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Etruscan Italy
(15 days)
Visit Etruscan Italy with Prof. Larissa Bonfante, New York U. Tour highlights include the hill sites selected for their cities, their tombs, and in museums, the beautiful objects used in their lifetimes and taken to their graves. We will visit the great Etruscan collections in Rome and Florence and explore the medieval hill towns of Perugia, Cortona and Orvieto.

South Korea (15 days)
Discover Korea's 5,000 years of history with Prof. Donald Baker, U. of British Columbia. We begin in Seoul, capital of the Joseon dynasty and continue to Gungju to visit the royal tombs of the Baekje dynasty and to Sentyang, capital of the Silla dynasty. Highlights include the Seokguram Buddhist Grotto, Buseok-sa Temple, the Tripitaka Koreana of Haein-sa Temple, the Demilitarized Zone and the ancient tamar and rock sculptures around Gwangju. We will also experience the music, dance and folklore of traditional Korea.

Tunisia (17 days)
Explore the great Phoenician, Roman and Islamic monuments of Tunisia with Prof. Pedar W. Foss, DePauw U. Beginning with five days in Tunis, we visit Carthage, the Bardo Museum's fabulous mosaic collection, Thuburbo Majus and Panic Karthouane. Tour highlights include the Roman Dougga, Sbeitla and El Jem, the underground Numidian capital at Berta Regia and Kairouan. Traveling south we visit underground cities, fortified granaries, Berber troglodyte villages and exotic bazaars.

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Journey through the heart of the Aztec empire with Prof. William Satumo, Boston U. Beginning in Mexico City, highlights include the recently excavated Templo Mayor, the magnificent ceremonial centers of Teotihuacan, Tula and El Tajín, Xalapa's museum and the exciting sites around colonial Puebla. Our journey ends with three days in Oaxaca, exploring the historical sites and craft villages in this colorful region.

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COVER: Scientists who have studied the 8,500-year-old skeleton known as Kennewick Man have come to a number of conclusions about him. This sculpted bust, for example, is their interpretation of what he looked like.

CREDIT: StudioEIS
Lay of the Land

Fulfilling Our Mission

Back in 1980, The Archaeological Conservancy's first year of operation, I visited the famous Hopewell site near Chillicothe, Ohio, for the first time. Two thousand years ago it was the ceremonial center of the Hopewell people. Today, it is the type-site of the Hopewell culture and perhaps the most famous archaeological site in the Eastern United States. In 1980, most of the 200-acre site was planted in corn. It had been extensively excavated by several archaeologists and amateurs, traversed by a road and a railroad, plowed down, and just beat up. But there it was, still intact.

We consulted with state officials and several archaeological experts. Everyone agreed that it was critical to preserve this site. Large-scale developments were less than a quarter mile away, and the threats to completely destroy this indispensable part of America's prehistoric legacy were acute. All the experts concurred that, despite its history of abuse, the Hopewell site still contained vital information about one of North America's most enigmatic cultures. Even though we really could not afford it, we bought the main part of the site. Two other tracts were added later, and some years later it was added to the new Hopewell Culture National Historical Park.

In this issue of American Archaeology (see “A Hopewell Woodhenge,” page 32) we report on exciting new research that is being done at the Hopewell site. It turns out that a 73-acre circular feature is still intact under the plow zone, and that it appears to be a kind of calendrical monument. Despite being known for some 200 years, no one had excavated and examined this feature. Because the Conservancy acquired the site and preserved it, it is still there for new archaeologists to investigate using the latest technology. That’s why the Conservancy was founded in 1980, and it feels good to see those efforts pay off.

Mark Michel, President

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- June 16–22
  - Summer Solstice - Archaeoastronomy in the Four Corners

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- March 15–28
  - Olmec and Maya - Cultural crossroads in southern Mexico
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Editor’s Corner

Many people spend their time on this earth quietly going about their business, noses to the grindstone. So it was for a 5-foot-7-inch, 160-pound, 40-year-old guy with bad teeth. Thousands of years ago he wandered the Pacific Northwest Coast while doing his job, which was hunting and gathering.

By all indications, life was tough. He had a laundry list of ailments: a fractured shoulder bone, cracked ribs, minor head injuries. And that’s not to mention the stone point in his hip. Given his injuries, throwing an atlatl—a requirement for someone in his business—must have been painful.

Nonetheless, he did his job, and presumably did it well. Then one day death came. He was given a proper burial, and that was that. He rested in peace for some 8,500 years. Then, on a summer day in 1996, that peace came to an end.

He, of course, is Kennewick Man. When his nearly intact skeleton was discovered that day in Kennewick, Washington, he quickly got the attention of the local authorities. He subsequently captivated the archaeological community, Native Americans, the press, and the world. It took a very long time, but this ordinary fellow, who probably aspired to nothing more than day-to-day survival, achieved modern celebrity. Perhaps that shouldn’t be surprising, since his is a remarkable tale. And as our feature “The Story Of Kennewick Man” (page 19) shows, his tale hasn’t been fully told.

Give The Students Credit

Living in Oklahoma, I turned first to the Spiro Mounds story (“Rethinking Spiro Mounds”) when my Fall issue arrived. In due course I came across the sentence “This hypothesis satisfied (Mississippian archaeologist James A.) Brown until a few years ago, when a student asked him if enough details of the Great Mortuary were available to create an illustration of it.” The student’s question eventually led to Brown’s new theory on Spiro.

Then I read “Searching for De Soto,” which begins with the sentence “The Atlanta high school girl was in the middle of a solitary stint at the sifting screen, while archaeologist Dennis Blanton and the rest of the group working at the Glass site were engaged elsewhere.” Her subsequent discovery “sent a jolt through Blanton and his crew.”

What these articles have in common is that the impetus for changing perspectives in both cases came from unnamed, uncredited students.

Gary Edmondson
Duncan, Oklahoma

Medicinal Tobacco

It was interesting to read the article “Holy Smoke” in the summer issue, which was about Native American tobacco use and the practice of blowing tobacco smoke into a child’s ear to relieve an earache. My mother used to tell of her father taking her on his lap and blowing pipe smoke into her ear when she had earache. My paternal grandmother, who grew up in a sod house on the Kansas prairie in the 1870s and ’80s, said that their only doctor was a Native American “herb doctor” who lived nearby.

American Archaeology and Archaeology are my two favorite magazines. When I was a kid, I didn’t know there was such a profession as archaeologist. If I had, I might have become one. Keep up the good work. I look forward to every issue.

Larry B. King
Wolf Creek, Oregon

Sending Letters to American Archaeology

American Archaeology welcomes your letters. Write to us at 1717 Girard Blvd. NE, Albuquerque, NM 87106, 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.
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 480 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, 1717 Girard Boulevard NE, Albuquerque, NM 87106;
by phone: (505) 266-1540;
by e-mail: mbawaya@americanarchaeology.com; or visit our Web site: www.americanarchaeology.org.

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NEW EXHIBITS

John D. Cooper Archaeological and Paleontological Center
California State University, Fullerton, Fullerton, Calif.—The exhibition “Titans: Student Research in Archaeology and Paleontology at the Cooper Center” is the result of a partnership between the university and Orange County Parks. It features student research projects that emphasize the Cooper Center’s collections that focus on remains from Orange County’s original titans: mammoths, mastodons, dinosaurs and whales. It also looks at prehistoric cultures that date back 10,000 years. www.jdcoopercenter.org/exhibits (Through December 31, 2014)

Smoki Museum
Prescott, Ariz.—Since the 1920s, amateurs have pursued archaeological investigations in the Central Arizona region. While professional archaeologists bring a level of sophistication to these explorations of the past, amateurs also often have surprisingly sophisticated skills and remarkable insight and respect for the past. The contribution amateur archaeologists have made to our greater understanding of the past is explored through the new exhibition “An Essential Relationship: Amateurs and Professionals in Central Arizona Archaeology,” organized by curator Andrew Christenson to accompany his recent book. (928) 445-1230, www.smokimuseum.org (December 6 through May 31, 2015)

University of Pennsylvania Museum of Archaeology and Anthropology
University of Pennsylvania, Philadelphia, Pa.—In the new, interactive exhibit “Native American Voices: The People—Here and Now,” artifacts and contemporary voices combine to offer a Native American perspective of the first inhabitants of this land. Set against the backdrop of more than 200 objects from the museum’s expansive collections, the exhibit challenges stereotypes, presenting audio and video clips of contemporary Native Americans speaking of the many ways in which they maintain their religious, political, linguistic, and artistic independence. Over the course of five years, nearly 300 objects representing 85 tribes will be on rotating display. (215) 898-4000, www.penn.museum (New long-term exhibit)

Pueblo Grande Museum
Phoenix, Ariz.—The new exhibit “Supply and Demand: Hohokam Pottery Production” features new research on the Hohokam, revealing a remarkable economy that relied on the production and distribution of goods at a scale that challenges how we think about prehistoric exchange patterns. (602) 495-0900, www.pueblobl grande.com (Through August 2015)

Alexandria Archaeology Museum
Alexandria, Va.—The museum’s main exhibit “Archaeologists at Work: The Lee Street Site” weaves the story of the wharves, taverns, bakery, and Civil War privy excavated at the corner of Lee and Queen Streets together with the story of archaeologists at work, from excavation, to historical research, artifact processing, and conservation. The site offers a cross-section of Alexandria’s history from its founding in 1749 into the 20th century. Eighteenth-century wharves remained intact below remnants of a bakery, taverns, and residences that had sprung up on the bustling waterfront. The block was later used by the Union Army as a hospital-support facility for the huge influx of soldiers during the Civil War. (703) 746-4399, www.alexandriava.gov/Archaeology (Long-term exhibit)

University of Oregon Museum of Natural and Cultural History
Eugene, Ore.—Journey into the unique cultures and ecosystems of the Arctic. Recently adopted from Western Oregon University, the Jensen Arctic Collection is one of the largest assemblages of Arctic material in the lower 48 states, and is a valuable record of life in a rapidly changing region. (541) 346-3024, http://natural-history.uoregon.edu (Long-term exhibit)
Brooklyn Museum
Brooklyn, N.Y.—The exhibition “Life, Death and Transformation in the Americas” presents more than 100 masterpieces from the museum’s permanent Arts of the Americas collection that exemplify the concept of transformation as part of the spiritual beliefs and practices of the region’s indigenous peoples, past and present. Themes of life, death, fertility, and regeneration are explored through pre-Columbian and historical artworks, including many pieces that are rarely on public display. Highlights include Hopi and Zuni katsinas, masks from throughout the Americas, Aztec and Maya sculptures, ancient Andean textiles, and a full-body bark-cloth mask made by the Pami’wa of Columbia and Brazil. (718) 638-5000, www.brooklynmuseum.org (Long-term exhibit)

* CONFERENCES, LECTURES & FESTIVALS *

Maine Indian Basketmakers Sale and Demonstration
December 13, Hudson Museum, Collins Center for the Arts, University of Maine, Orono, Maine. This event, which is the largest holiday gathering of Maine native artists, features members of the Maine Indian Basketmakers Alliance who have received national awards, as well as new artists who represent the next generation of weavers. The artists include brown ash and sweetgrass basketmakers, carvers, and beadworkers. There will also be one-of-a kind art forms, demonstrations, storytelling, traditional music, drumming, and dancing. (207) 581-1901, http://umaine.edu/hudsonmuseum/events

Pueblo Grande Museum Indian Market
December 13-14, Phoenix, Ariz. This annual event features over 200 top Native American artists selling items such as paintings, sculptures, jewelry, and baskets. There will be music and dance performances, artist demonstrations, and traditional native foods. (602) 495-0900, www.pueblogrande.com

Society for Historical Archaeology Conference on Historical and Underwater Archaeology
January 7-11, Sheraton Seattle Hotel, Seattle, Wash. The theme of the 2015 conference, “Peripheries and Boundaries,” reflects the unique circumstances of the Pacific Northwest and addresses some of the issues that frame historical archaeology scholarship in the West. Nearly 1,000 attendees are expected, and more than 500 scholarly presentations will be held on all aspects of historical archaeology. (301) 972-9684, hq@sha.org, www.sha.org

The 2015 Maya Meetings
January 13-17, Thompson Conference Center, University of Texas, Austin. Given its obvious importance in Mesoamerican religion, sacrifice has engaged scholars and captured the imaginations of all who have studied the ancient Maya. But what were its diverse meanings? How was ritual violence integrated into politics, ideology, and cosmology? These meetings, the theme of which is "Body and Sacrifice: New Interpretations in Maya Archaeology and Religion," will explore these concepts through a wide-ranging and engaging series of talks and workshops, presenting new interpretations about this key, yet vaguely understood aspect of ancient Maya culture. www.utmesoamerica.org

Heard Museum World Championship Hoop Dance Contest
February 8-9, Heard Museum, Phoenix, Ariz. Experience the fast-paced precision and grace of hoop dancing as more than 70 top Native hoop dancers from the United States and Canada compete for cash prizes and the World Champion title. The tradition of hoop dancing has an extensive history among native people, for whom the hoop is symbolic. During performances, dancers incorporate speed and agility as they manipulate their bodies through the hoops. (602) 252-8848, www.heard.org/hoop
Chaco Canyon was once the center of a vast system of multistoried prehistoric pueblos linked by some 400 miles of roads. Despite being a World Heritage Site, Chaco, which is located in northwestern New Mexico in one of the nation’s most productive oil and gas basins, is threatened by energy development.

“The greater Chaco Canyon landscape is one of America’s most precious treasures,” said archaeologist Paul Reed. “What most people don’t realize is the vast extent of Chacoan culture and influence across much of New Mexico’s San Juan Basin. Hundreds of Chacoan outlier dwellings lie across the landscape of not just New Mexico, but extending into Colorado, Utah, and Arizona. This ancient Chacoan realm encompassed an area equal to Ireland in size. Beyond great house structures and dwellings, this landscape is crossed by numerous ancient roads built during Chaco’s heyday in the a.d. 1000s. These fragile, hard to see resources are especially vulnerable to various impacts.”

The Mancos Shale formation is the focus of the area’s oil and gas development. It’s buried about a mile deep, stretches from New Mexico into portions of Colorado, Utah, and Wyoming, and is estimated to contain more than six billion barrels of oil. Most of the lands within the BLM’s Farmington field office area have already been leased, and oil and gas development has accelerated in the last five months.

“While individual archaeological sites and sacred places are normally identified and avoided during oil and gas development, the larger landscape is being severely impacted by these operations,” Reed said.

Gary Torres, BLM’s Farmington field manager, said his agency is working to revise the region’s resource management plan, which was devised in 2003, to address these concerns. In the meantime, the application of hydraulic fracturing technology—often referred to as fracking—has resulted in a development boom in the basin. But the BLM owns only about 20 percent of the land surrounding Chaco, with the remainder belonging to the State of New Mexico, the Navajo Nation, and individual members of the tribe.

A coalition of environmental groups is attempting to slow down BLM’s leasing process and implement a comprehensive master leasing plan (MLP) that would allow for more careful planning of drilling and extraction activities that involves all stakeholders.

“Creation of an MLP would also build in the extra protections necessary to preserve the delicate and irreplaceable cultural and natural resources across the San Juan Basin,” added Reed. “To those of us concerned about this issue, there is no doubt that now is the time to speak up and protect the amazing Chacoan landscape for ourselves and our descendants.”

—Tamara Stewart
This spring, limited investigations of a shipwreck found off the northern coast of Haiti by underwater explorer Barry Clifford indicated it could be the Santa Maria, Christopher Columbus’ long-sought flagship. Hoping to conduct a full investigation this summer Charles Beeker, director of the Office of Underwater Science and Academic Diving at Indiana University, submitted a detailed research proposal to the United Nation’s Educational, Scientific and Cultural Organization (UNESCO), but his proposal was rejected. Instead UNESCO released a report stating that, based on the location of the wreck and its 17th- and 18th-century ship-building techniques such as bronze fasteners and possible copper sheathing, it’s not the Santa Maria.

“I was on the site for four days and it is not copper sheathed,” said Beeker. “Finding two pieces of copper, with a nail hole in one, does not make a copper-sheathed, 18th-century vessel.” While Beeker agreed that bronze fasteners are not typical, he noted that less than 20 Ibero-Atlantic shipwrecks from the Columbus era have been reported worldwide, and this limited database can’t be considered a representative sample. He also pointed out that UNESCO ignored images of what appear to be early wrought iron artillery known as lombards on the site, which date to the 15th and 16th centuries. “While I’m not claiming this is the Santa Maria, it’s still in a compelling location with the appropriate attributes, and needs a proper investigation before we can confirm or deny it,” Beeker said.

UNESCO advised the Haitian government to reject Indiana University’s research proposal. The agency is proposing its own search for the Santa Maria, planning to look in a number of different locations around Haiti, including two areas of marshland along the north coast where they think the vessel could lie under coastal sediment.

“UNESCO’s rejection of our proposal and initiation of their own search is completely politically motivated to get them in on the investigation and bring more money to Haiti,” said Beeker. “Our proposal would have brought money to Haiti, too, but would’ve resulted in a thorough, collaborative, scientific investigation of the vessel to determine whether or not it is indeed the Santa Maria.”

But UNESCO’s Ulrike Guérin, who was involved in the decision, said “our work in this matter was absolutely neutral and purely in response of the Haitian government’s request. If the site would have been the Santa Maria, we would have said so.” He added that Indiana University’s proposal was reviewed by UNESCO’s Scientific and Technical Advisory Body which consists of 12 people with “the highest reputation in the field of underwater archaeology.” —Tamara Stewart
Poverty Point Named A World Heritage Site

The designation acknowledges the 3,400-year-old site’s significance.

Poverty Point, one of the most culturally significant prehistoric sites in the U.S., was renamed “Poverty Point World Heritage Site” in October to recognize its inscription as a World Heritage Site by the United Nations Educational, Scientific and Cultural Organization. Located in northeast Louisiana, Poverty Point is a massive earthen complex consisting of six mounds, six concentric C-shaped earthen ridges, and a 43-acre interior plaza. It has already been designated a National Historic Landmark.

“Constructed between approximately 1700 and 1100 B.C., the monumental core of the 3,400-year-old site encompasses at least 350 acres. The scale of the site is unprecedented for hunter-gatherers,” said Poverty Point station archaeologist Diana Greenlee. Researchers believe the inhabitants moved nearly two million cubic yards of dirt, basket by basket, to build the monumental earthworks. “It opened our eyes to what hunter-gatherers could do,” Greenlee said.

It was also the center of the largest trade network of its time. Soapstone bowls and tons of exotic rocks unearthed at the site suggest that the inhabitants were involved in a long distance trade network. Greenlee noted that the site’s population estimates vary from a few hundred to several thousand people, at least some of whom probably lived year round on the ridges and gathered for ceremonies on the plaza.

Poverty Point was inscribed in June as the 22nd World Heritage Site in the United States. It joins the ranks of other World Heritage Sites that include Chaco Canyon, Mesa Verde, Cahokia, Stonehenge, and the Pyramids of Giza. The process, from the initial application to selection, took eight years. Greenlee and Nancy Hawkins, an archaeologist manager with the Louisiana Division of Archaeology, wrote and edited the application, while U.S. Senator Mary Landrieu led the effort at the federal level.

“More than 3,000 years ago, Poverty Point was an economic engine for this region, and it will be again as a World Heritage Site,” Landrieu said. “In the past, it brought goods and materials to be traded, today it will bring tourists and jobs to grow and expand the middle class.” —Paula Neely

Mound A is one of six mounds found at this huge earthen complex.

Diana Greenlee
Slave Cemetery Uncovered
At Nashville Zoo

The zoo was built on top of a 19th-century plantation.

The Nashville Zoo at Grassmere in Nashville, Tennessee, was built atop the 19th-century Grassmere Plantation, so when construction work began last February to expand the zoo, officials knew they might find remnants of the plantation, and possibly even burials. But they were surprised when archaeologists uncovered a cemetery filled with slaves who lived, worked, and died on the plantation between 1820 and 1850. This discovery is one of the few known slave burial grounds from this time period.

Archaeologists with TRC Environmental Corp excavated the site, finding 20 burials in 19 graves. Of those burials, 17 were in hexagonal coffins, and a single coffin had decorative hardware on it. The burials were in rows and arranged in what appear to be family groups. All the graves but one were oriented with heads to the west, an arrangement that’s thought to result from the Christian belief that the dead will sit up and see the eastern sun rising on Judgment Day. Inside the coffins were remnants of clothing, including numerous buttons and clasps. Eleven of the burials were children or subadults.

The cemetery was found in a prominent place on the plantation, and that, along with the coffins, clothing remains, and the arrangement of the burials, led the archaeologists to originally surmise it was a tenant-farmer cemetery. But a subsequent osteological analysis of the remains by Shannon Chappell Hodge of Middle Tennessee State University and her students concluded that seven of the nine adults had African-American morphological traits. The other two were too poorly preserved to make a determination.

“A common assumption about slave life is that it involved minimal access to things and possessions, and vast cultural differences between slaves and their owners. What we found at the zoo cemetery, in terms of the clothing items, coffin construction, and arrangement of the graves, suggests some better than expected access to material goods and acceptance of Anglo-American cultural practices within this slave community,” said TRC archaeologist Larry McKee. But he added that “the skeletal analysis, in terms of the relatively young ages at death and the signs of hard physical labor, add some grim details to the story.”

All nine had died before age 50. They appeared to be well nourished, but three showed signs of sickness or trauma, though their injuries had healed before they died. Six individuals had arthritis, indicative of demanding workloads and repetitive tasks. One youth had a slipped capital femoral epiphysis, in which the ball of the ball-and-socket joint of the hip was damaged. This individual also had gout, which can be a sign of sickle cell anemia. The remains were reinterred in a different location on the zoo grounds and a ceremony was held to dedicate the new cemetery. —Dawn Kaufmann
Archaeologists in New Mexico have discovered a correlation between hallucinogenic tobacco plants and prehistoric rock art that suggests the paintings were done by trancing shamans, according to Lawrence Loendorf, an archaeologist who specializes in rock art.

Loendorf, who is president of Sacred Sites Research, said that wild coyote tobacco was found growing near or beneath 30 rock art panels with similar pictographs of triangles at sites in Fort Bliss, Carlsbad, and Las Cruces, a region occupied by the Jornada Mogollon culture from about the fifth to the 15th centuries. “When you walk up to a panel and see tobacco growing at the base, you wonder what’s going on,” Loendorf said. “There’s no question in my mind that tobacco use correlates with these sites.”

According to oral histories, native tobacco was a primary hallucinogenic plant used by Native Americans in North America. It can be many times more potent than the tobacco used in modern cigarettes, said Myles Miller, an archaeologist with Versar/Geo-Marine, who worked with Loendorf.

Loendorf theorized that the tobacco grew from seeds left behind by shamans who smoked it to enter a trance to help them communicate with the spirits. He thinks the art could be their plea for rain, or it could be what they saw when they were trancing.

The yellow, black, red, and white triangles could be water gourds. Similar designs representing water are used in the pottery and weavings of the Huichol, a modern Mexican tribe whose beliefs and rituals are similar to those of the extinct Jornada culture.

“It’s the first time that there’s been a connection between plants and rock art,” Loendorf said, noting that he toured rock art sites 10 years ago with tribal elders who told him to pay attention to the plants. “They recognized that these were medicine areas and the plants could be important. I should have listened,” he said.

Loendorf’s theory is “absolutely credible,” according to archaeologist and rock art expert Dave Whitley, director of ASM Affiliates. “It’s a line of evidence that connects shamanism with rock art.”

The triangle patterns were found on the walls and ceilings of rock shelters, open-air sites on arroyo banks, and a boulder. Miller said mountains and caves were considered to be places of power where spirits existed and rock art may have been used to reach them. Based on ceramics discovered in deposits at the sites, Loendorf estimated that the rocks were painted around A.D. 1000. He hopes to test paint samples to get more precise dates. —Paula Neely
In early September 1897, a mining strike in the anthracite coal region of Northeastern Pennsylvania culminated in one of the deadliest labor incidents in U.S. history: the Lattimer Massacre. In the previous weeks, protesting low wages and high rents and company store prices, nearly 5,000 miners had gone on strike in the Hazleton, Pennsylvania, area. The strike came at the end of the crippling four-year depression that began with the Panic of 1893, during which time the price of anthracite coal—to which the miners’ pay was tied—sank to its lowest level in more than 30 years.

Ironically, although they were organized by the United Mine Workers of America, the mostly foreign-born miners were also protesting a state law supported by the UMWA that was designed to protect American citizens’ jobs. The Campbell Act mandated a tax on the coal companies of three cents per day for each unnaturalized worker over the age of

A strike led to the deaths of 25 coal miners in 1897. Despite the many casualties, this incident has been largely forgotten. An archaeological project has uncovered evidence of the massacre as well as details of the miners’ lives.

BY BRUCE E. BEANS
21, and this tax could be deducted from the pay of miners who were already earning 10 percent to 15 percent less than their Anglo-Saxon peers. The strikers had already succeeded in shutting down several of the mines in the region.

On September 10 about 400 unarmed Polish, Slavic, and Lithuanian miners marched several miles north of Hazleton intent on closing the three Lattimer collieries operated by the family-owned Calvin Pardee Company.

As they approached the mines they were stopped by Luzerne County Sheriff James Martin and a posse of 86 deputies, including Pardee-company men and members of the local contingent of the Coal and Iron Police, who were armed with rifles, shotguns, and pistols. A scuffle ensued, a gun was discharged, and the posse then opened fire at point-blank range on the miners. Many of them were shot in the back as they fled. Twenty-five miners were killed and approximately 30 were wounded. All of the victims were immigrants.

Despite the UMWA’s role in the passage of the onerous Campbell Act, tens of thousands of foreign-born miners galvanized by the incident joined the union. Meanwhile, as a test case, Martin and all of his deputies were subsequently tried for the murder of just one of the miners, Michael Cheslock, who had recently applied for U.S. citizenship. All 87 defendants were acquitted.
Today the scene of the massacre near the long-abandoned mines is marked by a state historical marker and a stone monument erected by the United Labor Council, AFL-CIO, and the UMWA. Despite the high death toll, the incident is found in few U.S. history books, is absent from the Pennsylvania school curriculum, and is not listed on the National Register of Historical Places. Paul Shackel, a labor archaeologist at the University of Maryland, was unaware of the massacre until 1997. His wife saw a notice about a 100th-anniversary commemoration of the incident, and they both attended the event. Five years ago, determined to make the little-known tragedy part of the national memory while trying to understand the context within which the massacre occurred, Shackel began an investigation of the site.

Anthracite coal was first mined in Pennsylvania in the late 1700s. By the turn of the 20th century, the coal industry in northeastern Pennsylvania—which contained most of the world’s anthracite deposits—employed about 180,000 workers who extracted more than 100 million tons of coal a year. It was the main fuel source for industries and for heating homes in the Northeastern United States. Most of the miners in the mid-1800s were German, English, Irish, Scottish, and Welsh immigrants. During the late 1870s and 1880s, however, newly arrived mine workers of Slavic descent, followed shortly afterwards by those from Italy, began to outnumber their predecessors.

Describing the Slavs and Italians who had most recently immigrated to the towns around Hazleton, author Henry
Edward Rood wrote: “… not only are they eager to work for wages on which an English-speaking family would starve, but they are superstitious and murderous, and do not hesitate to use dynamite to blow up the home of one whom they particularly hate. Also, unlike the average Chinaman, each of these foreign miners insists on voting as soon as possible.”

Working in the mines from seven in the morning to dusk, with an hour lunch break, these miners were earning between 50 cents and $1.10 per day, according to Rood. He was told of one miner who had worked 16 days and netted just four cents. “As a rule,” Rood added, “foreigners in the anthracite fields have been content until recently to labor for very low wages without a protest; to huddle in shanties like so many domestic animals; to eat half-spoiled vegetables and fruits that could not be sold to English-speaking people.”

None of the jurors selected for the Lattimer Massacre murder trial were miners or of Slavic descent, according to Shackel and Michael Roller, a doctoral candidate who is part of Shackel’s team. Given all the potential shooters, it would also have been hard to prove who actually shot Cheslock—even though 140 witnesses testified that they saw the deputies shooting at the unarmed miners.

In his closing remarks a defense attorney called the strikers “that lawless horde that came from the steppes of Asia [that] has found its way here,” and added, “[T]he history of the Hun and Slav in the old country is that of mischief and destruction. And they marched under Attila ruthlessly over Europe.”

“You read this racist language talking about the immigrants living in these hovels and living in a style of medieval times 500 years earlier,” said Shackel. In 2010 he and his team were joined by the Battlefield Restoration & Archaeological Volunteer Organization, which used metal detectors to survey the site of the massacre. Among the various bullets and shell casings the group found three spent bullets fired by pistols dating to the time of the massacre. They lay near the area where oral histories say the first rounds were fired.

Wanting to illuminate the lives of these miners and their descendants, the researchers excavated the backyards and privies of the Slavic and Italian homes. These residences are in the patch towns of Lattimer and Pardeesville near the
Lattimer mines just north of Hazleton. The archaeologists also interviewed third- and fourth-generation descendants of the miners and researched historical news accounts and coal company archives.

One of the key findings is the paucity of animal bones, which suggests the residents consumed very little meat. “Almost every site I have ever excavated has contained a significant amount of faunal material, but not here,” said Shackel. “It’s a real sign of poverty.” During the first two years of excavations at two different Italian shantytowns (this past year’s artifacts are still being catalogued), only about 45 bone specimens from cows, pigs, chickens, and ducks were unearthed. The faunal evidence also indicates the residents were trapping wild rabbits and hunting deer.

The lack of protein is reflected in the recipes of local and regional cookbooks from the period, most of which do not include meat. Instead, starch and carbohydrates, such as pierogies and pasta, predominate. “Think of what these people had to do,” said Shackel. “The men worked 10 to 12 hours a day in the mines, the wives woke up early and packed their husbands’ lunches, took care of their children, tended their gardens, and some worked in the local textile mills, and at the end of the day they ate starch, with very little protein in their diets.”

To supplement their food supplies, the miners and their families gardened extensively. In many cases “every square foot that was not being used for a house or an outbuilding was used for gardening,” Shackel said. The researchers speculated that these vegetable gardens could have played an important role in enabling the miners to sustain labor stoppages.

The archaeologists uncovered several Mason jars that most likely were used to preserve garden vegetables. Peach and pumpkin remains were found in one backyard this past summer. Peppers, tomatoes, bean vines, spices, herbs, and...
berries were also commonly grown, according to the miners’ descendants. Justin Uehlein, a graduate student at American University, plans to analyze the pollen and seeds found in excavated soils to better determine the types of produce. They also are going to analyze privy soils to see if there are any detectable parasites that could have affected the residents’ health.

Though the Slavs’ lives were difficult, the Italians had it worse. Whereas the Slavs resided in company-built and -owned homes constructed in the late 1860s, the Italians lived nearby in shanties they built on the company’s land. Roller is researching the Italian neighborhoods and how they evolved over the decades from the 1870s’ scrap-wood shanties to more permanent structures, some of which still stand today.

Excavations of the stone foundations, maps from the company archives, aerial photographs, and GIS-generated digital map overlays show a sharp contrast between the shanty town and the much more spacious and uniformly built Slavic homes. The Italian residences were irregularly shaped, and some sat three deep off a dirt road, with shared walls, tiny alleys, and no yards. Roller estimates one home was only about 10 feet by 10 feet. Yet, according to an article in The Century Magazine, an average of six to 12 immigrants lived in a single shanty. Another article described some of the homes as being “not much larger than dog kennels.”

That article also noted that, “There is no sewage system, and the alley is the dumping-ground for all offal.” The archaeologists discovered that the residents gradually improved the village’s sanitation. “We found concrete pads poured in the early 20th century to drain effluvia and wastewater away from the homes,” said Roller, and those pads were eventually replaced by iron pipes.

The researchers also uncovered various other items such as a miner’s metal I.D. tag and a corroded medal stamped 1854 that was inscribed, in Italian, “Papa Pio IX” (Pope Pius IX). That family heirloom, which apparently belonged to Italians, was found in the basement of a house that Shackel originally assumed had been inhabited exclusively by Slavs.

A variety of cosmetic bottles and nearly 100 pairs of nylon stockings, all of which date sometime between the 1930s to the 1950s, were found at a Slavic residence. To supplement their husbands’ inadequate mining wages, many wives also worked in, and waged labor battles with, Hazleton’s silk and rayon mills. Reflecting on the cosmetic containers and stockings, Camille Westmont, a University of Maryland graduate student researching the role women played in the mining communities, said “Even though women were working eight- to 12-hour days in the silk mills in Hazleton, they were still trying to conform to expectations of what womanhood is supposed to be.”

In 2005, Hazleton made national headlines when the city council approved, and Mayor Lou Barletta signed, the Illegal Immigrant Relief Act. The ordinance was Hazleton’s response to yet another influx of immigrants—this
time Latinos, including many Dominicans from New York City. They were drawn by low-wage, unskilled jobs in new factories and distribution centers that had been established to take advantage of significant tax incentives to attract new businesses to Pennsylvania. As a result, from 2000 to 2005 Hazleton’s population had increased nearly 33 percent to about 31,000. Over this same period it was transformed from 94 percent white to about 30 percent Latino.

Hazleton’s new ordinance called for the suspension of business licenses if a business hired illegal immigrants; set a fine of $1,000 per day for renting to an illegal immigrant; and established English as Hazleton’s official language. This xenophobia resulted in some Spanish-speaking residents leaving Hazleton. By 2010 the population had shrunk to about 25,000, yet the remaining residents were still 37 percent Latino.

Ironically, the anti-immigrant ordinance never went into effect. Three different federal courts declared it unconstitutional. In March 2014, the U.S. Supreme Court refused to hear the town’s final appeal. Barletta, a descendant of Italian immigrants who arrived at the turn of the 20th century, has since become the U.S. congressman for Pennsylvania’s 11th District. He continues to be a critic of the Obama Administration’s immigration policies, including its handling of thousands of illegal children from Central America. As Shackel’s team concluded its excavation this past July, Barletta was one of the local officials who prevented some of those children from being housed at a former corrections facility in downtown Hazleton.

For Shackel, a Bronx native whose parents were the children of immigrants—Russian and Slavic on his father’s side, Italian on his mother’s side—Hazleton’s modern anti-immigrant stance is a clear case of history repeating itself. A practitioner of what he calls activist archaeology, he sees his research as an opportunity to connect the stories of the past to the present.

“The story of the present in Hazleton is about how new immigrants coming in within the past decade-and-a-half have disrupted the status quo—which is the same thing that happened in the 1880s and ‘90s, when the Slavs and the Italians came in with their own languages and customs,” said Shackel, who has put first-generation Hazleton students to work at his dig sites each summer. “It was all foreign to the people who were here and they didn’t treat them very well. They made them live in shantytowns, they didn’t have proper food to nourish themselves, they didn’t have good sanitation, and they were treated as non-humans. I think it’s important to see what we did in the past and use the past as a lesson for the present.”

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ON A WARM JULY DAY IN 1996, Will Thomas and Dave Deacy, two college kids, were watching some speedboat races on the Columbia River near Kennewick, Washington, when they came upon a startling sight: a human skull lying in the shallow water near the shore. Wanting to watch the races, they hid the skull in some bushes, and later reported their find to the local police.

Neither man had any inkling that they had just spotted one of the best-preserved ancient skeletons ever discovered in North America. Or that the roughly 8,500-year-old remains, dubbed Kennewick Man, would soon spur a historic legal confrontation, some bitter political wrangling, and an intense debate among scientists, government officials, and Native American tribes over who should control such ancient finds, and who

A NEW BOOK REVEALS THE CONCLUSIONS OF YEARS OF SCIENTIFIC STUDY OF THE ANCIENT SKELETON AND RECOUNTS THE LEGAL AND POLITICAL BATTLES THAT FOLLOWED ITS DISCOVERY.

THE STORY OF KENNEWICK MAN

By David Malakoff
gets to make that decision. Along the way, the decade-long saga would also include the mysterious disappearance of skeleton parts, allegations of government malfeasance, an FBI investigation, and a helicopter raining tons of rock on the riverbank.

“It’s an astonishing story when you look back on it all—almost unimaginable,” said one of the drama’s central players, forensic anthropologist Douglas Owsley of the Smithsonian Institution’s National Museum of Natural History in Washington, D.C.

Now, Owsley and about 60 other scientists are telling the story in unprecedented detail. This past September, they published *Kennewick Man: The Scientific Investigation of an Ancient American Skeleton* (Texas A&M University Press), a richly illustrated, 700-page tome that documents Kennewick Man’s legal and scientific importance. In its 32 chapters, the researchers interpret the voluminous data collected from the skeleton and the site where it was discovered, and offer some surprising new insights into Kennewick Man’s origins, lifestyle, diet, and death. A former government official offers an insider’s perspective on some controversial bureaucratic decisions, and legal analysts break down the courtroom drama. And there are plenty of tables and charts on everything from the carbon, nitrogen, and oxygen isotopes found within the bones, to the algae and minerals that grew on them.

“We wanted to be as comprehensive as possible, and there’s a lot of ground to cover,” said Owsley, who spent more than six years assembling the volume with co-editor Richard Jantz, a forensic anthropologist and professor emeritus at the University of Tennessee in Knoxville. “We didn’t want all this information to just get lost; we wanted it out there.”

Indeed, some researchers are calling the book, which quickly sold out its initial press run, “the Kennewick Bible.” But it’s not likely to be the last word. “There are a number of conclusions where others are going to have some different opinions,” said Michael “Sonny” Trimble, an archaeologist with the U.S. Army Corps of Engineers in St. Louis who helps oversee Kennewick Man’s remains. “There’s going to be debate.”

Once the police were informed of the skull, they quickly passed it to the county coroner, who consulted James Chatters, a local archaeologist. The two men returned to the riverbank, which was on land managed by the Corps, and they soon realized it held an almost-complete skeleton. Over the next few weeks some 350 bones and fragments were recovered, and Chatters analyzed them in his lab.

He suspected the skeleton was old. For one thing, it had a hand-crafted stone point embedded in one hip. He sent a single metacarpal (hand) bone to the University of California, 

Kennewick Man’s remains were found in this river bank. It’s thought that his body was intentionally buried here.
Forensic anthropologist Kari Bruwelheide arranges Kennewick Man’s remains, which revealed that he was tall for his time and had a wide-bodied frame.
Riverside for radiocarbon dating. The result was eye-opening: it was 8,340 to 9,200 years old. Chatters realized the skeleton was a rare find, and soon he made arrangements to take it to the Smithsonian, where Owsley, a nationally-renowned expert, could arrange a more extensive study.

That plan “never had a chance,” attorneys Alan Schneider and Paula Barran recounted in the book. “The federal government had its own plans for the skeleton, and they did not include study by scientists.” As Chatters prepared for his trip, he informed Corps’ officials of the skeleton’s age, and they in turn ordered him to stop all research and hand over the remains. The county coroner protested, arguing he had jurisdiction. While the bureaucrats fought it out, the bones were packed up and locked in a sheriff’s office, and then moved to a government laboratory.

At the same time, local Native American tribes demanded that they be given Kennewick Man so they could rebury him, citing the provisions of the 1990 Native American Graves Protection and Repatriation Act (NAGPRA) that requires “Native American” remains and cultural objects be returned to tribes. Scientific study of the skeleton, they argued, would be a “desecration.” In mid-September, less than two months after the bones were found, the Corps announced that it would give the skeleton to a coalition of five Native groups that planned to rebury Kennewick Man in a secret grave.

The Corps’ controversial decision was the result of a “weakening” of agency policies on handling cultural resources found on its lands, Larry Banks, a former senior archaeologist at the agency, wrote in a chapter that gives a rare peek behind the bureaucratic curtain. In 1998, at the request of senior Corps leaders, Banks conducted a review of how the agency handled the episode. He concluded that the Corps’ professional archaeologists were essentially cut out of decisions involving the skeleton as a result of a series of policy changes, some intended to improve relations with local Native American groups, which were engaged in a series of politically-charged disputes with the agency. The changes ultimately created “an environment in which politics took precedence,” he wrote, and “the tribes themselves effectively directed cultural resources affairs.” (Trimble and other Corps archaeologists dispute some of Banks’ conclusions.)

Although sensitive to the tribes’ concerns, Owsley and others were skeptical that Kennewick Man met NAGPRA’s definition of Native American. And they worried about losing a golden opportunity to learn more about one of America’s earliest inhabitants. Just one other ancient North American skeleton, a roughly 9,400-year-old mummy recovered from Spirit Cave in Nevada, had been found in such good condition. Even some prominent members of Congress asked the Corps to let the scientists examine the bones before they were reburied, but to no avail.

Frustrated, Owsley, Jantz, and six other scientists made a radical move as Kennewick Man was about to be transferred. They hired Schneider and asked a federal judge to block the
handover. “It just seemed like the right thing to do,” recalled Owsley. At the time, “few observers thought…they could win, and many pressures were brought on them to quit,” Schneider and Barran wrote. And even Owsley admitted that “we had no idea what we were in for.” The courtroom battle would last some 8 years.

The legal issues raised by Bonnichsen et al. v. U.S. (archaeologist Robson Bonnichsen of Oregon State University was the lead plaintiff) were numerous and complex. In the end, however, the case turned largely on one question: Was Kennewick Man linked to existing Native American tribes, and thus covered by NAGPRA, or not? Answering that question would require a lot of scientific study.

The first serious efforts came in 1998. After extensive legal skirmishing, the government began its own scientific evaluation, including new dating tests that generally confirmed the earlier age estimate, but also produced some dates that were about 2,600 years younger. Researchers also concluded that the skeleton’s physical features did not, by and large, resemble modern Native Americans. But the government and the tribes remained firm in their view that Kennewick Man had cultural and other connections to modern tribes, and should therefore be transferred to them.

A federal judge disagreed, however, handing team Bonnichsen a victory. Even as the wheels of justice turned in their favor, the scientists worried that they’d lost valuable research opportunities. In 1998, for instance, the Corps, rushing to complete a bank stabilization project that Congress was poised to stop, used helicopters to bury a portion of the site where the remains were discovered under tons of rubble, before the plaintiffs could conduct studies they requested.

The plaintiffs also feared that the government wasn’t properly caring for the skeleton. Security logs suggested unauthorized visitors were getting access, and poor temperature and humidity control were causing the bones to crack and degrade. There was also the strange case of Kennewick Man’s femurs, which mysteriously disappeared, and then reappeared years later in a storeroom. The FBI investigated, but no charges were filed, and, according to the book, the “disappearance has never been explained.” Eventually, a judge ordered the government to move the skeleton to safer quarters at the Burke Museum of Natural History and Culture at the University of Washington in Seattle.

Finally, in early 2004, a federal appeals court (one step below the Supreme Court) ended the fight, ruling NAGPRA did not apply. “Kennewick Man’s remains are so old and the information about his era is so limited,” the judges wrote, that it wasn’t possible to reasonably conclude that he “shares special and significant genetic or cultural features with presently existing indigenous tribes, people, or cultures.”

The Bonnichsen decision set a precedent: For the first time a court recognized that scientists had a right to intervene in legal battles over NAGPRA. And, by clarifying the law’s definition of “Native American,” it established a new test for deciding when it applied. Consequently it was no longer a certainty that researchers who recovered, and museums that stored, ancient remains found on federal or tribal lands would have to give them to Native Americans.

Even with the legal issues settled, however, “gaining access to the skeleton was not routine or easy,” Schneider and Barran wrote. It took nearly a year to negotiate a research plan with legal and scientific staffers at the Corps, which has repeatedly emphasized that it has a strict legal obligation to “protect and preserve the condition, research potential… and uniqueness” of the skeleton. This also proved to be a bittersweet moment for the plaintiffs. After some eight years of fighting to get access to the remains, and being just months away from achieving it, Robson Bonnichsen died in his sleep.

OVER THE COURSE OF 16 DAYS carefully choreographed teams of researchers performed a long list of tasks, including measuring and photographing the remains, and meticulously assembling the skeleton on a bed of sand covered with fabric. It took years to analyze, interpret, and write up all the data. But the wait was worth it, Owsley and Jantz wrote, producing some surprising answers to key questions about Kennewick Man’s life and times.

Using advanced radiocarbon-dating methods, the researchers concluded the remains are approximately 8,400 to 8,700 years old. Kennewick Man was “tall for his time” at 5-foot-7-inches, they write, “but generally wide-bodied and massive,” weighing about 160 pounds. As he grew older, he
likely had a gummy smile because his teeth were worn to nubs, partly by fine grit that got mixed into his food.

He was right-handed, and he routinely held something cocked above his head, “almost certainly an atlatl for propelling darts with forceful overhand motions.” In fact, he threw so vigorously that he fractured a shoulder bone, “a condition that was painful and undoubtedly affected his throwing ability.” He also had numerous cracked ribs, and some minor head injuries, perhaps caused by a bird-hunting tool known as a bola that consisted of two rocks tied by a string. “A bola stone gone astray could have given the hunter a good-sized bump and a headache,” they noted.

He was a young man when the stone dart struck him in his hip. “The impact location was amazingly fortuitous,” they wrote, “resulting in basically a superficial trunk injury.” The dart appears to be a Cascade or Haskett point, both relatively common artifact styles of the time, but the bone has healed around it, making it hard to identify with certainty.

It appears that Kennewick Man was about 40 when he died, but it is not clear what killed him. Through some remarkable sleuthing, however, the researchers think they know exactly how he was buried. One earlier study had concluded that his skeleton had come to rest on its side, in a curled position. But the new analysis suggests he was intentionally “buried on his back with hands palm down at his sides… His head was at the east, upstream, and his feet at the west with his left side closest to the river.”

They know he was face up, Owsley said, because as water trickled down through the grave it formed telltale crusts of calcium carbonate on the undersides of the bones. And they know which side of his body was closest to the river by studying the stains left by algae that grew on the bones after they eroded out of the riverbank. The bones weren’t exposed to water for very long, the researchers concluded, perhaps a month at most. If the remains had surfaced any earlier they would have been carried away by floodwaters that covered the site shortly before the discovery.

One of the most intriguing questions about Kennewick Man is whether he was a local or an immigrant. To answer this, the researchers measured carbon, nitrogen, and oxygen isotopes in his bone collagen, which would roughly match the isotope content of the food and water he consumed as an adult. The results point to two plausible scenarios: he was a local guy who lived largely on the Columbia River’s salmon and trout; or, he was an adventurous migrant from the coast, some 300 miles to the west, who had a taste for seal, sea lions, and other marine mammals.

For a variety of reasons, Owsley and Jantz think the
coastal scenario is more plausible. Not only is Kennewick Man’s isotopic signature remarkably similar to those seen in the bones of other Pacific Coast foragers who hunt marine mammals, but his worn teeth are reminiscent of those seen in early Eskimos and others who routinely worked seal hide with their mouths to soften it. And the anatomical features of his right arm are just what you’d expect in a hunter who spent years killing seals with an atlatl. “Kennewick Man could not have been a long-time resident of the area where he was found;” they argued, speculating he probably came from what is now coastal Canada, or perhaps even Alaska.

Owsley said statistical analyses show that Kennewick Man’s skull most closely resembles those of Polynesians. That could mean he descended from an ancient population in coastal Asia that produced both early immigrants to North America (who left behind only a light archaeological and genetic footprint), and later immigrants to the Pacific islands. But other scholars are skeptical.

Owsley, for one, welcomes such discussions. “There are still lots of things to talk about, unanswered questions,” he said. Indeed, the book closes with a recommendation—a plea, really—that Corps officials allow a new round of studies. They could include bone analyses to better pinpoint Kennewick Man’s age at death, tooth isotope studies to help nail down his geographical origins, and x-ray analyses of the stone point, which could identify where the raw material was quarried. The authors also express concerns about the Burke Museum’s curation of the skeleton, claiming that swings in temperature and humidity may be damaging the bones.

Peter Lape, the Burke’s curator of archaeology, disputed those allegations, saying that independent conservators who have been monitoring the bones for more than 14 years have concluded that “any deterioration of the bones… appears to be most closely associated with handling of the remains during scientific study.”

What kinds of additional studies the Army Corps might allow is uncertain. In general, agency policies discourage tests that alter or destroy even a small part of a rare find unless “the potential gain in scientific or interpretative information outweighs the potential loss of the object.” As recently as 2011, it did allow researchers to destroy two small slivers of previously sampled bone in an ongoing effort to extract DNA. No other requests are currently pending, according to Trimble. But he believes the book should make it easier for the Corps’ experts to determine which studies will be essential to filling key knowledge gaps. “It provides an important baseline that we really didn’t have before, and that will be helpful in evaluating proposals,” said Trimble.

In the meantime, Owsley is philosophical, and he’s sure that “Kennewick Man’s story isn’t over with this publication. He still has a lot to tell us.”

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Kennewick Man’s mandible fragment shows worn teeth that are reminiscent of those seen in early Eskimos and others who routinely worked seal hide with their mouths to soften it.
It was the rainy season in central Mexico and David Carballo was sweeping the stone floor, trying to clear away the dust before it had a chance to turn to mud. It was a losing proposition given a summer full of torrential downpours. “It’s a nightmare when it rains overnight. And it pretty much rains every night,” said Gina Buckley-Yost, a graduate student from Penn State. And the floor Carballo was standing on presents a more daunting challenge than most: it hasn’t been cleaned for close to 2,000 years.

Carballo, an archaeologist with Boston University, suspects that the last people to sweep this floor witnessed the growth of Teotihuacan, an ancient metropolis whose ruins lie about 30 miles outside of modern day Mexico City. “We’re getting to some of the earliest layers,” he said as he used a trowel to expertly flick the loosely packed dirt out of neat, small holes that probably once held posts supporting a thatched roof and walls. The people who built this floor out of crushed tepetate, a local volcanic tuff, probably watched as the largest city in the Americas expanded into their neighborhood, absorbing them into a complex political structure and turning them into some of central Mexico’s first urbanites.

At its height, which spanned from about 100 B.C. to A.D. 650, Teotihuacan was a metropolis—a rarity in ancient Mesoamerica, where cities tended to be sprawling, low-density affairs situated within vast forests and tracts of farmland. In
Teotihuacan, however, the Pyramids of the Sun and Moon towered over a downtown that had likely been cleared of significant vegetation. The monuments were connected to one another and the rest of the city by the 150-feet-wide, roughly three-mile-long Avenue of the Dead, which cut through the urban landscape at precisely 15.5 degrees east of north.

More than 2,000 apartment compounds, like the one the archaeologists are excavating, fanned out from the thoroughfare, arranged in a rigid grid system that rivals New York City’s or Chicago’s in its regularity and structure. Each housed at least three families, with an average of 40-60 people living there at any given time. That allowed the city to pack about 100,000 residents—including traders and migrants from hundreds of miles away—into a mere 12-square miles, a degree of density seen nowhere else in ancient Mesoamerica. Before its mysterious political collapse and subsequent abandonment, Teotihuacan was the largest city in the Americas and the sixth largest in the world.

The political structure of Teotihuacan is still hotly debated, with some archaeologists believing it was ruled by a god-like king and others arguing for a governing council made up of members from elite families. But ever since the 1960s, when the pioneering Teotihuacan Mapping Project used surface collection of artifacts to reveal the staggering size and unprecedented organization of the
archaeologists have thought that this cosmopolitan metropolis could not have arisen without some kind of strong central authority responsible for, among other things, the design and construction of the urban environment. “The scale of planning in this city seems pretty unparalleled for the ancient world,” Carballo said. As a result, archaeologists have assumed Teotihuacan was a “very centralized state that was involved in the intimate details of daily life.”

Carballo and Ken Hirth, an archaeologist from Penn State University, are directing an excavation in the Tlajinga District, a neighborhood of lower-status craftspeople and artisans near the southern edge of the Avenue of the Dead. From here, the pyramids of the Sun and Moon peek out over the trees, nearly blending into the mountainous landscape around them. The view from Tlajinga is “like someone from Queens looking at the Manhattan skyline,” Carballo said. It was part of the city, but far from the center of power and its political concerns.

Over the next 500 years or so, seven more floors were built above the stone floor Carballo was sweeping. By excavating each of them, the archaeologists hope to learn what daily life was like for this home’s occupants at different points in Teotihuacan’s history. Given Tlajinga’s geographic and symbolic distance from central Teotihuacan, the archaeologists are focused on how the lives of Tlajinga’s residents intersected with the politics and culture of the city as a whole. Did they make their own economic and cultural choices, or was every decision dictated by the city’s central government?

Questions like those first interested Carballo when he was an undergraduate political science major. After a trip to Teotihuacan with Colgate University archaeoastronomer Anthony Aveni and a few seasons of fieldwork at Copán, a Maya capital in Honduras, Carballo settled on a career in archaeology as a means to explore those lines of inquiry. “It’s a discipline that allows you to think about those big questions of social organization and their change over time,” he said. “And it’s fun to dig in the dirt.”

After 10 weeks of digging at Tlajinga last summer, the archaeologists uncovered evidence of craft production, religious rituals, construction, and human burials in a single apartment compound. They found pottery sherds and other, less common artifacts, such as seashells, ceramic figurines, and beads and other adornments. The most abundant types of artifacts were construction tools, such as the myriad pumice floats, which were probably used to even out the wet
concrete that the residents made by mixing lime with clay, mud, gravel, and sap from the nopal cactus.

He won’t know the tools’ precise dates or what they were used for until he is able to analyze the microscopic remains of material left on their surfaces. For now, he’s sure of only one thing: there are too many of them to build just one house. He suspects that the people who lived in this apartment compound might have been construction workers involved in building projects throughout the city.

Construction was probably not a particularly high-status job, and Tlajinga was known to be a lower-status neighborhood. So Carballo was surprised when, earlier in the season, he found one of the few intact examples of Teotihuacan’s iconic greenstone masks resting on a stone patio that was probably built during the city’s last decades. How did such a high-status good end up here, so far from the elite palaces and temples of downtown? But he has since discovered that the residents had access to quite a few nice things. The seashells, for example, came from Mexico’s coasts hundreds of miles away, and some of the household’s pottery was imported from southern Puebla, a region that continues to be famous for its clays.

In 2013, while excavating a nearby compound that appeared to have been occupied by obsidian craftspeople, Carballo uncovered a stout, three-legged vessel that had been covered with stucco and delicately painted. As the vessel’s ornate outer layer wore off with use, its owners repaired it by filling in the cracks with new stucco, before ritualistically burying it in their home. “That gives a great window into a family that was of lower status, but had some access to nicer stuff and had to take care of it,” he said. “In terms of thinking of Teotihuacan’s broader economy, we’re seeing that lower status individuals had access to pretty much the range of goods or commodities that circulate within the city, but in more limited quantities consistent with their purchasing power. It’s indirect evidence of a pretty strong market economy.”

The archaeologists’ work at Tlajinga is complicating the narrative of top-down planning and control in Mesoamerica’s largest city. “I think that there’s reason to believe that people were making their own decisions and planning their own neighborhoods,” Carballo said.

Take the idea of cookie-cutter apartment compounds planned and built by the central government. Apartment living does appear to spring up at more or less the same time across the city, which suggests a certain amount of state involvement and direction. The apartment compounds close to downtown are almost perfect squares laid out neatly on the city’s grid, a striking level of regularity that has been taken as evidence of strong central planning and authority. The Teotihuacan Mapping Project assumed this level
of regularity extended throughout the city and that all the apartment compounds had the same shape.

But now that compounds in Tlajinga and other peripheral districts are being excavated—often with the help of remote sensing technology that can accurately map the remains of stone architecture even before it is uncovered—it appears that Teotihuacan’s residential architecture is “much less regular than the 1960s’ map would indicate,” said Carballo. Once you get away from the downtown neighborhoods, “no two [apartment compounds] are identical, probably.”

The materials used to construct the apartments also varied, and given that degree of local variability, Carballo is skeptical of any model that suggests “these things are completely state-planned and state-constructed.” But that’s not to say state authority was completely absent from Teotihuacan. Given the city’s complexity, pitting top-down, centralized

Every Friday in the Tlajinga District, David Carballo stops digging early and gathers his grad students and workers together for a soccer match. They found a great spot to play nearby that’s just the right size and perfectly flat. Its evenness is no accident of nature. Their soccer field is right on top of an unexcavated area of the Avenue of the Dead, Teotihuacan’s main thoroughfare.

Carballo and his team are not the only ones to find a modern use for the ancient urban landscape. Although Teotihuacan experienced a political collapse around A.D. 550, people never stopped living around and on top of its ruins. Today, the Valley of Teotihuacan’s proximity to rapidly expanding Mexico City makes it an attractive place to settle. The area is currently home to 70,000 people; by 2025, the local population is expected to reach 120,000, said Jaime Delgado, an archaeologist with Mexico’s National Institute of Anthropology and History (INAH) who works on conservation at Teotihuacan.

When it comes to archaeological conservation, playing soccer on top of buried ruins is one thing. Building houses, plowing fields, and running sewers through them is another. Worse, much of the modern development is done illegally, flouting INAH regulations and laws protecting Mexico’s cultural patrimony. At this point, Delgado said, 49 percent of Teotihuacan’s archaeological remains have been destroyed or rendered inaccessible. “We’re losing the most important city in the Americas.”

A mere seven percent of Teotihuacan’s original 12-square-mile expanse falls within the protected tourist zone, which covers only the city’s ceremonial downtown and most important pyramids. No ancient residential neighborhoods are formally protected, which limits the information available to archaeologists like Carballo, who are interested in the daily lives of Teotihuacan’s middle- and lower-status residents. “We need to know about the people who were living there, not just their monuments,” said Mark Michel, president of The Archaeological Conservancy. “That information is going to be lost unless the Mexican government moves quickly to protect the entire site.” —Lizzie Wade

The Threat to Teotihuacan

Though these magnificent structures in downtown Teotihuacan are protected, much of the site is threatened by development.
control against bottom-up, local processes is “setting up a false dichotomy,” he said. “It’s obviously going to be a little of both.”

Carballo may have found at least one concrete manifestation of the connection between the state and the residents of the apartment compound. In an earlier construction phase a few feet below the site’s last building, the compound’s architecture appears to be oriented to 19 degrees east of north, nearly four degrees off from the standard Teotihuacan grid. Then, during the last construction episode, the apartment’s adobe walls were perfectly aligned with the Avenue of the Dead and the rest of the city. “Was there a city ordinance?” Carballo wondered. If so, could it have been related to a larger political shift resonating throughout the city?

To determine the reasons for the alignment shift, the archaeologists will need to date each construction episode in the apartment compound. They’ve found enough organic remains—of wood, bone, and potentially even microscopic food remains embedded in kitchenware—to radiocarbon date some of the floors. Perhaps the date of the alignment shift will correspond with a known change in the city’s political structure. Or perhaps it won’t, in which case the shift could be a result of local, rather than centralized, planning.

Carballo and Hirth recovered well over a million pieces of obsidian from another Tlajinga apartment compound they excavated in 2013. Most of these pieces are manufacturing debris, but they’ve also found blades that were used to make other tools. Each piece must be sorted and categorized, a task that Hirth and four students have barely made a dent in thus far.

The blades were flaked, one by one, off of larger cone-shaped obsidian cores. Skilled artisans would be able to turn one core into hundreds of blades in just over a day, Hirth estimated. He has spent years mastering those ancient artisans’ techniques in order to understand their work. For example, the production of points and blades that served martial and ritual purposes created different kinds of debris than the production of blades made for domestic tasks like processing food. But the differences are subtle, and it’s hard to recognize them without replicating the process, Hirth said. “The technique is not just to look at the attribute and say okay, this was made with a hammer,” he explained. “It’s to say, can we make this with a hammer?”

Because of such factors as its distance from downtown Teotihuacan and the domestic tools it produced—state-run obsidian workshops, according to Carballo, tend to have weapons, ritual items, and fancy adornments—the archaeologists believe they’ve discovered an obsidian workshop that wasn’t state controlled. That strengthens the argument that the city had a market economy and “households were in business for themselves,” Hirth said.

The kind of experimental archaeology he’s practicing can also provide intimate glimpses into the daily lives of these workers. Shaping obsidian can be an arduous, painful task, especially for beginners. “When we do experiments we’re constantly bleeding because this stuff is extremely sharp,” Hirth said. From sweeping floors to flaking tools, Carballo and Hirth aren’t just reconstructing ancient lives. In some ways, they’re reliving them.
A Hopewell Woodhenge

The Hopewell are known for their remarkable earthen architecture. But an ambitious remote-sensing survey suggests they also used wood extensively. This discovery could change archaeologists’ interpretation of Hopewell sites.

By Dave Ghose
Researchers work to expose portions of a buried feature known as the Great Circle. Archeological Technician Patrick Zingerella (right) sprays water on the floor of an excavation unit to enhance subtle differences in soil color and texture that suggest ancient pits and postholes.
Two excavators dug a long, narrow trench in the flat, vacant landscape. They were part of a small crew that worked quietly in an unremarkable patch of the Hopewell Culture National Historical Park. Though the size of the crew and the scope of their excavation seemed unremarkable, the project’s discoveries appear to be anything but. The archaeologists have uncovered evidence of a massive earthen and wooden Hopewell monument that stood here almost 2,000 years ago. “The archaeological record is totally intact,” said Bret Ruby, the park archaeologist leading the excavation. “It’s just buried.”

On a hot day in early July, Ruby—wearing sunglasses, work boots, and a wide-brimmed hat—stood at the edge of the Great Circle, the focus of his investigation at the Hopewell Mound Group, one of six sites that make up the park near Chillicothe, Ohio. Though archaeologists have known about the feature for nearly 200 years, Ruby is the first to excavate it.

According to conventional wisdom, the circle, which is nearly 400 feet in diameter, was destroyed by two centuries of plowing. Historical accounts described it as a circular embankment and ditch, but Ruby contends it also included close to 100 wooden posts. Several small white flags mark spots along the circle where Ruby believes the posts once stood. Earlier this summer, his team opened two four-foot-deep excavation units near two of the flags. The digging hasn’t uncovered remnants of the actual posts so far, but it has revealed other important information.

Using a rolled-up map, Ruby pointed to an oddly colored, U-shaped stain in the soil profile. That stain, he said, is where a post once stood. The color and texture is different from the surrounding reddish, gravelly soil, suggesting the natives removed the post and then backfilled the hole, a decommisioning practice that occurred at other Hopewell sites. The dimensions of this and other postholes indicate they could have supported posts as tall as 16 feet. This suggests that the largest Hopewell timber circle, or “woodhenge,” ever recorded once stood in this earthworks complex. “There aren’t a lot of [alternative explanations],” Ruby said.

Ruby’s discovery grew out of one of the largest magnetic surveys ever conducted of a North American archaeological site. Covering 73 acres of the Hopewell Mound Group, the survey detected hundreds of magnetic anomalies, including the postholes and the Great Circle’s ditch and embankment. Ruby predicted remote-sensing
techniques—especially magnetic methods, which are especially well suited to Ohio’s iron-rich soil—will lead to similar discoveries at other Hopewell sites. “In the next few years, we’re going to see an explosion in our knowledge about Hopewell wooden architecture,” he said.

If that happens, it will change how archaeologists view the spectacular Hopewell earthworks built during the Middle Woodland Period. Ruby suggested that wooden architectural features could have been commonplace in Hopewell construction. “It’s really revolutionizing our views of these earthwork sites,” he said. “They’re not just mounds and earthworks. There’s probably a ton of wooden architecture out there we were never seeing before—and didn’t dream to look for.”

Hopewell Mound Group is the “biggest and baddest” of the roughly two-dozen monumental earthworks in Ross County, Ohio, according to Ruby. It once boasted two miles of earthen walls enclosing 110 acres with at least 40 burial mounds. “It’s not outrageous to say that this was probably the spiritual capital of Eastern North America about 2,000 years ago,” he said.

In the 1890s, Ohio archaeological pioneer Warren Moorehead conducted a major excavation of Mound 25, the complex’s most imposing feature and the largest burial mound ever built by the Hopewell. The excavation netted an astounding variety of artifacts and materials—many of which are now housed at the Field Museum in Chicago—including shells and shark teeth from the Atlantic Ocean, obsidian from Yellowstone National Park, and copper from the Keweenaw Peninsula in Michigan. Moorehead called the enclosure the “Hopewell Works,” naming it after Mordecai Cloud Hopewell, the Chillicothe dry goods merchant and former Confederate soldier who owned the farmland. The moniker stuck, giving the newly discovered culture its name.

The Great Circle was first recorded in 1820, and by the time of Moorehead’s excavation, farming had taken its toll on the site. The circle had been obliterated by plowing, which—especially with the advent of diesel tractors—also damaged other features over the next century. Today, most of the earthen complex is leveled, and Mound 25, once 500-feet long and 33-feet high, is a third of its original size.

During a July 2001 Ohio State University field school at the Hopewell Mound Group, a small-scale magnetic survey uncovered a 90-foot circular ditch in between the mounds. Though people have investigated the complex since the early 1800s, no one had detected the circle before. The revelation made a big impression on Jarrod Burks, then an Ohio State archaeology graduate student and a park employee. Through pure luck, the students chose a spot to survey with an undiscovered feature. “I was like, ‘Oh my goodness. If we found that randomly, what else is out there?’” he recalled.

Park officials hired Burks’s firm, Ohio Valley Archaeology, in 2012 to do a more complete magnetic survey of the Hopewell Mound Group. After earning his doctorate from Ohio State in 2004, Burks developed a practice focusing on geophysical archaeological services. Park officials hoped the
new survey would expand on the 2001 effort, which covered about six percent of the site. “We want to be able to show people why this site’s so important,” Ruby said. “It’s not just a plowed field.”

Burks spent 18 days in late 2012 and early 2013 collecting data. He used a pushcart with four fluxgate gradiometers that detect changes in the magnetic field up to a yard below the surface. He surveyed more than half of the site, rolling his machine over ground that, according to historical accounts, once included walls, burial mounds, and circular embankments.

Such a large survey would have been impossible without the cart. The device allowed Burks to cover four to five acres a day—far more than he could have covered with a single handheld fluxgate gradiometer. “That’s been a game-changer, and that’s really why this project happened,” he said.

As he downloaded the data onto his computer, creating a geophysical map, Burks saw anomalies that appeared to represent a number of features including the east wall of the main enclosure, part of the D-shaped embankment that surrounded Mound 25, and the remnants of the north and south walls of a square outer enclosure on the east side of the site. At the south end of the map, very close to where historical accounts placed it, was the Great Circle. The magnetic data showed an embankment surrounded by a circular ditch about seven-to-nine-feet wide. There also were two roughly 40-foot-wide openings on the top half of the circle.

Burks thought he might find the circle, since the 2001 survey detected part of it. But he was surprised by the sight of several small anomalies, spaced about 10-feet apart, that formed a circle within the circle. He was certain, however, that the anomalies were a giant woodhenge.

The first Hopewell woodhenge was found at the Stubbs Earthworks along the Little Miami River northeast of Cincinnati in 1998. The salvage excavation (a new high school was being built on the site) uncovered 172 postholes that supported wooden posts the size of telephone poles in a circle about 240 feet in diameter. “Nothing like this had ever been found before,” recalled former Cincinnati Museum Center curator of anthropology Frank Cowan, the archaeologist who led the excavation.

In 2005, an even more complex feature called Moorehead Circle was discovered at Fort Ancient, the Hopewell hilltop enclosure a few miles northeast of the Stubbs Earthworks. An excavation—led by Bob Riordan of Wright State University in Dayton—revealed three concentric rings of postholes surrounding a pile of red soil. Gravel-filled ditches,
limestone pavement, and overlapping floors were also discovered at the circle, which was named after Warren Moorehead, who urged the Ohio legislature to make Fort Ancient a state park.

An old-school tool—a backhoe—uncovered the Stubbs postholes, but the Moorehead Circle discovery grew out of geophysical surveys conducted by Burks. The Ohio Historical Society hired him to check an area near an eroded earthen wall to ensure work crews wouldn’t destroy or damage anything of archaeological significance during a planned restoration, and he found the 200-foot-wide circular anomaly. “I suspect these woodhenges were probably fairly common

**PRESERVING HOPEWELL SITES**

In 1980, The Archaeological Conservancy acquired most of the famous Hopewell Mound Group near Chillicothe, Ohio. It is the type site of the Hopewell culture and one of the Conservancy’s first acquisitions. At that time it was being farmed, and there were large-scale developments nearby that threatened the site. The Conservancy subsequently acquired additional parts of the mound group, and in 1997 the site was transferred to the new Hopewell Culture National Historical Park.

The High Bank Earthworks, another very large Hopewell site in the Chillicothe area, was also acquired by the Conservancy and transferred to the National Park Service. More recently, the Conservancy acquired the Spruce Hill Works, a large Hopewell hilltop enclosure. In March 2014, the Conservancy was the winning bidder at auction for the Junction Group, another huge Hopewell site (see “A Preservation Collaboration,” page 44, American Archaeology, Summer 2014). Preserving Hopewell culture sites in Ohio and elsewhere continues to be a high priority for the Conservancy.
in that part of the world in that time period,” said Cowan, who estimated there are between 40 and 50 known circular enclosures in southern Ohio.

Like the intricate maps of the 19th century and the aerial photographs of the 1930s, the remote-sensing tools of today offer a powerful new lens to view the Hopewell culture. “We’re realizing we have no clue of what’s actually out there,” Burks said.

The Great Circle excavation has turned up few artifacts. Ruby opened a box that held a 10-inch celt (an axe-like tool) found when his crew extended an excavation unit across the circle’s ditch. Such discoveries have been few and far between. The researchers mostly have found flint flakes, small pieces of pottery, and other tiny items. “It was apparently just not appropriate to discard a lot of materials there, so it’s more evidence that the thing was ritual and sacred in purpose,” said Ruby.

So what was that sacred purpose? The sky may hold the answer. Small orange flags mark the openings—or gateways—in the top half of the circle detected in the magnetic surveys. One of the gateways appears aligned to the summer solstice. “The northwest gateway is clearly aligned to the summer solstice sunset. When the builders stood in the center of the circle on the solstice, the sun would appear to set through the northwest gateway,” Ruby said. William Romain, an Ohio archaeoastronomer, has corroborated Ruby’s theory with a more sophisticated analysis that factored in the position of the sun when the woodhenge stood. “That woodhenge is solstice aligned, and there really is no question about it,” Romain said.

The researchers collected samples from the posthole and ditch profiles for laboratory analysis. Ruby hopes the lab work will offer a clearer picture of how the ditch filled in over time. He also hopes flotation samples of the posthole fill may reveal traces of wood.

Ruby laughed as he imagined what Warren Moorehead, the man who put the Hopewell Mound Group on the map, would think of this small, targeted excavation. “He would think we’re out of our minds,” Ruby said. “‘Where’s your obsidian bifaces, and marine shells, and copper axes?’” he mimicked Moorehead asking. “I’ve got these empty postholes. I don’t even have the posts to show.”

But that’s an indication of how much the science of archaeology has changed since Moorehead excavated Mound 25 with the help of a team of mules. Though lacking wooden posts and showy artifacts, Ruby does have a treasure map of sorts that shows more than 500 subsurface magnetic anomalies. He seemingly could spend the rest of his career conducting pinpoint excavations of the mounds, enclosure walls, refuse and storage pits, and burned buildings they suggest.

The Great Circle is just the beginning, Ruby said. Remote-sensing methods will lead to more discoveries of wooden architecture at Hopewell Mound Group and other enclosures. “The more we look, the more we’re going to find,” he said,“and it’s going to change our perception of these places.”

DAVE GHOSE is a freelance writer in Columbus, Ohio.
Some 70 years ago the renowned archaeologist William Duncan Strong concluded that, in the late 18th century, the Cheyenne migrated west from Wisconsin and Minnesota. One of their first stops in this migration was Biesterfeldt, a site in North Dakota that’s being preserved by The Archaeological Conservancy. Though Strong’s conclusion held sway for decades, a recent investigation of Biesterfeldt refutes his ideas.

By Kristin Ohlson
Field school students excavate an area that was dug by Strong in 1938.
Not long after Mike Michlovic launched the archaeology program at Minnesota State University at Moorhead in 1975, he crossed the Sheyenne River from Minnesota into North Dakota and saw the Biesterfeldt site. The site was just over four acres of land, half of it unplowed. It was obvious that native people had once lived there, as the landscape was pocked with dozens of large depressions created by earth lodges. “You could walk right up to these depressions and see how big their houses were,” Michlovic said. He decided it was a great spot for student field trips.

The Archaeological Conservancy now owns the site, but back in the 1970s it was owned by a reclusive bachelor farmer named Irwin Johnson who had no phone. So Michlovic would call Johnson’s nearest neighbor, who was several miles away, and ask him to drive over to Johnson’s house. The neighbor would knock on Johnson’s door and shout, “That professor wants to look at your pasture again.” Johnson would give permission, and year after year Michlovic took his students to see this Cheyenne village on the Sheyenne River.

The noted archaeologist William Duncan Strong determined Biesterfeldt was a Cheyenne village when he excavated about 10 of the site’s earth lodge depressions in 1938. Two years later, Strong wrote a paper titled “From History to Prehistory in the Northern Plains” that presented the conclusions of his investigation. His work supported a then-developing anthropological theory that stated people who move to a new and different environment undergo rapid changes as a result.

The Cheyenne and other Plains tribes were thought to be examples of this theory, as they were believed to have migrated from the Eastern Woodlands to the High Plains in the 18th and 19th centuries, where they quickly adopted the characteristics of nomadic buffalo hunters. It was assumed that the Cheyenne moved to Biesterfeldt after they left Minnesota and Wisconsin in the early 1700s. They settled along the Sheyenne River and, it was thought, practiced their Eastern Woodlands culture for a few decades until their village was burned down and they fled. Biesterfeldt, which Michlovic surmised was occupied sometime between 1720-1790, was considered their first stop on the way to their new life in the West.

“By 1810, the Cheyenne are out in the Black Hills hunting buffalo on horseback,” Michlovic said. “That’s just a few decades later than Biesterfeldt, but by then they had developed a classic Plains Indian culture, which was very different from the culture of Woodlands people in eastern Minnesota and Wisconsin. How do they change that fast? How do they give up so much and adopt so many new ways in such a short period of time? The answer back then was that this happens under the influence of a new environment.”

Strong was confident that the next generation of archaeologists working in the region would find cultural materials in Minnesota and Wisconsin that more closely resembled those found at Biesterfeldt, thus establishing a plausible
migration path from the east to the site. “When he dug Biesterfeldt, this area was terra incognita,” Michlovic explained. “There are thousands of square miles in western Minnesota and eastern North Dakota, but no one was doing any archaeology here. Most of the archaeologists were clustered in the big cities. Strong thought that once someone started looking, we’d find artifacts like those in Biesterfeldt, but we still haven’t found them.”

And Biesterfeldt’s archaeological remains puzzled experts. Rather than resembling the handiwork of an Eastern Woodlands culture, they were like the material culture of the Arikara people who lived to the west of Biesterfeldt, along the Missouri River in the Dakotas. The data from Strong’s excavation were reexamined in 1971 by W. Raymond Wood of the University of Missouri at Columbia, who noted the Biesterfeldt-Arikara similarities. That led Wood to question the notion that Biesterfeldt’s inhabitants came from the Eastern Woodlands, but he didn’t challenge Strong’s conclusion.

Decades later, however, Strong’s interpretation of Biesterfeldt was challenged. The National Park Service’s Midwest Archaeological Center had decided to nominate the site—which was already on the National Register of Historic Places—for national landmark status, and it gave Michlovic a grant to investigate it in 2007. The investigation included a geophysical field school that was directed by his Moorhead colleague Rinita Dalan. The following year, the researchers co-hosted a geophysical workshop at the site with the National Park Service that drew professionals from around the world. “This provided an opportunity to use the gear and expertise of many people,” Dalan said. “We could experiment with what may be the future in terms of technology.”

The conclusions reached by Michlovic and Dalan, along with their Moorhead colleagues George Holley and Erik Gooding, overturned more than 70 years of thinking about the site and called into question assumptions about the

Ceramic vessel handles recovered during Strong’s excavations. The decorative elements on these sherds resemble those of pottery from along the Missouri River in the Dakotas, rather than pottery found in Minnesota.
timing of the western migration of eastern tribes and the speed with which they adopted the Plains lifestyle. In their view—expressed in a paper to be published in the journal *The Plains Anthropologist*—Biesterfeldt was occupied by a people who migrated from the west, not the east.

The researchers point to historical, linguistic, and archaeological evidence that suggests that the westward migration of native peoples was far more extensive and complicated than the conventional theory allows. Michlovic and his colleagues concluded these migrations were not necessarily caused by contact with Europeans; instead, the tribes had likely been moving around the nation's midsection before the Europeans arrived.

“All received wisdom has to be revisited periodically,” said Bill Green, an archaeologist from Beloit College who studies early historic interactions between natives and
Europeans in central North America. “There have been nagging questions about this site for years and it makes sense for archaeologists in the region to address them. Mike and his team found data that just doesn’t fit the story.”

Biesterfeldt’s identification as a Cheyenne village began in the historical record. In 1799, David Thompson, an employee of a fur trading company, reported a conversation at a trading post on the Red River with an Ojibwa chieftain named Sheshepaskut, who explained that his people and the Biesterfeldt Cheyenne had been “doubtful friends” who nonetheless traded corn and other foods. However, the Ojibwa became convinced that the Cheyenne, and not their longtime Sioux enemies, were murdering their hunters. So the Ojibwa surrounded Biesterfeldt, waiting until the Cheyenne hunters rode off in search of game. The Ojibwa then burned the village to the ground, and shot all the survivors except three women.

But the historical record is often inaccurate and incomplete. European settlers and explorers had many problems identifying the various Native American tribes they encountered, and one of those problems was what to call them. There were various terms then that seemed to refer to the Cheyenne—Chaa, Chaienaton, Shiens, Sha-i-ena, Chaienne, Shiene, and others—none of which resembled tse-tsebe-sestaestse, the word the Cheyenne used to refer to themselves. Michlovic and his co-authors pointed out that the word “Cheyenne” derives from the Dakota word shahiyena, which is usually translated as “people of alien speech.”

To further the confusion, the same names were often used for different groups, and even today’s Dakota sometimes refer to Cree and Chippewa as Cheyennes. From 1680 through 1882, there were hundreds of names for the peoples of the Great Lakes and the Plains. Distinguishing among these people and determining who went where is a daunting task.

“The historical documents contain a lot of terms that the early explorers and traders wrote down, but they might have interpreted them wrong and we might be interpreting them wrong,” said Michlovic. “People often think that the history is just there for us to read, but there’s a great deal of work in figuring it out.”

Michlovic’s investigation uncovered semi-subterranean lodges with timber walls that, while not completely identical to those found along the Missouri River, were nothing like native dwellings in Minnesota. The use of geophysical technologies like magnetic gradiometry also allowed Michlovic and his colleagues to see things that Strong couldn’t. They were not only able to identify the locations of the houses, but also the orientation of their entryways and even the footpaths—the weight of human feet had compacted the soils so that the paths stood out—that connected each house with the rest of the village.

“The pattern of the village is very like that in the Missouri River area,” Dalan said. “The earth-lodges are clustered together in neighborhoods with storage pits either within or between the houses. Their size and configuration, the way they’re oriented, the way they’re situated within a ditch...
enclosure—this is much like architectural material from the west, not from the east.”

Michlovic’s team found cultural materials similar to those that Strong recovered decades earlier, including metal objects, ceramics, and stone tools made from Knife River Flint, which is found west of the Missouri River. The ceramics are grit tempered and have design features, such as the rim decorations, that are strikingly similar to Arikara ceramics. But both Michlovic’s and Strong’s excavations found some ceramics that were unlike the Arikara’s, and Strong focused on these differences—such as cord-wrapped rod and stamped decorations seen in Late Woodland ceramics from Minnesota—to support his contention that Biesterfeldt was occupied by Cheyenne coming from the East.

However, Craig Johnson of the Minnesota Department of Transportation said that these differences could be explained by encounters among tribes. “Women made the pots,” Johnson said. “If there were people at Biesterfeldt getting wives from the east, that could have influenced the pottery. Also, groups of hunters sometimes went out and made contact with people making a certain kind of pottery and brought it back with them.”

Archaeologist Dennis Toom of the University of North Dakota agreed that Biesterfeldt was likely settled by native people moving from the west. He studies Plains Village culture, and he thinks Biesterfeldt could be a “rebound” site, where native people fleeing the smallpox epidemic of 1780–81 had resettled. The epidemic started along the Eastern Seaboard around the time of the American Revolutionary War, then it moved to Mexico City and up through Santa Fe, and then along horse trading routes to the Plains. “The epidemic took down up to 70 percent of the native populations,” Toom said. “Those large villages concentrated along the Missouri River were the hardest hit. People wanted to get out of there and some appear to have moved back to the east, carrying the material culture they developed along the big river.”

Conrad Fisher, tribal historic preservation officer for the Northern Cheyenne, suggests that archaeologists could learn about Biesterfeldt and its occupants by consulting tribal elders. “We have an oral history of being a horticultural group in the Dakotas,” he said. “Our oral history is who we are, and it’s possible that our elders could pinpoint Biesterfeldt as a Cheyenne site.”

Though some experts think Michlovic and his colleagues have disproven Strong’s hypothesis, Biesterfeldt still poses unanswered questions. For his part, Michlovic doesn’t think the evidence of a west-to-east migration precludes the possibility that the Cheyenne occupied Biesterfeldt. Perhaps “they were already living on the Plains and in touch with the Arikara,” he speculated. An examination of Cheyenne oral history could complement the existing research by addressing such issues, Michlovic said. “Those oral traditions could really fine-tune our understanding of this site.”

KRISTIN OHLSON’s latest book is The Soil Will Save Us: How Scientists, Farmers, and Foodies are Healing the Soil to Save the Planet. Her article “Searching For De Soto” appeared in the Fall 2014 issue of American Archaeology.
The Rediscovery of Sally Warren Mounds

The Conservancy preserves two mounds that disappeared for some 30 years.

According to Louisiana state site files, the Sally Warren Mounds consist of “a large rectangular shaped mound” known as Mound A, and a “conical shaped burial mound” known as Mound B.

Their presumed function was listed as “burial mounds and possibly small village.” The site is located on a natural levee next to Cocodrie Lake.

The site, named for a previous landowner, was last visited by an archaeologist in 1982, when it was discovered that both mounds had been disturbed, and a complete human skeleton had been uncovered in Mound B. The landowner was so rattled by the incident that he denied the archaeologist access to the site shortly after he arrived. As there was no time to do any drawings or collect artifacts, the site file simply noted that prehistoric material was observed, and there was a large area of dark soil near one of the mounds with an extensive quantity of ceramics and lithics. “This site should definitely be tested before looters destroy it completely,” the archaeologist wrote. Unfortunately, little more is known about the Sally Warren Mounds.

After this incident, the owner vigilantly protected the site, and the illicit digging stopped. Eventually the mounds were covered by thick vegetation, hiding them from view. A highway now divides the two mounds. When the development company Monterey Holdings recently purchased part of the site, its owners were unaware that their land contained Mound B. According to one of the owners, Peter Carmichael, it was only when they began clearing the land next to Cocodrie Lake to survey house lots that they discovered the mound. At that point they also noticed potsherds on the surface around the mound.

Having decided to preserve Mound B as a green space and plan their development around it, they asked the Conservancy to help them.

The Conservancy contacted Chip McGimsey, the Louisiana state archaeologist, to get information about the site. McGimsey, referring to the notes from 1982, said it was “Once a very nice two-mound site with associated midden area.” He added that “We don’t know much about it, but what is recorded is very encouraging.” When members of the Conservancy’s Southeast regional office visited the site, they found that it was largely intact.

Monterey Holdings decided to donate Mound B to the Conservancy. And at the behest of the company’s owners, Al Ater, a local landowner whose holdings included Mound A, agreed to donate it to the Conservancy as well. The two mounds that disappeared, and were then rediscovered, will now be preserved so that one day the Sally Warren Mounds can reveal their secrets. —Jessica Crawford
General Anthony Wayne was an important figure during the early formation of the American military. He led troops against the British during the American Revolution and was appointed commander-in-chief of the United States Army by President George Washington. During the 1790s he established a number of military forts along the Northwestern frontier of the United States as westward expansion continued. One of those forts, built in 1793 in what would soon become western Ohio, was Fort Greenville.

At the time of its construction Fort Greenville was the largest wooden fort in North America, covering over 50 acres. General Wayne ordered that eight blockhouses be built about 250 yards away from the main fort to provide an initial line of defense. Two years later, Fort Greenville would be immortalized by the signing of the Treaty of Greenville on August 3, 1795, which ended the Northwest Indian War and laid the groundwork for Ohio to become a state in 1803.

The fort was abandoned in 1796 and most of its ruins were destroyed as the town of Greenville sprang up on the site. The remains of Blockhouse 8, located across Mud Creek from the main fort, were preserved in a field for more than 200 years and largely forgotten until amateur archaeologist Tony DeRegnaucourt and others found them in 2002.

DeRegnaucourt and his crew discovered over 1,500 artifacts dating to the late 1700s as well as pit features and log stains. The blockhouse was a large, two-story structure measuring roughly 85 feet by 112 feet. It was surrounded by a stockade measuring about 200 feet on each side. Though only a small portion of the site was excavated, the research yielded a large amount of information. Nonetheless, there remains much to be learned about Blockhouse 8 and Fort Greenville.

The Burk family, who has owned this land for some time, was happy to give the researchers access to the site. The Burks are also interested in preserving this important piece of American history, and so they’re selling a 12-acre parcel that includes Blockhouse 8 to the Conservancy. —Josh McConaughy
The Garoga site is perched on a hilltop overlooking Caroga Creek, a meandering tributary of the Mohawk River. Also referred to as Garogo, or Castle Hill, it contains the remains of a 16th-century Mohawk village. This site has yielded important information about Mohawk demographics, village layout, and early trade with Europeans.

The site was first excavated in the late 19th century by Samuel Frey, who discovered and named it. In 1905, not long after Garoga’s discovery, M.C. Harrington did additional testing that focused on pit features. Subsequently David Dorn, then president of the now defunct Leatherstocking Chapter of the New York State Archaeological Association, excavated the site for a few days. From the time Frey conducted his investigations through the early 20th century, Garoga also attracted looters.

William Ritchie and Robert Funk of the New York State Museum directed extensive excavations of Garoga in the 1960s. They identified a minimum of nine longhouses within the main village area and they also confirmed the location of a short double palisade that runs across the entrance to the village site. In addition to uncovering house patterns and the palisade, the archaeologists found two burials, numerous hearths, and close to 100 pit features.

The high density of pit features

This longhouse was exposed during excavations directed by William Ritchie and Robert Funk in the 1960s.
The Protect Our Irreplaceable National Treasures (POINT) program was designed to save significant sites that are in immediate danger of destruction. The archaeologists also discovered a variety of artifacts including ceramics, pipes, a vast assortment of stone tools, bone and antler objects, shell, European trade goods, and a number of plant and animal remains.

The Garoga excavations have yielded several assemblages held in museums across the state. Many objects from the site are also found in private collections. Some of these contain excellent examples of trumpet-style and human effigy pipes, intricately carved antler effigies and tools, and marine shells obtained from other areas. Copper scraps, tubular beads made from repurposed kettle fragments, and other ornaments offer evidence of early trade with Europeans.

In the 1990s Dean Snow of Penn State University performed a thorough analysis of Garoga as part of his Mohawk Valley Project, which sought to better understand Mohawk settlement patterns and population trends. Snow suggested that the longhouse patterns found here, based on their length and the number of hearths they contained, would have housed more than 90 people on average. This reflects a change in settlement patterns, which took place between A.D. 1525-1580, that featured more compact villages with bigger longhouses that accommodated more people.

Garoga is a contemporary of another Conservancy preserve, the recently acquired Cayadutta site. Based on radiocarbon dating and artifact analysis, Snow estimated that both of these villages were occupied from A.D. 1525-1545. The sites are very similar topographically, with the main villages situated on top of a hill with steep, sloping sides. These positions were easy to defend, and nearby waterways offered abundant resources as well as transportation.

The two sites, which are approximately 10 miles apart, are close to Johnstown, which is located along the southern edge of the Adirondacks and northwest of Albany. Garoga’s longhouse patterns indicate that it was the larger community, consisting of between 800 and 900 residents, while Cayadutta likely had a population between 600 and 700. Both contain the earliest evidence of European trade goods in the Mohawk Valley.

The Garoga site has been listed in the National and State Registers of Historic Places since 1980. Even given the amount of work that has been done on the site, a substantial portion of the village remains unexcavated, including hundreds of pit features and portions of longhouses. This means that there is great potential for future research. Realizing the significance of the site, the landowner, Scott Orr, decided to sell it to the Conservancy to guarantee its permanent preservation.

—Kelley Berliner
The Conservancy Expands Dresden Preserve

EAST—The Dresden preserve, located along Maine’s scenic Kennebec River, contains archaeological remains that date to the Early through Middle Archaic Periods, approximately 10,000 to 5,000 years ago. Dresden is the largest site of this time period in Maine, and one of the largest in northern New England. The site was originally discovered by Richard Doyle, an avocational archaeologist. It was subsequently excavated by Arthur Spiess, Maine’s state archaeologist, who uncovered intact hearth and pit features as well as numerous projectile points, stone knives, and fish bones.

The Conservancy obtained an additional 4.3 acres, expanding the size of the preserve to 31 acres. This expansion was facilitated by Ed Friedman, the chairman of Friends of Merrymeeting Bay Land Trust, which transferred the additional property to the Conservancy. The parcel contains a substantial length of undeveloped shoreline that is home to numerous species of waterfowl and rare plants. The expansion will help guarantee that such natural habitats, as well as additional areas containing cultural resources, are permanently protected.

Prince Edward Soapstone Quarry Donor Wins Virginia Sherman Award

NORTHEAST—The Conservancy’s Eastern regional office recently took part in the presentation of the Council of Virginia Archaeologists (COVA) 2014 Virginia Sherman Award to Hanna Brooks Burress.

The award was given to Burress by Jack Gary, the president of COVA, in recognition of her donation of the Prince Edward Soapstone Quarry site to the Conservancy. The site is one of the largest and best-preserved prehistoric soapstone quarries in Virginia. Burress was nominated for the award by Andy Stout, the Conservancy’s Eastern regional director.

Each year COVA presents awards in memory of Michael Hoffman, Professor of Anthropology at the University of Virginia, and Virginia Sherman, Westmoreland County’s Historic Preservation Officer. The Hoffman Award is given to organizations and the Sherman Award to individuals. These awards recognize organizations and people outside of the professional archaeological community who have made significant contributions to archaeological and historic preservation in Virginia.
MIDWEST—The Conservancy has entered into an agreement to buy an additional 40 acres of the Silver Mound National Historic Landmark in Jackson County, Wisconsin. Silver Mound is a unique geological outcropping of Hixton silicified sandstone, a high quality, easily-worked stone much valued by prehistoric Native Americans as a raw material for tool manufacture. It was used for millennia, from the Clovis period to European contact.

About 1,000 prehistoric quarry pits dot Silver Mound’s wooded slopes and scores of prehistoric encampments and workshops surround it. The 40-acre parcel contains numerous cultural resources such as the Dwyer Rockshelter and a Late Paleo-Indian lithic workshop.

The Dwyer Rockshelter has seen limited test excavation that confirmed stratified cultural deposits. The single published radiocarbon date from the excavation is circa 7450 B.C. Additionally, the shelter evidences a small amount of rock art, including some poorly preserved red-painted pictographs. The Late Paleo-Indian period lithic workshop is located on a flat expanse below the rockshelter. Limited excavations there yielded Cody Complex artifacts, which are thought to be roughly 8,000–10,000 years old.

The opportunity to permanently preserve this portion of the National Historic Landmark arose when its longtime stewards, Jim and Donna Rankin, began to contemplate retirement and the sale of the KOA campground that they operated at Silver Mound. Wanting to protect its cultural resources, they offered to sell the parcel to the Conservancy prior to listing the remaining property with a realtor. We will purchase the property for approximately $135,000, payable over four years. The additional acreage will increase the size of the Silver Mound Archaeological Preserve to 184 acres, solidifying its position as our largest preserve east of the Mississippi.

The Conservancy Expands Protection Of A National Historic Landmark
Reviews

Constructing Community: The Archaeology of Early Villages in Central New Mexico
By Alison E. Rautman
(University of Arizona Press, 2014; 304 pgs., illus., $60 cloth; www.uapress.arizona.edu)

The Salinas region is home to majestic ruins of Spanish mission churches and historic pueblos, such as those seen at Abo, Quarai, and Gran Quivira in Salinas Pueblo Missions National Monument. Much less is known of the earlier, smaller native settlements of the area.

In this volume, Alison Rautman tells us how archaeologists use the material culture to reconstruct what life in the Pueblo world of central New Mexico was like over a period of 1,000 years. She finds they used their built environment—be it in the form of pithouses, jacal structures, unit pueblos, or plaza-oriented pueblos—to emphasize the unity of the village. Drawing on 20 years of research, she illuminates this part of the Southwestern culture, thus adding to our understanding of the entire region.

Discovering the Olmecs: An Unconventional History
By David C. Grove
(University of Texas Press, 2014; 222 pgs., illus., $55 cloth; www.utexaspress.com)

The Olmecs of southern Mexico are known as the “mother culture” of Mesoamerica because they made the first stone monuments, were the first to use a calendar, and produced early hieroglyphic writing. They are generally thought to be the precursors of the Maya and other advanced Mesoamerican cultures. They flourished for more than 700 years, from about 1150 to 400 B.C.

Author David Grove is an emeritus professor at the University of Illinois who has carried out archaeological research in Mexico for 50 years and is best known for his work at the Olmec site of Chalcatzingo, near Mexico City. In this small volume, he has produced a lively history of the intrepid archaeologists and their research in the Olmec heartland along the Gulf coast of Veracruz and Tabasco beginning in the 1920s. This region was—and still remains—a wild and remote part of southern Mexico dominated by coastal wetlands, heat and humidity, and mosquitoes, ticks, and snakes. The diminutive Tuxtla Mountains provide some relief from the tropical lowlands.

The first explorers were Frans Blom and Oliver La Forge of Tulane University in New Orleans, who traversed the region on horseback and by boat in 1925-26. They dodged rebel bands left over from the Mexican Revolution (ca. 1910-20) and succeeded in finding important Olmec stone monuments and sites, including the site of La Venta, one of the major Olmec centers, although they identified it as Maya.

Thirteen years later, Matt Sterling of the Smithsonian Institution conducted the first scientific excavations in the Olmec heartland at La Venta and Tres Zapotes. Sterling was the first to recognize the antiquity of the sites and to identify them as a newly discovered Olmec culture, and he excavated the first Olmec monumental stone heads and altars.

Grove continues to track the archaeologists who investigate Olmec sites. Discovering the Olmecs is a fascinating history of archaeological discovery that carries on to this day. The difficulties and dangers of research in such a remote place make this book an exciting saga of science and adventure.
One of the many fun things about American archaeology is that it is continually seeking new areas to explore and new sub-disciplines to cultivate. Urban archaeology is one of the newer disciplines that is attracting many scholars and much fieldwork. It is helped along by government rules that require archaeological investigations in advance of major new developments, and it is now paying huge dividends by gleaning new information from urban sites.

Two of the nation’s leading urban archaeologists, Nan Rothschild of Barnard College, Columbia University, and Diana diZerega Wall of the City College of New York, have produced this fine synthesis of the developing field. Beginning with an introductory survey of the evolution of American cities—a process much different from that of European cities—the authors trace the advancement of urban archaeology. They focus on case studies in New York, Philadelphia, Tucson, Oakland, and many other cities to highlight various aspects of the emerging field.

Archaeology is the study of the material culture of an area, but urban archaeology requires a much broader scope of study that can involve such diverse factors as race, class, and gender. The result is a much better understanding of America’s cities as they develop over time and of the people who live in them. The authors find that the city itself becomes an artifact defined through its landscape, planning, and infrastructure. This in turn leads to new insights regarding many aspects of urban life, including commerce and manufacturing as well as social structure. American cities are composed of various groups of immigrants that evolve over time, and archaeology can tell us much about those groups and their impact on the whole.

The Archaeology of American Cities is an outstanding introduction to a rapidly developing field in archaeology. Archaeologists and lay people will enjoy it and use it as a guide for further study of this fascinating field.
Colonial Chesapeake

When: April 26 – May 3, 2015
Where: Maryland and Virginia
How Much: $1,895 ($300 single supplement)

From early European settlements to later colonial capitals, the Chesapeake Bay region has played an important role in the founding and development of our nation. Come 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 the 18th-century town of Williamsburg, Virginia. Along the way we’ll visit the first capital of Maryland, St. Mary’s City, explore the bay-front town of Annapolis, and stop in at Mount Vernon. Local scholars will join us to share their expertise and explain how archaeology has assisted them in interpreting the region’s past.
Ohio Mound Builders

When: June 5 – 8, 2015  
Where: Ohio  
How Much: $1,095 ($215 single supplement)

Massive mounds and earthworks, some nearly 70-feet tall and others covering hundreds of acres, are the legacy of the Hopewell and Adena cultures that dominated the Eastern United States from 800 B.C. to A.D. 400. Archaeologists have found exotic mica objects, copper ornaments, burials, and the remains of wooden structures at many of the mound sites. The significance of the mounds, which often were built in animal and geometric forms, is still a subject of great study.

Our tour begins in Columbus, with a visit to the Newark Earthworks, a magnificent Hopewell Mound complex that once covered more than seven miles. Then it’s on to Chillicothe and the Hopewell Culture National Historic Park, now a flourishing center of Hopewell research. We’ll also visit Serpent Mound, a massive effigy mound that stretches more than 1,400 feet, as well as many other fascinating sites. Throughout the tour expert archaeologists will give their insights into the world of the mound builders.

San Juan River Trip

When: June 6 – 13, 2015  
Where: Utah  
How Much: $1,895 per person  
($175 single supplement)

Join our river adventure through the Anasazi world. From the vantage point of Utah’s San Juan River, you’ll experience one of the most scenic regions of the Southwest. We’ll begin our adventure with two full days of site visits on land, then we’ll board our boats and float down the San Juan River for four days, stopping often to visit Anasazi ruins accessible only by river. At night we’ll camp under the spectacular Southwestern sky.
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Since the inception of the Conservancy’s Living Spirit Circle in 2002, participation has grown to over 100 members. These dedicated members have included the Conservancy in their long-term planning to ensure that America’s past will always have a future.

This elite group is open to those who wish to make a lasting contribution by including the Conservancy in their will or estate plans, or by making a life-income gift such as a charitable gift annuity. The Conservancy would like to thank the following Living Spirit Circle members for their thoughtfulness and generosity.

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