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C r e d i t :  I l l i n o i s  S t a t e  A r c h a e o l o g i c a l  S u r v e y
Saving Mississippian Centers

Nearly 1,000 years ago, what appears to be a Native American metropolis was developing on the banks of the Mississippi River near present day St. Louis. We now know there were three distinct Mississippian centers that we now call St. Louis, East St. Louis, and Cahokia (see “The Beginnings Of Urbanism?” page 12). Cahokia was the largest with 20,000 people and over 120 mounds, including the massive Monks Mound. The other centers were smaller, yet still substantial. These ancient urban centers eventually returned to the earth, and modern cities were built on top of them.

When I first visited Cahokia some 40 years ago, about all that was left was Monks Mound. The rest of the site was covered with modern houses and businesses, and a few of the mounds were visible in back yards. Illinois State Parks has done a Herculean job of acquiring and clearing property and creating a wonderful new park with an impressive visitors’ center. This project continues with the help of the Conservancy and local supporters. Recently, we were able to purchase Cahokia Mound Number 1.

In the past few years, the Conservancy and local groups have been acquiring parts of the East St. Louis Mounds as vacant lots and dilapidated buildings become available. While most of the mounds are gone, much archaeological material remains in situ underground. A viable archaeological research preserve is now emerging in the center of East St. Louis. The Conservancy and its allies are committed to saving the remains of these great centers, and at last we are making a lot of progress.

Mark Michel, President
Letters

Beware Of Over Interpretation

Paula Neely’s News article “Personalized Pipes Found At Jamestown” in the Winter 2010 issue should serve as a cautionary tale to archaeologists who over interpret their findings. The pipe inscribed “CKARLES HOWARDS,” if one excuses the typo, might indeed personalize a pipe for Sir Charles Howard. And “E SOVTHAM” might signify a gift for the Earl of Southampton. But that the pipe marked “SR WALTER” was destined for the famous Sir Walter Raleigh seems presumptuous. There must have been any number of tobacco addicts named Sir Walter in 17th-century Great Britain.

Robert R. Dykstra
Worcester, Massachusetts

The Amazing Cultural Landscapes

I loved your feature about the Salinas Pueblo Missions National Monument (“Reading The Land,” Fall 2010). The cultural landscapes are more than amazing! That is what I love about your magazine: there are always eye-candy photos of the American landscape, with enlightening articles that instantly pique my curiosity!

Paul Dale Roberts
Elk Grove, California

Editor’s Corner

Niles is the only city in Michigan that can boast of having flown the American, English, French, and Spanish flags. That distinction, at least in part, is due to Fort St. Joseph, a military post cum mission cum trading post that was occupied from 1691 to 1781. (See “The Story Of Fort St. Joseph,” page 38.)

The fort was abandoned, and eventually it disappeared; however, it remained in the collective memory of Niles’ residents. In 1998, a group of them hired archaeologist Michael Nassaney to find the fort—which he did—and from that discovery a “neighborhood archaeology” project, as he refers to it, ensued.

Last year Nassaney completed his seventh field season with the help of the people of Niles, who, it’s only a slight exaggeration to say, have assumed the role of co-principal investigators. With Nassaney’s support, the City of Niles formed an Archaeology Advisory Committee that has a voice in defining the goals of the project and how to achieve them. And even if they’re not on the committee, Niles residents don’t withhold their advice. Many of them have had their say when encountering Nassaney on the street. In addition to advice, the city and its people have offered him financial and logistical support.

He, in turn, has welcomed his co-investigators. He hosts open houses, summer camps, and media days, and he put together a traveling archaeology booth. The site has attracted nearly 10,000 visitors in the last four years. That’s nothing compared to what the likes of Mesa Verde and Tikal draw, but it’s not bad for a site with no cliff dwellings, pyramids, or any standing architecture. Niles ranked the site as one of its most important cultural assets. Now that’s being a good neighbor.

Michael Banaja

Sending 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.
Welcome to The Archaeological Conservancy!

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 405 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

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**NEW EXHIBITS**

**St. Louis Art Museum**

St. Louis, Mo.—The breathtaking new exhibit “Fiery Pool: the Maya and the Mythic Sea” brings together more than 90 stunning works from Mexico, Belize, Honduras, and Guatemala that offer exciting new insights into the culture of the ancient Maya and showcase the importance of water. Surrounded by the sea and dependent on the life-giving power of rain, the ancient Maya created fantastic objects imbued with the symbolic power of water. From monumental stone sculptures to jewels of jade and gold, many of these artifacts, which date from the Preclassic Period (2500 B.C.) to as recently as the early 16th century, have never been shown in the United States. (314) 721-0072, www.slam.org (Through May 8)

**Maxwell Museum of Anthropology**

University of New Mexico, Albuquerque, N.M.—The compelling images included in the new photo exhibit “Look Close See Far: A Cultural Portrait of the Maya” delve into the heart of the forests and villages in which the Maya people have been rooted for generations. This stunning exhibit is a collection of images and ideas gathered by American fine art photographer Bruce Martin while traveling throughout the Maya region of Central America. Since 1987, Martin has taken more than 10,000 photographs of ruins, landscapes and people in an attempt to make a distinctive portrait of this singular culture whose identity is fundamentally intertwined with the land from which they and their ancestors have coaxed their livelihood. (505) 277-4405, www.unm.edu/~maxwell (Through December)

**Anchorage Museum at Rasmusen Center**

Anchorage, Alaska —The traveling exhibit created by the Field Museum “Mammoths and Mastodons: Titans of the Ice Age” re-creates the lives of mammoths and mastodons, their interactions with one another and with ancient humans. They were wonderfully successful creatures of the Ice Age who served as food and artistic inspiration for ancient peoples. But despite their size and ability to adapt to different habitats, these early cousins of the elephant eventually went extinct. Displays include skeletons, skulls and tusks, large-scale projections, life-sized dioramas and virtual experiences, and rare and evocative objects, including some of the oldest art in existence. (907) 929-9200, www.anchoragemuseum.org (March 4 through October 9)
Museum of Northern Arizona
Flagstaff, Ariz.—The Museum’s award-winning exhibit “Native Peoples of the Colorado Plateau” documents 12,000 years of occupation in the region by ancestors of today’s Hopi, Ute, Navajo, Zuni, and other Native American tribes. The Colorado Plateau includes 130,000 square miles of mountains, mesas, and canyon lands centered in the Four Corners region of Arizona, Utah, Colorado, and New Mexico. (928) 774-5213, www.musnaz.org/exhibits

Southwest Seminars presents Spring Lecture Series
March 21–May 23, Mondays at 6 p.m., Hotel Santa Fe, Santa Fe, N.M. “Ancient Sites, Ancient Stories II” is a fascinating series of lectures by noted scholars, archaeologists, historians, and tribal leaders to honor and acknowledge the scholarship of the School for Advanced Research. (505) 466-2775, www.southwestseminars.org

The Maya Meetings
March 23–27, San Jacinto Conference Center, University of Texas, Austin. This annual conference brings scholars and interested individuals together to study and explore the richness of ancient Maya civilization and share the most recent insights on Maya and Mesoamerican research. This year’s theme is “2012: Time and Prophecy in the Mesoamerican World.” The conference will present new and exciting scholarship on Mesoamerican philosophies of calendars and prophecy. Contact Paola Bueché at (512) 471-6292, or visit www.utmaya.org

Caddo Conference
March 25–27, University of Arkansas, Fort Smith, Ark. The conference features paper presentations on the archaeology, history, culture, and language of the Caddo Indians. There will also be a welcome reception, dance, and tours of local archaeological sites. www.uark.edu/campus-resources/archinfo/current.html

Arizona Archaeology Expo
March 26–27, Deer Valley Rock Art Center, Phoenix, Ariz. Learn about the prehistory and history of Arizona and why it’s important to preserve archaeological sites and historical places. The event features a mock archaeological dig for kids, guided hikes of the petroglyph trail, storytelling, music, lectures, and over 40 exhibitors and craft demonstrations. (623) 582-8007, http://dvrac.asu.edu

Society for American Archaeology Annual Meeting
March 30-April 3, Sacramento Convention Center, Sacramento, Calif. This year’s meeting offers a variety of forums, symposia, poster presentations, an exhibit hall, and a CRM Expo. Other events include a welcome reception, awards presentations, and local excursions such as a Sacramento Riverboat Tour. (202) 789-8200, www.saa.org

American Rock Art Research Association Conference
May 27-30, Shilo Inn Conference Center on the Snake River, Idaho Falls, Idaho. The conference includes workshops, paper presentations, reports, and posters concerning the latest in rock art research. A banquet and awards ceremony and tours to local rock art sites are also planned. www.arara.org

Frank H. McClung Museum
University of Tennessee, Knoxville, Tenn.—The exhibit “Mapping the New World” contains a selection of 29 original maps that date between 1493 and 1847. Starting with a Ptolemaic map of the world as conceived in the Middle Ages, the maps trace the increasing geographical knowledge of the New World. Nineteen of the early maps come from the renowned collection of W. Graham Arader III in New York and 10 come from the university’s collections. The exhibition also features seven early navigational instruments on loan from the Smithsonian Institution. (865) 974-1000, http://mcclungmuseum.utk.edu/exhibits.shtml (Through May 22)
Maritime archaeologists working with National Oceanic and Atmospheric Administration’s Office of National Marine Sanctuaries recently announced the discovery of the wreck of *Two Brothers*, an 1800s Nantucket whaling ship, whose captain also sailed the ill-fated *Essex*, the ship that inspired Herman Melville’s book, *Moby Dick*.

The wreck was located about 600 miles northwest of Honolulu, in the remote Papahanaumokuakea Marine National Monument, a UNESCO World Heritage Site.

Captained by George Pollard Jr., *Two Brothers* hit a shallow reef off French Frigate Shoals on the night of Feb. 11, 1823, according to first-hand accounts. The crew clung to small boats until they were rescued the next morning by another whaler.

Archaeologists discovered the wreck in 2008 during a NOAA research expedition to the Northwestern Hawaiian Islands. They spotted two large anchors, three cast iron try-pots for melting whale blubber into oil, hundreds of bricks, and the remains of the ship’s rigging. Those artifacts dated the whaler to the early 19th century, but they didn’t find anything that positively identified the wreck as the *Two Brothers*.

“It took a while to make sure we had all the pieces to the puzzle,” said Kelly Gleason, Papahanaumokuakea Marine National Monument maritime archaeologist, who led the project. In 2009 and 2010, more artifacts from the early 19th century were discovered, including blubber hooks and whaling lances. Analysis of artifacts such as whaling harpoon tips, cast iron cooking pots, and ceramics, indicated that the ship had originated in Nantucket in the 1820s.

Based on the evidence and first-hand descriptions of the wreck, Gleason said they ruled out two other whaling ships that had wrecked on the French Frigate Shoals: the *South Seaman* in 1859, and the *Daniel Wood* in 1867. She said none of the artifacts date to their time period, and those ships would have carried heavier machinery. Records also indicate that their wrecks occurred elsewhere on the reef.

*Two Brothers* is the first wrecked whaling ship from Nantucket, Massachusetts, the birthplace of America’s whaling industry, to be discovered, according to Gleason. The vessel was part of a fleet of several hundred whaling ships that were part of America’s economic and political expansion into the Pacific. Whaling fleets transformed the region both economically and culturally, and caused the near extinction of many whale species. They were also largely responsible for early exploration of the Indian Ocean and the polar regions.

“Archaeology has a lot to lend to what we know about these ships and what would have been on board,” Gleason said. With the exception of the *Charles W. Morgan* at Mystic Seaport Museum in Connecticut, all of America’s whaling ships are now gone, broken up, or sunken. “Shipwreck sites like this are important in helping tell the stories of the early days of sailing, including whaling and maritime activities both in the Pacific and around the world,” she said. —Paula Neely
Researchers at the University of Arkansas’ Department of Geosciences and their colleagues recently announced the development of a 1,238-year long tree-ring chronology for central Mexico. The chronology was produced from core samples taken from millennium-old Montezuma baldcypress trees, the national tree of Mexico. Other Mesoamerican tree-ring records extend back about 400 years.

“We’ve been working on this pretty much my entire career. It’s been a big goal for American dendrochronology,” said David Stahle, a paleoclimatologist at the University of Arkansas who led the project. “We’d like to improve our understanding of the occupational history and environmental context in which the great cities of Mesoamerica rose and fell, but we couldn’t until now. Now we have this annual record that’s correlated with precipitation, temperature, drought indices, and crop yields in central Mexico that we think is an exceptionally good proxy for climate change.”

The new tree-ring chronology, the first to extend into the pre-Hispanic period in Mesoamerica, was produced from core samples extracted from ancient Montezuma baldcypress trees that have been discovered in a steep gorge called Barranca de Amealco in the state of Querétaro in central Mexico, which is located near Tula, the principal city of the ancient Toltec state, and the Aztec capitol of Tenochtitlan in the Valley of Mexico.

The analysis of lake sediments and stalagmites from caves suggests that one of Mexico’s worst droughts occurred during the early 10th century, an event that has been confirmed and the dating refined by the new dendrochronology record. “We really pin down the dating of the Terminal Classic drought to 897 to 922,” Stahle said. There is evidence of this drought in the Maya region, and his dendrochronology record shows it reached deep into central Mexico. The new reconstruction also documents severe and sustained drought during the decline of the Toltecs (A.D. 1149 to 1167) and during the Spanish conquest of the Aztecs (1514–1539). The tree-ring reconstruction provides a new, precisely dated climate framework for Mesoamerica against which to test hypotheses regarding the possible role of climate in the rise and fall of pre-Hispanic cultures, such as the Maya.

A paper on the study by Stahle, José Villanueva Díaz and Julian Cerano Paredes from the Dendrochronology Lab at the Forest Research Institute, Agriculture and Livestock in Mexico, and their colleagues has been accepted for publication in Geophysical Research Letters, a Journal of the American Geophysical Union. The team has begun work on a tree-ring chronology for the state of Chiapas near Guatemala.

—Tamara Stewart
Ninety-Four Hundred Year-Old Dog Bone Identified

The skull fragment came from the New World’s oldest domesticated dog.

Analysis of a skull fragment found in a paleofecal sample excavated from Hinds Cave in the Lower Pecos region of Texas concluded the bone came from the oldest known domesticated dog in the New World. University of Maine graduate student Samuel Belknap III recently identified the skull fragment while analyzing the paleofecal sample. Subsequent Radiocarbon testing concluded the bone is 9,400-year-old, making it the oldest evidence of a domesticated dog in the Americas.

“In addition to providing the earliest genetic material from New World domestic dogs, this discovery supports data showing that pre-Columbian New World dogs are descended from a species of Eurasian wolf, rather than having been domesticated separately here,” Belknap said. “More importantly, it provides the earliest evidence of the use of domestic dog as a food source, a practice that would later become widespread throughout the world.”

Great Plains Indians were known to eat dogs as a celebratory meal and also when food was scarce, though neither scenario was apparent at Hinds Cave, a limestone rockshelter excavated by Texas A&M University in 1974 and 1975. A rich archaeological assemblage spanning thousands of years was recovered from the site and it is stored at the university. Numerous ancient latrine areas produced over 1,000 human paleofecal samples, less than half of which have been analyzed. While conducting research for his Master’s thesis on ancient human diet and subsistence, Belknap found the bone fragment, known as BE-20, and, with the help of University of Maine researchers Kristin Sobolik and Robert Ingraham, identified it as that of a likely canine species. The bone was then sent to the University of Oklahoma’s Molecular Anthropology Laboratory, where DNA tests confirmed it came from a domesticated dog.

“The DNA techniques utilized in the identification of the BE-20 bone are extremely accurate,” said Belknap. “Domestic dogs possess genetic markers that wolves do not. Recent genetic advances have allowed for a better understanding of the dog genome and how it is distinctive from that of its wolf ancestors, allowing for the confident identification of early domestic dog remains.”

Pending minor revisions, Belknap and his colleagues’ findings have been accepted for publication in the *American Journal of Physical Anthropology*. “This discovery shows us yet another facet of prehistoric human and dog interactions at a very early date,” he said. “Due to the paucity of dog remains from this time period, every glimpse we get into the genetic history of dogs allows us to create a more accurate view of their co-evolution with humans.” — Tamara Stewart
LiDAR Study Reveals Chaco Canyon’s Great North Road

The study proves the effectiveness of this remote-sensing technology.

Researchers using LiDAR, an optical remote-sensing technology, recently recorded over 40 miles of the Great North Road that was built by the occupants of Chaco Canyon, a large Anasazi center in northwest New Mexico.

“This project was an opportunity to test the effectiveness of LiDAR as a technology for identifying and recording Chaco roads, hundreds of which are thought to have been developed throughout the Four Corners area between A.D. 700 and 1200,” said Anna Sofáer, founder and president of the Solstice Project, who instigated the study. The Great North Road, considered a cosmographic expression of the Chaco culture with likely astronomical orientation and use, was chosen for the study because some sections are well documented while others are not. This situation made this road a good test to evaluate LiDAR’s capability to identify both known and unknown road segments.

A LiDAR (Light Detection and Ranging) sensor was mounted on an airplane that flew over the Great North Road. The sensor emitted thousands of laser pulses per second that reflected off the ground. The Great North Road, like many other Chacoan roads, is a linear path dug out of the ground, and consequently it’s lower than the surrounding terrain, though in some cases by only a few inches. The laser pulses clearly detected these “topographic anomalies,” said Rich Friedman, a geologist who was involved with the project.

“The results were extremely rewarding,” Sofáer said. “LiDAR proved to be a tool with unprecedented capability to record the subtle and rarely visible Chaco roads. Road segments that could not have been detected from ground or aerial survey became visible in the LiDAR imagery. Computer manipulations of the light source on the 3-D images bring out the subtlest of linear features, including one road with a depth of no more than three and a half inches.”

The Chacoans built a network of roads, many of which were remarkably straight and as wide as 30 feet. Many of the road segments do not connect ancient buildings with each other or with natural resources, but rather with topographic features on the landscape that are often marked with shrines or ritual architecture, suggesting they served a cosmographic rather than utilitarian purpose. The LiDAR study also documented segments of a number of other Chacoan roads, which are threatened by erosion and oil and gas development.

The Solstice Project is a non-profit organization established by Sofáer in 1978 to study, document, and preserve the remarkable Sun Dagger site, a celestial calendar of Chaco Canyon, and other works of the ancient cultures of the American Southwest. The organization was awarded a grant by the National Trust for Historic Preservation that partially funded the LiDAR study.

—Tamara Stewart
Pawn Fragments Reveal Madison’s Chess Set

Based on two pawn fragments discovered in a 200-year-old trash deposit, archaeologists and curators recently deduced what the chess set looked like that Thomas Jefferson and James Madison matched wits over at Montpelier, Madison’s estate in northeast Virginia.

Thomas Jefferson’s granddaughter Ellen Wayles Coolidge once said that the country’s third and fourth presidents often engaged in epic chess matches. According to Coolidge, Jefferson spoke of “four-hour games with Mr. Madison.”

The tops of two broken pawns, about the size of peas, were buried under several inches of soil with other household trash just outside the kitchen yard of Madison’s lifelong home, according to Matthew Reeves, director of archaeology at Montpelier. Reeves noted that chess sets were expensive and would not have belonged to household servants.

The tiny pieces made of bone or ivory were unearthed in 1993, but they were misidentified as a seed and a sewing bobbin. The pawn pieces were correctly identified last May, when, at the behest of Lynn Dakin Hastings, Montpelier’s vice president for museum programs, Reeves searched the museum’s bone and ivory artifact collection looking for items related to chess. Upon reexamining the items, he realized they could be pawn heads and he sent pictures of them to Jon Crumiller, an antique chess set dealer.

Crumiller determined from the size of the head and the distinctive shape of the neck of one of the broken pawns that they appear to be from an Old English chess set, also known as a Washington-style set. Fashionable around 1780–90, these expensive sets had either black and white or red and white playing pieces, according to Hastings.

Although no red pieces have been found at Montpelier, one white and two red chess pieces Madison is thought to have owned are located at Tudor Place, a historic home built by Martha Washington’s granddaughter in Washington, D.C.

Based on this evidence, Montpelier recently purchased an 18th-century red and white chess set identical to Madison’s from a London auction house. (Montpelier didn’t announce the identification of the pawn fragments until they obtained the chess set.) The ivory set is now on public display atop an original Madison gaming table in the drawing room of the mansion.

“We knew they played chess here, but we would not have known what the chess set looked like without archaeology,” Hastings said. “Authentic finds like this help us learn more about James and Dolley Madison, and connect not with historic icons, but with the real people they were.” —Paula Neely
PILOTS HAVE A DESCRIPTION OF FLYING that is, with slight modification, equally apt for archaeological fieldwork: “Long hours of complete tedium punctuated by moments of sheer exhilaration.” Holly Mitchell Nazetta was on her knees in the dirt of a former Illinois hog lot, scooping debris from the floor of a 1,000-year-old structure when her moment came.

“My partner and I were cleaning up the floor of that section of the house,” said Nazetta, at the time a student at Southern Illinois University, Edwardsville. It was 2009, her second summer working at a dig in East St. Louis, Illinois. “Probably just five or six inches down, I started to uncover the edge of a piece of ceramic,” she recalled. As Nazetta pulled it from the soil, she looked down to see…a face.

The face had almond-shaped eyes and slightly parted lips. It belonged to a kneeling female figure holding a vessel made of shell. Not quite four inches tall, the figurine had somehow managed to remain intact. “It was incredible knowing I had the honor of getting to see and hold the figurine for the first time since it was buried a thousand years ago,” Nazetta says.

The kneeling woman, christened the Exchange Avenue figurine after a nearby road, is a prized artifact of a cultural resource management project directed by Susan Caba.
by the Illinois State Archaeological Survey (ISAS) on a Missis-
sippian site called the East St. Louis Mounds Center. The goal
of the project, which began in 2008, is to recover and docu-
ment cultural resources—like the kneeling woman—before
they are destroyed by construction of a new bridge over the
Mississippi River that is scheduled to open in 2014.

The figurine and the structure in which she was found
are part of a recently discovered residential district that is
thought to be related to a ceremonial district a mile away.
“We are really talking about a metropolitan area with a dense
population, akin to a modern city,” says project coordinator
Joseph Galloy of the East St. Louis site. What makes East St.
Louis all the more significant is that it’s just a few miles from
Cahokia, the largest Mississippian city. A third major Mississip-
'pian community once existed across the river, in St. Louis.

“East St. Louis would be a phenomenal center even if
it were not adjacent to Cahokia,” says Thomas Emerson, the
director of ISAS. “The effect of having East St. Louis and St.
Louis adjacent to Cahokia is geometric, not arithmetic, in
terms of their political, social, and religious impacts.”

HISTORIAN HENRY BRACKENRIDGE first documented
the existence of 45 to 50 mounds in East St. Louis in
1811. He described “a group of mounds, mostly circu-
lar in shape…resembling enormous haystacks scattered
through a meadow.” By the end of the Civil War, when an
amateur archaeologist mapped the remaining mounds, there
were only 15. The rest had been leveled for streets or used as
fill for construction projects.

In 1922 archaeologist Warren K. Moorehead began lob-
bying to preserve the nearby Cahokia Mounds as a state
park. In the process, he excavated 30 to 40 test pits around
East St. Louis and became convinced that it was once part of
the greater Cahokia community.

Then, as a result of an East St. Louis highway project
in 1988, Washington University archaeologist John E. Kelly
directed a cultural resources survey that discovered a foun-
dation trench for a Mississippian-era wall. Over the next
two decades, Kelly, as well as other ISAS archaeologists, con-
ducted further excavations throughout the city, eventually
identifying the layout of a ceremonial center in East St. Louis
that resembles that of Cahokia’s. It featured mounds, grand

ISAS archaeologists excavate Mississippian features. This was once the site of the St. Louis National Stockyards
and the remains of concrete hog pens stand in the background.

American archaeology
simultaneously, and that the dynamics that spurred the latter’s growth were also at work in the surrounding area. “This is going to revise our picture of Cahokia and how it developed,” according to Galloy. “It’s a once in a lifetime opportunity.”

Four dozen workers, facing construction deadlines and the approach of freezing weather, map features and gather artifacts from excavated floors that stretch in saw-tooth patterns into the distance. “We are rarely able to open up a big site and get a major slice of a downtown area—that just doesn’t happen,” Galloy says.

For more than a century, the St. Louis National Stockyards and other meat-packing companies operated here. The land is pocked with foundations of 19th- and 20th-century buildings and crisscrossed with abandoned drains and utility lines. ISAS used geological survey data, historical maps, and other documents to determine where to excavate. Then they employed heavy construction equipment to strip layers of soil from locations likely to contain archaeological evidence. Eventually they uncovered the telltale dark, rectangular soil stains that suggest structures once stood there.

The evidence of the semi-subterranean houses consists primarily of wall trenches within rectangular pits and post-molds. The archaeologists have also excavated a number of structures that could have served as storage facilities, sweat lodges, and temples or other public buildings. Galloy stresses the interpretations—based on knowledge of structures at other Mississippian sites as well as the size, shape, and contents of the buildings—are “very preliminary.”

“We’ll have a much better understanding of how buildings functioned after we complete the laboratory analysis,” he says. “We do also expect to see socio-economic differences that are expressed materially in both the size and shape of the architecture and the amount and types of artifacts recovered from buildings.”

The ISAS archaeologists use a variety of formulas that take into account the number, size, and estimated dates of the structures they’ve found to extrapolate that, at any given time during what’s called the Lohmann phase (a.d. 1050–1100), almost 300 structures existed, and that figure grew to roughly 1,700 over the course of the Stirling phase (a.d. 1100–1200). Based on the sizes of these structures, the archaeologists estimate that, at its peak, East St. Louis had nearly 3,000 residents.

During this time, Cahokia’s population was close to 20,000. Galloy notes that Cahokia was among the first cities in what is now the United States and says it was also the largest until Philadelphia gained that distinction in the latter half of the 18th century. The discovery of the residential district less than a mile from the ceremonial area supports the theory, held by Galloy, Kelly, and Emerson, that East St. Louis was also a city. They believe that it and Cahokia—which have similar layouts—were politically or socially linked.

They are less than a day’s walk from one other and the general area has been described as an extensive waterway system of linked creeks, lakes, and marshes that would have made navigating between the settlements easy. “Historically, we have accounts following the mounds out all the way from the river to Cahokia,” says Emerson. “They are both on the shoreline of Cahokia Creek—it would have been easy enough to go from one to another. At one level, separating them is artificial because…where is the real break between them?”

Kelly takes the theory a step further: “This represents the
beginning of urbanism” (in what is now the United States)... and it puts Cahokia on the stage of what’s happening elsewhere in the world during that period.” Cahokia once had more than 120 mounds, East St. Louis approximately 50, and St. Louis roughly 25. Together they formed an urban metropolis, says Kelly. He thinks that indigenous North American groups haven’t been credited for their ability to develop cities and complex societies.

Cahokia scholar Tim Pauketat makes the argument in several books that the three communities were components of “the Central Administrative Complex of the Cahokian polity” rather than distinct entities. “What happened at Cahokia and East St. Louis was very different than at other so-called Mississippian regions,” says Pauketat, an archaeologist at the University of Illinois, Champaign-Urbana. “Not only did things happen quickly, they generated a kind of momentum that changed the valley politically and socially.”

Though Galloy agrees with Kelly and Pauketat, he says there are other Mississippian experts, to whom he refers to as “minimalists,” who don’t. “When I started grad school 20 years ago, people would shy away from using the words ‘city’ or ‘urban’ when referring to Cahokia. Words like ‘mound center’ were substituted,” he says. “There are minimalists and maximalists. Today the maximalists’ arguments seem most convincing. But there are still people who argue that Mississippian society is not that complex.”

Paul Welch, a Mississippian scholar at Southern Illinois University Carbondale, says there’s a “reasonable argument” for calling the greater Cahokia area a metropolis, but he takes issue with the idea that the relationship between Cahokia and its two neighboring communities represents the beginning of urbanism. “Most Mississippians are skeptical of this claim,” he says. Welch notes that the standard anthropological definition of urbanism includes “a symbiotic economic relationship” between the main city and the outlying communities, and there’s no evidence that such a relationship existed between Cahokia and its neighbors.

The East St. Louis Mounds residential district, according to Galloy and Emerson, appears to have been the prehistoric...
equivalent of a planned community. They believe the Missis-
sippians altered the landscape to make it more suitable for
habitation and then built residential and public subdivisions
over a short period of time.

“They took control of the landscape and remade it,”
says Emerson. “They did land leveling, knocked the tops off
the ridges, filled in the swales, created a flat space, and built
mounds around a plaza. At the same time these mounds are
going up, people lay out the landscape. They decided spe-
cifically that we’re going to build this separate, upper-class
subdivision.”

This thinking is based partly on the analysis of soil core
samples ISAS has collected for 15 years. The core samples,
which date to before, and during, the Mississippian occupa-
tion, suggest that changes in the landscape were man-made.
The geomorphological evidence demonstrates that different
types of soils were mixed by the Mississippians “to create
manufactured soils that had characteristics that they wanted
to fill in swales and to build stable mounds,” says Emerson.
Topographical maps, combined with dated archaeological
features, supports the theory that houses were laid out in
“neighborhoods” and built simultaneously.

The discovery of two dozen pits that anchored mas-
sive posts also gives credence to the planned community

Preserving The Ceremonial Center
Prior to the current ISAS project, excavations done in
advance of highway expansion and the construction of a
light rail line in the 1980s and ‘90s first produced evidence
that the East Saint Louis ceremonial center was preserved.
Further investigations by John Kelly and other archaeologists
have revealed a surprisingly intact archaeological record
beneath the soil (see “Rediscovering the East St. Louis

The light-rail line that passes through the
archaeological site is buffered by wide swaths of green-
space. The Archaeological Conservancy is preserving the
site by purchasing lots in the vicinity of the green-space and
consolidating them into an archaeological preserve.

Last December the Powell Archaeological Research
Center, acting as the Conservancy’s proxy, purchased two
lots adjacent to the green-space at a tax-forfeiture auction.
Although the lots have yet to be archaeologically tested,
previous work by Kelly on a nearby lot on the same street
revealed the remnant of a buried mound. These two lots,
which are the Conservancy’s most recent additions to its
East Saint Louis Preserve, bring its total to 16.

These charred posts somehow survived the fire that destroyed East St. Louis. The white flags mark the location
of a trench in which the posts, which supported the wall of a house, were anchored.
theory, he says. (The pits have a keyhole shape because the poles were so big they were erected by sliding them down ramps dug into the pits.) These pole pits were located along a natural ridge that was large and broad enough to support a substantial occupation where none previously existed. Ceremonial poles and pole assemblages are key features of Mississippian settlements. Ethnographic accounts of later Native American groups note that the poles sometimes represented honored ancestors or deities, were used in renewal ceremonies, or marked sacred locations.

According to Galloy, it appears the posts "were laid out to mark where the most expansive (Lohmann-era) neighborhood was to be established," much like housing lots are marked in a modern subdivision. "The distribution of these posts does seem to correspond to the heart of the (Lohmann-era) occupation." A short time after the neighborhood was established, the posts were pulled out of their pits (and were possibly reused elsewhere) and structures were built along the ridge where they once stood. Sometimes these structures were placed directly over the post locations.

The Exchange Avenue figurine carries a marine shell cup, and these shells, in ethnographic accounts, are associated with fertility. This corresponds with Cahokian female figurines, which are often embellished with serpents, gourds, vines, and other symbols that represent Earth’s fertility. But all the other known examples—fewer than a dozen—were found in rural temples, which Emerson believes were gathering places that knit scattered farm families into social and spiritual communities.

Someone in such a community might have brought the Exchange Avenue figurine to East St. Louis as part of a rural migration to the metropolis. It’s evidence, Emerson believes, of the various types of people drawn to the urban area. "Perhaps at the East St. Louis Center, such religious sites served to bind the newly displaced rural population into a cohesive urban neighborhood," he says.

He and others embrace the theory that East St. Louis sprang into existence so quickly—Pauketat calls it the "big bang" theory—that it must have attracted residents from far-flung locations, rather than growing organically. Different immigrant groups would have settled in clusters based on kinship, status, and shared practices.

No female figures have been discovered in 90 years of research at Cahokia, which is presumed to have been the domain of rulers and priests. That absence leads Emerson to speculate that fertility and female-related religions belonged to the "people," rather than the ruling elite.

The ISAS archaeologists have also discovered evidence suggesting that a large fire brought the East St. Louis Mounds Center to an abrupt end around A.D. 1175. While Mississippians commonly burned buildings for various reasons such as ceremonial closings, they also frequently rebuilt in the same locations. There is some evidence of rebuilding structures in East St. Louis after the fire, but it appears to have been rare. The ceramic artifacts, all of which predate the inferno, corroborate the abandonment date.

Cahokia’s fall is a mystery of long standing. Its population peaked around the time of the East St. Louis fire, which is also the approximate time Cahokians built palisades around their city’s center. Cahokia was abandoned approximately 100 years later. Were the two events related? Some archaeologists surmise that a war or internal strife brought down the Mississippians, an idea that may be supported by...
discovery of the fire and the subsequent building of fortifications. “That event really is a sea change,” says Pauketat. “Was it warfare? Did some kind of great person die? Or did a royal lineage come to an end?”

“Something happened. There is a very dramatic reduction in population (at East St. Louis) after what was almost a site-wide fire between 1175 and 1200. We hope to tease out the nature of that burning event,” Emerson says. “Were the burned structures filled in naturally or were they filled in intentionally? In a ceremonial closing, people came in and cleaned up. … Those are the kinds of details we’re trying to find—evidence of a clean up, or of natural fill. We hope we can shed light with our excavations. It may help us figure out why Cahokia’s population started dropping at the same time.”

But the time for uncovering that evidence is growing short. “We’d like to think of some way for the government to acquire this land and set it aside,” Emerson says, referring to the privately-owned land surrounding the bridge project. The land is now prime real estate slated for development. “But it’s hard to show people—to say, ‘See this rubble here? Underneath this is a really, really important site.’”

Emerson, Pauketat, and others are lobbying their Congress people to purchase the land for preservation. “While the archaeology impacted by the bridge is being mitigated, the remainder of this buried site is greatly endangered by proposed development,” Emerson laments. “After this project, it’s hit or miss.”

SUSAN CABA is a freelance journalist who writes about the arts, material culture, and the built environment. Her article “Reexamining Kincaid Mounds” appeared in the Fall 2010 issue of American Archaeology.
The port in St. Augustine, Florida, was the most dangerous on the East Coast when Johann David Schoepf arrived in 1784. Schoepf was a surgeon hired with German mercenaries to fight for the British in the restless American colonies. For him St. Augustine was a stopover on his voyage from Charleston, South Carolina, to the West Indies, which he wished to visit before returning to Europe. Throughout Schoepf’s voyage to St. Augustine the skipper on his ship had worried about the bar before the port. A steersman, “quite in the indifferent manner of an old sea-farer,” had told passengers one could not cross the bar without facing mortal danger.

The bar was shallow and exposed to the ocean’s force. Channels across the bar were narrow and crooked, and the sand shifted with stormy weather. This meant seamen returning after long absences had to find a new course. Ships ran

By finding and excavating shipwrecks and other maritime sites, researchers with the Lighthouse Archaeological Maritime Program are learning about the history of St. Augustine, America’s oldest port city.

By Amy Green

LAMP field school supervisor Rachel Horlings (right) communicates by hand signals with a student. Carrying a pencil and a plastic tablet, the student is able to write underwater.
aground so often every time a vessel approached someone in the port rang a bell, and boats were unmoored in anticipation of yet another rescue. Happily, Schoepf’s ship made it to the port safely.

A lone lighthouse on nearby Anastasia Island guided ships toward the port. Of the beach Schoepf wrote, “Without the least overstatement I daresay that every 100 paces, almost, the skeleton of a foundered ship, or its wreckage, may be seen. Who could pass this way without emotion—if one imagines to himself the terror so many souls must have suffered here, and the lives that have been here lost. The estimate is that every fortnight, or every month at least, a vessel is wrecked on this coast. I saw several of these skeletons far off from the water, at the highest part of the beach, and buried deep in the sand. A very little more, and they would be wholly covered. Should the sea withdraw after centuries, it would be an astounding thing to come upon the reliques of these ships.”

Centuries later archaeologists are doing just that, investigating the remains that haunted Schoepf so. Today, St. Augustine is the nation’s oldest port city; itself a relic of the Spanish colony that once thrived here. The sea plays a large role in the city’s past, and to get a clearer picture of its role, the St. Augustine Lighthouse & Museum established the Lighthouse Archaeological Maritime Program (LAMP) in 1999.

LAMP is among the nation’s few maritime archaeology research organizations that’s not associated with a university or government agency. It operates on a $300,000 budget provided by the St. Augustine Lighthouse & Museum, grants, contracts, and private donations, and it’s staffed by three archaeologists and an archaeological conservator, with the assistance of volunteers. Its offices are in the lighthouse, which was built in 1874. The lighthouse’s 219 steps lead to a lovely view of the city and the miles of coastline where so many ships have been lost.

The organization is the first to undertake extensive excavations of St. Augustine’s maritime archaeological sites. LAMP’s archaeologists believe hundreds of shipwrecks litter the sea here, and they’ve discovered about a dozen sites so far. “Before we came along, (St. Augustine’s maritime history) was really unappreciated,” says Chuck Meide, LAMP’s director. “Most historians or archeologists weren’t really thinking about maritime issues at all.” The Spanish settled here in 1565 because the port was easily defended. No other region in the nation saw regular shipping, and therefore so many shipwrecks, in the 16th century. “Nobody can touch us,” says Sam Turner, LAMP’s director of archaeology.

Maritime archaeologists face numerous challenges. They excavate items that are underwater or beneath the sea floor, Digging is difficult because the excavated sand often falls back into place. Exposing waterlogged artifacts to air places them at risk because, if they dry out, they quickly deteriorate. Consequently stringent

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This cannon was recovered from the Industry.
It’s now on display at the museum.

The bell of the Storm Wreck was covered with concretions prior to cleaning.

PHOE BE FLEMIN G

Amy Green
conservation measures are necessary.

LAMP’s investigations begin with researching historical accounts of shipwrecks. These accounts often give vague descriptions as to where the vessel went down, which is further complicated by the fact that the maritime landscape, due to both natural and manmade forces, has changed over the years. So the archaeologists also study maps and other documents to understand those landscape changes. “We know where the likely search area is” as a result of this research, Meide says.

Then the archaeologists, aboard one of their research vessels, survey the underwater landscape using sidescan sonar, which produces an image of the sea bottom, and a magnetometer, which detects iron and steel. Even though boats were made primarily of wood until the 1800s, “there’s enough iron on any wooden sailing ship that you’re going to get some kind of blip,” using a magnetometer, he says.

In this fashion the researchers identify “targets” that can take the forms of objects, revealed by sonar, that could be part of, or related to, a shipwreck, or they can simply be a mysterious blip on the magnetometer’s screen. There’s often no way of knowing whether these targets represent historic shipwrecks or trash such as television sets or boat motors (“Most of the time it’s modern junk, says Meide.) without examining each one, so divers are sent down to scrutinize them. It’s a difficult area for diving because visibility is generally poor due to the waves stirring up sediment and muddy water from two rivers that flow into the harbor. In some cases, the divers plunge 10-foot probes into the sand in search of buried objects.

The investigation of the Industry, a merchant ship that sank in 1764, is one of LAMP’s most important projects. Discovered in 1997 by researchers with Southern Oceans Archaeological Research, Inc., it was the first colonial shipwreck to be found in northeast Florida waters. In 1763 the Spanish had ceded St. Augustine to the British, who were intent on turning it into a prosperous colony. The loss of the Industry, one of four sloops delivering much needed supplies to the colony, was a blow to the British, who eventually lost control of St. Augustine in 1783.

LAMP began excavating the wreck in 1999, and its archaeologists have discovered eight cast-iron cannons, a swivel gun, crates of iron shot, three mooring anchors, copper cookware, and boxes of tools such as axes, shovel blades, knives, trowels, files, and handsaws. Some of the artifacts are on display at the lighthouse museum. The wreck offers a glimpse of colonial life in St. Augustine, and the range and type of artifacts provide insight into the basic supplies the British thought necessary for a nascent colony.

Slightly north of the Industry site are the remains of a 19th-century wooden-hulled steamship that was found in 1995. The exposed wreckage includes a boiler, a single-cylinder inverted engine, a condenser, two bilge pumps, an air pump, and a propeller. It also appears to have a broken keel, and consequently Meide thinks the steamship could be the Cricket, which, according to historical documents, sailed out of Key West headed for New York in 1869. “She was so low on fuel,” he says, “the only thing she had to burn was the bacon from her kitchen stores.” The Cricket’s crew tried to make an emergency landing at St. Augustine and the ship’s keel was broken when it ran aground while trying to enter the port.

LAMP’s archaeologists, who also excavated the site in 2007 and 2009, uncovered a ballast that leads them to suspect there are two shipwrecks there. The ballast is telling because steamships, with all of their heavy equipment, generally didn’t need ballast for stability. Sailing ships did, and the location of the site led the archaeologists to surmise that the second wreck could be the Jefferson Davis, a notorious Confederate privateer (a privately-owned vessel that saw combat during the Civil War) that had also served as a slave ship. But so far they’ve found no evidence that confirms this.

An entry in the St. Augustine Light Station Keepers’ Log informed LAMP’s researchers of the wreck of the Florida, an early 20th-century dredge vessel they discovered in 2002.
When the *Florida* launched in 1904, a local newspaper declared it to be the most technologically advanced vessel of the time. Dredge vessels cleared and deepened channels, making them navigable for the steam-powered riverboats that plied those waters. The *Florida* maintained channels throughout the state before sinking during a storm in 1918.

The archaeologists discovered a collapsed A-frame assembly at the bow, a clamshell bucket dredge, a partially collapsed paddlewheel at the stern, and piles of staved dredge pipe. The *Florida* is an example of America’s emphasis on maritime infrastructure during that period. The vessel “was on the cutting edge of technology at the time,” Meide says. “It was a pretty important piece of history to be more or less forgotten.”

During the final week of LAMP’s 2009 summer field season, Meide was diving at a target off St. Augustine’s shore. Underwater, visibility was zero. He was only able to feel his way around the sea bottom, doing what he calls “archaeology by Braille.” Meide plunged a probe into the sand and felt it clunk into something a foot and a half down.

“Using one arm as best I can to steady the top-heavy probe, I eagerly reached into the hole with my other hand. My fingers slid down the pipe, into the swirl of jetting water … Wood!” he wrote in *Spyglass*, a publication of the St. Augustine Lighthouse and Museum. He groped along the sea bottom, discovering a plank and ballast stone. “My heart and mind raced as I continued to erase centuries of sand below my grasping, greedy fingers. There is another ballast stone, this one stuck to a plank by a growth of concretion. Concretions are concrete-like encrustations that form on and around iron, another good sign that this was a shipwreck.”

The site Meide discovered is believed to be more extensive than that of the *Industry*. Unable to identify the wreck, the LAMP team named it the *Storm Wreck*. Meide brought up a ballast stone and two concretions in 2009. The archaeologists returned to the site last year and found the ship’s bell, which they raised, and four cannons that remain under the sea. They also sucked up sand and debris using a dredge, filling a bag onboard the boat above. Sifting through this sand, the researchers discovered thousands of pea-sized lead shot, the base of a wine glass, and a belt buckle.

The cannons are a type known as carronades, and ships weren’t equipped with these guns until around the 1780s. It was determined that the lead shot were manufactured as early as 1665, and similar shot have been found on 17th and 18th century shipwrecks. The size, shape, and impurities of the wine glass base match those of wine glasses dating to the 18th century. The team believes the belt buckle is brass or a copper alloy and similar to 18th-century belt buckles. The archaeologists also found three cauldrons of different sizes, one of which is very large. Concretions cover the cauldrons, and the archaeologists will glean more information as they...
remove them, but their oval shape and the design of their handles suggest they were made between 1740 and 1780.

The LAMP team identified about 30 different concretions at the site. One concretion contains a pistol with a barrel that could be bronze and a handle that likely is wood. It’s smaller than military pistols of that time, and Meide describes it as a gentleman’s pocket pistol that was probably owned by an officer or merchant on board. The concretion also contains lead shot, an iron spike, a loop that possibly was part of the ship’s rigging, and a circular object that could be a coin. A coin, with its precise minting date, would be an important find because the researchers would then know the vessel sank sometime after that date.

About three-quarters of the bell’s surface has been cleaned, but no markings speaking to the age or identity of the vessel have been found. The remaining area is covered with an iron concretion. There is always the possibility of damaging an artifact when cleaning it, and removing the concretion from the bell will require significant force. So the researchers have decided to take it to a local hospital for a CAT scan, a type of x-ray that will reveal if there are any artifacts trapped in the concretion that could be damaged by its removal.

Sometimes shipwreck debris can scatter, leaving a trail that is spread by storms. At first Meide thought the site could be part of a debris trail left by the Industry, but he no longer suspects that because some of the Storm Wreck’s artifacts, like the carronades, appear to postdate the Industry. “Our current belief is that this wreck went down sometime between the start of the American Revolution and the end of the War of 1812,” says Meide. Depending on when the ship sank, St. Augustine could have been under British or Spanish control.

“My guess is this is a merchant ship,” he says. “These were items that were needed for every day use” in St. Augustine. “If this was a British ship, this may have been a ship from Charleston. That was a big trading partner, we know. If it was a Spanish ship, it would have likely been coming from Havana.”

Perhaps the ship was among those Schoepf saw on the beach, its skeletal remains nearly buried before disappearing from view for centuries. Until now.

AMY GREEN’s work has appeared in PEOPLE and Newsweek. She lives in Orlando.
The Best of the Southwest tour participants pose for a group photo in front of Chetro Ketl Pueblo at Chaco Culture National Historical Park.

The Best of the Southwest

Seeing ancient cliff dwellings, shopping at historic trading posts, and being in four states at once. These are just a few of the remarkable things that take place on one of the Conservancy’s most popular tours.

By Nancy Zimmerman

Photos by Michael Palmer
“These guys can make even a pile of dirt seem fascinating.”

That was the sentiment commonly expressed by participants in The Archaeological Conservancy’s autumn tour, “Best of the Southwest.” “These guys” were tour leader Jim Walker, Southwest regional director for the Conservancy, and the crew of experts he recruited to provide information, context, and conjecture at each of the ancient and storied sites featured on the 10-day trip.

Of course, most of the tour’s attractions—cliff dwellings, canyons, petroglyph-lined trade routes, soul-stirring high-desert vistas—were fascinating in and of themselves. The comfy motor coach wound its way through the mountains and mesas of New Mexico, Arizona, and southern Colorado, following an itinerary that managed to be at once jam-packed and leisurely.

The trip was prefaced by a Saturday evening cocktail party at the Sheraton Albuquerque Airport Hotel, where the group enjoyed a lecture and slide show about the sites they would

The group admires the White House Ruin at Canyon de Chelly National Monument. Over the course of millions of years, natural forces fashioned Canyon de Chelly’s sheer cliff walls. The Anasazi began building masonry homes here around A.D. 700.
soon visit. The party also gave everyone a chance to get acquainted—in some cases reacquainted—with one another. As is typical of the Conservancy’s tours, the 19 participants included both first-timers and veterans of other Conservancy trips, all of whom shared not only an interest in archaeology but also a high degree of intellectual curiosity and an appreciation of history and culture.

So it was a congenial bunch of like-minded travelers who set out the following morning to learn about the settlers of the pueblo of Kuaua, founded circa A.D. 1300 just a short distance from Albuquerque along the banks of the Rio Grande. The site, known today as the Coronado State Monument, preserves an earthen pueblo first excavated by Works Progress Administration laborers in the 1930s. It also has a reconstructed kiva and a small museum with an exhibit hall that displays some of the finest examples of pre-Columbian mural art in the country.

“I was particularly amazed by the murals,” said Jean Owen, a retired librarian and chairwoman of the Natural History Institute of the Rockies, from Red Lodge, Montana. “The work was very sophisticated.” Owen also noted how the science of preservation has advanced over the years, as the murals are now protected behind special glass in a climate-and light-controlled environment to slow the fading and disintegration that had begun when they were first brought up from the kiva. “At any given moment, archaeologists do their best to protect their discoveries, but we learn new methods all the time, and of course mistakes have been made,” she observed. “I was pleased to learn of the care they take, and to hear that so many sites remain unexcavated, as it gives us time to continue to develop new and better techniques for exploring and preserving these special places.”

One such unexcavated site is San Marcos Pueblo, a Conservancy preserve in the Galisteo Basin. It was the second stop of the day and the spot that elicited the aforementioned observation about fascinating “piles of dirt.” To the untrained eye, this is an inhospitable spot, marked by the occasional mound of earth and seemingly random groupings of rocks. But to the expert, in this case site steward Bill Baxter, it’s the vestige of the most populous of all the pueblos encountered by the Spanish when they first arrived in 1540, one rich in potential for further investigation. Baxter, who is familiar with the research that’s been done here, offered a thought-provoking explanation of what life was probably like for the pueblo’s 500 or so households.

The day’s final destination was Pecos National Historical Park, which encompasses thousands of years of history in the form of ruins of
The group returned to Santa Fe via San Ildefonso Pueblo, famous for the black-on-black style of pottery pioneered by Maria Martinez in the early 20th century, when she revived and refined the ancient art of pottery making.

Cliff Palace is one of some 600 cliff dwellings in Mesa Verde National Park. This amazing cliff dwelling once had roughly 100 people.

American archaeology

The ancient Pecos Pueblo, colonial missions, remains of sites along the Old Santa Fe Trail, and an old Civil War battleground at Glorieta Pass, the westernmost front of that conflict. First settled by pre-Pueblo people who constructed pit houses, by A.D. 1100 it became a grouping of some two dozen villages constructed of rock and mud and was considered the most powerful of New Mexico’s pueblos. It’s a place of singular natural beauty where mountains and plains butt up against each other, flanked by the snowcapped Sangre de Cristo range and nourished by the flow of Glorieta Creek.

That evening in Santa Fe at the elegant Inn at Loretto, everyone gathered for a pre-prandial cocktail before dining, either individually or in small groups, at some of the city’s excellent restaurants.

The next morning the tour recommenced with a visit to Bandelier National Monument, where the history of human activity extends back more than 10,000 years. Around A.D. 1150 the hunter-gatherer ancestors of today’s Pueblo people settled into more permanent dwellings in the cliffs overlooking Frijoles Canyon on the Pajarito Plateau, a hauntingly beautiful setting. The park contains nearly 3,000 archaeological sites, among them small ceremonial shrines and two-room field houses that sheltered Pueblo farmers some 700 years ago.
The pueblo houses a handful of home-based galleries selling pottery and other crafts, as well as Cottonwood Trading Post, which features pottery, paintings, jewelry, and other finely wrought articles made by Native American artists.

“The quality of the goods there was excellent,” observed Mary Jane Tait, a retired teacher of English as a second language from Fullerton, California. “I’ve seen these sights before, but that was with my three kids in tow, around 35 years ago. I saw so much more on this trip. That’s why I like going with the Conservancy—people share your interests, and you learn so much.”

Tuesday provided a bit of a breather, with an optional morning tour of Santa Fe’s Palace of the Governors, which was built in 1610 and is the oldest public building in the nation, as well as a visit to the stunning New Mexico History Museum. The group was then provided with passes for admission to the rest of the city’s museums, which they were able to visit on their own. There was also time to tour the city’s many galleries and shops. That evening the group convened at the rooftop bar at the Hotel La Fonda to enjoy a sunset cocktail and compare notes on the day’s activities.

On Wednesday, everyone piled back into the motor coach and headed for Acoma Pueblo, an impressive village 60 miles west of Albuquerque built atop a 367-foot mesa with commanding views of the valley below. Continuously inhabited since at least A.D. 1150, the pueblo now counts only 30 full-time residents in the village proper, with another 6,000 or so members in the surrounding area. A highlight of the tour was a look at the 361-year-old Spanish mission, San Esteban del Rey.

The next stop was Ganado, Arizona, just across the New Mexico state line in Arizona, home of the famed Hubbell Trading Post. John Lorenzo Hubbell, who purchased the post in 1878, was instrumental in developing the Navajo art of rug weaving and silversmithing, promoting them to visitors with such dedication that these art forms flourish to this day. The trading post is a National Historic Site, and visitors can still find high-quality woven textiles and silver jewelry there, among many other goods.

“I really drooled over all the beautiful rugs,” said Elizabeth Varsa, a retired physician from Albuquerque who has taken this particular tour more than once. “It’s always worth
doing again,” she noted. “I learn new things each time, and I enjoy being with interesting, like-minded people.”

From Ganado the tour proceeded across the Defiance Plateau to **Canyon de Chelly National Monument**, one of the most evocative and awe-inspiring stops on the itinerary and one cited by many of the participants as their favorite. Considered the spiritual heart of the Navajo Nation, Canyon de Chelly was settled more than 3,500 years ago and it boasts cliff dwellings, petroglyphs, and pictographs left by the ancient residents within its multihued sandstone walls.

“Since the reservation is ‘dry,’ with no alcohol sold or served, we held a little cocktail party on the bus en route, with wine, and margaritas, and soft drinks,” said Walker, “and another the next evening in my room. It made for a festive trip.” The group spent the night at the Thunderbird Lodge, a former trading post near the edge of the canyon, and then rose early for the four-wheel-drive tour down to the canyon floor, led by a Navajo guide. “Canyon de Chelly was like being in a different world,” observed Owen. “It had a magical, mysterious feeling to it, and I think the fact that there were people still living there made it seem more alive.”

“Riding down to the canyon floor and looking up at everything gave me a feeling of being more a part of things than I would have by just standing at the rim and looking down,” said Trish Nichols, a former chief operating officer for an investment and financial services company from Pittsburgh. “The apple orchards, the grazing cattle—it all really helped me to understand the history of the place, and I particularly liked learning more about the Navajo beliefs in the current culture, not just about the ancient people. I was struck by how different all the Native American groups are from one another, and by the fact that they often speak a different language from even their close neighbors, having more in common with people living much farther away. It really makes you think about the history and culture in a new way.”

“Canyon de Chelly was wonderful,” concurred John Feiertag, a computer specialist from Cincinnati. “It had rained the day before we got there so there was water running down the canyon, and there was no dust—just beautiful. It was an especially wonderful day.”

After another night at Thunderbird Lodge, the tour continued to **Mesa Verde National Park** in southern Colorado on Friday, pausing at the Teec Nos Pos Trading Post along the way. While many trading posts throughout the Navajo Nation have lost importance or even disappeared in the wake of ubiquitous convenience stores, this remote,
historic post still functions as an important source of food and other goods.

“People are always intrigued by the huge selection of enameled kitchen ware found there,” said Walker. “And if you look through the various products for sale you’ll find lots of items that used to be part of mainstream culture but have mostly disappeared, like Lorna Doone cookies, huge tubs of Snow Cap lard, and sacks of Bluebird flour.”

After a quick stop at Four Corners Monument to mark the spot where Utah, Colorado, Arizona, and New Mexico meet—planting arms and legs in all four states simultaneously is a corny but irresistible ritual—it was on to Yellow Jacket Pueblo. This huge, unexcavated Conservancy preserve at one time consisted of more than 1,500 rooms with 192 kivas, and 27 towers. Very little remains of the once flourishing community, but with a little help from archaeologist Kristin Kuckleman of the Crow Canyon Archaeological Center, it was possible to visualize its former vastness.

“It’s funny,” commented Ken Hollingshead, a marine biologist from Indian Head, Maryland. “We saw so many spectacular ruins on the trip, but the site my mind keeps going back to is Yellow Jacket. There’s really nothing there, but I found it thought-provoking. I’m not the most imaginative person, but the archaeologist was able to make it come alive. It was also interesting to be able to see what a site looks like before it’s been excavated or reconstructed.”

The group then settled in for a two-night stay at the Far View Lodge in the heart of the Mesa Verde National Park. “The lodge was great because our rooms were up front, which gave us a spectacular view,” said Tait. “It was very impressive.”

The travelers spent Saturday touring some of Mesa Verde’s intricate ruins: Cliff Palace (the largest cliff dwelling in North America), Spruce Tree House, and Sun Temple. The ancestral Puebloans lived here for more than 700 years, from about A.D. 550 to 1300, before migrating south to present-day New Mexico and Arizona. These are some of the most impressive ruins in the Southwest, and scientists and visitors alike continue to be awed by the intricacy of the masonry and mystified by the depopulation of the Four Corners’ region.

“The masonry really stood out as impressive to me,” said Nancy Surdoval, a retired lawyer from Pittsburgh. “We learned about the different patterns of stonework, and the artistry was just incredible. When you see the Cliff Palace, it makes you wonder why they left. It must have been heartbreaking to leave after doing all that work. It seems that so

This multistoried masonry structure known as Aztec West is found at Aztec Ruins National Monument. It’s estimated to have had 405 rooms and 28 kivas.
many places in the Southwest all had their periods where people just vanished. This trip has definitely made me want to read more about the history and culture of the area.”

On Sunday the tour took in Salmon Ruins and Aztec Ruins National Monument, outliers of the legendary Chaco Canyon. “Salmon and Aztec are little gems,” commented Feiertag. “The museum director, Larry Baker, walked us around and told us his theories, pointing out that although people have tried to use the petroglyphs to interpret history, nobody really knows for sure what they mean. It’s all just speculation, but of course we know there must have been cultural exchanges with the Mesoamericans because they’ve found artifacts like bones and feathers of parrots and macaws, birds not native to the area.”

After an overnight at the Inn at Farmington, the group set off for its final stop, Chaco Culture National Historical Park, the most mysterious of the Anasazi sites and one some visitors find eerie, even unnerving. Chaco proved to be another favorite, even for those who had seen it before. Between A.D. 700 and 1100, over a dozen large pueblos were built, some of which were four stories high and contained several hundred rooms. The sophisticated masonry and architecture evince knowledge of astronomy, as a number of buildings were situated in accordance with the equinoxes and solstices, and the large number of kivas suggests that this may have been a religious center serving all of the outlying pueblos.

“The place was very spiritual,” observed Owen. “I loved the feeling of going back in time, and it was exciting to learn about how well the residents were doing, how sophisticated the architecture was. There’s still so much we don’t know—why they left, what their ceremonies in the kivas were about. I’m glad the surviving cultures have kept it secret, that they continue their ceremonies without having them appropriated by outsiders.”

It was a tired but happy bunch that headed back to Albuquerque late that afternoon, and all agreed that the tour had exceeded their expectations. “We went to all the best places, the handouts were very informative, and the evening lectures were interesting,” said Feiertag. “I used to laugh at the idea of going on a bus tour, but now I’m looking forward to the next trip!”

“I’d been to some of these places before, but it was so much better seeing them with knowledgeable guides,” added Owen. “Also, the company was great, the food was good, and the accommodations were wonderful, more luxurious than I had expected.”

Walker was universally praised by group members for his personal warmth, knowledge, and seamless command of logistics. “I’d travel anywhere,” Tait said, “if I knew he was the one leading the group.”

NANCY ZIMMERMAN is a freelance writer, editor, and translator based in Tesuque, New Mexico.
Deep in the interior of South Central California, a scant 90 minutes north of the urban sprawl of Los Angeles, is one of the most spectacular and largely unexplored collections of Native American prehistoric paintings found anywhere in North America. Situated on the Wind Wolves Preserve, a private 95,000-acre tract hidden within the San Emigdio Hills, the property was originally occupied some 2,000 years ago by the Chumash and Yokut tribes.

But the rugged terrain can be forbidding. Hot, dry, and dusty, the temperature in this parched high desert hovered in the high 80s on an early July morning and soared to nearly triple digits by midday. Although the turn off for the preserve is less than 10 miles down a two-lane stretch of highway off Interstate-5, the heavily trafficked artery that connects Los Angeles to the San Francisco Bay area, it feels like a desolate land that time forgot.

Located in an ecologically distinct area where three mountain ranges—the Transverse, Coast, and Sierra Nevadas—meet the western edge of the Mojave Desert and the southern tip of the San Joaquin Valley, Wind Wolves Preserve is the largest non-profit land holding in the American West. The Wildlands Conservancy, a nonprofit organization, bought the property in the 1990s from private landowners and has since done much to restore the region’s diverse natural habitats and delicate ecosystems.

A photographer and I drove another three miles off the main road and met up with two archaeologists, Julie Bernard and David Robinson, at the preserve’s visitor center, which is housed in a hacienda-style adobe building with a red tile roof that’s surrounded by a thicket of trees, making the verdant patch of land an oasis in the arid landscape. A tall, willowy brunette, Bernard is a researcher at UCLA, while the bearded and bespectacled Robinson is a California native who now teaches at the University of Central Lancashire in northern England. The third member of their team, Fraser Sturt, of the University of Southampton, was already at the dig site.

The three of them have been working to reveal some of the specifics of the lives of these indigenous people, uncovering what Robinson referred to as “the deeper human history of the spaces where the art was made and has since endured.” He’s been trekking up here since the late ’90s when he was an undergraduate at the University of California’s Santa Barbara campus, which is on the other side of the coastal mountain range. Robinson was part of a team of volunteers, known as the Rock Art Documentation Group, who protected Central California’s abundant Native American rock art from erosion and vandalism. He was also among the first archaeologists to explore the vivid, colorful pictographs found on the Wind Wolves Preserve shortly after it was opened to the public in 1996.

“We still have a meager understanding of what the art is all about—how it was viewed, how old it is, what activities took place around it, and what variety of roles it may have played in the past,” he said.

We hitched a ride with the pair, who were both wearing T-shirts, hiking boots, khaki pants, and head gear to shield against the scorching summer sun, to the dig sites. The first stop was a quarry site where three students were toiling in front of a large sandstone boulder. They were part of a field school that included a dozen participants from both Europe and North America that was conducted jointly by

By Linda Marsa

A California project is examining the function of rock art in ancient times.
This panel from the Three Springs site shows a Chumash anthropomorph. The line through the figure's head might represent an arrow. The two “pinwheels” that flank this figure are ubiquitous in Chumash rock art.
universities in the United Kingdom—University of Central Lancashire and the University of Southampton—and the Cotsen Institute of Archaeology at UCLA. The primary purpose of the field school was to examine the indigenous people’s relationship to the environment and how they made this landscape their own—a process Robinson called “enculturation.” Rock art, he added, “is one of the ways the Chumash”—a sophisticated and diverse tribe of hunters and gatherers who settled over the past millennia along the coast near Santa Barbara and as far inland as the San Joaquin Valley—“enculturated their surroundings.”

One of the students scanned the wall, using a handheld x-ray fluorescence machine to identify the chemical composition of the blue and green mineral seams inside the quarry to determine whether they were used in some of the prehistoric paintings. “It’s been dug out—that’s not natural,” Robinson explained, pointing to an obvious depression in the mineral deposits. This led the researchers to believe the indigenous people who once lived here mined the veins of the exotic blue and green minerals azurite and malachite.

The Chumash apparently used a wide variety of natural pigments, including red, orange, and yellow from soils colored by the iron oxides hematite and goethite, white from a rock known as diatomite, and black primarily from charcoal or manganese. They were then crushed in stone mortars and mixed with water, animal fats, seed oils, or even blood, and
painted on with fingers, sticks, or brushes made from feathers or leaves. "We're trying to compare the pigments with the rock art on the sandstones surfaces but also with pigments found in the excavations," Robinson said.

We moved on to the Santiago site, one of five sites the researchers have excavated in the past decade, and it was a beehive of activity. There was a massive sandstone boulder—about six feet high and 10 feet across—embellished with fragmentary pictographs. At other sites such as Pinwheel Cave, Los Lobos, and Three Springs, the rock art was more striking. "There are fanciful figures depicting insects, reptiles, birds, bears, humans, or strange combinations, often with upturned appendages or embellished with fine lines and delicate dots," said Robinson. "Other images, painted in vibrant reds, look like mandalas or sun disks with radiating spokes."

Almost everyone at Santiago was wearing a surgical mask to keep out dust and to avoid ingesting spores from the soil, which can contain pathogens that cause valley fever. Shielded by tarps to keep out the sun, a handful of students carefully scooped up soil in front of the giant rock. Two other students sat nearby in front of slanted screens painstakingly sifting through the excavated dirt, looking for the telltale bits of debris that can shed light on what took place here so long ago.

"Typically, paintings have been thought of as (being located) away from the public, reserved for shamanistic rituals or vision quests, that are considered to be a dangerous undertaking," said Bernard. "But we've been finding that just the opposite is the case, because most of what we find here is the trash of every day life: glass beads, projectile points, the lithic flakes from creating stone tools, stone bowl fragments, and even burnt food remains."

In fact, their research suggests that all sorts of activities took place around the rock art, such as eating, making tools, cooking, food storage, and the processing of acorns, which were the main staple of their diet. "The rock art is not isolated, or hidden, or remote, or difficult to get to, and the paintings are invariably near water supplies and in places where people would have been hanging around processing food or working on making stone tools," added Bernard, gesturing towards a nearby stream and the bedrock mortars surrounding the rock art that could have been used for pulverizing acorns and seeds.

Fraser Sturt, a geoarchaeologist, is attempting to re-create what the environment looked like hundreds of years ago. Standing on a gently sloping hill a few hundred yards away from the Santiago site, he peered through a total station to take measurements that will help create a topographic map of the landscape.

Fraser Sturt and David Robinson lie at the entrance of Pinwheel Cave. The archaeologists once thought this was a shamanistic site, but recent excavations have shown that the public used it.
Core samples extracted by other scientists have given Sturt and his colleagues a good indication of what plant species were once there, and by dating the organic material within the samples they can determine when those plants existed. “We can also sift through the material and capture plant remains that may have been used for food production,” he said.

Sturt is also using the core samples, along with other geological data, to create a computer model of the hydrological system. Simulations are then run to see how water would have flown over and through the different geological strata. “And one of the key factors we’ve uncovered is the relative change in the abundance of water,” he added.

This region wasn’t always so parched, and it may have even been a heavily forested terrain with stately oak trees covering the rolling hills. But as water sources dried up in the valley, the tree line steadily receded to the hilltops. Since the 1930s, in fact, the water table has dropped about 30 feet because water was pumped out for farming in the San Joaquin Valley and diverted to Los Angeles by the California aqueduct system.

“The landscape today is not what it was like even as recently as a hundred years ago,” said Sturt. “There once was an extensive network of lakes—small patches re-emerge when it’s very wet—and the oaks themselves would have been much further down the slope,” he adds, pointing to the sparse row of trees at the crest of the hills. “There’s a clear relationship between rock art and water.”

Archaeological and historical evidence suggests that the natives settled in these areas primarily in what’s known as the Late Period, from about A.D. 1300, and during the Colonial era after the Spanish established the missions along the coast in the mid-to-late 1700s. “We found an extraordinary quantity of debitage in front of the rock art, said Bernard “from about 1300 to 1782.” This indicates intense activity was taking place there. The dates of the rock art are unknown, but the ages of the associated deposits could be a clue to that of the rock art, she added.

The glass beads they uncovered “are evidence of the trade between tribes because most of the beads were made on the coast,” she said. “We were thrilled when we found glass beads—they give us an indication of the historic era because they were imported as a result of European contact. Many of them were made in Venice, Italy, and would have been brought in by the Spanish, who used them to barter. By the late 1700s, glass beads would start to trickle into the local economy. They give us an interesting perspective in...
the archaeology of the region—not only of the people living here a long time but also of the influx of people seeking refuge from the coast."

There is even some evidence the region may have been a haven for natives fleeing from the Spanish missions. In 1824 there was a revolt against the missions and hundreds of natives may have fled here. "Could these rock art locales possibly be safe havens for people running away from the missions?" Bernard wondered. "It would have to have been a place the Chumash had been familiar with and would have known the ins and outs."

Robinson believes the notion that rock art was disconnected from everyday life resulted from researchers’ reliance on folklore and ethnographic accounts gathered in Colonial and post-Colonial times. "Stories were collected from Native Americans after they no longer really utilized the sites," he said. Another reason is that the rock art researchers, many of whom are not archaeologists, have focused primarily on the images themselves and ignored the adjacent deposits.

At Pinwheel Cave, for example, few artifacts were found on the surface by the art and Robinson and other researchers initially thought it was a classic example of a shamanic site. But when he, Sturt, and Bernard recently excavated near the rock art they uncovered numerous items: exquisitely made arrowheads, burnt animal bone, charcoal from cooking, and tiny shell and glass beads that are evidence of life from the Colonial era. "It’s a big archaeological blind spot because no one looked at the actual material culture," said Robinson. "The archaeology of Pinwheel Cave showed it was anything but a private site."

But at least two rock art experts who aren’t involved with the Wind Wolves project take issue with the contention that many specialists have concluded that rock art was created in remote locations for primarily shamanistic purposes. "Nothing could be further from the truth," said David Whitley, an archaeologist who has written a number of rock art books. He believes that the images served both sacred and secular purposes, noting that the archaeological and ethnographic records show that rock art was indeed found in the center of settlements, benefiting the shaman as well as the villager. "In some ways," Whitley said, "putting things in plain view is the strongest way of emphasizing its significance and sacredness."

Jannie Loubser, an archaeologist who has worked at numerous rock art sites in the U.S. and other countries, echoed Whitley. He noted that the prosaic and the sacred were as inextricable in the past as they are in the present, an example of the latter being homes containing religious icons, such as crucifixes.

Though Whitley and Loubser conceded that many rock art researchers aren’t archaeologists and therefore don’t investigate associated archaeological deposits, they said there have been projects that have examined both. Consequently the Wind Wolves’ researchers conclusions that rock art was created in public places corroborates, rather than challenges, the existing evidence. Robinson agreed that there have been other projects that examined both rock art and associated artifacts, but the Wind Wolves project, he said, is "the first to systematically excavate a series of pictograph sites in our region."

Robinson, Sturt, and Bernard plan on taking some time off from excavating to analyze their findings, using both radiocarbon and amino acid testing. The latter is a technique that’s effective for dating shells. They also intend to do faunal and paleobotanical analysis to reveal what these ancient people ate and how they used their surroundings. "The real story is the people who lived in this landscape for thousands of years," said Robinson. "They produced such fantastic art that it enrathls us to this day, and they deserve our admiration and respect for the empathetic way they understood their world around them and for the compelling society they created."

LINDA MARSA is a Discover contributing editor who is working on a book about the effects climate change will have on our health.
HINGS CAN GO MISSING, historic forts included. Such was the case with Fort St. Joseph, which was established by the French in 1691 and was one of the earliest European settlements in the western Great Lakes region. The fort played an important role in France’s missionary activities, and as time passed it also served as a trading post and a garrison, housing a commandant and as many as 10 soldiers, supplemented by a blacksmith, an interpreter, and visiting priests.

The fort, which played an important role in the French-native fur trade, was one of a series of settlements that manifested France’s ambitions in North America. For decades the French lived in Fort St. Joseph and the Potowatomi and Miami tribes were their agreeable neighbors.

The fort was abandoned in 1781, eventually fell into ruin, and then disappeared. But it wasn’t forgotten by the people of Niles, a city that sprang up where the fort had once stood, who commemorated it with an engraved boulder in 1913. Thousands of 18th-century artifacts were found in Niles, prompting George Quimby, a noted historical archaeologist, to search for the fort in the 1930s, as did a number of others over the ensuing decades.

In the 1990s, a group of history buffs formed Support the Fort, Inc. with the intention of preserving the artifacts and reconstructing Fort St. Joseph. The group was advised, however, that making an accurate reconstruction required finding the genuine article. So, in 1998, Support the Fort hired Michael Nassaney to find it.

“I didn’t think much of the project at the time,” said Nassaney, an archaeologist at Western Michigan University. “I thought we’d dig a couple test pits. I didn’t know people had been looking for the fort for 100 years.”

The fort was built next to the St. Joseph River and it was assumed that it had eroded into the river. A dam downriver from the site was raised in the 1930s, which in turn raised the water level upriver as much as 12 feet. This area had later become a landfill, so it was also possible that the fort’s remains were buried under a mound of trash.

Based on his examination of historical documents, Joseph
Peyser, a Support the Fort member and a French colonial scholar, determined the fort was located somewhere on a 15-acre parcel of land owned by the City of Niles on the east side of the river. Funded by a grant, Nassaney and a small crew began excavating this area on the weekends and found two musket balls and some chert flakes. On their last weekend of digging, a man showed up with a collection of 18th-century French artifacts he’d found there using a metal detector. “So then we start digging shovel test pits in this area,” Nassaney said. “We needed to convince ourselves that he found the collections here.”

They dug about 80 test pits, 15 of which yielded artifacts such as gunflints, European ceramics, glass trade beads, brass kettle fragments, and stones with traces of mortar adhering to them. But virtually every pit they excavated breached the water table, preventing them from establishing a stratigraphic profile. Consequently, Nassaney wasn’t certain they had found the fort because he couldn’t prove the artifacts were in their original context. They could have washed up from another place along the river, he said.

In order to continue the investigation, Nassaney had to find a solution to the water problem. “The challenge of working on the site was so daunting,” he said. It wasn’t until 2002 that he solved the problem by contacting an engineering firm, DeWind Dewatering that specializes in removing ground water.

Field school students wet-screen excavated dirt through one-eighth inch mesh to capture tiny artifacts like lead shot and glass seed beads.
DeWind installed a pump at the site that’s capable of removing 800 gallons of water a minute. But, Nassaney noted, the pumping system cost $10,000 and “our funding fell through at the last minute and the project was in jeopardy.” Support the Fort came to his rescue, providing the money to pay for the system. “They were committed to seeing the project through,” he said.

The water problem solved, Nassaney resumed the excavation that year, assisted by a group of Western Michigan field school students, and he and his team exposed a stone fireplace and a nearby stone hearth that confirmed the presence of the fort. Last summer, Nassaney was still at it, directing his seventh field school at the site. During this time he’s been examining the material and social consequences of the fur trade in southwest Michigan and the nature of the relationship between the French and the Native Americans at the fort.

René Robert Cavelier de La Salle visited the St. Joseph River Valley in 1679 to expand France’s fur trade as well as find passages to the Pacific Ocean and the Gulf of Mexico. He founded a short-lived fort that year. In the 1680s, the French Crown granted a tract of land along the river to the Jesuits where, in 1691, Fort St. Joseph was built. It became the heart of a mission serving local tribes.

Though its earliest incarnation was religious, the fort evolved primarily into a commercial and military post. But in 1696, France had accumulated such a glut of furs that all French posts were ordered closed. Colonial officials responded by making a case for keeping Fort St. Joseph and Fort Michilimackinac, in what is now northern Michigan, open. “They argued that these forts were more than places for trade, they were also sites for diplomacy with Indians, and if the French abandoned the interior they risked damaging relations with Indian nations whom they needed as military allies and would need in future for trade,” said José António Brandão, a historian at Western Michigan University whose research has informed Nassaney’s project. “Worse, they argued, if the French did not trade with the Indians, the English might move to fill that void and all would be lost.”

Indeed, Fort St. Joseph, and other forts in the region, were part of France’s strategy to foster alliances between the French and the surrounding native tribes so as to curb the influence of the British and their Native American allies in this part of North America. France lacked the troops to compete directly with the British, so they relied on friendly Native American groups that served as their proxies.

The colonial officials’ argument succeeded in forestalling the closure of Fort St. Joseph until 1699. It reopened in 1717, and by the mid-18th century it was the fourth most productive of all French trading posts in North America. In addition to its role in the fur trade, the fort also served as a supply base and staging point for the French wars against the Fox Indians in the 1720s and ’30s and the Chickasaws from 1736-40.

Fort St. Joseph proved the effectiveness of France’s strategy when, after the British took control of it in 1761 during the French and Indian War, the Native Americans, during Pontiac’s Rebellion in 1763, attacked Fort St. Joseph and other regional posts to expel the British and return the French. This was the only time the fort saw combat. Though they maintained control of the fort, the British, except for a brief occupation in 1779, didn’t re-garrison it, and French traders continued to operate in the area till 1780.

These are some of the more distinctive artifacts found at the site:

A. A finger ring with green and blue glass insets
B. A blue glass inset from a piece of jewelry
C. An engraved bone-handled knife
D. An ornate crucifix
E. A lead toy known as a whizzer
The following year Spain managed to claim it for a day, after which time Fort St. Joseph was largely abandoned.

On an early August morning last summer, water—this time rain—was again hindering the excavation. Once the rain stopped, Nassaney and his crew of roughly 15 students resumed work. The tarps that were used to cover the excavation units were strewn about the site. Planks were placed over some of the muddiest areas to make them traversable and several students worked barefoot. Dressed in shorts, a Fort St. Joseph T-shirt, and a Western Michigan University baseball cap, Nassaney moved from one excavation unit to the next, assessing his crew's efforts.

He joined four students perched over a unit. “We think we have a midden,” one of them informed him. The students exposed shells, bones, and other debris. Nassaney thinks this was a residential area. The researchers have no maps of the fort, so archaeological data are the only means of determining its layout and types of structures. The fort, he surmised, could have contained as many as 30 buildings, and thus far they’ve exposed portions of four. “What we’re trying to key in on is the identity of the occupants. Is this the house of the commandant,” Nassaney asked rhetorically. “Is this the house of a priest?” The associated artifacts could provide the answers, as the commandant’s house will probably have some items of a military, and the priest’s of a religious, nature.

Toward that end, Susan Benston, a member of his crew, used a geographic information system to complete a spatial analysis of the various types of artifacts. Her work has led Nassaney to conclude, based on the associated domestic artifacts such as ceramics, glass fragments, and beads, that three of the four structures were the homes of French fur traders.

Over the years Nassaney’s crews have recovered more than 100,000 artifacts—ranging from musket balls to glass trade beads to clay and stone pipes—that speak of the fort’s military, commercial, and domestic functions. The researchers, with the help of remote sensing, have also found four European-style fireplaces, and last summer they uncovered two wooden posts and the remnants of a foundation wall that are associated with one of the fireplaces. Nassaney thinks the fireplace, wall, and posts were part of one of the fur traders’ homes.

The wall and posts are the most significant evidence they’ve uncovered of the fort’s architecture, and they indicate that, in the same building, posts were placed both in sills and in the ground. This is sufficient information for Nassaney to estimate the size and orientation of the building.

The myriad faunal remains that have been recovered are being analyzed by Terrance Martin, the curator and chair of anthropology at the Illinois State Museum in Springfield. “It shows more than just the diets,” he said of his analysis. “It shows social interactions.” Martin, who has analyzed the faunal remains from three other French forts in the region, noted that Fort St. Joseph’s occupants had “a preference for wild game” rather than the domesticated animals the French generally consumed.

That game consisted primarily of white-tailed deer, which were plentiful and whose hides contributed to the fur trade, but it also ran the gamut from turkey to black bear to porcupine. Some of the animal bones were fashioned into native artifacts such as round disks, roughly the size of a nickel and painted or incised on one side, that were used in a dice game by the Potowatomi. “If you just looked at the animal remains” Martin said, you might think it’s a native site. He theorized that the French adopted a foreign diet because, at this remote place where they were greatly outnumbered by the natives, the French were “dependent on the Indians for learning how to live off the land.” Both he and Nassaney also noted that the French approach to colonialism differed from that of their British rivals. The British built large forts with the intent of dominating the Native Americans, Martin said, whereas the French were willing to adapt to this new place and its people.

The fort’s initial French settlers came from Quebec and Montreal, where they had likely learned something about native practices. They gave the natives gifts, such as gunpowder and ammunition, repaired their guns, and married their women. (This was partly due to the fact there were very
few French women on the frontier.) “The English,” Nassaney wrote in the International Journal of Historical Archaeology, “also made no attempt to disguise their contempt for the Indians, in contrast to the French who had shown the Indians considerable courtesy and respect. They were, after all, kin.”

**GOING PUBLIC**

In 1998, Michael Nassaney led a dozen or so researchers in search of Fort St. Joseph. These days his crews, which often consist of archaeologists, students, and volunteers, can number three times that. And that’s not to mention the numerous partners, sponsors, and donors that assist him.

The Fort St. Joseph Archaeological Project has blossomed from its modest beginnings, becoming a cottage industry of sorts. Nearly 10,000 people have visited the site since 2006 to observe, and in some cases participate in, Nassaney’s work. Each year he hosts a weekend open house, and last summer’s attracted more than 1,500 visitors.

There’s a long list of people and organizations that have contributed time, effort, and money. One of the most important is Fort St. Joseph’s landowner, the City of Niles, which signed a 10-year cooperative agreement with Western Michigan University in 2008 giving Nassaney and his school the exclusive rights to excavate the site. “They’re very supportive,” he said of Niles’s officials, adding that they spent approximately $15,000 to bring electricity to the site. The city also gets something in return. During last summer’s open house, Nassaney surveyed 200 visitors and 60 percent of them said they would spend money in Niles.

Like a welcoming host, Nassaney has invited the public to his project, and they’ve accepted his invitation. In 2002 he held his initial “summer camp” during which local middle and high school students excavate with his crew to learn archaeological techniques. He estimated that, over the years, roughly 120 students have participated in this program, which won the Historical Society of Michigan Education Award in 2007. Nassaney held his first open house in 2004. These events feature artifact displays and a living history village with re-enactors creating the details of 18th-century life at the fort.

For several years Nassaney has held a media day, inviting the local press to the site. He’s recently decided to become part of the media, publishing the first issue of the Fort St. Joseph Post, a newsletter covering his research and related activities. He’s also gone the social media route with a Fort St. Joseph Facebook page.

All of this is going above and beyond the call of digging up history, but Nassaney thinks it’s well worth the effort. “We have a close working relationship with the community,” he said. “It’s a win-win situation.” —Michael Bawaya

It’s fortuitous that Fort St. Joseph was one of several forts the French built in the western Great Lakes region. The oldest—Fort Miami, at the mouth of the St. Joseph River—was abandoned before a fort of the same name was established in Indiana.

**HISTORICAL ACCOUNTS ALSO NOTE THAT NATIVE WOMEN WHO TOOK FRENCH HUSBANDS WERE BAPTIZED, AS WERE THEIR CHILDREN.**

As the decades passed, the two peoples became less and less distinct, according to Nassaney. “(French) Men sometimes found refuge in their wives’ households where they accommodated to a world structured by Native American custom and tradition,” he wrote in that same article. “Marriage transformed French traders into Indian husbands, fathers, and brothers. According to historian Susan Sleeper-Smith, the offspring of Indian women and French men were often raised biculturally and they ‘might identify themselves as either Indian or French,’ depending on the social context.”

The archaeological evidence suggests that the “French were hunting like natives,” said Nassaney. Many of the bones recovered by his crews were broken to extract the marrow, which was used as grease. This was a native practice, but he said there’s so much evidence of it at the fort “that I suspect the French are doing it as well.” In 2002 the researchers found a concentration of carbonized corn cobs that Nassaney thinks served as a smudge pit, a native technology consisting of a small hole in the ground in which green corn cobs were burned. The green corn produced heavy smoke that was used to tan hides. Several other smudge pits have been found on the periphery of the site, which could mean they were used by Native Americans residing beyond the fort, but this pit is in one of the main activity areas, making it highly plausible that the French adopted this technology.
The French’s economic and military ambitions were supplemented by a desire to introduce their culture to the natives, but at times they were so accepting of the Indians’ ways that it apparently caused consternation among some of the French Jesuits in Canada, who lamented that it was the natives who were winning converts. Nonetheless, “the French,” Nassaney said, “didn’t give up their culture by any means.”

Indeed, the archaeological evidence also speaks to the persistence of French traditions in this foreign land. There are fragments of brass kettles, iron knives, guns, glass bottles, and European ceramics. Straight pins and an awl discovered near one of the fireplaces conjure up an image of sewing by the fire’s light and heat.

The fort—at least what little of it the researchers have uncovered—was of French construction. In addition to the posts and fireplaces, the researchers have also found hand-wrought nails, pintles, hinges, windowpane shards, and plenty of bousillage, (a mixture of clay and straw that connected upright posts) and pierrotage (a mixture of stones and mortar).

Having recovered a number of religious medallions and crucifixes, Nassaney believes the French “maintained an active religious life.” Historical accounts also note that native women who took French husbands were baptized, as were their children.

Not so long ago, he observed, archaeologists didn’t bother to look for evidence of Indian culture—what they refer to as “native agency”—at colonial sites because they assumed that when European and native cultures collided, the former prevailed. Sites like Fort St. Joseph have turned that assumption on its head. But even taking native agency for granted, when an archaeologist investigates a site marked by the unpredictable and disorderly intersection of cultures and lives it’s a “challenge to answer the questions ‘Who made these? Who used these?’” and why, Nassaney admitted. A French religious medallion found at a Potowatomi residence, for example, could signify a Catholic convert or personal adornment unrelated to religion.

Despite these ambiguities, Nassaney and his colleagues have concluded that Fort St. Joseph was the site of a melding, not a collision, of cultures. The French and the Indians, he wrote, “who initially shared neither cultural values nor assumptions about the appropriate ways of acting, forged a middle ground and created new social identities.” In short, two dramatically different peoples came together and got along. In addition to revealing the past, Nassaney hopes his project will inform the present.

MICHAEL BAWAYA is the editor of American Archaeology.
A Piece Of Cherokee History

The Conservancy signs an option for a significant Cherokee town site.

Students excavate during a Western Carolina University field school in the 1970s. Researchers uncovered 55 features, such as hearths and pits.

The Conservancy is in the process of acquiring Spikebuck Town, which is one of the Valley Towns. Located in Hayesville, near the confluence of Town Creek and the Hiwassee, Spikebuck Town was a large settlement surrounded by small, scattered farmsteads. It also appears to have been a ceremonial center. The site features a large, well-preserved earthen mound. This is remarkable because only a few of the mounds that were associated with the Valley Towns exist, the others having been destroyed over the years by plowing and looting. The mound is protected by Clay County, which acquired it in 2000.

The historical and archaeological records show that Spikebuck Town was occupied intensively, though perhaps intermittently, from the late 17th through the first half of the 19th centuries. An amateur excavation in 1961 uncovered an oval house pattern, two clay lined fire pits, burials, soapstone pipes, shell beads, and potsherds. The excavators also discovered European trade goods such as beads, musket parts, and a large piece of wool in a pit near the mound. The European goods could have come from contact with...
the Spanish in the mid-16th century, or through the extensive trade networks that existed among Native Americans.

Surface collections of the site in 1966 by Brian Egloff of the University of North Carolina identified as many as six house patterns represented by concentrations of daub and charcoal. Western Carolina University conducted limited excavations at the site between 1973 and 1975 and researchers identified 55 features, including hearths, trash and storage pits, burials, and burned timbers. The burned timbers, along with historical documents, suggest that Spikebuck Town may have been the site of one of the attacks on the Cherokee by North Carolina Militia General Griffith Rutherford, who waged a campaign against them during the Revolutionary War.

Historical records also indicate that Spikebuck Town was occupied when, under the Indian Removal Act of 1830, the Cherokees were forced from their land. The town may have served as a gathering place for Cherokee prior to their departure on the Trail of Tears.

As a result of the historical significance and archaeological integrity of the site, Spikebuck Town was listed on the National Register of Historic Places in 1982. “The Archaeological Conservancy’s successful negotiation with the Cabe family to purchase the site of Spikebuck Town supports the efforts of the Eastern Band of Cherokee Indians Tribal Historic Preservation Office, the Office of State Archaeology, citizens and community organizations in Clay County and the town of Hayesville, Warren Wilson College, and Western Carolina University to preserve this very important site,” said Jane Eastman, Director of Cherokee Studies at Western Carolina University. “The Conservancy has stepped in and taken over to accomplish what our local efforts could not. We are all winners here, and that is rare.”

Spikebuck Town offers a significant opportunity to expand our knowledge of 16th- to 19th-century Cherokee culture. The site was protected for decades by the Cabe family, who grazed cattle on the land and prevented trespassers from disturbing the site. After the passing of Mr. and Mrs. Cabe however, the site could have been sold for development and destroyed. The Cabe’s daughters, Betty McKinney and Sarah Poston, together with their families, agreed to sell the site to the Conservancy as a bargain sale to charity, so that this important piece of American history could be preserved and studied for future generations.—Andy Stout
Preserving An Early Archaic Cemetery

The Sloan site offers a picture of life and death more than 10,000 years ago.

The Conservancy recently obtained the Sloan site, which is located on a sandy ridge in northeast Arkansas' Cache River Valley and dates to approximately 8500 B.C., during the Dalton Period. The site contains what has been called the oldest cemetery in the New World. The Dalton people were hunter-gatherers who lived during the transition from the Ice Age to the Holocene. At that time, the landscape was filled with large spaces of low lying grasslands crisscrossed by networks of shallow streams and high sandy terraces covered with hardwood forests. This environment provided rich hunting grounds for the Dalton people during their seasonal migrations.

Dalton people are named for the eponymous stone projectile points they used. These long, lanceolate-shaped points were attached to a handle or spear shaft. In addition to these points, the Sloan site has also yielded a variety of stone tools that were employed by the Dalton people.

The Sloan family owned property that contained a number of sites and was consequently nicknamed Dalton Field. In 1974 looters began taking Dalton points from their land and, having become aware of the looting, the Sloans assumed the responsibility of protecting these sites.

They also assisted archaeologist Dan Morse, of the Arkansas Archaeological Survey, in excavating one of these sites (the Sloan site), which yielded large numbers of Dalton stone tools. The Sloans donated all the recovered artifacts to the state of Arkansas. This collection consists of 146 Dalton points as well as 42 adzes and adze preforms. The adze is a wood working tool that is often found on Dalton sites. Some of the projectile points show evidence of heavy use and continual resharpening, while others were hardly used. Some tools are half finished, or were broken and repaired. “It is as if a time traveler were able to grab an armful of unhafted stone tools from a single band over a period of about three generations,” Morse said.

During the excavations human bone was discovered with groups of Dalton tools and it became clear that the two were closely associated. Archaeologists are interpreting these clusters of bones and stone tools as graves, and it appears there are between 28 and 30 of them. Although no bone fragments were large enough to determine age, sex, or stature, it is probable that both juveniles and adults were buried at the cemetery.

The Sloan site contains important evidence of how the Dalton people made and used their tools. Its cemetery also indicates that these ancient people took great care when burying their dead, and that their practices suggest a belief in an afterlife. The Sloan family, who has taken great care for so many years to protect the site, recently sold it to the Conservancy to ensure its preservation. —Jessica Crawford
The Conservancy Partners To Obtain Ninth Wisconsin Preserve

The Cade Archaeological District contains several prehistoric sites.

The Conservancy has partnered with the Mississippi Valley Conservancy (MVC) and the Wisconsin Department of Natural Resources to acquire 70 acres along the Bad Axe River in southwestern Wisconsin. The property, the Bernice Cade farm, is the central portion of the Cade Archaeological District, which is listed on the National Register of Historic Places. The property has several significant archaeological resources including two effigy mound groups, two late prehistoric habitation sites, and an unexplored rockshelter that shows signs of prehistoric occupation.

The two well-preserved effigy mound groups are located in the wooded slopes overlooking the river. Effigy mounds date from about A.D. 750 to 1100 and are primarily found in Wisconsin. About 85 percent of Wisconsin’s effigy mounds have been destroyed, so the Cade property is “an opportunity to preserve what has become a rare and unique resource,” according to Joe Tiffany, Director of the Mississippi Valley Archaeological Center at the University of Wisconsin-La Crosse.

The habitation sites in the river bottom were the focus of a field school lead by Jim Theler, an archaeologist with the Mississippi Valley Archaeology Center. The excavation revealed, among other things, the presence of another habitation area that yielded pottery characteristic of the Great Oasis Culture of southern Minnesota and northern Iowa. This was the first time Great Oasis pottery was discovered in Wisconsin, and it is also the farthest east that the pottery has been found.

The radiocarbon dates from the Cade site’s Great Oasis features indicate an occupation at about A.D. 1050, the time when the culture disappears from Minnesota and Iowa. The possibility that the Cade site holds important clues to the disappearance of the Great Oasis Culture makes its acquisition particularly rewarding.

When Theler learned that the Cade property was on the market for $210,000 he notified the Conservancy and suggested that we contact the MVC, a local land trust preserving natural areas in southwestern Wisconsin. The MVC was familiar with the Cade property, which is considered particularly desirable because it includes a large, unspoiled stretch of the river, and harbors at least seven species of state-endangered or threatened plants and animals.

Wanting to preserve her property, Bernice Cade agreed to a bargain-sale-to-charity price of $165,000, and this allowed the Conservancy and MVC to purchase the property by each contributing $41,250, which was matched by a $82,500 Knowles-Nelson Stewardship Grant from the Wisconsin Department of Natural Resources. Future use of the property is governed by a management plan endorsed by the Wisconsin DNR that provides for future archaeological research.

According to MVC conservation specialist Abbie Church, her organization’s goal “is to involve and serve the needs of the public to the greatest extent possible while protecting all natural and cultural resources.” —Paul Gardner

CONSERVANCY Plan of Action

SITE: Cade Archaeological District
CULTURE AND TIME PERIOD: Principally Effigy Mound Culture and Great Oasis Culture, circa A.D. 600–1100.
STATUS: The sites are threatened by residential development.
ACQUISITION: The Conservancy needs to raise $60,000.
HOW YOU CAN HELP: Please send contributions to The Archaeological Conservancy, Attn: Cade, 5301 Central Ave. NE, Suite 902, Albuquerque, NM 87108-1530.
LOCATED IN OUACHITA PARISH, in northeastern Louisiana, Plum Creek is a Middle Archaic Period (ca. 3500 B.C.) site that is located in an area known for its mound sites from this period. Plum Creek was named for the timber company that previously owned the site, and it was discovered by Bryan Davis and later investigated by Louisiana Regional Archaeologists Joe Saunders and Reca Bamberg-Jones in 1997.

Although there is no mound at Plum Creek, the evidence of its occupation resembles those of Watson Brake and Frenchman’s Bend Mounds, two of the region’s large archaic mound sites. Bulverde, Carrollton, Ellis, Sinner, and Evans projectile points have been discovered there, as they have at other Archaic sites in northeast Louisiana. The site is also covered with fire-cracked rocks, which are commonly found at Archaic sites. These rocks were heated for cooking, which caused them to fracture.

The Plum Creek site has also yielded the second largest known sample of baked clay objects in the region. These objects are another signature artifact of Archaic sites. Their exact use is unknown, but some archaeologists believe them to be associated with hearths and cooking activities. They were made hard by heating them in a fire. Their shapes vary somewhat, but in general they look like small bricks or biscuits. It’s possible that they were used to line cooking surfaces or fire pits. A total of 206 of these objects were found in the surface collections and excavations at Plum Creek.

Plum Creek is believed to have been a camp with a rich, well-preserved midden. An abundance of fish and more than a dozen species of mussels and aquatic snails have been found there. Little is known about the daily lives of the people who built and used archaic mounds. Since Plum Creek was inhabited by the same people who built the nearby Archaic mounds, the abundance of food processing artifacts at this site offers an excellent opportunity for archaeologists to learn more about the health, diet, and cooking practices of this mysterious population.

The Conservancy attempted to purchase Plum Creek several years ago, but the negotiations were unsuccessful and the Cardinal Gas Company then purchased the tract of land containing the site. Cardinal Gas has since agreed to donate the site to the Conservancy to preserve it. The site will be fenced and protected so that future researchers can add to our knowledge of the oldest mound-building cultures in the Southeast. —Jessica Crawford
Saving A Huge Shell Midden

The Conservancy obtains a pristine shell midden in Florida.

The Walraven Shell Midden is located in the middle of the St. Johns River on picturesque Drayton Island in northeast Florida. The 30-acre site was recently donated to the Conservancy by a private party. The site has been the home of numerous prehistoric peoples, most of whom existed during the Middle to Late Woodland periods from approximately 500 B.C. to European contact, around A.D. 1565.

The shell midden consists mainly of the remains of various types of mollusks that were eaten by the people living at Walraven. Archaeologist Chris Newman of Archaeological Consultants, Inc., a cultural resource management firm in Florida, and several island landowners visited the site in June of last year to determine its occupation and boundaries.

A surface survey revealed that the shell midden covered several hundred yards and that, in some areas, it’s more than three feet deep. Newman also found numerous sand-tempered pottery sherds produced by the St. Johns culture. These people inhabited northeastern Florida along the St. Johns River and its tributaries, where they exploited the marine and fresh water resources and produced the St. Johns Plain and Check-Stamped pottery found at the site.

Newman concluded that the Walraven Shell Midden site is larger than first believed and that it could be an extension of the Drayton Island Shell Midden, which is located several hundred yards to the south. Based on her inspection of the artifacts and exposed midden along the shoreline, this appears to be a very large site that extends 260 yards east and west and 885 yards north and south.

Drayton Island is largely undeveloped. For that reason, and because the site is closely monitored by the few people who live there, Walraven Shell Midden is in pristine condition. The former landowner donated the site to the Conservancy to ensure it would remain so. —George Lowry
Though the graves seen in the upper left of this photo did some damage to Mound 1, they also prevented it from being destroyed.

**Troyville Site Expanded**

SOUTHEAST—The Troyville site (ca. A.D. 400) in Jonesville, Louisiana, was once one of the country’s largest mound complexes. It consisted of at least 10 mounds, with a 10-foot-tall embankment on three sides and a river on the fourth. Unfortunately, much of the site has been destroyed by the town of Jonesville, which was built on top the site.

Many of the mounds were reduced in size as their dirt was used for various purposes such as filling in low areas throughout the town. But recent excavations have revealed that buried cultural deposits are intact.

This discovery led the Conservancy to preserve the portions of the Troyville site that remain intact. The Conservancy acquired its first tract, Mound 4, in 2009. This mound formerly stood approximately 12-feet high, but had been reduced to about seven feet, and it once had a house perched on top of it.

The Conservancy recently acquired its second tract, Mound 1, as a result of a donation by the landowner. Some of Jonesville’s early settlers are buried in Mound 1, and it has suffered some minor disturbances as a result, but these graves also prevented the mound from being destroyed by the town’s development. The mound is a large enough that research can easily be conducted on it in without disturbing the graves.

Piece by piece, the Conservancy will continue to salvage the remains of this remarkable prehistoric community.
A Discovery
At Fort Salem

MIDWEST—Fort Salem, located in south-central Ohio, is a hilltop earthen enclosure with two mounds that was acquired by the Conservancy in 2005. Very few artifacts have ever been recovered from this site and, like other hilltop enclosures with mounds, it’s been assumed that it was built by the Hopewell about 1,600 to 1,800 years ago.

In the fall of 2010, with the assistance of volunteer Harry Campbell and funding provided by site steward Bill Bear, I conducted a magnetometer survey of Fort Salem, searching for signs of other mounds or geometric enclosures. I was quite surprised when the data revealed a number of possible pit features in one section of the site. While they haven’t been excavated, these features are likely the remains of cooking pits that were part of a small but significant settlement.

This poses the question of whether people were living in this settlement before or after the earthworks were constructed. At this point it is too early to conjecture about the age and relationship of the settlement to the surrounding earthen monuments. But these new features are an exciting discovery that has the potential to transform our understanding of Fort Salem.

—Jarrod Burks,
Ohio Valley Archaeology, Inc.

The Conservancy Receives Prestigious Award

The Conservancy received the Archaeological Institute of America’s (AIA) Conservation and Heritage Management Award in recognition of exceptional achievement in archaeological conservation, heritage management, and public awareness of conservation.

Mark Michel, the Conservancy’s president, accepted the award at the 111th Annual Meeting of the AIA in San Antonio, Texas in January. Every year the AIA presents a number of awards to archaeologists, educators, authors, and others whose work has had a positive impact on the field of archaeology, recognizing excellence in the pursuit of human knowledge through archaeology or related disciplines.

AIA official Sebastian Heath congratulates Mark Michel, the president of the Conservancy.
The Archaeology of American Capitalism

By Christopher N. Matthews

(University Press of Florida, 2010; 272 pgs., illus., $70 cloth; www.upf.com)

Drawing on a wide range of examples from New York City urban life to California mining camps, this compact study examines the material culture of capitalism in America and illustrates its development from the colonial to the modern eras. It is the first comparative treatment in historical archaeology to do so.

Author Christopher Matthews, an archaeologist at Hofstra University, worked on the Annapolis, Maryland project that produced dramatic new information about life in that city using historical archaeology. In this book, Matthews focuses on the topics like the material construction of individuals as commodities and the orientation of social life to the market. He includes studies on early Native-European relations, early colonial culture change, urbanization, mass consumption, and heritage tourism that are presented in a theoretical framework of capitalism as defined by Karl Marx and Max Weber.

Archaeological evidence of sabotage at a cutlery factory indicates worker conflict with management, as does evidence from slave sites that indicates resistance to the plantation system.

Matthews treats archaeology as an artifact of capitalism by linking the study of material culture to its creation within a capitalistic society. He ends with a challenge to the archaeological community to develop an ethical framework that promotes the public welfare. The Archaeology of American Capitalism will challenge the reader to view American archaeology from a new perspective that may or may not be appreciated.
How Chiefs Became Kings: Divine Kingship and the Rise of Archaic States in Ancient Hawai‘i

By Patrick Vinton Kirch

(University of California Press, 2010; 388 pgs., illus., $40 cloth, $32 ebook; www.ucpress.edu)

One of the perplexing problems in anthropology is the early emergence of large-scale social organization that is often called the “archaic state.” This polity is characterized by distinct groups that include a professional ruling class headed by a divine king. Other characteristics include a state religion run by priests and the ability to hold territory seized by war. These kingdoms had more power than traditional chiefdoms, particularly in waging war, exacting tribute, and regulating manpower and labor. They first appear in places like Egypt and Mesopotamia. More recently, archaeologists have determined that archaic states emerged in Mesoamerica (the Maya) and South America (the Inca).

In this fascinating work, archaeologist Patrick Kirch of the University of California at Berkeley, and formerly of the Bishop Museum in Honolulu, makes the case for the existence of archaic states in the Hawaiian Islands at the time of European contact in 1778. By 1810 King Kamehameha I had united the islands under his rule. Integrating archaeology, linguistics, ethnology, and oral and written history, Kirch carefully lays out the evidence. His 40 years of research on the islands’ various prehistoric sites expands on the historical record as told by Captain Cook’s crew and later European explorers. Native Hawaiian histories are another valuable source of information. Massive palaces, temples, and other public structures attest to the power of these kingdoms.

How Chiefs Became Kings is an excellent study of Hawaiian history and archaeology. It is also a compelling case study of the evolution of complex societies ruled by divine kings. Hawaiian residents as well as the many tourists will want to visit the many archaeological parks and museums to learn more of the islands’ remarkable history after reading this book.

New Philadelphia: An Archaeology of Race in the Heartland

By Paul Shackel

(University of California Press, 2011; 240 pgs., illus., $65 cloth, $27 paper, $22 ebook; www.ucpress.edu)

In 1836 Frank McWorter, a Kentucky slave who bought his freedom, founded the town of New Philadelphia on the west-central Illinois prairie. The town prospered, then declined. In 1869 the new railroad bypassed the town, leading many residents to move away. By the 1920s it was completely abandoned. Today, its archaeological remains are part of Illinois farm country like many other American towns that did not survive.

But New Philadelphia is unique. Frank McWorter was black and the town he founded was integrated from the start. By the end of the Civil War it had some 160 residents. There were 144 lots, a school, and a blacksmith’s shop. A historical archaeologist at the University of Maryland, author Paul Shackel has conducted three field seasons at the site. In this captivating study Shackel tells the story of McWorter, the town, the archaeology, and the efforts to preserve and interpret it. In 1996 local residents founded a non-profit organization to interpret the site. In 2010 The Archaeological Conservancy bought the core of the town to permanently preserve it.

There are plans for New Philadelphia, and Shackel’s history lays the groundwork for moving them forward. It is a great American story that will enthral readers. —Mark Michel
Jamestown attracts thousands of visitors each year. Archaeologists are excavating the original fort, which was rediscovered in 1996.

Colonial Chesapeake

WHEN: May 1–8, 2011
WHERE: Maryland and Virginia
HOW MUCH: $1,795 ($300 single supplement)

From its early European settlements to later colonial capitals, the Chesapeake Bay region has played an important role in the founding and development of our nation. Join the Conservancy as we spend a week exploring the area's rich and diverse historic culture. Our exciting journey will take us from Jamestown, the first permanent English colony in North America, to Mount Vernon, the home of the “father of our country,” George Washington. Along the way we'll visit the first capital of Maryland, St. Mary’s City, and we'll also explore the bay-front town of Annapolis and experience the colonial flavor of Williamsburg. Local scholars will join us to share their expertise and explain how archaeology has helped them interpret the region’s past.
Chaco Canyon in Depth

Explore the vast cultural system of Chaco Canyon and the extensive network of outlying communities that developed in northwestern New Mexico and southwestern Colorado from A.D. 800 to 1140. We’ll visit Pueblo Bonito and other spectacular great houses in Chaco Canyon as well as the great kiva at Casa Rinconada. We’ll hike to some of the most spectacular and remote sites in the canyon. We’ll also visit many of the most important outlying communities that are integral parts of the Chacoan complex that’s still being uncovered by researchers.

Scholars are still struggling to understand how this vast system developed and operated, and why it suddenly collapsed around A.D. 1140. We’ll spend two memorable nights camping in Chaco Canyon, and we’ll also tour the modern day Pueblo of Acoma. Some of the leading Chaco experts will join us.

Cliff Palace is one of Mesa Verde National Park’s most spectacular attractions.

Cliff Dwellers

This fall the Conservancy brings back one of its most popular Southwestern tours: an exciting look at the region’s spectacular prehistoric cliff dwellings. Ancient Southwestern groups experimented with building their houses in cliff faces and rockshelters. These structures not only offered protection from the weather, but many of them also served as natural solar collectors during the winter.

Departing from Phoenix, you’ll travel north through the Verde Valley, Sedona, Oak Creek Canyon, and Flagstaff to Monument Valley and Mesa Verde. You’ll see the cliff dwellings of Montezuma Castle, Cliff Palace, and the White House Ruin, just to name a few. The trip also includes a visit to Lorenzo Hubbell’s historic trading post; a stop at Second Mesa at Hopi; a jeep tour of Canyon de Chelly; and walking tours of some of the Conservancy’s most significant preserves, including Yellow Jacket Pueblo and Atkeson Pueblo on Oak Creek.

The Mandan and Hidatsa peoples lived in villages consisting of earthlodges.

Highlights of the Northern Plains

This new tour, which centers on Bismarck, North Dakota, will explore some of the unique and fascinating historic places of the Northern Plains. We’ll visit Knife River Indian Villages National Historic Site, which preserves the remains of five historic period Mandan/Hidatsa villages, including the hometown of Sacagawea, the guide for Lewis and Clark. We’ll also see the North Dakota Lewis and Clark Interpretive Center and the replica of Fort Mandan, where Lewis and Clark spent the winter of 1804-05.

We’ll also visit the partially reconstructed Fort Abraham Lincoln, the home of George Armstrong Custer’s 7th Cavalry and the place from which they departed on their ill fated expedition to the Little Bighorn.

The tour also includes a number of prehistoric Native American sites, such as Double Ditch and Huff Indian Village State Historic Sites, well-preserved Plains Village Tradition villages, and the Knife River Chert Quarries, one of the largest prehistoric quarry sites in North America. Archaeological experts will join us throughout the trip.
Patrons of Preservation

The Archaeological Conservancy would like to thank the following individuals, foundations, and corporations for their generous support during the period of November 2010 through January 2011. Their generosity, along with the generosity of the Conservancy’s other members, makes our work possible.

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Several years ago the Conservancy established a leadership society, the Living Spirit Circle, to recognize the growing number of members who were interested in making a legacy gift to support archaeological preservation. Contributors to the group have included the Conservancy in their will or estate plans, or by making a life-income gift such as a charitable annuity. This elite group has grown to over 100 members and is an essential component of the Conservancy’s success in identifying and preserving America’s most endangered archaeological resources. They have made an important investment in protecting America’s past.

Planned giving gifts may provide significant tax benefits to you and your heirs, and they allow you to specify how your assets will be distributed after your lifetime. This can be done by simply adding an amendment including the Conservancy as a beneficiary to your existing will. It can stand as a lasting memorial to you or a loved one.

The preservation of America’s archaeological resources depends on the continued support and generosity of our members. By joining the Living Spirit Circle today, you can ensure the preservation of our nation’s cultural heritage.

For more information, contact Mark Michel at (505) 266-1540.
The Archaeological Conservancy charitable gift annuity can:
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