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COVER: The Dunkirk Schooner sits at the bottom of Lake Erie. A legal battle is taking place between a company that wants to raise the well-preserved schooner and put it on display, and the State of New York, that wants to preserve it by leaving it on the lake floor.

CREDIT: Captain Steve Gatto
Following Ancient Peoples

In this issue of American Archaeology we tackle one of the most difficult and vexing problems of archaeology—the movement of ancient people and goods over long distances. (See “The Mesoamerican-Southwest Connection,” page 32, and “Polynesian Contact?” page 38.) For decades archaeologists have debated the extent of trade and influence between ancient cultures in the present day United States and the advanced cultures of Mesoamerica. The mound-building cultures of the Southeast have some similarities (temples on pyramids and art forms to name a few) with the Aztecs, Toltecs, and others. Evidence of trade between southern Mexico and the Southwest is growing with the recent discovery of chocolate at Chaco Canyon.

Possible evidence of a Polynesian presence in California adds another aspect to the debate over the peopling of the New World. Pre-Columbian contacts from Europe and elsewhere have been proposed for many years. Only one—a Viking colony in Labrador—has been proven. But the search continues. While it is unlikely that travelers before Columbus had much impact on the Americas, it is certainly possible that they could have visited. New technologies like ancient DNA could provide strong evidence. We must approach all these theories with an open mind, and American Archaeology will continue to report on the most current evidence as it becomes available.
Letters

Nineteenth-Century Coeducation

Tamara Stewart’s otherwise fascinating article on Edgar Lee Hewett (Breaking The Rules,” Summer 2011) contains one big historical blooper. Referring to the New Mexico Normal School (teachers’ college) in Las Vegas under Hewett’s presidency (1898-1903), Stewart writes that “the school welcomed women both as students and professors, a practice that was then unheard of.” Far from being “unheard of,” coeducation in public colleges and universities was routine by 1898. There have been women professors in the U.S. since the 1850s (probably the first was in 1853 at Antioch College), although faculties were still overwhelmingly male in 1898.

Normal schools in particular had been chock full of women since their beginnings at the end of the 1830s, including female heads as early as 1866 (Framingham Normal School, in Massachusetts). The historical record of the subordination of women is depressing enough. We don’t need to invent history to make it worse.

James Turner
Cavanaugh Professor of Humanities
History Department and Graduate Program
in History and Philosophy of Science
University of Notre Dame

Editor’s Corner

Mike Waters’ lengthy archaeological experience dates back to the ninth grade, when he was working on a site in San Diego. More recently he’s been working in central Texas, investigating a site known as Friedkin that he believes is 15,500 years old. (See “Making A Case For The Pre-Clovis,” page 20.)

Early in his career, Waters’ accepted the hypothesis that, some 13,000 years ago, the Clovis became the first people to enter the New World. The Clovis First model was then the most convincing explanation for the settlement of the Americas. But Waters was always willing to consider the possibility of a pre-Clovis settlement, should someone uncover convincing data.

That someone, as fate would have it, turned out to be him. But he hastens to add that his faith in the Clovis First model was also weakened by the work of other archaeologists over the course of the last two decades. Waters is now a firm believer in the pre-Clovis model, as are many other experts. “I think most people have shifted away from Clovis First,” said Dennis Stanford, a distinguished first American scholar.

Consequently, one of American Archaeology’s most vigorous debates, Clovis versus pre-Clovis, appears to be winding down. But does that mean the issue is settled? Have recent discoveries like Friedkin and Paisley Caves—where archaeologists have reported finding 14,000-year-old human coprolites—added so much weight to the pre-Clovis argument that there’s really nothing left to argue?

Gary Haynes, another first American scholar, thinks not. The debate may be losing vigor, but it won’t end, he said, until “we find a human skeleton that is directly dated older than Clovis.” Archaeologists have found some impressive pre-Clovis data, but no one has found that.

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fall • 2011
Smithsonian's National Museum of the American Indian

National Mall, Washington, D.C.—The critically-acclaimed exhibit “A Song for Horse Nation,” previously at the museum’s George Gustav Heye Center in New York, will travel to Washington with an expanded version which doubles its exhibition space to 9,500 square feet. The exhibition presents the epic story of the horse’s influence on American Indian tribes beginning with the return of horses to the Western Hemisphere by Christopher Columbus to the present day. The exhibit traces how horses changed the lives of native people from the way they traveled, hunted, and defended themselves, to how horse trade among tribes was the conduit for the magnificent spread of horses in the Plains and Plateau regions of the United States. Fifteen more objects were added to the exhibition, including a 16-foot high, hand-painted 19th-century Sioux tipi depicting battle and horse raiding scenes. Other highlights include a life-size horse-mannequin in fully-beaded regalia and Geronimo’s and Chief Joseph’s rifles. (202) 633-1000, www.americanindian.si.edu (Opens October 29)

Alutiiq Museum Archaeological Repository

Kodiak, Alaska—At the southern tip of Kodiak Island, where the land reaches far into the rough waters of the North Pacific, Alutiiq ancestors recorded their stories in stone. Carved into the bedrock of Cape Alitak, images of animals and people guard the storm-tossed entrance to the Alutiiq world. The new exhibition “The Cape Alitak Petroglyphs” explores how these images were made, what information they contain, and how archaeologists are working to preserve them. (907) 486-7004, www.alutiiqmuseum.org (Through May 2012)

Deer Valley Rock Art Center

Phoenix, Ariz.—From the Archaic to the present, people have inhabited Perry Mesa, located in Agua Fria National Monument, leaving their marks on the landscape. The exhibit “Landscape Legacies: The Art and Archaeology of Perry Mesa” examines how these marks changed over time. Pat Gorraiz’s stunning photographs of the rock art, architecture, and agricultural practices of Perry Mesa reveal the past. This exhibit is a collaboration between Agua Fria National Monument, Pueblo Grande Museum, and Arizona State University. (623) 582-8007, http://dvrac.asu.edu (Through January 31, 2012)

Arizona State Museum

University of Arizona, Tucson—The exhibit “Many Mexicos: Vistas de la Frontera” explores 3,000 years of varied Mexican histories through some 300 objects, including objects such as a Maya ritual corn vessel, Spanish Colonial retablos, Santa Anna’s sword and uniform, Maximilian’s ring and Carlota’s brooch, and a sombrero that may have belonged to Pancho Villa. This exhibit interprets the broad sweep of Mexican history from the perspective of the borderlands—a vast, contested space that was the outer rim of Mesoamerica in the pre-Columbian period and later evolved into the northern frontier of Spanish-Indian relations following the conquest of Mexico. The establishment of the international border between the United States and Mexico in the mid-19th century set the stage for a new set of cross-cultural contacts and commercial exchanges. (520) 621-6302, www.statemuseum.arizona.edu/exhibits (Through 2012)
CONFERENCEs, LECTURES & FESTIVALs

Utah Rock Art Research Annual Symposium
September 23–26, Price, Utah. Presentation sessions will be devoted to the Barrier Canyon Style and Fremont rock art, with a keynote presentation by Polly Schaafsma, the author of The Rock Art of Utah and many other books. There will be field trips to rock art sites in Nine Mile Canyon and the San Rafael Swell. www.utahrockart.org/symposium

Moundville Native American Festival
October 5–8, the University of Alabama’s Moundville Archaeological Park, Moundville, Ala. Ancient rulers and thousands of their subjects thrived in a city behind huge wooden walls that once surrounded the Moundville site. Each year, descendants of this vibrant native culture return, celebrating the South’s rich cultural heritage at the Moundville Native American Festival. Repeatedly named one of Alabama’s Top 20 Tourism Events, the award-winning festival features performers, artists, craftpeople, demonstrations, native foods, living history camps, and hands-on children’s activities that entertain and educate visitors about the rich culture and heritage that makes Southeastern Native American culture unique. (205) 371-2234, http://moundville.ua.edu

Biennial Jornada Mogollon Archaeological Conference
October 7–8, City of El Paso Museum of Archaeology, El Paso, Tex. Archaeologists working in the Jornada Branch of the Mogollon culture area in the American Southwest present papers on their recent research. The conference is hosted by the City of El Paso Museum of Archaeology and the El Paso Archaeological Society. (915) 755-4332, http://moundville.ua.edu

Plains Anthropological Conference
October 26–29, Marriott University Park Hotel, Tucson, Ariz. A variety of papers, posters, and symposiums will be presented on Plains research. There will also be a Friday night banquet with keynote speaker David Hurst Thomas, and a tour to ancient Sinagua ruins of the Verde River Valley. Contact Maria Nieves Zedeño at mzedeno@email.arizona.edu, or www.pac69.com

Southeastern Archaeological Conference
November 2–5, Hyatt Regency Jacksonville- Riverfront, Jacksonville, Fla. The conference features the latest archaeological research in the Southeastern U.S. There will be a variety of events, including the Museum of Science and History’s annual Native American Festival and an excursion to Fort George Island. Contact Ken Sassaman at (352) 392-6772, sassaman@ufl.edu, or www.southeasternarchaeology.org

New Mexico Archaeological Council’s Fall Conference
November 12, Hibben Center, University of New Mexico, Albuquerque, N.M. This year’s conference will explore the theme “Pre-Ceramic Hunters, Foragers, and Early Farmers in New Mexico,” providing an opportunity to share new discoveries of New Mexico’s pre-ceramic past. Contact Jim Railey at jrailey@swca.com, or www.nmacweb.org

Royal Ontario Museum
Toronto, Ontario, Canada—The remarkable new exhibit “Maya: Secrets of their Ancient World” highlights the ancient Mesoamerican civilization’s Classic period (A.D. 250-900) and its achievements. In collaboration with Mexico’s National Institute of Anthropology and History, the ROM and Canadian Museum of Civilization bring together a stunning collection of nearly 250 artifacts, including sculptures, ceramics, masks, and other precious works, many of which were associated with Maya temples and palaces and have never been exhibited in Canada. Visitors will also learn about the complex calendar, elaborate writing system, and sophisticated architecture and urban centers developed by the Maya. (416) 586-8000, www.rom.on.ca (November 19, 2011-April 9, 2012; Canadian Museum of Civilization: May 18-October 28, 2012)
In the News

African American Village Uncovered In Central Park

Nineteenth-century village was razed to build New York City’s park.

This summer archaeologists discovered the remnants of Seneca Village, a little known middle-class black settlement demolished in the mid-1800s to make way for Central Park. Researchers from NYU, City College, and Columbia University, who founded the Institute for the Exploration of Seneca Village History, said their excavation sheds light on the daily lives of the inhabitants of the village and draws attention to its importance as the first significant community of African American property owners in New York City. About 300 people, predominantly middle-class blacks, lived there from 1825 to 1857. It was also home to Irish and German immigrants.

The village included houses laid out on the city grid, three churches, a school, and several cemeteries. The city razed everything in 1857 after it seized the property for the park. According to Nan Rothschild, a Columbia University archaeologist, news accounts during the eviction period, when about 1,600 people throughout Manhattan were displaced, erroneously portrayed Seneca Village as a shantytown. The myth persists today.

“Many people think of African Americans during the mid-19th century as either enslaved or free,” Rothschild said. “They don’t realize that some of them were middle class and owned property.” Seneca Village residents worked as teachers, grocers, laborers, mariners, sextons, and porters.

The eight-week dig focused on the foundation of a three-story wooden house where William Wilson, a sexton at a Seneca Village church, lived with his wife and eight children, as well as the backyard of another house. “Their stuff is still there. It’s a reminder that there was a deep African American presence in New York City, and they were people of stature,” said Diana Wall, an archaeologist at City College.

Chinese porcelain and other distinctive ceramics discovered at the site reflect the community’s middle-class status, said Wall. Archaeologists also found the leather sole and fabric upper of a shoe, possibly worn by one of the Wilson children. “It was very moving,” she said. Other artifacts include butchered cow and pig bones, an iron teakettle and roasting pan, portions of a chamber pot, a stoneware beer bottle, a toothbrush handle, and a cookie jar lid. Soil samples will be analyzed to identify pollen and seeds that will reveal what plants were grown in gardens and what kind of trees and vegetation were in the area.

Prior to digging, the archaeologists spent about 10 years researching documents, extracting soil cores, and conducting ground-penetrating radar studies to identify the best places to excavate. It took five years to get the city’s permission to dig. About 38 million people visit the park each year, so the archaeologists were required by the Central Park Conservancy to backfill their holes each week and security guards protected the site much of the time. —Paula Neely

These items were found at the site (clockwise from top left): a bone toothbrush handle, a piece of a lamp or glass candlestick holder, two pieces of a yellow ware pitcher, the base of a glass bottle, a piece of a Chinese porcelain vessel, a ceramic jar top.
Archaeologists working at Pig Point have discovered wigwams dating to 1000 B.C., the oldest known structures in Maryland. They have also uncovered a 9,300-year-old hearth at the site, which makes it one of the oldest known settlements in the state.

Al Luckenbach, Anne Arundel County archaeologist, is directing the excavation that began three years ago. Pig Point was discovered five years ago by the site’s landowner, who found mussel shells and pottery when he installed a water pipe. The site, which is on the Patuxent River in central Maryland, has yielded artifacts dating from A.D. 1540 to 7300 B.C. Pig Point covers between two and three acres and it’s thought that 200 to 300 people could have lived there at a given time.

Luckenbach has found continuous ancient cultural deposits reaching a depth of seven feet, which is very unusual for this region where Native American sites tend to be shallow. “We never thought we’d find a prehistoric site that was seven feet deep,” he said. Pig Point is not only deeper than other sites in the area, but it is also better preserved. Maryland’s acidic soil tends to break down artifacts, but Pig Point has freshwater mussel remains in the soil that reduce its acidity. “We were amazed how well it’s preserved. Usually we don’t find bone tools because of the acidic soil,” Luckenbach said, adding that the site has bone tools as old as 3,000 years.

The archaeologists have found numerous artifacts, including Hopewell projectile points, Adena copper beads, and carved stone pipes made of raw materials from the Ohio River Valley. These exotic artifacts suggest a trade network that covered a long distance. “Maybe it [Pig Point] is on a main trade route because it’s unusual for a Maryland site to have those artifacts,” Luckenbach said.

In addition to the mussel shells, the archaeologists have uncovered other evidence of the villagers’ diet in the form of game and fish bones, oyster shells, walnuts, and hickory nuts. Though it’s believed that the area’s environment was markedly different when Pig Point was first occupied, Luckenbach noted that the faunal and floral remains are similar to what one finds in the region today.

Luckenbach said Pig Point is the most important prehistoric site in Maryland. In addition to the discoveries, his project is also remarkable in that, during a time of tight government budgets, it’s funded in part by Anne Arundel County and the State of Maryland. —Nicole Kliebert
The largest wildfire recorded in New Mexico history burned 62 percent of Bandelier National Monument, including 37 percent of its archaeological resources. In total, the Las Conchas fire, which began on June 26 due to a tree falling on a power line, burned 156,593 acres in New Mexico before it was fully contained on August 1. Nearly 21,000 acres of that total were within Bandelier.

“This environment is designed to burn every 10 to 15 years,” said Rory Gauthier, an archaeologist at Bandelier. Fires in 1977 and 1996 burned 14,000 and 16,000 acres respectively, and there is evidence that fires scorched this area as far back as the mid-1400s. Though archaeologists haven’t yet examined the damage, they think that the fire could have affected approximately 1,100 sites. No other recorded blaze has burned such a broad portion of the park.

Archaeologists plan to assess all burned archaeological sites in the upcoming year, and they’ll perform any emergency treatment that’s required. The treatment will be prioritized according to the severity of the burn and the probability of erosion. Though surface features and artifacts are vulnerable, previous fires have had little or no effect on subsurface deposits at Bandelier. Archaeologists will also examine the condition of sites outside of the burned area to assess and control the potential damages of flash flooding.

Heavy rain recently caused a flash flood that quickly overflowed the concrete and sandbag barriers. The flood, which carried piles of burned wood and rocks, stopped just short of the visitor center. Fortunately, Bandelier’s major archaeological sites did not suffer any major damage, Gauthier said.

Research and planning will continue for the next three years and long-term rehabilitation will be influenced by the concerns of local Native Americans. Fire-killed trees could be moved to slopes to form erosion barriers, especially above archaeological sites. The staff plans to remove heavy vegetation from archaeological sites that could serve as fuel for another fire.

Sections of Bandelier reopened on July 15. As dangers are assessed and addressed, more areas will reopen, though most of the park will remain closed for the foreseeable future. The visitor center is closed indefinitely due to the threat of flash flooding. Consequently, park visitation has decreased 80 percent compared to last year. Prior to the fire, visitation was up three percent.

Based on climate models, the scale of these wildfires is predicted to become the norm, rather than the anomaly. “Any archaeological sites in areas where there are fuels... are going to burn,” Gauthier said. — Raffi E. Andonian

Archaeologists have yet to determine the damage to cultural resources.

The fire burned roughly 1,100 archaeological sites, including this pueblo.
Discoveries At Fort Vancouver

A dog burial and numerous hearths are among the finds.

Field school discoveries at Fort Vancouver National Historic Site in Washington State are providing new insights into how the multicultural employees of the Hudson’s Bay Company lived and created a society that was new to the Pacific Northwest, according to Robert Cromwell, an archaeologist at Fort Vancouver.

Cromwell said company workers, skilled at fur trapping, fishing, agriculture, sheep tending and lumbering, lived outside the fort, where the British company was headquartered, from 1829 to 1860. Occupants included English and Scotsmen, French Canadians, Métis, Portuguese, Iroquois, Hawaiian Islanders, and representatives of over 20 tribal groups that lived in the Pacific Northwest. At its peak, about 600 to 1,000 people lived there in 1840. It was the largest colonial village between Sitka, Alaska and San Francisco, California.

This summer, 19 field school students investigated the areas between 12 house sites in the village. They unearthed two dog burials, a smudge pit, a large trash pit, and part of the clay floor and wooden doorsill of a house. The dog burials were the most surprising finds, according to Cromwell. Their skeletons were fully articulated, and one of the dogs was wrapped in a green blanket and buried just outside the threshold of a house they found this summer.

He said the burials contradict accounts written by the English and Scottish managers who lived inside the fort that the workers raised dogs to eat them. “Someone very caringly buried these animals. It opened our eyes to the fact that the workers were not all cruelly killing and eating them,” he said. But he added that the explorers Lewis and Clark recorded information about the Chinooks eating dogs in 1805. “It was a cultural tradition.”

One of the dogs is about the size of a dachshund, the other is about the size of a sheep dog. Further analysis of their remains will be conducted to learn more about the breeds, which probably no longer exist, he said.

Students also discovered what appears to be a smudge pit in the center of the village, where archaeologists unearthed eight hearths that contained charcoal, fire cracked rock, burned bones, and ceramics and glass. Cromwell said the area might have been used for smoking hides to make them softer or for cooking. Smoke also may have been used in the 1830s in an effort to control the cholera epidemic, he said.

Historical information, ranging from clerk’s journals to maps and sketches, indicates that the areas surrounding the houses were used as gardens, to house livestock, and for various other subsistence activities. Soil samples gathered this summer will be analyzed for pollen and seeds to help researchers identify what the villagers grew and how they used the land.

The National Park Service has conducted archaeological research at Fort Vancouver for over 60 years, mostly on the remains of the fort. — Paula Neely
Researchers excavating on Calvert Island on the central coast of British Columbia, Canada, found a large village that could be as old as 10,000 years. The village was uncovered this spring by archaeologist Farid Rahemtulla of the University of Northern British Columbia, who directed a field school in partnership with two First Nations bands, the Heiltsuk and the Wukinuxv.

Digging test units and taking core samples, the researchers recovered shell and animal bones. They also found stone tools that were eroding out of a bank. The site appears to extend some 450 feet along the coast. "It’s fairly deep and a large site by coastal standards," Rahemtulla said.

Though Rahemtulla has no firm dates yet, the site’s stone tools are similar to those of Namu, another site on the coast. Namu’s stone tools were dated from 6,000 to 10,000 years ago. Samples of items recovered from the site are being radiocarbon dated, but the results aren’t expected until later this year. Faunal samples are also being analyzed to determine what the villagers ate and when they ate it. "Certain types of animals and fish are only available certain times of year," he said. Consequently this information could indicate if the site was occupied seasonally or year-round.

Rahemtulla excavated the site at the suggestion of Elroy White, an archaeology consultant and member of the Heiltsuk First Nation, who served as a liaison between the archaeologist and the natives. "The university and the First Nations work together on this site," Rahemtulla said. "We are doing it [digging] in a respectful manner to the First Nations and have full collaboration with them."

It was thought that the site could be Luxbalis, a native village that, according to oral traditions, was abandoned at an unknown time. White hoped that the field school would reveal the date of abandonment as well as other important information about the village. But Rahemtulla was subsequently informed that the site is not Luxbalis, which is believed to be on a different part of the island. He said First Nation’s elders know the name of the site and they will reveal it to him soon. "It’s a very interesting project trying to correlate oral history with the archaeology," White said.

The researchers hope to learn when the recently uncovered village was abandoned. The results of the radiocarbon dating could answer this question, but until he receives those, Rahemtulla can only speculate. For now, the cedar trees standing on the site are the most telling evidence of when it was deserted. "We think these trees must be at least between 100 and 200 years old," he said. Because of their density, he believes they could only have grown after the village was abandoned. —Nicole Kliebert

This bone awl was recovered during the excavation.
Every shipwreck, it is said, has a story to tell. But for a century and a half the two-masted wooden schooner that lies at the bottom of Lake Erie several miles off Dunkirk, New York, has remained a story untold—its narrative lost in the mists of time as surely as the wreck itself once vanished into some of the lake’s deepest, darkest, and coldest waters.

No historical accounts that chronicle the loss of the schooner and its crew have been found yet. The date and circumstances of its demise—even its name—are murky. But the extraordinary degree of preservation of the wreck, discovered with its masts still standing and its hold brimming with wheat, barley, and hickory nuts, has made it a valuable time capsule of early commerce and maritime technology on America’s inland seas.

“The schooner is a rare and extremely intact example of an early 19th-century inland schooner, complete with her principal spars, hardware, and design features,” says Mark Peckham, director of the New York State Historic Preservation Office. “Schooner wrecks are not uncommon in the Great Lakes, but few of them pre-date, or are as well preserved as, this one.”

Northeast Research LLC claims the boat is the historically significant Caledonia/General Wayne. But so far they’ve failed to convince the courts.

By Mike Toner
At a depth of 170 feet, Lake Erie’s 37-degree waters and the low levels of oxygen have slowed the deterioration of the wooden hull to a crawl. Local and regional divers have known the location of the wreck and its remarkable state of preservation for some time. It is even listed in a state recreational diving guide. In 2004, however, Northeast Research LLC, a salvage firm owned by Richard Kullberg, retrieved several artifacts, including a ship’s compass, from the wreck and petitioned federal courts for permanent salvage rights. That proved to be the opening volley in a rancorous seven-year dispute among archaeologists, salvors, historians, and public officials over who owns the wreck and who should have a chance to tell its story.

So far, a succession of legal and administrative decisions have gone against the firm. In 2008, the State of New York, citing “desecration of human remains” at the site, revoked Northeast’s permit for limited investigational excavations. In 2009, the National Park Service added the wreck site to the National Register of Historic Places. And twice in the last year, federal courts have ruled that the Dunkirk Schooner belongs to the state of New York—a forceful rejection of the “finders, keepers” principle enshrined in centuries of admiralty

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In 2010, U.S. Magistrate Judge Leslie G. Foschio ruled that because of the firm's actions amounted to “little more than plundering and looting” the company had forfeited any salvage rights. That decision was affirmed in federal district court earlier this year.

Preservationists have hailed the legal decisions as a landmark affirmation of the Abandoned Shipwreck Act of 1987, which Congress passed to prevent damage to historic shipwrecks by divers and looters by making them the cultural property of the states in whose waters they lie. In the Great Lakes alone, the act potentially applies to more than 3,000 known wrecks and hundreds more yet to be discovered.

Northeast's owners have appealed the Dunkirk case to the U.S. Circuit Court of Appeals. After reportedly spending as much as one million dollars on teams of technical divers, work boats, equipment, consultants, and lawyers, they are not about to give up their dream of fully excavating and raising the schooner, and preserving it in a waterfront museum in nearby Buffalo.

Pat Clyne, part owner and spokesman for Northeast, says the state of New York doesn’t have the millions of dollars that would be needed to raise and preserve the ship. “We’re not looters or treasure hunters,” he says. “We are professional salvors. The ship itself is a treasure. We want to do everything we can to preserve it.” He wants the public to share the sense of wonder he felt the first time he dove into the depths of Lake Erie and saw the schooner in the gloom. Despite 40 years of experience in underwater treasure recovery operations in the Florida Keys, Clyne was awestruck. “It was mind-boggling,” he recalls. “It was a ghost ship, just sitting there on the bottom, shrouded in silt with its masts still upright.”

Absent an identity, however, it has been difficult for the firm to prove its argument that the schooner is not abandoned, and therefore doesn’t belong to the state. Northeast contends that the wreck is actually that of the Caledonia.
a Canadian fur-trading vessel built in 1799. Commandeered by the British at the outbreak of the War of 1812, the Caledonia was subsequently captured by American forces and used in Captain Oliver Hazard Perry’s defeat of the British fleet on Lake Erie in 1813. After the war, the ship was sold to Pennsylvania merchants Rufus Reed and John Dickson, who renamed it the General Wayne, and refitted it for Great Lakes commerce. Because Reed was an abolitionist, Northeast researchers believe it may also have been used to ferry runaway slaves to freedom in Canada.

If the firm’s contention is correct, the schooner would, indeed, be an important relic of Great Lakes’ maritime history. But archaeologists and New York officials say the claim, which is based on a historic museum sketch of the Caledonia showing architectural similarities to the Dunkirk Schooner as well as questionable research, is largely conjecture. The last historical mention of the General Wayne on the Great Lakes was published in 1818. But an 1834 gold coin found in the cabin of the Dunkirk Schooner indicates it did not sink until, or after, that date.

“it is highly unlikely that it is the Caledonia/General Wayne,” says Arthur Cohn, a specialist in shipwreck archaeology who is the executive director of the Lake Champlain Maritime Museum in Vergennes, Vermont. Cohn, who has not dived the wreck, but has studied pictures and illustrations of it, says the Dunkirk Schooner is longer than the Caledonia and was likely built years after the General Wayne vanished. He says the schooner’s flattish bottom, straight, rather than curved, sides, and 18-foot width suggest that it was one of a generation of vessels built to pass through the narrow locks of the Welland Canal, the man-made waterway that connects Lake Erie to Lake Ontario. The canal opened in 1829.

Cohn says Northeast “appears wholly committed to manufacturing a complex, self-serving, and unsubstantiated hypothesis” concerning the boat’s identity. “There is neither archaeological nor historic evidence that points to the Dunkirk Schooner being the Caledonia/General Wayne any more than the thousands of other commercial schooners that plied the Great Lakes during the first half of the 19th century.”

But he adds that the absence of a name in no way diminishes the schooner’s historical significance. “A wreck like this has extraordinary potential,” Cohn says. “The Great Lakes were highways of the industrial revolution. Many settlers heading west made the first leg of their journey not in a covered wagon, but in a Great Lakes schooner. During this period, ships were constantly evolving as builders designed craft that could not only navigate open water but the growing number of man-made canals. Every shipwreck, especially one like this, contains a collection of things that reflect the culture and technology of the period.”

A technical diver (someone certified to dive at great depths) examines the openings in the transom.

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But Cohn and other archaeologists say Northeast’s efforts to establish the identity of the wreck have damaged the site’s archeological integrity and done little to take advantage of its rich cultural potential. As the court-appointed “salvor-in-possession” the company had the exclusive, albeit temporary, right to investigate the wreck and its cargo with an eye toward identifying it. Since the vessel’s identity—or lack of it—also bore on New York’s claim of ownership, the state in 2008 issued a permit for limited archaeological excavation by Northeast divers. But the New York State Museum imposed guidelines about the scope of the work and rules to be followed in the likely event that human remains were discovered. Northeast, for its part, agreed to hire two archaeological consultants to guide its investigation.

“We had high hopes that the project would be a precedent for private and public collaboration on archaeology,” says Kenneth Vrana, president of the Center for Maritime and Underwater Resource Management (CMURM) in Laingsburg, Michigan, who was one of the consultants. “What actually happened was very, very sad.”

Because the depth of the wreck requires the use of skilled technical divers, Northeast’s archaeological consultants did not dive on the wreck themselves, but relied on reports from the company.Late in the summer of 2008, well after the excavation had been underway, Jim A diver views the encrusted tiller that was used to steer the schooner.
Herbert, a local charter operator who takes divers to shipwrecks, took some of his customers to the site. The accounts from those divers provided the first independent report of what had been happening 170 feet below the surface.

The divers noted that the roof of the cabin had been damaged. They also saw a bag on the deck that contained a mixture of human bones, the remains of as many as three individuals, that Northeast had not yet reported to state authorities. The divers informed Herbert of this, and he in turn informed the state officials.

“I was very upset,” Vrana says, when he discovered that the company had made numerous dives on the wreck without telling him. He told the New York State Museum that he was “outraged that anyone would treat this historical shipwreck in such a destructive and disrespectful manner.”

State archaeologist Christina Rieth was outraged, too. She promptly yanked the company’s permit, charging that “removal and dismantling of planks from the schooner’s cabin roof, dredging the cabin contents, and the haphazard deposit of a table and other furniture on the vessel’s deck,” had destroyed valuable contextual information that might have been gleaned from the wreck.

To emphasize the importance of the wreck, the federal government, moving with unusual speed at the state’s request, added the site to the National Register of Historic Places. The initial request for an official determination of eligibility for listing was approved within a day of its receipt. “We wanted to acknowledge the importance of the site,” explains National Park Service archaeologist Erika Martin-Seibert. I think the listing helped save the site,” she adds. “Going into court with a site that is listed in the National Register, versus one that is not, is significant. If it is on this federal list, it is a powerful indicator that the wreck holds important information potential that deserves both special recognition and preservation.”

Northeast’s divers have acknowledged removing some planks from the roof of the schooner’s cabin to gain access for their excavation, and that some weakened portions of the ship’s bulkheads collapsed during their work. But Peter Hess, the firm’s attorney, says the most serious damage was caused by “unauthorized intruders,” and he notes the inability of law enforcement agencies to protect the wreck from looters. He insists that the disturbance of human remains was an inevitable result of the hydraulic dredges that divers use for underwater excavations. This equipment doesn’t permit the kind of precision excavations seen at terrestrial sites.

Clyne says Northeast actually tried to protect the wreck from “interlopers” by putting a no trespassing sign on the
wreck and citing the firm’s court recognition that it was the sole salvor in possession. But it was “obviously impossible” for the firm to provide around-the-clock protection of the site and he says the state ignored the firm’s pleas for help in protecting it.

He also says the firm’s divers didn’t actually “recover” human remains from the wreck, but rather stored them in a bag in the ship’s cabin for later analysis. But Cohn says the appearance of human remains should have halted work at the site instantly. “The most egregious of all their activities was the desecration of human remains,” he says. “And they were clearly understood to be human because they were described in dive log entries as ‘human,’ ‘a femur,’ ‘femur or arm bone,’ ‘another arm bone.’ Even after their discovery, the excavation and disturbance continued unabated.”

Under terms of their now canceled permit, Northeast was also supposed to send all recovered artifacts to the Mercyhurst Archaeological Institute in Erie, Pennsylvania, for conservation and curation. Jeff Illingworth, the director of curation at Mercyhurst, says the institution has received only a handful of artifacts. The rest, according to attorney Hess, have been retained by the company and kept in a storage warehouse freezer.

In all, more than 100 artifacts have been recovered from the wreck, most from its small, silt-filled cabin. In addition to a scatter of coins with dates ranging from 1797 to 1834, two ship’s compasses, oil lamps, buttons, glass, and ceramic dinnerware, there were a number of items that clearly attest to the presence of women on board when the ship sank. The list includes ornate brass brooches, rings, earrings, a bracelet, and a shell comb. Other items attest to the highly preservative effects of Lake Erie’s cold water, including a piece of shoe leather, a leather pocket book, fragments of a Bible, and a leather jacket of a journal by Harriet Newell, a missionary whose writings were first published in 1812.

Based on the vessel’s architectural characteristics and diagnostic artifacts, Vrana and James Reedy, a research associate of CMURM and lead author of its 2008 project report, believe the schooner plied the Great Lakes between 1800 and 1850, most likely between the 1820s to the 1840s. The ship’s cargo suggests that it sank sometime after autumn harvest time, perhaps in a late season storm. “The cargo appears to have consisted primarily of hickory nuts and mixed grain,” he says. “During the 19th century, virtually all types of grain were used in the production of alcoholic beverages, and there were numerous whiskey distilleries around the Great Lakes. Hickory nuts were used as flavoring in at least one type of whiskey, and consequently were a viable commercial product.” Although such clues haven’t yet pinpointed the identity of the schooner, Vrana and Reedy believe the

The mussel-encrusted bow of the ship is illuminated by a diver.
Evidence has helped narrow the most likely candidates to four similarly sized schooners that were lost during that period—the Dayton, the General Harrison, the Pennsylvania, and the South America. They also think it could also be a vessel that’s not mentioned in historical documents.

Regardless of its name—or lack of—the Dunkirk Schooner case begs the question of the wisdom of raising shipwrecks. Northeast’s goal of ensconcing the schooner in an aquarium somewhere on the shore of Lake Erie is in part driven by the public’s fascination with shipwrecks wrested from the deep. More than seven million people, for instance, have visited King Henry VIII’s Mary Rose since it was raised from the waters off Portsmouth, England in 1983. But the task of caring for an artifact as large and complex as a shipwreck can be daunting. Despite tens of million of dollars spent on the Mary Rose, conservation work on the ship won’t be finished for at least another five years. At least $17 million has been spent to care for the Confederate submarine H.L. Hunley since it was raised from Charleston Harbor in 2000. Some estimate the cost of the iron-hulled sub’s conservation and curation could eventually total $100 million.

“Many people who want to raise a ship don’t understand that once you do, it can take decades to conserve it and you have to be prepared to take care of it forever and ever,” says Carrie Sowden, archaeological director of the Great Lakes Historical Society in Ohio. New technology such as side scan sonar and remotely operated underwater vehicles is making it easier to locate shipwrecks. A recent survey of the Hudson River, for instance, found more than 200 wrecks. In situ preservation is the preferred option for such sites under UNESCO’s Convention on the Protection of Underwater Cultural Heritage.

Though Cohn is not opposed to raising shipwrecks in all cases, he says the rush to raise historic wrecks in the Great Lakes has had tragic consequences. “Take the case of the Alvin Clark,” he says. “Built near Detroit in 1846, it sank in 1864 in Lake Michigan’s Green Bay. In 1969, the perfectly preserved schooner was found by amateur salvors and raised. The boat was in such amazing condition that it floated once the water was pumped out of it. Despite the best of intentions, the boat decayed over the next decades and was bulldozed in 1994.

“The French and Indian War, Revolutionary War, and War of 1812 history led to numerous significant wrecks being left behind on Lake Champlain’s bottomlands,” he adds. “Between the mid-1800s and the mid-20th century, many of these wrecks were recovered as beloved historic relics and brought to the surface to provide a tangible connection between the people of the day and their forefathers. These well-intentioned efforts nearly all ended in the destruction of the boat.”

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These are some of the artifacts that were recovered from the ship by Northeast Research. (Top) A small oil lamp. (Above) Sherds from a multicolored china bowl.

This brown, salt-glazed jug has a faint cobalt blue flower design on the upper shoulder opposite the handle.
Making A Case For The Pre-Clovis

Archaeologists believe they have found a huge cache of 15,500-year-old artifacts in central Texas.

Field school students work in a trench at the Friedkin site.
It’s 10 a.m., and the temperature is already above 90 degrees. The glare from white limestone outcrops seems to double the intensity of the sunlight. Tall grasses stand immobile with no breeze to bend them. But Buttermilk Creek gurgles in its streambed under the shade of oak trees. Deer stop to drink, then scatter, leaping over fences and running past prickly pears. Named for the dissolved limestone that sometimes colors the water murky white, the creek on this visit is clear and blissfully cool. It’s not hard to see why ancient people would have visited this valley and its source of water.

And visit it they did, according to archaeologist Michael Waters, the director of the Center for the Study of the First Americans at Texas A&M University. In their fifth year of excavating at the Debra L. Friedkin site along Buttermilk Creek, Waters and his team have found evidence of human occupation dating back 15,500 years. “When people found this place, they kept coming back,” says Waters.

Archaeologists have discovered one of the most complete records of prehistoric life here as well as the most extensive collection of artifacts—more than 15,000—older than the Clovis period (approximately 12,800 to 13,100 years ago). In fact, Friedkin has yielded more evidence of a pre-Clovis occupation of North America than all of the continent’s other pre-Clovis sites combined, according to Waters.

A barbed-wire fence and gravel road are the only things separating Friedkin from the Gault site, where the largest collection of Clovis artifacts—over 600,000—has been found. (Gault has been a preserve of The Archaeological Conservancy’s since 2007.) Michael B. Collins, an archaeologist at Texas State University and chairman of the Gault School of Archaeological Research, began work at Gault in 1999. Waters was involved in the early excavations at Gault, and he and Collins always suspected the archaeological site extended past the Gault property boundary. In 2006, the Friedkin family, owners of the land directly adjacent to Gault, agreed to an excavation on their property. Now the two projects operate within shouting distance of one other.

Having two teams side by side has “huge advantages,” says Collins. The two sites are “different in terms of the scholars working there, the perspectives, the methods being employed, and so forth. And if two independent projects come up with comparable results, that’s a more powerful finding than when one does.”
As soon as they started digging, Waters’ team realized they had discovered a remarkable record of human history. They found artifacts from the late prehistoric through the Paleo-Indian periods stacked like a layer cake. There were numerous items from the Clovis period, including bifaces, flutes, blades, and other tools. The most exciting finds at Friedkin, however, came below the Clovis layer, where Waters’ team found more than 15,500 artifacts, which they refer to as the Buttermilk Creek Complex. Most of these were stone flakes chipped off in the process of making tools, but the haul also included 56 choppers, bifaces, bladelets, and scrapers.

The “Clovis-First” theory, which for decades had been widely accepted by archaeologists, holds that the first human inhabitants of the New World arrived from Siberia around 13,000 years ago by crossing a land bridge that connected Asia and Alaska during the last ice age. People then moved south through an ice-free corridor located east of the Rocky Mountains. From there, they spread out across the Americas.

During the last several decades archaeologists have discovered numerous sites in North and South America that are said to pre-date the Clovis period, yet some experts either hesitate, or simply refuse, to accept these findings for various reasons. Waters suspected other archaeologists would question the site’s stratigraphy because its clay soils are known to expand when wet and contract when dry, and this movement is thought to dislodge the artifacts from their original contexts, thereby precluding stratigraphic dating.

“There is an old model that states these soils are formed by a self-mulching process where everything churns around, but it turns out that this model was based on nothing more than someone’s idea,” says Waters. “It got ingrained in textbooks and everyone learned it, but it’s not true.” Recent studies by soil scientists have concluded that these clay-rich soils in fact don’t churn, and consequently they maintain their stratigraphic integrity and the artifacts found in them can be accurately dated, according to Waters.

Radiocarbon dating is often used to determine the age of artifacts, but it can only be used on organic remains such as bone, hides, plants, or charcoal, none of which have been found at Friedkin. So Waters employed another technology called optically stimulated luminescence (OSL). OSL determines the last time minerals such as quartz and feldspar, which cover the site’s buried artifacts, were exposed to sunlight. The technology was developed in 1984 and it’s been widely adopted by geologists, although it remains unfamiliar to many archaeologists.

Waters teamed up with Steve Forman, director of the Luminescence Dating Research Laboratory at the University of Illinois in Chicago. Forman has conducted OSL tests on soils from Friedkin since 2007. “It was pretty impressive,” says Waters. “The dates all lined up with the diagnostic artifacts.”

A student records information about items found in an excavation unit. The students are required to take meticulous notes about the locations of artifacts and the geological contexts in which they’re found.
In other words, layers containing Archaic-style artifacts dated to the Archaic period, and layers containing Clovis artifacts dated to the Clovis era. The 18 OSL dates taken from the layer approximately eight inches beneath the Clovis horizon range from 13,200 to 15,500 years ago.

Waters and his team’s findings were published in Science in March of this year. Once it appeared in that prestigious journal, numerous publications picked up the story. “We were even in The Onion,” says Waters, who was pleased to get the attention of the satirical newspaper. “Of everything, that’s what he’s most proud of,” laughs Jessi Halligan, the project’s field director and a Ph.D. student at Texas A&M.

Response to the Science article was generally positive. Archaeologist David G. Anderson of the University of Tennessee told the Los Angeles Times, “Their science is really impeccable, and that is important when we are trying to document these early sites.” Rolfe Mandel, a geoarchaeologist at the University of Kansas in Lawrence, was quoted in Nature as saying the archaeological study was “about as perfect as they come.”

Gary Haynes, a first Americans scholar at the University of Nevada, Reno, gives Waters and his colleagues their due, but he adds that the Science report “has several naggingly weak points.” Haynes mentions the churning of the clay and the lack of precision of OSL dating. “Unless something organic and definitely artifactual or associated with the lithics can be directly dated by radiocarbon, the OSL ages should remain open to some doubt.”

Dennis Stanford, a noted first American scholar at the Smithsonian Institution, has his doubts as well. “I’m not comfortable at all” with the dates, says Stanford, who has visited these are sample of the lithic artifacts recovered from the site’s pre-Clovis levels.

An Ancient Neighbor

Archaeologists have known of the Gault site since the 1920s. J.E. Pearce, the first anthropologist at the University of Texas, excavated there and found numerous prehistoric artifacts, including stone tools that were more than 10,000 years old. But Gault’s owners were more interested in cash than science and they made a tidy profit allowing amateur collectors to dig there for $10 a day. When the land was sold in 1998, the new owners allowed Gault to be excavated by professional archaeologists.

Michael Collins purchased the site in 2007 and donated it to The Archaeological Conservancy to preserve it. “We’ve truly accomplished the preservation and conservation of the site,” says Collins.

Recent excavations at Gault have turned up tools in the pre-Clovis layer including bifaces, blades, and a chisel-like burin probably used for carving wood or bone. “Those are scarce as can be,” Collins says of the burin. As with Friedkin, Gault’s tools have both similarities and differences with Clovis materials. “This opens up the challenge: are we looking at something that’s entirely different from Clovis or a developmental stage of Clovis? A lot of research and analysis is needed to answer that question or even properly frame the question,” he says.

Meanwhile, the big picture continues to emerge—“The two sites together are adding up to a pretty compelling case for occupation in the Buttermilk Creek valley that predates Clovis,” according to Collins. —Elizabeth Lunday
the site. “I’d feel more comfortable if they were radiocarbon dates.” He also says it’s strange that the archaeologists haven’t found any features and “they have no diagnostic artifacts.”

Waters acknowledges that OSL lacks the precision of radiocarbon dating, noting it has a roughly five percent deviation rate—which is far greater than that of radiocarbon—meaning a 10,000-year-old artifact could be as much as 500 years older or younger. Nonetheless, he maintains that years of use by geologists have proven OSL’s accuracy and the test results show the pre-Clovis artifacts are at least 15,500 years old, given the deviation rate, and could be older.

The sun beat down on the big silver tent under which students painstakingly scraped the soil. Other researchers sifted dirt through fine-mesh screens so even the smallest flakes could be discovered. “Everybody be sure to drink lots of water today,” Halligan shouts to the crew. The students scramble for a giant pink aerosol can of bug spray at the sight of fire ants. “They come and go,” says Heather Hatch, who’s studying for her Ph.D. at Texas A&M. “No one’s gotten stung—yet.”

Waters sits with Halligan and other crewmembers recording finds from the dig. Stone tools are literally thick on the ground at Friedkin. These artifacts, which have been dislodged from their original contexts, are sometimes used as paperweights by the researchers. “We’re trying to obtain a larger sample of Clovis artifacts, and then hopefully down in the pre-Clovis layers we’ll find some sort of projectile point,” says Waters. He would like to compare such an item to a Clovis point. “Of course, you never know what you’re going to get, you just hope for the best.”

The site was “not a workshop, but a place where people camped and conducted daily activities,” he says. “We know this from the types of tools and flakes we find.” So what do the pre-Clovis artifacts tell us about the earliest Americans? “They were hunters and gatherers, just like the folks that came after them,” according to Waters. “Their toolkit was fairly small, so it would be easily

A Clovis To Pre-Clovis Conversion

Mike Waters gradually lost faith in the Clovis First model. Dates of these sites were contemporaneous with numerous sites in South America that clearly were not inhabited by the Clovis people.

Then he excavated the Friedkin site. Friedkin and the Clovis dating project were “the big game changers for me,” he says. “There was no other way to read the data. People had been in the Americas long before the distinctive Clovis technology appears in North America.”

That may be contrary to what he was taught by his former mentor, but then Waters adds that Haynes also instructed him to “collect the data and let the chips fall where they may.”
transported. They were highly mobile. They were also skilled at tool making and the Buttermilk Creek valley offered high-quality chert, an ideal stone for that task.

Waters believes the artifacts point to a connection between the pre-Clovis and Clovis people, and that the site’s pre-Clovis tools are the precursors of Clovis technology. The types of tools (blades, bladelets, scrapers, etc) are the same and the construction techniques similar. “We have a basic technology from which Clovis could derive,” Waters says, explaining that this technological connection hasn’t been seen at any other pre-Clovis sites. Stanford disagrees, saying that Waters may claim he’s discovered evidence of such a technological connection, “but he hasn’t shown it.”

If people were in the Americas 15,500 years ago, how did they get here? The land bridge would have been passable 15,000 to 16,000 years ago, but glaciers would have blocked passage south through Canada. Some archaeologists have suggested early Americans traveled southward along the coast—after all, humans reached Australia 40,000 years ago—but it’s a difficult hypothesis to test since the ice-age coastline has long been submerged. Another hypothesis has people sailing from southern Europe along the edge of the Atlantic ice sheet, but genetic evidence indicating ancient Native Americans descended from Asians seems to contradict this theory.

Waters expects the situation will become clearer in the next few decades as more pre-Clovis sites are uncovered and ancient DNA is analyzed. Meanwhile, much remains unclear. “It’s an exciting time to be in First American studies. There are all these questions. How does South America fit in? How did they get there? We still don’t know that. We don’t know about the ice-free corridor—when was it deglaciated? A lot of questions,” Waters says. “That’s what makes it interesting.”

When the Science article came out, Waters got phone calls from journalists asking why this story was news—wasn’t the pre-Clovis colonization of the Americas a settled fact? “Well, maybe in the news media, but not in archaeology,” he told them. Friedkin’s data won’t end the debate about when humans reached the Americas, but Waters believes it provides a strong case for pre-Clovis occupation of North America. “We had a team of the best scientists working at this site doing dating, studying the soil and the magnetic properties of the site. Each worked independently and came to the same conclusion—that the artifacts were in place and dated before Clovis.”

Waters glances toward the shady creek bed. “This is a unique site,” he says. “Buttermilk Creek gives us an opportunity to look at pre-Clovis technology and figure out not only connections to Clovis but also where these people came from. Like I said, it’s an exciting time to be in First American studies.”

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Winterville Mounds was occupied for centuries and during this time it underwent dramatic changes. Ed Jackson is the latest of a number of archaeologists who have tried to understand what took place there.

As an afternoon storm threatens to rend the stagnant summer air, Ed Jackson makes a discovery not much bigger than the size of a raindrop. He has found a manufactured bead stuck in a fragment of burnt daub, and the distant past jolts to life for the University of Southern Mississippi archaeologist. “All I can imagine is a woman plastering the wall of the house, getting her necklace stuck, and losing the bead,” he says, excited over the tiny object and its larger implications.

Jackson is leading a team of 13 students that is excavating the prehistoric mound site of Winterville in the Yazoo Basin of the Lower Mississippi Valley (also known as the Delta of blues lore). Located on Highway 1, about five miles north of Greenville and slightly south of its namesake town, Winterville contains evidence of 23 platform mounds, nine of which are intact. Organized in an oval pattern with a northeast-to-southwest axis, Winterville has two ceremonial plazas, whereas most...
Mississippian mound sites have one. Its largest structure, Mound A, divides the plazas and, at 55-feet high, is one of the tallest mounds in the country. University of Tennessee archaeologist David G. Anderson calls Winterville “one of the South’s most impressive mound complexes.”

A National Historic Landmark, Winterville became a state park in the 1960s and has been managed since 2000 by the Mississippi Department of Archives and History. Thanks to the efforts of Jackson and other archaeologists, it has also become one of the better-documented mound sites in the American South.

Clarence B. Moore—described by archaeologist Jeffrey Brain as “one of the last of the prodigal, peregrinating, archaeological explorers”—was the first to excavate Winterville. He arrived there in November 1907 thinking he could match the trove of artifacts he found at Moundville. Over six days he and his team dug 150 pits and test holes that yielded little beyond some bones and potsherds. With no fine pottery or funerary objects to show for his efforts, Moore moved on, writing in a 1908 paper that “we are at a loss to account for our limited success in finding burials and artifacts.”

The problem with Moore’s assessment was that he sought “goodies,” laughs Brain, rather than information. Yet Moore’s verdict on Winterville served a purpose. “The reputation that there’s nothing at this site kind of preserved it for a century from looters,” says Jackson.

In the 1940s Harvard University and the National Park Service undertook the first modern archaeological survey of Winterville, and Brain, then a graduate student at Yale, conducted his own excavation in the late 1960s. Brain’s report, *Winterville: Late Prehistoric Culture Contact in the Lower Mississippi Valley*, published in 1989, remains in many ways the definitive explication of the site.

“I was really interested in looking at native Coles Creek culture in the Lower Mississippi Valley, being aware it would be impacted by middle Mississippian influences from further up the river, and whether we could document this,” says Brain, who is now a senior research associate at the Peabody Essex Museum in Salem, Massachusetts. He found evidence of this contact at Winterville, where, in some fashion, people from Cahokia, the great Mississippian center near what is now St. Louis, interacted with Coles Creek people around A.D. 1200.

“When I got to Winterville and did the excavations,” he recalls, “behold, not only did I see some indications of these connections between the two different cultures, but very specific ones, and I was just very thrilled by this.” For example, Brain found Mississippian-style shell-tempered ceramics along with the grog-tempered pottery that were a signature of the Coles Creek.

Winterville sat at the northern boundary of the Coles Creek area and the southern boundary of the Middle

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By William L. Ellis
Photos by David N.B. Jackson
Mississippian area. Though the Mississippian people inhabited a huge area that extended, north to south, from Wisconsin to the Gulf of Mexico, the material culture of settlements in the Lower Mississippi Valley also revealed local influences.

Brain concluded that Winterville began as a Coles Creek settlement around A.D. 1000, then between 1200 and 1400 it evolved into a sort of Coles Creek-Mississippian hybrid, and thereafter became a Mississippian site. He thought it was abandoned sometime between 1450 and 1500.

JACkSON'S WoRk, WhIlE bUIlDIng ON that of Brain’s, is offering new insights into Winterville. His latest excavation follows four previous digs he made in 2005 through 2007, and in 2009. Jackson seeks to understand the political and social dynamics that brought about the Coles Creek to Mississippian transition, and how the site changed prior to its abandonment. “What I’ve been trying to do is to get at the variability, usage, and activities across the site both on and off the mounds,” he says.

Jackson has recently focused on Mound C in the southwest plaza area, which has been largely ignored since Moore “stuck his holes in anywhere and everywhere,” he says. It was easy enough to overlook, partly due to its odd inverted V shape. Brain’s data led him to conclude that by the mid-15th century only mounds in the northeast plaza were still inhabited, which would mean Mound C was abandoned. Jackson’s data indicates otherwise.

In 2009 he discovered that Mound C had at least four building stages between 1200 and 1450. He also uncovered ceramics in eroded fill near the mound. The style of the ceramics indicates they were made after 1400. Jackson is awaiting the results of radiocarbon testing of samples from the mound that he suspects will confirm the pottery dates.

He also recovered large amounts of broken pottery, bone tools, and lithic manufacturing debris. While he isn’t sure what to make of the copious lithic items, which tend to be relatively scarce at Winterville, he hypothesizes that C was once a pyramid mound that functioned as a private residence and not a public structure. Remote sensing data provided by the University of Mississippi has determined that a massive

Researchers work to delineate residential areas near Mound D in 2007. A tree has taken root on top of the mound, which has eroded over the centuries. Mound A stands in the distance.
amount of the mound eroded over the years, creating its peculiar appearance. Winterville once served as a cow pasture and the animals caused so much damage to Mound A that it had to be reconstructed with the help of historic photographs.

While excavating eroded fill from Mound F several years earlier, Jackson recovered ceramics of a style that appears after 1500, which indicates that Winterville was occupied longer than Brain thought. The several building episodes at Mound C, one of which occurred later than 1400, as well as several other burned structures around the site that span the 13th through the 15th centuries, also makes Jackson question Brain’s hypothesis that a single, site-wide conflagration at the start of the 15th century brought about radical change and marked the beginning of the end for Winterville.

Jackson has evidence “that buildings are being burned throughout the occupation,” which leads him to think that the fires were intentional and probably ceremonial. Though it was common for public structures to be razed and rebuilt, he suspects this was also done to residential mounds such as C, where events such as the death of an individual could have been commemorated by ritual burning. He cites a chunky game stone he found in 2009 on a burned structure floor at Mound C that had been purposefully broken before being left on the floor. “So that seems a little ritualistic,” Jackson says.

Jackson believes that Mississippian culture dominated Winterville two centuries earlier than Brain thought. The Coles Creek were mound builders; however, their settlements, generally consisting of a handful of small structures, lacked the Mississipians’ scale. Though it’s uncertain how many Coles Creek mounds once stood there, Brain documented only one. Winterville’s 23 mounds, many of which were built around 1200, suggest Cahokian grandness, and their ceremonial arrangement is another Mississippian trait. Jackson also noted that the amount of shell-tempered pottery increased around 1200 and thereafter.

The question, then, is what caused this remarkable transformation? Jackson thinks it was the attractiveness of Mississippian culture to the Coles Creek people at Winterville. “There’s something about associating yourself with Mississippian culture,” he says. “It’s the difference between driving a Chevy and driving a BMW.” Cahokia’s influence was so great that its characteristics—not only its material culture, but also its stratified socio-political order—were emulated by people at Winterville and other settlements located hundreds of miles away.

“The mounds are built for the elites,” says Jackson. The elites emerged “out of a society that heretofore didn’t have much social difference.” The woman who lost a necklace bead while plastering a wall of her house, Jackson surmises, was a member of an elite family that occupied Mound C in the 1400s, or someone laboring on their behalf. Winterville was essentially ceremonial at this point, but a few hundred
people still lived there and in the immediate area. The woman’s family was politically prominent, filling a leadership role important to the ceremonial, religious, and economic activity at the time, even as it was waning.

“The fact that people are living on mounds and can have the mounds rebuilt suggests something about the groups that have loyalties to them—the labor that can be mustered to actually do the mound building—so they in some sense have got to be the important people of the society,” he says.

The elite could have employed “a number of different strategies to develop followership,” according to Jackson, such as religion, providing goods for the lower classes, and ceremonial activities like feasting. “You can’t really detach the ritual and political aspects of this society. They are very tightly intertwined. They have ritual responsibility as well as political and economic organizational responsibilities. Those
The Mississippian people occupied a large area and their culture manifested itself differently from one region to the next. Several of those different Mississippian regions are shown on this map. Nonetheless, the influence of Cahokia, the greatest Mississippian center, is to some extent seen in the architecture and material culture of other significant mound communities. For example, such quintessential Cahokian artifacts as Ramey incised pottery, long-nosed god ear ornaments, and a particular style of flint clay objects have been found at these sites.

are all part of the same package of the elite and what their leadership roles were.

As for the mystery of the two ceremonial plazas, Jackson hypothesizes that it reflected a period of stratification. “It may be we’re seeing the merging of two distinct societies, a dual organization that might be reflected,” he says. “Maybe it has to do with clan or moiety affiliation, with the central mound and the person on that mound being the unifying component.”

Winterville is sometimes categorized as a Plaquemine site. (Plaquemine culture developed out of local Coles Creek culture as a result of external influences.) Brain wrote that between 1200 and 1400, when Winterville, in his estimation, was a Coles Creek-Mississippian hodgepodge, it took on a Plaquemine-like quality. This may be because Cahokian characteristics, though they exist at sites in the Lower Mississippi Valley, are uncommon. Mark Rees, an archaeologist at the University of Louisiana at Lafayette, says Plaquemine culture differs so much from one region to the next that Jackson’s research could help clarify what it is and isn’t. Rees says Plaquemine culture has been vaguely defined as a “Mississippian variant, Coles Creek-Mississippian-hybrid, and [an] indigenous development of Coles Creek, depending on the region of study.”

“Many years ago when people first started writing about Mississippian they emphasized the similarities,” notes University of Alabama archaeologist and Mississippian scholar Jim Knight. “Most all research these days—and Ed’s is a very good example of this—is [about] regional differences and how these regional differences almost deconstruct the whole notion of Mississippian.”

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Recent evidence of Mesoamerican chocolate at Southwestern sites has rekindled the debate over the extent of contact between the peoples of the two regions.

By David Malakoff
In 1968, a young graduate student stood in the bowels of the American Museum of Natural History in New York City, unwrapping pottery that researchers had found in New Mexico nearly 70 years earlier. “The pots had just been sitting there all that time, wrapped up in newspaper,” recalls Dorothy Washburn, now an archaeologist with the University of Pennsylvania in Philadelphia. “Nobody had even looked at them.”

Now, thanks to sensitive techniques that can detect even the faintest residue of a chocolate cocktail once sipped by ancient elites, some of these pots are helping rekindle a long-running archaeological debate. The question at issue is: how much contact did prehistoric cultures of the American Southwest have with the Mesoamerican civilizations that flourished hundreds of miles away in what is now southern Mexico and Central America?

For decades, the conventional answer was that the two regions had minimal interaction. But some recent discoveries have Washburn and others arguing otherwise. In particular, they say that growing evidence that Southwestern peoples drank a ritual beverage made from cacao—the plant used to make chocolate, which grows in southern Mexico and farther south—suggests that Mesoamerican cultures had a big impact on their neighbors to the north. “I think this is one of the great discoveries of the past decade,” says Michael Coe, a prominent Mesomerican specialist and professor emeritus of archaeology at Yale University. “There have always been these hints at an intimate connection between Mesoamerica and the Southwest, but this clinches it.”

But other scholars remain unpersuaded. Although the new cacao finds are “intriguing and suggestive,” they don’t paint a picture of close and lasting ties, says Southwestern archaeologist Edward Jolie of Mercyhurst College. “I’m not getting the strong sense that people were walking up from Mesoamerica and taking up residence in places like Chaco Canyon, an important Anasazi center in northern New Mexico where some of the cacao-laced pots were found.

The current back-and-forth has its roots in studies—and some mysteries—that stretch back more than a century. The pots that Washburn unwrapped as a graduate student, for instance, were part of a haul...
that archaeologists recovered from Chaco Canyon between 1896 and 1900. Their finds included some unusual, elegantly-decorated, tall and narrow vessels known as cylinder jars. Archaeologists have found less than 200 of these pots in the Southwest, and more than 110 of those came from a single room in Chaco Canyon’s Pueblo Bonito, an 800-room great house built during Chaco’s golden age, between about A.D. 850 and 1130. The pots were found carefully stacked on top of each other, with some pitchers and bowls. They obviously had special value,” Washburn says.

Exactly how the vessels were used, however, was unclear. Although archaeologists agreed that they were made for rituals, some speculated that they held bones or minerals, while others suggested they might have been covered with hides to make drums. Despite the lack of consensus, some specialists saw similarities between the Anasazi jars and tall Mesoamerican ceramics that had been found much further south, mostly at older sites in Mexico and Central America once occupied by the Maya and other groups. Archaeologists had tied these Mesoamerican vessels to the ritual use of a mildly stimulating beverage brewed from dried cacao beans, which grew nearby. Maya art, for example, showed that these ceramics were “chocolate pots” used to “froth up the beverage, by pouring it from one cylinder to another,” says Coe, who helped document the use of cacao in Mesoamerica, and cowrote the book *The True History of Chocolate.* “It was the drink of the elites, and they closely controlled who had access to it.”

In Mesoamerica, researchers found evidence that cacao was used by at least 1500 B.C., was routinely traded among settlements, and even served as a form of money. There was no hard proof, however, that traders had ever brought the beans north to Anasazi settlements such as Chaco Canyon, which sits nearly a thousand miles from the nearest cacao-growing area in southern Mexico. “In Mesoamerica, we’ve found dried cacao residues and even a few old beans” in pots, Coe notes. “But you didn’t see that in the Southwest.”

That changed a few years ago, however, after Patricia Crown and W. Jeffrey Hurst found evidence of chocolate consumption at Chaco Canyon. Crown is an archaeologist at the University of New Mexico, and Hurst is a chemist with the Hershey Center for Health and Nutrition. They teamed up to tap two technologies—high-performance liquid chromatography and mass spectrometry—to search for a telltale chemical fingerprint that liquid or dried cacao can leave behind on storage vessels. These technologies enabled them to detect residues of a chemical called theobromine, which is a marker for cacao, which is primarily responsible for the stimulating effect of the drink. Theobromine’s name comes from the plant’s genus, *Theobroma*.

In 2009, Crown and Hurst reported in the *Proceedings of the National Academy of Sciences* that they had found theobromine on three sherds that had come from ‘likely
“Cylinder jars” made at Pueblo Bonito between A.D. 1000 and 1125. The discovery marked the “first known use of cacao drinks north of the Mexican border, far outside the area of cultivation,” they wrote. And it answered questions about “the likely function of the ceramic cylinder jars.”

The residues also provided “further evidence for ties” between the Anasazi and Mesoamericans, they noted. Over the past century, for instance, archaeologists had found Mesoamerican copper bells at Anasazi sites. They had also recovered numerous feathers from scarlet macaws, brightly colored parrots that live south of the border. “We know that there was some long-distance exchange going on, but the extent has been debated,” says Jolie, who has been studying Chaco culture.

What made the cacao finds intriguing, he and other archaeologists say, is that they suggested that complex ritual practices and knowledge—and not just physical objects—were also trading hands. As Crown and Hurst put it, the Chacoans had “imported or acquired both the ingredients and the culinary knowledge to incorporate elements of Mesoamerican ritual activity into the Chaco world.” The “specialized knowledge and equipment required to prepare and serve the beverage would have set some individuals apart,” they add, possibly boosting the social stature and influence of Chaco elites. But whether Chacoans ritually used cacao “in a way that was uniquely Southwestern, or adopted a Mesoamerican ritual, remains an open question,” they concluded.

That question of just how “homegrown” early Southwestern cultural practices were has interested Washburn for years. She has exhaustively documented the ornate designs that ancient potters drew on their ceramics, looking for shifts in style and pattern that might reveal underlying cultural changes and outside influences. She became an expert in “symmetry”—the various ways artists can repeat motifs to create complex patterns.

When she heard about cacao discovery, something clicked. In her own studies of early Southwestern culture, she had detected the sudden appearance of unusual “foreign” or “non-local” symmetries and pot shapes that coincided with major architectural and environmental shifts. One example is the cylinder jars at Pueblo Bonito, “which were very different from what had come before, or what came after,” she says.

Over dinner one night, she and her husband William, a medicinal chemist with pharmaceutical company Bristol-Myers Squibb, discussed Crown and Hurst’s find. They wondered if the appearance of non-local pottery designs at Chaco Canyon and other Southwestern sites was associated with cacao use. It was a question that could be answered, they realized, using some of the resources at William’s workplace and some of the pots that Dorothy had unwrapped long ago as a graduate student. Best of all, the testing wouldn’t harm the pots, since the researchers could simply wash them out and analyze the rinse water for theobromine residues. “I was almost certain that the vessels I worked with had never been washed, so the residues of anything they held would still be there,” she says.

Dorothy obtained permission to take rinses from an array of 75 pots housed at the American Museum of Natural History and three other museums. In all, they included three types of non-local vessels: some 11th-century cylinder jars, pitchers, and bowls found in association with elite burials at Chaco Canyon, and some similar 14th-century pots from an elite burial at Los Muertos, a site near Tempe, Arizona, associated with the Hohokam culture. For comparison they also tested some local pots associated with small, non-elite Anasazi sites.

Nearly two-thirds of the elite pots from Chaco Canyon tested positive for cacao, as did 80 percent of the pots from the elite Hohokam burials. The Washburns, along with analytical chemist Petia Shipkova of Bristol-Myers Squibb, reported their findings in the Journal of Archaeological Science in February. But in a “totally unexpected” result, so did every single pot from the non-elite Anasazi sites. “We were stunned,” says Washburn. After taking pains to rule out the possibility that some locally-grown plant was the source of...
theobromine, they concluded “that the most reasonable explanation for the detection of theobromine in our vessels is consumption of imported cacao.” In all, 50 of the 75 pots had tested positive, suggesting “that the use of this stimulant was not only widespread but also occurred over centuries (A.D. 900-1400).”

The discovery of theobromine at non-elite sites had “major implications,” the trio argued. “At the very least, since cacao was being consumed both by elites and non-elites, the extensive nature of its use must have required an active trade that exchanged cacao for commodities available in the Southwest.” The find “virtually mandates a reassessment of current theories regarding Southwest/Mesoamerican relationships,” they concluded.

One possibility, Dorothy says, is that people of all stripes were trading Southwestern turquoise, a mineral much prized in Mesoamerica, for cacao. Miners and stoneworkers “may have been paid in cacao, the way the Aztecs paid some of their workers,” she says. And she thinks it is no coincidence that the appearance of cylinder jars and cacao in the Southwest coincides with a severe ninth-century drought that helped splinter Mesoamerican societies and sparked the creation of more decentralized trading networks. “People were spreading out,” she says. “I think the interactions [between the Southwest and Mesoamerica] became pretty direct and pretty extensive.”

Such ideas have drawn a mixed reaction from other archaeologists. Steve Lekson, a Southwestern specialist at the University of Colorado, Boulder, believes the two studies confirm “what a substantial array of evidence strongly suggested for over a century: the U.S. Southwest was the extreme northwest frontier of Mesoamerica.”

John Henderson, a Mesoamerican expert at Cornell University, thinks that the idea “that the turquoise trade was a big part of the connection is probably right.” But he also believes that social ties, and not economic arrangements, may have played a role in the spread of cacao. “I’m imagining high status families from the Southwest having connections with similar families to the south, pretty permanent relationships with people visiting and hosting from time to time. There’s a lot of evidence that you could enhance your status with these kinds of foreign connections.”

That’s a “close contact” scenario that, according to Coe, might make sense, given the complexity associated with learning to prepare cacao beverages and perform the associated rituals. “It takes some time to learn all the steps,” he says. And “it’s not just material influence we’re seeing here,” he adds. “It is mental influence, too. The mindsets in the Southwest at this time appear to be so similar to the views in Mesoamerica. It’s not possible they could not have influenced each other. It’s one big cultural mix.”

Both Coe and Henderson were surprised by the evidence that ordinary Southwesterners were drinking cacao, but Coe
thinks that’s plausible. “This was a bad time across Central America,” he says. “Lots of fracturing and terrific movement of people.” One scenario is that the average Southwesterner took advantage of the chaos to get in on the turquoise-for-cacao trade; another is that elites controlled the exchanges, but doled out the beans or powder to non-elites on special occasions.

But Ben Nelson, an Arizona State University archaeologist, is skeptical that enough cacao could have been moved north to supply widespread use. “It seems unlikely that so much cacao could have been transported without there being other evidence of the logistical support it would have taken. he says. “It would have been a lot of material.” That corroborating evidence “could include charred cacao beans, mural depictions of the beans themselves, the containers used to transport, store, prepare, and consume them.”

Jolie echoes those doubts. “If there was such extensive exchange, why aren’t we seeing actual [Mesoamerican] trade wares” such as pots or tools, he asks, adding that analyses show that the cylinder jars at Chaco Canyon “are locally made vessels.” And other kinds of analyses, such as studies of ancient DNA, don’t suggest a major influx of people from Mesoamerica to the Southwest. “There clearly was some influence and down-the-line trade,” he says, but the appearance of cacao and cylinder jars may only reflect “a bit of ramping up in the nature and extent of this interaction.” The Washburn study, he says, “may be stretching the interpretation a little bit.”

Still, Jolie and others think the cacao studies are reinvigorating research on this topic. It’s true that archaeologists have found little evidence of trade in “bulk goods, pottery, or stone tools,” notes Christopher Beckman of the University of Colorado, Denver, who has done extensive work in Mexico. But that doesn’t mean the trade in prized items, such as turquoise and colorful feathers, was “of minimal significance. Archaeologists are well aware of the social importance of rare objects.” Beckman notes that Washburn’s study highlights the importance of preserving and revisiting museum collections, especially when new technologies make it possible to ask new questions.

To better document the ancient cacao trade, Crown and Hurst are now working on a follow-up to their study that involves testing pots found at a wide range of Southwestern sites along possible north-south trade routes. Pottery from sites that also have macaw remains will get priority, the researchers note in a description of their study, which is funded by the National Science Foundation. And to “understand how cacao was consumed,” they will also be testing for things like honey, which was often added to the drink.

Such data will provide a valuable new way of comparing and contrasting Mesoamerican and Southwestern cultures, Lekson says. “Was cacao in the Southwest used in ways similar to those of societies to the south? Or were Mesoamerican practices translated into local, Southwestern idioms?”

Answering such questions, he believes, “will tell us much more about the Southwest than we will ever learn from Southwestern sites and artifacts considered alone.”

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Some researchers believe that Polynesians sailed great distances to reach the Americas as early as A.D. 400.
IN THE LATE 1990S, UNIVERSITY OF California, Berkeley, linguist Kathryn Klar noticed a few words in two extinct native languages from the southern California coast seemed out of place. The three words—one in Chumashan and two in Gabrielino—all had to do with boats, but they bore no linguistic resemblance to typical words in either of those languages. It was as if Chinese words had appeared in Old English.

One of the few specialists in Chumashan, Klar looked closer, but the nearest root words she could find were in Polynesian, which is spoken on the other side of the Pacific Ocean. After she presented her results at a conference in 1999, archaeologist Terry Jones of California Polytechnic State University in San Luis Obispo approached her. He had some evidence of his own of prehistoric contact between Polynesians and Southern California’s native tribes, and he asked if she would be interested in collaborating with him.

It was an invitation to step into an academic minefield. The idea of pre-Columbian contact between ancient Polynesians and North Americans is one of the most contentious topics in the archaeology of western North America. “I knew this was going to be a hot one,” Klar says, but she agreed. (“I’d raised two kids, so I was used to being nimble in potentially confrontational situations.”) Since then, Klar and Jones have made a case that still faces strong opposition.

The Polynesians were among the most advanced long-distance seafarers in the ancient world. Using outrigger sailing canoes and advanced celestial navigation, they island-hopped east from Asia across the South Pacific in the first and early second millennia A.D. Sometimes they took plants and animals on one-way voyages in search of new lands to settle.

Whether or not they made it all the way to the Americas has been debated since the 19th century, when sailors and scholars noted similarities in language and boat design on both sides of the Pacific Ocean. Explorer Thor Heyerdahl’s 1947 Kon Tiki expedition from Peru to Polynesia flew in the face of what little scientific consensus there was—based on shaky evidence, he was trying to
prove people could have migrated in the other direction, from east to west—but it was a public sensation, opening the floodgates to even more colorful but unscientific theories.

“Historically, there has been lots of wild, crazy speculation about developments in the New World being ultimately caused by contact with the Old World,” says Jones. A lot was due to cultural biases against Native Americans, but ironically, the gradual acknowledgment of their homegrown achievements helped push the theory of trans-Pacific contact even more out of favor. As a result, by the end of the 20th century, the idea had become almost taboo among American archaeologists.

Recently, though, many researchers have come to accept evidence that prehistoric Polynesians at least reached South America. Sweet potatoes, domesticated in Peru, have been genetically linked to samples from prehistoric sites in the Cook Islands. In 2007, chicken bones from a site in Chile were dated to roughly A.D. 1350, well before European arrival around 1500. Since chickens were domesticated in Southeast Asia, this is strong evidence for a cross-ocean voyage.

In contrast, the response to Jones and Klar’s case for North American contact has ranged from cautious agreement to outright derision. Jones’ archaeological argument centers on the sewn-plank boats (tomolo or tomol) used by the Chumash, who lived on three of California’s Channel Islands and along the southern California coast. Dated as far back as A.D. 400–700, these were probably the most technologically advanced watercraft in pre-colonial North America, unique to the Chumash and the Gabrielino group that lived to the south.

The boats averaged 20-23 feet long and were made of split planks—only redwood examples have survived—that were shaped with shell adzes and chisels and finished with shark-skin sandpaper. The builders would glue the planks together with a mix of heated tar and pine pitch and let it harden for three days. Then they would drill holes in the plank edges with stone drills and bone punches and sew the planks together with twisted vegetable fibers. After sealing the holes with more tar, they would have a craft that could carry up to 12 passengers or two tons of cargo.

A tomolo was a serious investment of time and resources—archaeologists estimate that each one required 500 person-days of skilled labor to build—but they seemed to be worth it. Chumash chiefdoms developed greater socio-political complexity around the time they adopted the sewn-plank canoe. The ocean-worthy vessels made it possible to catch large, aggressive fish like blue fin tuna and swordfish, and their owners could now regularly make longer trading trips along the coast and 20 miles across the Santa Barbara Channel to the Channel Islands.

The canoes were smaller than oceangoing boats built by the Polynesians, some of which were 60 feet or longer. But the design is similar, and so different from anything else in native North America that archaeologists such as Ronald Olson and Alfred Kroeber were suggesting a cross-ocean link as early as the 1930s.

The Channel Island residents also started using new types of fishhooks soon after they adopted the tomolo. For thousands of years, natives on the California coast had used hooks made from one or two straight, cylindrical pieces of bone pointed on
both ends. But around A.D. 900 Polynesian-style compound hooks appeared. They were made of two pieces of bone or wood, a curved barb and a straight shaft, attached with cord and tar. The new hooks were carefully shaped by grinding or carving, and were probably used for open-ocean trolling for larger fish.

In the past decade, single-piece barbed fishhooks collected on the islands and adjacent mainland have been dated to roughly the same timeframe. These distinctive hooks, which were made of shell or bone, have a grooved shank, a barb on the outside of the point, or both. Jones calls their similarity to hooks from Hawaii and Polynesia “striking.” The ones made of bone had no precedent in the region.

**SO IN A RELATIVELY SHORT SPAN of time, residents of the Channel Islands’ area adopted two new advanced marine technologies. Did Polynesian seafarers bring the plank boats and fishhooks? If they did, Jones says, “we’re definitely talking very brief encounters—maybe a boatload, a few dozen people.” They might have needed supplies or tools to fix their boats after a long voyage. But even a stay of a month or two could have been long enough for the locals to see how their boats were built and how their hooks were shaped.

It might also have been long enough to leave behind a handful of boat-related words that lingered through the turn of the 20th century, when linguists recorded the now-extinct languages of the Island Chumash and Gabrielino. Klar thinks the proto-Chumash word for sewn plank canoe, *tomolo’o*, almost certainly came from another language, since it doesn’t contain any native Chumashan elements nor any from languages spoken in nearby areas. What it does resemble, at least in linguistic terms, is the proto-Central Eastern Polynesian *tumu rakau*, meaning “a product from wood.” The same goes for the Gabrielino words for sewn-plank canoe, *ti’aat*, and their general term for boat, *taraina/tarainxa*, which suggest the proto-Polynesian *tia* (to sew) and *talai* (to carve), respectively. The Chumashan word for harpoon, *kalui*, also seems to come from the proto-Polynesian bases *tala* (sharp object) and *bui* (bone).

Jones and Klar believe the artifactual or linguistic evidence suggests trans-oceanic contact. “I didn’t come to these conclusions easily,” he says. When he and Klar started working together, “it was almost like a joke that first year—we didn’t even believe it ourselves.”

Many archaeologists still don’t. Based on the South American evidence, few, if any, deny the possibility of Polynesian-North American contact. But the evidence is far from certain, says Terry Hunt at the University of Hawaii, Manoa. “I am afraid the case for Polynesian-North American contact has become one of special pleading rather than anything scientific.”

One major problem is the timing. In a February 2011
paper in the *Proceedings of the National Academy of Sciences*, Hunt and three coauthors presented evidence that the islands of East Polynesia, including New Zealand, Hawaii, and Easter Island, were colonized much later than previously thought. In a meta-analysis of 1,434 radiocarbon dates from around the region, they came up with two distinct phases of settlement: approximately A.D. 1025-1120 in the Society Islands, four centuries later than earlier estimates, and major settlement of the rest of the South Pacific around A.D. 1190–1290—much too late to account for the new canoe and fishhook designs in southern California. "Previously supported longer chronologies have relied upon radiocarbon-dated materials with large sources of error, making them unsuitable for precise dating of recent events," says Hunt. "Jones and colleagues should be happy to be proven wrong," he adds, "rather than simply taking a position and not budging when the evidence clearly points to a contrary answer."

Rebutting Hunt and his coauthors, Jones says "the fact is that most Pacific specialists don’t agree with them and there have been many papers already challenging their short chronology." He adds that Hunt’s analysis is limited to artifacts that have been radiocarbon dated and therefore are not definitive, because, for various reasons, not all artifacts can be radiocarbon dated.

Jones and Klar suggest two “pulses” of contact with southern California: the first occurred about A.D. 400 from central-eastern Polynesia and a second around A.D. 1300 from Hawaii. The initial contact would have required a long, difficult voyage against prevailing winds, perhaps as much as 3,275 miles from the Marquesas Islands, but it would account for the sewn-plank design and associated words. A strong El Niño climate oscillation could have made it easier to sail east, against the prevailing winds and currents, they suggest, and the sailors could have used Hawaii as a staging base before the islands were actually settled.

Jeanne Arnold, an archaeologist at UCLA, isn’t convinced by this argument. “There’s absolutely not a shred of archaeological evidence for this idea, absolutely zero,” she says. The two-piece fishhook is a simple innovation used around the world. Lynn Gamble, a University of California, Santa Barbara archaeologist, agrees: “There are only so many ways to make a fish hook.”

As for the boat design, John Johnson of the Santa Barbara Museum of Natural History points out that Polynesian canoes were not only much larger than Chumash canoes, but often had sails, outriggers, or twin hulls as well—none of which appear on Chumash boats. "The only thing similar is sewing the planks together," he says. "It’s just a natural development."

Indigenous boat-builders around the northern Pacific, from Japan to Alaska and the Pacific Northwest, used the sewn-plank technique, although the Chumash were the only ones in North America to make their entire vessels that way. Other groups added sewn planks onto the sides of dugout canoes to increase freeboard, the amount of hull above the water. “It’s kind of insulting in some ways to suggest that these things aren’t simply local inventions,” Arnold says. “Cases for ephemeral contact will always be difficult” to make, says Alice Storey, a Pacific specialist with the
University of New England in Australia who supports the idea. Even before sweet potatoes were dated in the South Pacific, the sheer fact of their presence, and the similarity of the word for sweet potato in Polynesian and Quechua, the language of the Andes, were taken as strong circumstantial evidence for prehistoric contact. As Story points out, the Polynesians settled a third of the planet in under 2,000 years. The strange thing might be if they didn’t reach both North and South America.

CRITICS OF THE LINGUISTIC EVIDENCE AREN’T as concerned with the small number of borrowed words as they are with the argument behind them. It’s not unusual for words in poorly documented languages to have unknown origins, according to linguist Yoram Meroz, but all three “borrowed” words can be explained by local etymologies. For example, he says *tomolo/tomol* is an old Chumashan word meaning “yellow pine” that gradually came to identify plank canoes.

“This is a clever, but rather far-fetched idea, based on very liberal speculation,” says Robert Blust, a linguist at the University of Hawaii. “It would be strange indeed for the visiting Polynesians to refer to their boats as ‘trees.’ Nowhere have I ever come across such a usage anywhere in Polynesia or elsewhere in the Austronesian world.” The pre-Hawaiian word for boat is *wa’a*, he says, so it stands to reason that if these peoples were in contact, Chumashan and Gabrielino speakers would have borrowed that word.

What might have happened, according to Jane Hill, a linguist at the University of Arizona who finds Klar’s argument plausible, is the Polynesians were looking for materials to make repairs and kept repeating the word for “wood.” Besides, says Klar, the Chumash already had a perfectly good vocabulary for boats, and it’s common to refer to items by their materials: think of “plastic” for credit card or “skin” for a handshake.

Genetic evidence would be a very powerful, says Arnold. If the Polynesians arrived, they couldn’t have easily returned to Hawaii, due to prevailing winds and currents in these parts of the northern Pacific. Stranded boaters probably would have stayed and intermarried, leaving behind their DNA, but it is quite telling that no such genetic evidence has been uncovered, she says. Klar responds that the genetic studies to date have examined mitochondrial DNA, which traces female lineages. Y-chromosome studies, which reveal male lineages, would be more telling. “Since the initial exploratory long voyages were undertaken only by men,” she says, “the Y-chromosome is where any evidence of brief, sporadic contacts might be found.” Klar also adds that an absence of DNA evidence doesn’t disprove contact.

“It isn’t unreasonable for American scholars and indeed First Nations groups to be wary of discussions of pre-Columbian contact,” Storey says. “In the past these sorts of ideas were often used to justify a decidedly racist agenda, suggesting the First Nations were not sophisticated, intelligent, and extraordinary people in their own right.”

But in fact, the Chumash and Gabrielino tribes seem to be more accepting of the idea of trans-oceanic contact than non-native archaeologists. Chumash oral history is ambiguous on the subject of prehistoric contact, says Jones, but “in our own conversations with Chumash and Tongva (Gabrielino) descendants, as well as with Native Hawaiians, few, if any, have expressed outrage at our proposal. Several have told us that a prehistoric connection with Polynesia is something they have always known happened.”

In the meantime, the *tomolo* has made a comeback. The Island Chumash revived the canoe-building tradition in the 1970s, and now the Chumash Maritime Association makes annual trips to the islands in authentic sew-plank boats.

Assuming Jones and Klar’s theory is true, Storey says, “isn’t it a credit to both the Chumash and the Polynesians that their first meeting was not one of suspicion, violence, or conquest, but in fact a friendly one in which two groups of people who spoke unintelligible languages recognized fellow seafarers and shared their technological knowledge?”

JULIAN SMITH is the author of Crossing the Heart of Africa. His article “First American Seafarers?” appeared in the Summer 2011 issue of American Archaeology.
A Glimpse Of Connecticut’s Past

The Conservancy signs an option for its first preserve in the state.

THE ROGERS SITE IS LOCATED along the banks of the Quinebaug River in Lisbon, in southeast Connecticut. The site, which is named after the family that owns the land, was inhabited during the Late and Terminal Archaic periods (4000 to 1700 B.C.).

The site was first discovered in 2005, when the Rogers family gave some friends permission to look for “Indian artifacts.” The Rogers soon became concerned when they saw that over 300 stone projectile points had been unearthed, as well as two unusual stone carved pendants—one in the shape of a human face and the other resembling a caterpillar.

The Rogers were intrigued with these finds, so they contacted the state archaeologist, Nicholas Bellantoni. After visiting the site and realizing its significance, Bellantoni mobilized a team of students and volunteers from the Friends of the Office of State Archaeology, Inc., a non-profit group that assists him. They began test excavations in the summer of 2006 to uncover more data.

The excavation revealed a large residential area that extends for more than 2,500 square yards. A sample from an intact feature was dated to approximately 4,000 years ago using accelerator mass spectrometry. A secondary cremation burial feature was inadvertently exposed, yielding massive charcoal, shattered stone tools, and calcined bone fragments. Secondary cremation features reflect small deposits of materials that were removed by native peoples from the primary, larger cremation ossuary, and re-interred. This feature was dated to about 3,400 years ago.

Connecticut’s Native American Heritage Advisory Council reviewed the burial context and its sacredness. While the primary ossuary wasn’t found, it’s assumed that it, as well as additional secondary features, are buried somewhere in the area.

“The site is very significant for a number of reasons, both for the high potential of containing other cremation burial features that remain undisturbed, and also because the artifacts recovered from the site’s excavation suggest a large fishing camp,” according to Bellantoni. “We are all very excited to see the Conservancy at work in Connecticut and helping to preserve this unique and important site.” —Andy Stout

CONSERVANCY Plan of Action

SITE: Rogers
CULTURE AND TIME PERIOD: Late and Terminal Archaic (4000 to 1700 B.C.)
STATUS: The site could be logged or sold for residential development.
ACQUISITION: The Conservancy needs to raise $120,000 to purchase the 24-acre site.
HOW YOU CAN HELP: Please send contributions to The Archaeological Conservancy, Attn: Rogers, 5301 Central Ave. NE # 902, Albuquerque, NM 87108-1530.
Much of southeast Colorado consists of dry mesas marked by deep canyons cut through sedimentary rocks by tributaries of the Arkansas River. Beginning in the 1930s, archaeologists recorded a number of prehistoric sites in the region that were usually located on elevated areas of the landscape near water sources. The sites often featured a cluster of rock slabs and pillars arranged in circles that appeared to be the bases of houses. The house walls and roof could have been made of perishable brush that was plastered with mud. Side-notched projectile points were commonly found there. Radiocarbon dates suggest these sites were occupied from A.D. 1100 to 1450.

The people who inhabited these sites are known as the Panhandle Aspect culture. This culture, which was defined by archaeologist Alex Krieger in 1946, also occupied sites in New Mexico, Texas, Oklahoma, and Kansas. The Panhandle Aspect has three regional variations known as Antelope Creek, Optima, and Apishapa. Due to the limited amount of archaeological research in the region, little is known about these variants.

For the past eight years, archaeological student Chaz Evans has been hiking southeast Colorado’s canyons and mesas and recording archaeological sites. In 2003 he found Roper’s Walk, an Apishapa village built above a tributary of the Arkansas River. The site takes its name from the Ropers, a pioneer ranching family that lived nearby.

Roper’s Walk contains nine intact architectural features with 16 rooms, together with numerous exterior hearths, and a possible quarry area. A number of surface artifacts including stone flakes, grinding slabs, and manos were also noted, as were exotic materials such as chert from Texas’ northern panhandle, obsidian from both northern New Mexico and southern Idaho, and a Catlinite pipe fragment from a Minnesota quarry. There is also a natural pool that is capable of holding up to 4,000 gallons of runoff water at the base of a cliff.

Evans conducted a region-wide survey that ultimately identified five rock shelters, open-air lithic scatters, and over 50 architectural rooms near the town of Beulah, which he used as the basis of his master’s thesis at Colorado State University. His work represents the first extensive look at Apishapa sites in decades.

Roper’s Walk is situated on a five-acre residential lot within a gated subdivision of custom homes. The Conservancy will fence the preserve, develop a management plan, and establish a volunteer site steward program to protect it. Red Creek Land Company, the developer of the subdivision, has generously agreed to donate $15,000 of the value of the Roper’s Walk lot in a bargain-sale-to-charity.

Learning About The Apishapa

Roper’s Walk offers insights into a little-known culture.

The site’s natural pool can hold up to 4,000 gallons of runoff water.

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<td><strong>Plan of Action</strong></td>
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<td><strong>SITE:</strong> Roper’s Walk</td>
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<tr>
<td><strong>CULTURE AND TIME PERIOD:</strong> Apishapa (A.D. 1100-1450)</td>
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<td><strong>STATUS:</strong> The site is threatened by development.</td>
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<td><strong>ACQUISITION:</strong> The Conservancy needs to raise $61,930 by January 2012.</td>
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<td><strong>HOW YOU CAN HELP:</strong> Please send contributions to: The Archaeological Conservancy, Attn: Roper’s Walk, 5301 Central Ave. NE Suite 902, Albuquerque, NM 87108-1530.</td>
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*Image: Roper’s Walk is situated on a five-acre residential lot within a gated subdivision of custom homes. The Conservancy will fence the preserve, develop a management plan, and establish a volunteer site steward program to protect it. Red Creek Land Company, the developer of the subdivision, has generously agreed to donate $15,000 of the value of the Roper’s Walk lot in a bargain-sale-to-charity.*
An Enigmatic Site

Researchers have largely ignored Newton-Hopper for the last several decades.

The Newton-Hopper site, named after the farmers that owned this land when the site was first recorded, has been visited throughout prehistory by Native Americans. Projectile points dating back thousands of years have been found here, and it’s also the location of a Late Woodland period village, inhabited from A.D. 1550 to 1570. The 18th-century Seneca chief, Big Kettle, from the Buffalo Creek Reservation, may also be buried here.

Located near the Town of Elma, in western New York, Newton-Hopper is the oldest of a series of villages inhabited during the Late Woodland period in this region. It sits atop a bluff overlooking a large creek, a position that was easy to defend. “The Newton-Hopper site is among the more enigmatic Late Woodland village sites” in this area, said Douglas Perrelli, an archaeologist at the University of Buffalo. It, and other nearby sites, have been largely ignored since the 1960s and ’70s, when they were explored by avocational and professional archaeologists. One of the professionals, the late Marian White of the University at Buffalo, “sought to place known palisaded village sites like (Newton-Hopper) in a sequence of occupation in order to study the development of Iroquoian culture through time,” Perrelli said.

Several other important Late Woodland villages are located nearby, forming a cluster of pre-contact Iroquoian sites. It’s not certain who inhabited Newton-Hopper in the mid 16th-century, since this area was home to the Neutral and the Erie Iroquoians, and later the Seneca. Paul Geib, whose 1977 master’s thesis focused on Newton-Hopper, believed that the village was occupied by a group of Eries, who had moved there from another village site. Geib found that despite years of looting, the site was still largely intact.

Newton-Hopper was brought to the Conservancy’s attention by Bob Newton, a descendant of one of the namesake families. Newton put the Conservancy in touch with the Clark family, who currently owns the property. Thanks to the Clarks, the Conservancy has an option to preserve 22 acres of this unique piece of New York history that is in the process of being listed on the National Register of Historic Places. —Andy Stout
Two cisterns mark the foundations of outbuildings.

The Conservancy obtains the Prospect Hill plantation, from which roughly 300 slaves immigrated to Liberia.

Prospect Hill was a large plantation that was established in the early 1800s by Captain Isaac Ross, a Revolutionary War veteran. Accompanied by his family and a group of slaves, Ross moved from South Carolina to southwest Mississippi, where they turned Prospect Hill into a prosperous cotton plantation at a time when the industry was benefiting from the invention of the cotton gin.

Ross was a member of the Mississippi Colonization Society, which advocated “repatriating” freed slaves to what is now Liberia. Ross’ will decreed that Prospect Hill be sold and his slaves who chose to emigrate to Liberia be freed. Their resettlement was to be funded by the proceeds from the sale. However, his grandson, Isaac Ross Wade, contested the will in court, seeking to prevent the sale of the plantation and the freeing of the slaves. The case was tied up in litigation for a decade, during which time the house was burned during a slave uprising in April, 1845. A young girl died in the fire, and a group of slaves who were accused of orchestrating the uprising were executed on the plantation grounds.

A new house was built on the site of the original one, and it was completed in 1854. The house and grounds remained in the family until the 1970s, when they were sold. The property was subsequently sold again to people who partly restored it. During the past several years, however, the house and the rest of the plantation have fallen into serious disrepair. But the brick foundations of the buildings that served as the kitchen, laundry, and servants’ quarters are still extant, as are the remains of the carriage house, smokehouse, and both a slave and family cemetery.

Prospect Hill is an important piece of American history, and archaeological research can shed light on the lives of those who once lived there. Approximately 300 slaves emigrated from Prospect Hill to Liberia. Some acquired slaves of their own and built great mansions like those they escaped, while others struggled to survive. Their journey was chronicled in Alan Huffman’s bestselling book, Mississippi in Africa.

The Conservancy recently agreed to purchase the house and over three acres of land surrounding it. The Conservancy is raising money to stabilize it while partnering with other preservation organizations to properly restore the house.

“Before the Conservancy, Prospect Hill didn’t have a chance,” Huffman says. “Now it has a chance.” —Jessica Crawford

Ceramic sherds, a glass fragment, part of a brass object, and a boar’s tooth (left of scale) were recovered from the site.
Preserving A Pueblito

The Conservancy acquires an 18th-century structure surrounded by a modern subdivision.

The love for archaeology motivated Norma Garrett to buy and protect Garcia Canyon Pueblito, perched atop a steep mesa in a residential subdivision. The Conservancy purchased the site with POINT-4 emergency acquisition funds. An educator for over 30 years, and now a social worker, Garrett has spent her life in the American Southwest serving others. “I have deep respect for all things traditional Navajo,” Garrett said. For over a decade, she has been “trying to learn all I can about the belief system and philosophy” of the Navajo.

This passion began in 1998, when she visited archaeological sites in New Mexico’s Dinéh region, where the Navajo creation story is focused. “Garcia Pueblito was the first site I saw, at dawn with orange and yellow light reflecting off the mesa and the pueblito.” The site was in a subdivision that was being developed by Ideal Investments, and Garrett noticed a sign stating the lots beneath the mesa on which the pueblito stands were for sale. She bought them shortly thereafter.

Garrett’s concern for the pueblito was obvious and as a result Ideal Investments, confident that she would take care of the site, offered to sell her the parcel containing the structure in 2001. She “grabbed at the chance,” and now she is ensuring its perpetual preservation by entering into a generous bargain-sale-to-charity transaction with the Conservancy for half the appraised value of the land.

Listed on the National Register of Historic Places as part of the Navajo/Refugee Pueblo Thematic Group, the 5.5-acre site is located in the northern part of the state. The pueblito is named after Isidro Garcia, who homesteaded nearby. Garcia Canyon Pueblito is one of the few tangible reminders from the Gobernador Period (circa 1680-1780), a time of social and political turmoil. During this period, various Puebloan people fled to the Navajo areas in northwestern New Mexico after the Spanish, having been driven out of New Mexico...
The Protect Our Irreplaceable National Treasures (POINT) program was designed to save significant sites that are in immediate danger of destruction.

The pueblito is perched 70 feet above the canyon.

by the natives in the Pueblo Revolt of 1680, regained control in 1692. The Pueblo influence became apparent in Navajo architecture, especially in these multi-room masonry dwellings called pueblitos.

Using tree-ring dating, researchers determined that the first four rooms of this one-story pueblito were constructed in 1712, and additions continued until 1722, when the sixth through ninth rooms were added; the site was abandoned by 1730. Walls, doorways, and portions of the wooden roof beams are still intact. Built and occupied during a time when the neighboring Ute people were raiding the area, Garcia Canyon Pueblito sits atop a mesa in a defensive position, 70 feet above a canyon, with a commanding view to the north.

The site also contains petroglyphs and a midden, which are well preserved, but the pueblito needs to be stabilized.

The Conservancy intends to document the condition of the walls and renew the mud mortar joints. Documenting and studying the pueblito’s construction methods will help us understand how and why these walls still stand despite centuries of weathering. Larry Baker, executive director of the Salmon Ruins Museum and Research Library, has extensive experience stabilizing Navajo pueblitos, and he has offered to direct the stabilization work.

Thanks to the generosity of Garrett and the Conservancy’s POINT-4 donors, Garcia Canyon Pueblito will be preserved. Consequently, researchers will be able to study the site’s structure, midden, and petroglyphs so they might better understand this time of cultural fusion and turbulence.

—Raffi E. Andonian
Geophysical Studies Continue at Pueblo San Marcos

SOUTHWEST—This July, the Summer of Applied Geophysical Experience (SAGE) program, sponsored by Los Alamos National Laboratory, conducted geophysical investigations at Pueblo San Marcos, an extensive, 2,000-room adobe pueblo south of Santa Fe, New Mexico. San Marcos, a Conservancy preserve, was occupied from the 13th century until the Pueblo Revolt of 1680 and contains the remains of a 17th-century Franciscan mission complex.

At its height, Pueblo San Marcos was one of the largest pre-Columbian settlements in the Galisteo Basin of northern New Mexico. It was a major producer of Rio Grande Glaze Ware ceramics and its occupants likely controlled the valuable turquoise and lead deposits in the nearby Cerrillos Hills.

Geophysical studies at the site have used a variety of non-invasive methods, such as ground penetrating radar (GPR). These survey measurements were used to map and define the underlying geology, as well as delineate and locate sub-surface archaeological structures.

“GPR data were used to delineate a number of linear and circular anomalies that, when overlain on an archeological
map of identified pueblo structures, correlate with a number of known features such as walls, floors, and kivas,” said Patricia Gillies, one of the program’s participants. The geophysical data also suggest the presence of a smelting furnace and associated metallurgical production debris near two room blocks.

The SAGE program began in 2004 at San Marcos, and in previous years participants have mapped terrace deposits, helping archeologists better understand the association of the pueblo with the surrounding landscape.

Youths Win Take Pride In America Award

SOUTHEAST—A joint project between the Mississippi Department of Archives and History and the University of Mississippi continued this summer on a portion of the Conservancy’s Carson Mounds preserve. In addition to the four mounds the Conservancy owns, it is holding a temporary archaeological easement on a three-acre agricultural field. The Conservancy was given the easement by the owners after archaeological features and human burials were disturbed by farm equipment.

According to state law, human remains cannot be disturbed without a permit from the state, and must be respectfully and professionally removed before farming can resume. Although they were unwilling to sell this portion of the site to the Conservancy, the owners have allowed the university and the state to conduct research there. In July, the university held its field school at the preserve that focused on excavating bioarchaeological features. To date, three stockades, 18 houses, 224 pits, 58 burial pits containing up to 36 individuals each, and 2,677 postmolds have been recorded within the easement.

Researchers identified the remnants of a house with a pit containing a large number of stone flakes.

Carson Mounds is one of the major sites in the area and in his 1894 Bureau of American Ethnology publication on the mounds of the Eastern United States, Cyrus Thomas included a map of the site showing more than 80 mounds. Over the next 100 years, most of the site was farmed, which obliterated many of the smaller mounds, but researchers are still learning a tremendous amount about the people who were living in this part of the Lower Mississippi Valley during the 1400s.

SOUTHWEST—This summer, the Vecinos del Rio Mesa Prieta Petroglyph Project and the Bureau of Land Management (BLM) received the 2011 Take Pride in America award. The award, which was presented at the White House, was given in the Outstanding Public-Private Partnership category for the Summer Youth Intern Program.

Mesa Prieta, also known as Black Mesa, is a 12-mile long volcanic escarpment in northern New Mexico with some 40,000 prehistoric through historic period petroglyphs and other archaeological features. Held for two weeks each summer, the program welcomes 12 to 15 youths, ages 13 to 18, from Native American, Hispano, and other communities, who receive intensive training in petroglyph recording. The participants learn about digital photography, mapping, rock art recording forms, scientific drawing, and the use of a Global Positioning System.

Guided by professional archaeologists, trained volunteers, and alumni of the program, the participants then record petroglyphs along the mesa. Several hundred petroglyphs, the oldest of which date to the Archaic period, were recorded in 2011. The information will become part of the BLM database archived at the Museum of New Mexico’s Laboratory of Anthropology in Santa Fe. Landowner Katherine Wells, author of the recently published Life on the Rocks: One Woman’s Adventures in Petroglyph Preservation, spearheaded the program. She donated the Wells Petroglyph site, which includes a portion of the larger Mesa Prieta landform, to the Conservancy as a permanent archaeological preserve in 2000.

Take Pride in America is a nationwide partnership program authorized by Congress to promote the appreciation and stewardship of our nation’s public lands. In July, several students involved with the program traveled to Washington, D.C. to receive the award. For more information about Mesa Prieta and the Summer Youth Intern Program, go to www.mesaprietapetroglyphs.org.
Reviews

Mimbres Lives and Landscapes
Edited by Margaret C. Nelson and Michelle Hegmon
(SAR Press, 2011; 128 pgs., illus., $60 cloth, $25 paper; www.sarpress.sarweb.org)

From about A.D. 900 to 1130 a Puebloan people flourished in and around the Mimbres River valley of southwestern New Mexico. Their greatest legacy is a remarkable body of pottery that features geometric and figurative designs that are very evocative of modern art. The pottery is much sought after by collectors, which has led to rampant looting of Mimbres sites. Archaeologists have been studying the Mimbres since the 1920s, and this work continues today. In this volume designed for the general reader, 15 leading Mimbres scholars present the latest information on these fascinating people, their lives, and their art.

The Mimbres people were a small, distinct group in the desert Southwest, contemporary with the Hohokam to the west and the Anasazi to the north. They lived in small villages, farming the rich river valleys of the region. They buried their dead under the floors of their stone and adobe houses, and the corpses’ heads were often covered with a spectacularly painted bowl. A hole was crudely punched in the center of the bowl, perhaps to allow for communication with the spirit. Around 1130 this lifestyle came to an end. The villages were depopulated, and the Mimbres people changed their burial practices and stopped painting the distinctive bowls. Long considered a great mystery, recent research suggests they did not disappear. Rather, the Mimbres moved into small hamlets and farmsteads, holding on until the Apaches arrived in the area around A.D. 1500.

Their pottery is the defining characteristic of these people, and it is well represented in this engaging and readable volume, with dozens of photos and drawings. Mimbres Lives and Landscapes is a valuable addition to the literature of one of the ancient Southwest’s most intriguing cultures.

Ceramic Makers’ Marks
By Erica Gibson
(Left Coast Press, 2011; 147 pgs., illus., $89 cloth, $25 paper; www.lcoastpress.com)

Since ceramics, both prehistoric and historic, preserve so well, they are of invaluable use to archaeologists in identifying and dating cultural layers. In American historical archaeology, makers’ marks on ceramics can give the researcher precise information about the site that may not be otherwise forthcoming. Erica Gibson of Sonoma State University has produced this much needed catalogue of ceramic makers’ marks that are often found in the United States.

It contains some 343 marks from 112 manufacturers, importers, or retailers from the mid-19th through the 20th centuries, including information on the history of the mark and its variants. Of these 112 sources, 100 are British, four are French, one German, and seven are American. This volume will be an indispensable tool for historical archaeologists, collectors, antique dealers, museum curators, art historians, students, and anyone interested in ceramics. Plus, the marks illustrated in the volume are of historical and aesthetic interest in themselves.
The Swift Creek Gift:
Vessel Exchange on the Atlantic Coast
By Neil J. Wallis
(University of Alabama Press, 2011; 264 pgs., illus., $48 cloth, $25 paper, $20 ebook; www.uapress.ua.edu)

During the second half of the Woodland Period (ca. A.D. 100 to 850) Swift Creek Complicated Stamped pottery gained widespread popularity across much of the Southeast, becoming common in sites throughout Georgia and the surrounding states. To make the pottery, wooden paddles were carved with the complicated designs often representing animals, plants, and faces. The designs were then pressed into the soft clay before firing. The permanent impressions of the wooden paddles preserved unique signatures such as cracks in the wood and asymmetrical design flaws. These signatures allow archaeologists to identify individual paddles whose pottery may be spread over hundreds of miles.

This volume concentrates on only a small part of the Swift Creek pottery locale—the Atlantic Coast of southern Georgia and northern Florida. Author Neil J. Wallis of the Florida Museum of Natural History has combined graphic analysis, neutron activation analysis, and stamped paddle analysis to identify the pottery from village sites and burial mounds. He demonstrates that there was an active trade between the Altamaha River in Georgia and the St. Johns River in Florida. This is a fascinating case study of how new technology can bring new insights to a complex problem of archaeology.

Visualizing the Sacred: Cosmic Visions, Regionalism, and the Art of the Mississippian World
Edited by George E. Lankford, E. Kent Reilly III, and James F. Garber
(University of Texas Press, 2011; 362 pgs., illus., $60 cloth; www.utexaspress.com)

Since 1993, scholars of the mound building cultures of the Midwest and Southeast have gathered at Texas State University at San Marcos to share ideas and information on the religion and symbolism of the Mississippian culture that flourished from about A.D. 900 until the arrival of the Europeans. Known as the Mississippian Iconographic Workshop, participants include archaeologists, anthropologists, folklorists, art historians, and Native Americans. In 2007, the first report of this research was published, Ancient Objects and Sacred Realms. This new volume features 14 articles written by 11 of these scholars.

The ancient Mississippian shaped one of prehistoric America’s greatest artistic traditions, creating beautiful objects out of copper, shell, stone, clay, and wood. Despite two recent exhibitions, Mississippian art does not enjoy the wide recognition it deserves. The authors draw heavily on ethnographic information from tribes of the Southeast, Great Lakes, and the northern and southern Great Plains. The use of this ethnographic record is a kind of Rosetta Stone for understanding the prehistoric meanings of these designs.

Visualizing the Sacred focuses on style regions, and it is organized along those lines. The Middle Mississippi Valley region centers on Cahokia Mounds near St. Louis, the largest of the Mississippian centers. Other regions include the Lower Mississippi Valley, the Cumberland Valley, Moundville in Alabama, and Etowah and the upper Tennessee Valley. Instead of presenting large conclusions, Visualizing the Sacred offers a series of smaller studies focused on local art forms and their contexts. These regions represent a network of interrelated religious systems that experience both continuity and change over time. This volume is hardly the final thoughts of a dynamic group of scholars on the Mississippian traditions, but it advances our understanding of this complex topic. —Mark Michel
Maya of Yucatán and Calakmul

**WHEN:** January 12 – 22, 2012  
**WHERE:** Mexico  
**HOW MUCH:** $2,795 ($325 single supplement)

From A.D. 300 to 900, the brilliant Maya culture flourished in the Yucatán Peninsula of Mexico. We’ll visit some of their most splendid sites including Dzibilchaltún, Balankanche Cave, Mayapán and Chichén Itzá. We’ll also drive deep into the forest to visit Calakmul, which has been undergoing significant excavations in recent years. Calakmul is believed to be the largest of all the Maya cities. More than 100 stelae and 6,500 structures have been discovered there so far. During the Late Classic period it dominated the entire southern Yucatán. Accompanying us will be John Henderson, one of the nation’s leading Maya scholars.

Guatemala Highlands and Copán

**WHEN:** March 15 – 25, 2012  
**WHERE:** Guatemala and Honduras  
**HOW MUCH:** $2,795 ($325 single supplement)

Rain forests, snow-capped volcanoes, and magnificent lakes make up the landscape of the ancient Maya in the highlands of Guatemala. On our tour you’ll see everything from ancient Maya ruins to modern-day Maya cities. Our travels will take us from beautiful Lake Atitlán to the Honduran rainforest, where we will visit Copán, considered the crown jewel of the southern Maya cities. John Henderson from Cornell University will accompany us on the tour.
Peoples of the Mississippi Valley

Beginning in Memphis and following the Mississippi River south to Natchez, our week-long journey covers more than 5,000 years of history ranging from ancient earthen mounds to Civil War battlefields. The trip offers an exciting opportunity to learn more about the rich and complex mound-builder cultures that flourished along the Mississippi River valley until the arrival of the Europeans.

While taking in the charms of the Old South, we’ll visit important sites, including Emerald Mound, the third largest Mississippian mound in the United States. We’ll also visit sites from historic times, including the Grand Village of the Natchez and the Civil War battlefield at Vicksburg. Several of the Conservancy’s preserves, such as Watson Brake Mounds, which may be the oldest mound site in North America, are also featured on the tour.

Yampa River

Join us for a downriver adventure in Colorado and Utah, where we’ll float through Dinosaur National Monument and experience incredible scenery that was first described by explorer John Wesley Powell. On our 70-mile journey down the Yampa and Green Rivers we’ll visit remote archaeological sites, including Fremont culture rock art panels and prehistoric rock shelters.

Highlights of the Northern Plains Tour

This new tour, which begins and ends in Bismarck, North Dakota, explores some of the unique and fascinating historic places of the Northern Plains. We’ll visit Knife River Indian Villages National Historic Site, which preserves the remains of five historic period Mandan/Hidatsa villages, including the “hometown” of Sacagawea, the guide for Lewis and Clark. We’ll also visit a number of prehistoric Native American sites including Double Ditch and Huff Indian Village State Historic Sites, well-preserved Plains Village Traditions villages, and the Knife River Chert Quarries, one of the largest prehistoric quarry sites in North America.
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