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Cover: Archaeologists examine a pit under the arch of an 18th-century aqueduct at the Papine slave village in Kingston, Jamaica. Photograph by Jerry Rabinowitz
The Benefits of Archaeological Tourism

Every June, *American Archaeology* runs a feature article about visiting archaeological ruins in the United States. The stories are intended to guide people to some fabulous archaeological areas around the country. This year we are featuring the archaeology of western North Dakota (see “Exploring the Archaeology of North Dakota,” page 19). It’s a place of dramatic landscapes and fascinating history.

Until recently, when ordinary folk thought of archaeological tourism in the U.S., they thought of Mesa Verde and perhaps some of the mounds in Ohio. But there is so much more out there, and more and more people are taking advantage of it. Nearly every state has enough archaeological attractions for a nice road trip. Most have much more. New sites are being opened every year, and we intend to bring them to your attention. The Conservancy and other organizations continue to offer new guided trips in every region of the country.

Archaeological tourism can, and does, play an important role in the struggle to preserve America’s heritage. It helps educate the general populace about past cultures and modern science. It builds public support for preservation initiatives. It develops important new economic and political allies. All of us that care about America’s heritage should double our efforts to promote new archaeological parks and museums. Archaeological tourism is very educational, and it is fun.
Historians Reveal the Working Class

Mike Toner’s article “Working to Reveal the Working Class” (Spring 2010) would have readers believe that “historical accounts of the rise of American industry have often overlooked its effects on ordinary workers.” These words may help industrial archaeologists feel good about themselves, but they aren’t true. The last two generations of historians, prompted by the powerful idea of “bottom-up” history, have given us a five-foot shelf of sophisticated studies of workers’ lives that offer far more than the horseshoes, bottles, and teacups that randomly turn up at digs. An excellent place to start is Tamara Hareven’s classic Amoskeag: Life and Work in an American Factory-City, which has been available since 1978.

Robert Dykstra
Worcester, Massachusetts

Chimney Rock’s Lookout Tower

I enjoyed the Chimney Rock story “A Once In A Lifetime Dig” in your Spring 2010 issue. I thought your readers might be interested in a little background about the lookout tower shown on pages 20 and 21.

The tower was originally built in the late 1930s for the purpose of wild fire detection in the surrounding area. Stones from the neighboring ruins were used in the construction of the tower’s base. By 1960, it was no longer in use, and in 1974 the cab (the upper part used for observation) fell into disrepair and was dismantled. In 1988, the cab was rebuilt for use as an observation tower for the archaeological site. According to the Durango Herald, the lookout will be dismantled this coming fall.

Colorado currently has six fire lookout towers in active use. While the archaeological value of the Chacoan ruins is undeniable, fire lookouts are also important to our history. They are symbols of forest conservation in America and are deserving of our recognition as well.

Susan Epstein
Web Manager
Colorado/Utah Chapter
Forest Fire Lookout Association

Send Letters to American Archaeology

American Archaeology welcomes your letters. Write to us at 5301 Central Avenue NE, Suite 902, Albuquerque, NM 87108-1517, or send us e-mail at tacmag@nm.net.

We reserve the right to edit and publish letters in the magazine’s Letters department as space permits.

Please include your name, address, and telephone number with all correspondence, including e-mail messages.

Editor’s Corner

I knew little about the history of Jamaica when I decided to cover an excavation in Kingston that examined slavery there as well as in other Caribbean islands and parts of the United States. (see “An Examination of Slavery,” page 12). The project is a collaboration between the Digital Archaeological Archive of Comparative Slavery (DAACS), based at Monticello, Virginia, and the University of the West Indies Mona campus in Kingston.

DAACS’ archaeologist Jillian Galle led a field school crew consisting primarily of Jamaican students who excavated the Mona and Papine fields on the university’s campus. Long ago, enslaved Africans were brought to Jamaica by the British to work on sugar and coffee plantations, and the slave quarters for two of those sugar plantations were once found on the Mona and Papine fields.

Jamaica’s sugar, coffee, and slave labor made the island one of the British Crown’s most valuable possessions. All slavery was brutal, but, according to Galle, sugar plantation slavery was exceptionally so. African slaves greatly outnumbered their white masters and, over time, as slavery was abolished, they, and their descendants, took control of the country.

Prior to working on the project, several of the Jamaican students were unaware that, on the very place they’re receiving the education that will allow them to pursue their dreams, their ancestors were condemned to lives of servitude. The sherds, buttons, and other artifacts the students are extracting from the ground speak volumes of this hard, shameful history. Archaeology is rarely so personal.

Michael B. Shewey
The Archaeological Conservancy is the only national nonprofit organization that identifies, acquires, and preserves the most significant archaeological sites in the United States. Since its beginning in 1980, the Conservancy has preserved more than 395 sites across the nation, ranging in age from the earliest habitation sites in North America to a 19th-century frontier army post. We are building a national system of archaeological preserves to ensure the survival of our irreplaceable cultural heritage.

Why Save Archaeological Sites?
The ancient people of North America left virtually no written records of their cultures. Clues that might someday solve the mysteries of prehistoric America are still missing, and when a ruin is destroyed by looters, or leveled for a shopping center, precious information is lost. By permanently preserving endangered ruins, we make sure they will be here for future generations to study and enjoy.

How We Raise Funds:
Funds for the Conservancy come from membership dues, individual contributions, corporations, and foundations. Gifts and bequests of money, land, and securities are fully tax deductible under section 501(c)(3) of the Internal Revenue Code. Planned giving provides donors with substantial tax deductions and a variety of beneficiary possibilities. For more information, call Mark Michel at (505) 266-1540.

The Role of the Magazine:
American Archaeology is the only popular magazine devoted to presenting the rich diversity of archaeology in the Americas. The purpose of the magazine is to help readers appreciate and understand the archaeological wonders available to them, and to raise their awareness of the destruction of our cultural heritage. By sharing new discoveries, research, and activities in an enjoyable and informative way, we hope we can make learning about ancient America as exciting as it is essential.

How to Say Hello:
By mail: The Archaeological Conservancy, 5301 Central Avenue NE, Suite 902, Albuquerque, NM 87108-1517; by phone: (505) 266-1540; by e-mail: tacmag@nm.net; or visit our Web site: www.americanarchaeology.org
NEW EXHIBITS

El Paso Museum of Archaeology
El Paso, Tex.—The traveling exhibit “Kennewick Man on Trial” approaches several controversial questions regarding the 9,000-year-old human remains discovered in Washington state and known as Kennewick Man. The exhibit, organized by the Burke Museum of Natural History and Culture at the University of Washington where the Kennewick Man remains are stored, was curated by a member of the Comanche Nation, and includes multiple perspectives and insights from Native Americans, scientists, and anthropologists. (915) 755-4332, www.elpasotexas.gov/arch_museum (Through July 5)

Peabody Museum of Archaeology and Ethnology
Harvard University, Cambridge, Mass.—The new exhibit “Spying on the Past: Declassified Satellite Images and Archaeology” demonstrates how archaeologists recognize visible signs in these images and draw conclusions about the ancient world from them. Using declassified U.S. government spy satellite and aerial images, Harvard student archaeologists explored ancient sites where images reveal complex early cities, extensive tracks, intricate irrigation canals, and even traces of nomadic journeys. (617) 496-1027, www.peabody.harvard.edu (Through December)

San Diego Museum of Man
San Diego, Calif.—Explore centuries of Latin America’s mysterious ancient past through the new exhibit “Gods & Gold: Ancient Treasures From Mexico to Peru,” featuring the museum’s stunning collections of Mexican, Central American, and South American archaeological objects. The exhibit includes rare gold and jewelry, exotic figurines, intricate stonework, and exquisite pottery from ancient Mesoamerica. Explore distinctions in artistic styles, techniques, and materials used to create numerous intriguing pieces by the Maya, Aztec, Inca, and other cultures. (619) 239-2001, www.museumofman.org/exhibits (Through December 6)

J. Paul Getty Museum
Los Angeles, Calif.—Spanish exploration and colonization in the Americas coincided with the Renaissance rediscovery of Europe’s Greco-Roman past. To many Spaniards, the Aztecs were the Romans of the New World. In an unprecedented look at this convergence of cultures, the new exhibit “The Aztec Pantheon and the Art of Empire” considers the Spanish conquest of Mexico, European attempts to interpret Aztec civilization through the lens of classical culture, and comparative approaches to the monumental art of empire. Masterpieces of Aztec sculpture from the collections of the National Museum of Anthropology and the Templo Mayor Museum in Mexico City will be on display, as well as the Florentine Codex, one of most valuable chronicles of Aztec history and culture, which returns to the Americas for the first time in more than four centuries. (310) 440-7300, www.getty.edu (Through July 5)
Arizona State Museum
University of Arizona, Tucson, Ariz.—Some 12,000 years ago, a group of prehistoric humans known as the Clovis attacked a 10-ton, 13-foot-tall mammoth near what is now Naco, Arizona, thrusting eight stone-tipped spears into its ribs, neck, chest, and back. The remains of the Columbian mammoth, still riddled with ancient spearheads, are featured in the museum’s latest exhibit “Ice Age Arizona: Preserving the Naco Mammoth.” Excavated in 1951 by a student team led by renowned archaeologist and then Arizona State Museum director Emil Haury, the bones were rescued from an exposed arroyo bank near Naco. The site remains one of the most important because of a 3-by-3-foot block cut and preserved from the site that shows Clovis spearheads in and among mammoth bones—the very best evidence for the interaction of people with mammoths in the world. The Naco site was the first evidence of Clovis people uncovered in Arizona and one of the first in North America. The display also features Clovis spearheads and photographs of Emil Haury and his team of students excavating the site. (520) 621-6302, www.statemuseum.arizona.edu (Through October 15)

CONFERENCES, LECTURES & FESTIVALS
Mid-South Archaeological Conference
June 18–19, Rhodes College, Memphis, Tenn. The conference is an annual event highlighting current archaeological research within the Mid-South and Lower Mississippi River Valley. This year’s theme, “Integrating Technology and Archaeology,” will explore the ways new technology has changed, benefited, and hindered the field. The keynote address, given by Evan Peacock of Mississippi State University, is titled “Laser Beams and Stranger Things: Where is ‘High-Tech’ Archaeology Leading Us?” Contact Anna Lunn at (901) 452-7803, email midsoutharchaeology@gmail.com, or visit www.weaverassociatesllc.com

18th Annual Indian Market & Festival
June 26–27, Eiteljorg Museum of American Indians and Western Art, Indianapolis, Ind. This annual market and festival features performances by some of today’s premiere Native American storytellers, dancers, and singers. Nearly 140 native artists from across the country will have their unique works available for sale. Enjoy native foods and activities ranging from making masks to a corncob dart toss. (317) 636-9378, www.eiteljorg.org

77th Annual Hopi Festival of Arts and Culture
July 3–4, Museum of Northern Arizona, Flagstaff, Ariz. A Fourth of July tradition since the 1930s, the festival is the world’s premier gathering of Hopi artists and scholars. Visitors gain insights from artisans against a backdrop of cultural presentations, storytelling, and traditional music and dancing, with more than 55 booths offering fine arts and crafts. (928) 774-5213, www.musnaz.org

10th Annual Nueva Paquimé Festival
July 14–23, Casas Grandes, Chihuahua, Mex. The festival, taking place just outside the renowned Paquimé archaeological sites (declared a UNESCO World Heritage Site in 1998), is a celebration of the heritage and cultures of northern Mexico. It features parades, art contests, concerts, poetry readings, children’s workshops and various other events. www.si-mexico.com/mexico_events_calendar.htm

Cahokia Mounds Archaeology Day
August 7, Cahokia Mounds State Historic Site, Collinsville, Ill. Experts demonstrate ancient crafts such as flint-knapping, finger-weaving, pottery, bow and arrow making, and bone, shell, and gourd carving. Archaeologists will explain petroglyphs, animal bone identification, remote sensing, and the use of Global Positioning System technology. Visitors can tour excavations, sift soil, and wash 1,000 year-old artifacts. Food and beverages will be available. (618) 346-5160, www.cahokiamounds.com

Pecos Conference 2010
August 12-15, Silverton, Colo. The 74th annual gathering of Southwest archaeologists features field reports, seminars, workshops, and posters presenting the results of the latest research in the region. Activities include a Thursday night reception, oral and poster presentations Friday and Saturday, a catered dinner and dance featuring live music on Saturday night, and tours to local sites on Sunday. Contact Charles Riggs at riggs_c@fortlewis.edu, or visit www.swanet.org/2010_pecos_conference
Remembering Stewart Udall
The nationally renowned conservationist played a huge role at the Conservancy.

With the passing of Stewart L. Udall on March 20, 2010, The Archaeological Conservancy has lost one of its greatest champions. He was born to a family of Mormon pioneers in 1920 in St. John’s, Arizona, near Zuni Pueblo and the Navajo Reservation, where he developed his appreciation of Native American culture. In his 90 remarkable years, Udall had a major impact on the course of American history.

At the University of Arizona he starred in basketball, then joined the Army Air Corps as a gunner on bombers over Eastern Europe, an experience that helped shape a life-long commitment to world peace. Returning to Arizona after the war, he became a lawyer and entered politics. He was elected to the U.S. House of Representatives in 1954 and made his mark as a champion for conservation.

In 1960, he was picked by President John F. Kennedy to be Secretary of the Interior, and his unprecedented accomplishments over the course of eight years included a vastly expanded national park system featuring four new national parks, six national monuments, eight national seashores, nine national recreation areas, and 20 historic sites. He helped establish 50 new national wildlife refuges and was a key player in the passage of critical new conservation legislation including the Wilderness Act of 1964 and the Land and Water Conservation Act of 1965. He pushed for the enactment of the Historic Preservation Act of 1966 and played a crucial role in saving Carnegie Hall from demolition. His seminal book *The Quiet Crisis* (1963) laid out a conservation agenda that was largely achieved over the next 20 years.

His connection with the Conservancy began in the fall of 1980, only a few months after the organization’s founding in Santa Fe, New Mexico, when he agreed to join the Board of Directors, on which he continued to serve until his death. Udall was practicing law in Phoenix at the time, and he recognized the need to preserve archaeological sites across the nation. In 1982, he became chair of the board, a post he held for 11 years. During this time he moved from Phoenix to Santa Fe and shared offices with the Conservancy.

He became chair at a critical time in the Conservancy’s history. The nation was in a deep recession, funding was drying up, and one board member suggested closing the doors. Udall would have none of it. He lent his prestige to fundraising campaigns that got the organization through the tough times, even enlisting the aid of his political adversary and personal friend Barry Goldwater.

During his years as chair of the board, Udall was involved with all aspects of Conservancy activities. An avid outdoorsman, he loved to join Conservancy staff on field trips to remote sites in the Southwest and elsewhere. He drew on old friendships to help push through important preservation legislation including the creation of Hopewell Culture National Historical Park in Ohio and the expanded Tumacacori National Historical Park in Arizona.

As the Conservancy celebrates 30 years of successful preservation, we can all thank Stewart Udall for what has been accomplished. He was leader, mentor, and friend to us all. The Archaeological Conservancy, the historic preservation community, and the nation owe him an inestimable debt of gratitude, and we will all miss him very much. —Mark Michel
Chemical analysis of a stalagmite near a prehistoric site has revealed that native peoples left a bigger carbon footprint than previously thought. It also shows that humans began affecting global climate as early as 100 B.C.E., according to a recent study by Ohio University scientists.

The 7,000-year-old stalagmite was found in the Buckeye Creek basin of West Virginia, about 200 yards from a cave where a Native American community lived 2,000 years ago. The carbon record stored as the stalagmite developed shows that a major change in the local ecosystem began around 100 B.C.E., according to Gregory Springer, an associate professor of geological sciences at Ohio University and lead author of the study recently published in the journal *The Holocene*.

Springer and research collaborators from the University of Texas at Arlington and the University of Minnesota were studying historic drought cycles in North America using carbon isotopes in stalagmites in 2005 when they discovered an oddity in the stalagmite’s carbon record.

Springer said the evidence suggests that the Native American practice of burning trees to clear land and control the species of trees in the forests released a significant amount of carbon into the atmosphere. Forests store carbon in trees, organic litter, and soil. When carbon burns, it becomes carbon dioxide, a greenhouse gas that traps heat and reflects it back to earth, causing global warming. He noted that the ongoing clearing and burning of the Amazon rainforest is one of the world’s largest sources of greenhouse gas emissions today.

To corroborate the stalagmite evidence, the team also measured charcoal concentrations in stream sediments near the cave from 6,000 years ago to the present, and they tested carbon isotopes derived from soil above the cave. Those studies showed high levels of charcoal deposits and carbon isotope anomalies that began in 100 B.C.E. and peaked around A.D. 1,400, confirming the stalagmite evidence. The levels dropped off markedly until they peaked again in the 1800s after Europeans settled in North America.

The new evidence conflicts with the popular notion that early Native Americans had little impact on North American landscapes. “We’re the first to come in with real data about the carbon cycle and say that Native Americans were making a difference in the environment,” Springer said. “They actively shaped the forest and landscape to suit them.” For example, he noted that nut trees are fire resistant so they would have survived the fires and thrived with less competition from other trees, producing more food for the natives. “The Native Americans achieved a pretty sophisticated level of living that I don’t think people have fully appreciated,” he said.

“Long before we were burning fossil fuels, we were already pumping greenhouse gases into the atmosphere. It wasn’t at the same level as today,” Springer said, “but it set the stage.”

—Paula Neely
Evidence Of Water Pressure Found At Palenque

Maya appear to have built the New World’s first water pressure feature.

An aqueduct discovered at the city of Palenque in southern Mexico suggests that the Maya produced water pressure as early as A.D. 400. They could have used the water pressure for fountains and flush toilets. The Piedras Bolas Aqueduct, which was discovered by archaeologist Kirk French and hydrologist Christopher Duffy of Penn State University, is the first known example of engineered water pressure in the New World. It was previously thought that the Spanish introduced water pressure systems when they arrived in the New World in the 1500s, according to the researchers, whose work was recently published in the Journal of Archaeological Science.

Located on steep terrain with a 20-foot-drop, the 217-foot-long underground water aqueduct, is a spring-fed, stone-lined rectangular conduit that abruptly decreases in size from about 10 square feet near the opening at the spring to about a half square foot near the outlet. The researchers say that the combination of gravity and the sudden narrowing of the conduit would have caused the water to flow out forcefully and upwards about 20 feet.

Surrounded by upper class dwellings, the aqueduct’s outlet is about 300 yards west of Palenque’s main plaza. French said the conduit could have stored water and the pressure could have created an aesthetically pleasing fountain or aided in the filling of water jars. He said it’s also possible that the residents used the same technology in other parts of the city to pipe water uphill to their palace, which would have facilitated the flushing of what appear to be four ancient limestone toilets.

The conduit was first identified by French in 1999 while mapping the area. French returned with Duffy to examine it in 2006. The conduit is partially collapsed, so very little water currently flows from the outlet. The researchers used simple hydraulic models to determine the potential water pressure.

French said the conduit dates from about A.D. 400 to 700. During this time, Palenque experienced a population and construction explosion that peaked at about 6,000 residents with an estimated 1,500 structures. The densely inhabited city was built on a small limestone shelf between an escarpment and the steep terrain of the Sierra Madre de Chiapas Mountains. There are streams about every 300 feet and living space was limited.

While other Maya cities were concerned with storing water for the dry season, Palenque’s residents were challenged to accommodate their growing city. To get more land to build on, they routed streams away from the city via underground aqueducts and built plazas over them. These experiences could have led to the creation of water pressure.

The researchers noted that it’s likely that similar examples of water pressure at other Precolumbian sites in the Americas may have been misidentified or unassigned. “It’s easy to overlook,” French said. —Paula Neely
Three southern Utah men are the latest to plead guilty in the federal crackdown on theft and trafficking of Native American artifacts from public and tribal lands in the Four Corners area. On April 23 in Moab, Nick Laws, Dale Lyman, and Aubry Patterson, three of the 26 people charged in the two-year sting operation, pleaded guilty to violating federal laws protecting artifacts on public and tribal lands and to trafficking in stolen artifacts. Laws and Lyman each face up to two years in prison and a $250,000 fine, and Patterson faces a maximum sentence of 12 years in prison and a $500,000 fine. All three will give up their artifact collections according to the plea deal.

An October 25th trial date has been set for five additional Blanding, Utah defendants, including Joseph Smith, Meredith Smith, Tad Kreth, Reece Laws, and Brandon Laws. So far, six defendants have entered guilty pleas and two—Blanding physician James Redd and Santa Fe, New Mexico salesman Steve Shrader—committed suicide last summer. The only two defendants sentenced so far in the case include Redd’s wife and daughter Jeanne and Jericca, who reached plea deals that resulted in probation sentences and the forfeiture of more than 800 artifacts. Operation Cerberus, the government’s investigation of illegal excavators, artifact dealers, and collectors, relied heavily on information obtained from undercover government informant and former antiquities dealer Ted Gardiner. Apparently under a lot of stress due to threats against his life, Gardiner shot and killed himself in his Salt Lake County home on March 1, just weeks before he was supposed to testify at the trial of one of the defendants. Blanding resident Charles Denton Armstrong was sentenced to prison for threatening to beat Gardiner.

Gardiner’s death forced prosecutors to re-evaluate how they will present the thousands of hours of taped evidence gathered over the two years during which he bought more than 250 illegally-obtained artifacts totaling $335,685 at the direction of the FBI. According to court documents, some of the transactions were observed by other law-enforcement officers. Despite attempts to suppress the taped evidence on the claim that the federal government violated Utah law by conducting illegal surveillance, federal authorities noted that such surveillance under Utah and federal law is legal as long as one person is aware of the recording and the suspect had been caught in the act of committing a crime. Government attorneys confirmed that the felony prosecutions against the remaining defendants will continue.

“In general, the criminal process is moving along, with plea agreements entered in several cases and trial dates set for this summer and fall in almost all the cases,” said Melodie Rydalch, public information officer with the District Attorney’s office in Salt Lake City. “The case continues to move forward.”

—Tamara Stewart
Late last spring, while working on an infrastructure project at Chaco Canyon in northwest New Mexico, park archaeologists monitoring construction found a new site. They excavated a portion of it, finding an early Basketmaker III habitation (ca. a.d. 400-725) with evidence of possible ceramic production. The site contains a number of features, including several pithouses, hearths, a ramada, and numerous unlined pits, some with burned corn.

The archaeologists have also found “evidence of early ceramic production in the form of a possible kiln, unfired sherds, and both lithic and bone tools for polishing and shaping,” said park archaeologist Roger Moore, who is participating in the excavation. “Ceramic types include La Plata Black-on-white, but most sherds have been oxidized in firing, resulting in the paint coming out red—possibly indicating early black-on-white firing experimentation.”

The researchers dug a test pit below one of the pithouses to determine if there was evidence of even deeper cultural deposits. They discovered another pithouse and were able to expose most of the structure.

Portions of at least six unburned wooden beams were recovered that were probably from the structure’s roof. Samples from several beams were taken for dendrochronology analysis. Several large trough metates, along with two broken-in-place ceramic vessels, were also found in the pithouse. This suggests that the pithouse functioned as a ceramic manufacturing workshop.

“We have submitted a number of carbon-14 samples, some wood and some corn,” Moore said. “The dates appear to cluster in the a.d. 500s to early 600s.” Chaco researchers have thought that early inhabitants of the canyon grew their own corn, while research on the later Greathouse period (ca. a.d. 900 to 1200) indicates that most, if not all, corn was imported from outside the canyon at that time. Construction at the major town sites within the canyon took place between a.d. 1020 and 1120. “The corn will be tested for trace mineral ratios to determine its place of origin,” he said. “If it does turn out to be locally grown, it will verify the early inhabitants of the canyon grew their own corn.”

“We definitely have not found the whole site, but have a general idea of its total size,” said Moore. “Testing of the area has shown the site continues to the north and west under existing park maintenance yard facilities. After completing this last pithouse, we will not be doing any additional field work, as it would be beyond the scope of the initial damage assessment and data recovery project.”

—Tamara Stewart
AN EXAMINATION OF SLAVERY

University of the West Indies' officials Gordon Shirley and Swithin Wilmot view artifacts recovered from the Papine site.
Archaeologists are studying how slaves were affected by major changes in the Caribbean and the United States in the 18th and 19th centuries.

By Michael Bawaya

In the 18th century, sugar was king in the Caribbean. It was, however, difficult to harvest. The sugar cane was heavy and the plant’s sharp leaves scratched skin. The fibrous cane was hard to cut. Once cut and stripped of leaves, the sugar was run through a mill where it was crushed, and the juice was placed in huge copper vats and boiled into refined sugar and unrefined molasses. Some of the sugar was used to produce the region’s renowned rum.

The Caribbean sugar business was built on the backs of a vast army of African slaves who performed the brutal work that went on around the clock during the harvest. “There are stories of slaves being crushed in the mill. There are stories of slaves falling into the vats of sugar,” said archaeologist Jillian Galle. “The heat, the all-night work, and disease led to high mortality rates.” Malnutrition also took its toll. Their deaths were little more than a nuisance to their owners, who simply imported more slaves to replace them. The British brought more than a million Africans to Jamaica between 1700 and 1790, where they lived longer and reproduced more.

Jamaica was originally inhabited by the Tainos. It was colonized by Spain after Christopher Columbus landed there in 1494, and during the 1500s the native population rapidly declined as a consequence of contact diseases and other factors. In 1655, the British wrested Jamaica from Spain, and while under British rule it gained notoriety for attracting pirates and privateers.

Having tried indentured European labor to work the sugar plantations, the British turned to African slaves. Jamaica became essential to the British Crown because of the wealth generated by the sugar, and, to a lesser extent, coffee, and its role in the triangular trade network between England, Africa, and the Caribbean. England provided manufactured goods, Africa provided slaves, and the Caribbean islands provided sugar, coffee, and other goods.
The 1830s painting Water-Jar Sellers depicts two Jamaican men selling locally produced coarse earthenware pottery. The large jar balanced on the man’s head is similar to vessels that are frequently found at the Jamaican villages being investigated by archaeologists.
FOR THE LAST 10 YEARS Galle has served as the project manager of the Digital Archaeological Archive of Comparative Slavery (DAACS), which is based at Monticello, Thomas Jefferson’s former estate in Virginia. It’s now a World Heritage site owned and operated by the Thomas Jefferson Foundation. DAACS’ mission is to make digital archaeological data from slave societies in the Caribbean, as well as the Chesapeake and the Carolinas in the U.S., available to researchers via the web.

DAACS archaeologists want to know how major demographic and economic changes affected slaves in the U.S. and the Caribbean in the 18th and 19th centuries. Galle and her colleagues spent five months in Jamaica in 2006 reanalyzing collections recovered by other archaeologists from two 18th-century sugar estates—Seville and Montpelier—on the island’s north coast. But those collections, which were recovered from only a few houses that were part of large slave villages, represented a fraction of those sites’ data.

One of the differences between Caribbean and U.S. slave quartering sites was that the former were much bigger than the latter. Whereas the U.S. sites usually consisted of several houses, the Caribbean sites, by the mid 18th century, were “large villages that may have contained 30, 50, 80 houses and hundreds of enslaved workers,” according to Galle.

“Because archaeologists to date have focused their excavations on individual households within these large villages, they have been unable to address larger questions about the strategies developed and used by enslaved laborers in the late 18th century to cope with the impact of the changes to the sugar economy and the institution of slavery as emancipation approached.”

To obtain the data that would give them a more comprehensive picture of village life in the 18th and 19th centuries, they had to excavate. Prior to this, DAACS researchers had only sought data from excavations by other archaeologists.

“The traditional approach to slavery in the Caribbean is to investigate one, two, or three household sites at a single village,” Galle said. However much this method reveals about those particular sites, it leads to the guesswork of extrapolations and assumptions regarding the rest of the village. At Monticello, Frasier Neiman, the director of archaeology, emphasized investigating entire landscapes rather than focusing on individual sites, and Galle employed this method, digging 20-inch-in-diameter test pits every six yards across the entire villages at eight estates on Jamaica, Nevis, and St Kitts.

Last January Galle directed excavations at the slave villages associated with the Papine and Mona estates, two 18th-century sugar plantations whose remains are located on the University of the West Indies (UWI) Mona campus in Kingston, Jamaica. She and her crew dug roughly 1,200 test pits at Papine, and about 100 more at Mona. Roughly two-thirds of Mona has been destroyed by the construction of a science complex that was first built in the late 1940s and expanded during subsequent decades, but Papine, much of which is now an open field with an 18th-century aqueduct, is largely intact.
Galle is energetic and petite, with short, dark hair. She seems to have a good rapport with her crew, which consists primarily of Jamaican students from UWI. She supervised a handful of students as they excavated and screened for artifacts near Papine’s aqueduct. It once transported water to the attached sugar mill, most of which no longer stands.

They’ve recovered some 57,000 artifacts from Papine, ranging from tools to ceramics to glass bottles to beads. A number of ackee trees grow on the site, and oral tradition has it that ackee and other fruit trees are good indicators of historic habitation sites. (Ackee and saltfish became one of the island’s signature dishes.) To remedy the problem of their slaves dying from malnutrition, the British imported trees that bore edible fruit, and planted many of them at the slave villages.

Gordan Shirley, the principal of the UWI Mona campus, and Swithin Wilmot, the dean of the faculty of humanities and education, who have been following the excavation, visited the site. Papine and Mona are among the few sites on Jamaica’s south coast that are sufficiently preserved to yield useful data, and UWI officials invited Galle and her colleagues to investigate them. “From the very beginning it was mutually beneficial for DAACS and the university,” Wilmot said of the project.

Shirley and Wilmot accompanied Galle to an old house nearby that once sheltered World War II refugees from Gibraltar and now serves as the archaeology laboratory. Myriad artifacts were neatly laid out within a series of rectangles that have been drawn on the tops of several large tables. Each rectangle represented a shovel test pit. Documentation taped to the rectangles noted the site, test pit number, excavator, and excavation date. These artifacts had been washed and dried, and were in the process of being classified and catalogued. “We do basic counts on the island so we can supply the Jamaican National Heritage Trust with an inventory of the artifacts prior to export,” Galle said.

Most of the artifacts—they don’t ship items such as mortar and bricks—will be sent to Monticello, where they will be analyzed by archaeologists with expertise in the material culture of this period, and the information derived from the artifacts will be entered into the DAACS database. Then they’ll be returned to Jamaica and curated by the UWI Department of History and Archaeology.

Having viewed the artifacts and been informed of the most recent findings, Shirley and Wilmot emerged from the laboratory: “There’s a lot that’s new to me,” said Wilmot. Shirley said he wants to know the details of how the slaves lived because “we view ourselves as one” with our ancestors.

Bringing Slavery To The Web

The DAACS’ web site (www.daacs.org) states that “Our goal is to help scholars from different disciplines use archaeological evidence to advance our historical understanding of the slave-based society that evolved in the Atlantic World during the colonial and ante-bellum periods. DAACS also serves as a model for the use of the Web to foster new kinds of scholarly collaboration and data sharing among archaeologists working in a single region.”

DAACS began in 2000 when Fraser Neiman, the director of archaeology at Monticello, received a $600,000 grant from the Andrew W. Mellon Foundation to fund the Digital Archaeology Archive of Chesapeake Slavery. Jillian Galle was hired that year to manage the project. It took four years to get the website, and the massive database that drives it, up and running. This version of DAACS focused solely on making data from slave sites in the Chesapeake, such as Monticello, Mount Vernon, and Poplar Forest, accessible. “The initial idea,” Neiman said, “was to convert the boxes of uncatalogued and unaanalyzed artifacts from previously excavated slave sites at Monticello into digital data that could be widely shared and analyzed quantitatively.”

But he and his colleagues concluded that the Monticello data would be best understood if it were viewed within “a larger comparative framework” that included other sites in the region. Toward that end, sites from South Carolina and the Caribbean were added in 2004. “The Caribbean was really the economic engine of the early-modern Atlantic world,” said Neiman.

Galle focused on obtaining data from the “significant” Atlantic sites. “Researchers were inherently interested in this project,” Galle said, because it gave them access to data from numerous slavery investigations. So many, though not all, archaeologists shared their data with DAACS.

During DAACS’ gestation, Galle solicited input from a steering committee that included over 30 archaeologists and historians working on issues of slavery. She posed a question to the committee: if they could have “a pie in the sky database for conducting archaeological research on slavery, what would it be?” The database and the classification and measurement protocols were built to their pie-in-the-sky standards.

DAACS contains all manner of information about almost 1.5 million artifacts from 42 sites, and it’s up to the challenge of answering most any query. “Show me all the Chinese porcelain tea bowls from sub-floor pits at Monticello,” she said, mimicking a difficult query, and the database will obligue with every such tea bowl. The data, which includes classifications, measurements, spatial data, site maps, and artifact images, some of which are in 3-D, can be downloaded and manipulated by researchers.

Amassing this wealth of information is complicated. The goal is to standardize the data from the various sites using the same classification and measurement protocols, ensuring that the data are easily comparable among plantations and regions. There are “hundreds of pages of protocols” to adhere to when analyzing the artifacts, according to Galle. And the majority of those artifacts are physically catalogued at the lab. “If there are 30,000 artifacts in the collection,” she said, “we physically catalogue those 30,000 items.”—Michael Bawaya
several different types of Afro-Caribbean ceramics, which are also known as yabba ware. One type was hand-made, low-fired, unglazed, and used for cooking and food preparation. Another type, that dates to the mid-to-late 18th century, was shaped on a wheel, kiln-fired, thin-walled, and covered with a muddy green glaze. A third type consists of thick-walled, unglazed red earthenware vessels suited for bulk storage and processing and was produced throughout the 18th and 19th centuries. DAACS archaeologists have found large amounts of these Afro-Caribbean wares at south coast sites, such as Papine and Mona, that were near urban areas.

Galle and her colleagues are seeing changes in the usage of these types over time. Their preliminary conclusion is that the thin-walled glazed ware, which resembled European ceramics, was initially produced by local specialists to compete with those expensive, imported ceramics. These wares fell out of favor by the late 18th century, while the thick-walled, red storage vessels dominate the 19th-century ceramic assemblages. DAACS archaeologists have found large amounts of these Afro-Caribbean wares at south coast sites, such as Papine and Mona, that were near urban areas.

Galle explained this behavior as the slaves’ response to the changes that were taking place on both sides of the Atlantic. Signaling theory, which archaeologists have borrowed from the field of behavioral ecology, posits that physical displays are a form of communication between individuals and groups. Displays that involve risks, whether physical or economic, convey essential information about the risk taker that might not be easily observed, such as his or her economic and social standing. “You can see men and women making different choices in the market place,” said Galle. “For example, young men who invested in costly clothing items, such as metal buttons, signaled their ability to earn money and to use that money to purchase non-essential, fashionable goods from merchants in towns or in market places. Those buttons in turn signaled a host of personal attributes—that young man’s skills at earning money, his ability to travel off his home plantation, and knowledge of fashionable goods—all useful qualities to convey when hoping to attract potential long-term mates, social allies, and economic partners.”

The Slave Trade was abolished in the British Caribbean in 1807, meaning African slaves could no longer be sold in British colonies. For some time the notion that, to a large extent, abolition resulted from the declining profitability of sugar production, held sway among historians. That notion has recently been challenged, and Galle and Neiman decided to test it archaeologically.

While excavating the Jessups and New River estates on Nevis, they discovered that each estate had two slave villages—one that dated to the mid-to-late 1700s and one...
that likely originated in the 1790s. They discovered that the early slave villages were moved from agriculturally productive to marginal lands in the 1790s. The sites of the early villages were then cultivated in sugar, and their proximity to the plantations’ mills and boiling houses likely increased productivity by decreasing the time and effort required to transport the sugar cane to the mill. The remains of an early windmill and subsequent steam mill at New River indicate that the owners invested in steam, the new technology of that period, and that also maximized yield. All of this, to Galle and her colleagues, supports the contention that sugar remained profitable through the late 1700s and early 1800s and that abolition of the slave trade was not necessarily driven by economics.

As early as the 1790s, plantation owners, anticipating abolition, implemented some changes in the hopes of increasing longevity and reproduction rates among their slaves. According to historical documents from Nevis, plantation owners that didn’t feed their slaves (some of them did) gave the slaves Saturdays and Sundays off to produce their own food. Galle and Neiman have also uncovered large numbers of imported ceramics and a decreasing amount of Afro-Caribbean ceramics after 1800. This suggests that many slaves were using their free time to engage in market activities that improved their lives.

These changes apparently had the desired effect in Nevis: the island’s slave population increased due to reproduction in the 1800s. Jamaican slave owners also became less demanding of their charges, but that island didn’t see a natural increase in its slave population.

After numerous rebellions, slavery itself ended in 1834 in the British Caribbean. But even after emancipation, slaves remained tethered to their masters. Freedom came with the price of “a four year apprenticeship period when slaves were kept on the property,” Galle said. This apprenticeship featured a set work schedule with a nominal salary.

Jamaica eventually emancipated itself from the British Empire, gaining independence in 1962. On a pleasant January day nearly 50 years later, Mavis Morris, a Jamaican field school student, said she was suffering “all kinds of pains” from digging test pits, but she wasn’t complaining. Before working on the project, she hadn’t known the Papine field that UWI students now use for track and other sports was once a slave village where her ancestors toiled.

Morris also knew nothing about their lives, and uncovering such routine evidence as pig and chicken bones, which indicated what the slaves ate, was a minor revelation. “I didn’t know that slaves used ceramics,” she added, noting that the variety of ceramics surprised her all the more. “Where would they get it from?” she wondered about the Chinese porcelain.

“Working on the site makes (the slaves’) lives more concrete,” Morris said; washing their artifacts in the laboratory made that time “more real.” Another Jamaican field school student who hadn’t known of the slave villages also expressed his surprise at how telling and evocative the artifacts could be. As Switchen Wilmot observed, “It’s really a process of self discovery to look back as you’re going forward.”

MICHAEL BAWAYA is the editor of American Archaeology.
EXPLORING THE ARCHAEOLOGY OF NORTH DAKOTA

By Lauren Donovan

These mushroom-like geological formations are known as rain pillars. They can be found at Theodore Roosevelt National Park South Unit.

On-A-Slant Village features reconstructed earth lodges.
The remnants of native villages, trading posts, forts, and battle sites remain part of North Dakota’s landscape. Paleo-Indians occupied this land as long as 13,000 years ago, thousands of years later tribes such as the Mandan and Hidatsa made it their home, and Lewis and Clark and their Corps of Discovery wintered here during their journey to the Pacific Ocean. A driving trip to a number of North Dakota’s premiere archaeological sites offers the added benefit of seeing some of the state’s beautiful farm and ranch country, much of which is bordered by the mighty Missouri River, the longest river in America.

Plan four to six days to do justice to this tour, which begins in Bismarck, the state’s capital. There you’ll find the **Heritage Center**, the state’s foremost repository for archaeology, history, and paleontology, and home to the State Historical Society of North Dakota. The exhibit “First Peoples” features thousands of artifacts that date from the Paleo-Indian and Archaic times through the late 1700s into the 1800s, the contact period that essentially brought traditional Plains Indian life ways to an end. Key diagnostic artifacts for each period are displayed, including stone and bone tools, projectile points, pottery vessels, and trade goods such as marine shells, copper, and obsidian.

A display of some 200 projectile points illustrates how knapping techniques using Knife River flint, a stone distinct to North Dakota, evolved over time. In addition to Plains Indian artifacts, there are illustrated explanations of their architecture, which progressed from rectangular lodges to circular earth lodges.

The next stop is **Double Ditch Indian Village State Historic Site**, 7 1/2 miles north of Bismarck on Highway 1804, a paved two-lane that skirts the Missouri River. Double Ditch is named for the protective entrenchments that surrounded this once-thriving Mandan village. It was one of nine villages that were inhabited by an estimated 10,000 Mandan Indians at the confluence of the Missouri and Heart rivers between 1490 and 1785. Double Ditch was virtually abandoned after the smallpox epidemic of 1781–82. The ditches, middens, and remnants of earth lodges in the forms of circular depressions, are on display. There’s also a recreation site with scenic hiking trails between Double Ditch and the Missouri.

From Double Ditch, continue north on Highway 1804 onto Highway 83 to Washburn, about 35 miles from Bismarck. This riverside community is home to the **Lewis and Clark Interpretive Center and Fort Mandan**. The interpretive center, at the intersection of Highways 83 and 200A, tells the...
story of the Lewis and Clark and their Corps of Discovery’s journey of 1804–1806, when the explorers spent more time in what is now North Dakota than in any other location between St. Louis, Missouri and the Pacific Ocean. A reconstruction of Fort Mandan, replete with a visitor center, is two miles north. Evidence of the original fort, which the explorers built for shelter in the winter of 1804–1805, has apparently been washed away by the shifting Missouri River, though it’s assumed to have been a few miles upstream from its successor.

The Lewis and Clark Interpretive Center’s Fort Clark wing has exhibits concerning Fort Clark Trading Post State Historic Site, the next stop on the tour. Using a model of the Mandan village and other displays, the Fort Clark Wing tells the colorful and tragic story of Fort Clark and the nearby village at a time when steamboats plied the river and the Indians, diminished in population from disease, tried to continue their traditional lifestyle in face of increasing contact with the outside world. The artifacts include a rare James Madison Peace Medal from 1814–1815.

From Washburn, head west 15 miles on Highway 200A to the Fort Clark Trading Post State Historic Site, where you can spend an hour or two walking through the grounds. The trading post, which was built around 1830, was associated with the American Fur Company and situated on the Missouri River for access to steamboats that brought goods upstream and departed downstream with bundles of valuable fur.

Fort Clark was enclosed by a palisade that encompassed the dwelling of the head fur trader and other buildings. It was located near a Mandan summer village that was nearly extinguished by smallpox in 1837–38. The surviving Mandans relocated and the village was occupied by the Arikara until 1861. Noted artists George Catlin and Karl Bodmer produced scenes of Mandan and Arikara village life and people, documenting details of their dress, lodgings, and ceremonies.

The fort was all but destroyed by fire in 1860 and the remaining wood was scavenged to fuel steamboats. The site has been the scene of extensive excavations and research through the 1970s and 1980s, 2000–2001, and 2004, and it was placed on the National Register of Historic Places in 1986. Archaeologists documented the remains of 86 earth lodges, Fort Clark and Primeau’s Post, another fur trading post, and numerous storage pits.

After Fort Clark, continue west on Highway 200A another 12 miles to Stanton and continue through town one-half mile north to the Knife River Indian Villages National Historic Site. Sakakawea (the common spelling in North Dakota) lived at one of the villages here before she joined Lewis and Clark on their journey to the Pacific.

The visitor center, which is shaped like a traditional earth lodge, has exhibits that tell the story of the three primary Hidatsa villages on the property. An especially impressive exhibit is a food cache filled with the dried squash, beans, and corn the natives grew in their gardens. Modern descendants treasure their collections of seeds from these ancestral gardens. There’s also a display of some of the artifacts that
have been recovered from the sites on the property. A series of excavations here between 1976 and 1983 uncovered more than 800,000 artifacts, including some that date to the Paleo-Indian period.

The site features a reconstructed, authentically furnished earth lodge. Outside the lodge, the staff and volunteers maintain a traditional garden fenced with willow branches. Having seen these attractions, you can walk on a trail system that leads to the Missouri and Knife rivers.

Return to Stanton, where you'll find the Mercer County Courthouse. The courthouse lobby has an impressive artifact collection of hundreds of Knife River flint projectile points and animal bones and shells used as decorative jewelry. The collection was amassed by George Sagehorn, an early settler and county judge.

Stop at Café Du Mond, and sample a fleischkuechle (flysh-keek-la), a deep fried meat-filled pastry that's part of the community's German heritage. It's filling and flavorful,
though some consider fleischkuechle an acquired taste.

From Stanton, continue west on Highway 200A and on to Highway 200 through Hazen. Allan and Gail Lynch own Lynch Ranch, which is west of Dodge off Highway 200. Their land encompasses a mile-long section of a Knife River flint quarry, part of a larger network of quarry sites in this region. The Lynches welcome visitors and, depending on their schedule, they will take guests out to the quarry near their ranch headquarters. (Contact the Lynches if you want to see the quarry.)

The quarry is marked by hundreds of shallow pits where Native Americans dug for the prized coffee-colored flint, removing an estimated one million cubic feet of it over a span of 11,000 years. For the Hidatsa, who lived in villages approximately 50 miles east, the flint was one of their primary trade goods, and pieces of it have been found as far away as New York, Mexico, and Canada.

The Dunn County Historical Museum—open depending on the availability of volunteers—in nearby Dunn Center offers a small collection of flint-mining and tool-making artifacts, along with nonarchaeological items that represent the last 150 years of local history.

Continue west on Highway 200 past Killdeer to the Killdeer Mountain Battlefield State Historic Site where, in 1864, U.S. Army Brigadier General Alfred Sully engaged the Sioux in retaliation for a Sioux massacre of white settlers in Minnesota. (Artifacts from the battle and personal items left behind by the fleeing Sioux are displayed at the Stoxen Library at Dickinson State University in Dickinson.)

Return to Highway 200, and then turn north on Highway 85 for a 20-mile drive to the Theodore Roosevelt National Park North Unit. The park was established in
1947 in honor of Roosevelt who, when visiting the area in 1883, took such a liking to it that he invested in a local cattle operation called the Maltese Cross and for a time tried his hand at ranching. There’s no archaeology to be seen here, but it’s still well worth a visit. The North Unit is what North Dakotans call their “grand canyon,” ruggedly eroded Badlands carved by the Little Missouri River. The north unit has a visitor center with information that explains the geological activity that formed the Badlands. There’s also a scenic drive, hiking trails, and a campground.

Fifteen miles north of the North Unit is Watford City, a bustling oil and ranching town that’s a good place for lunch and shopping. The Long X Visitor Center in Watford City features an impressive petrified cypress from a time roughly 60 million years ago when an inland sea covering the Great Plains receded into swamps. It also has information about the area’s various historical, geographic, and cultural attractions.

Head west on Highway 23, north on highway 85, west on Highway 200, north on Highway 58, and then west on Highway 1804 to Fort Union Trading Post National Historic Site. Established in 1828 by the American Fur Company, Fort Union’s purpose was commercial rather than military: it was built to foster trade with the northern Plains tribes.

The site has several reconstructed buildings and a visitor center with exhibits explaining the history of the trading post. During the summer months, interpreters in period costumes reenact life at the trading post during the 1800s. The National Park Service conducted excavations at Fort Union between 1968-72 and 1985-88, recovering more than 500,000 artifacts, including roughly 10,000 tobacco pipe fragments. A small sample of the pipes are displayed at the site, as are glass beads, both of which Euro-Americans traded to the natives for furs.

About two miles east on Highway 1804 is Fort Buford State Historic Site. Fort Buford was built in 1866 near the confluence of the Missouri and Yellowstone rivers. It was one of a number of forts whose purpose was to protect land and river routes used by Western settlers. Fort Buford is also the place where Sitting Bull, who led the Lakota in their battles against the U.S. Army, surrendered in 1881.

Three original structures still stand: the powder magazine, the officers’ quarters, and the officer of the guard building. There is also a reconstructed barracks. The officers’
Heritage Center  
612 East Boulevard Ave., Bismarck  
(701) 328-2666  
www.history.nd.gov/exhibits/heritagecenter.html

Double Ditch Indian Village State Historic Site  
Located seven and one-half miles north of Bismarck  
(701) 328-2666  
www.history.nd.gov/historicsites/doubleditch/index.html

Lewis and Clark Interpretive Center and Fort Mandan  
Washburn  
(877) 462-8535, (701) 462-8535  
www.fortmandan.com

Fort Clark Trading Post State Historic Site  
Located 15 miles southwest of Washburn  
(701) 328-2666  
http://history.nd.gov/historicsites/clark/index.html

Knife River Indian Villages National Historic Site  
564 County Road 37, Stanton  
(701) 745-3300  
www.nps.gov/knri/index.htm

Mercer County Courthouse  
1021 Arthur St., Stanton  
(701) 745-3292

Lynch Ranch  
Dunn Center  
(701) 548-8175

Dunn County Historical Museum  
153 Museum Trail, Dunn Center  
Call (701) 548-8111 to find out if the museum is open.  
www.dunncountymuseum.org

Fort Abraham Lincoln State Park  
4480 Fort Lincoln Road, Mandan  
(701) 667-6380  
www.fortlincoln.com

Killdeer Mountain Battlefield State Historic Site  
http://history.nd.gov/historicsites/kmb/index.html

Theodore Roosevelt National Park North Unit  
North Unit Visitor Center  
(701) 842-2333  
www.nps.gov/thro/index.htm

Watford City  
www.4eyes.net/WatfordCity/

Fort Union Trading Post National Historic Site  
(701) 572-9083  
www.nps.gov/fous/index.htm

Fort Buford State Historic Site  
(701) 572-9034  
www.history.nd.gov/historicsites/buford/index.html

Medora  
www.medorand.com/visitor_info.htm

Theodore Roosevelt National Park South Unit  
South Unit Visitor Center  
(701) 623-4730 ext. 3417  
www.nps.gov/thro/index.htm

Custer Trail Auto Tour  
South of Medora  
(701) 227-7800

Dakota Dinosaur Museum  
200 Museum Drive, Dickinson  
(701) 225-3466  
www.dakotadino.com

If You Go:  
(Book lodgings in northwest North Dakota well in advance.  
The local oil boom has reduced vacancies there.)
quarters has an interpretive center with displays about the fort. The cemetery has reconstructed wooden headboards marking the graves where soldiers were once buried. After the fort was abandoned the soldiers’ remains were disinterred and moved to the cemetery at the Little Bighorn Battlefield National Monument in Montana.

Return to Watford City and continue south on Highway 85, and then west on Interstate 94 to Medora, a pleasant place to spend a few hours. Medora was founded by the Marquis de Mores, a young French nobleman, in 1883. He named it after his wife, the daughter of a wealthy New York banker. With the support of his father-in-law, de Mores built a meat packing plant, a hotel, stores, and Chateau de Mores, a mansion overlooking his town. The 26-room Chateau de Mores is now a museum, and it’s located at the Chateau De Mores State Historic Site southwest of Medora.

Medora is the gateway to Theodore Roosevelt National Park South Unit, where wild horses, bison, elk, mule deer, and prairie dogs roam. The visitor center has a museum with a variety of Roosevelt’s possessions from his ranching days, such as his Winchester rifle. The Maltese Cross Cabin, near the visitor center, contains more of Roosevelt’s belongings as well as furnishings from the late 1800s. The 36-mile long Scenic Loop Drive provides an opportunity to view the park’s scenery and wildlife. You can also take a guided horseback tour at Peaceful Valley Ranch House.

There is also a petrified “forest” of enormous cypress stumps more than 65 million years old in the northwest corner of the park. The easiest way to reach it is by a gravel road that leads into that area and then hiking a mile to the forest.

Outside the park is the Custer Trail Auto Tour, which will most satisfy those who love both history and driving. The tour requires a day or more of traversing gravel roads to four of Lieutenant Colonel George Armstrong Custer’s and two of General Alfred Sully’s campsites. During the years 1864-1876, Custer and Sully engaged and pursued Sioux Indians through these rugged Badlands. The park visitor center has maps that will direct you to the Custer tour and petrified forest.

On the return to Bismarck, stop in Dickinson to see the Dakota Dinosaur Museum, which is home to numerous full-scale replicas of the great reptiles. Then continue east on Interstate 94 to the final stop, Fort Abraham Lincoln State Park, located south of Mandan on the west bank of the Missouri River. Take Interstate 94 into Mandan, turn south on Highway 1806, and drive seven miles to the fort’s entrance.

It was from this fort that Custer departed for his famous and fatal encounter with Plains Indians in the 1876 Battle of the Little Bighorn. The interpretive center has displays of both Mandan and U.S. Army artifacts. The park also includes On-A-Slant Village, which consists of reconstructed earth lodges. The village was occupied by the Mandans from about 1575 until 1785. You can take a guided tour of the reconstructed lodges.

Having spent your time at the park, head back to Interstate 94 and Bismarck, completing your journey across North Dakota’s vast plains and distant past.

Lauren Donovan is a North Dakota native and journalist.
Two major cultures, the Hohokam and the Patayan, mingled at the Gillespie Dam site in southwest Arizona. Archaeologists are studying this unusual site to understand the effects of this cultural interaction.

By David Malakoff
Even a thousand years later, archaeologists Howard Higgins and Glen Rice could imagine the intensity of the graveside ceremony. About A.D. 1000, someone had lowered a painted clay jar holding cremated remains, probably from a relative or neighbor, into a narrow pit dug into the bank of Arizona’s Gila River. Then, a few violent, ceremonial thrusts with a sharp stick shattered the jar, scattering fragments across the pit, which also cradled a carefully placed quiver of arrows.

The ancient riverside grave sat undisturbed until recently, when the archaeologists excavating in the path of a planned natural gas pipeline found it. After consulting with the Akimel O’Dham, whose ancestors are thought to be buried here, the archaeologists removed the jar and returned it to the tribe for reburial in a protected place.

“The emotional intensity was still there; you could feel it,” recalled Higgins, head of the Cultural and Natural Resources Practice at TRC Companies in Albuquerque, New Mexico, which led the pipeline survey. “You got a strong sense that this was a pretty elaborate and powerful burial ritual,” added Rice, a professor emeritus at Arizona State University in Tempe and a consultant with Rio Salado Archaeology, a firm that also worked on the study.

The shattered urn—found at a site called Gillespie Dam, some 60 miles southwest of Phoenix—is giving scholars more than just an emotional connection to the past. It and other artifacts found in two burial grounds near a prehistoric village are providing some surprising insights into how two major ancient Southwestern cultures, the Hohokam and the Patayan, may have mingled. The evidence suggests that their bonds were far closer and more complex than researchers once imagined. The tale told by the two burial grounds, said Rice, “is that you’ve got some fairly complex forms of cultural coexistence, over a fairly long period.”

The finds “provide a foundation for some new ways of thinking about how these two cultures interacted,” agreed Kathy Henderson, an archaeologist with Desert Archaeology Inc. in Tempe, who has also worked at Gillespie Dam. “Plus, there hasn’t been a whole lot of archaeology done in this part of Arizona; it’s been fairly paltry in fact. So this opens up some new territory where there were some pretty interesting things going on.”

The finds “On the Borderline”

Gillespie Dam site, named after a nearby irrigation dam built on the Gila River in the 1920s, sits in a desert valley that once marked a frontier of sorts between the Patayan and Hohokam homelands. From about A.D. 500 to 1550, the two neighboring cultures spread across a landscape that today includes parts of Arizona, California, and northern Mexico. “They were two of the region’s dominant groups at...”
the time,” said Jeffery Clark, an archaeologist with Center for Desert Archaeology in Tucson.

The Hohokam are one of the region’s most-studied prehistoric cultures. More than a century of research has revealed that they built sophisticated networks of irrigation canals, grew crops, and lived in extensive settlements in the river valleys of southern Arizona, including areas now covered by the cities of Phoenix and Tucson. Scholars estimate some 40,000 people once lived in these villages, and traded pottery, decorative shells, food, and obsidian along routes that stretched for hundreds of miles through the desert to the Pacific Ocean. At their peak, the Hohokam produced distinctive and ornate red-on-buff clay pottery that today is considered one of their hallmarks.

The Patayan are less well documented. That, to some extent, is because they inhabited areas that today are harsh and difficult to investigate. The Patayan also appear to have been a mobile people who typically did not build large dwellings or accumulate lots of possessions, and floods probably washed their rudimentary riverside settlements away. Still, researchers have found enough evidence—including distinctive rock art and a form of pottery known as Lower Colorado Buff Ware—to suggest that a Patayan heartland sat to the west of the Hohokam in the Colorado River Valley, and stretched from the Grand Canyon into Mexico’s Baja California.

By the 1940s, archaeologists had realized that the Lower Gila River, downstream of Phoenix, marked a possible frontier between the two cultures. At numerous sites along its valley, they found a mix of Hohokam and Patayan ceramics, and panels of carved rock art in the styles of both cultures. They also found Patayan-style geoglyphs—stones arranged into geometric or human shapes—and intaglio designs that had been scraped into the desert floor.

One particularly visible symbol of this borderland can be seen at Gillespie Dam, which sits just upstream of the so-called Gila Bend, where the river takes a 90-degree dogleg through some rugged ridges. For more than two miles along the Gila’s west bank, monumental Hohokam and Patayan glyphs—including wavy lines, outlined crosses, and shield-like shapes—hang over the valley, clearly visible to travelers below.

It is “a very public display of symbols used by different populations,” Christopher Watkins, a doctoral student at Arizona State University and consultant with Rio Salado Archaeology, concluded in a recent analysis he wrote with Glen Rice. “In short, Gillespie Dam was located in a very public part of the landscape where people of different cultural traditions were likely to encounter each other.”

Patayan travelers could easily reach the area on well-established trails from the west, the pair noted in a paper they presented last October at the 3rd Biennial Three Corners Conference at the University of Nevada, Las Vegas. And large Hohokam populations lived not far upstream on the Middle Gila and the Lower Salt River, a major tributary of the Gila. “The spot was probably also attractive because it had a good supply of fresh water, farming land… and it was a good place to cross the Gila,” said Rice. Those factors, he added, may explain why a relatively large village ultimately sprang up on the Gila’s east bank, across from the rock art panels.

The Gillespie Dam, built in the 1920s, lends its name to the nearby archaeological site.
A Pipeline Into the Past

Just how the Patayan and Hohokam interacted along the Lower Gila frontier, however, has long been a subject of scholarly speculation. Fifty years ago, for instance, some archeologists wondered if one group might have displaced the other over time. These days, however, the replacement idea has given way to more complex scenarios that envision a variety of ways the neighboring cultures might have interacted. They include everything from infrequent contact for trade to highly interwoven relationships like formal alliances and even intermarriage. It can be difficult, however, to find clear signs of these more nuanced arrangements in the scattered shards, stone points and bits of shell, bone, and grain left behind at many prehistoric sites.

That’s why Southwestern archaeologists are intrigued by the graves and other cultural artifacts found at Gillespie Dam. “This is really good stuff… it’s a little unusual to find relatively intact sites that allow you to develop some pretty solid scenarios about cultural interactions,” said Clark.

That “good stuff” is in large part the result of Arizona’s growing appetite for natural gas. In 2006, the Transwestern Pipeline Company hired TRC to do archaeological surveys along the path of a planned 250-mile long pipeline network. The archaeologists, who finished their fieldwork early last year, examined more than 60 sites within a narrow corridor that ran roughly north-south along the western edge of Hohokam territory. That alone “made the project a bit different,” said Higgins, “since past survey transects tended to go east-west.”

At Gillespie Dam, it turned out the pipeline’s route crossed the southern edge of the village, and it went through what appeared to be two cemeteries about 100 feet apart. In one, excavations uncovered two graves holding cremated remains accompanied by Hohokam-style ceramics. In the other, the researchers found seven sets of cremated remains along with 12 complete or nearly complete Patayan-style vessels.
At another site, archaeologists—some working on other projects—had found features associated with a jumbled mix of Hohokam and Patayan sherds. Those features included middens, apparent hearths, and the remains of both small and unusually large pit structures. The researchers had also found stone points, apparently from quivers of arrows buried with some of the cremated remains, decorative shells that had originally come from the California coast (confirming a previously unknown trade route), flakes of obsidian from distant outcrops, and bits of ancient wood and plant material.

Soon, the archaeologists were struggling to make sense of their rich but often confusing finds. It was clear that the village had been deeply influenced by both Patayan and Hohokam cultural practices. But the researchers recognized that a number of scenarios might explain what they were seeing. One explanation, for instance, took account of the fact that the village sat astride both east-west and north-south trading routes. Perhaps the village residents had traded heavily with both the Patayan to the west and the Hohokam to the east, and had eventually adopted burial practices and pottery-making technologies from both groups. The trade influences could explain both the varying ceramics and burial traditions.

Another possibility was that groups of the highly-mobile Patayan had periodically settled around a more-established Hohokam village, trading game, pots, and other goods for...
crops. Perhaps they had even established their own cem-
etery. A third option was that Hohokam villagers had allowed
Patayan laborers to work their fields in exchange for a share
of the crop and the right to live, at least seasonally, in or
near the village. Yet another scenario was that Hohokam and
Patayan families had lived, farmed, and died side-by-side, but
retained their own pottery-making and burial traditions.

Or, “you could use a mix of these scenarios to explain
what was going on,” Rice said. “You can’t entirely rule any
of them out,” he added, noting researchers are working with
“pretty small sample sizes… it will take more research to
fully test a lot of these ideas.”

All Together Now
Still, he believes the available evidence all points to a rela-
tively rare, documented example of a very intimate rela-
tionship. “There is every indication that the Hohokam and
Patayan populations occupied the village at the same time,
and interacted with each other on a daily basis,” Watkins and
Rice concluded in their paper. And the mix of Hohokam and
Patayan sherds found in the pit structures only reinforces the
notion the two peoples shared working spaces.

That scenario sits well with Henderson, who in 2007 and
2008 led excavations of several dozen of the pit structures
near the center of the village—including some unusually
large structures the researchers believe might have served as
community gathering spaces. “We found small numbers [of
Patayan ceramics] in most features,” she said. Originally, she
thought the most viable explanation was that the pots had
come into a Hohokam village via trade. Now, she thinks there
was a more regular Patayan presence in the village, which
started as a primarily Hohokam-oriented settlement.

The two distinct cemeteries, however, suggest Patayan and
Hohokam families eventually “are living in close proxim-
ity, but not necessarily blending,” said Higgins. “The cemeter-
ies are spatially discrete and the burial goods,” such as pots,
are different, noted Rice, suggesting each culture clung to at
least some cherished traditions.

But why did the Patayan move in? Watkins and Rice
believe a sharecropping relationship is one likely possibility.
Irrigation is labor intensive, they note, and many irrigation-
dependent cultures—including more modern Native Ameri-
can groups in the Southwest—have used sharecroppers.
Archaeologists have also found evidence at other Hohokam
villages that outsiders worked or lived in the field houses
near the crops and canals, which appears to be the case at
Gillespie Dam’s field houses.

The Patayan might have found it easier to become full-
fledged landowners in the village due to one of Gillespie
Dam’s unusual characteristics. Upstream Hohokam villages
appeared to have highly structured land and water owner-
ship systems due to the need to build, operate, and maintain
irrigation systems based on a complex network of canals.
It’s assumed that the people who lived at the head of the
channel—where the flow of water was controlled and the
land was most fertile—were also at the head of the political
hierarchy.

The Gillespie Dam village, on the other hand, had no
main canal, apparently because ample water was available
on the nearby Gila River floodplain, where farming occurred.
Frequent floods may have periodically shifted the river’s
course, thereby changing the locations of the most desirable
lands and making flexible land ownership arrangements
attractive. Watkins and Rice said this difference could indi-
cate that the village had less structured governance and land
and water ownership systems than other Hohokam commu-
nities, making it “easier for charismatic Patayan household
heads to incorporate themselves into” the village.

A Multi-Ethnic Hybrid?
Although the Gillespie Dam site provides ample evidence
of the two groups maintaining separate traditions, it also
suggests some cultural blending. A ceramic scoop and some
undecorated pottery sherds, for instance, appeared to be
“hybrids” that reflected both Hohokam and Patayan technol-
gies. Similarly, the graves show some signs of hybridization
in burial practices.

Studies at other sites, for instance, have found that the
Lower Gila Patayan had a tradition of breaking their interment
pots (which were placed upside down into the burial pit),
and scattering the fragments within the grave. The Hohokam
tended to keep their burial pots whole. At Gillespie Dam,
however, the archaeologists found that the two Hohokam urns had been broken Patayan-style—including the one that gripped the imaginations of Rice and Higgins. “The two Hohokam burials fell somewhere in between,” Watkins and Rice reported. “The vessels were broken, but the sherds were not scattered through the grave, suggesting that the local Hohokam had modified their treatment of vessels to include some elements (but not all) of the Patayan practice.”

The Gillespie Dam cemeteries also show some distinct differences from similar burial sites found upstream, closer to the center of the Hohokam heartland. There the graves of apparently important people have tended to hold ceremonial objects like crystals, bone whistles, and unusual stones or shells. Downstream, however, ancient VIPs were buried with quivers holding five or more stone-tipped arrows.

Watkins and Rice say that may have been because the upstream communities wanted to honor ritual leaders, possibly shamans, who helped hold together the political alliances necessary to run cooperative irrigation systems. Downstream, where cooperative irrigation was less important, the honors may have gone to “big man” hunters. That makes some sense, they noted, because the Lower Gila landscape is more hospitable to big game than upstream areas. Overall, Watkins and Rice said it appears that “Hohokam burial practices on the Lower Gila are closer to Patayan burial practices than to Hohokam practices in the Phoenix area.”

The big picture that emerges from Gillespie Dam, Higgins said, is that “the Hohokam—or the Patayan—were not a monolithic society where everyone did things the same way. There were choices people could make about how you dealt with things like food, and irrigation, and finding labor for agriculture.” It’s not entirely clear, he added, exactly how the Gillespie Dam village of a thousand years ago should be defined. Is it mostly Hohokam? Or Patayan? Or, like many modern border towns, something in between? “The local population there,” he said, “seems to have formed their own little multi-ethnic community.” And the challenge, he and other archaeologists said, is finding more frontier sites like Gillespie Dam that can tell us more about what it once was like to live on the edge.

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The Great Recession has wreaked havoc. We know only too well about the job losses, home foreclosures, and industry bailouts. What’s less well known is that the recession is also affecting archaeological resources. In response, local, state, and federal officials, and concerned individuals are scrambling to deal with this threat.

In Arizona, five of 30 state parks are slated for closing this year because the parks department budget was cut by 80 percent and its revenues were diverted to fund other state programs. Lyman Lake State Park and Homolovi Ruins State Historic Park were the first to close in February, and officials are concerned that looting, once a major problem, might resume.

Lyman Lake, located in St. Johns in east-central Arizona, contains petroglyphs and an ancestral Hopi ruin. Homolovi, in nearby Winslow, holds the ruins of four major ancestral
Hopi pueblos that date from A.D. 1250 to 1400. The pueblos are some of the largest in the Southwest, with a combined 2,500 rooms and 60 kivas. Chuck Adams, a curator of archaeology at the Arizona State Museum and an archaeologist at the University of Arizona, noted Homolovi’s importance to the Hopi. “It’s where the people lived before they migrated to the Hopi mesas,” he said. “Clans visit here because the villages are shrines representing their migration paths. The river through the area is also used by the Hopi to collect turtle shells and feathers from rare birds for use in ceremonies.”

Arizona established Homolovi in 1986 after the Hopi, who live on a reservation approximately 60 miles away, asked the state to help protect the ruins. Looting at Homolovi was so bad from the 1960s to 1980s that heavy equipment was used to uncover artifacts. Archaeologists have since discovered backhoe trenches in the walls and floors of a kiva they excavated in 1993.

“The big concern is that the park is so rural, and there are back roads to it that belong to surrounding ranches. The sites are pretty vulnerable to renewed vandalism, and the material culture is rare and highly sought after in the black market,” Adams said. Looters are primarily interested in Hopi Yellow Ware, White Mountain Redwares, and other ceramics. The sites also include paintings on kiva walls that are backfilled and protected and petroglyphs that are susceptible to target practice.

Karen Berggren, whose job as Homolovi’s manager ended in April, said protecting the ruins was a top priority. Toward that end, the state has placed locked gates at roads leading into both parks, and both have a park law enforcement officer living there. Site stewards continue to watch for suspicious activity and environmental degradation, and local law enforcement officials from Winslow and Apache County will include the parks in their rounds. “We also have unique ways of protecting them that we’re not sharing,” said Ellen Bilbrey, Arizona State Parks spokesperson.

Adams said one of the problems is that no one has experience closing a park, so there’s no procedure to follow. He spent several days with Homolovi’s staff reviewing concerns about the impact of the closings on archaeological sites and the risks of vandalism and erosion. He also discussed the possibility of backfilling and other means to preserve and protect open excavation areas. The Arizona Archaeological Society will be working with the state parks department to stabilize the exposed walls in three of the ruins. The buildings have been boarded up, and the collections have been packed and sent to the Arizona State Museum for storage.

With support from the Hopi and their surrounding communities, Adams thinks Homolovi can be protected. But, he said it will be hard to keep people enthused, and the effort will need to be maintained for months or years before the park reopens. Other Arizona state parks that aren’t as remote are receiving help from local communities. “We’re coming up...
The Ohio Historical Society implemented management agreements with local organizations to help keep their parks functioning.

These children are touring the Great Circle Museum, which is managed by the Greater Licking County Convention and Visitors Bureau.

An Arc of Appalachia employee (right) shows visitors how to throw an atlatl at Serpent Mound.

The Newark Earthworks Center at Ohio State University-Newark offers educational programs about the earthworks.

Archaeology Day at Fort Ancient is sponsored by the Dayton Society of Natural History.

with management agreements with localities to keep some of the parks open,” Bilbrey said, adding that town mayors are finding solutions because the parks are so important to local economies, and friends of the park groups are organizing fundraisers. In fact, with the help of $40,000 from Apache County, where the park is located, Lyman Lake reopened, though only for the summer.

The Ohio Historical Society is funded in part by the state legislature to promote knowledge of Ohio’s history and archaeology. This year their biennial state subsidy for managing historical parks was cut by a third, from $12 million to $8 million. The cuts meant the society had to take creative measures to fulfill its responsibilities. After a series of public meetings, the society implemented management agreements with local organizations that enabled them to cut costs while maintaining or increasing access to the 58 parks managed by the society. These include Serpent Mound, Newark Earthworks, Fort Ancient, and other parks that have significant archaeological features.

“Whether the city takes care of mowing the lawn or we’re partnering with community groups to operate the museums or sites, this approach has been very successful,” said Kim Schuette, the society’s communications manager. “There was some concern by stakeholder groups that smaller organizations wouldn’t have the expertise to handle the collections and provide services, but the society is providing training where it’s needed,” she said.

Brad Lepper, the society’s curator of archaeology, said the archaeological staff hasn’t been able to do as much research as they would like because of budget cuts, so they have been approaching archaeologists from other institutions who have their own funding to conduct research. Excavations will take place at several sites this year.

There has always been some danger of looting, but so far it’s not much of a problem. “Our partners are as committed to the sites as we are,” he said.

In New York, budget constraints could result in the closing of 41 parks and 14 historic sites, some of which have archaeological resources, according to Dan Keefe, a spokesperson for the state parks system. If the parks are in fact closed, he said some steps will be taken to protect their cultural resources.

Park closings have also been discussed in a number of other states.
INSUFFICIENT FEDERAL FUNDING

Protecting archaeological sites has become a growing concern for the Bureau of Land Management. “We rely considerably on volunteers to help with protection, but assistance from volunteers has dropped by over 30 percent since 2007,” according to Richard Hanes, chief of the Division of Cultural and Paleontological Resources and Tribal Coordination. The bureau manages 253 million acres of land, more than any other federal agency, encompassing a broad spectrum of archaeological sites. Most of the land is located in the Western states. Hanes said volunteers systematically monitor areas that may be vulnerable to looting or erosion, but they have to buy their own gas, and they have less money now. Many are preoccupied with finding a job.

According to Dan Odess, the assistant associate director of cultural resources for the National Park Service, looting has increased at some national parks, as well as on federal lands the park service doesn’t manage, as a result of the recession. The culprits are not only organized looters, but also unemployed people who have more free time to hunt for artifacts. “Site protection is always an issue,” he said, “but there are fewer people on the ground now, and fewer people to deal with those issues.”

“We’ve surveyed less than three percent of our park lands,” said Odess. “Much of the land is in Alaska, and we know there are significant archaeological resources on those lands, but with only a couple million dollars for inventory work spread between almost 400 National Park units, progress is slow. In an era of flat funding and increasing costs, those dollars do not go as far as they once did.”

The economic downturn, Odess lamented, has occurred at the same time that federal and state agencies have to deal with the threat of climate change, especially in the form of rising sea levels, that endanger some sites. He said that Cape Krusenstern National Monument is one of several sites in Alaska that are eroding due to rising sea levels, as are some island and coastal sites from Massachusetts to Florida.

The vast museum collection owned and managed by the Department of the Interior (DOI) is also at risk, in part because of inadequate staffing and lack of resources. These problems will be more difficult to remedy due to the recession, according to Terry Childs, museum program manager and archaeologist with the DOI Office of Acquisition and Property Management. According to an audit report published by the DOI’s Office of the Inspector General in December 2009, “DOI has jeopardized countless works of art, artifacts, and other museum objects by failing to keep track of its vast museum collections.”

Management of the collections is delegated to DOI bureaus—primarily the National Park Service, Bureau of Land Management, Bureau of Reclamation, Bureau of Indian Affairs and the Fish and Wildlife Service. The bureaus are required by law to maintain archaeological collections recovered from federal lands and acquired through donation, purchase, exchange, or transfer. The audit report acknowledged that “extremely low staffing levels for the museum programs make it difficult for bureaus to establish accountability over their museum collections.”

Childs estimates that about a third of the collections have not been catalogued. Second in size to the Smithsonian Institution’s, the DOI’s collections include over 155 million objects at 625 DOI facilities and over 1,000 non-DOI facilities. About 50 percent of the collections include archaeological artifacts and related documents. The items range from lithic...
scatters to intact pottery to organic artifacts recovered from melting glaciers in Alaska, not to mention the remains of a 19th-century Mississippi steamboat. “If you can think of it, we’ve got it,” Childs said.

The audit report stated: “We found widespread failure to properly execute the three key processes required to maintain accountability over museum collections—accessioning, cataloging, and inventorying. At DOI, elements of the nation’s heritage are being neglected and forgotten in thousands of boxes containing millions of objects neither identified nor accounted for. As a result, these collections are unavailable for research, education, or display, and are subject to theft, deterioration, and damage.”

Childs said that, in recent years, the bureaus have done a better job of caring for their collections, and that the DOI is developing an action plan to address the Inspector General’s recommendations and focusing on changing its staffing and other resources to cope with budgetary constraints. They will also pursue more partnerships with universities and museums that could curate some of the DOI collections. In addition, they will continue to install and implement a new cataloguing system. “It will be extremely challenging. We can’t accomplish everything without more resources. It will take a long time, at least five years to make major headway,” she said.

**JOB CREATION AND PRESERVATION**

Section 106 of the National Historic Preservation Act requires a review of the impact of federal projects on properties listed on, or eligible for, the National Register of Historic Places. As a consequence of Section 106, archaeological surveys and, in some cases, excavations, are done prior to the construction phase of the project. This work is often referred to as cultural resource management (CRM). In some states, processing requests for Section 106 reviews has become more difficult due to staff cuts at state historic preservation offices (SHPOs).

“The workload has increased dramatically” due to the American Recovery and Reinvestment Act, commonly referred to as the federal stimulus program, said Susan Stratton, who supervises the federal compliance unit at California’s SHPO. “We've also been furloughed three days a month” because of the state’s well publicized financial crisis. Stratton’s staff, which consists of nine full-time and one half-time employees, has already reviewed over 6,000 projects during their current fiscal year.

Governor Arnold Schwarzenegger ordered that reviews be fast-tracked, prompting Richard Moe, president of the National Trust For Historic Preservation, to retort in an op-ed piece in the *San Jose Mercury News:* “Everyone can agree that delays are frustrating and that creating jobs is a priority. But pitting the promise of job creation against effective, long-standing environmental and preservation protections is not the way to go.”

Many of the projects the California SHPO reviews have no effect on archaeological resources, but a number of them—Stratton couldn’t say how many—do. She mentioned, for example, a wastewater treatment plant that is to be built in a small southern California town with $80 million of federal stimulus money. In order to meet the deadline to obtain the stimulus funds, Stratton’s staff had only three days to review the project’s archaeological survey, which was done by a CRM firm. The survey detected about 50 archaeological sites and noted that some of them would be affected by construction. The SHPO accepted the survey’s conclusions—had it not accepted them the project could have been delayed and the stimulus funds’ deadline missed—with the condition that a mitigation plan be developed for the affected archaeological sites. The outcome of the mitigation plan is uncertain: in the best case the sites could be left intact, in the worst they would be excavated prior to being destroyed.

Stratton and her staff face political pressure to expedite the reviews and this “pressure affects the way we do things,” she said, but she added that they remained dedicated to protecting archaeological sites. She also expressed concern that about 20 percent of California’s stimulus money has been spent and, as the balance is spent, the SHPO could “really become inundated.”

New Mexico’s SHPO, like California’s, is contending with more Section 106 reviews courtesy of the stimulus bill, a problem that’s exacerbated by its staff shortage. The state archaeologist, the Section 106 program manager, and three archaeological reviewer positions are
vacant and can’t be filled because of a hiring freeze, and therefore some projects proceed without being reviewed.

“Some things just don’t get done,” said Jan Biella, the state’s interim historic preservation officer. “The staff is just wearing out. They’re really tired.” She said the SHPO is “using a triage” to determine which projects get priority. If they’re too busy to review a project within 30 days, it will proceed without review. The unreviewed projects pose limited danger to cultural resources, according to Biella, as they affect areas that are already disturbed. “We’re doing our very best to protect the archaeological resources,” she said, but “the staff is just wearing out. They’re really tired.”

South Dakota’s state archaeologist’s office, having lost state funding, faces the challenge of becoming self-supporting. It’s funded this year through a temporary tourism tax, revenue from contractual work, and fees for permits, curatorial, and research services. Jim Haug, the state archaeologist, said the tourism tax expires next year, contract work is dwindling, and fees generate about 10 percent of the revenue needed to support their operations, which include Section 106 compliance and other legally mandated services. If his office is unable to find the money to carry out its responsibilities, Haug said “somebody, somewhere, will still have to do what we do.”

Construction projects have declined in many parts of the country because of the recession, and a number of companies that provide CRM services are struggling. “Everyone has seen a slow down,” said Lucy Wayne, president of American Cultural Resources Association, which represents CRM firms.

“All of the work normally generated by 106 has almost entirely dried up over the last year,” said Nick Luccketti, a partner in The James River Institute of Archaeology in Williamsburg, Virginia. As a result their company’s employees have decreased from 25 to eight. Luccketti also said the winning bids for a number of projects were far below cost. “It makes you wonder how they do it. Will they really identify all the important sites?”

Grants that have helped fund archaeological projects in the past are also disappearing. “Save America’s Treasures” and “Preserve America” programs have both been eliminated in the proposed federal budget for fiscal year 2011, and funding for National Heritage Areas would be slashed by 50 percent. According to the National Trust for Historic Preservation, those programs “do more than preserve our rich heritage, they put Americans to work.”

PAULA NEELY’S work has appeared in nationalgeographic.com and DIG magazine. Her article “Uncovering Early Colonial Life” appeared in the Fall 2009 issue of American Archaeology.
A Late Starter and A Trailblazer

Kathleen Gilmore was nearly 60 when she began her pioneering career in archaeology.

By Elizabeth Lunday

In 1962, while excavating at the Gilbert site east of Dallas, a Native American camp that was a hub for the French trade network, Kathleen Gilmore unearthed an engraved brass artifact. Delighted with her find, she showed it to principal investigator Edward Jelks. He looked carefully at the piece of metal and said, “It’s a butt plate.” Gilmore stared at Jelks. Then she snapped, “Like hell it is!” and stomped off.

“She thought I was trying to pull one over on her,” laughed Jelks, now emeritus professor of anthropology at Illinois State University. Gilmore wasn’t going to let anyone play her for a fool—she was determined to be taken seriously as an archaeologist. So it took a good bit of convincing to reassure her that what she had discovered was indeed the butt plate of a French musket.

Gilmore herself came to find this story funny and she didn’t mind when “Like hell it is!” became a catch phrase among her friends and colleagues. But that was Kathleen Gilmore, by turns fierce and funny. This pioneering archaeologist never limited herself to one role. She was a dedicated stay-at-home mom and path-blazing career woman, a passionate researcher and a party-lover.

Gilmore died on March 18, 2010 at age 95. She never stopped working. Even while waiting in the emergency room of a Dallas hospital—she’d been taken there after complaining of chest pains—she was focused on the book she was writing about Spanish Colonial Texas when she suffered a fatal heart attack. “But that was Kathleen,” said Tamra Walter, associate professor of archaeology at Texas Tech University. “She never let anything stop her.”

Kathleen Kirk was born on November 12, 1914 in Altus, Oklahoma, and grew up in Tulsa. She decided as a girl to be an archaeologist. “When I was about 13 there was a whole article in the newspaper about the lost Maya civilization, and how nobody could read their script,” said Gilmore in an interview about a week before her death. “And I thought, oooh, I want to do that.”

Her enthusiasm was dampened when she learned that classical archaeology demanded knowledge of several languages, and Gilmore said she “wasn’t good at languages.” Further, when she graduated from high school, the country was deep in the Depression; Gilmore needed to find a job where she could make good money.

She decided to go into geology, thinking she could find work with one of the oil companies in Oklahoma and Texas, but she was confronted by the entrenched sexism of the day, which was one of her most frustrating experiences. “I’ll tell you what was difficult,” said Gilmore. “I had a bachelor’s...
degree in petroleum geology and I couldn’t get a job!”

The best she could do was get a position in the stenographers’ pool. Gilmore learned typing and shorthand, but hated the work. “I couldn’t stand that stenographic pool, oh my!” she said. She finally got a job as an assistant to a senior geologist in Houston, a position one step up from the typing pool.

She married Bob Gilmore, a petroleum engineer, on Christmas Day, 1940. Bob was then working in Henrietta, in north Texas, a long way from Houston. Gilmore kept the marriage secret from her boss for several months for fear that, if she announced it, she would be expected to quit, as working wives were unusual at that time. When Bob took a job with a petroleum-consulting firm in Dallas, she joined him, and a baby followed nine months later.

The next two decades were devoted to raising her four daughters. But archaeology remained appealing. She was active in the Dallas Archaeological Society and participated in volunteer projects such as the Gilbert dig. And when her youngest daughter was 12 years old—and Gilmore herself was in her 50s—she went back to school full-time to get the archaeology degree she had always wanted.

Naturally, she worried how she would do. “I said, gosh, these kids are going to be brand new out of college and know how to study. How am I going to do this? And Bob, my husband, he just said, how are you going to know if you don’t try?” She did just fine, earning her Ph.D. in 1973 and going on to become a pioneering woman archaeologist. In the late 1960s, she helped found the international Society for Historical Archaeology; later she became its first female president.

“When they asked me to be president,” said Gilmore, “I said to Bob, I don’t know if can do this. He said again, how do you know until you try? He was a good guy.”
died in 2000.) In 1995, the society bestowed upon her their highest recognition, the J.C. Harrington Award for lifetime achievement. Gilmore also served as president of the Texas Archaeological Society and as the first president of the Council of Texas Archaeologists. Gilmore also received the Texas Governor’s Award for Historic Preservation, the state’s highest honor for historical work, in 2008. She told friends she was happy to get the award, even though the Governor, Rick Perry, is a Republican and she was a staunch Democrat.

Gilmore focused on the Spanish Colonial period of Texas history, taking particular interest in ceramics. “There wasn’t much known about Spanish artifacts of the period,” said Jelks. “At all these sites you’d find busted pottery, some of it made in Mexico and some made in Spain. She became a real authority on that stuff.” Gilmore used her knowledge to identify several mission sites.

Gilmore’s conclusion was confirmed in 1996 when a worker discovered a cannon at the site. Soon after, seven more cannons were uncovered. Gilmore remembered her excitement when she got a phone call from Texas Historical Commission (THC) executive director Curtis Tunnell. “I was standing there in the kitchen, and he said, ‘we found the cannons. That proves your site is the site of La Salle’s Fort St. Louis,’” Gilmore said. “Oh, what a day!”

A major excavation got underway at Keeran in 1999, and Gilmore served as senior consultant, renting an apartment in Victoria to be near the project headquarters. The principal investigator, Jim Bruseth, director of the THC archaeology division, recalled evenings spent discussing the day’s discoveries over glasses of fine wine. “Because of her age, she wasn’t able to be in the field every day, but she was nearby for consultations,” said Bruseth. “It was critical to have someone of that level of seniority and knowledge on hand.”

Gilmore remembered the Keeran excavation as miserably hot. “And, oh, the mosquitoes!” But the distant past was never far from her mind—she immediately began describing Her expertise made her the natural choice to re-examine artifacts from the Keeran site, about two hours southeast of San Antonio near Victoria. This campsite on a bluff above Garcitas Creek was assumed to be the location of the ill-fated Fort St. Louis, the colony founded by French explorer Robert Cavelier, Sieur de La Salle. But archaeologists were unable to prove this, as excavations in the 1950s failed to find definitive evidence of a French settlement.

In the early 1970s, leading Texas archaeologists asked Gilmore to reanalyze the data from the 1950s’ excavation. She noted several green glazed potsherds that were unlike any Spanish pottery she had ever seen. She consulted with other experts and established that the pottery was indeed French, and was from the Saintonge region. Saintonge was not far from La Rochelle, France, the center of colonial trade and the port from which La Salle embarked. “After finding that, I felt pretty sure that I really did have Fort St. Louis,” said Gilmore.
the effect of the harsh climate on the French colonists. “Those poor people didn’t do well,” she said, shaking her head.

In fact, people interested Gilmore more than artifacts. For example, during the research for her master’s thesis she learned the story of a particularly contentious—and rakish—Spanish captain named Felipe de Rábago y Terán, who commanded the short-lived San Xavier and San Sabá missions in Central Texas.

Rábago took charge of a presidio built to protect the three San Xavier missions from attack by Apaches, but he outraged Franciscan friars by seducing numerous Indian women and carrying on a flagrant affair with the wife of a colonist.

The story retained its fascination for Gilmore for 40 years, and in the mid-2000s she decided to write a book that would fill in the gaps about Rábago. With help from Walter, Bruseth and a translator, she gathered information about the San Xavier and San Sabá missions. She also researched archives in San Antonio and Spain, uncovering correspondence about the investigation of a murder Rábago may have committed as well as the name of his mistress.

“That’s what really got me started on this, because nobody had put her name anywhere. There are several accounts about Rábago, but not one of them had her name. So I went and I found it,” Gilmore said. “Juana Francesca de Rodriguez. That was her name.”

Gilmore had scheduled a meeting with her book team on March 19 to discuss future steps, including a trip to Spain. When she began having chest pains and was rushed to the hospital, “she told the doctors, I have an important meeting tomorrow. I’m not staying here,” said Walter. “They were trying to convince her she was having a heart attack, but she just said, prove it. That’s so like her,” said Walter.

The diminutive, blue-eyed Gilmore had suffered several ailments in her later years, but until her heart attack, she refused to let them slow her down. As her eyesight failed, she got audio books and other reading devices. When arthritis troubled her, she got a cane—two canes, in fact, that she named Charlie and George, and she confided she didn’t like Charlie much. “Let’s go, George!” she said when she walked guests to the door. “Whatever it was, she just dealt with it,” said Walter. “She never let it get her down. She’d begin talking about her research, and it immediately lifted her spirits.”

Walter is planning to continue with the book project in honor of her friend. “We will definitely finish it for her—that was her wish,” she said. Walter walks a path blazed by Gilmore, who was one of the first female archaeologists in Texas. “She didn’t just help open doors—she busted the doors down,” said Walter. “And she always helped other female researchers—she was there for other women.”

Gilmore was also a leader in the research of Spanish colonial sites. “She was one of the very first mission archaeologists. She’d worked on so many sites, and I’d look to her research to guide what I should do,” Walter said. “She was a pioneering person in finding and excavating these sites,” said Bruseth. “She really allowed us to better understand many Spanish colonial sites in Texas. She did great, great work.”

Gilmore greatest legacy, however, may be her insights into the lives of ordinary men and women who carved out precarious existences on the Texas frontier. “To me, and this may not be true for everybody, my interest has always been the people,” Gilmore said. “I want to know what the people were doing, and how they were doing, and why they were doing. After all, it’s the people that make history. It’s the people that change things.”

Kathleen Gilmore was one of those people.

A Vestige of the Mimbres

The Conservancy obtains the Elk Ridge Mimbres site.

During their Classic period, the Mimbres people of Southwestern New Mexico lived in large, multistory cobble-walled pueblo structures that were constructed around central plazas. Some of the pueblos had great kivas that most likely served as community and ceremonial centers. Mimbres sites have been documented across much of Southwestern New Mexico, and the greatest concentration of large sites is in the Mimbres Valley and the areas adjacent to the Mimbres River.

Mimbres pottery is renowned. The black-on-white painted pottery bowls and jars are decorated with stunning geometric, naturalistic, and anthropomorphic designs. The pottery was frequently included among funerary objects placed with human remains at the time of burial. Bowls associated with burials typically have a “kill” hole punched in the bottom.

Many pottery collectors covet the elaborately decorated pieces and are willing to pay very high prices for them. Consequently, almost all of the sites located on private land in the Mimbres Valley have been destroyed by looters. In some cases, mechanical equipment has been used to dig through entire sites.

The Elk Ridge Mimbres site is located in the northern part of the Mimbres Valley. Unlike other sites in the area, it’s buried under as much as six feet of alluvium, which protected it for many years. One of the previous owners eventually discovered the site and, though he used mechanical equipment to dig for pottery, disturbed a relatively small area.

Recent investigations have determined that much of the site, including a large multi-roomed, cobble-walled architectural unit, is still intact. There is also a large rectangular shaped room that may have functioned as a great kiva. If so, it’s the only undisturbed great kiva left on private land in the valley. The northern portion of the site, which reaches into the Gila National Forest, is intact and protected.

The current owners of the Elk Ridge Mimbres site—a professional archaeologist and his wife—purchased the property in order to stop the looting, and they’ve managed to save a significant portion of the site. They recently approached the Conservancy about obtaining the site, and we’ve entered into an option to acquire it.

—Steve Koczan

Conservancy
Plan of Action

SITE: Elk Ridge Mimbres site
CULTURE AND TIME PERIOD: Mogollon-Mimbres Phase a.d. 1000-1150
ACQUISITION: The Conservancy has negotiated a real estate purchase option with the owner. The purchase price and additional costs for developing management and public educational programs is $120,649.
HOW YOU CAN HELP: Please send contributions to The Archaeological Conservancy, Attn: Elk Ridge Mimbres site, 5301 Central Ave. NE, Suite 902, Albuquerque, NM 87108-1530.
An Ancient Site Is Rediscovered
LA 149 was first documented in 1925, then forgotten for decades.

Today, La Cienega is a small, traditional northern New Mexico rural community south of Santa Fe. This settlement along the historic El Camino Real de Tierra Adentro, the Spanish “Royal Road” from Mexico City to Santa Fe that was in use from the late 1500s to the late 1800s, was the location of a 17th-century pueblo that was resettled by the Spanish in the early 1700s.

Archaeologists have identified at least five major pueblos in the Santa Fe River and Cienega Creek watersheds between Santa Fe and La Cienega, all of which were occupied in the late 1200s through the early 1400s. Other smaller but equally important sites are found in the area surrounding the larger pueblos and they complete the cultural landscape. The Conservancy recently signed an option to buy one of these sites, which is known as LA 149. This designation is the Museum of New Mexico’s Laboratory of Anthropology’s identification number assigned to the site when it was first documented in 1925 by noted Southwestern archaeologist H. P. Mera.

Although LA 149 was documented long ago, few archaeologists have visited the site because it’s been buried under alluvial soils that have accumulated over the years. It was “rediscovered” by the property owner in the early 1990s when large numbers of artifacts were found while building the foundation for a new home. Construction stopped in accordance with the Santa Fe County Land Development Code, which requires an archaeological survey during land development planning stages, and also outlines procedures to follow when previously unrecorded archaeological resources are discovered. County officials and the New Mexico Historic Preservation Division were contacted and a treatment plan was developed.

Archaeologist Cherie Scheick of Southwest Archaeological Consultants, Inc., conducted a limited testing program that verified the site is in fact LA 149 and determined its boundaries. They also found extensive archaeological remains, including multi-room architectural units.

The property owners wanted to preserve the site, so they changed their construction plans and contacted the Conservancy. As a result, we have entered into an option for a bargain sale to charity where the owner accepts a cash offer that is less than the fair market value of the property. The difference between the cash payment and fair market value is then considered a charitable donation, and the owner receives state tax credits and federal tax deductions.

Scheick’s investigation confirmed the presence of substantial undisturbed cultural materials. This will be an important addition to the group of six archaeological preserves the Conservancy has established in Santa Fe County.

—Steve Koczan

Conservancy
Plan of Action

SITE: LA 149
CULTURE AND TIME PERIOD: Ancestral Puebloan, Late a.d. 1300s to Early 1400s
ACQUISITION: The Conservancy has a real estate purchase option from the owner in a bargain sale to charity transaction. The purchase price and additional costs for developing management and public educational programs will be $79,149. The property owner donation is valued at $145,000.
HOW YOU CAN HELP: Please send contributions to The Archaeological Conservancy, Attn: LA 149 in La Cienega Archaeological site, 5301 Central Ave. NE, Suite 902, Albuquerque, NM 87108-1530.
A Prehistoric Mound Is Preserved

Gibson Mound 2 is largely intact despite the fact that a house was built on top of it.

In a part of Louisiana where much of the land is either at or below sea level, an Indian mound is an obvious landmark, and for some people it’s an ideal location for a building. That was the case with Mound 2 at the Gibson site, the Conservancy’s recent acquisition in southeastern Louisiana. The Gibson site is located in the town of Gibson, in Terrebonne Parish, one of Louisiana’s southernmost parishes, and it’s covered by several bayous that empty into the Gulf of Mexico, which borders the parish to the south.

The Conservancy learned of the Gibson site when the owner decided to sell the lot that included an abandoned house on top of an approximately 10-foot high prehistoric mound. A realtor who was showing the house found a pile of bones and pottery sherds in the basement. Some of the bones appeared to be human, so county and state authorities were immediately alerted. It was determined that some of the bones were indeed human and others animal.

According to the niece of a previous owner, the bones and pottery may have been those that were found in the 1950s when her aunt and uncle dug a small fallout shelter into the mound. She said they stored the items they’d found in the mound in a box with the hopes that one day they would be reburied. It’s possible the box eventually disintegrated, which would explain why the bones were in a pile on the floor.

The discovery of the bones made the local newspapers, and Louisiana’s state archaeologist Chip McGimsey contacted the Conservancy about acquiring the mound. According to McGimsey, the construction of the house doesn’t appear to have done much damage to the mound, and since it’s in such a state of disrepair, the Conservancy can have the house removed and restore the portion of the mound that was affected.

Believed to have been occupied approximately A.D. 800 to 1300, the Gibson site also consists of another, larger mound in an adjacent lot and a small remnant of a third mound that was also once crowned with a building. The mounds are reported to sit atop a two-foot thick midden full of broken pottery and rangia shell. Rangia is a type of clam, found in local waterways, that was a staple of Native American diets.

Other parties expressed interest in buying the lot and leveling the mound, so the Conservancy purchased it and took the first step toward preserving the entire site. Hopefully, the rest of the site can be acquired in the near future, and one of the few remaining mound sites in this part of the state will be permanently preserved in its entirety.

—Jessica Crawford
The Carley site sits on a hill near the Town of Pompey in New York State’s Onondaga County. It was occupied from approximately A.D. 1640–1650, and it’s believed to be one of the larger villages that the Onondaga established during this time.

For centuries the Onondaga lived in fortified villages in the glaciated Allegheny uplands south of what is now Syracuse. By the 16th century, and possibly earlier, they were part of the five nations that formed the Iroquois Confederacy. The other nations included the Seneca, Cayuga, Oneida, and Mohawk. A sixth nation, the Tuscarora, later joined the confederacy.

At the beginning of the 17th century, the Iroquois saw a massive influx of European trade goods into their territory, and not long after the Europeans themselves arrived. By the summer of 1655, the Jesuits established a mission among the Onondaga and the following year the French sent soldiers and civilians to build a settlement there.

It was also during the early 17th century that the Onondaga shifted away from their traditional settlement pattern of pairing large and small villages, and resorted to large central villages that were moved periodically. Outside the villages, scattered across their vast territory, were small hamlets that served as hunting, fishing, and fowling camps. The Carley site is one of five known locations where the Onondaga moved their village. Carley extends across several acres and it consists of a pallisaded village that most likely held a mixture of longhouses and smaller structures. There are two cemeteries associated with the site and more may exist.

Though the village site is intact, the cemeteries were excavated by looters and amateur archaeologists years ago. Some of the items recovered in these excavations were analyzed by professional archaeologists, who noted the different types of trade beads fashioned in the shapes of stars, tubes, and melons with two colors, some of which were made from a whelk or conch shell. Other native artifacts included a beaver effigy carving, and an animal effigy pipe. European materials such as brass triangular points and lead shot were also found in the burials.

Gregory Sohrweide, president of Syracuse’s William M. Beauchamp Chapter of the New York State Archaeological Association, first brought the Carley site to the Conservancy’s attention. “Preserving the Carley Site is important because it is one of the best preserved Onondaga village sites from the early to mid 17th century period,” said Sohrweide. Thanks to the generosity of the O’Connor family, the Conservancy is in the process of obtaining the site through a bargain sale to charity.

—Andy Stout
The Mystery of the Double Earth Lodge

An unusual earth lodge site is the Conservancy's first Iowa preserve.

The beautiful Loess Hills of southwest Iowa, which rise above the flood plain of the Missouri River, have a rich archaeological history. The Glenwood Culture inhabited the area surrounding the town of Glenwood from about A.D. 1200 to 1400. These people built, and resided in, hundreds of earth lodges as they cultivated the rich soils of the region’s scenic valleys.

The earth lodges were semi-subterranean buildings constructed of wattle and daub with rounded or hipped roofs supported by tree trunk-sized posts. The entire structure was covered with a layer of earth, creating a durable and well-insulated building. There are over 300 known earth lodge sites in this area, sometimes occurring in clusters but also as single units, typically either at the top or near the base of ridges. Each cluster might have been occupied by a distinct kin-based group.

An earth lodge site north of Glenwood caught the attention of archaeologists and the Conservancy because of its distinctiveness. Known as the Woodfield Earth Lodges site, it is the largest double earth lodge structure of its kind east of the Missouri River. The main lodge measures about 46 feet by 40 feet while the smaller lodge is 33 by 23. Both earth lodges have a vestibule pointing south.

It’s possible these two structures were occupied
sequentially. More charcoal was found in the smaller than the larger lodge, suggesting that it may have been burned and the larger lodge was built to replace it. But if both structures were used simultaneously, the smaller structure may have served as a subordinate building, perhaps providing storage. The large size of this double earth lodge also suggests the possibility that its purpose was ceremonial rather than residential.

Test excavations by archaeologists with the State of Iowa have yielded hundreds of pottery sherds, charcoal, stone tools, and floral and faunal remains. The Woodfield Earth Lodges site has been nominated to the National Register of Historic Places and Iowa’s State archaeologist, John Doershuk, would like to nominate it for National Historic Landmark status.

Using emergency POINT funds, the Conservancy purchased Woodfield Earth Lodges, its first Iowa preserve, from Oak Ranch Developments. The earth lodges are located on land that’s being developed for residential construction. With more research, we will be able to better understand how the Glenwood Culture lived and flourished here over 800 years ago.

—Josh McConaughy
Cavanaugh Mound Clean Up

SOUTHEAST—The Conservancy recently began a maintenance project at one of its largest Southeastern mounds. Cavanaugh Mound is located in Fort Smith, Arkansas, and it overlooks the Poteau and Arkansas river bottoms. Little research has been done at the site, which was acquired in 2005, but archaeologists believe the mound is affiliated with the same people who built and occupied the nearby Spiro site approximately A.D. 900-1300.

Many years ago a large portion of dirt was taken from the east side of the mound, possibly for use as fill for development projects. This created an erosion problem that must be dealt with. However, before the erosion can be addressed, the thick growth of brush and small trees that cover most of the site must be removed. This will clear the way for stabilization efforts and will also discourage the common practice of dumping trash at the site.

For three days in March, with the help of members of the Arkansas Archaeological Survey, the Arkansas Archaeological Society, the City of Fort Smith, and local volunteers, the Conservancy began the job of clearing the lot of trash and vegetation. Before stabilizing Cavanaugh’s east side begins, Tim Mulvihill of the Arkansas Archaeological Survey plans to examine the mound’s profile to learn more about its construction. Many prehistoric mounds were constructed one level at a time with long intervals between construction episodes. These levels are usually visible when a mound’s profile is carefully exposed.

A great deal of work remains before any research and interpretation can take place. “With the help of some really dedicated and hard-working volunteers,” said Southeast Regional Director Jessica Crawford, “we’re well on our way.”

A group of volunteers worked for several days helping the Conservancy clean up the Cavanaugh Mound. 
MIDWEST—When first recorded in 1811 by Henry Breckinridge, the East Saint Louis Mound Group consisted of about 45 mounds extending in an arc along the east bank of the Mississippi River. Today the area is dominated by interstate highways, railroad yards, and the homes and businesses of one of America’s hardest hit rust-belt cities. Only a single mound from this Cahokia outlier remains visible, fortuitously preserved between railroad tracks, but investigations by John Kelly of Washington University have revealed a surprisingly intact archaeological record beneath the surface (see “Rediscovering the East St. Louis Mounds,” American Archaeology Winter 2002-03).

One of Kelly’s first opportunities to investigate the East Saint Louis Mound Group came in 1988 during an archaeological mitigation of the widening of Interstate 64 through the city. Evidence of the prehistoric occupation associated with the East Saint Louis Mound Group was uncovered, including house basins, wall trenches, pit features, and two pyramidal mounds. Only a corner of one mound, designated E-6, extended into the highway corridor, so the most of it was not excavated and it remained buried beneath two commercial building lots.

Nearly 20 years later one of the lots containing about a third of the E-6 mound became available for purchase. The Powell Archaeological Research Center (PARC), a land-trust founded by Kelly and other local people concerned about the Cahokia area’s rapidly disappearing archaeological resources, purchased the property. They then received grants to demolish and remove an abandoned hardware store from the front of the lot. With the structure removed, PARC then sold the lot to the Conservancy at cost. The Conservancy is pleased to add this parcel to its East Saint Louis Archaeological Preserve and to assume responsibility for its permanent preservation.

public archaeology at Fort Vancouver, Washington and Oregon
June 15–July 31, 2010. Fort Vancouver National Historic Site is an unparalleled archaeological laboratory, comprised of the remains of Fort Vancouver, the 1825-1860 regional headquarters and supply depot for the Hudson’s Bay Company, and Vancouver Barracks, the first (1849-2010) permanent U.S. Army post and command center in the Pacific Northwest. This year’s field school will explore Fort Vancouver’s multicultural Village (also known as “Kanaka Village”). This colonial village was the largest settlement in the Pacific Northwest in the 1830s and 1840s. It contained people from all over the world and the Pacific Northwest, including Native Hawaiians, African Americans, the Métis, and people of many different American Indian tribes. The fieldwork will provide a means to recapture the history of this multicultural worker’s village and to engage the modern Portland/Vancouver area in the unique history of their closest National Park site. Contact Douglas Wilson (360) 921-5241, doug_wilson@nps.gov

public archaeology at Pemaquid, Maine
July 5–August 20, 2010. Pemaquid Falls is an unparalleled archaeological laboratory, comprised of the remains of Fort Vancouver, the 1825-1860 regional headquarters and supply depot for the Hudson’s Bay Company, and Vancouver Barracks, the first (1849-2010) permanent U.S. Army post and command center in the Pacific Northwest. This year’s field school will explore Fort Vancouver’s multicultural Village (also known as “Kanaka Village”). This colonial village was the largest settlement in the Pacific Northwest in the 1830s and 1840s. It contained people from all over the world and the Pacific Northwest, including Native Hawaiians, African Americans, the Métis, and people of many different American Indian tribes. The fieldwork will provide a means to recapture the history of this multicultural worker’s village and to engage the modern Portland/Vancouver area in the unique history of their closest National Park site. Contact Neil De Paoli (603) 766-0561, ndppquid@yahoo.com
Prehistory, Personality, and Place: Emil W. Haury and the Mogollon Controversy

By Jefferson Reid and Stephanie Whittlesey
(University of Arizona Press, 2010; 208 pgs., illus.; $20 paper; www.uapress.arizona.edu)

In the fall of 1930 and the summer of 1931, two young archaeologists set out to survey the archaeological sites of the southwestern New Mexico and southeastern Arizona mountains. Traveling in an old woody station wagon, Emil Haury and Russell Hastings traveled the back roads of the rugged country, camping along the way as they documented the prehistoric ruins of the region. In the following years, Haury excavated at two major sites.

In 1936, Haury published The Mogollon Culture of Southwestern New Mexico, in which he defined the ancient Mogollons as a culture distinct from their Anasazi and Hohokam neighbors, triggering a major intellectual debate that involved most all of the big names of the era, including Alfred V. Kidder, J.O. Brew, and Paul Martin. Tree ring dating was just beginning, so Haury had to use ceramics and stratigraphy to put the Mogollon into temporal context. He found that the Mogollon architecture, ceramics, mortuary practices, and other aspects of material culture were markedly different from the Hohokam and the Anasazi.

University of Arizona archaeologists Jefferson Reid and Stephanie Whittlesey ably chronicle this controversy and the personalities who drove it. It is also a book about the places that shaped the New Archaeology of the Southwest.

Excavating Nauvoo: The Mormons and the Rise of Historical Archaeology

By Benjamin C. Pykles
(University of Nebraska Press, 2010; 416 pgs., illus.; $62 cloth; www.nebraskapress.unl.edu)

Before Salt Lake City there was Nauvoo, Illinois, home to the fledgling Mormon Church from 1839 to 1846. Founder Joseph Smith selected the site on the east bank of the Mississippi River after being driven from Missouri, and at its peak Nauvoo had some 12,000 inhabitants, the same number as Chicago. But the unconventional practices of the new church drew strong opposition in Illinois as well, and Smith was murdered in 1844 in a jail in nearby Carthage. Led by Brigham Young, most of the Mormons left Illinois for Utah and in a few years the once thriving city was virtually deserted.

Excavating Nauvoo tells the fascinating story of the excavation and restoration of the 19th-century city. The Nauvoo archaeological project was headed by J.C. Harrington, considered to be the father of historical archaeology, who made his reputation at Colonial Jamestown. The project lasted from 1961 to 1984 and parallels the development of the now well-established discipline of historical archaeology. Funded by the Utah church, the project quickly became a source of dispute between the two main branches of Mormonism—the Church of Jesus Christ of Latter-day Saints (Utah LDS) and the Reorganized Church of Jesus Christ of Latter Day Saints (RLDS), which consists primarily of descendants of Mormons who did not follow Brigham Young to Utah. The project is important for non-Mormons as well, since Nauvoo is representative of frontier towns of the era, and it was largely undisturbed by continuous development and change.

Author Benjamin Pykles, an archaeologist at SUNY-Potsdam, has produced a detailed and readable study of all aspects of the Nauvoo project and its role in the development of historical archaeology. The competing approaches and philosophies of the Utah LDS and the RLDS add interest and controversy to the story. Today, visitors to Nauvoo get to enjoy an authentically restored frontier town, made so with the wise use of historical archaeology. Along with the history of the Mormon Church, they also receive an ample dose of LDS proselytizing and a competing view from the RLDS.
Today, the Inca outpost of Machu Picchu, located on the border between the high Peruvian Andes and the Amazon Basin, is one of the most visited tourist destinations in the world. The dramatic setting and spectacular ruins continue to awe serious as well as casual visitors. It was unknown until a young American scholar, Hiram Bingham, found it in the forest 99 years ago. One of the most dramatic discoveries in the history of archaeology, Bingham’s dispatches from the site captured the imagination of the world. He was celebrated by the New York press, President Taft, and National Geographic.

Tall, handsome, and married to a wealthy Tiffany heiress, Bingham was just starting an academic career at Yale University when he traveled to Peru to search for the last places the Incas held out against the Spanish. He found several in addition to Machu Picchu. In 1912, he led a Yale expedition that excavated much of the fabled city. His dispatches to American newspapers thrilled readers hungry for tales of treasure and adventure. Before long he ran afoul of Peruvian politicians, who resented the attention the young American was receiving and the loss of their patrimony to Connecticut. Bingham also hurt his credibility by buying smuggled artifacts for the Yale collection.

Bingham left Peru in 1915 under a dark cloud, but he went on to become an aviation pioneer, governor, and senator. Always controversial, he ended his career as a Red-baiter in the McCarthy era. Today Yale and Peru remain locked in a bitter legal battle over the artifacts Bingham brought to America a century ago. Christopher Heaney tells the story with gusto in this well-researched book. The real-life story of Hiram Bingham is as exciting as that of any Hollywood archaeologist.

The Tennessee Valley Authority was created in the depths of the Great Depression to bring cheap power and economic development to an especially hard hit region of the country. The Tennessee is the nation’s fifth largest river system, and TVA set out to tame it with a series of gigantic dams and reservoirs. By 1941, six dams were completed and four more were under construction. There were many archaeological sites in the way.

TVA pioneered government sponsorship of rescue archaeology using noted scholars like William S. Webb and David DeJarnette to excavate major sites. Remarkably, these early projects were completed prior to federal requirements at the initiative of the agency itself.

In TVA Archaeology, 14 contributors discuss prehistoric excavations at a number of sites and how the agency’s salvage and preservation policy evolved over its 75-year history. It is an important contribution to the archaeology of the mid-South, and to the role government can play in protecting and destroying our cultural heritage. —Mark Michel
The Conservancy’s Best of the Southwest tour features spectacular archaeology such as these cliff dwellings found at Mesa Verde National Park.

Best of the Southwest

**When:** September 18–28, 2010  
**Where:** New Mexico, Arizona, and Colorado  
**How Much:** $2,495 per person  
($480 single supplement)

The American Southwest is home to some of the best-preserved evidence of prehistoric civilizations in the New World. The magnificent ruins of Chaco Canyon and Mesa Verde are but two vivid reminders of the complex cultures that dominated the region between the 10th and 14th centuries. The Archaeological Conservancy’s Best of the Southwest tour includes these two settlements as well as other prehistoric sites and modern pueblos where ancient traditions persist.

*Pueblo Bonito is one of the amazing sites at Chaco Canyon.*
Effigy Mounds of the Upper Midwest

**When:** September 25–29, 2010  
**Where:** Wisconsin and Iowa  
**How Much:** $899 ($200 single supplement)

In what is now Wisconsin, prehistoric Native Americans constructed about 20,000 earthen mounds, more than in any other area of comparable size. We’ll visit the best surviving examples of these fascinating constructions, emphasizing sites of the characteristic mound-builder culture of the upper Midwest, the Effigy Mound Culture. Some of the sites we’ll visit include Lizard Mounds Park, Effigy Mounds National Monument, and Aztalan State Park. The tour will begin and end in Milwaukee.

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Oaxaca

**When:** October 29–November 8, 2010  
**Where:** Mexico  
**How Much:** $2,495 per person  
($350 single supplement)

Join us in Oaxaca, Mexico during one of the most unusual festivals anywhere—the Day of the Dead. On this day, people prepare home altars and cemeteries to welcome the dead, who are believed to return to enjoy the food and drink they indulged in while alive. The Day of the Dead is one of the celebrations.

You’ll have the opportunities to explore Oaxaca’s museums and markets. Our tour also explores the Mixtecan and Zapotecan archaeological sites in the region, including Mitla, Monte Albán, San José Mogote, and Dainzu. You’ll also visit several crafts villages featuring weaving, pottery, carved animals, and other local art.
Patrons of Preservation

The Archaeological Conservancy would like to thank the following individuals, foundations, and corporations for their generous support during the period of February through April 2010. Their generosity, along with the generosity of the Conservancy’s other members, makes our work possible.

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- Evelyn A. Smith, California
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Gifts of $2,000 or more
- Pete and Christine Adolph, New Mexico
- James and Audrey Benedict, Colorado
- Joy Robinson, California
- Harlan Scott, Delaware

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- Sidney Stern Memorial Trust, California

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- Joanne B. Butler, North Carolina
- Kenneth J. Ewing, New Mexico

Anasazi Circle is an elite group of members who contribute $2,000 or more annually to The Archaeological Conservancy’s ongoing efforts to permanently preserve America’s cultural treasures. Since its inception in 1993, participation in the Anasazi Circle has increased by over 267 percent.

Anasazi Circle member support is essential to the Conservancy’s ability to continually expand its preservation goals. It is crucial to preserve information regarding our nation’s past so we can better understand it. Cultural evidence is often destroyed before proper analysis can be done and the knowledge is lost forever. The Conservancy uses donations to act quickly to protect a site and prevent significant information from being destroyed.

Benefits of Anasazi Circle membership include discounts on tours, recognition in American Archaeology, an award-winning magazine, and an invitation to an exclusive seminar weekend. This year’s Anasazi Circle Weekend offers an opportunity to discover more about the Hopewell and Adena with visits to some of their most awe-inspiring mounds and earthworks. By sending in your donation of $2,000 or more today, you can ensure your invitation to the Conservancy’s 2010 Anasazi Circle.
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