Overlooking the scene of a bison jump site, Two Medicine River Valley, Montana. The cliff in the foreground marks the end of multiple funnel-shaped drive lines that extend onto the prairie. Bison carcasses were butchered and processed on the small floodplain below. Radiocarbon dates on bison bone located below the cliff indicate its use between A.D. 1400–1500. Large and small residential sites occur in the distant background.
I recently marveled at the new Bryant Bannister Tree-Ring Building and the tradition of excellence it represents in geochronology at the University of Arizona, when I finally came around to reading an old issue *The Kiva* dedicated to the expansion of geochronology, wherein Emil Haury also predicted the creation of the Arizona Accelerator Mass Spectrometry Laboratory.

*The Kiva* published Emil Haury’s lecture, “Exploring the Corridors of Time” in 1952, which marked the 25th Liberal Arts Lecture at the University of Arizona. Haury prefaced his lecture by debunking Shakespeare’s quote, “What’s past is prologue,” a phrase engraved on the National Archives Building in Washington, D.C. After dismissing the notion that history repeats itself, he advocates that anthropologists bear the atomic-age responsibility of bringing time depth to the study of our species. In making this argument, Haury gives some attention to the concept of time, arguing that metaphysical attempts to prove that time is unreal contradict culture-historical thinking. The interpretation of archaeological data, according to Haury, relies on a two-dimensional framework that sets time and space apart to map time-space markers (artifacts). He writes, “In simple terms, the proven existence of a temporal order of events is abundant testimony that time is real.”

Time is a dimension in which events are ordered from the past, through the present, and into the future. To appreciate the rea...
cesses, the growth of tree rings, radioactive decay, and other clocks. Archaeologists simply draw new boundaries on a preexisting chronology based on taxonomy (artifact types), and map the time-space distribution of like-artifacts. Thus, we arrive back where Doc Haury ended.

Perhaps it’s not important to concern ourselves with whether time is real. We would like to know the nature of the various clocks we use to measure time, ... minuscule at the scale of human events. On the other hand, to practice archaeology without thinking about time is opportunity lost. We may be condemned to explore the past through the present, but what we find becomes our future.

I wish to thank the Richard B. Woodbury and Nathalie F. S. Woodbury estate and everyone who participated in the silent auction. I’m told that you did a wondrous job for the ASM library this year! Also, please help the Arizona Archaeological and Historical Society support the past, present, and future by contributing to the Society’s Research Grant and Scholarship Fund. The application period begins in the new year, and the board has pinpointed competitive research as one of its central goals for the Society.

—Jesse Ballenger

AAHS LECTURE SERIES

All meetings are held at the University Medical Center, Duval Auditorium
Third Monday of the month, 7:30–9:00 p.m.

Dec. 17, 2012: Jesse Ballenger and María Zedeño, It’s Monumental, but It’s Flat: The Stone Architecture of Bison Hunters in Northwestern Montana [Note: This lecture will be held at ASM in conjunction with a holiday party/silent auction.]

Jan. 21, 2013: Suzanne F. Fish, Paul R. Fish, and Mark D. Elson, University Indian Ruin: Changing Views of the Hohokam Late Classic Period in the Tucson Basin

Feb. 18, 2013: Barbara Mills, From Typology to Topology: Social Networks and the Dynamics of the Late Prehispanic Southwest

Mar. 18, 2013: Paul Minnis, The Boring Side of Paquime

Apr. 15, 2013: Carolyn O’Bagy Davis, Goldie Tracy Richmond: Trapper, Trader and Quiltmaker

UPCOMING AAHS FIELD TRIPS

AAHS membership is required to participate in field trips. Prospective members may attend one AAHS field trip prior to joining.

Tour of the Prison Camp Historic Site, Mt. Lemmon
December 8, 2012
Discover the historic structures of the Prison Camp in a tour by Arizona Site Steward Ralph Mersiowsky and Coronado National Forest Archaeologist Bill Gillespie. They will share the results of a multi-year effort to identify the remaining features and document the camp.

We will meet at the site at 9:00 a.m., and should finish around noon. Bring a picnic if you like. Tour is limited to 20 people. To register, email Katherine Cerino at kcerino@gmail.com.

If you signed up for this field trip, please send an email to Katerine Cerino at kcerino@gmail.com. Unfortunately, the sign-up sheet has gone missing.

Amerind Foundation Back Room Tour
December 15, 2012
This will be a half-day trip to visit the Amerind Foundation, located east of Tucson, on Saturday, December 15. We will meet at 9:00 a.m., at the Houghton Road exit off Interstate 10 East (northwest side) to carpool.

We will then drive to the Amerind Foundation where we will meet Dr. Eric Kaldahl at 10:00 a.m., who will give us a gallery tour and behind-the-scenes look at the Amerind’s collection in its new storage facility. The tour will take about 2 hours and is limited to 20 people. Plan to bring a picnic lunch. To register, contact Christine Lange at 520.792.1303, or clange3@msn.com.

University Indian Ruin
February 23, 2013
Drs. Paul and Suzanne Fish will lead a morning tour of University Indian Ruin, the site of the current University of Arizona Field School. This 13-acre property, located in Indian Ridge Estates, was a gift to the School of Anthropology in the 1930s, and includes one of the last remaining Hohokam Classic period platform mound sites in the Tucson Basin (circa A.D. 1325–1450). Tour is limited to 20 people and involves moderate walking over uneven ground. To sign up, contact Lynn Ratener at LynnRatener@cox.net.

Follow AAHS on Facebook at: www.facebook.com/pages/Tucson-AZ/Arizona-Archaeological-and-Historical-Society
**AAHS HAPPENINGS**

**TOPIC OF THE DECEMBER 17 GENERAL MEETING**

**It’s Monumental, but It’s Flat: The Stone Architecture of Bison Hunters in Northwestern Montana**

by Jesse A. M. Ballenger and María N. Zedeño

Monumental architecture, such as pyramids and platform mounds, is usually vertical, and it symbolizes power and the conspicuous consumption of human energy. Our modern landscape shows that vertical monuments are generally accompanied by expansive spaces where energy is extracted, features that we describe as horizontal monuments. We extend this relationship into the prehistoric past to demonstrate the complex social behavior of prehistoric bison hunters. Our example is the Two Medicine River Valley of northwestern Montana, a valley that was communally visited by bison-hunting societies during the Old Women’s phase, circa A.D. 1000–1700.

In 2012, The Kutoyis Archaeological Project (KAP) mapped architectural features that are nearly imperceptible at the scale of individual rock piles and tipi rings, but that connect to form vast webs of bison drive lines, residential camps, tombs, and monuments built by a flourishing society of bison hunters only centuries before European contact. More than 6,500 individual cairns were point-located this year to reveal a glimpse of what may be the most complete bison drive line systems yet documented in the Northwestern Plains, overprinted by the modern landscape of the Blackfeet Reservation. Complete drive line systems included more than simple V-shaped features, and in some cases, appear to encapsulate entire basins in a predictable manner. We discuss the subtle monumentality and complexity of these ephemeral features in relation to intensified bison hunting during the Old Women’s phase.

**Suggested Reading:**

Brink, J. 2008 *Imagining Head-Smashed-In: Aboriginal Buffalo Hunting on the Northern Plains.* Athabasca University Press, Edmonton, Canada.


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**Call for Papers and Workshops for the 2013 Arizona Historic Preservation Conference**

The 11th annual Arizona Historic Preservation Conference, which brings together archaeologists, tribal members, architects, planners, and preservations of all varieties, will be held at the Mesa Hilton Inn on June 12–14, 2013. We invite archaeologists to submit ideas for topics, speakers, or workshops they would like to see at this year’s conference. The theme is: *Making Preservation Relevant: The Past in Future Tense.* Please contact Sarah Herr at sherr@desert.com, or Ann Howard at avh2@azstateparks.gov, by December 14, 2012.

For more information about the conference, visit www.azpreservation.com, or “Like” Arizona Historic Preservation Conference on Facebook.

**2012 T-Shirts Available Online**

The new AAHS T-shirts, designed by Janine Hernbrode, featuring Ho-hokam burden carriers over a petroglyph design from Cerro Prieto, are now available through our online store at www.az-arch-and-hist.org. The T-shirts, which are available in both a traditional cut and a more tailored women’s cut, are $18.00 (including shipping). The system will create an online account for any purchaser for whom AAHS does not already have an email address. If you have difficulty making a purchase from our online store, contact Vice-President for Membership, Mike Diehl at mdiehl@desert.com.
On September 21, 2012, President Barack Obama utilized his authority under the 1906 Antiquities Act to declare Chimney Rock Archaeological Area a National Monument. Chimney Rock National Monument, located approximately 17 miles west of Pagosa Springs in southwestern Colorado, will remain under the management of the U.S. Forest Service. The monument designation is the culmination of several years of concentrated effort by the Chimney Rock Interpretive Association, the local community, political leaders, tribal leaders, archaeologists, and others for the area to be granted the recognition and protection it deserves.

The centerpiece of the newly designated monument is the Chimney Rock Great House. In 2009, Steve Lekson from the University of Colorado, Boulder, was asked to conduct excavations and reduce fill levels at the Great House in advance of stabilization work. The University of Colorado has a history of work at the Chimney Rock Archaeological Area, with excavations and surveys conducted by Dr. Frank Eddy and students at the Great House and some of the community sites in the 1970s. More recently, Dr. McKim Malville pioneered our understanding of the site as an astronomical observatory. Dr. Lekson asked me to direct the excavations that would ultimately comprise the bulk of my dissertation research. Considerable stabilization work was completed after the conclusion of our field season. The Forest Service has also removed a historic fire tower, restoring the historical integrity of the landscape.

Chimney Rock Great House is notable on several accounts. First, the location of the site is absolutely spectacular. The phrase “location, location, location” could not be more apt. The Great House was constructed on a narrow mesa approximately 800 feet from the floor of the Piedra River Valley and adjacent to the two towering stone pillars of Chimney Rock and Companion Rock. From the mesa top, the inhabitants of the Great House could have seen for miles; in fact, a line of site communication system between Chimney Rock and Chaco Canyon, New Mexico, via a repeater station on Huerfano Butte has been documented. The mesa top can only be accessed via a narrow and steep strip of land, at the top of which was constructed a “guard house,” presumably intended to grant or to deny access to visitors. In the Chaco era, the approach to the high mesa and great house may have been defined by a formal stairway.

The site was constructed in the eleventh century, and at first, the area was very sparsely populated. Then, seemingly quite rapidly and in concert with the Chacoan presence on the high mesa, population exploded and the stone chimneys were surrounded by a community of individuals living in homes that were architecturally very different from the Great House above. Frank Eddy has called the small, circular homes that the “regular” people lived in below the Great House, “crater houses;” these structures are essentially aboveground pithouses made from stone. When the Chaco System collapsed, the area appears to have been depopulated rather quickly, and with no evidence of violence. Unlike most Chaco outliers, the Chimney Rock Great House was not inhabited in the post-Chaco era. This historical trajectory presents unparalleled opportunities to understand a Chacoan colony, uncomplicated by later occupation.

The location of the Chimney Rock Great House appears to have been carefully chosen in reference to the Major Lunar Standstill cycle. Approximately every 18-19 years, from the vantage point of the Great House, the moon can be seen rising between the adjacent stone pillars. Tree ring dates, coupled with evidence for Chacoan observation of solar and lunar cycles at other locations, add another dimension to the connection between Chimney Rock and lunar cycles. Eddy in 1970, and then Todd and Lekson in 2009, recovered tree ring dates from years in which major

(continued on page 10)
lunar standstills occurred, most notably A.D. 1076 and 1093. These dates indicate that work crews were cutting and processing wood to integrate into the Great House during the ritually charged astronomical phenomenon. Chimney Rock Great House may have been constructed as an astronomical observatory built to observe the lunar cycles.

Todd and Lekson also recovered very early and intriguing dates, a cutting date of 1011, and a near cutting date of 1018. These dates provide additional support for the inference of a connection between Chimney Rock and the moon. A minor lunar standstill occurred in 1011, and a major lunar standstill occurred in 1018. These dates are earlier than any other tree-ring date recovered from the Chimney Rock Archaeological Area. It is possible that an early structure was built atop Chimney Rock Mesa to observe the moon. Wood from this early structure may have been integrated as a meaningful component of the Great House, special wood from special years. Or, the Chimney Rock Great House could have been built much earlier than previously thought, at the same time as Pueblo Alto in Chaco Canyon. Additional tree ring dates will be necessary to untangle the full story of the Chimney Rock Great House.

Chimney Rock Great House appears to be one of the few Chacoan “outliers” to have been built by individuals from Chaco Canyon, making the Great House a colony of Chaco. The wide walls constructed with core-and-veneer masonry, large rooms with high ceilings, relatively massive scale of construction, the architectural history, aspects of the ceramic assemblage, including trachyte-tempered pottery, and certain archaeologically visible citations of Chacoan practices indicate direct connections to Chaco Canyon.

President Obama’s designation of the Chimney Rock Archaeological Area as a National Monument is a gift to the American people, American Indian Tribes, researchers, and the local community. The protection of the Great House and the surrounding 200 or more ancient homes and ceremonial buildings will allow future research and improved understanding of the prehistoric Chacoan people, preservation of a place important to contemporary Puebloan people, and additional economic opportunities for the local community.

ARTICLE SUBMISSIONS FOR GLYPHS: If you have research or a field project that would be interesting to Glyphs readers, please consider contributing an article. Requirements are a maximum of 1,000 words, or 750 words and one illustration, or 500 words and two illustrations. Please send electronic submissions to jadams@desert.com, or by mail to Jenny Adams, Desert Archaeology, Inc., 3975 N. Tucson Blvd., Tucson, Arizona 85716.
Giant Sequoia Section Moved to New Home

After 74 years on loan at Arizona State Museum (ASM), an iconic, 10-foot-diameter section of giant sequoia was recently reclaimed by the Laboratory of Tree-Ring Research (LTRR) and moved to a newly built home on the University of Arizona campus.

The tree from which the section came began growing in 212 CE in northern California. After having died in 1913, and felled by a storm in 1915, the tree was sectioned for educational purposes. One “slice” was eagerly pursued for the University of Arizona in 1931, by Dr. A. E. Douglass, then director of Steward Observatory and renowned father of tree-ring research. The acquisition was ultimately a gift from Sequoia National Park.

Other sections of the same tree were sent to museums around the world: Sweden and China, for example, according to ASM records. LTRR was formally established on the University of Arizona campus in 1937, and was allocated “temporary” space at that time in the football stadium. Incidentally, one of the museum’s early locations was also there, until it moved into its brand new building in 1936, the building that housed the tree section until October 19.

ASM began displaying the section in the summer of 1938, thus creating a fondly remembered and much-beloved icon for generations of Tucson children. “We still get lots of comments all the time from folks who grew up in Tucson and remember standing in front of it on their school field trips,” said Dr. Beth Grindell, ASM director. “People really want to see it back on display. So do we.”

The rings of the section record 1,701 years. When on exhibit at ASM, it served as a compelling visual aid illustrating significant epochs in human history, particularly in the Southwest.

“The section has not been on formal exhibit at ASM since about 1998, and with LTRR building a new home, everyone agreed that the venerable giant should have a new life in the new facility,” said Grindell.

“Indeed, the section itself represents science education and tree-ring research on this campus,” said Dr. Tom Swetnam, director of the University of Arizona’s Laboratory of Tree-Ring Research. “A. E. Douglass created the science and established the discipline of tree-ring research right here at the University of Arizona. Putting his giant sequoia back on public display—for new generations of students and visitors to marvel at and learn from—is no better way to venerate LTRR’s new facility.”

The Bryant Bannister Tree-Ring Laboratory is set to open sometime next year, with the giant section featured prominently—in the main foyer, once again accessible to the public.
ARCHAEOLOGY SOUTHWEST’S
ARCHAEOLOGY CAFÉ

Archaeology Southwest and Casa Vincente invite you to the Archaeology Café, a casual discussion forum dedicated to promoting community engagement with cultural and scientific research. Meetings are the first Tuesday of each month from September to May, at 6:00 p.m. Casa Vicente is located at 375 S. Stone Avenue. The café is free and open to the community.

The remainder of the 2012-2013 season includes the following presentations:

Dec. 4: Pat Gilman, *Mimbres Beyond the Mimbres Valley Homeland: Frontier, Rural Living, or Periphery?*

Jan. 1: No program, New Year’s Day

Feb. 5: John Welch, *Placemaking and Displacement at Fort Apache and Theodore Roosevelt School National Historic Landmark*

March 5: Matt Peeples, *Cooking Pots and Culture in the Zuni Region*

April 2: Linda Mayro and Julia Fonseca, *Ten Years After – The Success of the Pima County Sonoran Desert Conservation Plan*

May 7: Ben Nelson, *Connecting the American Southwest and Mesoamerica: A Ritual Economy*

PALEOINDIAN ODYSSEY CONFERENCE

The Center for the Study of the First Americans is excited to present three days of public lectures by leaders in the field of first Americans studies, as well as posters and artifact displays. The conference is open to the public and will be held October 17–19, 2013, in Santa Fe, New Mexico. The Center is excited not only about visiting this gorgeous and historic place, but also reaching a large audience of professionals, avocationals, and members of the public interested in the Ice Age peopling of the New World. Please pass on this message to colleagues, students, and friends.

List of speakers, exhibits, and displays, as well as information about the conference banquet and special lodging rates is available at: paleoamericanodyssey.com/index.html.

For professionals and serious avocationals, there is still time to submit a poster proposal for the conference. The deadline is April 1, 2013. If interested, please visit our Call for Posters at: paleoamericanodyssey.com/posters.html. Poster space is limited, so make sure you submit your poster proposal early!

AAHS MEMBERSHIP APPLICATION

Membership is open to anyone interested in the prehistory and history of Arizona and the Southwest and who support the aims of the Society. Membership runs for a full year from the date of receipt, and covers all individuals living in the same household.

Monthly meetings are free and open to the public. Society field trips require membership. Members may purchase an annual JSTOR subscription to *Kiva* back issues for $20 through the AAHS website.

Membership Categories

- **$50** Kiva members receive four issues of the Society’s quarterly journal *Kiva* and 12 issues of *Glyphs*
- **$40** Glyphs members receive *Glyphs*
- **$35** Student Kiva members receive both *Kiva* and *Glyphs*
- **$75** Contributing members receive *Kiva, Glyphs*, and all current benefits
- **$120** Supporting members receive *Kiva, Glyphs*, and all current benefits
- **$300** Sponsoring members receive *Kiva, Glyphs*, and all current benefits
- **$1,000** Lifetime members receive *Kiva, Glyphs*, and all current benefits

Note: For memberships outside the U.S., please add $20. AAHS does not release membership information to other organizations.

Institutional Subscriptions

For institutional subscriptions to *Kiva*, contact Left Coast Press, Inc., www.leftcoastpress.com, or 925.935.3380.

For institutional subscriptions to *Glyphs* ($50), contact AAHS VP for Membership at the address below.

You can join online at www.az-arch-and-hist.org, or by mailing the form below to:

Michael Diehl, VP Membership
Arizona Archaeological and Historical Society
Arizona State Museum, The University of Arizona
Tucson, AZ 85721-0026

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The objectives of the Arizona Archaeological and Historical Society are to encourage scholarly pursuits in areas of history and anthropology of the southwestern United States and northern Mexico; to encourage the preservation of archaeological and historical sites; to encourage the scientific and legal gathering of cultural information and materials; to publish the results of archaeological, historical, and ethnographic investigations; to aid in the functions and programs of the Arizona State Museum, University of Arizona; and to provide educational opportunities through lectures, field trips, and other activities. See inside back cover for information about the Society’s programs and membership and subscription requirements.