaic environments gave way to wetter, forested neotropical landscapes with diverse plant and animal re-

sources. These shifting environments shaped early patterns of adaptation and settlement, which are explored in the accompanying posters in this same symposium.

Heather B. Thakar and Keith Prufer

Trans-Holocene Human Ecology and Culture in the Southern Lowlands of Belize: Insights from Paleoethnobotanical Analyses at Mayahak Cab Pek and Saki Tzul Rockshelters

This poster summarizes an ongoing analysis of remarkably well-preserved macrobotanical remains recovered from Mayahak Cab Pek and Saki Tzul Rockshelters in the Maya Mountains of Southern Belize. These plant remains document almost 12,000 years of human-forest interactions in the lowland neotropics, with clear evidence for early and persistent reliance on forest tree crops throughout the transition from foraging to food production economies. Variation in the abundance and diversity of identified taxa suggests shifts in economic importance of key species that resulted in more specialized extraction during later time periods. We discuss preliminary interpretation of these data and invite discussion.

Jordan J. Thompson, John C. Blong, Rachel A. Horowitz, and Roger Amerman

Early Holocene Exploration and Landscape Adaptation: A Case Study of Two Nimíipuu Camp Sites in the Bitterroot Mountains, USA

The Southern Columbia Plateau has recently become a vital location for evidence of the early peopling of the Americas, however mountain environments of the region remain underrepresented in this discussion, despite their central role in cultural, subsistence, and knowledge systems. The lack of study of these regions results in underrepresenting the full spectrum of past mobility and subsistence strategies. We present a case study of two early Holocene Western Stemmed Tradition Nimíipuu (Nez Perce) upland campsites, Weitas Creek (10CW30) and Kelly Forks Work Center (10CW34), located on the upper North Fork Clearwater River, Idaho. To examine the role of the Bitterroot Mountains in early Holocene exploration, subsistence, and landscape adaptation we employ lithic technological, raw material sourcing, geoarchaeological, and ethnogeological investigations. Western Stemmed projectile points are associated with early Holocene occupation at these sites. The results of our analysis demonstrate a very early familiarity with the landscape and regional resources with a strong connection between the Bitterroot uplands and ancestral Plateau lithic traditions, with archaeological data indicating that the seasonal subsistence cycle was likely established very early on. This investigation contributes to our understanding of the settling of the Plateau and the subsistence strategies of early peoples in the Americas.

L. Kim Thompson and David Meyer

Why Basally Thinned Sunrise and Charlie Lake Point Types Both Merit a Distinct New Name, Type Site, and Complex Assignment

Over 60 years ago Marie Wormington and William Mullroy documented a 'short, stubby, fluted point with a concave base' recovered in Alberta; and Thomas Kohoe concluded basally thinned points in Saskatchewan 'do not fit into either the Clovis or Folsom types.' Similar points are often umbrellaed under the Charlie Lake type*, securely dated 10,500 RCYBP. The largest assemblage of basally thinned point types was recently recovered in eastern Wyoming at the Powars II red ochre quarry site. Bruce Bradley and Greg Nunn classified 34 points as a new type purportedly named Sunrise for the mine/town housing the site. Although both Sunrise and Charlie Lake type points were manufactured on percussion flaked biface/preforms, their similarities end there. The former employed the pressure thinning/flattening method for its production process, whereas Charlie Lake type points primarily retained Clovis' overshot flaked reduction sequences throughout its manufacture. The latter depicts a direct technological Clovis offshoot; whereas Bradley and Nunn closely associate Sunrise points with Goshen technology. Since these point types exert enormous bearing upon early paleo migratory patterns, both merit a name. Following Eugene Gryba's directive for naming the northernmost compendium: 'It must be Charlie Lake because it's the only point stratigraphically dated in excavation.'

David K. Thulman

Discerning Point Shape Evolution from a Large PIDBA Dataset

Using a dataset of over 1000 Paleoindian points images from Florida presently accessible on PIDBA, statistically distinguishable types are discernable. Using that typology and PIDBA point images from the greater Southeast, we can make inferences about the evolution of artifact shape, the appearance of Early Archaic notched points, and the cultural connections throughout Southeastern North America that facilitated those shape changes.

Marcelo Javier Toledo

LGM Occupation of Central Argentina Loessic Plains and Deserts (18-28 ky BP)

Two main cultural components were identified in LGM fluvial deposits of Pampas valleys. The anthropic evidence consists of modified bones of extinct fauna, very rarely associated with lithics. Material from primary sites of different functionalities was redeposited in muddy channel-fill bars and calcrete channel-lags of very low gradient streams inserted in loessic plains and interdune depressions. The low-energy environment and the absence of the bone-crushing carnivore niche eliminate most of the taphonomic bias. Anthropic modified bones represent different stages of carcass processing from butchering to bone quarrying. Priority was given to elements of very low equifinality ambiguity such as attached bone flakes, butterfly wedges, broad percussion notches, hackle marks and repetitive cut marks with shoulder effect and barbs. Also, recurring patterns of non-random fracturing were identified. AMS dating of shells, collagen and bioapatite confidently date these cultural levels to 18-20 ky BP and to 26-28 ky BP. This implies that there was no significant pleniglacial demographic gap between the OIS3 and the post-LGM peopling waves that arrived to Pampean Plains. Current genomics models map only the latest expansion, particularly successful due to a sustained improvement of biome productivity and to the heritage and development of sophisticated terminal Upper Paleolithic technocomplexes.

Jesse W. Tune

Paleoindian Points in the Tennessee River Basin: A Drainage Basin-Centered Analysis of PIDBA Data

Research using the Paleoindian Database of the Americas (PIDBA) typically operates at the state level, reflecting the database's organizational structure rather than the behavioral geographies of the people who the data represents. This poster presents a drainage basin-centered analysis of PIDBA data from counties intersecting the Tennessee River basin. By reframing the unit of analysis around a major drainage basin, I examine how Paleoindian point type distributions crosscut modern political boundaries and align with physiographic structure. Point type presence, abundance, and diversity are assessed across upper, middle, and lower basin segments, treating the Tennessee drainage as a spatially coherent landscape unit likely to reflect patterns of movement, information flow, and resource use. I focus particular attention on the spatial distributions of Clovis, Cumberland, and Dalton points to evaluate whether these temporally successive types show shifting distributional patterns within the basin. Results suggest that drainage-centered analysis reveals geographic patterning obscured by state-level aggregation and has broader implications for how PIDBA data are used in Paleoindian research.

Jim Uhrinak

Wisconsin's Horicon Basin: A Mammoth Hunting Destination - Bones, Rock Images, Petroform, and Favorable Geology

Wisconsin's Horicon Basin is a mammoth hunting destination verified through decades of lithic-scatter analysis by the Illinois Archaeological Survey. Dr. Jack Steinbring excavated images of a camelid guanaco and paleo projectile points pecked into bedrock surfaces at the basin's west edge. Fox and Uhrinak described petroform related to the surface exposure of Neda oolitic ochre below the Niagara formation, with Niagara-cuesta elevations providing seasonal-round migration handrails and paleo-hunter vista locations. Milwaukee Audubon Society's Buffalo Speaks Reserve holds the Kolterman Mound and Petroform Site located at the prairie-forest border of continental-scale biomes. The reserve had topographic utility for the Horicon Basin's paleo big-game hunters and its boulder monuments became a trail shrine. Milwaukee Audubon Society's land restoration work at Buffalo Speaks Reserve since 2010 has revealed stone images of mammoth and other taxa. We helped fund dating the Persha mammoth remains found with Ice-Age bison bones south of Buffalo Speaks Reserve. The Persha mammoth site has not yet been excavated. These finds promise productive research regarding artifacts and the paleohunter landscape.

Thomas M. Urban, Jeff Rasic, and Raven Garvey

Magnetic Detection of Ephemeral Sites in the Americas from Alaska to Patagonia

Magnetometers have been used to detect burnt archaeological features since at least the 1950s with Martin Aitken's successful detection of Roman kilns at Water Newton with a proton magnetometer. Here we explore the idea of locating early ephemeral sites in the Americas using an alkali vapor magnetometer to detect the magnetic anomalies associated with hearths and related activity areas. Building on a history of successful cases from Alaska, we expand southward and attempt to apply the same approach in several other contexts in the lower 48

and South America. We highlight the great potential for this underutilized approach to site detection.

Meghann M. Vance

Lime Ridge: Nearly 50 Years Later

The Lime Ridge Clovis site was first reported in 1978 as a Folsom locality, though by the mid-1980s had claimed its place as the one of the few known Clovis sites in Utah and the first identified on the northern Colorado Plateau. For a surface site, it was remarkably preserved, with a high ratio of tools to debitage, largely local raw material types, and assemblage characteristics that suggested an encampment, but not a kill or butchering site. Some 20 years later, a re-examination of the spatial data and artifacts provided evidence for discrete knapping loci and gendered work areas, found shared technological attributes with southern Arizona sites, as well as a potential raw material link to northwestern Utah or Nevada, and identified the site as a short-term stop-off for tool replenishment following a nearby hunt and later hide processing activities. More recent work suggests Lime Ridge may also represent terminal classic Clovis landscape use in Utah and an emerging local fluted point tradition in a territory that was already well-known. Examination of raw materials continues to aid refinement of this potential territory.

Sebastián Daniel Vidal Cuéllar and Antonio Pérez-Balarezo

Lithic Technology and 3D Documentation of the Rafael Larco Paiján Collection from Pampa de los Fósiles, Peru

Paiján lithic technology is central to debates on Late Pleistocene and Early Holocene occupations of the Peruvian Pacific coast, yet several foundational collections remain poorly documented. This poster presents a technological and 3D documentation study of the lithic assemblage collected by Rafael Larco Hoyle in the 1940s from Pampa de los Fósiles, Cupisnique Valley, northern Peru. Curated at the Museo Arqueológico Rafael Larco Herrera, the collection comprises 1703 surface artifacts, including cores, flakes, bifacial preforms, unifaces, bifaces, debitage, and Paiján stemmed points. Because the assemblage derives from historical surface collection, it is evaluated not as a closed stratigraphic context but as a legacy assemblage with internal technological coherence and research potential. The analysis combines inventory, raw-material and metric recording, technological study of 121 diagnostic artifacts, drawing, and 3D documentation. Preliminary results show a debitage-dominated assemblage, multiple stages of the Paiján chaîne opératoire, and raw-material differentiation between formal points, bifacial preforms, unifaces, and flake tools. The study highlights digital recovery of legacy collections for refining regional models of early coastal hunter-gatherer technology.

Silvina Vigliani, Samuel Meacham, Eduard G. Reinhardt, Brandi MacDonald, James C. Chatters, Dominique Rissolo, and Roberto Junco

Paleoamerican Ochre Mines in the Submerged Caves of the Yucatan Peninsula, Quintana Roo, Mexico

In 2017, the first evidence of early ochre exploitation was located in the Sagitario cave system. Following this discovery, similar contexts were identified in various submerged caves along the coast of Quintana Roo. Initial studies indicate that ochre search and extraction activities occurred repeatedly between the late Pleistocene and early Holocene, and that ochre was an important mineral for the region's early inhabitants. A set of associated features has been identified at these sites, demonstrating a high level of knowledge about the caves and their geology, as well as the initial stages of ochre processing. These features include excavation pits, piles of debris alongside them, broken speleothems used as hammers, fire areas for lighting, and broken and displaced speleothems to create space. In some cases, the initial stages of mineral processing for transport and/or storage may have been carried out in situ. Numerous cairns made of flowstone and broken speleothems were also recorded along the passageways, suggesting internal navigation strategies within the dark cave systems. A sampling plan for ochre, charcoal, and calcite is currently underway to determine the quality, selection, and potential uses of the ochre, as well as the time period of its exploitation.

Hannah von Suskil and Kristine Korzow

Bye Bye, Birdie: An Investigation into the Taxonomy of Extinct North American Birds of Prey

The Pleistocene Ice Age was a time unlike any other. Megafauna ruled the earth, and diverse forms of birds evolved, including large, and giant predatory taxa. Since traits specialized for carnivory have evolved several times in Aves' evolutionary history, separate lineages, such as falcons and accipitrids, convergently evolved similar morphology. This makes morphological relationships of extinct raptors difficult to determine, and, in the absence of DNA, taxonomic placement can be nearly impossible.

Several extinct raptors found at the La Brea Tar Pits, California, where DNA extraction has not yet been successful, have been taxonomically allocated by morphology alone. To resolve their taxonomic placement, I use the sequence of Type I Collagen (COL1) as an alternative to DNA analysis, as its abundance and slower degradation allow COL1 to be preserved in La Brea fossils. Here, I propose a resolved phylogenetic placement of three extinct raptor species, *Teratornis merriami*, *Neophrontops americanus*, and *Neogyps errans* based upon their collagen sequences, as well as uncovering the presence of a fourth taxon that was morphologically misidentified.

Cody Walton, Erik Simpons, Kim Adams, Chris Lowry, Danielle Schneider, and Mark Williams

An Analysis of the Confidence of Previously Identified Paleoindian Affiliated Sites in Northwestern New Mexico

This poster examines sites that have been recorded within the Farmington Field Office of the Bureau of Land Management. Sites dating to early human occupation within Northwest New Mexico are rare and the majority of these sites have been established through salvage archaeology in relation to federally permitted activities. The confidence in site affiliation is ranked based on the presence of lithic assemblages, zoological remains, datable carbon deposits, and contamination from later reoccupation.

Monica Warner, Paige Lynch, and Keith M. Prufer

Strontium Isotope Evidence for Paleoindian and Archaic Migration in Southern Belize

Human migration played a fundamental role in the peopling and long-term occupation of the Neotropics. This study presents results from radiogenic strontium (87Sr/86Sr) isotope analysis of dental enamel from 46 individuals interred in the rock shelters of Saki Tzul and Mayahak Cab Pek, including three Late Pleistocene and 15 Early Holocene individuals. These rock shelters contain occupations from the terminal Pleistocene through the Classic periods. Since enamel 87Sr/86Sr ratios form during childhood, the data reflect where individuals lived during tooth formation rather than short-term or seasonal movements. These 87Sr/86Sr data show that the majority of Late Pleistocene and Early Holocene individuals exhibit 87Sr/86Sr values that align with local baseline signatures for the Maya Mountains (~0.71337), indicating long-term local resource use in this geologically diverse upland area. Conversely, two individuals have isotopic values linked to different geologic regions: one Late Pleistocene individual's value (~0.70981) correlates to nearby lowlands, and an Early Holocene individual's value (~0.70873) correlates to limestone-carbonate terrain. These results reveal varied landscape use and inform broader discussions on migration and regional interactions in tropical environments during these periods.

Joshua J. Wells, Eric C. Kansa, Sarah W. Kansa, David G. Anderson, and D. Shane Miller

Systematic Reviews about the Earliest Indigenous Peoples of North America through DINAA (Digital Index of North American Archaeology) and PIDBA (Paleoindian Database of the Americas)

This poster illustrates the application of systematic review strategies to answer questions regarding the Pleistocene cultures of the earliest Indigenous peoples of North America. Systematic reviews are a form of meta-analysis, herein employed to assess in combination archaeological site data, published research, and other linked open data sources available through the Open Context archaeological data publication service which houses both the Digital Index of North American Archaeology (DINAA) and the Paleoindian Database of the Americas (PIDBA). Specifically, we demonstrate the use and functions of the Covidence systematic review platform to accomplish meta-analytical tasks regarding subjects best addressed at the level of the archaeological site. We then explain how a systematic review is facilitated through the linked open data management structures of both DINAA and PIDBA which they inherit from the Open Context platform. In unison, DINAA and PIDBA provide important lenses through which to identify relevant materials for systematic reviews based on a wide variety of shared and unique attributes for each database. We hope to encourage greater disciplinary interest in data sharing and linking on these models, which should significantly aid future research and understanding.

John T. White

The Search Continues: Recent Investigations of Southern Alaska's Paleoindian Record and Late Holocene Environment

While multidisciplinary investigations have increased archaeological interest in the earliest occupation of the Northwest Coast, evidence of Pleistocene-aged humans on the coast remains extremely limited. Southern Alaska in particular has the potential to preserve a significant

as-yet undiscovered Paleoindian record. Investigations in the last decade have extended the occupation of southern Alaska's Copper River Basin to the Younger Dryas and even the Allerød with the identification of the multicomponent Nataeł Na' site located along the former shores of Glacial Lake Ahtna. Its position relative to Alaska's established Allerød-aged occupations raises questions regarding processes of landscape learning and resource procurement among populations wielding Nenana-complex technologies. Attempts to identify Pleistocene-aged stranded shorelines in nearby Prince William Sound have served to elucidate the complexity of the regions geological history and identified opportunities to target further investigations in the area based on reconstructions of the past environment and sea-level change.

Ernest A. Wiegand

Allen's Meadow: A Paleoindian Camp in the Norwalk River Valley, Wilton, Connecticut

The Allen's Meadows site was discovered at a community garden in Wilton, Connecticut in 1981. Surface collection of the site resulted in the recovery of a large number of artifacts attributed to a Paleoindian occupation of the site, as well as several artifacts of the Late Archaic and Early Woodland periods. The Paleoindian assemblage includes large numbers of endscrapers, as well as fluted points, bifaces, utilized flakes and wedges. The site is unusual in that the vast majority of the lithic artifacts and debitage are quartz. Shovel test pit excavations, one-meter excavation units and a single block excavation have been conducted outside the garden area to determine the size and boundaries of the site as well as areas that have not been disturbed by plowing. This progress report will present the results of the work conducted and future directions for the site's study.

Stefania L. Wilks and Lisbeth A. Louderback

Geophyte Use in Terminal Pleistocene Northern Great Basin: Starch Residue Evidence from Lowland and Upland Sites in Southern Oregon, USA

Paleoethnobotanical studies in the northern Great Basin suggest that late Pleistocene and early Holocene foragers used a diverse range of wetland and upland plant resources, including edible geophytes such as roots, tubers, and bulbs. While intensified geophyte harvesting over the past ~4,000 years is well documented, their importance in earlier human subsistence strategies remains less clear. This study examines starch residues recovered from 31 ground stone tools dated to Younger Dryas through early Holocene at Connley Caves (ca. 12,500–10,200 cal BP), Buffalo Flat (ca. 11,000–9000 cal BP), and Paulina Lake (ca. 10,500-8500 cal BP). Starch granules from *Apiaceae* (wild carrot family) were identified on 20% of analyzed tools and accounted for 28% of the total taxa represented. All identified *Apiaceae* residues are associated with lowland contexts, whereas contemporaneous upland assemblages from Paulina Lake yielded too few granules to support quantitative analysis. The presence of geophyte residues alongside abundant aquatic and wetland resources, indicates these plants were incorporated into human subsistence even while high-ranked resources were readily available. These results demonstrate that Paleoindian foragers employed flexible and diversified plant-use strategies, aligning with ethnographic evidence documenting the long-term cultural importance of geophytes in Indigenous Great Basin lifeways.

Susan Winchell-Sweeney, Jonathan C. Lothrop, and Alexandra DeCarlo

Points, Sites, and Ice Age Settlement in New York State: Emerging Patterns from the New York Paleoindian Database Project

Based on data from the New York Paleoindian Database Project (NYPID), we investigate the geographic distributions of Paleoindian points and archaeological sites across the New York region. Spanning ca. 12,800 to 9000 years ago, Indigenous peoples of the Early, Middle, and Late Paleoindian periods inhabited this region during the Younger Dryas and the Early Holocene, two climatic episodes marked by contrasting environmental regimes. Building on early efforts by former state archaeologists William Ritchie and Robert Funk, since 2009 we have been collecting data on fluted and Late Paleoindian bifaces across the New York region. We apply Geographic Information Systems (GIS) analysis to these data to explore spatial relationships between point findspots and site locations versus key environmental variables, including physiography, drainage basins, footprints of the Champlain Sea and the Ontario/Erie lake stages, toolstone sources, elevation, latitude, and inferred landscapes. By mapping these relationships, our analysis reveals patterns that illuminate how climates and landscapes influenced First Peoples' land use and residential mobility through time in what is now New York State.

Jason D. Windingstad

Piedmont Flood Histories Preserved in Dune-Dammed Playas Shed Additional Light on Post-Clovis Abandonment of the Sonoran Desert

The absence of post-Clovis Paleoindian occupations in southern Arizona and northwest Sonora have long puzzled southwestern archaeologists. It has been hypothesized that highly variable moisture conditions (relative to other areas of the southwest) during the Younger-Dryas Chronozone (YDC) limited the expansion of post-Clovis hunter-gatherers into the region. To shed additional light on this issue this paper summarizes recently dated playa and aeolian stratigraphic successions that span the latest Pleistocene to early Holocene transition in southwestern Arizona. Piedmont floodwater capture behind stabilized dune dams in the Mohawk Valley began ~13.6 cal ka and continued unabated until the middle Holocene. Well defined couplets that likely represent individual floods were deposited between ~13.2-8.0 cal ka while thicker beds of darker colored clays near the bottom and top of the couplet sequence yielded ages of 13.1-12.9 and 10.5-10.3 cal ka. This record suggests the continued presence of higher intensity rainfall (likely warm season precipitation) capable of depositing flood sediments on distal piedmont areas during the YDC and into the early Holocene. Based on these findings a lack of reliable seasonal precipitation likely did not play a significant role in the post-Clovis abandonment of the region.

Carl Yahnig

My One Hundred and Five Favorite Artifacts from the Little River Clovis Complex - Christian County, Kentucky

The artifacts on this poster represents the One Hundred and Five (105) favorite artifacts, collected by the author, chosen from the 18,324 artifacts collected from the Little River Clovis Complex (LRCC), south of Hopkinsville, Christian County, Kentucky, and donated to the Gault School of Archaeological Research (GSAR), in Florence, Texas. The Gault School is to be a conservancy of important Clovis collections to be compared and analyzed by students working on masters or doctorial theses. One aspiring doctoral candidate, Katharine Pontillo, is hoping to do such a study of the Little River materials. According to Dr. Alan Slade, Texas Archaeological Research Laboratory, the collection is 95% Clovis. They have been surface collected from six sites along the Little River, in total, no more than five miles apart: 15Ch90 Adams; 15Ch219 Brame; 15 236 Boyd-Ledford; 15Ch482 Roeder; 15Ch483 Ezell; and 15Ch Brinnon sites. The artifacts are formed out of St. Genevieve chert, now called Hopkinsville chert, a term coined by Dr. Ken Tankersley. The materials are sourced near the sites and have produced every manufacturing stage from nodule through to finished Clovis points. The collection also includes; cores, blades, scrapers, denticulates, flake tools - many of the primary flakes display incised patterns and there are other related items as well, hammerstones, a schist stone for preparing hafting edges for fluted points, and a large rabot.

María Nieves Zedeño, Ripan S. Malhi, John Lindo, Michael DeGiorgio, and Francois Lanoë

Genomic Analysis and Divergence of the Blackfoot Lineage

We present results of a genomic study conducted collaboratively with the Blackfeet Tribe of Montana and the Blood Tribe of Alberta. This study provides insight into the peopling of the Americas and furnishes a new line of evidence that can be used to further aboriginal and treaty rights. We show that the genomics of sampled Blackfoot individuals belong to a previously undescribed ancient lineage that diverged from other genomic lineages in the Americas in Late Pleistocene times.

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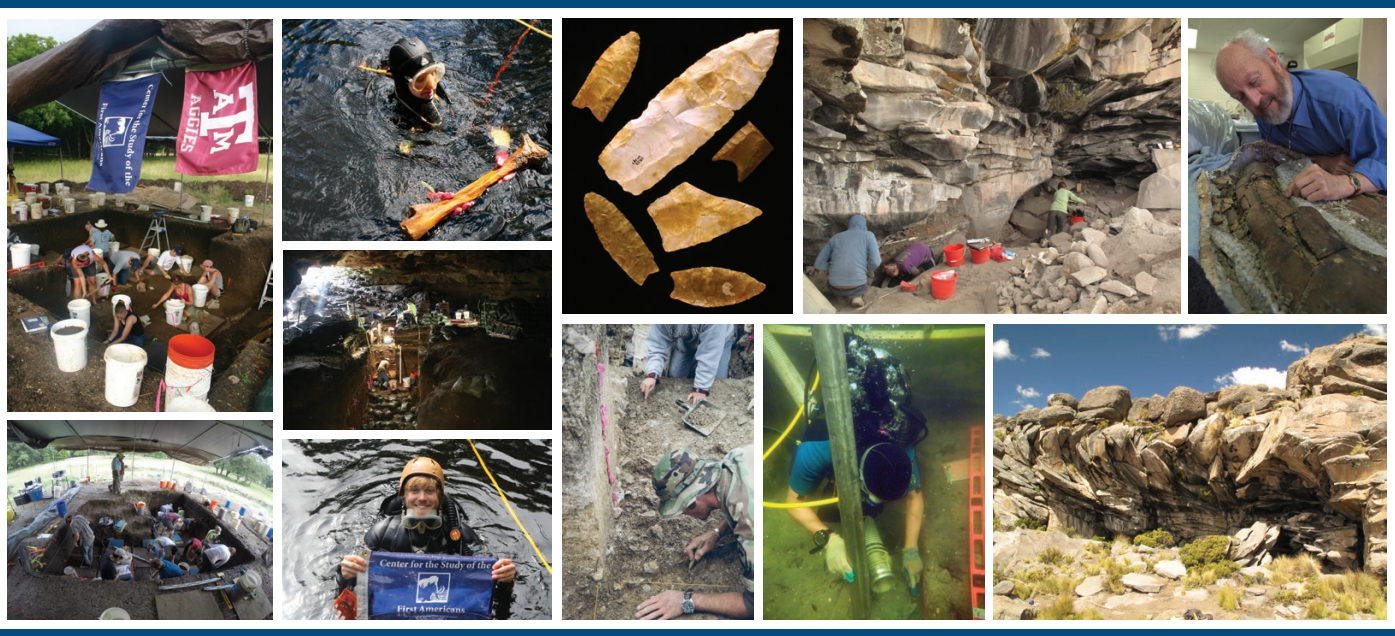

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