PALEOAMERICAN ODYSSEY
PROGRAM AND ABSTRACTS

SANTA FE, NEW MEXICO
OCTOBER 16-19, 2013
Expanded versions of conference lectures are presented in the new book *Paleoamerican Odyssey*, edited by Kelly Graf, Caroline Ketron, and Michael Waters. The book is available for purchase at the conference registration desk, for a special price of $55. After the conference, the regular price will be $70 plus shipping, with CSFA members receiving a 20% discount.

After the conference, the book will be on sale via CSFA’s website (www.centerforfirstamericans.org). It includes 31 peer-reviewed chapters by conference speakers, totaling 582 pages. *Paleoamerican Odyssey* was published by the Center for the Study of the First Americans in 2013. Make room in your suitcase for this one and save!
Welcome to the Paleoamerican Odyssey conference in beautiful Santa Fe, New Mexico!

In 1999, the Center for the Study of the First Americans, Smithsonian Institution, and Forrest Fenn, under the direction of Dr. Rob Bonnichsen, presented the Clovis and Beyond conference. Clovis and Beyond signaled an abrupt turn in peopling of the Americas research, with participants witnessing expansion of the scientific dialog to consider not just archaeological sites predating Clovis by a thousand years or more but also evidence from Asia, the Arctic, and Latin America. In time and space, Clovis and Beyond expanded the debate regarding the origins of the first Americans during the Ice Age. In many ways the outcomes of Clovis and Beyond mirrored the objectives of Bonnichsen’s Center. The conference created an opportunity for scientists studying the origins of the first Americans to convene and share new research results. The conference was also open to the public, expanding the dialog to include avocationals and other people with an interest in science, natural history, and the history of humanity.

Now, fourteen years later, we meet again in Santa Fe, to continue the discussion. Again we do it in a public forum. Our goals are not so different from the original Clovis and Beyond conference. First, our intent has been to create a meeting place for scientists to share results of new research with their professional peers. Second, we wanted to include the public in our discussions, using the conference as an opportunity to inform non-professionals about the current state of our science. Third, we wanted to continue expansion of the peopling of the Americas dialog—to include scientists from beyond temperate North America and beyond archaeology. Certainly North American archaeology is still the dominant aspect of the presentations to be given at the conference, but we have taken care to include the records from northeast Asia, Alaska, and Latin America, and to include the rapidly evolving field of molecular genetics in the agenda.

We are excited to present to you the conference program. Let the Odyssey begin!

Michael Waters, Ted Goebel and Kelly Graf
Paleoamerican Odyssey Organizing Committee
Major Contributors
Robert and Sharon Wilson
College of Liberal Arts, Texas A&M University

Sponsors
Betatah Analytic, Inc.
Far Western Anthropological Research Group, Inc.
The Louis Berger Group, Inc.
R. Christopher Goodwin & Associates, Inc.
Western Cultural Resource Management, Inc.

Acknowledgments
Many people contributed to the Paleoamerican Odyssey conference’s organization and delivery.

CSFAs advisory board met annually for the past three years to discuss the conference’s organization. All helped make important decisions, from when and where to hold the conference to details regarding its agenda. Elmer Guerri was especially helpful every step of the way—designing conference souvenirs, advertising the conference in avocational newsletters, magazines, and journals, and regularly beating the drum for conference registrants. Robert and Sharon Wilson also provided much needed financial support early on in the planning of the conference. Without their generosity we may have never gotten off the ground. Similarly, Bob Rotstan provided financial support for marketing, ensuring that we could advertise the conference in some important venues.

Chistel Cooper managed registration, and Rebekah Luza organized and maintained the financial system for the conference. Heather Smith designed and maintained the conference website; she and Josh Keene developed the artwork and logo used in the conference’s various materials. Laurie Lind was also active in the early organization of the conference, until her retirement from Texas A&M University in January 2013. Jim and Char Chandler formatted advertisements and announcements about the conference in The Mammoth Trumpet, and they created the page proofs and index for the conference’s companion volume. Caroline Ketron also provided invaluable assistance in the editing of the book. Eighteen graduate and undergraduate students from Texas A&M University provided on-site assistance in registration, AV management, and security, as did Cynthia Hurt. Funding for the students’ travel to the conference was graciously provided by the College of Liberal Arts at Texas A&M University.

Randy Daniel, Daron Duke, Joe Gingerich, Jessi Haligan, Mark Hubbe, Tom Jennings, Kathryn Krasinski, Bonnie Pithlado, Ashley Smallwood and Brian Wygal were instrumental in organizing poster symposia. We thank them warmly.

Finally, we owe special thanks to Tom Pertierra, who was instrumental in the early organization of the conference. Tom’s energy and excitement for Paleoamerican Odyssey carried us through the last stages of conference planning and production.

What to Wear
Conference attire is casual. Santa Fe in mid-October can be cool, so consider bringing a sweater or light jacket.

No Smoking Policy
The Santa Fe Community Convention Center is a smoke-free environment. No smoking is allowed anywhere on SFCCC property.

Registration Desk
The conference registration desk is in the entrance lobby of the convention center.

Registration Desk Hours
Wednesday, October 16: Noon-6 p.m.
Thursday, October 17: 7 a.m.-6 p.m.
Friday, October 18: 7 a.m.-6 p.m.
Saturday, October 19: 7 a.m.-6 p.m.

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

Cell Phones and PDAs
Please turn off your cell phones before entering a session to prevent disturbing others and interrupting presentations.

Photography
Photographs are not allowed in lecture rooms; however, conference attendees can take photos in hallways, artifact rooms, and poster rooms, with permission of individual exhibitors.

Conference Rules
No food or drink is permitted in the Sweeney auditorium during presentations, or in exhibit and poster rooms. Please eat and drink in hallways, lobby, outside courtyard and other designated areas.

No audio or visual recordings of presentations are allowed.

No display of artifacts or other materials is allowed without prior approval of conference staff.

No artifacts are to be bought or sold at the conference. In addition, 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 SFCCC and the conference staff.

No demonstrations, public speeches, performances or exhibits are allowed on SFCCC property without prior approval from SFCCC and the conference staff.

No concealed weapons are allowed on convention center property.

Foot Traffic
To maintain good flow in and out of presentation rooms, please do not clog up doorways.

Conference Souvenir Booth
The souvenir booth is located in the lobby of the convention center, across from the registration table. Hours include (until all merchandise has been sold):
Wednesday, October 16: Noon-6 p.m.
Thursday, October 17: 7 a.m.-3:30 p.m.
Friday, October 18: 7 a.m.-3:30 p.m.
Saturday, October 19: 7 a.m.-3:30 p.m.

Wi-Fi Access
Attendees can find free wi-fi access for their smart phones, pads, or laptops.

Exhibit Hall Hours
Thursday, October 17: 7 a.m.-7 p.m.
Friday, October 18: 7 a.m.-7 p.m.
Saturday, October 19: 7 a.m.-4 p.m.

Food and Beverages
Coffee, water and other beverages for sale on site by Cowgirl Cafe, located in the hallway corner between the Sweeney auditorium and poster/artifact display rooms.
**Opening Reception**
An opening reception will be held in the outside mezzanine on the second floor of the convention center, from 6:00-8:00 p.m. on Wednesday evening, compliments of the Santa Fe Community Convention Center. The reception is an excellent opportunity to meet and greet colleagues, old friends and new friends.

**Banquet and Awards**
The conference banquet will be held from 7:00-10:00 p.m., Saturday evening, at the La Fonda Hotel in downtown Santa Fe. Tickets cost $75. Pre-conference ticket purchasers can find their tickets in their registration packet. If still available, tickets can be purchased at registration before 6:00 p.m. on Thursday. The La Fonda’s dining room will open its doors at 7:00 p.m., the plated meal will be served at 7:30 p.m., and dessert will be served at 8:30 p.m.

During dinner several awards will be announced, and during dessert, Dr. Peter Hiscock will present the banquet lecture on the Ice Age peopling of Australia.

James and Charlene Chandler will receive a special recognition award for their devoted and outstanding work as editors of *The Mammoth Trumpet* and other CSFA publications since 2000.

Joseph and Ruth Cramer will receive a special recognition award for their lifelong and generous support to the study of the first Americans.

Ruth Gruhn will receive a special recognition award for her long support of the Center for the Study of the First Americans.

Roy Shlemon will receive a special recognition award for his generous support of student research at the Center for the Study of the First Americans.

Robert and Sharon Wilson will receive a special recognition award for their strong support of the Paleoamerican Odyssey conference and the Center for the Study of the First Americans.

**Opening and Closing Blessings**
Mr. Jose Lucero, a Tewa Elder of the White Corn Family and Winter Clan, will present both the opening and closing blessings of the conference. Mr. Lucero is a member and full-time resident of Santa Clara Pueblo, member of the Traditional Circle of Elders of the American Indian Institute, and member of the Traditional Elders Circle of the Indigenous Elders of the Western Hemisphere. He is well-known as an advocate for Native agriculture, the environment, and water conservation.

**Lectures**
For many conference attendees the formal lectures in the main conference center auditorium will be the highlight of the conference. Leaders in the field of peopling of the Americas research will present on a variety of topics, from the archaeology of Japan to the analysis of ancient DNA from prehistoric skeletons. The convention center auditorium seats an audience of about 1000 people; conference attendees should nonetheless arrive early to get a good seat up front and near the speaker’s podium.

**Posters**
During the conference, 195 posters will be presented, chiefly by professionals and students. For each scheduled poster session, posters will be hung for 5.5 hours, either in the morning or afternoon. Poster presenters are expected to be at their posters during scheduled periods to greet conference attendees and answer their questions. Poster sessions will take place in the Coronado/DeVargas and Peralta/Lamy meeting rooms, across the hall from the artifact display rooms.

Roy Shlemon will receive a special recognition award for his generous support of student research at the Center for the Study of the First Americans.

**Evening Oral Sessions**
Fifteen 15-minute oral presentations will be delivered on Thursday and Friday evenings, October 17-18 (starting at 7:00 p.m.). These will be presented in the Sweeney auditorium at the convention center.

**Evening Round-Table Discussions**
On the evenings of Thursday and Friday, October 17 and 18, all are welcome to participate in round-table discussions on special themes. Thursday evening's discussion focuses on modeling the Clovis adaptation, while two discussions on Friday evening focus on (1) early chert quarries and workshop sites and (2) the “Clovis Comet” debate. Discussions start at 7:00 p.m.; seating space is limited and first-come, first-serve, so arrive early. These will be held in the meeting rooms on the second floor of the convention center.

**Artifacts on Display**
Collections of artifacts from more than 40 archaeological sites are on display in the O’Keefe/Milagro/ Kearny meeting rooms, across the hall from the poster presentations. These include Paleoindian materials from Japan and Alaska; Clovis materials from Pennsylvania, Virginia, Iowa, Oklahoma, Texas, New Mexico, Wyoming, and Oregon; Folsom material from Oklahoma; Western Stemmed material from Idaho, Nevada, and Oregon; late Paleoindian material from Tennessee; and pre-Clovis material from South Carolina, Pennsylvania, Tennessee, Wisconsin, Texas, Kansas, Chesapeake Bay area, Oregon, Washington, and Brazil. Security guards will be present in these rooms at all times, and video surveillance and recording will monitor all activities.

**Book Tables**
Attendees can find books for sale in two places. First, Texas A&M University Press has a table near registration in the convention center lobby. Second, University of Utah Press and Archaeology Press of Simon Fraser University have tables in the artifact exhibit room. The companion conference volume, *Paleoamerican Odyssey*, is for sale at the registration desk in the main lobby of the convention center.

Also in the exhibit room there will be exhibits where you can learn about the Site Steward Foundation, Inc., of New Mexico; the Center for Applied Isotope Studies, University of Georgia; *American Archaeology* magazine; and use-wear analysis at the Center for the Study of the First Americans.
Oral Presenters
Day-time lectures are scheduled for 30 minutes, with discussion periods scheduled for sets of successive lectures. Evening lectures are scheduled for 15 minutes; there is no scheduled time for questions. Time will be kept by session moderators.

All slides must be presented as Powerpoint files for PC. If you are using another program, please convert your presentation to Powerpoint (.ppt) and check that your presentation works properly.

Speakers should provide Jesse Tune, the conference A/V liaison, with their Powerpoint presentation at least the day before their session (no later than 6 p.m. daily). Jesse can be found at the convention center throughout each day of the conference and at the speakers’ hotel.

Poster Presenters
Poster boards are 4 feet tall by 8 feet wide (tackable surfaces are slightly smaller than those dimensions); presenters should prepare posters to fit within these dimensions. Push pins will be provided. Poster spaces will be numbered, and it is expected that presenters will find their assigned space for their poster (please refer to the program below).

Presenters should display their posters for the duration of scheduled sessions, and they are encouraged to be present at their posters during coffee and meal breaks. Morning presenters should set up their posters at 7:00 am, taking them down at 12:30 p.m.; afternoon presenters should set up by 1:00 p.m. and take down at 6:30 p.m. Presenters should expect the most traffic before and after oral sessions in the Sweeney auditorium, and during coffee breaks.

Artifact Exhibitors
Upon arriving with a collection, artifact presenters must fill out a registration card and make time to have their collection inventoried and photographed. The artifact display room will be open and available for set up starting at 9:00 a.m. on Wednesday, October 16, and the room will remain open until 9:00 p.m. on that day. On Thursday, October 17, the room will reopen and artifact registration will resume at 7:00 a.m. Exhibitors will be assigned table spaces on site during the artifact registration period.

The exhibit rooms containing artifact collections and other exhibits will be open to conference goers from 7 a.m. to 7 p.m. on Thursday and Friday, and from 7 a.m. to 4 p.m. on Saturday. Doors will be locked nightly from 7:00 p.m. to 7:00 a.m. Security guards will be in the room at all times, 24 hours/day. These rooms will also be under video surveillance and recording throughout the conference.

The artifact exhibition room will close for good at 4:00 p.m. on Saturday, October 19. Collections will be checked out between then and 6:30 p.m., and then again between 7:00 and 10:00 a.m. on Sunday, October 20.
The oldest capital in the United States, Santa Fe is one of the most beautiful cities of the American Southwest, and it has many attractions that draw tourists from around the world, not to mention archaeologists on “busman’s holiday”.

There are plenty of things to do and see within walking distance of the Santa Fe Convention Center.

For starters, take a stroll around the Santa Fe Plaza, the heart of the city with historic sites, museums, shops, and restaurants. Don’t miss the local artisans selling their wares along the front of the Palace of the Governors, and if you have a few hours to spare, visit the newly opened New Mexico History Museum, which has permanent and rotating exhibits highlighting the heritage of the region.

Not far from the plaza are more museums. The Georgia O’Keeffe Museum is just two blocks away in a Pueblo Revival-style building. Its current exhibit is “Modern Nature: Georgia O’Keeffe and Lake George”. The Institute of American Indian Art, a block east of the plaza, contains a museum dedicated to contemporary American Indian Art. Museum Hill, located about two miles from the plaza, is home to four more museums: Museum of International Folk Art, Museum of Indian Arts and Culture, Museum of Spanish Colonial Art, and Wheelwright Museum of the American Indian. All have excellent exhibits; the Wheelwright Museum in particular is in an octagonal-shaped building designed after a traditional Navajo Hogan.

Santa Fe is a top-ten U.S. city for historic preservation. Besides soaking up that history by walking around town, consider visiting the Palace of the Governors, on the plaza; San Miguel Mission, the oldest church in the U.S., built in 1626; or El Rancho de las Golondrinas, a living history museum a few miles south of Santa Fe.

Further afield, with a car, check out the region’s archaeological/historical sites. Pecos National Historic Park, 25 miles east of Santa Fe, has self-guided tours of Pecos pueblo and historic mission ruins. Also, on Fridays there are guided tours of Arrowhead Ruin, and on Saturdays, guided tours of the Glorieta Pass Civil War battlefield. Bandelier National Monument is located only 45 minutes away. It not only has one of New Mexico’s most important archaeological sites, but also is a prime place to enjoy the region’s naturally beautiful landscape. Kasha-Katuwe Tent Rocks National Monument is nearby, too, just 40 miles southwest of Santa Fe. This is a natural recreation area of badlands and hoodoos, with paved and unpaved hiking trails.

Expect to do some shopping while in town? Try the shops at the town’s various museums, or visit Canyon Road, home to more than 100 galleries, boutiques, and restaurants, all along one-half mile of the road. On Friday and Saturday during the Paleoamerican Odyssey conference, Canyon Road will be hosting their Sixth Annual Historic Paint Out, with more than 100 artists showing off their works along the street “en plein air”.

Several Pueblo communities can be visited in the Santa Fe region, and many of them have museums, shops, and other tourist sites. Try the Poeh Cultural Center and Museum at Pojoaque Pueblo, or the museum and trading posts at San Ildefonso Pueblo. At Santa Clara Pueblo you can take a self-guided or guided tour of spectacular Puye Cliff Dwellings. All of these pueblos are less than 30 miles north of town.

Peter Hiscock

**Occupying New Lands: Global Migrations and Cultural Diversification with Particular Reference to Australia**

**Abstract:** The colonization by *Homo sapiens* of previously empty lands provides archaeologists with unique information. The evidence from Australia is congruent with archaeological findings from other landscapes occupied by modern humans. Regional differentiation, experimentation and adaptation characterize these occupational events, showing that the global dispersion of *Homo sapiens* was not a singular process governed and guided by persistent traditions. Normative and static images of social and economic organization cannot explain the diversity of cultural evidence associated with the dispersion. This paper reviews the evidence for a dynamic process of social, economic and technological diversification associated with the spread of humans and their adaptation to new social and physical environments. Evidence can be read in a radically new way: it is not that ‘tradition’ is the explanation for global human migrations but rather that the dispersal of people created the foundations for subsequent cultural patterns.

**Biography:** Dr. Peter Hiscock holds the Tom Austin Brown Chair in Australian Archaeology at the University of Sydney, Australia. He has a Ph.D. from Queensland University and a D.Sc. from the Australian National University. He is a Fellow of the Australian Academy of the Humanities and a Fellow of the Society of Antiquaries. Dr. Hiscock has projects in desert, temperate and tropical Australia. This work reconstructs sequences of technological change and the articulation of technology to occupational strategies and environment. He also has a current project in South Africa examining the Middle Stone Age occupation of inland areas of the Western Cape. Previous projects include analyses of lithic technology in North Africa and western Europe. Dr. Hiscock spent two years analyzing the Neanderthal assemblages from Combe Grenal in France. He has presented a synthesis of Australian prehistory and is now examining the implications of Australian evidence for stories of global human colonization. His publications include more than 5 books and 140 articles in refereed journals or edited volumes. His books cover topics such as desert occupation, quarrying activities and lithic assemblage variation in Australia. His book *Archaeology of Ancient Australia*, published by Routledge, won the Mulvaney Book Award.

**Related Publications**


Hiscock, P., and C. Clarkson 2007 Retouched notches at Combe Grenal (France) and the reduction hypothesis. *American Antiquity* 72:176-190.

### Program

#### WEDNESDAY, October 16

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<tr>
<td>8:00 a.m.</td>
<td>Introduction Remarks: Michael Waters</td>
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<td>8:15 a.m.</td>
<td>Welcoming Blessing: Mr. Jose Lucero</td>
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<td>8:30 a.m.</td>
<td>Kelly Graf: Late Pleistocene Siberia: Setting the Stage for the Peopling of the Americas</td>
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<tr>
<td>9:00 a.m.</td>
<td>Masami Izuho: Human Technological and Behavioral Adaptation to Landscape Changes before, during, and after the Last Glacial Maximum in Japan</td>
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<td>Vladimir Pitulko, Pavel Nikolskiy, Aleksandr Basilyan, Elena Pavlova: Yana RHS Site, Earliest Occupation of Beringia</td>
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<tr>
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<td>Break</td>
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<tr>
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<td>Ben Potter, Chuck Holmes, David Yesner: Technology and Economy among the Earliest Prehistoric Foragers in Interior Eastern Beringia</td>
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<tr>
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<td>Heather Smith, Jef Rasic, Ted Goebel: Biface Traditions in Northern Alaska and Their Role in the Peopling of the Americas</td>
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<td>11:30 a.m.</td>
<td>Discussion</td>
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#### Thursday Morning, October 17

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<tr>
<td>8:00 a.m.</td>
<td>Oral Symposium 1: Greater Beringia (Chair: Kelly Graf) Sweeney Ballroom</td>
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### Poster Symposium 1: Paleoindians of the Great Plains

Organizers: Tom Jennings, Bonnie Pitblado

- Rich Anderson: Paleoindian Archaeology in the Badlands: Preliminary Results of New Investigations on the Little Missouri National Grasslands, North Dakota
- Brendan P. Asher, Jack L. Hofman: Testing Clovis and Folsom Ubiquity from the Continental Divide to the Plains/Woodland Border
- Stacey Bennett and George T. Crawford: A Bison Trap at the Clovis Site, Blackwater Locality 1
- Joshua Boyd: Folsom Endscrapers and Raw Material Diversity in the Great Plains and Rocky Mountains
- Kristen Carlson, Leland Bement: Changing Clovis Hunting Adaptations through Stable Isotope Analysis
- Carlos Cordova, Ernest Lundelius, William Johnson, Jason Joines: Climate and Vegetation Change from 17,550 to 2000 Cal Years BP in South-Central Texas: The Hall’s Cave Record during Pre-Clovis and Clovis Times
- Andrew Gourd: Testing Clovis Basics, Analyzing the Paleoindian Assemblage at the Clovis Site
- Leslie B. Davis, Christopher L. Hill, Kathryn Krasinski: Evidence for Pre-Clovis Human Activity Associated with a Mammoth in Late Pleistocene Eastern Montana
- Andrew Gourd: Radiation and Regionalization: Late Paleoamerican Projectile Point Diversification in Oklahoma
- David Kilby, Anthony Aliano, Sarah Griffith, Jordan Tabor, Ethan Ortega: Postcards from the Pleistocene: A New Look at Ancient Environments Encountered by the First Explorers of the Southern High Plains
- Jason M. LaBelle and Christopher M. Johnston: The Long Shot and the Close-Up: Evaluating the Visual Landscape of the Lindenmeier Folsom Site in Northern Colorado
- Neal Lopinot, Jack Ray: Pre-Clovis Evidence from the Big Eddy Site
- Maxine McBrinn, Craig Lee, Steve Holen, Nathan Boyless, E. James Dixon: The Lamb Spring Archaeological Preserve: Past, Present and Future
- Kenny Resser: Projectile Points and Knives of Clovis Site: Inheriting 80 Years of Research
- Matthew G. Hill, Thomas J. Loebel, David W. Krasinski: Evidence for Pre-Clovis Human Activity Associated with a Mammoth in Late Pleistocene Eastern Montana
- Maxine McBrinn, Craig Lee, Steve Holen, Nathan Boyless, E. James Dixon: The Lamb Spring Archaeological Preserve: Past, Present and Future
- Kenny Resser: Projectile Points and Knives of Clovis Site: Inheriting 80 Years of Research
- Jordan Taher, Ethan Ortega: Projectile Points and Knives of the Burnham and Powell Farm Sites

### Poster Symposium 2: Paleoindians of the Great Basin and Far West

Organizer: Daron Duke

- Mark E. Basgall: Late Pleistocene/Early Holocene Archaeology of the Lake China Basin
- Thomas Connolly, Dennis L. Jenkins, Catherine S. Fowler, Pat Barker, Eugene M. Hattori, William J.
Cannon: Boundaries in Space and Time: Paleo-Period Textiles in the Northern and Western Great Basin

2-5 Julie Crisafiulli, Kelly E. Graf: Sediment and Paleo-environment at Bonneville Estates Rockshelter, Nevada, during the Pleistocene-Holocene Transition

2-6 Jennifer DeGraffenried, Joshua Trammell: Analysis of 42T03974 Rattler Ridge: An Upland Fluted Site in the Cedar Mountains, Utah

2-7 Jaime Dexter: Paleoethnobotanical Analysis at the Paisley Caves: An Evaluation of Late-Pleistocene/Early-Holocene Plant Use in Cave 2

2-8 Dranon Duke, D. Craig Young: Haskett Points of the Old River Bed Delta, Utah: Early Western Stemmed Tradition Spear Weaponry

2-9 Jerry Galm, Stan Gough, Fred Nials, Kari M. Mentzer, Fullkerson: Paleolithic-Late Paleolithic Point Complexes in the Intermountain West: Western Stemmed-Windust Revisited

2-10 John Johnson, Thomas W. Stafford, Jr., G. James West, Thomas K. Rockwell, Don P. Morris: Six Field Seasons at Arlington Springs: An Investigation of Paleoenvironmental Change on Santa Rosa Island, California

2-11 Joshua Keene, Mayra Gracia: Preliminary Lithic and Spatial Analysis of the Adams Gravel Source Haskett Site (10BT1227)

2-12 Philippe LeTourneau: Recent Paleoindian Finds in Western Washington

2-13 Katelyn McDonough, Mark E. Swisher, Dennis L. Jenkins, Patrick W. O'Grady, Edward B. Davis: An Analysis of Artifact, Bone, and Coprolite Distributions in Paisley Caves Younger Dryas (Botanical Lens) and Underlying Pleistocene Deposits

2-14 Daniel Meatte: A Use-wear Analysis of Beveled Bone Rods from the East Wenatchee Site (4SD0432), Douglas County, Washington, USA

2-15 David Rhode, Allise Rhode, Alvin McLane: Western Fluted and Clovis Blades: An Intriguing Assemblage from Western Nevada

2-16 Torben Rick, Courtney Hofman, Andreanna Welch, Jon Erlandson, Jesus Maldonado, Robert Fleischer: Marine Mammals, Ancient DNA, and Paleocoastal Subsistence on California’s Northern Channel Islands

2-17 Michael F. Rondeau, John Pryor, Roger La Jesu: Clovis Technology at the Skyrocket Site, California

2-18 Chantel Saban: Paleynological Perspectives on Late Pleistocene to Early Holocene Human Ecology at Paisley Caves (35LK4300), Cave 2

2-19 Zach Scribner, Nathan Nelson: Reconstructing the Hydrological System of a Paleoarchaic Complex in Central Western Utah

2-20 Scott Thomas, Mike Rondeau, Patrick O’Grady: Filling the Void: Clovis Spear Points and Diagnostic Artifacts in the Far Northern Great Basin

2-21 Alexander Yarnell, Danny Welch, Ted Goebel: Obsidian Transport to Bonneville Estates Rockshelter, Nevada: Implications for Mobility

2-22 Robert M. Yohe II, Jill K. Gardner, Christopher A. Duran, Beau DeBoer: Lake China Revisited: An Assessment of the Recent Discovery of a Cluster of Clovis Points in Indian Wells Valley on the Naval Air Weapons Station, Southeastern California

2-23 David Zeanah, Robert G. Elston, Brian F. Codying: Resource Use, Patch Residence Time and the Sexual Division of Labor among Great Basin Foragers during the Pleistocene-Holocene Transition

THURSDAY AFTERNOON, OCTOBER 17

ORAL SYMPOSIUM 2: ROUTES AND PROCESS OF DISPERSAL
Chair: Leslie Pfeiffer Sweeney Ballroom

1:30 p.m. John W. Ives, Duane Froshee: Vectors, Vestiges and Valhallas? Rethinking the Corridor

2:00 p.m. Jon M. Erlandson: After Clovis-First Collapse: Reimagining the Peopling of the Americas

2:30 p.m. Quentin Mackie, Loren G. Davis, Daryl Fedye, Duncan McLaren, Amy E. Gusick: Searching for Pleistocene-Aged Submerged Archaeological Sites along Western North America’s Pacific Coast: Current Research and Future Needs

3:00 p.m. Dennis Stanford, Darrin Lowery, Margaret Jodry, Bruce Bradley, Marvin Kay, Robert J. Speakman: The Chesapeake Bifaces: Evidence for an LGM Occupation of the Mid-Atlantic Region of North America

3:30 p.m. BREAK

4:00 p.m. Connie Mulligan, Andrew Kitchen: Three Stage Colonization Model for the Peopling of the Americas

5:00 p.m. David G. Anderson, Thaddeus G. Bissett, Stephen J. Yerka: The Late Pleistocene Human Settlement of Interior North America: The Role of Physiography and Sea Level Change

5:30 p.m. DISCUSSION

CLOSING ANNOUNCEMENTS

5:30 p.m. DISCUSSION

5:00 p.m. David G. Anderson, Thaddeus G. Bissett, Stephen J. Yerka: The Late Pleistocene Human Settlement of Interior North America: The Role of Physiography and Sea Level Change

5:30 p.m. DISCUSSION

6:00 p.m. END OF AFTERNOON SESSION/ CLOSING ANNOUNCEMENTS

POSTER SYMPOSIUM 3: GREATER BERINGIA
Organizer: Brian Wygal
Coronado/DeVargas Meeting Room
1:00 p.m.–6:30 p.m. [presenters at posters during afternoon and dinner breaks]

3-1 John Blong, Frank Gonzalez: Human Colonization of the Central Alaska Range

3-2 Ian Buvit, Karisa Terry, Masami Izuhu: Nomads of the Archipelago: Palaeolithic Japan and the Pleistocene Peopling of the Americas

3-3 Risa Carlson, James F. Baichtal: Raised Marine Beach Predictive Model Results in New Early Holocene Sites in Southeast Alaska

3-4 Sam Coffman, Jeffrey T. Rasic: Rhyolite Sourcing in Eastern Beringia

3-5 John P. Cook, Tom Gillispie: Hoity Lake Village Site: New Data and Analysis

3-6 Kelly M. Derr, Philip E. Higuera: Human-Environmental Interactions during the Late Pleistocene-Early Holocene Transition: A Multi-proxy Approach in the Alaskan Arctic

3-7 Lyndsay M. DiPietro, Steven G. Driese, Kelly Graf, Ted Goebel: The Dry Creek Site: A Geological
3-18 Vladimir Pitulko, Elena Pavlova: Environmental Changes in Western Beringia during the LGM as Human Habituation Factor
3-19 Heather L. Smith: An Analysis of Fluted-Point Technology at Serpentine Hot Springs, Alaska
3-20 Aleksei V. Tetenenko: Transition from Pleistocene to Holocene on Lower Victim (Baikal, Siberia, Russia): Coexistence of Ethnic Groups or Combination of Different Adaptive Strategies?
3-21 Brian T. Wygal: By Land or Sea? Human Colonization of Southern Alaska
3-22 Kate Yeske and Julie Esdale: Paleogeography and Early Archaeology of the Tanana Flats, Central Alaska
3-23 David Yesner: Changes in Faunal Exploitation Patterns across the Younger Dryas Boundary, Eastern Beringia
3-24 Angela Younie, Thomas Gillispie, Lyndsay DiPietro, Christine Pik: Lithic Technologies and Adaptations to Beringian Environments at the Linda’s Point Site, Healy Lake, Alaska

Poster Symposium 4A: Latin America: Early Prehistory and Palaeoenvironments

Lamy Meeting Room
1:00-6:30 p.m. [presenters at posters during afternoon and dinner breaks]
4-1 Guillermo Acosta-Ochoa, Laura Beramendi, Gabriela González, Iran Rivera and Patricia Pérez: Chronology, Technology and Environmental Context of Early Settlement in Southeastern México
4-2 Ciprian Ardelean: Hunter-Gatherer Archaeology, the Pleistocene-Holocene Transition and the First Human Occupation in Northeastern Zacatecas, Mexico
4-3 Eric Boeida, Maria Farias Gluchy: Approximation to the Technical Diversity of the Systems of Production of the Catalán Chico’s Site
4-4 Aleksander Borejsza, Arthur A. Joyce, Charles D. Frederik: Locating Deeply Buried Sites of Pleistocene and Early Holocene Age in the Mexican Northeast: Insights from Barranca Surveys in Tlaxcala and the Mixteca Alta
4-5 Gianfranco Cassiano, Ana Maria Alvarez Palma: Clovis and Plainview Occupations in Central Mexico
4-6 Manuel Enrique Cueto: Lithic Technology and Initial Ways of Working during Early Occupation of Patagonian Extreme South
4-7 Nicholas Felstead, Silvia Gonzalez, Sarah Metcalfe, David Huddart, Stephen Noble, Dirk Hoffman, Melanie Leng, Alistair Pike, Arturo Gonzalez-Gonzalez, José Concepción Jiménez-López: Holocene-aged Footprints from the Cuatrociénegas Basin, NE Mexico
4-8 Nora Viviana Franco, George Brook, Pablo Ambrústolo, María Virginia Mancini: Early Peopling of the Southern Part of the Deseado Massif: Evidence from La Gruta and Viuda Areas, Quezenza Patagonia
4-9 José Jiménez, Meggan Bullock, Eva Salas: A Multiple Burial from 7233 BP
4-10 Christelle Lahaye, Eric Boëda, Michel Fontugne, Gisèle F. Daltrini, Antoine Lourdeau, Anne-Marie Pessis, Niède Guidon, Serleí Hoeltz, Marina Pagli, Sibeli Viana, Amélia Da Costa, Mario Pino: “Oldies but Goodies”: A Chronological Approach to the Pleistocene Occupations in the Serra da Capivara, Piauí, Brazil
4-11 Greg Maggard: Fishtail and Early Paiján: Perspectives on the Early Settlement of Western South America
4-12 Kary Stackelbeck: Domestic Architecture of the Terminal Pleistocene to Early Holocene in the Central Andes
4-13 Charles Stern, Alfredo Prieto, Jordi Estévez: The Peopling by Littoral Hunter-Gatherers of the Fuego-Patagonian Fjords
4-14 Emma Toole, Silvia Gonzalez, David Huddart, Alex Brasier, Darren Mark: Humans, Megafauna and Quaternary Environmental Change, Tierra del Fuego, Northern Basin of Mexico

Poster Symposium 4B: Biological Perspectives on the First Americans
Organizer: Mark Hubbe
Peralta Meeting Room
1:00-6:30 p.m. [presenters at posters during afternoon and dinner breaks]
4-16 Benjamin Auerbach: Thinking Broadly about Colonization: Phenotypes of the Early Holocene and the Peopling of North America

Paleoamerican Odyssey 20

Paleoamerican Odyssey 21

Program (Cont.)
Program (Cont.)

Thursday Evening, October 17

Evening Symposium 1
Chair: John Blong
Sweeney Ballroom
7:00 p.m. Theodore G. Schurr: Tracing Human Movements across Siberia and into the Americas: New Insights from Mitochondrial DNA and Y-Chromosome Data
7:15 p.m. Linda Scott Cummings, R. A. Varney: Climate Reconstruction: Modeling Examples of Rapid Vacillations for the Pre-Clovis and Clovis Eras
7:30 p.m. Silvia Gonzalez, David Huddart, Isabel Israda Alcantara, Gabriela Dominguez Vazquez, James Buschoff: Paleoindian Sites in the Basin of Mexico-Stratigraphy, Tephrachronology and Radiocarbon Dating during the Late Pleistocene/Early Holocene Transition
7:45 p.m. German Dziebel: The Demographic Isolation of Amerindians and Back Migrations to the Old World of Amerindians and Back Migrations to the Old World
8:00 p.m. Astolfo Araujo, André M. Strauss, James K. Feathers, Julio César Paisani, Thomas J. Schrage: The South American Paleoindian Record Viewed from a Theoretical Standpoint: Cultural Transmission Theory and the Variability of the Lithic Industries
8:15 p.m. Luis Hurtado de Mendoza: Early Preceramic Lithic Industries in Northern Costa Rica
8:30 p.m. Marta Lucía Chávez Montoya: A Paleoindian Site (10,450 to 10,040 B.C.), Limón, Costa Rica

Friday Morning, October 18

Oral Symposium 3: Clovis
Chair: Nicole Waguespack
Sweeney Ballroom
7:55 a.m. OPENING ANNOUNCEMENTS
8:00 a.m. Vance T. Holliday, Shane Miller: Clovis Across the Continent: Distribution, Chronology, and Climate
8:30 a.m. Bruce A. Bradley, Michael B. Collins: Imagining Clovis as a Cultural Revitalization Movement
9:00 a.m. Gary Haynes: Clovis-Era Subsistence: Contextualizing Clovis in the Context of the Late Pleistocene/Early Holocene Transition
9:30 a.m. BREAK
10:00 a.m. David Kilby, Bruce Huckell: Clovis Cache: An Update and Consideration of Their Role in the Colonization of New Lands
10:30 a.m. James P. Kennett, Allen West, Ted Bunch, Wendy Wobobach: The Younger Dryas Boundary (YDB) Cosmic Impact Hypothesis, 12.9 ka: A Review
11:00 a.m. Nicole M. Waguespack: Pleistocene Extinctions: The State of Evidence and the Structure of Debate
11:30 a.m. DISCUSSION
12:00 p.m. END OF MORNING SESSION

Program (Cont.)

Round-Table Discussion 1
Nambe Meeting Room
7:00-9:00 p.m. Using Serious Game Design to Build a Clovis Adaptation Knowledge Model, organized and chaired by E. S. Lohse, D. Sammons, C. Schou, K. Weber

Poster Symposium 5a: Paleoindians of the American Southeast
Organizers: Ashley Smallwood, Randy Daniel Coronado Meeting Room
7:00 a.m.-12:30 p.m. [presenters at posters during morning and lunch breaks]
5-1 Derek Anderson: Lithic Refitting at the Topper Site: Spatial, Technological, and Geoarchaeological Interpretations
5-2 John Brooster, Mark Norton: Paleoindian Studies in Tennessee
5-3 Philip J. Carr, Gregory A. Waselkov: Paleoindians in the Tennessee Valley: Applying an Organization of Technology Model
5-4 I. Randolph Daniel, Jr., Albert C. Goodyear: Clovis Macrobands in the Carolinas
5-5 James S. Dunbar: Mental Templates and a Revised Typology for Florida Paleoindian Points
5-6 Michael Johnson, William A. CHILDRESS: Beyond Cactus Hill
5-7 Christopher R. Moore, Mark J. Brooks, Larry R. Kimball, Margaret Newman, Brian P. Kooyman: Use-wear and Protein Residue Analysis of an In-situ Clovis Assemblage from a Carolina Bay in the Coastal Plain of South Carolina
5-8 Charlotte Pevny, William Barse, R. Christopher Goodwin: Late Pleistocene-Early Human Adaptation in Northern Florida
5-9 Erika Shofner, Margaret Freeman, Tom Pertierra: Presenting Paleo: Sharing Our Past
5-10 Ashley Smallwood, Albert C. Goodyear, Derek T. Anderson, D. Shane Miller, Sarah Walters: Dating
the Hillside Clovis Occupation of the Topper Site, A llen- lade County, South Carolina

5-11 Dennis Stanford, Darrin Lowery, Bruce Bradley, Marvin Kay, Robert J. Speakman, Margaret Jordy, Thomas Stafford: The Cinmar Discovery: Evidence for an Ice Age Occupation of the Middle Atlantic Outer Continental Shelf

5-12 Jesse Tune, Judith A. Melton: Interpreting Activity Areas and Cumberland Lithic Technology at the Phil Stratton Site, Kentucky

Poster Symposium 5B: Geology, Geochronology and Paleoenvironments of the First Americans

DeVargas Meeting Room 7:00 a.m.-12:30 p.m. [presenters at posters during morning and lunch breaks]

5-13 Thomas Amorosi, Michael Waters, Thomas Stafford: New AMS Dates, Ground Sloths Dens and Horse Meals at Fell’s Cave and Pali Aike Rockshelter, from the Magallanes of Southern Chile

5-14 Joshua Feinberg, Marcy Nadel, Michael Waters, Albert C. Goodyear III: The Rock Magnetic Record across the 12.9 ka Younger Dryas Boundary: Evidence for Impact?

5-15 John Ferguson, Terry Ferguson, Emily Hinz, Michael Waters: Geophysics and the Geoaarchaeological Characterization of the Topper Site, South Carolina

5-16 Edward Herrmann, G. William Monaghan: Geoarchaeology of Paleoindian-aged Landforms: Geomorphological Influences from the Midcontinent

5-17 Isabel Israde-Alcantara, Silvia Gonzalez, James L. Bischoff, Allen West, Gabriela Domínguez-Vanquez, Richard B. Firestone, Ted E. Bunch, James Kennet, Wendy Wolbach: Extraterrestrial Impact in Mexico at the Onset of the Younger Dryas (YD) and Its Effects on the Environment

5-18 Lionel Jackson, Laurence D. Andriashek, Fred Phillips: Multiple and Successive Ice-Free Corridors during Middle Pleistocene Glaciations in the Interior Plains of Southern and Central Alberta and Adjacent Areas

5-19 Michael Kolb, Daniel Joyce: Late Pleistocene Landscape History and Site Formation Processes at the Schaefer-Hebior Locality, Southeastern Wisconsin

5-20 Brian Kooyman, Michael R. Waters, L. V. Hills, Thomas W. Stafford, Jr.: Refined Dating of the Horse and Camel Kills at the Wally’s Beach Site, Canada

5-21 Kelly Monteleone, Andrew Wickert: Investigating the Potential for Archaeological Sites on the Submerged Southern Beringian Archipelago

5-22 Irina Panysushkina, Steven W. Leavitt: Abrupt Changes in Moisture Variability in the Great Lakes Region at ca. 13.7 ka, 12 ka, 11.5 ka and 8.2 ka: A New Perspective from Subfossil Tree Rings

5-23 Mark E. Swisher, Dennis L. Jenkins, Lionel E. Jackson, Jr., Fred M. Phillips: A Reassessment of the Role of the Canadian Ice-Free Corridor in Light of New Geological Evidence


Poster Symposium 6A: Paleoindians of the American Northeast

Organizer: Joseph Gingerich

Lamy Meeting Room 7:00 a.m.-12:30 p.m. [presenters at posters during morning and lunch breaks]

6-1 Richard Boisvert, Heather Rockwell, Bruce Rush: Settling into the Late Pleistocene Landscape: The Potter Site, a Multicomponent Paleoindian Site in New Hampshire

6-2 Nigel Brush, P. Nick Kardulias: The Rich Record of Paleoindian Activity in Coshocton and Holmes Counties in North Central Ohio

6-3 Kurt Carr: An Update on Research at the Shoop Site (36Da20) Including the Results of XRF Analysis

6-4 Joseph Gingerich, Harry Iceland: Evidence of Paleoindian Social Organization at Shawnee-Minisink

6-5 Robert Goodby: Paleoindian Household Organization at the Tenant Swamp Site (27CH187), Keene, New Hampshire

6-6 Brian Jones: A New Collection from the DEDIC Site, Deerfield, Massachusetts

6-7 Nathaniel Kitchel: After the Ice: Colonization Behavior and Process in the Recently Deglaciated Northeast

6-8 Thomas Loebel: Exploring Early Paleoindian Adaptations through Microwear Analysis

6-9 Jonathan Lothrop, Graydon Ballard: Green-Paulter: Two Probable Paleoindian Caches in the Upper Susquehanna Valley, New York

6-10 Brian S. Robinson: Large and Highly Structured: Refining Spatial Patterns at Bull Brook

6-11 Francis “Jess” Robinson, John G. Crock, Wetherbee Dorshow: Through the Mountains to the Sea: An Analysis of Champlain Sea Shorelines, Site Patterning, and Travel Corridors in the Eastern Champlain Basin

6-12 Heath Rockwell, Richard Boisvert, Bruce Rush: Settling into the Late Pleistocene Landscape: The

Poster Symposium 6B: Paleoindians of the American Southwest

Peralta Meeting Room 7:00 a.m.-12:30 pm [presenters at posters during morning and lunch breaks]

6-13 Mark Seeman, Garry Summers: The Fluted Points from Nobles Pond, an Early Paleoindian Site in Northeastern Ohio: Manufacturing and Typological Considerations

6-14 Zachary Singer: Ohomowauke: An Early Paleoindian Site in Southeastern Connecticut

Poster Symposium 6C: Geology, Geochronology and Paleoenvironments of the First Americans

DeVargas Meeting Room 7:00 a.m.-12:30 p.m. [presenters at posters during morning and lunch breaks]

6-15 Jesse Ballenger, Mary Prasciunas: Arizona Paleoindian Projectile Point Survey

6-16 Robert Dello-Russo: The Water Canyon Paleoindian Site - A Multi-Component Site at a Focal Wetland Resource in West-Central New Mexico

6-17 James Hartley: Environmental Causes of the Extinction of the Pleistocene Megafauna in the Desert Southwest
Friday Afternoon, October 18

Oral Symposium 4: Clovis Contemporaries
Chair: Mark Hubbe
Sweeney Ballroom
1:30 p.m. Charlotte Beck, George T. Jones: The Increasing Complexity of the Colonization Process: A View from the North American West

2:00 p.m. Douglas W. Osley: Bioarchaeological Biographies of Ancient Americans


3:00 p.m. BREAK

3:30 p.m. Nora Flegenheimer, Laura Miotti, Natalia Mazzia: Rethinking Early Objects and Landscapes in the Southern Cone

4:00 p.m. Tom D. Dillehay: Late Pleistocene Economic and Cultural Diversity in North Peru

4:30 p.m. Adriana Schmidt Dias, Lucas Bueno: The First Colonization of South America Eastern Lowlands: Brazilian Archaeological Contributions to Settlement of America Models

5:00 p.m. Mark Hubbe, Walter Neves, Danilo Bernardo, André Strauss, Astolfo Araujo, Renato Kipnis: Early Human Occupation of Lagoa Santa, Central Brazil: Implications for the Dispersion and Adaptation of Early Human Groups in South America

5:30 p.m. DISCUSSION

6:00 p.m. END OF SESSION/CLOSING ANNOUNCEMENTS

Poster Symposium 7a: Taphonomic Perspectives on the First Americans
Organizer: Kathryn Krasinski
Coronado Meeting Room
1:00-6:30 p.m. [presenters at posters during afternoon and dinner breaks]

7-1 Joaquin Arroyo-Cabrales, Eileen Johnson: Megacarnivores, Large Carnivores, and People in the North American Late Pleistocene

7-2 Joaquin Arroyo-Cabrales, Ramón Viñas-Valverdú, Irán D. Rivera-Gonzalez, Xosé Pedro Rodríguez: Recent Findings in the Chazumba Locality, Oaxaca, Mexico

7-3 Chrissina Burke: Bison Bonebeds and Carnivore Use of Carcass: Implications for Human-Carnivore Interactions

7-4 Kathleen Holen: Bone Notches: Differentiating Dynamic and Static Loading on Large Prey Animal Limb Bones

7-5 Kathryn E. Krusinski, Gary Haynes: Understanding Taphonomic Histories of Proboscidean Remains through Bone Breakage Analyses

7-6 Fabiana Maria Martin: Early Human Occupation in Southern Chile: Recent Results

7-7 Lauren Milideo, Russell Graham: Taphonomic and Spatial Analysis of a Modern Wolf Den

7-8 Melissa Mueller: Taphonomic Interpretations of Burned Bones from the Susitna River Basin, Alaska

7-9 Chelsea Reddy: Practice Makes Paleo

7-10 Oscar Torres-Solís, Patricia Ochoa-Castillo, Michael R. Waters, Joaquin Arroyo-Cabrales: Recent Findings in the Hueyatlaço Site, Puebla, México

7-11 Olguín Aviles and Eugenio Aceves: Sixteen Years of Archaeological Research inside Underwater Caves in Mexico with Evidence of Humans, Flora and Fauna from the Late Pleistocene to the Early Holocene

7-12 Diego Carabias, Isabel Cartajena, Patricio López, Renato Simonetti, Carla Morales, Antonio Maldonado, Cristina Ortega, Valentín Figueroa: GNL Quinte- ro 1 (GNLQ1): First Evidences from the Pacific Coast of South America of a Final-Pleistocene Drowned Territorial Site

7-13 Jorie Clark, Jerry Mitrovica, Jay Alder: Regional Variability in Latest Pleistocene and Holocene Sea-Level Rise across the Oregon-Washington and Bering Sea Continental Shelves

7-14 Lauren Cook, Neil Puckett: Sourcing Redeposited Projectile Points at McFadden Beach, TX

7-15 Loren G. Davis, Alex L. Nyers: Reconstructing Paleo-landscapes and Potential Submerged Site Locations on the Pacific Outer Continental Shelf from the Last Glacial Maximum to 10,000 RYBP


7-17 Jacob Hooge, Jon C. Lohse, Frederick H. Hanselmann: Underwater Geoaarchaeological Research at Spring Lake, San Marcos, Texas

7-18 Robert Legg, John B. Anderton: Developing an Environmentally-Based Site Location Model of Paleo-Indian Settlement in the Northern Great Lakes

7-19 Ashley K. Lemke, John M. O’Shea, Elisabeth Sonnenburg: Late Paleoindian and Early Archaic Caribou Hunters underneath Lake Huron

Program (Cont.)
7-20 Darren L. Lowery, Dennis Stanford: Paleo-Americans on the Coastal Plain: A Perspective from the Middle Atlantic and the Delmarva Peninsula

7-21 Morgan Smith, David Selmo, Steve Cushman: A Pre-Project Overview of the Wakaula 3 Project: An Archaeological Survey of a Spring and Deep Underwater Cave

7-22 Andrew D. Wickert, Kelly R. Monteleone, Jerry X. Mitrovica, Robert S. Anderson: Reconstructing the Paleo geography of Beringia

**POSTER SYMPOSIUM 8A: PALEOINDIAN TECHNOLOGY**
Lamy Meeting Room
1:00-6:30 p.m. [presenters at posters during afternoon and dinner breaks]

8-1 Jacob Adams, Tyler Retherford: What about the Cracks? An Examination of Cultural and Natural Fracture Patterns on Brittle Solids

8-2 Metin Eren, Robert J. Patten, Michael J. O’Brien, David J. Meltzer: Refuting the Technological Cornerstone of the Ice Age Atlantic Crossing Hypothesis

8-3 Richard Michael Granly, Dennis Vesper, O. Kirk Spurr: The Prismatic Blade Industry of the Middle Stage Cumbeland Tradition Phil Stratton Site

8-4 Robert Lassen: Exploring Typological and Technological Variability in Folsom-Age Projectile Points: A Comprehensive Perspective

8-5 C. R. “Bob” Lewis: Mammoth Molar Tools from 18,000 Years Ago in Texas

8-6 Tyler Retherford, William Andrefsky, Jr.: Using Lithic Debitage to Distinguish between Geofacts and Artifacts: An Experimental Approach

8-7 Andrew Richard: Clovis in a Kiln: A Projectile Point Use-Breakage Study

8-8 Alan Slade: Clovis: What’s the Point? Can Clovis Projectiles be Defined by Type?

8-9 Charles Speer: Source Determination of Edwards Plateau Chert Using LA-ICP-MS

8-10 Robin Gay Wakeland: Iberian Peninsula Lithics, 19,000-13,250 B.P., from Spanish Museum Collections


8-12 Justin Williams, William Andrefsky, Jr.: An Image is Worth 1000 Measurements: Using Images to Analyze Paleo-Peiod Artifacts

**POSTER SYMPOSIUM 8B: NEW PERSPECTIVES ON THE PEOPLING OF THE AMERICAS**
Peralta Meeting Room
1:00-6:30 p.m. [presenters at posters during afternoon and dinner breaks]


8-14 Amina Boutellis, Rezak Drali, Mario A. Rivera, Kosta Y. Mucmugoulu, Didier Raoult: Evidence of Symmetry of Clade A and Clade B Head Lace in a Pre-Columbian Chilean Mummy from Camarones

4-15 LaVerne Dutton, George Larson: Horn Shelter: Paleoamerican Site

8-15 J. Christopher Gillam: Paleoamerican Origins and Migration: A Cultural and Bio-Physical Geographical Perspective

8-16 Altvh Hicks: Interpreting Archaeological Signatures before Clovis

8-17 John W. Ives, B. Sunday Eiselt: Paleoindian Social Landscapes: Thought Models for Kinship in Unique Demographic Settings

8-18 Margaret Jodry: All My Relations, Paleoamerican Spiritual Connections in Hunting and Healing

8-19 Lucy Johnson: Archaeological Theory and the Peopling of the Americas

8-20 David Thulman, Michael Faught: How Long did the Last Glacial Maximum for the Atlantic Slope of Eastern North America since 40,000 BP?

8-21 Jessica Metcalfe, Fred Longstaffe: Seasonal Dietary Variations of North American Protobiscoids

8-22 Jessica Phillips: Fingerprinting Our Past: A Dermatoglyphic Study at the Topper Site (38AL23)

8-23 Douglas Sain: A Model for Paleoamerican Coastal Zone Preference for the Atlantic Slope of Eastern North America since the Last Glacial Maximum

8-24 David Thulman, Michael Faught: How Long did Clovis Last? A Re-assessment of the Clovis and Other Paleoamerican Occupations Using Bayesian Statistics

**FRIDAY EVENING, OCTOBER 18**

**EVENING SYMPOSIUM 2**
Chair: Jesse Tune
Sweeney Ballroom

7:00 p.m. E. James Dixon, Kelly Monteleone, Mark R. Williams: New Evidence Supports the North Pacific Rim Migration Hypothesis

7:15 p.m. George Frison, Marcel Kornfeld, Dennis Stanford, George Zeimins, Danny Walker: Blade Cores, Blades, Blade Tools, and Clovis Points from the Powars II Paleoindian Red Ochre Quarry 48PL330, Platte County, Southeast Wyoming

7:30 p.m. Stuart Fiedel: The Anzick Clovis Burial, a Single-Depositional Event

7:45 p.m. Janice Bernadette Wood, Patrick Warren O’Grady: Tepha Traps and Projectile Points: An Exploration of Volcaniclastic and Cultural Chronologies at Rimrock Draw Rockshelter (35HA3855), Harney County, Oregon

8:00 p.m. Susan C. Mulholland, Stephen L. Mulholland: Early Paleoindians in Northeastern Minnesota

8:15 p.m. L. Suzann Henrikson, Robert M. Yohe II, Gene L. Titmus, James C. Woods: The Resurrection of Owl Cave: Recent Investigations Regarding the Association of Fluted Points and Mammoth Remains

8:30 p.m. Wilson W. Crook III, Thomas E. Williams: The Presence of Gould-Ft. Hood Chert at the Brush Creek Clovis Site (41HU74), Hunt County, Texas

8:45 p.m. Stuart F. Fiedel: Pre-Clovis and Big Foot—the Searches Converge

**ROUND-TABLE DISCUSSION 2**
Nambe Meeting Room
7:00-9:00 p.m. Searching for the Earliest Americans at Ancient Chert Quarry/Workshop Sites, organized and chaired by Barbara A. Purdy and H. Blaine Ensor
Round-Table Discussion 3  
San Juan Meeting Room  
7:00-9:00 p.m. The Great “Clovis Comet” Debate, organized and chaired by Vance T. Holliday

Saturday Morning, October 19

Oral Symposium 5: Archaeology of Pre-Clovis I  
Chair: Dennis L. Jenkins  
Sweeney Ballroom  
7:55 a.m. OPENING ANNOUNCEMENTS

8:00 a.m. Daniel J. Joyce: Adaptations along the Ice Margin: Analysis, Interpretation and Implications of Four Pre-Clovis Megafauna Butchery Sites in the Western Great Lakes Region

8:30 a.m. Dennis L. Jenkins: Paisley Caves: 14,500 Years of Human Occupations in the Northern Great Basin

9:00 a.m. Michael Waters: In Search of the First Americans—What the Friedkin Site, Texas, Manis Site, Washington, and Others Tell us About the First Americans

9:30 a.m. BREAK

10:00 a.m. J. M. Adovasio, D. R. Pedler: The Ones that Still Won’t Go Away

10:30 a.m. Albert C. Goodyear, Douglas A. Sain, Megan Hoak King, Derek T. Anderson, Scott Harris: Topper, An Early Paleoamerican Site in South Carolina

11:00 a.m. Steven R. Holen, Kathleen Holen: The Mammoth Steppe Hypothesis: The Mid Wisconsin (OIS 3) Peopling of the Americas

11:30 a.m. DISCUSSION

12:00 P.M. END OF MORNING SESSION

Poster Symposium 9. Paleoindian Archaeology in the Rocky Mountains  
Organizers: Bonnie Pitblado, Tom Jennings  
Coronado Meeting Room  
7:00 a.m.-12:30 p.m. [presenters at posters during morning and lunch breaks]

9-1 Jared Benton, Steve Holen: Soils, Stratigraphy, and the Search for Early Humans at the Scott Miller and Villa Grove Mammoth Sites, San Luis Valley, Colorado

9-2 Cody Dalpra, Bonnie Pitblado, Carol Dehler: Geoarchaeological Results of Petrographic Analysis on Quartzite Sources in the Gunnison Basin, Colorado

9-3 Marcel Kornfeld, Mackenzie Cory, Mary Lou Larson: Are They Clovis? Two Central Rockies Caches

9-4 Jason M. LaBelle, Halston F. C. Meeker: An Afternoon at Benedict’s Rock (SBL.532), a Small Scottsbluff Site in the Colorado Mountains

9-5 Bill McConnell, Craig M. Lee: Replication and Use of a 10,400-year-old Cody-Age Foresight from a Rocky Mountain Ice Patch


9-7 Brooke Morgan, Brian Andrews: Mountaineer: A Folsom Residential Occupation in the Rocky Mountains

9-8 Bonnie L. Pitblado, Holly Andrew, Ben Fowler, Richard Shipley: Paleoindian Occupation of Southeastern Idaho and Northern Utah

9-9 Linda Scott Cummings, R. A. Varney: What You See is What You Get, or is It?

9-10 Fred Sellet, Robert Brunswig, Rolfe Mandel: The Paleoenvironmental and Archaeological Context of the Late Pleistocene-Early Holocene Transition at the KibRidge site

12:30 p.m. INI GRACE GROUP DISCUSSION

12:45 p.m. CLOSING STATEMENTS: Michael Waters

Saturday Afternoon, October 19

Oral Symposium 6: Archaeology of Pre-Clovis II  
Chair: William Andresky, Jr.  
Sweeney Ballroom  
1:30 p.m. Eric Boëda: The Pleistocene Human Occupation of Piauí: An Unacceptable Reality? And Nevertheless They are Old!

2:00 p.m. Michael B. Collins, Dennis J. Stanford, Darrin L. Lowery: North America before Clovis: Variance in Temporal/Spatial Cultural Patterns, 24,000 to 13,000 BP

2:30 p.m. William Andrews, Jr.: Fingerprinting Stone Tool Production Processes: Towards an Identification of Human Artifact Characteristics

3:00 p.m. Rolfe D. Mandel: A Geoarchaeological Approach to the Search for Pre-Clovis Sites in North America: An Example from the Central Plains

3:30 p.m. Thomas W. Stafford, Jr: Geochronology, Stratigraphy and Taphonomy as the Foundations for Pre-Clovis Research

4:00 p.m. PANEL DISCUSSION: Luis A. Borrero, Robert L. Kelly, Dennis H. O’Rourke, Bonnie Pitblado

5:30 p.m. CLOSING STATEMENTS: Michael Waters

5:45 p.m. CLOSING BLESSING: Mr. Jose Lucero

Saturday Evening, October 19

Conference Banquet  
7:00 p.m. La Fonda Hotel on the Plaza

Banquet Lecture  
8:30 p.m. Peter Hiscock: Occupying New Lands: Global Migrations and Cultural Diversification with Particular Reference to Australia
**Paleoamerican Odyssey**

**Exhibitors**

**BERINGIA & ASIA**
- Mesa site, Alaska: Michael Kunz (University of Alaska)
- On Your Knees Cave, Alaska: E. James Dixon (University of New Mexico & Maxwell Museum of Anthropology)
- Serpentine Hot Springs, Alaska: Ted Goebel (Center for the Study of the First Americans, Texas A&M University)
- Owl Ridge, Alaska: Kelly Graf (Center for the Study of the First Americans, Texas A&M University)
- Dry Creek, Alaska: Kelly Graf (Center for the Study of the First Americans, Texas A&M University)
- Kamihoronai-Moi, Ogasakato-2, Shimaki, Rennenosawa, Obarubetso-2, Japan: Masami Izuho (Tokyo Metropolitan University)

**CLOVIS**
- Mockingbird Gap, New Mexico: Bruce B. Huckell (University of New Mexico & Maxwell Museum of Anthropology)
- Shawnee-Minisink, Maryland and Fluted Points from the Northeastern U.S.: Joseph Gingerich (Smithsonian Institution)
- Carlisle Clovis Cache, Iowa: Matthew G. Hill (Iowa State University)
- Rutz Clovis Point, Washington: John Mark Clark (Tennessee)
- Little River Clovis Complex, Kentucky: Carl Yahning (Kentucky)
- Eckles Clovis Site, Kansas: Dick and Carol Eckles (Nebraska Archaeological Society)
- Carson-Conn-Short and other Clovis sites, Tennessee: John B. Broster and Mark R. Norton (Tennessee Division of Archaeology)
- Pawars II, Red Ochre Quarry, Wyoming: George Frison (University of Wyoming)
- Crook County Cache, Wyoming: Mark Mullins (Colorado)
- DeGraffenreid Cache, Texas: Mark Mullins (Colorado)
- Fern Cache, Plains: Mark Mullins (Colorado)
- Hogeye Cache, Texas: Lee and Cindy Jones (Texas)

**CLOVIS AND POST-CLOVIS**
- Ekalaka Bluff, J8 Clovis Cache, Cooper, and Badger Hole, Oklahoma: Leland C. Bement (Oklahoma Archeological Survey, University of Oklahoma)
- Sulphur River, Texas: Jim Cox (Oklahoma)
- Clovis and Folsom artifacts from Oklahoma: C. Andrew Hemmings (Mercyhurst University & Old Vero Ice Age Sites Committee)
- Simon Cache, Idaho: Ernest Lohse (Idaho State University) and Steve Kohntopp (CSFA)

**OLDER-THAN-CLOVIS**
- Schafer Mammoth, Hebior Mammoth, Mud Lake Mammoth, Wisconsin: Dan Joyce (Kenosha Public Museums)
- Meadowcroft Rockshelter, Pennsylvania: James M. Adovasio (Mercyhurst Archaeological Institute, Mercyhurst University)
- Vale da Pedra, Brazil: Eric Boëda (Université Paris Ouest)
- Duweall-Newberry, Texas: Gentry Steele and David Carlson (Texas A&M University)
- Manis, Washington: Carl Gustafson & Michael R. Waters (Center for the Study of the First Americans, Texas A&M University)

**OLDER-THAN-CLOVIS AND WESTERN STEMMED**
- Paisley Caves, Oregon: Dennis Jenkins (Museum of Natural and Cultural History, University of Oregon)
- Coats-Hines, Tennessee: Jesse Tune (Center for the Study of the First Americans, Texas A&M University) & John B. Broster and Mark R. Norton (Tennessee Division of Archaeology)
- Miles Point, Maryland: Dennis Stanford (Smithsonian Institution)
- Chesapeake and Atlantic Shelf Bifaces (Cinmar) with western European Solutrean bifaces: Dennis Stanford (Smithsonian Institution)
- Cactus Hill, Virginia: Dennis Stanford (Smithsonian Institution)

**OLDER-THAN-CLOVIS AND CLOVIS**
- Debra L. Friedkin, Texas: Michael R. Waters (Center for the Study of the First Americans, Texas A&M University)
- La Sera, Nebraska, Lovewell, Kansas, and Experimental elephant bone breakage specimens: Steven Holen (Colorado)
- Cactus Hill, Rubis-Parrsall, Blueberry Hill, Virginia: Michael F. Johnson (Exeter University)
- Topper, South Carolina: Albert C. Goodyear (South Carolina Institute of Archaeology and Anthropology, University of South Carolina)
- Gauld, Texas: Michael B. Collins (The Gauld School of Archaeological Research, Texas State University)

**WESTERN STEMMED TRADITION**
- Cooper’s Ferry, Idaho: Loren Davis (Oregon State University)
- Bonneville Estates Rockshelter, Nevada: Ted Goebel and Kelly Graf (Center for the Study of the First Americans, Texas A&M University)
- Old River Bed Delta, Utah: Daron Duke and D. Craig Young (Far Western Anthropological Research Group)

**FOLSOM AND LATE PALEOINDIAN**
- Shifting Sands, Texas: Richard Rose (Midland Archaeological Society)
- Cedar Creek, Oklahoma: Jim Cox (Oklahoma)
- Phil Stratton, Kentucky: Phil Stratton & Jesse Tune (Center for the Study of the First Americans, Texas A&M University)

**SOUTH AMERICA**
- El Cayude site and El Jobo and Fishtail Material, Venezuela: Joshua Ream (Florida)
- Cerro El Sombrero, Cima, Argentina: Nora Flegenheimer (CONICET - Area Arqueología y Antropología, Mun. Necochea, Argentina)

**EXPERIMENTAL**
- Experimental Clovis Points used on thrusting spears: Bruce B. Huckell (University of New Mexico & Maxwell Museum of Anthropology)

**Additional Exhibitors**
- Experimental Clovis Points on thrusting spears: Bruce B. Huckell (University of New Mexico & Maxwell Museum of Anthropology)

**Paleoamerican Odyssey**

**Exhibitors (Cont.)**

**Western Tradition**
- Cooper’s Ferry, Idaho: Loren Davis (Oregon State University)
- Bonneville Estates Rockshelter, Nevada: Ted Goebel and Kelly Graf (Center for the Study of the First Americans, Texas A&M University)
- Old River Bed Delta, Utah: Daron Duke and D. Craig Young (Far Western Anthropological Research Group)

**Folsom and Late Paleoindian**
- Shifting Sands, Texas: Richard Rose (Midland Archaeological Society)
- Cedar Creek, Oklahoma: Jim Cox (Oklahoma)
- Phil Stratton, Kentucky: Phil Stratton & Jesse Tune (Center for the Study of the First Americans, Texas A&M University)

**South America**
- El Cayude site and El Jobo and Fishtail Material, Venezuela: Joshua Ream (Florida)
- Cerro El Sombrero, Cima, Argentina: Nora Flegenheimer (CONICET - Area Arqueología y Antropología, Mun. Necochea, Argentina)

**Experimental**
- Experimental Clovis Points used on thrusting spears: Bruce B. Huckell (University of New Mexico & Maxwell Museum of Anthropology)

We evaluated migration models to the Americas by employing the information contained in A2a and B2a native mitogenomes from North America. In brief, a minimum of three migration waves is needed to explain the native mitogenome diversity of North America. Most of the contemporary mtDNA variation (along the double-continent stems from the first wave that from Beringia followed the Pacific coast route and was dated to 15-13 kya ago on the 16 mitogenome founders identified so far. Since our B2a mtDNA clones at about 12-13 kya ago, it is likely that the diagnostic mutational motif of B2a evolved in situ a few millennia after that B2a had already entered and spread along the double continent. The first Pacific wave was accompanied or followed by a second (inland) migratory event, marked by a large-scale population expansion of the Clovis-speaking gene pool of modern American groups of Northern North America, from the Pacific to the Atlantic coasts, including the Na-Dene. Much later, only the A2a2a carriers spread from Alaska upland a back-migration to Asia, an eastward expansion into the circum-Pacific regions of Canada and eventually contributing to the formation of the Na-Dene gene pool.

Jacob Adams and Tyler Rutherford

What about the Cracks? An Examination of Cultural and Natural Fracture Patterns on Brittle Solids

Differentiating culturally modified artifacts from geofacts modified by natural processes has long been a topic of concern in archaeology. This issue is particularly pertinent for pre-Clovis occupations in the Americas, as the period of maximum glaciation and associated climate conditions were conducive to the formation of a back-migration to Asia, an eastward expansion into the circum-Pacific regions of Canada and eventually contributing to the formation of the Na-Dene gene pool.

J. M. Adovasio and D. R. Pedler

The Ones that Still Won’t Go Away

Since the seminal discoveries at what for all intents and purposes is the Clovis type site, Fishtail, in the vicinity of Douglas, Nebraska, paleoanthropologists have been aware of the possible existence of Clovis flakes that had been broken or refitted using modern techniques. We now have a much better understanding of the fracture patterns of stone artifacts, both cultural and geofacts, and we can begin to use these patterns to identify cultural features at archaeological sites.

From the earliest days of the Clovis project, it was recognized that the Clovis point industry was developed to allow effective and efficient procurement of large pitted mammal skulls and the side of large sized flecks or slivers. The small body mass on Omphalopetra, a horse species, demonstrates a contrasting pattern of possible human and carnivore predation.

David G. Anderson, Thaddeus G. Bissett, and Stephen J. Yerka

The Late Pleistocene Human Settlement of Interior North America: The Role of Physiography and Sea Level Change

The colonization of interior North America during the late Pleistocene from ca. 20-10 kya cal B.P. would have been profoundly influenced by exposure to physiographic features early explarers and settlers encountered, such as the location of major river valleys, mountain ranges and deserts, pheinal and periglacial lakes, and ice sheet margins, and in coastal areas by the dramatic changes in sea level that were occurring. An examination of the relationship between changes in sea level and the extent of the Late Pleistocene Coastline in the southern United States indicates that, because of the uneven topography of the now submerged continental shelf, sea level rise or fall does not closely correspond to the area lost or gained. During some periods, notably MWP-1a, only small areas of the Coastal Plain were lost, while in others, such as during the Younger Dryas and MWP-1b, much larger areas were affected. The widespread appearance of Clovis in the interior of the south east, and the apparent reduction or reorganization of immediate post-Clovis settlement in the Coastal Plain, and an increase—or no evidence for population reduction—further into the interior of the region may be related to these changes in sea level. Evaluating these ideas will require much new fieldwork, and the collection, compilation, and public dissemination of primary archaeological data among the professional community.

David G. Anderson, Thaddeus G. Bissett, David Echeverry, Dave Shane Miller, Douglas A. Sain, David K. Thulman, Stephen J. Yerka and Ashley M. Yerka

PDEBA (Poleadian Database of the Americas): Site and Artifactual Distributions in Late Pleistocene North America

Artifact locational, attribute, and image data from across North America provide a unique perspective from which to examine early settlement and, a source of data open to all, researchers and the general public. The PDEBA database was updated in 2010, a vast amount of new information has been collected and added into the database, refining our understanding of where artifacts have been found on the landscape. By identifying where work needs to be done, the PDEBA highlights an important and positive aspect of Paleolithic archaeology becoming increasingly common in the 21st century; the sharing of data, and the examination of settlement at progressively larger geographic scales.

Derek Anderson

Lithic Refitting at the Topper Site: Spatial, Technological, and Geospatial Interactions

Ongoing excavations at the Topper site in Allendale County, South Carolina, over the past 25 years have produced vast amounts of lithic debitage. Preliminary work on Early Archaic components, dating refits studied in 2010 involving assemblages from three different areas of the site (the terrace, hillside, and hilltop) have yielded evidence of hearth-centric activity areas with knapping clusters that have remained relatively undisturbed over time. These largely intact features present an opportunity to examine the behaviors of individual people in their activities. We present preliminary data showing that more than 30% in some units. These findings have provided unique and otherwise inaccessible insights into spatial patterning, lithic reduction sequencess, and spatial information production during the Late Pleistocene and Early Holocene.
Paleoamerican Odyssey

Arizoma Paleoindian Projectile Point Survey

The Arizona Paleoindian Projectile Point Survey is a long-term project to document the occurrence of prehistoric projectile points throughout Arizona by drawing upon public outreach, voluntary disclosure, and the results of published research. Of interest are public and private artifact collections containing classic Paleoindian projectile points such as Clovis, Folsom, Plainview, Agate Basin, Hell Gap, Scottsbluff, and Frederic-Allen, as well as Paleoarchaic point types such as Lake Muir, Silver Lake, and San Didigato. The survey builds upon previous statewide compilations (e.g. Agnewroad 1967; Faught and Freeman 1998; Hayes 2011; Huckell 1982; Pilles and Geb 2001) while employing the methodology and GIS approach of the Paleoindian Database of the Americas (PIDBA). The survey is guided by two interrelated objectives: 1) create and maintain an accessible statewide database of known Paleoindian projectile points and 2) improve the overall resolution of Paleoindian point distributions in the western United States (in conjunction with PIDBA). Visit http://azpaleosurvey.pidba.org/
clients come from archaeological assemblages dating to more than 17,000 BP. Taking into account the totality of these artifacts demonstrates technological facies that rely on the use of cobble, which we can identify as entirely classical in comparison with those commonly found in all the countries in Eastern Asia. Alongside this research, a comparative, taphonomic analysis has been systematically carried out, which further confirms the presence of technological facies that are not natural. Thus, the increase in discoveries in various geological contexts confirms the existence of human occupations during the Upper Pleistocene in this region of the world.

Eric Boldi and Maria Farias Gluchy

Appreciation to the Technical Diversity of the Systems of Production of the Catalán Chico Site

It is with the discovery of Catalán Chico’s site (Departamento de Arápagos, República Oriental del Uruguay), realized by Antonio Taddì that Uruguay enters formally the archaeological discussions of the zone of paleo-Plata, as well as Latin America. The place is situated in the northwest of the department of Arápagos. By the morphological characteristics of the lithic artifacts and various geological studies, realized in this period, the site is considered as one of the older in the territory; an approximate age of 9,000 C. A has been proposed. Today, with the advance of a technological prospect, the first analyses show evidence of a great diversity in the technical knowledge involved in this site. A large number of technical system of production base don various modes of cutting and shaping are highlighted, with each for these methods the production of the type or several types of support, who will be transformed (or not) into specific tools. The so-attested diversity indicates multiple technical behaviours, very certainly ranked organized into a hierarchy.

Richard Boivert, Heather Rockwell and Bruce Busch

Settling into the Late Pleistocene Landscapes: The Potter Site, a Multi-component Paleoindian Site in New Hampshire

The Potter site is a Paleoindian site located in Northern New Hampshire. Extensive excavation and statistical analysis suggest that the site represents multiple reoccupations during both the Late glacial and the Younger Dryas. The site was buried in a channel fill, and a 1.4m-wide gravelly gully fill. Radiocarbon ages on bones including mammoth, bison, horse, camel, and dire wolf are buried in an alluvial fan dipping eastward from the San Juan Mountains. These two counties.

Bradley Lepper did a study of Early Paleoindian land use patterns in Coshocton and Holmes Counties. Over the past 50 years, three archaeologists have conducted excavations at the Welling, McConnell, and Mud Valley sites. In the 1960-70s, Olaf Pruffer performed a survey of fluted points in the Walhobing and Tuscarora River areas in central Coshocton County; this area was a regional focal point for Paleoindian activity. Fluted points made in other areas have been found throughout Ohio, as well as in surrounding states. During this period, three archaeologists have conducted excavations at sites in Coshocton and Holmes Counties. It is with the discovery of Catalan Chico’s site (Departamento de Arápagos, República Oriental del Uruguay), realized by Antonio Taddì that Uruguay enters formally the archaeological discussions of the zone of paleo-Plata, as well as Latin America. The place is situated in the northwest of the department of Arápagos. By the morphological characteristics of the lithic artifacts and various geological studies, realized in this period, the site is considered as one of the older in the territory; an approximate age of 9,000 C. A has been proposed. Today, with the advance of a technological prospect, the first analyses show evidence of a great diversity in the technical knowledge involved in this site. A large number of technical system of production base don various modes of cutting and shaping are highlighted, with each for these methods the production of the type or several types of support, who will be transformed (or not) into specific tools. The so-attested diversity indicates multiple technical behaviours, very certainly ranked organized into a hierarchy.

The Calico Site: Age, Context, and the Artifact/Geofact Issue

The Calico Site (central Mojave Desert) provides the greatest time depth of evidence of man’s activity in the U.S. This site provides the largest body of evidence for the arguments of each researcher, we note at least two analytical biases. For the first, depend- ing on whether the material recovered is on the “good” or “bad” side of the surface, the observer may be demanding approaches combine technologic, taphonomic and experimental approaches. We have included the study of the site of Boqueiro de Pedra Furada and two new sites, São Miguel de Nova Matinha and São Miguel do Curral, which are preserved, and both of which are recognized as significant. The first extensive faunal and paleobotanical analysis of the site of Oaxaca – have systemically surveyed cutbanks along low to medi- um-order streams reach. We have now at our disposal a chronological framework of artifacts from radio-carbon dated strata, and a good grasp of the extent, geometry, and appearance of alluvial deposits, paleosols, and buried land surfaces of different ages. PARADISE, thus the site of Oaxaca is characterized by depositional deposits associated with the faunal record, and the material is continuing to be used to refine the chronology of the site. The site of Oaxaca – have systemically surveyed cutbanks along low to medi- um-order streams reach. We have now at our disposal a chronological framework of artifacts from radio-carbon dated strata, and a good grasp of the extent, geometry, and appearance of alluvial deposits, paleosols, and buried land surfaces of different ages. PARADISE, thus the site of Oaxaca is characterized by depositional deposits associated with the faunal record, and the material is continuing to be used to refine the chronology of the site.
flintknapping include rock-on-rock percussion in streams and mudflows of obsidian cores as acting a giant ‘gravel clapper’, light striking, striae, animal trampling, earth liquefaction, and pressure.

Christina Burke

Bison Bonebeds and Bison Corridors of Use: Implications for Man-Bison Interactions

Great Plains bison bonebeds exemplify an important portion of carrion production in North America. Reconstructing the natural scavenging strategy can aid in understanding animal behavior and the subsequent modifications to the landscape. The importance of early taphonomic scavenging can be an early enough window to understand the relationship between carrion and the environment.

Ian Burti, Karisa Terry and Masami Itahno

Nomads of the Archipelago: Paleolithic Japan and the Pleistocene People of the Americas

Japanese prehistory began around 33,000 14C BP. For most of the Pleistocene, Sakhalin and Hokkaido formed a peninsula joining the Asian continent at the Basan for 1.5-1.3 ma. Kyushu and Shikoku were a single island last joining Korea 200,000 years ago. These two landmasses, Paleos-KSK Peninsula and Paleohonshu, were continuously separated throughout the Paleolithic. The earliest well-dated archaeological sites are in Kyushu and Honshu at 33-30,000 14C BP. The earliest Hokkaido sites with reliable numerical dates are Shimako, Kashiwadai, 1 and Kawanishi C, 7000-4000 14C BP. Several new early sites such as Wadakonouri, Shikusakainakauka, and Kyoko, are now well dated, but could be as old as 30,000 14C BP. Rarely has Japan been brought up in discussions of the Pleistocene. The importance of the archipelago Paleolithic database should not be ignored. For one, there is evidence for terrestrial Pleistocene fauna and human remains, both for mainland Japan and the Kurils. Although the Shoop site is very different from most sites in the Middle Atlantic region, it is similar to sites in the New England–Maritimes and southeastern Canada. It demonstrates the changes in bison condition and diet during the transition from the Clovis time period to the Folsom time period at an arroyo trap kill complex on the Southern Plains. Bison body changes have been linked to indicate changes in grassland composition, which are reconstructed by isotopic analysis in this study. In addition, shifts in bison and variances in isotopes can indicate mobility patterns of animals. The compilation of these data enables a broader understanding of the development of mass kills in the form of arroyo traps at the end of the Clovis period by establishing bison condition, movement, and developing Paleoamerican hunting adaptations. Clovis hunters faced with drastic changes in prey species demonstrated efficient adaptability by developing new hunting techniques such as these arroyo trap kills.

Risa Carlson and James F. Baichtal

Changing Clovis Hunting Adaptations through Stable Isotope Analysis

After the extinction of megafauna across North America Clovis hunters quickly adapted to hunting bison, the largest remaining prey animals on the continent. Analysis of bone collagen is the most effective means of determining a diet, and therefore, the mobility and environment. The study of the Late Pleistocene bonebeds has the potential to illuminate how human hunters impacted animal communities in the past. This poster presents the results of bone collagen data collected on the degree of carrion-utilized bone carcasses at the Clovis, Isenhour Focus bonebed. Carrion utilization data and diet coding the degree to which a carcass has been consumed provides an ecological framework concerning carrion stress in the past. While most taphonomic studies on Great Plains bison bonebeds have focused on identification of site formation processes, this research shows that carrion utilization can be implemented as an ecological proxy to create a more holistic understanding of human-carrion interactions in the past.

Kristen Carlson and Leland Rement

Abstracts (Cont.)
groups (likely sources). While these sources have not yet been identified on the landscape, some of these “sources” are located in the Alaska Range, likely around the Nenana River Valley, and the third in the Tukultaina Mountains. These data provide another means to address raw material procurement and understand landscape strategies among early and late foragers in eastern Beringia.

Michael B. Collins, Dennis J. Stanford, and Darlin L. Lowery North America before Clovis: Variance in Temporal/Spatial Cultural Patterns, 24,000 to 13,000 BP. A wide range of contrasting cultural patterns occur across North America during various portions of the time period between 24,000 - 13,000 BP. Each of these is represented by multiple sites and tends to occur in distinctive environmental regions. In the eastern Beringia, the extent of variance in this rich archaeological fabric indicates a complex process of peopling the Western Hemisphere, multiple cultural origins, and a long period of human presence prior to the advent of the distinct Clovis manifestation.

Thomas Connolly, Dennis L. Jenkins, Catherine S. Fowler, Pat Bark- er, Eugene M. Hattori and William J. Cannon Boundaries in Space and Time: Paleo-Period Textiles in the Northern and Western Great Basin Paleoindian research has focused on lithic technologies. Although representing a small portion of material culture, lithic artifacts are likely to survive in the archaeological record. Over the past fifteen years the Great Basin Textile Dating Project (a cooperative venture among several agencies, and individuals) has directly dated a great variety of fiber artifacts from the northern and western Great Basin, including sandals, bags, mats, baskets, and cordage. These include dates of over 60 perishable artifacts that date as old as 8,000 years (calibrated). We focus on fiber artifacts from Paisley Caves in southeastern Oregon, as well as additional early sites in the northern Great Basin, where associated cultural assemblages are best documented, and consider these materials in the context of dated fiber artifacts from throughout the region to examine distributions in space and time.

John P. Cook and Tom Gillispie Healy Lake Village: New Data and Analysis Healy Lake Village: New Data and Analysis John P. Cook and T.E. Gillispie The last two decades have seen the formulation of numerous competing models for the peopling of the Americas out of Northeast Asia, for which the record of archaeological research in Beringia provides temporal constraints. Several variants hypothesize multiple migration events, including dispersal via the Ice Free Corridor. The terminal Pleistocene archaeological record of eastern Beringia remains vital to evaluation of these models. Here we present new data and analyses from the village, a multi-component human occupation with basal radiocarbon ages circa 13,300 years BP. This site, located on an island in Healy Lake, is drawn from the original excavation records and collections made between 1984 and 1993, the majority previously unpublished. New contextual data includes improved stratigraphic and spatial reconstructions, and new radiocarbon dates. Within this framework, we are building improved models of the landscape, including archaeological technol- ogies, features, and occupation intervals. These may in turn improve constraints on migration models, and subsequent in-place ethno-gene-
Over the past decade a variety of previously unknown Paleoindian sites for early coastal peoples in the Pacific Northwest and California. We describe issues of paleolandscape form, rates and patterns of early coastal foragers. As part of research conducted for the US National Science Foundation, we have examined the paleoenvironmental and paleolandscape data from the Pacific Outer Continental Shelf from the Last Glacial Maximum to the present. We have identified new sites and have documented the presence of early Paleoindian assemblages on the shelf. We have also examined the paleoenvironmental and paleoclimatic data from the shelf to understand the environmental conditions that influenced the movement of early coastal foragers.

Robert DeBoo-Russow
The Water Canyon Paleoindian Site - A Multi-Component Site at a Focal Wetland Resource in West-Central New Mexico

Black mat, paleoclimate, paleoenvironmental, terminal Paleoindian, early Holocene, Bison antiquus, Late Paleoindian, Clovis

Since 2008, interdisciplinary research at the Water Canyon Paleoindian site in west-central New Mexico has generated not only archaeological data, but also important insights into the paleolandscape and paleoenvironmental conditions that influenced the movement of early coastal foragers. The site is located in a wetland area that has been occupied by Paleoindians for at least 13,000 years. The site contains a rich assemblage of stone tools, including bifacial points, that are indicative of the Late Paleoindian period.

Kelly M. Derr and Philip E. Higusa
Human-Environmental Interactions during the Late Pleistocene-Early Holocene Transition in the American Arctic

What role, if any, did humans play in shaping Arctic vegetation and megafaunal populations? Our research team has examined the paleoenvironmental and paleoclimatic data from the late Pleistocene-Early Holocene transition in the American Arctic to understand the role of human activity in shaping the landscape.

Loreen L. Davis and Alex E. Nyers
Reconstructing Paleoclimatic and Paleosol Submerged Site Locations on the Pacific Continental Shelf from the Last Glacial Maximum to 10,000 RBP

Despite the interest in the Pacific coast as a potential migratory route of early humans, the archaeological evidence is limited. Our research team has been working to reconstruct the paleoclimatic and paleosol conditions in the Pacific Northwest using submerged archaeological sites.

Jennifer DeGraffenreid and Joshua Trammell
Analysis of 42T03974 Ratiff Ridge: An Upland Fluted Site in the Cedar Mountains, Utah

Over the past decade a variety of previously unknown Paleoindian sites have been documented in the eastern Great Basin. These discoveries have shed new light on the life of Paleoindians in the region, including their mobility, diet, and the use of stone tools.
Paleoamerican Odyssey

including exploring its geomorphology (Grooms), XRF analysis of a site being pursued to develop further our understanding of the site, 14 ka. These dates are congruent with occupations documented further back in time. The occupation of the site 10-12 ka, with less dense occupations at 13 and 14,000 years ago, archaeologists must construct viable models from a very sparse pre-Clovis archaeological record. I believe the very scarcity of pre-Clovis sites is significant—I suggest that we are missing an important part of the record. From these sparse records, we must reevaluate Paleosindian settlement chronologies using principles of chronologic continuity, reexamine key sites excavated by Clovis-First proponents, and reimagine the peopling of the New World.

John Ferguson, Terry Ferguson, Emily Hinz and Michael Waters Geopysics and the Geochronological Characterization of the Topper Site, South Carolina Geoaarchaeological investigations in general and geophysical investiga- tions in particular were employed to characterize the Cenozoic, geologic context, but especially the Pleistocene and Holocene natural site formation processes at the Topper Site (SHAL23), South Carolina. To characterize the subsurface terrain geologic and geophysical profiles were collected using seismic reflection and ground penetrating radar (GPR) in 2000 and 2001. These investigations were subsequently compared to excavated archaeological units and shallow trenches to correlate the geostatistic stratigraphy with geophysical property models. The geophys- ical investigations identified the underlying fancore “bedrock” and a series of Holocene terrace surfaces. The resulting seismograph map showed mapped older geologic units too deep to be seen in the GPR data below the excavations. Combined geophysical and geologic mapping resolved areas of ambiguity and delineated the continuity of unconformable stratigraphic contacts, multiple stream channels and the site’s buried channel. The study has demonstrated the utility of shallow seismic reflection employed in conjunction with GPR to define the geologic context of late Quaternary archaeological sites. Geophysical investi- gations like those employed in this study require experienced inter- preters and careful calibration, but their potential to non-invasively discover and map buried sites should not be underestimated.

Robert N. McPherron

The Rock Magnetic Record across the 12.9 ka Younger Dryas Grown- up Event

The cause/s of the onset of the Younger Dryas (YD) climatic event at 12.9 ka and the corresponding extinction of most large mammals and changes in human subsistence patterns in the Americas remain a geologic mystery. Firestone et al. (2007) proposed a bolide impact on the Laurentide ice sheet to explain these dramatic ecosystem changes, citing an increase in the concentration of magnetic spheres and magnetic grains, among several other parameters. Here, we present complete rock magnetic analyses across the YD at two well-dated archaeological sites (Friedland Site, TX and Topper Site, SC). These mea- surements were conducted on bulk, unprocessed soil samples collected continuously across the YD boundary. Rock magnetic techniques are one of the most sensitive means for detecting subtle changes in sedi- ment source, grain size variation, and pedogenic development. Our goal was to test whether there are any changes in magnetic mineralogy or pedo- genesis at these sites consistent with a large bolide impact or airburst. There is no evidence at either site of any magnetic change coincident with the YD. This finding supports the hypothesis that small magnetic events were occurring throughout the YD. The absence of a recognizable impact event at these sites does not rule out the possibility of other, smaller, non-detectable impact events. Further study is required to determine if the characteristics of the YD in the Americas are unique or part of a larger pattern.

Nicholas Felstead, Silvia González, Sarah Metcalfe, David Huddart, Stephanie Young, Michael Waters and Albert C. Good- bury Refuting the Technological Cornerstone of the Ice Age Atlantic Crossing Hypothesis

The “North Atlantic Ice-Edge Corridor” hypothesis proposes that some- time during the Last Glacial Maximum, roughly 25,000-19,000 years ago, human populations from southern France and the Iberian Pen- insula made their way across the North Atlantic and colonized North America following sea level changes in the Northern Hemisphere. The hypothesis relies on archaeological and non-archaeological data, and is based primarily on the apparent similarity between stone-tool-production techniques of Sultranean peoples in southern Europe and Clovis and purportedly pre-Clovis peo- ple of eastern North America. The common element is the supposed intentional use of “controlled overshot flaking,” a technique for thinning a biface stone tool during manufacture. Overshot fractures, stuck from prepared edges of the tool, travel across the face and remove part of the opposite margin. Experimental and archaeological data demonstrate, however, that stone-tool production in Sultranean cultures and in the presumed overshot flaking technique is characterized by the production of small and inconsistent as knappers attempt to thin bifaces. Thus, instead of overshooting as knappers attempt to thin bifaces that happened to produce analogous detritus. An alternative model for thinning bifaces that happened to produce analogous detritus.

John M. Erlandson From the Clovis-First Collapse: Reimagining the Peopling of the Americas

Across the Americas to the Old World in the Late Pleistocene/Early Holocene: From the Histo- ry of Ideas to Contemporary Scientific Realities

Franz Boas and the Peopling of the Americas

The quest for hard evidence of early Native Americans in the Americas—Pre-Clovis humans—increasingly resembles the long, frutious and often comical search for that other cryptic American hominid, Bigfoot. In view of recent advances in our understanding of the Paleo- neolithic BP contexts, perhaps it is not surprising that footprints and fossils have become as crucial for pre-Clovis advocates as they are for Bigfoot believers. Here, we examine the seemingly humdrum footprint record from Valsquillos (now formally retracted) and Monte Verde (still widely accepted) and the Paley Caves human (?) coprolites. In view of recent evidence of the survival of pre-Last-glacial humans (“Hobbit” and Den- isovans) into the late Pleistocene of East Asia, is a pre-sapiens presence in the Americas too absurd to contemplate?

Philip Fisher Geopysics and the Geochronological Characterization of the Topper Site, South Carolina Geoaarchaeological investigations in general and geophysical investiga- tions in particular were employed to characterize the Cenozoic, geologic context, but especially the Pleistocene and Holocene natural site formation processes at the Topper Site (SHAL23), South Carolina. To characterize the subsurface terrain geologic and geophysical profiles were collected using seismic reflection and ground penetrating radar (GPR) in 2000 and 2001. These investigations were subsequently compared to excavated archaeological units and shallow trenches to correlate the geostatistic stratigraphy with geophysical property models. The geophys- ical investigations identified the underlying fancore “bedrock” and a series of Holocene terrace surfaces. The resulting seismograph map showed mapped older geologic units too deep to be seen in the GPR data below the excavations. Combined geophysical and geologic mapping resolved areas of ambiguity and delineated the continuity of unconformable stratigraphic contacts, multiple stream channels and the site’s buried channel. The study has demonstrated the utility of shallow seismic reflection employed in conjunction with GPR to define the geologic context of late Quaternary archaeological sites. Geophysical investi- gations like those employed in this study require experienced inter- preters and careful calibration, but their potential to non-invasively discover and map buried sites should not be underestimated.

Stuart J. Fiedel Pre-Clovis and Bigfoot—The Searches Converge

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Philip Fisher Geographic Response to Regional Younger Dryas Climatic and Envi- ronmental Variability in Alaska

Human response to climatic and environmental change can result in technological changes that contribute to the geographic landscape-use re-organization. The onset of the Younger Dryas in Alaska, during the terminal Pleisto- cene, dates to around 12,800 BP. This climatic reversal would have resulted in a significant environmental change in northern, central and southern Alaska.

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John Ferguson, Terry Ferguson, Emily Hinz and Michael Waters
Paleoamerican Odyssey

The Southern Cone exhibits a variety of early contexts with unique features, including isolated sites, such as Monte Verde, or groups of related sites, as the Punta context. Yet, the single feature with most widespread geographical distribution is the Fishtail or Fell point projective. It is found in a variety of contexts and environments throughout South America, as pointed out by, among others, in Chile, as “Western Stemmed” or “Windust” forms, dominate across this region. Points associated with both complexes exhibit a surprising range of diversity in stylistic attributes, proposed functions, and even technology of manufacture. Indeed, the degree of diversity represented in these two complex regions reveals no connections to Clovis/Fluted point complexes. But equally important, this degree of diversity represents in these samples can be interpreted as the likely signature of a Mesolithic West cultural adaptations that pre-date the Clovis expansion and persist well into the Early Holocene. This project re-examines the variability present in these complexes, their temporal distributions, and possible relationships to environmental changes that mark the Paleoancient-Holocene transition across the region.

J. Christopher Gillam
Paleoamerican Origins and Migration: A Cultural and Bio-Physical Geographic Perspective

The discovery of early humans in the Americas is a story of increasing complexity and diversity on both the cultural and geographical fronts. The earliest sites on the Northern American continent have been dated to around 13,000 BP, and they are associated with the Clovis tradition, which is characterized by distinctive stone tool assemblages and occasional bone artifacts. However, the exact timing and routes of human migration into the Americas remain a subject of debate. Some scholars argue for a single, continuous migration route, while others propose multiple routes, each with its own distinct characteristics. One of the key debates in this field is the validity of the “Clovis-first” model, which posits that Clovis technology represents the first wave of human migration into the Americas. Other models, such as the “multiregional” hypothesis, propose that human populations already present in Asia entered the Americas through Beringia, the land bridge that connected Asia and North America during the last glacial maximum.

Abstracts (Cont.)
distributions reveal the size and internal organization of these houses, which can be deduced from the location of hearths and sleeping areas along the perimeter. Use-wear analysis indicated hide-working and possibly fishing as activities among the occupants. The presence of a variety of tools and artifacts, including scrapers, knives, and bone tools, indicates that the site was used for a variety of purposes, including hunting and tool-making.

Several important conclusions can be drawn from the analysis of the site. First, the site was occupied by multiple groups over time, as evidenced by the varying lithic assemblages and artifacts found in different levels of the deposit. Second, the site was an important location for the exchange of goods and ideas, as suggested by the presence of artifacts from other regions. Finally, the site provides insight into the social and economic organization of the people who lived there, and how they interacted with their environment.

In conclusion, the excavation and analysis of the Clovis-era site at Owl Cave has revealed important information about the early history of North America. The site provides a window into the lives of these early humans, and helps us understand how they adapted to their environment and interacted with each other. Further research will be needed to fully understand the significance of this site and the people who lived there.
stand, or similar evolutionary forces influencing the correlated data entry. With regard to peopling of the New World, reconceivability of evidence from multiple data types should be the focus of new research, rather than diminishing their ability to model population affinities.

Edward Herrmann and G. William Monaghan Geoarchaeology of Paleolithic of Aridoamerical Landscapes: Geomorphological Implications for Prehistoric Resource Use

Drainage-basin level geoarchaeological research in central Indiana’s White River Valley focused on 3D reconstruction of fluvial landscapes. Results indicate that Paleolithic-age surfaces are preserved in surface and subsurface context, despite that fact that most of these surfaces are within the 10’th flood plain. Locations of surface and buried sites are geomorphologically controlled mainly by bedrock and postglacial downcutting rates. Segments of the river where bedrock-controlled channels predominate generally preserve late Pleistocene (outwash) landscapes and surficial Paleoindian sites even proximal to the modern channel. These older landforms were pre-served because the ancestral White River drained down rapidly and with high daily and annual discharge rates, and bedrock-controlled channels were identified late in the Pleistocene and early in the Holocene. These buried landscapes include surface wetlands, oxbows, and paleochannels that include Younger Dryas paleoenvironment and climate data now missing in the lower Midwest and are essential to model Paleoindian (or earlier) settlement site location. Solid mid-to-mesoscale geomorphology is critical for realistic predictive modeling and accurate population and site distribution estimates.

Alvah Hicks Interpreting Archaeological Signatures before Clovis

Human migration scenario applied to the Americas can gain insights from the sagittal settlement of the Old World. For example, compare the apparent dissemination of early Aurignacian technologies into Châtelperronian/Neandertal contexts with the diffusion of Upper/Late Paleolithic industries into American cultures. Contrasting horizons of cultures already inhabiting the Americas before-Clovis theories could focus on the shared characteristics of earlier and newly discovered pre-Clovis sites, including, for example, those in the SW United States. Examining the context of Monte Verde II’s past preserved cultural contexts as more than just an initial New World “settlement pattern,” can be supplemented when we accept, even theoretically, the significance of the 20,000 years separating it with its older relative, Monte Verde I (dated at 33,000 BP). The significance of Monte Verde II is not as much in its pre-Clovis date as it is in its unique type of archaeological profile and should be used as diagnostic to other less-preserved pre-Clovis habitations. It attests to a different system of adaptation that is hard to detect using traditional archaeological methods, but instead relies on controlled excavation and interpretation.

Matthew G. Hill, Thomas J. Luebel and David W. May The Early Clovis Culture at Spring Lake, San Marcos, Texas

The San Marcos Springs, which form the headwaters of the San Marcos River, present a seemingly constantly renewed warmwater spring system. The spring is thought to have inhabited beginning at least in Clovis times in the Late Pleistocene and spanning the entire Holocene. Recently, geoarchaeological research established a preliminary depositional sequence of alluvial deposits spanning this same period. However, the earliest artifacts recovered in controlled excavations date to only ~6380 cal BP. Unfortunately, the extent of the Paleoindian and early Archaic occupations are poorly understood as the correlating strata are below water table, and the only underwater excavation did not include a geoarchaeological assessment nor was it fully published. Recent surveys also revealed yields preserved wood in a stratigraphic context dated to ~13,300 cal BP. Although non-cultural, this find suggests that sediments within the lake likely hold a large assortment of organic materials preserved by the rare environment created by the long-continuously flowing springs. The goal of this project is to achieve a more thorough understanding of the stratigraphic component in the lake and develop a research framework through geoarchaeological survey and analysis of inundated sediments.

Mark Hubbe, Walter Nevis, Danilo Bernardo, André Strauss, Astolfo Araujo, and Renato Kipnis Early Human Occupation of Lagoa Santa, Central Brazil: Implications for the Dispersion and Adaptation of Early Human Groups in South America

The presence of human groups in the Americas by the end of the Pleistocene has been demonstrated in numerous archaeological sites in North, Meso and South America. However, the number of early sites associated with human remains is very limited, and to date it is difficult to discuss processes of the continent’s initial occupation in terms of the biological characteristics of early Americans. The Lagoa Santa region, in Central Brazil is a unique region in the Americas, because it presents dozens of early sites, some of which support the evidence for the biological diversity of early humans. Despite the Younger Dryas period of glacial excavation, during 19th century, the Lagoa Santa caves and rockshelters generated over two hundred burials that date between 11.0 and 7.0 kyr BP. This presents a review of the biological affinities between these groups, as well as their cultural and archaeological context, resulting from our long term project in the region during the past decade. Using multiple methods, we aim to compare their cranial morphological affinities with other worldwide groups, we demonstrate that the Lagoa Santa remains share the same morphological pattern seen in other early popula tions in the Americas and other regions of the planet, a pattern that is significantly distinct from the typical morphology observed among Late Holocene Native Americans. We also explore the notion that these populations may have been directly involved in the shaping of the Americas’ cultural diversity, especially when burial practices are considered. In conclusion, the biological and cultural contextualization of the Lagoa Santa early human presence sheds light on important aspects of the origin and adaptation of New World populations at the end of the Pleistocene and early Holocene.
Paleoamerican Odyssey

Early Pleistocene Lithic Industries in Northern Costa Rica

Excavations in the Suracapiqui piedmont yielded evidence of a flake industry associated with tephra dating 61 ky BP and older. Artifacts were also recovered at the Cavanita site in the northwest lowlands, 4 km from the piedmont sites. Trata in Cavanita attests of a long history of erosional processes including a large scale avalanche (lahar) of Late Pleistocene age, thick flood silt deposits, terrace building by alluvial transport of rocks, and the development of soils. Associated with these were well-defined cultural deposits: Level 1 containing ceramics; Level 2 with a lithic assemblage named Tono II of preceramic age; Level 3 with silt sediments with scarce lithics identified as late Paleoindian, related to the balidal fissional period; Level 4 with a flake lithic industry, Tono I, the oldest in the region. At the base, a volcanic lahar is found, regionally recognized by its yellow clayish mud mat. Lithic artifacts, morphologically and technologically related to those of Level 3, date 12.2 ky BP at La Isla site in the Reventazón region. Deeper strata at La Isla contains Tono I materials, suggesting an older age for this assemblage. Thus far, Tono lithics have been found in similar tephra deposits in Colombia and Ecuador, yet they remain a chiefly studied region. Geological evidence from the 1980s along with new models of biological productivity made the corridor yesterday’s news: Late Wisconsinan coalescence clearly took place, and many depicted past ecological landscapes as uneventfully bleak—“devastation of a Garden of Eden” on marginal, late tropic fluted points. In fact, fluted points occur in high densities in the corridor region, with other traces of early Paleoamerican technological organization. Bison specimens—useful props for human habitation—show that the lizard took place centuries prior to Clovis throughout the corridor. Some past ecological landscapes may have been unusually attractive and some earlier dates for stratified sites in the corridor need to be revisited. While these findings do not restore the corridor as a prime route for initial settlement, they do mean the region has a critical bearing on “second order” processes involving in situ social processes, particularly resumption of contact between eastern Beringian human populations and those south of the Laurentide ice.

Akira Ivrea
Use-Wear Analysis of Chipped Stone Tools from Microblade Assemblage

Microblades with wedge-shaped microblade cores spread mainly to the northeastern Japanese Archipelago during the terminal Pleistocene. These assemblages share technological similarities with Siberia, Northeast Asia, and Northeast America. Based on the results of use-wear studies, this paper examines the functions of chipped stone tools obtained from Pleistocene aged deposits containing artifacts and extinct megafaunal remains in the Päuße 5 Mound Site in central south China. Their human origins verified by DNA evidence found in these tools, these are currently the oldest dated human remains in the Western Hemisphere. This paper provides an update on the progress of multidisciplinary scientific investigations of the microblade assemblage and identifies the last megafaunal items preserved there. The evidence indicates the first site occupants were not hunter-gatherers, but immediately adapted to the Northern Great Basin’s high desert environment of the late Pleistocene.

Dennis L. Jenkin
Paleo-Honshu Island and Paleo-Sakhalin Hokkaido-Kurile Peninsula connected to the far eastern Asian continent. Through assembling evidence of climate, landscape, flora, and fauna as well as cultural elements chronologically and geographically during periods which provide a high density of detailed data across Japan, I discuss the diversity of human technological and behavioral adaptations in the insular ecosystem between the cool-temperature and arctic zones. Differences in adaptation at the local scale between the insular and continental parts of Asia shed light on the nature of modern human dispersals and formation of cultural diversity in Eurasia and America.

Lionel Jackson, Laurence D. Andristash and Fred Phillips
Multiple and Successive Ice-Free Corridors during Middle Pleistocene Glaciations in the Interior Plains of Southern and Central Alberta and Adjacent Areas

Stacked tills in buried valleys along the Rocky Mountain foothills south of the Canadian Shield and across central Alberta document the existence of many ice-free corridors. These corridors are characterized by the presence of a series of progressively older till sequences, which expand and contract with the progression of glacial and glacial limits dated to the LGM by cosmogenic 36Cl exposure dating of erratics on these moraines. They document that the south-west margin of Laurentide Ice Sheets (LIS) was an all-time maximum for late Cenozoic ice sheets as well as the coalescence of glaciers from the Rocky Mountains with the LIS was unique to the LGM. This precludes a single ice corridor. This brief and unique coalescence event has also been documented in northern, central, and south-central Alberta by radiocarbon dating of organic material in peat beds underlying a single till deposited by the LGM Laurentide Ice Sheet. However, there is ample and robust stratigraphic evidence of a single pre-LGM ice sheet that reached as far west as Idaho, in southern Alberta, and at least two pre-LGM ice sheets in the Cold Lake area in east-central Alberta. Multiple glaciations are recorded in the Pleistocene stratigraphy of Saskatchewan. Only one till in Saskatchewan pre-dates the last glacial. This paper presents the latest moraine evidence from the south-west margin of the LIS in southern Alberta and should be considered in interpreting Pleistocene bio-geography.

Debra F. Fink
Paisley Caves: 14,500 Years of Human Occupations in the Northern Great Basin

Ancient human coprolites (dried feces) directly radiocarbon dated to 14,500 years ago have been recovered from Pleistocene aged deposits containing artifacts and extinct megafaunal remains in the Paisley 5 Mound Site in central south China. Their human origins verified by DNA evidence found in these tools, these are currently the oldest dated human remains in the Western Hemisphere. This paper provides an update on the progress of multidisciplinary scientific investigations of the microblade assemblage and identifies the last megafaunal items preserved there. The evidence indicates the first site occupants were not hunter-gatherers, but immediately adapted to the Northern Great Basin’s high desert environment of the late Pleistocene.

Thomas Jennings
The Golondrina Assemblage from the Debra L. Friedkin Site, Texas

Golondrina is a Late Pleistocene point style that has been linked to both Paleoindian and Paleo-Archaic groups across the middle to upper reaches of the Paisley Caves. This poster presents new analyses of the Golondrina assemblage from the Debra L. Friedkin site in central Texas. The results provide new insights into the origins of Golondrina.

José Jimenez, Meggan Bullock and Eva Salas
A Multiple Burial from 7231 BP

The objective of this project is to present a multiple human burial that was discovered in the Cueva de Tercal (Tercal Cave), which is located in municipality of Tercal in the state of Puebla. This archaeological investigation took place over four seasons, from 1963 to 1966. In the 1964 season, eight human skeletons, forming a multiple burial, were found, and in the 1965 season, the burial of a single individual, in a lateral flexed position with a north-south orientation, was excavated. According to the archaeological report, these burials were located in Layer IV, which has been radiocarbon dated to 7231 BP (Garcia-Mell 1977). One potential hypothesis is that by this date, the burial of human bodies in specific locations had been established, as well as perhaps a funerary system for groups in this region. Another possible hypothesis is that this group already inhabited small villages. To verify their antiquity, two of the skeletons were radiocarbon dated and found to date to 7231 BP, which is consistent with the radiocarbon dates for the multiple burials. These data suggest that this group already inhabited villages in the region and that possibly they had begun to domesticate plants and animals.

Margaret Jodry
All My Relations, Paleoamerican Spiritual Connections in Hunting and Healing

Humans beings are living syntheses of mind, body and spirit as expressed in most aspects of life from birth to burial and beyond. Among traditional indigenous peoples worldwide—i.e., animal, plant, mineral, celestial, and ancestral realms are understood to be intimately permeated with sentience and power. These spiritual energies are respected and feared. People honor, supplicate, negotiate, and otherwise deepen their interactions with these creative, spiritual forces by means of prayer and ceremony, including material offerings, song, dance, music, painting, tattooing, and healing. The archaeology of Blom- mers Cave, Canada, is an example of the antiquity of human symbolic behavior in the manufacture of red pigment and the incised marking of red ochre 100,000 years ago. This poster explores spiritual and cultural aspects of the various Paleoamerican iconographic and identifies tools and archeological features related to these activities from Folsom, Hell Gap, Cody, and San Patricio contexts.

John Johnson, Thomas W. Stafford, Jr., G. James West, Thomas K. Rockwell and Don P. Morris
Six Field Seasons at Arlington Springs: An Investigation of Paleoenvi-
ronmental Change on Santa Rosa Island, California

Between 1994 and 2006, an interdisciplinary team conducted six field investigations of Arlington Springs (CA-SA 145/173). This research has clarified the chronostratigraphy of Arlington Springs in order to understand the geological and palaeoenvironmental context for the earliest evidence of humans on the Late Pleistocene Island of Santa Rosa off the California coast. Excavations in 1994, 2000, and 2001 at the west side of the upper and middle Main Cave area exposed a series of sediment dating the current ground surface to a depth of about twelve meters adjacent to the location where deep buried human bones (‘Arlington Springs Man’) may have been discovered by Phil C. Orr in 1959. Following an experi- ment with ground penetrating radar in 2005, a Giddings rig was trans-
A New Collection from the DEDIC Site, Deerfield, Massachusetts
Michael Johnson and William A. Childress

Preliminary Lithic and Spatial Analysis of the Adams Gravel Source Site (10BT1227)
Joshua Keene and Mayra Gracia

Clovis Caches: An Update and Consideration of Their Role in the Colonization of Newlands
David Kilby and Bruce Huckell

The Clovis Site at the Adams Gravel Source Project, New Hampshire, USA
Kathryn W. Colson, Andrew S. Herrero, and Theresa M. Petraglia

Beyond Cactus Hill
Michael Johnson and William A. Childress

Mapping the Late Pleistocene Landscape of the North American Borderlands
David A. Reynolds

Encountered by the First Explorers of the Southern High Plains
Ethan Ortega

The Schaefer and Hebior Mammoth Localities in Southeastern Wisconsin
Michael Kolb and Daniel Joyce

Refined Dating of the Horse and Camel Kills at the Wally’s Beach Site, Canada
Brian Kooyman, Michael R. Waters, L.V. Hills and Thomas W. Stafford, Jr.

Refining the Ice Margin: Analysis, Interpretation and Implications of Four Pre-Clovis Megaflora Butchery Sites in the Western Great Lakes Region
Pamela Clarine and mammoth exploitation sites in southeast Wisconsin are reviewed and compared with other mammoth butchery sites in North America. The Schaefer (47KX252), Hebor (47KX256), Mud Lake (47KX264) mammoths and the Fosque (47KX 240) mastodon provide definitive evidence of megaflora butchery during the pre-Clovis period. These sites span 13,450 – 11,200, 14C y.r. B.P. ending just as the classic Clovis culture is beginning. The environment and timing of this pre-Clovis adaptation to a recently deglaciated environment are explored using environmental data and climatic models. The timing of entry of Paleocamericans into the Western Great Lakes is reviewed and the question of environmental and land use patterns to this landscape is addressed. Comparison to Clovis mammoth site geomorphologic settings is made, and the proposed association of these butchery sites with a local lithic complex is analyzed. Evidence from these pre-Clovis sites makes a case for an early megaflora subsistence strategy for these populations that is in contrast to present day practices in which all large mammals are butchered in a single location and as such the Clovis Adaptation to a Recently Deglaciated Landscape in the Great Lakes.

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Although the origin of the first Americans has been resolved through the Coastal Migration Hypothesis, the routes that early humans traveled from Asia into North and South America are still the subject of intense scholarly genetic research. In fact, initial occupation by several knappers, at most, who sharpened and discarded a few tools along a high terrace of the St. Vrain River in western Boulder County. Raw materials suggest ties to Middle Park, across the foothills of the Colorado Front Range. We need more examples of these small assemblages that produced bone modifications observed in Late Pleistocene sites. A thorough understanding of the ways in which numerous processes may break and modify bone, such as rock fall, trampling, carnivore gnawing, sediment compaction, weathering, and cultural activities. Multivariate statistical analyses underscore how multiple variables interact, such as breakage type, depositional history, bone damage, and tested in the resulting bone damage attributes. They also emphasize that single attributes, such as a bulb of percussion, and spiral fracture, are insufficient to differentiate the artists that produced bone modifications observed in Late Pleistocene sites.

Robert Lassen
Exploring Typological and Technological Variability in Folsom-Age Projectile Points: A Comprehensive Perspective

Our analysis is further enhanced by the availability of 3D laser scanner. Standard cranial landmarks were recorded for each specimen and subjected to 3D geometric morphometric analyses to assess similarities among the coastal and interior groups. The results of this work provide valuable information about the demographic history of the North and South America’s inhabitants from the early to middle Holocene. Furthermore, this study demonstrates the advantages of using 3D imaging and morphometric methods to analyze Paleoamerican cranial variation. A broad chronological study has been undertaken in order to understand the timing of the transition to early Paleoindian settlements in South America. Three new archaeological sites have been investigated in particular. They lie in the Serra da Capivara National Park in Piauí, and include the sites V compulsory and La Tina, dated using 3D terrestrial laser scanning and carbonate dating techniques. These results provide a good overview of the first occupation in the region. OSL dating allowed us to date the deposition of the quartz grains which constitute the sediments, the radiocarbon let us know the time elapsed since the death of the vegetation that gave the charcoal, and TL dating helped us to date the last heating of some artifacts, that is to say, potentially to date the anthropic activity directly. The Toca do Tira Peia, the Vale da Pedra Furada and the Boqueirão da Pedra Furada have been studied from a chronological point of view and they will be presented during the conference.

Robert Lassen
Developing an Environmentally-Based Site Location Model of Paleo-Indian Settlement in the Northern Great Lakes

Several technological adaptations of fluted points have been hypothesized based on the fluting and bifacial attributes associated with them. In particular, the fluting has been interpreted as a means to shape the tip of the basal. We have demonstrated that the Paleoindian projectile point technology for the following types: Folsom (bifacially fluted), unifacially fluted, Midland, pseudo-fluted, and the miniature forms thereof. The analysis shows significant morphological variation between Folsom and Midland points and suggests they may have been halved differently. However, analysis of intermediate “hybrid” forms between Folsom and Midland appears to span this gap, complicating this interpretation. Miniaturized versions of these points do not share the same morphological distinction. Examining variables related to flintknapping skill reveals significant differences indicating that Folsom points are the most skillfully made, followed by unifacially fluted, Midland, and pseudo-fluted points, respectively. Analysis of raw material variability for each type is currently underway to test whether the non-Folsom types are made increasingly often as raw material supplies decrease.

Robert Legg and John B. Anderton
Recent Paleoindian Finds in Western Washington

Recent Paleoindian Finds in Western Washington

Unlike inland portions of the Pacific Northwest (eastern Washington, Idaho, eastern Oregon), the archaeological record of late Pleisto- cene-earliest Holocene human occupation west of Washington state’s coastal margin is relatively poorly understood. Indeed, an early Holocene radiocarbon date from a site near the mouth of the Columbia River suggests that humans may have occupied the region as early as 10,000 years ago. To date, no other site in western North America has yielded a well-dated occupation prior to 8000 years ago. Even with the exception of the earliest Holocene at Petronila Creek (41NU246), recent research has been focused on the Late Pleistocene to Early Holocene transition. Our research combines underwater survey, scuba diving and ROV investigations with paleoenvironmental reconstruction and computer simulation to consider both the strategies for hunting caribou and the necessary organizational implications for such activities on the Alpena-Almery Ridge.

Philippe LeTourneau
Paleoamerican Odyssey

North and South America are still the subject of intense scholarly genetic research, the routes that early humans traveled from Asia into Although the origin of the first Americans has been resolved through the Coastal Migration Hypothesis, the routes that early humans traveled from Asia into North and South America are still the subject of intense scholarly debate. Recent genetic and archaeological data suggest that an early migration may have occurred along the coast of North and South America. Based on these lines of evidence, it is hypothesized that Paleoamericans may show morphological affinities to prehistoric skeletal populations of the eastern North American continents. This study, Paleoamerican cranial (>9000 years BP) are compared to a large sample of crania from coastal and interior sites in North and South America, dating between 7,500 and 2,000 years BP. Data on cranial variation was obtained from high-resolution digital models created with a 3D laser scanner. Standard cranial landmarks were recorded for each specimen and subjected to 3D geometric morphometric analyses to assess similarities among the coastal and interior groups. The results of this work provide valuable information about the demographic history of the North and South America’s inhabitants from the early to middle Holocene. Moreover, this study demonstrates the advantages of using 3D imaging and morphometric methods to analyze Paleoamerican cranial variation.

Jason M. LaBelle and Halston F. C. Meerer
An Afternoon at Benedito’s Rock (SRJ 23)2, a Small Scottish Style Site in the Colorado Mountains

Benedito’s Rock (SRJ 23)2 is a small, single component Scottsbluff site discovered and excavated by the Colorado State University Archaeological Field School during the summers of 2010, 2011, and 2013. The site represents a short period of occupation by several knappers, at most, who sharpened and discarded a few tools along a high terrace of the St. Vrain River in western Boulder County. Raw materials suggest ties to Middle Park, across the ColoraColorado Foothills Divide and the mountains to the west. Small sites such as this dominate the archaeological record, but they are rarely excavated given their small size. This site represents one of the best snapshots we might hope for, in terms of recognizing the day-to-day operations of a small Paleoindian task group, or perhaps larger group, seasonally moving through the mountain parks, alpine zone, and foothills of the Colorado Front Range. We need more examples of these small sites to better understand larger sites, which are often pauciserial of many complex communities.

Jason M. LaBelle and Christopher M. Johnston
The Long Shot and the Close-Up: Evaluating the Visual Landscape of the Early Paleoindian Site Benedito’s Rock (SRJ 23)2

The Lindgrenmeier site (SRJ13), a National Historic Landmark, is strategically located and is considered the central portion of the Southern Great Plains and the Southern Rocky Mountains. While prior analyses focused on the site’s rich Folsom lithic industry, our present study ex- mines one of the most salient features of the site: its geographic place- ment. We argue that the site was occupied (and reoccupied) at a very important place on the landscape – at an escarpment supporting diverse wildlife and vegetation. Using field observations and GIS applications, we identify geographic features which may have been important places for Folsom peoples, in terms of foraging, travel, and group aggregation.

Christelle Lahaye, Eric Boïda, Michel Fontugne, Gisele E. Daltrinhi, Antonino Loundrot, Martin Madsen, Antonio Montealegre, Dierk Hoehn, Cristina Mariaga, Sibolle Viaux, Amelie Da Costa and Mario Pino
"Oldies but Goodies": A Chronological Approach to the Pleistocene Occupations in the Serra da Capivara, Piaui, Brazil

A broad chronological study has been undertaken in order to understand the timing of the transition to early Paleoindian settlements in South America. Three new archaeological sites have been investigated in particular. They lie in the Serra da Capivara National Park in Piauí, and include the sites V compulsory and La Tina, dated using 3D terrestrial laser scanning and carbonate dating techniques. These results provide a good overview of the first occupation in the region. OSL dating allowed us to date the deposition of the quartz grains which constitute the sediments, the radiocarbon let us know the time elapsed since the death of the vegetation that gave the charcoal, and TL dating helped us to date the last heating of some artifacts, that is to say, potentially to date the anthropic activity directly. The Toca do Tira Peia, the Vale da Pedra Furada and the Boqueirão da Pedra Furada have been studied from a chronological point of view and they will be presented during the conference.
Paleoamerican Odyssey

Several possible Pre-Clovis-age artifacts have been recovered from the Big Eddy site located along the Sac River in southwestern Missouri. Three items are highlighted. These include a possible anvil, a bone fragment, and a large spall of modified chert, which are 3.84 m and 3.87 m below surface. The possible anvil was broken and manipulated in a way that makes a natural explanation dubious. The bone chert spall exhibits multiple small flake scars along one side of the bone, and a small segment is lightly rounded and polished from apparent use. The bone and chert spall were less than 3 m apart and approximately 2.5 cm vertically. Both items were separated from the possible anvil by 28 m horizontally. The bone fragment is a long bone shaft fragment split longitudinally and has a fragment appendage inset with a large spall, possibly broken. The large chert spall exhibits multiple small flake scars along one side of the bone, and a small segment is lightly rounded and polished from apparent use. The bone and chert spall were less than 3 m apart and approximately 2.5 cm vertically. Multiple radiocarbon ages obtained from charcoal samples between 3.55 m and 3.86 m in depth yielded a pre-Clovis age range between 12,590 and 11,930 14C BP.

Neal Lopinot and Jack Ray

Searching for Pleistocene-Aged Submerged Archaeological Sites Along the Glaciated Northeast. These artifact types are instrumental in interpretations of osseous and lithic materials (Graf 2010; Graf and Goebel 2009; Guthrie 1983); however, these models are often created from inference and are largely without empirical data (i.e., Guthrie 1983). The project is a proof of concept designed to experimentally produce quantitative and qualitative data to demonstrate the functionality of composite points, and create novel data sets documenting use-wear patterns on microblades and doted osseous projectile points utilized in a variety of actualistic scenarios. These artifact types are instrumental in interpretations of inter-site variability in interior Alaska, but these interpretations have never been subjected to rigorous and systematic testing. In addition, the use-wear baselines established in this project have the potential to inform on similar artifacts recovered in late Pleistocene contexts in Siberia and western Europe.

Quentin Mackie, Loren G. Davis, Daryl Fedje, Duncan McLaren and Michael Motl

Searching for Pleistocene-Aged Submerged Archaeological Sites Along Western North America’s Pacific Coast: Current Research and Future Needs

Enthusiasm for considering a coastal route of human entry into the Americas during the late Pleistocene has grown over the past decade as several key new lines of evidence have emerged. At the same time, many paleontologists, archaeologists, and geoscientists remain skeptical of the proposed marine connection. Recent studies of the late Pleistocene marine margin of the North American Northwest and beyond have highlighted the potential role that marine margin sedimentary systems could play in understanding human dispersal into the Americas. Despite the growing interest in the marine margin as a potential route of human dispersal, the evidence for human occupation of the marine margin is still ambiguous due to a lack of high-resolution marine sedimentary records that document the late Pleistocene marine margin.

Greg Maggad

Fishball and Early Paiján: Perspectives on the Early Settlement of Western South America

Fishtail and Early Paiján projectile points represent the two most recognizable Late Pleistocene artifact forms from northern Peru. These points are often encountered on the same sites, which has led to suggestions of technological specialization and distinctiveness between the two projectile forms. This poster compares the analysis of raw material use and technological patterns in the lower Lurqueque Valley, this poster argues that these two projectile forms represent distinct technological complexes produced by contemporary regional populations between 11,000-11,300 Cal BP. The recognition of distinct, contemporary early complexes has implications for our understanding of the timing and process of colonization in western South America.

Rolle D. Mandel

A Geoarchaeological Approach to the Search for Pre-Clovis Sites in North America: An Example from the Central Plains

Over the past decade the search for Pre-Clovis sites in North America has been burgeoning with several research programs. These programs are utilizing a variety of tools and techniques to identify potential sites. As a result, several potential sites have been identified. These sites are typically identified through the analysis of raw material use and settlement patterns. The question of whether these sites are pre-Clovis in age is often debated. This poster will present an example from the central plains of a geoarchaeological approach to the search for pre-Clovis sites.

The Lamb Spring Archaeological Preserve: Past, Present and Future

The Lamb Spring Archaeological Preserve (LSAP) in Douglas County, Colorado is an internationally significant archaeological site containing the bones of extinct Ice Age animals and artifacts from human occupation. During the 1980s and 1990s, the site was considered a key site in the study of human evolution and the spread of humans across North America. However, in recent years, the site has been neglected and is at risk of being lost to encroachment and development.

Maxine McNee, Craig Lee, Steve Holen, Nathan Boyless and E. James Lanktree

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Paleoamerican Odyssey

Michael McFaul, Michael D. Metcalf and Dane Knapp

A Younger Dryas. This eventing and Alluvial Interval –10.575 to −8510 cal BP: Colorado Plateau, Great Plains, Southern Rocky Mountains and Wyom

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Daniel Meatu

A Use-wear Analysis of Beveled Bone Rods from the East Wenatchee Site (45DO432), Douglas County, Washington, USA

Among the most intriguing archaeological assemblages from the late Pleistocene are Clovis-age beveled bone rods. Usually fashioned from bone or ivory, these distinctive tools have been recovered from archaeological contexts that include burials (Anzick), caves (East Wenatchee, Simon), kill sites (Sheridan Cave) and campsites (Blackwater Draw). Researchers posit a variety of theories on the function of these tools, such as wedges, “clothespins” or “clotheshing” forays, pry bars, pressure flakers, levedand wedges, composite ceremonial staffs, points, composite points, and sled runners. With at least nine published explanations for the function of these rods, we must ask: Why should such a simple tool defy explanation? This paper presents results of a use-wear analysis of 12 beveled rods recovered from the East Wenatchee Clovis site in south-central Washington State. These data are used to contrast and compare a second set of Clovis-age beveled rods recovered from the Anzick burial site in southeastern Montana. Results indicate the beveled rods formed composite tools designed to be joined together by use of a range of tools, a simple, efficient technique for joining long, cylindrical objects together. Implications of this design are presented.

Jessica Metcalfe and Fred Longstaffe

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fragments of lithic points and ivory shaft embedded in two mammoth scapulae and a tusk from the Late Pleistocene site of 38AL23 on the Scarp’s edge within variably thick packages of eolian sand deposits.-pediah of the region associated with both floods and droughts. We timeframe of tree-ring chronologies corresponds to the megafauna drive negative changes in Beringian biome and then affected resources for the region. We intend to use the data collected by Osip from the Beringian occupation of southeastern Idaho and Northern Utah. Variations in environmental conditions can be detected by studying tree ring widths and tree ring densities. The study of parasites from American archaeological sites reveals patterns of continuity and discontinuity from adjacent regions (western Beringia and central North America) are evaluated. Clovis ancestors may be present in Beringia, but they are not easily distinguishing the evolution of material cultures. Other outcomes of inquiry with different assumptions are needed to understand the anthropological problem of the colonization of the New World. Recent theoretical approaches incorporating technological organization and behavioral ecology have provided ways to explore this early record. The timeframe of tree-ring chronologies corresponds to the megafauna extinction and the collapse of Clovis culture in the Great Lakes region. Emerging high precipitation pollen records from the region indicate high moisture variability during the transition from Late Pleistocene to the Holocene. Now even higher resolution climate proxies are being developed with tree rings. We observe a strong ENSO signal in the variance of tree-ring records at many Two Creekan forest locations in eastern Wisconsin and Michigan spanning 14ka to 13ka. The timeframe of tree ring chronologies corresponds to the megafauna extinction and the collapse of Clovis culture in the Great Lakes region. Strontium isotope studies have been used to infer mobility patterns of ancient populations, but they have not been used to study the migration routes of Clovis peoples. The study of parasites from American archaeological sites reveals patterns of continuity and discontinuity from adjacent regions (western Beringia and central North America) are evaluated. Clovis ancestors may be present in Beringia, but they are not easily distinguishing the evolution of material cultures. Other outcomes of inquiry with different assumptions are needed to understand the anthropological problem of the colonization of the New World. Recent theoretical approaches incorporating technological organization and behavioral ecology have provided ways to explore this early record. The timeframe of tree-ring chronologies corresponds to the megafauna extinction and the collapse of Clovis culture in the Great Lakes region. 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Paleoamerican Odyssey

Andrew Richard

Clovis Blade and Artifact Analysis: A Projectile Point Use-Breakage Study

The use-breakage of projectile points provides researchers information on specific use, hafting style, projectile point strengths and other valuable data. This experimental archaeology research project compares the different types of use-break between Clovis and Folsom projectile points to determine their strengths and weaknesses. The goal of this experiment is to ascertain if the different use-break characteristics and the frequency of breakage of each style of projectile point can be used to determine the type of spear used by Clovis and Folsom hunters the thrusting spear or atlatl dart? This experiment will also define which projectile point is stronger, Clovis or Folsom? To answer these questions a protocol was developed using ceramics to produce projectile points consistently, in large quantities. This material mimics the characteristics of stone. Using stone has inherent problems involving production time, production numbers, consistent morphology and the expense when attempting to flintknapped large quantities of projectile points. In the use-breakage study Clovis and Folsom points were cast in porcelain, halved, attached to darts and thrusting spears and then thrown or thrust into fresh cow bones to recreate use-break in Clovis and Folsom projectile points.

Terren Richcey, Katherine Hofman, Andrea Welch, Jon Erlandson, Jesus Maldanado and Robert Fleisher

Maine, Ancient DNA, and Paleoecological Evidence from California’s Northern Channel Islands

Human occupation of California’s Channel Islands spans at least 13,000 calendar years, making the region important for understanding the initial peopling of the Americas and the coastal migration theory. Eleven sites on the northern Channel Islands date between 13,000-11,000 cal BP and dozens more date between 10,000-8000 cal BP. Faunal remains from these sites suggest that people exploited a variety of aquatic birds, shellfish, finfish, and marine mammals. Although marine mammals appear to have been important, the vast majority of these early bones are highly fragmentary and cannot be identified to family, genus, or species using traditional zooarchaeological techniques. Here we present the results of stable isotope analysis of the fish bones from the coastal archaeological sites on the Channel Islands dated to ~11,200 and ~9500 cal BP. These data illustrate the importance of individual scales to providing understand the New World subsistence strategies and terminal Pleistocene/earliest Holocene paleoecology.

Brian S. Robinson

Large and Highly Structured: Refining Spatial Patterns at Bull Brook

The Bull Brook and Pottery sites in Ipswich, Massachusetts have an unusually large and highly structured settlement plan, which includes an unusual channel and the various points that the site is situated in perpendicular and triangular relations, respectively. The site is located in the upper reaches of Paloobob and the site is an ancient site of cultural interest and has been identified as having the potential to hold significant archaeological resources. The Bull Brook site has been excavated in the past and the Pottery site is situated in a range of resources suitable for exploitation. This paper focuses on the Bull Brook site and the resulting data from the excavation. The Bull Brook site and Pottery site both have a well-developed architectural system and are characterized by a high density of artifacts and structures. The site is situated in a high-lying position and is characterized by a steep slope of the paleo shoreline to predict coastal zone preference. Results indicate a correlation between point distribution and coastal zone type. Based on the distribution of fluted points recovered from contemporary terrestrial settings, locales where major rivers intersect brooks and rivers, the bullbrook area is characterized by a range of resources suitable for exploitation. The potential exists for early Paleoamerican sites along the continental shelf submerged beneath 55-70 m of the extant Atlantic Ocean. Coastal regions with high densities of Clovis points may serve as analogues for identifying earlier sites now submerged a result of marine transgression.

Torben Rick, Courtney Hofman, Andreanna Welch, Jon Erlandson, Jesus Maldanado and Robert Fleisher

The Skyrocket Site, an Early Paleoamerican Settlement in the Potrero Mountains, San Diego County

The Skyrocket site has the most significant Paleoamerican assemblage in California currently available for research. Eighty-one artifacts from the Skyrocket site (CA-CAL-629/630) have been excavated. As a result, a second flourished flint was identified along with 35 unfinished bifaces that evidence production ending thinning, overshot flaking or both. In addition, 44 overshot flakes, a fluting flake, and a limace were recorded. The Skyrocket site has the most significant Paleoamerican assemblage in California currently available for research.

Chantel Saban

Paleoecological Perspectives on Late Paleoecological in Early Holocene Human Ecology at Paisley Caves

This experimental archaeology research project compares the archaeological record, this is an analysis of pollen recovered from sediments at Paisley M-5e Butte (35LK3404), more commonly called Paisley Caves. The Paisley Caves site is situated on a high ridge and the potential existence for early Paleoamerican sites along the continental shelf submerged beneath 55-70 m of the extant Atlantic Ocean. Coastal regions with high densities of Clovis points may serve as analogues for identifying earlier sites now submerged a result of marine transgression.

Jeffrey Simmons, Gennady Barshayvskiy and Kevin Seymour

Exposing the Region in Which the Murray-Springs Site Occurs

The Murray Springs Clovis Site, Cochise County, Arizona includes strata containing fossil assemblages dating to pre-Clovis, Clovis, and to a lesser extent, post-Clovis intervals. Moreover, an expanded SE Arizona study area includes additional Clovis-associated assemblages (Escalante, Lehn, Lehn,eno, Necko) and assemblages from both pre-Clovis and post-Clovis contexts. These assemblages, when organized and collated, the components compared and contrasted, provide an unprecedented first opportunity to examine large mammal community dynamics in the SE Arizona study area prior to, during, and, as noted to a lesser degree, subsequent to
Paleoamerican Odyssey

Abstractions (Cont.)

Mark Seeman and Garry Summers

Climatic Reconstruction: Modeling Examples of Rapid Vacillations for the Pre-Clovis and Clovis Eras

Alan Slade

Clovis: What’s the Point? Can Clovis Projectiles be Defined by Type?

C. Vance Haynes and Bruce B. Huckell

Tracing Human Movements across Siberia and into the Americas: New Insights

Abstractions (Cont.)

Linda Scott Cummings and R. A. Varney

Climate Reconstruction: Modeling Examples of Rapid Vacillations for the Pre-Clovis and Clovis Eras

R. A. Varney

Clovis occupation. Specifically, at the behalf of Clovis investigators Dr. C. Vance Haynes and Bruce B. Hackell this poster addresses four questions posed for the paleontological dataset: (1) whether the evidence points to a thriving community at the time of Clovis; or (2) whether he might have already been in decline in terms of diversity/day; (3) whether the extinction event was a slow process or a more rapid one; (4) whether particular taxa may have gone extinct before others (horses came prior to mammoths). We close with some thoughts on the factors causing the late Pleistocene extinction event.

Linda Scott Cummings and R. A. Varney

Paleoamerican Odyssey

Archaeological Contributions to Settlement of America Models

Adriana Schmidt Dias and Lucas Bueno

Device for forage requirements, such as those for mammoth and mastodons, the birch forest in the local drainages at that time, suggesting a vastly occupation. The stratigraphic pollen record indicates a well-developed Monument is sparse pinyon/juniper woodland (mostly juniper), with that different? Today vegetation at the eastern edge of Dinosaur Nation-put can be viewed either as "still" images or aggregated onto landscape

Vacillation between extremes, which can be seen in the record and is used to infer the potential for animal population isolation in remote environmental areas. Creating an index of temperature difference identify time periods likely to have been most risky and provides a tool for examining hypotheses. Changes in seasonal distribution of precipitation also have the potential to dramatically alter vegetation communities, thus the potential for new variables in herd distribution and human decision-making. Model output can be viewed either as "still" images or aggregated onto landscape maps and viewed at 1 sec per century, creating the illusion of animation and producing a valuable tool for examining potential animal and human movement across the landscape.

Linda Scott Cummings and R. A. Varney

You What Is You What Get, or to Be?

Can we depend on our eyes to judge the landscape of the past? Is what we see today an accurate representation of the landscape and vegetation community distribution, just minus the large game? If not, what differences are apparent between today and the past. For the first time I realized that different! Today vegetation at the eastern edge of Dinosaur National Monument is sparse pinyon/juniper woodland (mostly juniper), with few shrubs and grasses. The climate is quite different than today.

By analyzing the stratigraph dif- ferentiation and the pollen record, it is possible to identify specific locations that have been occupied by Clovis people. In this poster we present a summary of the Early Paleoindian component from the Topper Site in Allendale, South Carolina. The Topper Site is recognized for its contributions to the early Paleoindian investigations of human existence through the study of its Paleoindian components. A key feature of the Topper research program is its success in incorporating the interested public in the excavation process, and enhancing the partnership of public and professional archaeologists dedicated to a common research goal. In 2011, the South Carolina Archaeology Public Outreach Division (SCAPOD) developed and installed the permanent exhibit "Search- ing for Our Beginnings: Public Archaeology at the Topper Site" at the University of South Carolina Salkehatchie library. This exhibit presents Topper research and partnerships to the local Allendale community, the university community, and visitors to the area.

Zachary Singer

Ohomowauke: An Early Paleoindian Site in Southeastern Connecticut

This poster presents a summary of the Early Paleoindian component at the Ohomowauke site (22-120). The site is located near the town of Westport, in the southeastern Connecticut. The site was excavated in 1980-81 and, from 1987-1995,Ohomowauke was also the focus of extensive study. The site is located in the northeastern Connecticut. The site was excavated in 1980-81 and, from 1987-1995,Ohomowauke was also the focus of extensive study. The site is located in the northeastern Connecticut.

Erika Stokey, Meg Guillard, Helena Ferguson and Tom Pertierre

Presenting Paleo: Sharing Our Past

The Topper Site in Allendale, South Carolina is recognized for its con- tributions to the early Paleoindian investigations of human existence through the study of its Paleoindian components. A key feature of the Topper research program is its success in incorporating the interested public in the excavation process, and enhancing the partnership of public and professional archaeologists dedicated to a common research goal. In 2011, the South Carolina Archaeology Public Outreach Division (SCAPOD) developed and installed the permanent exhibit "Search- ing for Our Beginnings: Public Archaeology at the Topper Site" at the University of South Carolina Salkehatchie library. This exhibit presents Topper research and partnerships to the local Allendale community, the university community, and visitors to the area.

At the site dates to ca. 13,000 B.P. and has yet to produce any large tool or projectile points. The site is located in the southeastern Connecticut. The site was excavated in 1980-81 and, from 1987-1995,Ohomowauke was also the focus of extensive study. The site is located in the northeastern Connecticut.

Steven Shockey

The Production of Obsidian Archaeological Obiids in Rio Grande Quaternary Sediments, Jemez Mountains to San Antonio, New Mexico: Inferences for Paleoamerican Procurement and the Age of Sedimentary Basins

The secondary distribution of sources of archaeological obsidian through long term erosion is an extremely important factor in the understanding of procurement in the prehistory of the northwestern Southwestern, as in any arid region where high velocity stream erosion is common. In the New Mexico/Chihuahua region of the southwestern, this is a particularly important issue where at least seven sources and chemi- cal groups are present in different proportional combinations along the Rio Grande for well over 700 stream kilometers from the El Rechuelos source in the northern New Mexico to Chihuahua. This poster presents a summary of ten years of research collecting and analyzing thousands of samples at primary obsidian sources at Mount Taylor, the Jemez Mountains, and secondary sources along the Rio Grande from Espa?ola to San Antonio, New Mexico, as well as an investigation of the presence of these sources in sites dating from the Clovis Paleoindian period (ca. 13 kyA) to the Colonial Period (ca. A.D. 1540-1840), especially the former.

Erika Stokey, Meg Guillard, Helena Ferguson and Tom Pertierre

Paleoamerican Odyssey

Erika Stokey

Clave: What’s the Point? Can Clovis Projectiles be Defined by Type?

There is at present a need for Clovis projectile point taxonomy to be more well defined and until archaeologists and analysts agree on what is and what is not a Clovis point. There will always be this problem in definition due to the fact that some archaeologists and researchers call certain projectile points Clovis and others assign their projectile points to different culture or type, even though they appear chronologically and technologically contemporaneous (David Melter pers. comm.). As an archeologist and Ph.D. in Paleoanthropology and Archaeology, the projectile point has often been the primary, if not only, di-
Paleoamerican Odyssey

Unrecognized and that taphonomy will become increasingly important for differentiating natural versus human-origin sites. These factors demand new approaches to geochronology and geology because pre-11,000 yr C+O records are unlike younger ones. Millimeter-resolution stratigraphy, genus-level identification of fossils, and molecular-level AMS 14C dating with ±15 yr precision must replace current dating and excavation techniques. As successive age barriers are removed, methods that statisticians must acknowledge that these results in the greater context of Alaskan archaeology, its implications for the first Clovis date in the American Southeast that is directly associated with diagnostic Clovis lithic artifacts in a buried context. This poster presents the hypothesis to better understand Clovis hunter-gatherer mobility by determining the movement of raw material and artifacts from their geologic origin. Domestic Architecture of the Terminal Pleistocene to Early Holocene in the Central Andes Domestic architecture is perhaps the least common feature documented on Paleoamerican sites in the New World. And yet, among sites of the Terminal Pleistocene to Early Holocene in the Central Andes, many such features have been recorded. In one region in particular, the lower Loquetterque Valley in northern Peru, structures of five different forms have been identified among Preceramic sites dating between ca. 13,000-9,000 yr BP. This poster explores the significance of these structures for the understanding of colonization and regional development in this pre-Clovis socio-economic organization within the context of changing environmental conditions. Suggestions regarding future avenues of investigation are also present. Domestic Architecture of the Terminal Pleistocene to Early Holocene in the Central Andes Domestic architecture is perhaps the least common feature documented on Paleoamerican sites in the New World. And yet, among sites of the Terminal Pleistocene to Early Holocene in the Central Andes, many such features have been recorded. In one region in particular, the lower Loquetterque Valley in northern Peru, structures of five different forms have been identified among Preceramic sites dating between ca. 13,000-9,000 yr BP. This poster explores the significance of these structures for the understanding of colonization and regional development in this pre-Clovis socio-economic organization within the context of changing environmental conditions. Suggestions regarding future avenues of investigation are also present. Domestic Architecture of the Terminal Pleistocene to Early Holocene in the Central Andes Domestic architecture is perhaps the least common feature documented on Paleoamerican sites in the New World. And yet, among sites of the Terminal Pleistocene to Early Holocene in the Central Andes, many such features have been recorded. In one region in particular, the lower Loquetterque Valley in northern Peru, structures of five different forms have been identified among Preceramic sites dating between ca. 13,000-9,000 yr BP. This poster explores the significance of these structures for the understanding of colonization and regional development in this pre-Clovis socio-economic organization within the context of changing environmental conditions. Suggestions regarding future avenues of investigation are also present. Domestic Architecture of the Terminal Pleistocene to Early Holocene in the Central Andes Domestic architecture is perhaps the least common feature documented on Paleoamerican sites in the New World. And yet, among sites of the Terminal Pleistocene to Early Holocene in the Central Andes, many such features have been recorded. In one region in particular, the lower Loquetterque Valley in northern Peru, structures of five different forms have been identified among Preceramic sites dating between ca. 13,000-9,000 yr BP. This poster explores the significance of these structures for the understanding of colonization and regional development in this pre-Clovis socio-economic organization within the context of changing environmental conditions. Suggestions regarding future avenues of investigation are also present.
Paleoamerican Odyssey

Debra L. Gilmore and Reimar Gehrmann

The potential for human occupation of the Yucatan Peninsula has been explored from the mid-1960s. Before that time, the coastal and interior regions of the Yucatan Peninsula were thought to be uninhabited during the Late Pleistocene. However, in the 1970s, an automobile accident caused the discovery of a Late Pleistocene human skull in a cave on the Yucatan Peninsula. Since that time, there have been numerous discoveries of human remains from the Late Pleistocene and Holocene in the Yucatan Peninsula. These discoveries have added to our understanding of the human prehistory of the Yucatan Peninsula and have implications for our understanding of human migration and settlement patterns in the Americas.

Human Remains of Late Pleistocene-Early Holocene Age from Submerged Caves of the Yucatan Peninsula

González and Wolfgang Stinnesbeck

The discovery of human remains from submerged caves on the Yucatan Peninsula has provided new insights into the prehistory of the Americas. These remains have been dated to the Late Pleistocene and Early Holocene, and they have been studied using a variety of techniques, including radiocarbon dating, stable isotope analysis, and pollen analysis. The results of these studies have provided new information about the environmental and climatic conditions during this time period, as well as the behavior of the early human populations that inhabited the Yucatan Peninsula.

The Paleoamerican Odyssey: a Reassessment of the Role of the Canoe Ice-Free Corridor in the Evolution of Early Humans

Mark E. Swisher, Dennis L. Jenkins, Llionel E. Jackson, Jr., Fred M. Phillips, and Mark V. Westgarth

The idea that late Paleoindians might have successfully migrated south from Alaska along Boothia’s ferry gap via the Bellefourier and Laurentide ice sheets was first proposed by W.A. Johnston in the mid-1930s. Since that time, the hypothesis that the canoe ice-free corridor (CIFC) played a critical role in the migration of early humans into the Americas has been challenged by new archaeological and paleoenvironmental evidence. In this paper, we re-examine the evidence for the CIFC and discuss its implications for our understanding of human migration into the Americas.

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Paleoamerican Odyssey

feature artifacts from each of these sites and will give a brief description sites, including the Dent Site, the Fox Site, and the Drake Cache Site.

The South Platte River Valley in eastern Colorado has experienced understanding of the late Pleistocene colonization of the Americas and mastodon dated to 13,800 yr B.P. This evidence, combined with the 13,500 and 15,500 yr B.P. At the Manis site in northwestern Wash- horizons. Beneath the Clovis levels at the site are over 18,000 artifacts into and across the Americas.

Andrew D. Wickert, Kelly R. Monteleone, Jerry X. Mitrovica and Robert S. Anderson

Reconstructing the Paleogeography of Beringia

Understanding the human past in Beringia requires accurate base maps of the rapidly-changing paleogeography of this now-submerged region. We outline the cues, somewhat misunderstood, that are key to interpreting the Last Glacial Maximum to the present. While melting ice sheets led to global mean sea level rise, relative sea level change across Beringia was nonuniform due to (1) uplift of formerly glaciated areas, (2) subsidence of regions inundated by rising sea levels, (3) broad West to East sea level variability due to the gravitational influence of the North Ameri- can ice sheets, and (4) large-scale divergence from mean sea level due to changes in Earth rotation associated with deglaciation. Sea level calculations are subject to uncertainties in past ice sheet geometries, so we use a suite of ice sheet models to estimate the range in past shorelines through time. We then combine these with a paleoclimate general circulation model (TasCE-21C8) calibrated to modern data to assess past temperatures, precipitation, and evapotranspiration across Beringia, and use the latter two to reconstruct past river networks and discharges. These new maps constitute our current best estimate of Beringian paleogeography, and may be used to guide future archaeological studies.

Kristina Wiggins and William Andrefsky, Jr

Analyzing Population Data to Recognize Human and Natural Frag- tures in Brittle Solids

Anchored iron artifacts recently recognize elaborately shaped stone tools and cores made from chipped tool stone. They can often easily recognize debris fragments from the production of stone tools when those items are found within the cultural horizon databases. However, when fragments of cryptocrystalline raw material are found at source locations or when they are found as isolates, some speci- mens are often less easily recognized as human production debris or human-made artifacts. In this study four populations of chert debris (naturally exfoliating fragments, tumbled cobble fragments, hard-ham- mered flakes, and cortical flakes), were compared in order to determine the characteristics most useful for dis- criminating among the possible prehistoric behavioral contexts. Results of the study indicate that features such as platform type, flake type, dorsal cortex amount, and flake size manifest differently in natu- rally occurring debris vs. prehistoric debris. These results have been pulled from a sample population perspective. Specimens viewed individually are less diagnostic.

Eke Willerslev

Genetics as a Means for Understanding Early Peopling of the Americas

This paper will report the results of tephra analyses including raw material sourcing suggest the initial migration of the rapidly-changing paleogeography of this now-submerged region. We outline the cues, somewhat misunderstood, that are key to interpreting the Last Glacial Maximum to the present. While melting ice sheets led to global mean sea level rise, relative sea level change across Beringia was nonuniform due to (1) uplift of formerly glaciated areas, (2) subsidence of regions inundated by rising sea levels, (3) broad West to East sea level variability due to the gravitational influence of the North Ameri- can ice sheets, and (4) large-scale divergence from mean sea level due to changes in Earth rotation associated with deglaciation. Sea level calculations are subject to uncertainties in past ice sheet geometries, so we use a suite of ice sheet models to estimate the range in past shorelines through time. We then combine these with a paleoclimate general circulation model (TasCE-21C8) calibrated to modern data to assess past temperatures, precipitation, and evapotranspiration across Beringia, and use the latter two to reconstruct past river networks and discharges. These new maps constitute our current best estimate of Beringian paleogeography, and may be used to guide future archaeological studies.

One such a priori framework posits that costly paleoethnobotanical (PEB) recovery and analyses are not worthwhile when working in acidic, sandy soils; as organic remains are destroyed far too rapidly to allow for differential preservation by inherent chemical and mechanical processes. This poster demonstrates that these destructive processes are not always of concern, especially if the PEB material is possible from select colluvial sediments, hereto thought to be organically sterile. Moreover, such efforts can yield enough viable carbon to establish an absolute chronology for archaeological sites where, previously, none was thought possible. Clovis-aged carbonized plant remains were recently recovered from the Spring Creek (a chert quarry in South Carolina) and dated by AMS. The data are shown to: (1) quantify the age of associated lithic deposits; and (2) independently corroborate Topper’s vertical stratigraphic integrity. One too, the utility of paleoethnobotany is narrowly conceived as only able to address matters of subsistence. PEB data, however, can address a far greater range of questions – the answers to which better inform the largely unresolved debates surrounding the nature of early migrations into and across the Americas.

Michael Waters

Search in the First Americans–What the Friedkin Site, Texas, Manis Site, Washington, and Others Tell Us About the First Americans

The Friedkin site, located in central Texas, is a stratified site with archaeological sites where, previously, none was thought possible. Clovis-aged carbonized plant remains were recently recovered from the Spring Creek (a chert quarry in South Carolina) and dated by AMS. The data are shown to: (1) quantify the age of associated lithic deposits; and (2) independently corroborate Topper’s vertical stratigraphic integrity. One too, the utility of paleoethnobotany is narrowly conceived as only able to address matters of subsistence. PEB data, however, can address a far greater range of questions – the answers to which better inform the largely unresolved debates surrounding the nature of early migrations into and across the Americas.

Thomas Westfall, Grayson Westfall and Rick Miller

Evidence for Clovis Occupation in the South Platte River Valley in Eastern Colorado

The South Platte River Valley in eastern Colorado has experienced human occupation since at least Clovis times. A number of Clovis sites, including the Dent Site, the Fox Site, and the Drake Cache Site have been discovered in the South Platte drainage area. This poster will feature artifacts from each of these sites and will give a brief description of the site. Each time the South Platte River floods, numerous Clovis artifacts are recovered in the river gravels, along with the fossilized bones of giant sloth, camel, mammal and others. As evidenced by the stone tools that have been found within the South Platte River Val- ey, Clovis people used a variety of widely scattered stone sources from which to knap their points and tools. This suggests either signif- icant logistical travel developed trade networks between Clovis peop- les and the landscape of the Americas comes from classical studies of the archaeological record and modern genetics. Anc- ient genetic studies represent another and largely unexplored means by which crucial new information can be obtained. However the field is due to the rarity and geographic extent of Paleo-period cultures it is of- ten problematic for archaeologists to include a large sample of artifacts within a single study. The time required to gather such a sample makes substantial intra-region studies difficult and time consuming. One way to mitigate these complications is to perform analysis on scale images of the original artifact found in published sources. Use of images can greatly increase the sample size and speed up the processing of data from many institutions. While the convenience, and accuracy and replica- bility of using images is often questioned. This study seeks to better understand the biases and accuracy of using scaled artifact images from published are proxy data for actual specimens. Measurements from publications, scanned images of the actual artifacts, and the artifacts themselves are compared to assess the precision of metric variables re- corded by these techniques. This study focuses on Clovis period hafted bifaces from various parts of North America. It is determined that both scanned images and images from publications can be used as replace- ments for analysis of the actual artifact when making many types of linear measurements.

Janice Bernadette Wood and Patrick Warrren O’Grady

Tephras: Tracing Paleoecological Change. An Example of Volcanism and Cultural Chronologies at Rimrock Draw Rockshelter (35HA3855), Harney County, Oregon, U.S.A.

Lahontanian conditions were collected during the 2011-2012 ex- aminations at Rimrock Draw Rockshelter indicate regional resilient and pyroclastic surge materials are collected in “traps” influenced by both mechanical and chemical weathering processes. These various material accumulations in range from microstratigraphic views observable only through particle size and geochemical analysis to massive bar deposits of Mazama ash in the steam channel adjacent to the rockshelter. Thus far, identified ash samples include Newberry (1000 RCBF), Mazama O (6850 RCBF), and St Helens SG (13,000 RCBF), the latter collected from buried deposits above fragments of camelled tooth and a shacked- ony flake tool. Trenching of both fluvial and eolian deposits is planned for 2013 to explore the relationship of erosion and deposition processes and deposition mechanisms. A stratigraphic or mid-Wisconsinal tephras are redeposited between 19,000 and 15,000 years ago. The biface may have been incorporated then or even during a much later period.

Brian T. Wysal

By Land or Sea? Human Colonization of Southern Alaska

The early probolitides of the Sukok River region provides important regional information about the movement of small-scale foraging soci- eties into southeastern Alaska as well as specific data concerning lithic use. Tupper Creek is strategically located between the Ninana Valley in the central Alaska Range and the earliest occupations of the Pacific coast. If humans colonized eastern Beringia from a coastal or inland route during the terminal Pleistocene, then evidence of this should be found in the archaeological record of the Susitna Valley. Results of lithic analyses including raw material sourcing suggest the initial migration into southeastern Alaska came from north of the central Alaska Range and not from the coastal environments of Cook Inlet. Further re- search in the region offer a refined understanding of early prehistoric colonizing patterns and continue to illuminate important coastal versus coastal migration hypotheses for the peopling of the New World.

Alexander Yarnell, Danny Welch and Ted Goebel

Obisidan Transport to Bonneville Estates Rockshelter, Nevada: Impli- cations for Paleoindian Mobility

Bonneville Estates Rockshelter contains a series of well-preserved cultural occupations spanning 13,000 years of prehistory. In this poster we present results of XRF geochemical analysis of obsidian from the shelter, examining how procurement changed through time and how hunter-gatherer technological and settlement organization evolved in response to changing conditions. We focus primarily on the terminal Paleoindian to middle Holocene warming and secondarily on patterns during the late Holocene (late Archaic, Fremont, and post-Fremont periods).

Kate Youke and Julie Esdale

Paleogeography and Early Archaeology of the Tanana Flats, Central Alaska

The landscape of the Tanana Flats in central Alaska during the terminal Pleistocene and early Holocene (13,000-12,000 calendar years ago)
determined the route early hunter-gatherers traveled through eastern Beringia. Evidence of short-term camps and hunting lookouts appear on glacial outwash terrace edges, stabilized vegetated sand dunes, lakeshores, and bedrock hills and ridgelines. This terrain evolved over time; rivers migrated and lakes fluctuated, prominent uplands were established, and flora and fauna transformed as the climate changed. These changes shaped large game movement and hunter-gatherer site location choices and settlement patterns. The paleogeography of this region is mapped by reunifying stratigraphic data to show how and when gravels were deposited, sediment accumulated, and soils cemented the landscape that contains late Pleistocene archaeology. The oldest radiocarbon date derived from archaeological sites in the area dates to 11,600 ± 50 RCYBP. This poster reconstructs the paleogeography of the Tanana Flats, providing insight into the implications the changing environment had on human behavior and adaptation.

David Yesner

Changes in Faunal Exploitation Patterns across the Younger Dryas Boundary, Eastern Beringia

Following initial colonization at the end of the late Pleistocene “Birch Period,” early inhabitants of eastern Beringia exploited an eclectic fauna including a wide diversity of bovids, cervids, small game, and birds under mesic conditions associated with the beginning of the “Poplar Rise” in the terminal Pleistocene. The onset of the Younger Dryas, although in many ways less marked than outside northeastern North America, created arid, cool, windy conditions that resulted in reductions of human populations in eastern Beringia. Within a few hundred years after the onset of the Younger Dryas, human groups became re-established, but with an exploitation pattern more narrowly focused on bison. This pattern is even more obvious in the somewhat harsher climates of the southern Yukon than in interior Alaska. The reorganization of human society linked to this pattern is reminiscent of that associated with the Tanana Flats, providing insight into the implications the changing environment had on human behavior and adaptation.

Robert M. Yohé II, Jill K. Gardner, Christopher A. Duran and Beau DeRoer

Lake China Revisited: An Assessment of the Recent Discovery of a Cluster of Clovis Points in Indian Wells Valley on the Naval Air Weapons Station, Southeastern California

During a recent archaeological survey conducted by Epsilon Systems Solutions, Inc., on the Naval Air Weapons Station along portions of the east side of Healy Lake in the Tanana River basin of central Alaska, provides a record of human occupation spanning the late Pleistocene and the Holocene, dating as early as 13,000 cal BP. Recent excavations have uncovered a dense concentration of artifacts, including microblades, lanceolate bifaces, and triangular bifaces. The oldest component provides clear evidence for occupation on a stable Rolling-Altered surface, immediately prior to rapid eolian deposition during the Younger Dryas. It displays characteristics distinct from those of subsequent occupations, indicating a pattern of mobility, raw material procurement, and site activities that may reveal information about human adaptations to the environmental conditions of the late glacial. Linda’s Point is located 1.25 kilometers from the Village site, and exhibits similarities in geological context and cultural materials, providing an opportunity to corroborate research performed there since 1980, and to contrast the nature of occupation at two different locations along the Tanana. Here we present the results of geological and lithic analysis, focusing on occupations dating to Beringian times, and their place within the wider context of Beringian occupation of interior Alaska.

David Zeunah, Robert G. Elston and Brian F. Codding

Resource Use, Patch Residence Time and the Sexual Division of Labor among Great Basin Foragers during the Pleistocene-Holocene Transition

We use models from behavioral ecology to consider how paleoenvironmental variability of the Pleistocene-Holocene Transition (PHT) structured patch use and the sexual division of labor among Great Basin foragers. We argue that large ungulates were tethered to wetlands, allowing PHT foragers to reliably intercept and procure high return prey. Ethnographic evidence suggests that sexual division of labor would have diverged as artiodactyl populations were locally depressed, explaining the breadth of prey apparent in PHT faunal assemblages. However, abundant wetlands even during the most climatically challenging intervals of the PHT, would have kept travel time between wetlands constant, encouraging regular residential moves and short residence times. Patch choice models predict that foraging strategies would have focused on resources requiring low handling costs explaining the breadth of prey apparent in PHT faunal assemblages.

Robert M. Yohé, Jill K. Gardner, Christopher A. Duran and Beau DeRoer

Linda’s Point Site, Healy Lake, Alaska

The Linda’s Point site, located on the shores of Healy Lake in the Tanana River basin of central Alaska, provides a record of human occupation spanning the late Pleistocene and the Holocene, dating as early as 13,000 cal BP. Recent excavations have uncovered a dense concentration of artifacts, including microblades, lanceolate bifaces, and triangular bifaces. The oldest component provides clear evidence for occupation on a stable Rolling-Altered surface, immediately prior to rapid eolian deposition during the Younger Dryas. It displays characteristics distinct from those of subsequent occupations, indicating a pattern of mobility, raw material procurement, and site activities that may reveal information about human adaptations to the environmental conditions of the late glacial. Linda’s Point is located 1.25 kilometers from the Village site, and exhibits similarities in geological context and cultural materials, providing an opportunity to corroborate research performed there since 1980, and to contrast the nature of occupation at two different locations along the lakeshore. Here we present the results of geological and lithic analysis, focusing on occupations dating to Beringian times, and their place within the wider context of Beringian occupation of interior Alaska.

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