



The Calumet

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CELEBRATE THE SPRING EQUINOX

**At the Historic Steam Plant Event Center in Salida
March 18 -20, for the CCPA Annual Meeting.**

From the President

By Rosi Dennett

At the February Board meeting, we welcomed Chris Kerns as the News and Events Coordinator for IPCAS. Check out the "Upcoming Local Archaeology Events Calendar" recently distributed via email to all IPCAS members. Chris set up this list and will be updating it on a regular basis, so you can take advantage of all things archaeology! He will also be providing news articles for the Calumet, particularly on global-level current events in archaeology. Thank you, Chris, for these much-appreciated contributions.

The IPCAS Board also approved the purchase of a tent with the IPCAS logo that will be used for community outreach. Look for our new tent at the Boulder Creek Festival over Memorial Day weekend. Even better yet.....volunteer to man the booth and spread the news about IPCAS and the importance of protecting our archaeological resources!

Allison Kerns has volunteered to extend her role as Outreach Coordinator to overseeing the IPCAS Facebook page. So keep an eye out for new modifications to that site in the near future.

And we'll see you at the March 10 lecture by Mark Mitchell on "American Indian Settlement Systems in the Southern Rocky Mountains." It's guaranteed to be an informative one!

Volunteers Needed

IPCAS is hosting a booth at the Boulder Creek Festival, May 28 - 30, where we will be sharing our enthusiasm for archaeology with the public. If you would be interested in spending a few hours at the booth, or would like more information about volunteering please contact Allison Kerns via email at a.marcucci@rogers.com.



Mark Mitchell at Blackfoot Cave.
Courtesy of Mark Mitchell

About Mark Mitchell

Dr. Mark Mitchell is the Research Director of Paleocultural Research Group, a member supported research organization dedicated to archaeological research in the Great Plains and Rocky Mountains. He is the author of *Crafting History in the Northern Plains: A Political Economy of the Heart River Region, 1400-1750* (2013), co-editor of *Across a Great Divide: Change and Continuity in Nation North American Societies, 1400-1900* (2010) and author of many journal articles and book chapters. IPCAS volunteers have worked with him on a number of projects throughout Colorado over the last five years. His experience and expertise spans much of Colorado and extends to the Northern Plains.

IPCAS Lectures

When: Thursday, March 10 at 7:00 pm
Where: CU Museum, Dinosaur Room
Cost: Free and Open to the Public

Mark Mitchell

Research Director, Paleocultural Research Group

Return to Upper Crossing: What New Architectural Data Tell Us About American Indian Settlement Systems in the Southern Rocky Mountains

The stone enclosure sites of the San Luis Valley have perplexed archaeologists ever since E.B. Renaud first studied them over 75 years ago. Their chronology, function, and cultural affiliation have all been debated, but with only limited evidence to back up various interpretations. Dr. Mark Mitchell will report the results of significant new excavations at the Upper Crossing site near Saguache that permit a much more meaningful explanation of the history and use of these structures. Working with Bureau of Land Management and U.S. Forest Service archaeologists, University of Colorado field school students, and a cadre of dedicated volunteers, Mitchell investigated and dated a sample of the site's 30 stone structures. The surprising results overturn much of what we thought we knew about stone enclosure sites and offer important new data on American Indian mobility and land use in the San Luis Valley and beyond.

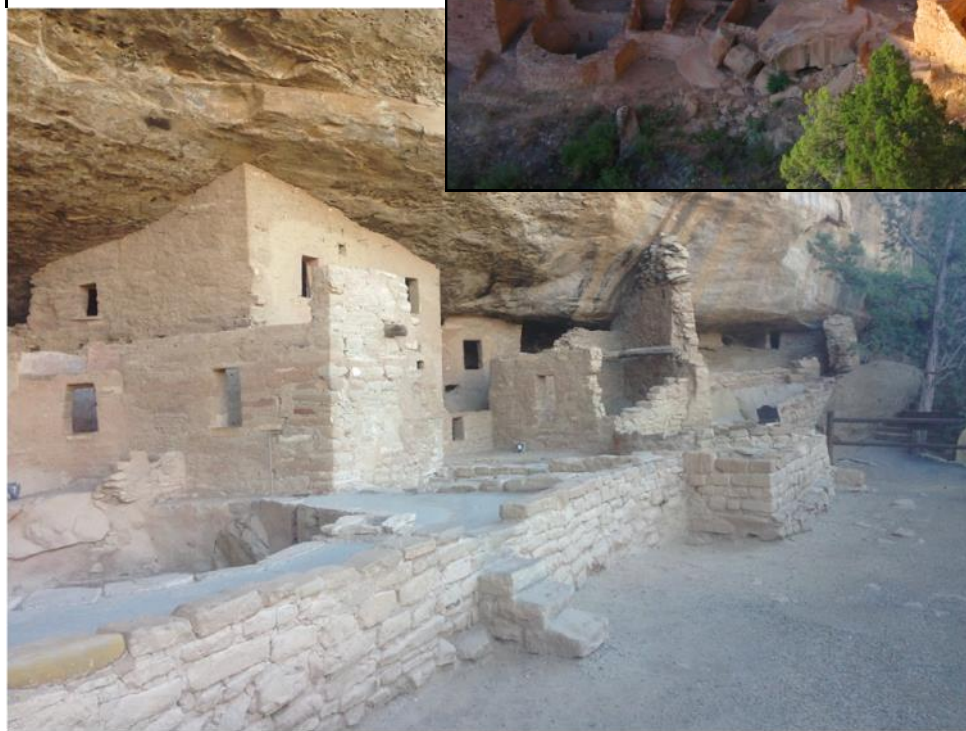
Next Month...

On the Third Thursday

April 21 at 7:00 pm

Chuck LaRue & Laurie Webster from the Cedar Mesa Perishables Project
Ancient Woodworking, Animal Use, and Hunting Practices in Southeastern Utah: New Insights from the Study of Early Perishable Collections

(Right): Square Tower House at Mesa Verde. Photo by Ben Frantz Dale. Courtesy of Wikicommons.



(Left): Spruce Tree House, Mesa Verde. Photo courtesy of Karen Kinnear

Mesa Verde Fieldtrip, June 4-12, 2016

By Rosi Dennett and Karen Kinnear

We're now accepting reservations for the IPCAS-sponsored Mesa Verde Field Trip taking place June 4-12, 2016. Local archaeologists will guide us behind the scenes as we explore pre-historic sites in Mesa Verde National Park, Ute Mountain Tribal Park, Hovenweep, Canyons of the Ancients and Mitchell Springs Ruins. The Four Corners/ Mesa Verde area was occupied from 600 AD through approximately 1285 AD. The area was relatively peaceful between 600 and 1000, but saw increasing violence from 1000 AD on. Contact Rosi Dennett or Karen Kinnear, if you are interested in participating. In the field trip. Look for more trip details in the April issue of Calumet.

Feature Article

How Do We Make Preservation Decisions over the Long Term?

By Richard H. Wilshusen

Vice-President, Indian Peaks Chapter

Colorado Archaeological Society

One of the most pressing challenges that professional archaeologists and land managers face is how to make long-term preservation decisions regarding historic landscapes and resources. Much of our current preservation activity is largely reactive. A recent example of resource planning in southern Arizona offers a new way of prioritizing preservation planning (Laurenzi *et al* 2013). This design utilizes the strengths of different sources of expertise. It combines the survey data that State Historic Preservation Offices (SHPOs) have accumulated over decades of cultural research resource management (CRM) with predictive (i.e., statistical) models that suggest where sites “ought to be” for different time periods. These sources of information are then compared against the local knowledge of a panel of experts including land managers,



Richard Carrillo recording a site on an archaeological survey in southeastern Colorado. Archaeologists such as Carrillo have inspired local groups to preserve sites that otherwise might have been lost. Image courtesy of Richard Wilshusen.

professional archaeologists, local avocational archaeologists, and tribal experts in the area. Finally land ownership maps offer ideas of where land purchases might be made or special protection put in place to preserve important areas. By seeking opinions from a range of preservation experts it is possible to capture a wider range of values, to consider sites that are known to locals but not yet recorded, and to get a “bigger picture” than might be possible in a regular SHPO review. To fully understand the power of this approach it is important to focus on the balance of strengths and weaknesses of each of the three elements of the decision-making model.

With almost 40 years of CRM data, we often have sufficient data to build fairly realistic models of relative site densities in a particular area. However, in many cases because of the particular focus of past site surveys, the gross categorizations of earlier site records, or the lack of reconnaissance on nearby non-federal lands, predictive models for site locations can be limited to specific types of sites or landscapes. SHPO site records typically are focused on finding out where sites are within a project area and whether these sites are sufficiently well preserved and important enough to be worth protecting or investigating. Many times records that are only 20 years old do not have sufficient detail to precisely place the occupation(s) in time or to predict the potential for deeply stratified occupation sequences. Even in very well surveyed areas with well-documented occupation histories including chronologically diagnostic features and artifacts, archaeologists have had to resort to fairly obscure statistical methods to create “realistic” predictive models of changing settlement patterns through time. And these models are only as good as the field observations they are built on. So lousy field site records equals lousy models of what to preserve. Although SHPO data provide important information for making decisions about preservation, we oftentimes need additional information if we are to make the hard decisions about what we want to preserve over the long term.

Local experts many times have knowledge of cultural resource hotspots and their suggestions can offer an important supplement in “big picture” decision-making. These experts may have a simpler list of site types, artifacts, and landforms in mind when they predict where sites might be located, but their intimate familiarity with the area can provide a critical real-world balance to a statistical or academic model of site locations on a larger historic landscape. They may know about unrecorded, yet important, sites outside of the SHPO’s database, and their experience may allow them to recognize special landscapes where combinations of site types, archaeological features, and repeated occupations may co-occur. By gathering panels of experts for discussions about potential priority areas, it is possible to multiply the knowledge represented within the room and to parlay this into much more effective decisions regarding future acquisitions of

archaeological preserves.

The third element of the model incorporates detailed site survey maps into land ownership maps to understand where minimal purchases might complement and round out existing archaeological preserves or where purchases will never be likely or successful for preservation purposes, such as highly contaminated abandoned industrial areas. This first round of creating a map of priority preservation areas can then be fit to the land ownership maps to identify areas of interest. Thereafter these areas can be ranked according to various criteria to create a list of prime preservation prospects for greater protection or possible purchase or conservation. This model will allow us to begin to consider how we are to assemble a wider range of heritage possibilities for research, education, and enjoyment in the future. It is a more proactive and bigger picture approach to preservation planning compared to much of what we presently do.

A final aspect of the planning model proposed by Laurenzi *et al* (2013) uses volunteers to check the site condition and viability of sites within the present and anticipated preserves to see if additional stabilization, protection, or preservation work is needed in the near term. This last “kicking of the tires” is a powerful way to interest and educate volunteers, landowners, and professionals about potential archaeological preserves and their importance now and for the future.

The ideas summarized here come from a professional article by Andy Laurenzi, Matt Peeples, and Bill Doelle in a 2013 issue of *Advances in Archaeological Practice*. It provides a more detailed account of how this worked in a real preservation situation where hard decisions had to be made.

References:

Laurenzi, Andy, Matthew A. Peeples, William H. Doelle
2013 Cultural Resources Priority Area Planning in Sub-Mogollon Arizona and New Mexico. *Advances in Archaeological Practice* 1(2): 61–76.

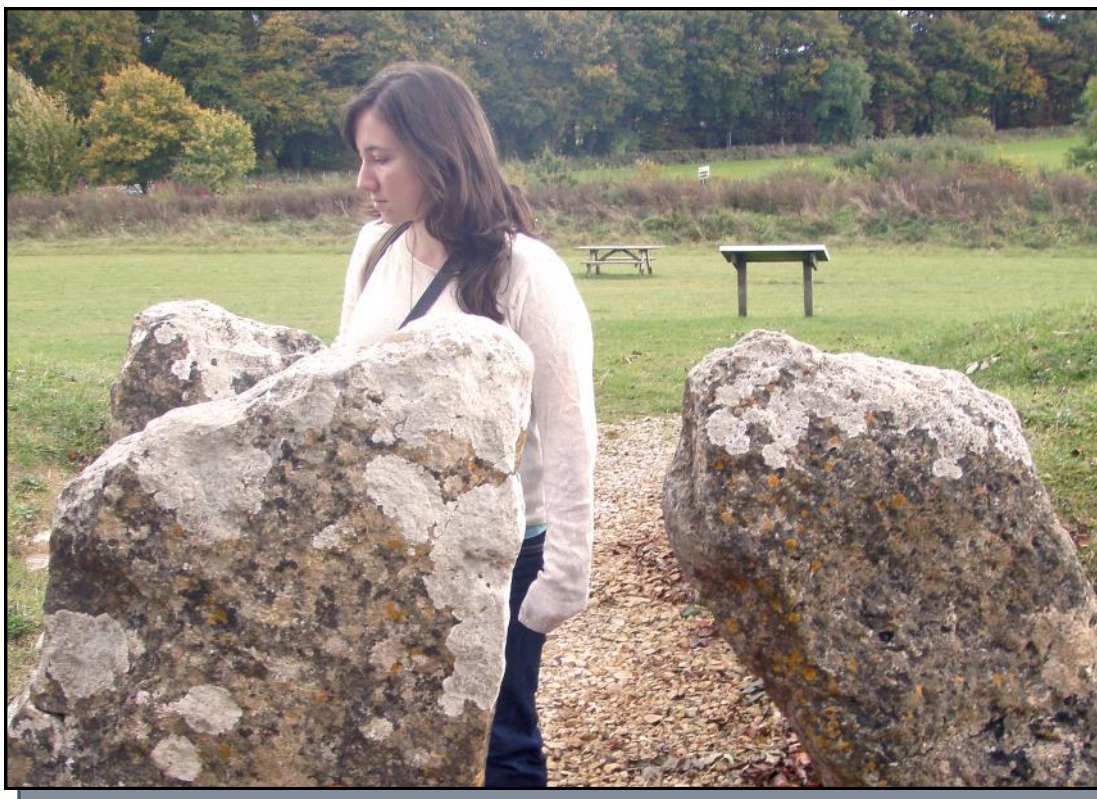
Fieldwork Opportunity

By Karen Kinnear

The 2016 field season at the Hell Gap site in Wyoming has opportunities for volunteers as well as crew positions. It is a great chance to excavate and celebrate the 50th Anniversary of the first excavations at Hell Gap. Fieldwork takes place in ten day field sessions from May to mid-August, with sessions in July and August at the Hell Gap Site. If you are interested, contact Marcel Kornfeld via email at anpro1@uwyo.edu or by phone at 307-766-5136. You can also visit the website at www.uwyo.edu/pirl.

Spotlight: Allison Kerns

By Allison M. Kerns



Allison exploring Nympsfield Long Barrow, one of the Neolithic Cotswold-Severn Tombs, England. Photo courtesy of Chris Kerns.

My focus on the IPCAS board is outreach. I joined the board late in the season last year, just before summer started. My goal is to build an outreach program for IPCAS, with the help of the board and our talented and enthusiastic membership, to give IPCAS and archaeology more presence in our community.

I started my journey in archaeology outreach as a volunteer, and later staff member, at the Royal Ontario Museum in Toronto (my home town). I later moved to England to pursue a master's degree in Landscape Archaeology, and had the opportunity to work with the Newport Ship Project in Wales. The community support for the rescue excavation of this medieval ship became the focus of my masters thesis. Much of my archaeological work has focused on Iron Age and Roman sites, including leading an outreach program centered on the volunteer excavation of a Roman bath house, and a hoard of Iron Age cauldrons, for Wessex Archaeology. In addition I worked at the Roman Baths Museum, part of the Bath World Heritage Site, giving tours of the Roman buildings, and interacting with thousands of international visitors every day. I have also had a brief

foray into contract archaeology, and was the assistant director for the excavation of Read's Cavern, an Iron Age cave site. You can read the preliminary excavation report online at http://www.ubss.org.uk/resources/proceedings/vol25/UBSS_Proc_25_2_165-186.pdf.

Here in Colorado I started off as a volunteer again, behind the scenes at the Boulder History Museum. I now work for the Geological Society of America, where I assist with the GeoCorps America program. I help to provide opportunities for early career geoscientists (and sometimes geo-archaeologists!) to get work experience on public lands. Through all of my work, however, my passion has remained bridging the gap between professional archaeology and the public, and getting interested people beyond museums and onto sites. I am very excited for the opportunity to continue work on archaeology outreach with IPCAS. If you have any ideas for, or would like to help with, IPCAS' new public outreach campaign please get in touch.



News Highlights from the World of Archaeology

By Christopher J. Kerns

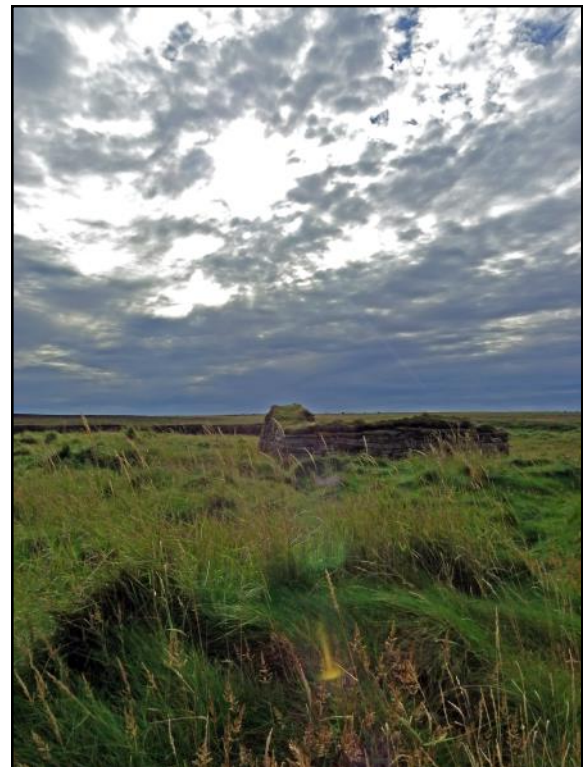
As a new, and hopefully regular, feature in IPCAS's newsletter I'm going to be writing a brief column highlighting the discoveries and research which are headlining archaeological news from around the world. I'm also going to attempt to distill the information from the news reports and show why the discoveries I discuss are important, not only to archaeology, but to the everyone. Consequently, I won't be able to touch on every piece of news out there, but there will always be links at the end of the column to websites I use to keep informed of exciting news in the world of archaeology.

Three news articles this month discuss the interactions between modern humans and Neanderthals. Researchers at the [Cold Spring Harbor Laboratory](#) report strong evidence of an interbreeding event between Neanderthals and modern humans in a recent article published in the journal *Nature* (Science Daily 2016a) The evidence comes from DNA sequencing of the "Altai Neanderthal" found in the same cave as the recently publicized archaic human specimens known as the Denisovans. Unlike previous DNA studies of interbreeding between Neanderthals and modern humans which indicated genetic exchange around 60,000 years ago during the "out of Africa" human migration, the new research indicates that a branch of modern human ancestors diverged and left

Africa approximately 200,000 years ago eventually leaving their genetic mark in the Altai Neanderthal around 100,000 years ago, prior to eventually going extinct themselves. Interestingly, a Denisovan from the same cave and two Neanderthals from European caves which were also sequenced for this study, completely lacked DNA derived from these ancestors of modern humans. Along the same lines, a study published in the Proceedings of the National Academy of Sciences (PNAS) argues that Neanderthals could have been driven to extinction by competition with modern humans (Popular Archaeology 2016). The study used a model of interspecies competition that incorporated differences in the differing levels of cultural development between the species. The results of the model suggested that a small modern human population could displace a larger Neanderthal population as long as the modern humans had a sufficiently larger cultural advantage over the Neanderthals. Finally, a press release from Vanderbilt University reported the preliminary results of a study on a possible connection between Neanderthal DNA variants within modern DNA and modern health problems (AIA 2016). The study used a database of 28,000 anonymous individuals which connected DNA samples to electronic health records. The results indicated that variants of Neanderthal DNA can be associated with a wide range of traits including immunological, dermatological, neurological, psychiatric, and reproduction diseases.

Neanderthal DNA is thought to have provided modern humans with adaptive advantages 40,000 years ago. An example of the possible advantages comes from a Neanderthal variant that increases blood coagulation and could have sealed wounds more quickly and prevented infection, but today manifests in people as an increased risk of stroke, pulmonary embolism, and pregnancy complications.

Archaeology and modern medical science also came together in a study published in [Scientific Reports](#) by a group of researchers from the [Liverpool School of Tropical Medicine](#) which suggests that Viking roots may be responsible for an inherited deficiency which predisposes people to emphysema, chronic obstructive pulmonary disease (COPD) and other lung conditions (Phys.org 2016). The only inherited trait



A Viking settlement at Deerness in Orkney, Scotland. Photo courtesy of Chris Kerns.

associated with these diseases is a deficiency of alpha-1 antitrypsin (A1AT). A1AT deficiency is due to deviants of A1AT which are common in Scandinavia. Excavations of Viking latrine pits in Denmark revealed that these populations suffered massive worm infestations. The current study suggests that deviant forms A1AT likely evolved in Viking populations over 2,000 years ago and could have protected Viking populations from such worm infestations. A1AT deficiency has been linked to lung conditions and is compounded if individuals smoke tobacco. Consequently a genetically inherited deficiency which once could have protected from parasites, such as worms, is now causing lung diseases.

Two articles this month have potential implications for our understanding of the "Peopling of the Americas." Archaeologists from the Russian Academy of Sciences published their findings on an excavated carcass of a mammoth discovered in 2012 north of the Arctic Circle along the coast of Yenisei Bay located in northern Siberia (Gibbons 2016). The findings were published in the journal [*Science*](#) in January. The archaeologists argue that the recently excavated mammoth, the best-preserved in a century, had been killed by humans. Mammoth hunting sites are not particularly unusual in Russia, however, the dating of this mammoth specimen indicates that it died approximately 45,000 years ago, making it possibly the oldest evidence of modern human occupation of arctic Siberia. Importantly, if the hunters who killed the mammoth could survive in the Arctic Circle 45,000 years ago than they could have lived, and migrated almost anywhere on the planet. As new archaeological dating places the earliest human occupation of the Americas further and further back (possibly circa 18,500 years ago), the ability of modern humans to survive in the Arctic has implications on the potential routes taken into the Americas and when.

A recent study of DNA from the people who lived in Europe from the Late Pleistocene to the early Holocene by researchers from the Max Planck Institute for the Science of Human History and published in *Current Biology* could potentially support Dennis Stanford and Bruce Bradley's North Atlantic Ice-Edge Hypothesis for a Clovis-Solutrean connection (Science Daily 2016b). The study uses mitochondrial DNA which is used to infer patterns of maternal ancestry only. The mitochondrial DNA (mtDNA) evidence gathered from 35 hunter-gatherer individual who lived in Italy, Germany, Belgium, France, Czech Republic, and Romania from between 35,000 and 7,000 years ago indicates a major shift in the population around 14,500 years ago during a period of severe climatic instability. The mtDNA of three individuals who lived in present-day Belgium and France during the Last Glacial Maximum (LGM) belonged to haplogroup M. The M haplogroup is extremely common in modern Asian, Australasian, and Native

American populations, but effectively absent in modern Europeans. The absence of the M haplogroup in Europe has previously been used to support the idea that non-African populations dispersed on multiple occasions across Eurasian and Australasia, however, the new evidence suggests a single dispersal around 50,000 years ago. The model produced as part of this research indicates that the descendants of the hunter-gatherers who survived the LGM in Europe were largely replaced by a population from another source around 14,500 years ago and the new source did not retain the M haplogroup. Overall, this genetic study could have significant implications on the study of the earliest Americans, particularly if additional evidence is recovered to support the North Atlantic Ice-Edge Hypothesis.

If you have any news stories you want reported on here, please contact Chris Kerns at cjkerns@hotmail.com. Additional news from the world of archaeology can be found at the following websites:

http://www.sciencedaily.com/news/fossils_ruins/archaeology/

<http://archaeology.org/news>

<http://www.archaeologychannel.org/rss/TACfeed.xml>

References:

Archaeological Institute of America (AIA)

- 2016 Neanderthal DNA May Influence Modern Health. *Archaeology*. Archaeological Institute of America. 12 February 2016. Available online at: <http://archaeology.org/news/4148-160212-neanderthal-influenced-traits>

Gibbons, Ann

- 2016 Grisly find suggest humans inhabited Arctic 45,000 years ago. *Science*. 14 January 2016. Available online at: <http://www.sciencemag.org/news/2016/01/grisly-find-suggests-humans-inhabited-arctic-45000-years-ago>

Phys.org

- 2016 From genes to latrines - Vikings and their worms provide clues to emphysema. *Popular Archaeology*. 04 February 2016. [online article] Available at: <http://phys.org/news/2016-02-genes-latrinesvikings-worms-clues-emphysema.html#jCp>

Popular Archaeology

- 2016 Study suggests how modern humans drove Neanderthals to extinction. *Popular Archaeology*. Vol. 21, Winter 2015/2016. Available online at: <http://popular-archaeology.com/issue/winter-2015-2016/article/study-suggests-how-modern-humans-drove-neanderthals-to-extinction>

Science Daily

- 2016a Neanderthals mated with modern humans earlier than previously thought, study finds: First modern human DNA in a Neanderthal individual. *Science Daily*. 17 February 2016. Available online at: <http://www.sciencedaily.com/releases/2016/02/160217140302.htm>
- 2016b DNA evidence uncovers major upheaval in Europe near end of last Ice Age. *Science Daily*. 4 February 2016. Available online at: <http://www.sciencedaily.com/releases/2016/02/160204150602.htm>

In the Field

By Gretchen Acharya and Kaitlyn Davis

CU Ceramics Lab: Sorting and documenting Pojaque/Cuyamungue Ceramic sherds

This semester volunteers, including members of IPCAS, continue working with Dr. Scott Ortman. There are 11 volunteers meeting at the archaeology lab in Hale Science, Mondays from 3-6 PM.

They are working on a collection from a 1952 Univ. of New Mexico field school that involved excavations within the current Pueblo of Pojoaque. The artifacts were still in the original field bags from 1952. The first step has been to wash, catalog and repackage the collection. The volunteers are now analyzing the pottery and stone artifacts and working on a database for the project.



*Dr. Scott Ortman, lab director and CU anthropology professor, assisting participants with sherd identification.
Photo courtesy of Gretchen Acharya.*

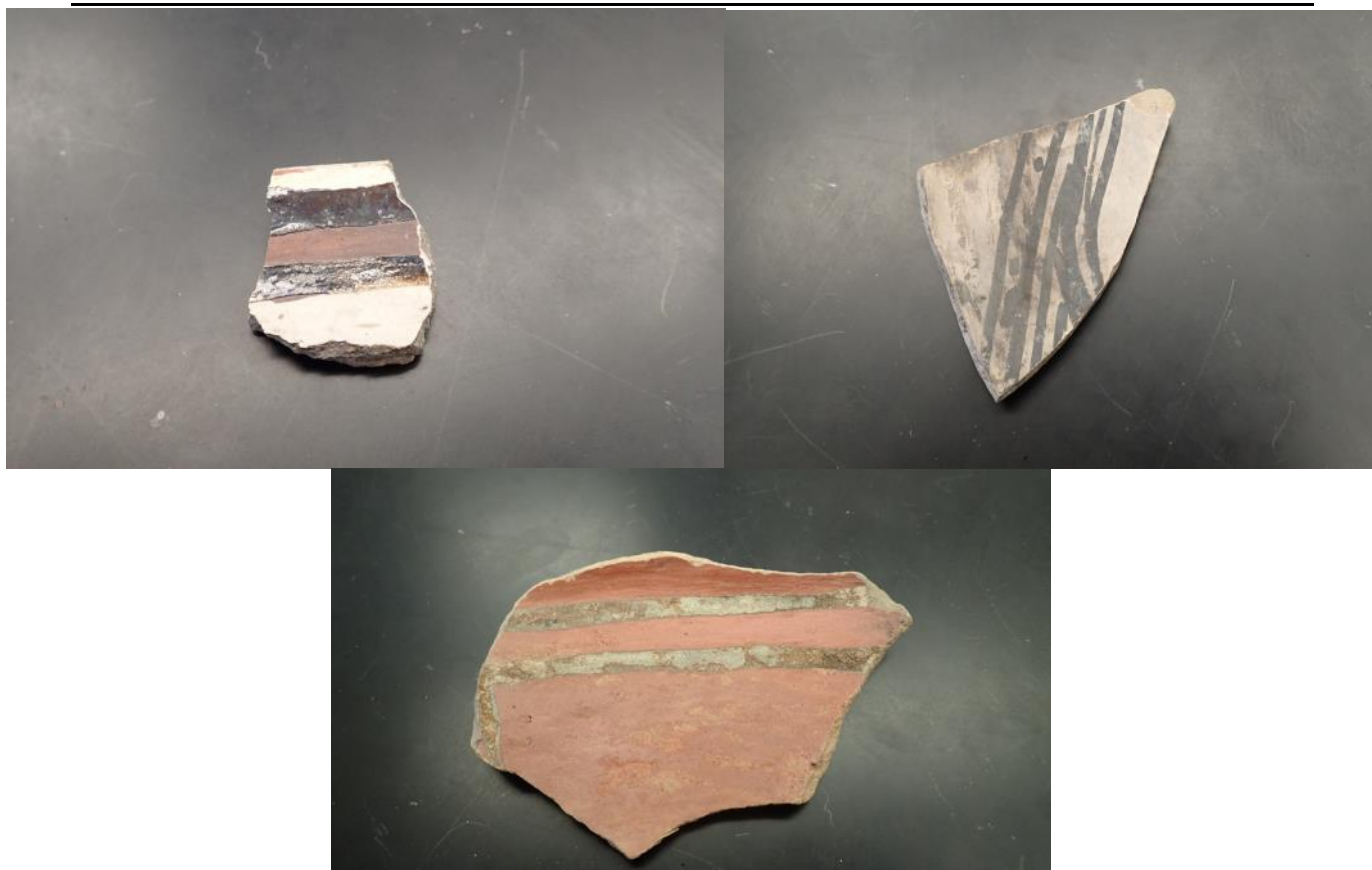
The primary goal for this project is to reconstruct the role of Pojoaque Pueblo in the history of Tewa Pueblo society and to develop methods for reconstructing the population histories of currently-occupied villages for application to other pueblos in the area.

Finally, one of the end products of this project will be an exhibit on the role of anthropology in contemporary native communities at the CU Museum of Natural History, and then the Poeh Center in Pojoaque.

This is a wonderful opportunity to be involved in a long term project which will serve the needs of the pueblo people. The volunteers are learning lab techniques and typology while enjoying the camaraderie of a great group of volunteers. Interested? Contact Dr. Scott Ortman at: Scott.Ortman@colorado.edu.



Volunteers are working on creating an electronic ceramic database for the Pojoaque collection. Photo courtesy of Gretchen Acharya.



The lab participants are washing, identifying, and recording a variety of ceramic sherd types ranging from the Developmental Period to the Historic Period. Photos courtesy of Gretchen Acharya.

2016 IPCAS Board & Supporting Members

Board Members

President	Rosi Dennett	rosidennett@gmail.com
Vice President	Richard Wilshusen	rhw1883@gmail.com
Secretary	Debbie Smith	debbiesmithcmc@gmail.com
Treasurer	Hal Landem	hal963landem@gmail.com

At Large Board Members

	Cheryl Damon	cheryl_damon@msn.com
	Kris Holien	kjholien@aol.com
	Joanne Turner	joanne.turner@colorado.edu

Appointed Positions

PAAC Coordinator	Delane Mechling	mechlings@hotmail.com
Communications Director	Joan Prebish	joan.prebish@yahoo.com
Outreach Coordinator	Allison Kerns	a.marcucci@rogers.com
CU Liaison	Gretchen Acharya	gacharyafinearts@gmail.com
CAS Representative	Karen Kinnear	klkinnear@hollandhart.com
News & Events Coordinator	Christopher Kerns	cjkerns@hotmail.com
Website Administrator	Anne Robinson	annerco@yahoo.com
Professional Advisor	Bob Brunswig	robert.brunswig@unco.edu

Editor: Joan Prebish

Members are encouraged to send ideas or material for The Calumet. All content is subject to review and approval by the IPCAS Board.

The submission deadline is the 15th of the month for the next month's issue.

Send to joan.prebish@yahoo.com





MEMBERSHIP APPLICATION – INDIAN PEAKS CHAPTER

	Category	Amount
_____	Individual	\$28.00
_____	Family	\$33.00
_____	Senior – Individual (does not receive <i>Southwestern Lore</i>)	\$14.00
_____	Senior – Family (does not receive <i>Southwestern Lore</i>)	\$16.50
_____	Student – Individual	\$14.00
_____	Student – Family	\$16.50

____ New ____ Renewal Tax-Exempt Donation to IPCAS ____ \$10, ____ \$25, ____ \$50, Other _____
 or donate to The Alice Hamilton Scholarship Fund ____ \$10, ____ \$25, ____ \$50, Other _____

***Membership period runs from January 1 through December 31 (calendar year).

NAME _____ TELEPHONE _____
 ADDRESS _____ E-MAIL _____
 CITY _____ STATE _____ ZIP _____

Please make check payable to: Indian Peaks Chapter, CAS. Mail to: PO Box 18301, Boulder, CO 80308-1301

I(We) give CAS permission to :

Yes ____ No ____ disclose phone numbers to other CAS members
 Yes ____ No ____ publish name/contact information in chapter directory
 Yes ____ No ____ publish name in newsletter (which may be sent to other chapters, published on the internet, etc.)

CODE OF ETHICS

As a member of the Colorado Archaeological Society, I pledge: To uphold state and federal antiquities laws. To support policies and educational programs designed to protect our cultural heritage and our state's antiquities. To encourage protection and discourage exploitation of archaeological resources. To encourage the study and recording of Colorado's archaeology and cultural history. To take an active part by participating in field and laboratory work for the purpose of developing new and significant information about the past. To respect the property rights of landowners. To assist whenever possible in locating, mapping and recording archaeological sites within Colorado, using State Site Survey forms. To respect the dignity of peoples whose cultural histories and spiritual practices are the subject of any investigation. To support only scientifically conducted activities and never participate in conduct involving dishonesty, deceit or misrepresentation about archaeological matters. To report vandalism. To remember that cultural resources are non-renewable and do not belong to you or me, but are ours to respect, to study and to enjoy.

Signature: _____ Signature: _____