

# common ground

ARCHEOLOGY AND ETHNOGRAPHY IN THE PUBLIC INTEREST



SPRING/SUMMER  
2000

*the earliest  
americans*





# NEW LOOK NEW APPROACH NEW MEDIA

*Common Ground* has been in the shop this summer, getting a new coat of paint. This issue, the first in color, marks changes that have been on the boards for almost a year, including an overhaul of our web site to be unveiled this winter (previewed opposite). The shift acknowledges that communications today must be sophisticated in strategy to cut through the media clutter.

The tack was timed to take advantage of the recent Harris poll on archeology, sponsored by the NPS Archeology and Ethnography Program—this magazine's publisher—and the nation's top archeological organizations. Over the coming year, poll results in hand, we'll be spotlighting archeological projects carried out thanks to preservation law—to heighten awareness of the profession and the fragile resources in our care. As reported in the last issue, the poll shows that most Americans, although they have a fairly good grasp of the discipline, have major misconceptions as well. "Discovering Archeology"—a series of web features—is being developed to address these and other issues. Each project's web presence will have the same look as the magazine and our other communications materials.

The new approach mirrors a similar initiative within the Park Service at large. The goals of the NPS "message project," as it's called, align closely with those of this program.

According to focus groups interviewed by project researchers, much of the public thinks of NPS as five western parks, unconnected with others or with national programs such as ours. There is little awareness of initiatives aimed at communities, researchers say, such as this program's ethnographic studies or the National Register of Historic Places. For most, the words "Park Service" call to mind natural wonders and vacation spots.

We'll be using this research to redouble what we've always done—build understanding of the breadth of the work carried out by NPS and its partners in government, academia, and the

private sector. Through the web and other means, we'll be taking that message to an even wider audience.

In the last issue of *Common Ground*, Interior Secretary Bruce Babbitt said public neglect was the number one threat to archeological sites, but he could have been talking about any of the resources under our stewardship. "Neglect feeds all the other threats," he said. "If we don't have an interested and informed public, the loss goes by unnoticed." Message project researchers echo the sentiment: "How can we achieve our mission to preserve these places if we don't have public involvement?" At this program, cultivating awareness will continue to be a primary goal.

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Cover: Reaping the bounty at the edge of the Champlain Sea, looking north from what is now Vermont. The first people in the Northeast took advantage of a flyway bordering the sea, traversed by vast flocks of birds.

Illustration Matthew Frey-Wood Ronsaville Harlin, copyright 2000

## FEATURES

### SPECIAL REPORT: THE EARLIEST AMERICANS

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*The evidence is elusive, rare, and fragile. Archeologists have long followed the threads from the time when people first arrived on the continent. Now a national landmarks study, coupled with a flood of new findings, promises to reshape what we know about the earliest Americans.*

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BY DAVID G. ANDERSON

# - in context -

| BY FRANCIS P. MCMANAMON |

## Commemorating an Ancient Legacy

There have been Americans for tens of thousands of years, ever since the first humans arrived in this hemisphere. Recent popular interest in this early settlement hints that today's Americans are becoming more aware of their ancient history. People want to know when and how the migrations took place, how many there were, and where the first Americans came from. Public archeologists hope their outreach efforts can feed this interest and grow to accommodate it. Commemorating sites as National Historic Landmarks—the main goal of the study underpinning this issue—is one of the best ways to do that. | **How important is** the honor? The most direct answer is that the select list of 3,000 landmarks, designated by the Secretary of the Interior, stands among the most highly recognized reminders of our collective history, alongside National Monuments and the units of the National Park System. Archeological sites, however, have been underrepresented ever since the landmarks roster was authorized by the Historic Sites Act of 1935. Most listings are structures linked to events or individuals associated with recent, i.e., post-European contact, times. | **This call to commemorate** archeological sites is a major opportunity to enhance understanding of the ancients, especially coupled with the increased attention in public schools fostered by the federal archeology program over the last decade. Most Americans do not need a cultural connection to make this heritage their own. An anchor to the past—in this case embedded in place rather than culture—helps balance modern life through reflection on the times that came before. Many Americans, their awareness heightened by recent media coverage, are concerned for the future of this legacy, at risk across the nation. | **Ever since the first decades** of European settlement, we have attempted to understand our ancient predecessors. Over the last century, these intentions

garnered strong public and political support, along with legal and public policy endorsement. But most efforts to understand and protect this heritage have been by a relatively small number of experts. | **The landmarks study** hopes to broaden the base of support, encouraging site nominations from individuals and private groups as well as public organizations at the local, state, and national levels. Archeologists working for universities, museums, and private contractors—as well as those in public agencies—are all invited to nominate sites and take part in their evaluation. | **The process**, which will also yield properties eligible for the National Register of Historic Places as well as for state and local honors, should improve the chances for sites nationwide, promoting their visibility to the media and to government agencies during environmental planning and development. The potential is ripe, but we must act before it is too late.

Francis P. McManamon is Chief, Archeology and Ethnography Program, and Departmental Consulting Archeologist, National Park Service, Department of the Interior.

“ **The landmarks study hopes to broaden the base of support, encouraging site nominations from individuals and private groups as well as public organizations at the local, state, and national levels.** ”

## History on the Hudson

### PEELING BACK THE CENTURIES OF ALBANY'S WATERFRONT

Like many American cities, Albany betrays little of its deep past. To see it today, few would dream of a rough-hewn outpost surrounded by wilderness. Nor would one imagine a jumping-off point for European power struggles and forays into unknown country. But that's the story archeologists have uncovered beneath the soil near the Hudson.

The State University of New York planned a parking garage downtown, and preservation law required archeological work ahead of it. Construction would encompass an entire block, most of which was underwater in the 17th and 18th centuries. Using computer software, archeologists laid old maps over new to trace the Hudson's changing course. They also combed historic documents and diaries. "We knew things were there," says Bill Bouchard of Hartgen Archeological Associates, contracted for the work.

Twentieth century development—rail yards and an interstate—eventually occupied much of the waterfront. But for hundreds of years docks lined the Hudson, busy with waterborne commerce.

Before construction could start, a gas main had to be moved from one side of the block. Archeologists started at the other end. Ten to fifteen feet down, they began uncovering what looked to be wooden footings from a 19th century building. Eventually it became apparent they were well preserved docks, one built around 1760, the other around 1780. They were essentially bulkheads fronting the river, with fill behind them. Construction details were recorded using photogrammetry and laser scanning so the scene could be rendered in 3D.

The archeologists got an unprecedented view of how the waterfront evolved. As new docks extended into the river, old ones were buried underneath. Boat equipment, fishing gear, ceramics, coins, bottles, pipes—all discarded in the water since the days of the Dutch and even earlier—were plucked from soil and sediment.

"A phenomenal excavation," says Bouchard. "What we have here is the development of Albany." Early on, since the Hudson was deep enough for oceangoing ships, the city became a staging area for excursions against the French. Later, it was a transshipment point for settlement of the Mohawk Valley. Warehouses went up in the 19th century. With the rise of the steam engine, the laying of rails sealed the legacy.

When the archeologists moved to the gas main side of the site, they were transported even deeper in time. From the mid-17th century until after the French and Indian War, Albany was surrounded by a wooden palisade, 300 feet of which the archeologists exposed. Researchers at the University of New Hampshire are examining wood from the stockade and docks; tree-ring evidence will help reconstruct the region's environment over time.



**Right:** The 19th century Albany waterfront. **Above:** Gunter quadrant used to keep track of time and date, likely Dutch, from about 1650.



RIGHT: PAINTING BY L. F. TANTILLO. LEFT: PEGEEN MCLAUGHLIN



## Landmark Decision

### PRESIDENT PROCLAIMS NEW MONUMENTS

Part of the Southwest's archeologically rich federal land now enjoys a higher measure of protection. In January, President Clinton bestowed national monument status on Arizona's Agua Fria and Grand Canyon-Parishant, and in June on Colorado's Canyons of the Ancients. Interior Secretary Babbitt, at the annual meeting of the Society for American Archaeology, called the move "a major achievement." Babbitt says the public's "burgeoning demand" for open space—which in part spurred the designations—will continue to provide opportunities to dovetail conservation and preservation. The monuments' plant and wildlife habitats were key to cultivating broad support.

The 71,000-acre Agua Fria encompasses Perry Mesa, a national landmark whose hundreds of pueblo ruins, petroglyphs, terraces, and other remains are believed to be one of the Southwest's most significant groups of sites. Between A.D. 1250 and 1450, the mesa was home to thousands. Apparently it was a time of change, when scattered villages were abandoned in favor of relatively few, densely populated settlements. Archeologists surmise the Perry Mesans built defensive outposts at strategic points, forming a kind of gated community from which outsiders could be watched and, if necessary, denied access. The area also holds an extraordinary record of prehistoric agriculture.

Described as "a geological treasure," Grand Canyon-Parishant comprises 1,014,000 acres on the northern rim of the Grand Canyon in northwestern Arizona. Evidence shows extensive human presence over the centuries. The region is abundant with prehistoric trails, camps, watchtowers, rock art, quarries, burial sites, and villages. Whereas some of Agua Fria has been vandalized—it lies a mere 40 miles from Phoenix—sites at Grand Canyon-Parishant remain relatively unscathed due to their remote location.

From about 7,000 to 3,000 B.C., the clues suggest the presence of small groups of hunter-gatherers. Then, until about A.D. 1150, the monument saw larger populations of ancestral Puebloans, who built the multiroom structures that survive today. Southern Paiutes, there when the Europeans arrived, eventually dominated. The presence of ranchers, miners, and homesteaders is documented in old buildings, decayed fences, ruined sawmills, and other remains.

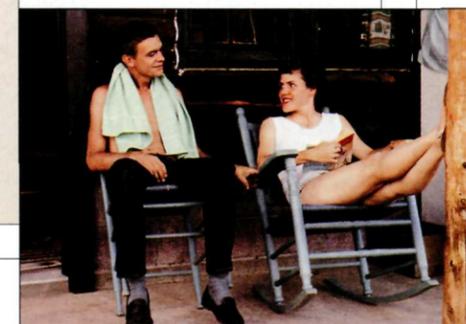
Canyons of the Ancients is a rugged landscape with the highest known density of sites in the nation. A focus of study for over 125 years, it bears evidence of occupation going back to the Paleoindian period. Among its canyons and mesas are cliff dwellings, villages, great kivas, shrines, agricultural fields, rock art, and sweat lodges.

Agua Fria and Canyons of the Ancients will be managed by the Bureau of Land Management. Most of Grand Canyon-Parishant falls within BLM's jurisdiction except for Lake Mead National Recreation Area, which is under Park Service purview.



ABOVE, LEFT: JERRY JACKA

**Left:** Baby Canyon Ruin on Perry Mesa, the archeological jewel of Arizona's Agua Fria, just designated a national monument. **Above:** Rock art at the mesa. Some speculate that the ancient inhabitants may have used the geography for defense, with lookout points to observe, and, possibly, turn away visitors. **Below:** John Turner, one of the archeologists who suggest there was prehistoric warfare on the Colorado Plateau, which encompasses the mesa (shown with Christy Turner at the Museum of Northern Arizona in 1957).



## Revolutionary War Find Rescued from e-Bay

**BELIEVED FROM BENEDICT ARNOLD'S FLEET**

A small bronze cannon, thought to be from a Revolutionary War gunboat under Benedict Arnold's command, was returned to the U.S. government after an unusual odyssey from the bottom of Lake Champlain to the world of internet antique dealing.

In January, an e-Bay post declared the cannon for sale, and soon the bidding was up to \$2,000. The post called it a "swivel gun," found in Lake Champlain in 1932. Inscribed with the initials "P&S," the cannon was probably manufactured by the same foundry that made the Liberty Bell—PAS & Stow of Philadelphia.

A New York state employee, upon seeing the post, notified Arthur Cohn, director of Vermont's Lake Champlain Maritime Museum. Although the information was sketchy, Cohn surmised the gun came from Arnold's Bay, where the Continental Army general deliberately sank his gunboats after a defeat by the British at the Battle of Valcour Island in 1776. Cohn knew that if the gun came from one of Arnold's vessels, it was federal property.

He contacted the U.S. Attorney's office in Vermont, which initiated an effort with the Department of Justice and the Navy. But who owned the cannon? Arnold was in the Continental Army, did the gun belong to its successor?

The U.S. Army said it abandoned the vessels in the 1930s, when the gunboat *Philadelphia* was raised from the lake (now on display at the National Museum of American History). This meant ownership rested with the General Services Administration, which agreed to a Navy request for the gun. Justice located the seller, Richard Armstrong, who brought it to the Naval Historical Center in D.C. Armstrong says he was unaware the cannon was federal property (he bought it for \$500 two years ago at a Virginia antiques show). The Navy expressed appreciation for his cooperation and has loaned the gun to the Lake Champlain museum for display.



**Left: Detail of "The Lost Gunboat" by Vermont marine artist Ernest Haas, showing a vessel from Benedict Arnold's fleet being explored by a remote operated vehicle.**

## Top Penalty

**OREGON LOOTERS SET RECORD**

Looting in Oregon's Umpqua National Forest has brought the state's largest criminal penalty ever under the Archaeological Resources Protection Act. Cousins Patrick Wayne Hunt and Patrick Eugene Hunt were each ordered to pay \$70,168 in restitution. Both pled guilty to damage caused while digging in the forest since at least 1994. Archeologists have estimated the damage—which covers over two acres—at \$140,000.

The case began in 1994, when Patrick Wayne Hunt appeared at the office of BLM archeologist Isaac Barner with a box of what he said were the bones of an ancient three-toed horse. Hunt was apparently eager to get credit for what he thought was a great find, though officials were skeptical. The agency was also skeptical about the bones' origin. Hunt claimed he found them in a pit (Barner's wife Debra, an archeologist at Umpqua, says that looters will sometimes ask professionals to verify an artifact's age). Led to the site by Hunt, authorities discovered it was a 6,000-year-old Native American camp.

In 1998, authorities put the site under surveillance when they discovered the damage was even more extensive. Debra Barner and Kelly White, a Forest Service law enforcement officer, encountered a man at the site carrying a rake and a three-pronged tool. He claimed to be hunting for rocks. The man was Patrick Eugene Hunt.

He eventually admitted to the digging. Authorities found 800 arrowheads, scrapers, and other tools at his house, not all believed to be from the site. Last spring, a federal grand jury indicted both Hunts and two acquaintances on archeological offenses. In December, the Hunts pleaded guilty to one felony count each of illegally excavating the Horsebone site. In addition to the restitution, Patrick Eugene received 5 years probation. Patrick Wayne got four months of home confinement plus a year of supervised probation. The acquaintances pleaded guilty to a misdemeanor for digging at another site. They were sentenced to two years' probation and 200 hours of community service.



### A W A R D

**HONORARY RANGER**

For his outstanding contributions to protecting archeological sites, NPS has given Dennis Kennedy, assistant U.S. attorney for the eastern district of Virginia, an honorary park ranger award. Working with the NPS National Capital Region, Kennedy has been instrumental in strengthening enforcement of the Archaeological Resources Protection Act. He serves as a legal instructor in training courses on archeological laws, often donating his personal time. Kennedy has successfully prosecuted most of the ARPA cases in the eastern district of Virginia.

# Captain Cook's Endeavour

## Rhode Island Makes Salvage Claim

**HMS ENDEAVOUR MAY BE PROTECTED BY UNPRECEDENTED MOVE**

As archeologists zeroed in on the location of a group of Revolutionary War shipwrecks in Rhode Island waters, the state preservation office grappled with a familiar problem. Staffers knew the wrecks were of tremendous importance, and that Captain Cook's *Endeavour* was likely among them. They also knew looters were more familiar with the site than they were. Many ships had already been pilfered. For relic-hunters, *Endeavour* would be the find of a lifetime. Rhode Island had to act.

But the state didn't know exactly where *Endeavour* was. The British sank the ships in 1778, when Newport was under threat of Americans by land and French by sea. Of about thirteen vessels, archeologists had located two.

So Rhode Island invoked admiralty law—which salvors often use against archeology's interests—asserting ownership through the law of salvage. A federal judge gave the state custody of all wooden, non-motorized vessels in a two-square-mile area of Narragansett Bay, where the wrecks were believed to be.

Ironically, Rhode Island's main concern was blocking salvage. The state was reluctant to rely on its antiquities act—which asserts ownership of historic properties in navigable waters—because there is no mechanism to enforce it. And it is legally untested.

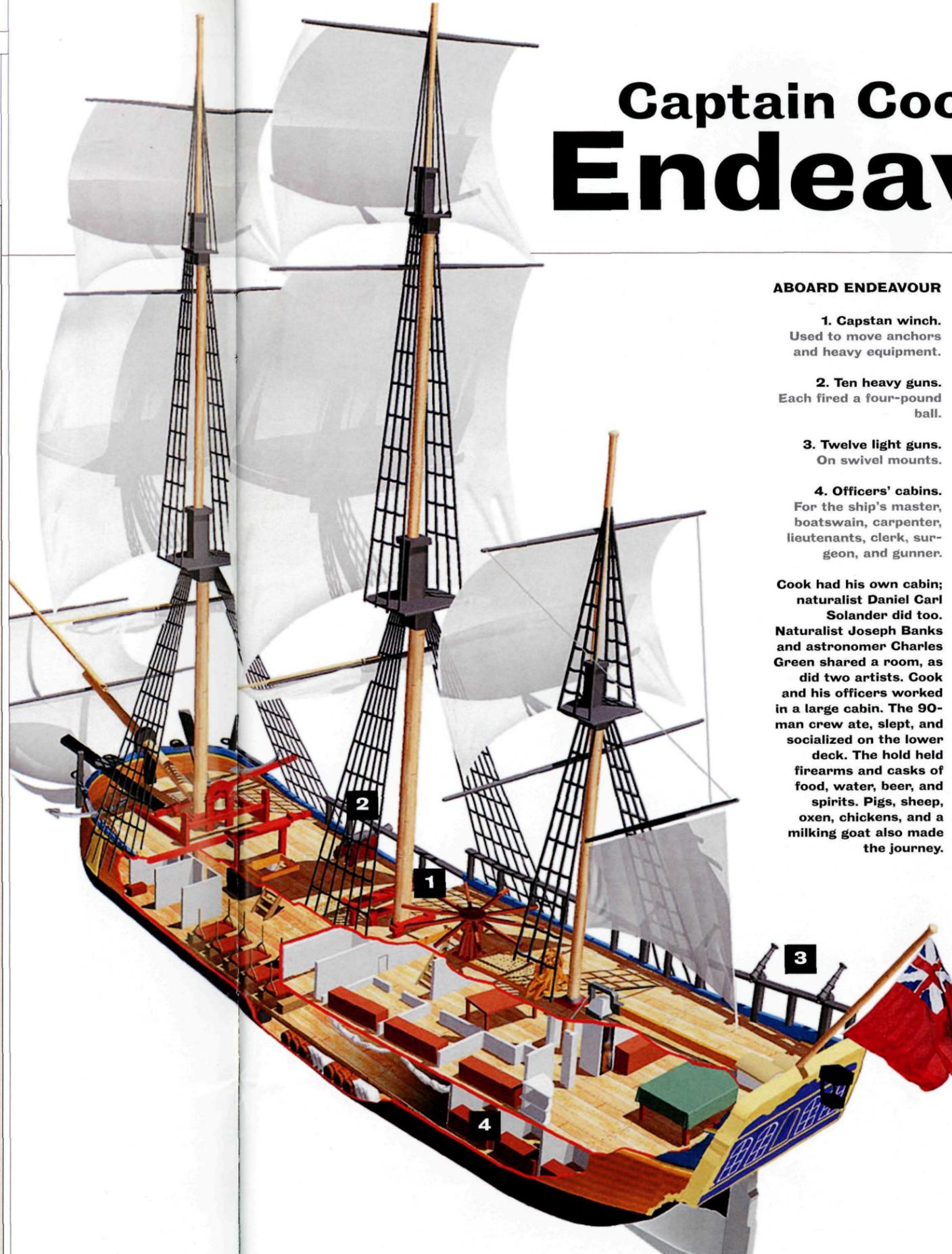
Also, the ships—part of a British transport fleet scuttled to block Newport Harbor during the Revolution—fall under the Abandoned Shipwreck Act. That law gives states title to wrecks, providing they are in state waters, eligible for the National Register of Historic Places, and, in fact, abandoned. The problem was proving abandonment, given recent court challenges (see *Common Ground* summer/fall 1998).

Had *Endeavour* been a British naval vessel, the issue of ownership would be settled. But it was privately owned during the Revolution (renamed *Lord Sandwich*) and chartered to the British as a transport. It is not known whether the owner was ever reimbursed for the loss.

Invoking admiralty law brought the matter into federal court, which meant the claim could be protected against international as well as domestic salvage. Under admiralty law, certain measures a salvor takes (such as recovering items from a sunken vessel) constitute what's called a preferred maritime lien, preventing other salvors from making claims. By recovering pottery from one of the vessels, Rhode Island was able to argue that it had "taken such measures as are necessary to constitute dominion and control of the wrecks." The U.S. district court, after a request from the state attorney general, issued an order creating the protective zone.

Since 1994, the state and the Rhode Island Maritime Archaeology Project—a non-profit involved in underwater projects and volunteer training—have been close partners in the search for the fleet. An agreement designated RIMAP as official agent in the investigation, critical since the state does not have resources for fieldwork, which has been funded by the U.S. Navy, the NPS Battlefield Program, and preservation money the Park Service grants to local governments.

The state notified the British government of its actions in writing, accompanied by the papers filed in court. Since the claim has gone uncontested, with no response from the British, Rhode Island is moving to claim title. Once this happens, the state will invite interested parties to participate in preservation, including the U.S. Navy and foreign governments.



### ABOARD ENDEAVOUR

1. **Capstan winch.**  
Used to move anchors and heavy equipment.
2. **Ten heavy guns.**  
Each fired a four-pound ball.
3. **Twelve light guns.**  
On swivel mounts.
4. **Officers' cabins.**  
For the ship's master, boatswain, carpenter, lieutenants, clerk, surgeon, and gunner.

Cook had his own cabin; naturalist Daniel Carl Solander did too. Naturalist Joseph Banks and astronomer Charles Green shared a room, as did two artists. Cook and his officers worked in a large cabin. The 90-man crew ate, slept, and socialized on the lower deck. The hold held firearms and casks of food, water, beer, and spirits. Pigs, sheep, oxen, chickens, and a milking goat also made the journey.

### THE LEGACY

Over 200 years ago, Captain James Cook sailed a converted coal carrier, *Endeavour*, on a worldwide scientific mission, recording over a thousand plants and an equal number of birds and fish. The voyage pioneered new methods in navigating and in preventing scurvy, brought on by lack of vitamin C.

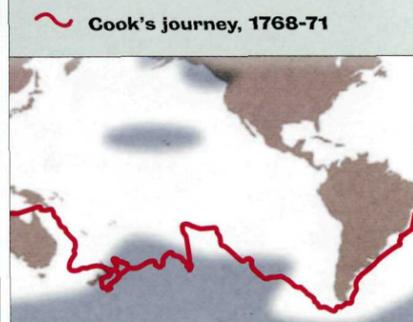
Does the *Endeavour* now reside on the bottom of Newport harbor? Archeologists are not certain. Marine archeologist D.K. Abbass (below) believes the British delib-



erately sunk the vessel during the Revolutionary War—rechristened as *Lord Sandwich*—along with a dozen others in a transport fleet. Three of the wrecks top 300 tons, *Endeavour's* weight range.

### COOK'S VOYAGE

Cook was the first to accurately map New Zealand and Australia's east coast, debunking the idea of a huge southern continent thought to lie in the blue shadowed area at the bottom of the map.



SOURCES: HM BARK ENDEAVOR FOUNDATION; NATIONAL MARITIME MUSEUM, GREENWICH, ENGLAND; "THE EXPLORATIONS OF CAPTAIN JAMES COOK." COURTESY KNIGHT-RIDDER



# the earliest americans

BY ROBERT S. GRUMET AND DAVID S. BROSE

**F**ew topics spark greater interest or inspire more spirited debate than the study of America's first inhabitants, the Paleoindians. Sites preserving evidence of their lives are among the nation's rarest, most sought after, and, by consequence, most threatened. This is especially true east of the Mississippi, where few of these places have received widespread public attention.

This issue draws on a nationwide effort using the latest scholarship to identify sites in the U.S. eastern half, to be evaluated for nomination as National Historic Landmarks or as listings in the National Register of Historic Places. The

authors show how multi-disciplinary research by hundreds of their colleagues is transforming ideas about cultural development not only east of the Mississippi, but across the entire continent.

The effort has its roots in the first NHL study on the subject, conducted over 40 years ago. Archeologists led by H. Marie Wormington summarized then-current knowledge to nominate 11 early occupation properties, including New Mexico's famous Clovis and Folsom sites. But the study's emphasis, and the locale of almost all the nominated places, reflected the prevailing view of Paleoindians as big game hunters on the broad prairies of the West.

## Landowners and Landmarks

Private landowners must consent before a National Historic Landmark can be nominated. Obtaining consent is not merely an administrative exercise. Federal preservation efforts like NHL and National Register designation protect landowners from federally funded or regulated undertakings, without infringing on privately funded activities. And in accordance with both the National Historic Preservation Act of 1966 (as amended) and the Archaeological Resource Protection Act of 1979 (as amended), site locations are not available to the public. This is to respect owner privacy, prevent trespass, and protect from looters and vandals.

The information gathered for nomination provides landowners and land managers with precise maps, assessments of site condition, and other critical data. The NHL program is developing computer networks to speed communicating this information among everyone essential to preserving these fragile reminders of the first Americans.

**Previous pages:** Archeologists map evidence of Paleoindians at Virginia's Thunderbird archeological district—a National Historic Landmark—flanked by a spear point found in Coshocton County, Ohio. **Below:** Artifact unearthed at Cactus Hill, also in Virginia, a site that is challenging accepted ideas of when people first arrived on the continent.

Much has changed since. Fueled by widespread scholarly and public interest, an explosive surge of exploration—in part driven by preservation law—has unearthed hundreds of sites containing potentially significant evidence. Discoveries by interdisciplinary teams of archeologists, geomorphologists, geophysicists, geochemists, paly-nologists, paleobiologists, and other specialists are shining new light on Ice-Age human ecology. Recovery of fish scales, charred nutshells, and other delicate plant and

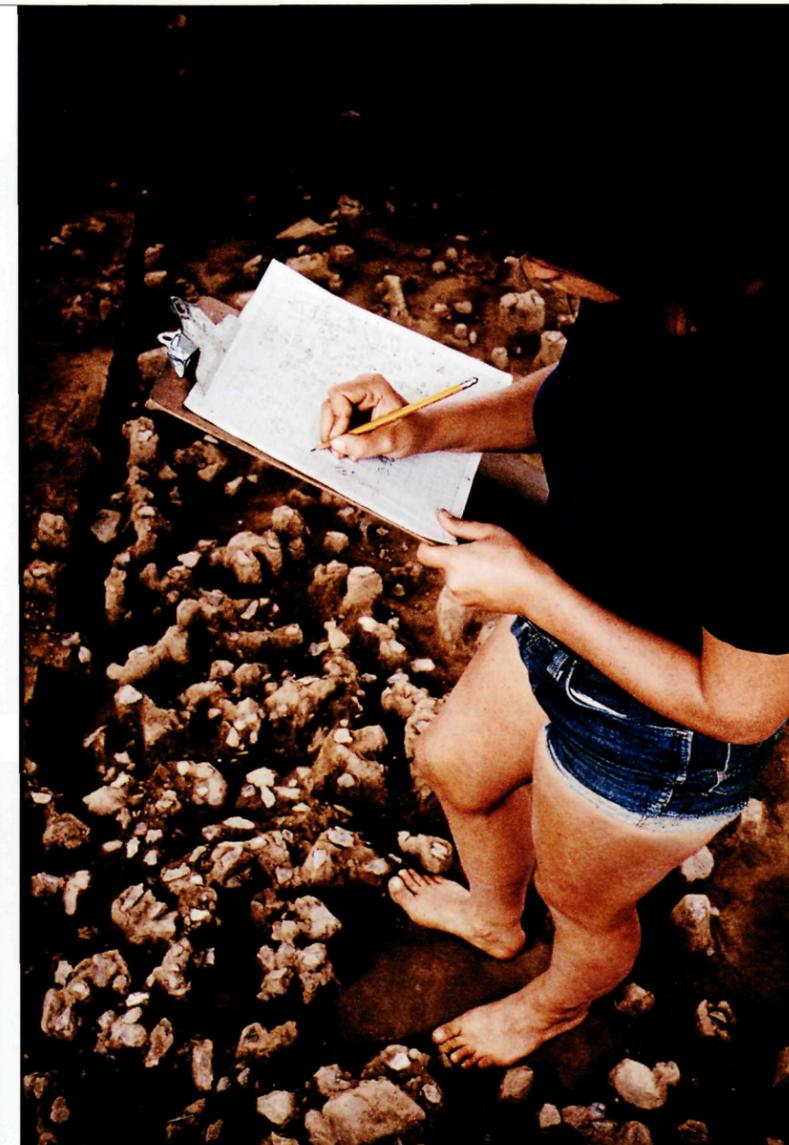


animal remains at Pennsylvania's Shawnee-Minisink site and elsewhere permit detailed reconstructions of Paleoindian diet, health, and settlement-subsistence patterns. Advances in radiocarbon dating allow archeologists to plot cultural sequences with increasing clarity and precision. Since Wormington's study, these and other innovations have supported nomination of nine Paleoindian NHLs (including two east of the Mississippi—Virginia's Thunderbird archeological district and North Carolina's Hardaway site) and the listing of seventy properties in the National Register (two-thirds in the East). In addition to

inspiring nominations, the flood of findings has also revealed the need to update past designations to reflect current thinking.

The avalanche of data paints a far more complex picture of the earliest Americans east of the Mississippi, challenging ideas about when they arrived and how they adapted to the diverse, ever-changing, and often unpredictable environments of the Ice Age. The findings show that, far from simply being big-game hunters, the Paleoindians survived in complex, flexible, and diverse ways. Other research suggests that Paleoindian occupations may reach farther into the past than previously thought.

Much remains to be discovered, and only archeology can provide the direct physical evidence needed to shape new understandings. The stewards of these fragile links to the past face daunting challenges. Museum curators struggle to accession new finds, preserve existing collections, and make holdings more available to scholars, Indian people, and others eager to learn more about America's first inhabitants. Land managers try to increase public awareness of the need to preserve the past as they confront



ABOVE LEFT, RIGHT: SANDRA SPEIDEN

**Above left and right:** Measuring and recording archeological features at Thunderbird, renowned for its extensive and well-preserved record of human history spanning over 12,000 years.

threats posed by erosion, development, casual collectors, and looters who destroy sites in search of Paleoindian projectile points, prized for their beauty, rarity, value, and association with the earliest Americans.

To meet these challenges, the Park Service asked the Society for American Archaeology to lead an initiative to increase the number

of sites recognized as NHLs. In 1995, the effort evolved into a new theme study entitled "The Earliest Americans." Advised by over 30 prominent archeologists—and a spectrum of public and private sector colleagues—we developed the following goals as NPS and SAA project coordinators, respectively:

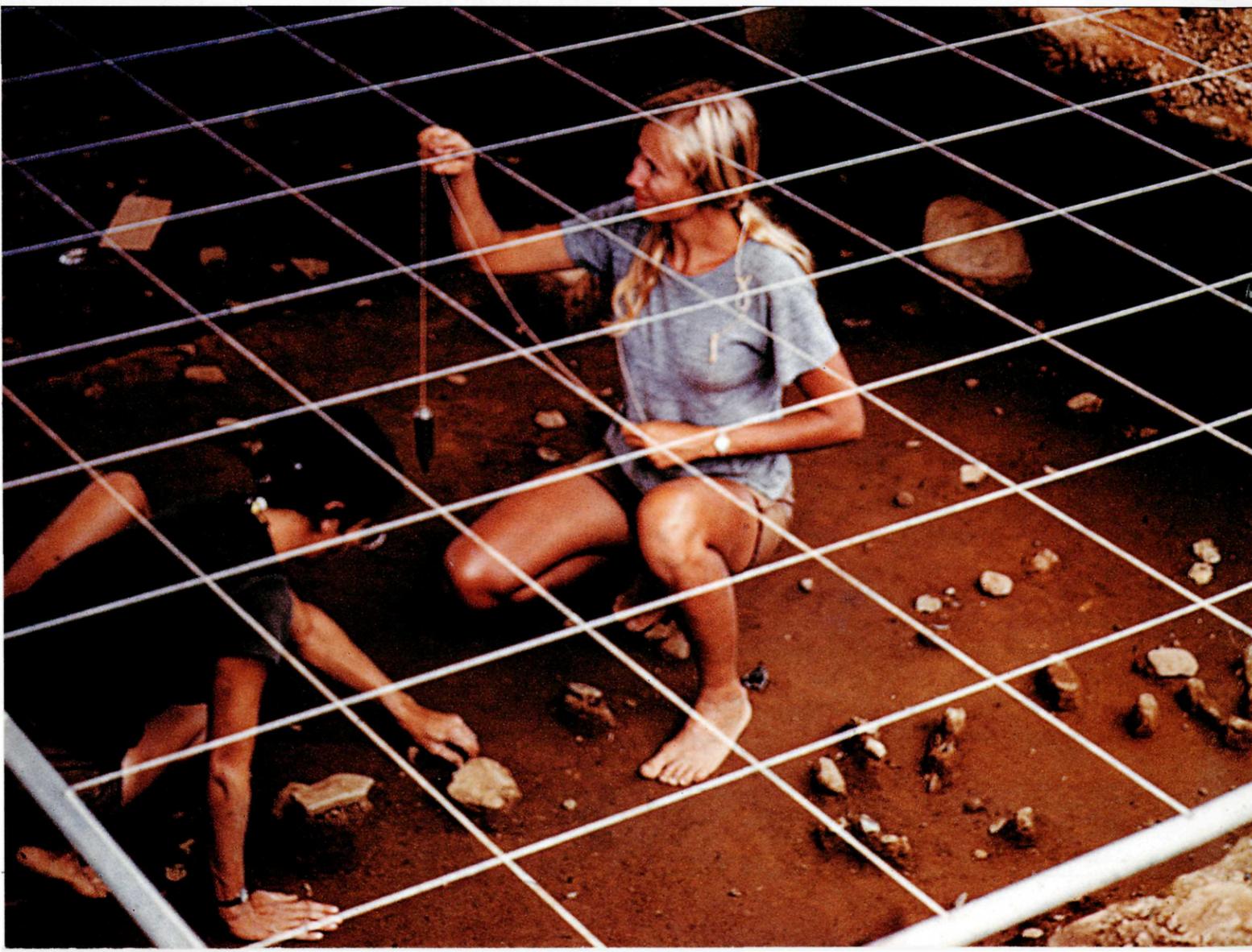
- Gather multi-disciplinary evidence on a nationwide scale.
- Organize it into frameworks ("historic contexts") that aid in identifying, evaluating, and nominating sites.
- Clarify boundaries of properties already designated.

LEFT: MIKE JOHNSON, FAIRFAX COUNTY ARCHEOLOGY

**“Fueled by widespread scholarly and public interest, an explosive surge of exploration—in part driven by preservation law—has unearthed hundreds of sites containing potentially significant evidence.”**

**Below:** Archeological grid at Thunderbird. Depth did not always correlate with age at the National Historic Landmark—where digging began in 1971—because the nearby Shenandoah River shifted the soil over the centuries. Ten feet down, archeologists found evidence of a 10,000-year-old swamp. **Right:** Archeologist at South Carolina’s Topper site.

SANDRA SPEIDEN



DARYL P. MILLER, SOUTH CAROLINA INSTITUTE OF ARCHAEOLOGY AND ANTHROPOLOGY

- Develop and refine data for use by public agencies and others to preserve and commemorate sites.
- Make the findings widely available.

The articles here preview the findings from historic contexts developed for regions east of the Mississippi. These contexts—which synthesize the latest science in ways that can be quickly grasped by nonspecialists—are consensus statements rigorously reviewed by scholars, avocationalists, preservationists, land managers at all levels, and others concerned with preserving the fragile physical record of the nation’s earliest inhabitants. This does not mean that the authors do not voice their own opinions. Instead, they contrast their views with those of others, stressing points of agreement and dissent.

The contexts serve as vehicles both to nominate new NHL and National Register properties and to update existing designations. Review drafts of the contexts, and final versions, are available in print and on the NPS website (see page 53 for contact information). The Park Service and the SAA invite all interested parties, particularly archeologists and avocationalists, to take part in the study and in nominating properties.

## A Framework for Preservation

Research documents called “historic contexts” provide a framework for identifying, evaluating, and designating potential NHL and National Register properties. Each context draws a picture of a particular time and region. It also defines property types, inventories sites and artifacts (known and projected), addresses research questions, provides evaluation criteria, and discusses key bibliographic material.

Archeological properties, unlike other NHL candidates, must have the potential to resolve a debate, modify a major concept, or close a gap in understanding. The material discovered must be able to yield information on one or more research questions, clarifying a site’s function, type, boundaries, and period of occupation. Nominations should also address relationships with other locales and whether the research is under-represented among current NHLs or National Register listings.

Nominators must show how a property illustrates these themes:

**Peopling Places.** Focuses on demography and settlement.

**Creating Social Institutions.** Examines how cultural traditions emerge and develop.

**Expressing Cultural Values.** Looks at issues of belief and its representation.

**Shaping the Political Landscape.** Deals with identity, territoriality, and interaction.

**Developing the Economy.** Explores how people extract, produce, distribute, exchange, and consume resources.

**Expanding Science and Technology.** Looks at material remains, technology, and technological organization.

**Transforming the Environment.** Examines humans’ responses to the environment and their impact upon it.

**A Changing Role in the World.** Assesses major contributions to knowledge and how this continent relates to the rest of the globe.

# the midwest

BY MICHAEL J. SHOTT

No baseball fan would confuse the contributions of a starting pitcher who labored long innings with a reliever brought in to retire the game's last batter. Both contributed to their team's success, but differently. No fan would call the second pitcher the starter nor credit him with the victory, because the first preceded him by many innings and laid the groundwork for the reliever's finish.

Every year across the Midwest, pioneer culture is celebrated in museums, music, and parades. And with good reason. Pioneers were resourceful, they worked hard, and they overcame formidable obstacles, often at great sacrifice of life and property. They laid the foundation upon which subsequent generations flourished. There is only one problem, and that an innocent one, in our esteem for pioneer lives and times: the people whom we call "pioneers" arrived in the Midwest at least 12,000 years too late truly to claim the honor. In the long span of human occupation of North America, these "pioneers"



GREG HARLIN—WOOD RONSAVILLE HARLIN, INC.

**Previous pages:** A Paleoindian band on its way to Silver Mound, a prominent landmark on the prairie in what is now western Wisconsin.

are 9th-inning relievers. They were preceded on this continent by people who lived here for thousands of years, people who trace their ancestry back to the real pioneers. These were the people who truly settled a land previously unknown to humans. They too were highly resourceful and hard-working, and they too overcame formidable obstacles in their path. They were the people whom archeologists call Paleoindians.

It is both a cliché and the truth to call the United States a nation of immigrants; Americans trace their ancestry to other parts of the world. Most scholars think America's first people also were immigrants, arriving perhaps 11,500 years ago (see sidebar on dating the era, page 25). Most likely, they came from northeast Asia, although there remains some controversy about who colonized the Americas and from where. Paleoindians were modern in the biological sense; there is no evidence for earlier humans like neanderthals anywhere in the New World. Paleoindians also were the ancestors of the Native Americans met by Europeans many millennia later. All available evidence supports this view.

Simple curiosity about distant ancestors is one reason to study Paleoindians, and it requires no special justification. Paleoindians represent a stage of human history worth knowing as much as any other, simply because they lived. There are other reasons, but we must avoid romantic notions about noble hunters in harmony with their environment. That view reduces Paleoindians and their descendants to caricatures, idealized embodiments of all the virtues thought not to characterize modern society. It establishes Paleoindians more as foils to our notions of progress than as legitimate subjects of study in their own right.

The study of Paleoindians is an important scientific task, but the limitations imposed by the archeological record are

# On the Record

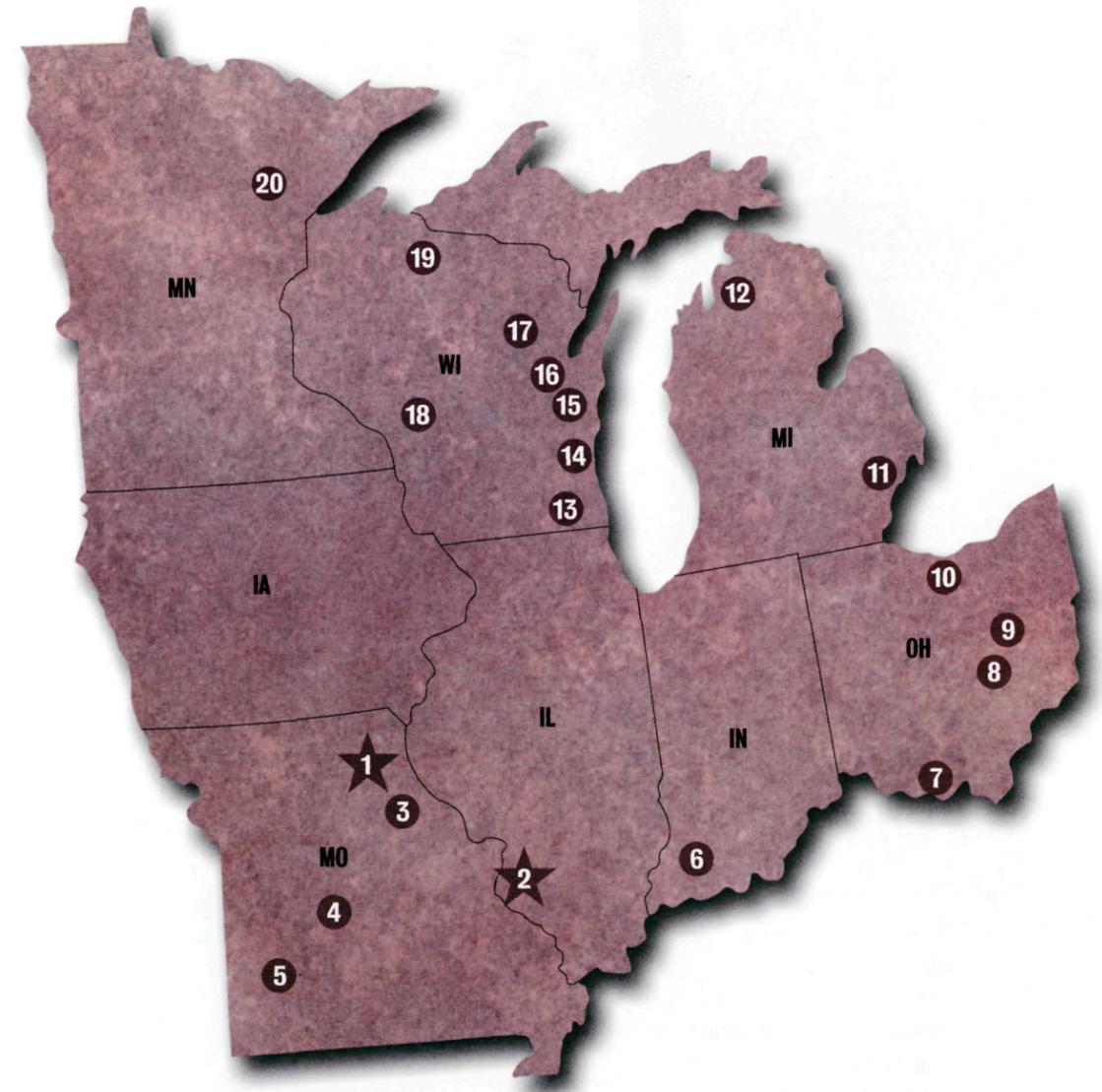
## National Historic Landmarks

- 1. GRAHAM CAVE.** At this well-preserved habitation site, projectile points—along with an extensive collection of other artifacts—were found with plant and animal remains radiocarbon dated to 9,700 years ago. Designated 1979.
- 2. MODOC ROCK SHELTER.** Samples from the shelter date to 9,000 years ago. Designated 1978.

## On the National Register of Historic Places

- 3. KIMMSWICK BONE BED.** A host of projectile points and other stone tools were discovered with mastodon bones. Listed 1980.
- 4. RODGERS SHELTER ARCHEOLOGICAL SITE.** Archeologists found many artifacts in the deepest of four culture-bearing strata at the site—in a 17-foot-thick layer of clay and gravel. Listed 1969.
- 5. MONTGOMERY ARCHEOLOGICAL SITE.** A variety of late Paleoindian projectile points were recovered from river-terrace deposits. Listed 1978.
- 6. PRAIRIE CREEK SITE.** Archeologists found stone tools among the bones of mastodon, giant beaver, and other extinct animals. Listed 1975.
- 7. ADAMS COUNTY ARCHEOLOGICAL DISTRICT.** Surface surveys recovered projectile points from all Paleoindian periods. Listed 1974.
- 8. FLINT RIDGE STATE MEMORIAL.** Distinctive chert from quarries in and around Flint Ridge has been found in Paleoindian sites throughout eastern North America. Listed 1975.
- 9. PALEO CROSSING-OLD DAGUE FARM SITE.** The site has pits, dated post-hole fill, and undisturbed strata with collections of tools including numerous scrapers and projectile points resembling those found at nearby Nobles Pond. Listed 1992.
- 10. BURRILL ORCHARD SITE.** Best known for its fortified village from the Late Woodland period (A.D. 1300-1500), this peninsula site also featured deep, sealed pits containing late Paleoindian projectile points, drills, and other tools. Listed 1977.
- 11. HOLCOMBE BEACH SITE.** Intensively analyzed, the site yielded one of the few pieces of animal remains clearly linked to the Midwest's first people: a charred caribou bone fragment. Listed 1970.
- 12. PEWANGOING QUARRY.** A major source of Eastport flint, used widely throughout the Midwest by Paleoindian and later peoples. Listed 1972.

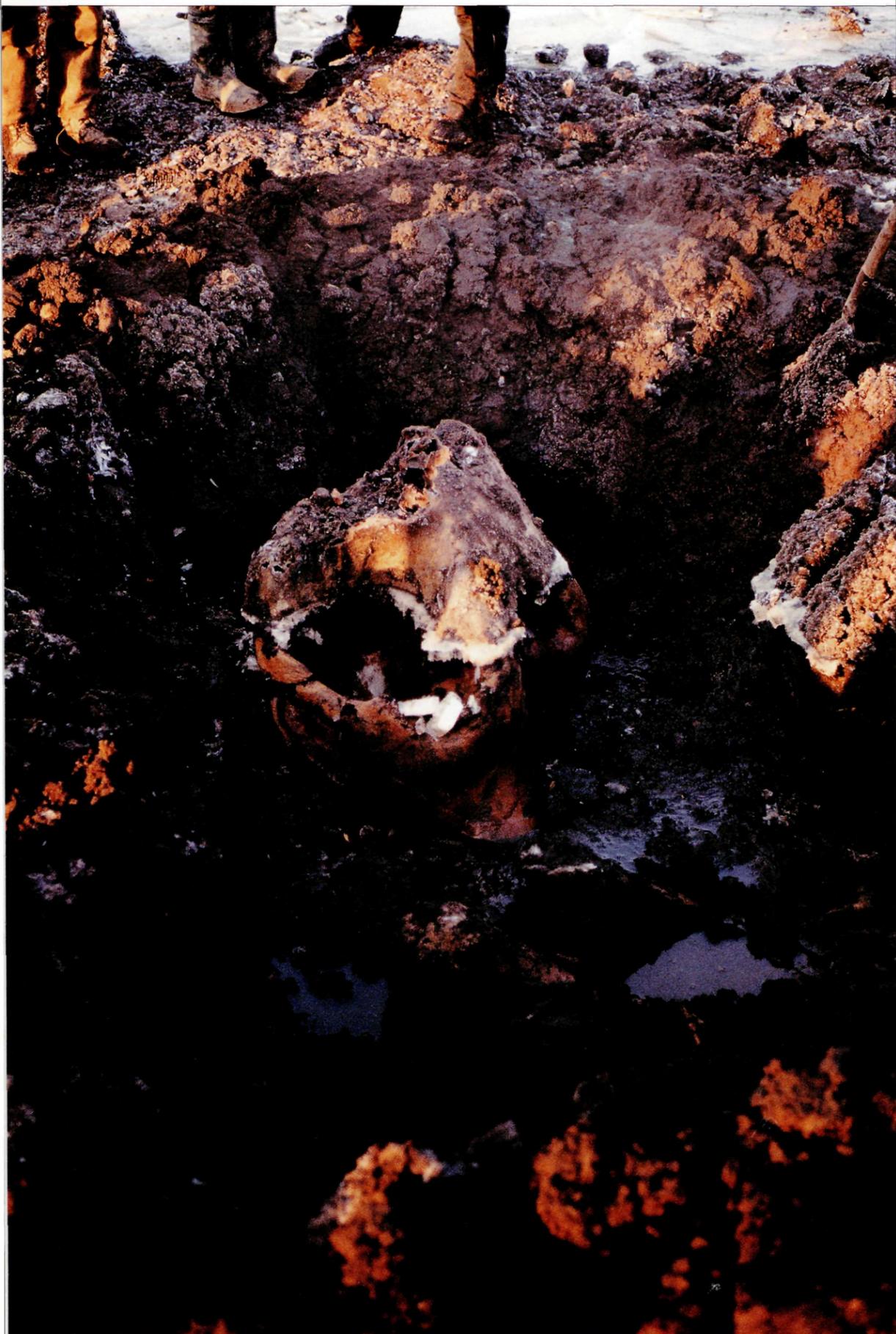
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- 13. CHESROW SITE.** The many projectile points found during surface reconnaissance at this site—near the shores of Lake Michigan—offer clues to a variety of uses. Listed 1977.
- 14. LUCAS SITE.** Small habitation that yielded a collection of artifacts similar to that found at the nearby Chesrow site. Listed 1995.
- 15. AEBISCHER SITE.** Archeologists found a number of early artifacts—primarily crafted from nearby Moline chert—at this small habitation. Listed 1985.
- 16. KAMRATH SITE.** Projectile points of Hixton Quartzite from Silver Mound (see number 18) were recovered at this small, open site. Listed 1975.
- 17. METZIG GARDEN SITE.** Radiocarbon assays of charred remains suggest occupation between 10,500 to 8,500 years ago at this small, late Paleoindian site containing many shallow hearths or roasting pits. Listed 1988.

- 18. SILVER MOUND ARCHEOLOGICAL DISTRICT.** Source of Hixton quartzite, used widely throughout the Midwest in the Paleoindian period. The site, an isolated outcrop covering approximately 200 acres, yielded many tools and much stone debris. Listed 1975.
- 19. DEADMAN SLOUGH.** Along a ridge, archeologists found late Paleoindian projectile points, scrapers, stone debris, a cremation burial, and charred plant and animal remains. Listed 1993.
- 20. WHITE OAK POINT SITE.** Late Paleoindian projectile points were discovered at the site, used for a host of purposes. Listed 1972.

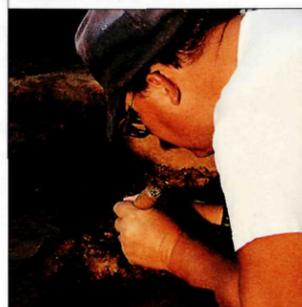
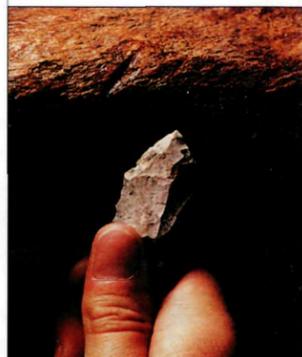
Research by Student Conservation Association diversity intern Andrew Bashaw.



**Left:** Bones of a nearly complete adult male mastodon peek through the muck at Ohio's Burning Tree site. The bones' position suggests that the animal may have been butchered and cached.

**Below:** Marks on a mammoth leg bone match the stone tool found with it in Wisconsin.

**Bottom:** Excavating Ohio's Manning site.



## Dating the Ancients

The dates in this issue are based on radiocarbon dating technology, which, although it has revolutionized archeology, introduced a suite of accuracy problems.

The technology is based on the rate at which the carbon-14 isotope decays. Elements such as seed, wood, plants, and bone, while alive, absorb carbon-14 from the atmosphere. Archeologists estimate when the element was last living by calculating carbon decay.

The problem is, atmospheric carbon can vary from year to year. Archeologists have adjusted some Paleoindian dates to allow for fluctuations, but the calibration programs are not consistent. Some yield a single date, others a statistical margin of error. Many dates have not been adjusted at all.

In the interest of consistency, no attempt has been made to adjust dates in this issue. New technology, and our growing knowledge of atmospheric shifts over the centuries, promise heightened accuracy in the near future.

daunting. No doubt they had diverse, sophisticated material cultures of shelter, clothing, ornament, and tool. In the Midwest, however, most objects have not survived long exposure to the elements. We are left with the imperishable component, chiefly stone tools. Our challenge resembles that facing a future archeologist who contemplates 21st century American society on the basis of an auto mechanic's toolkit. At first glance, the prospects seem severely limited. But with hard thought and work, the archeologist could learn much more about our society than how we tuned engines. Every technology is set in a broader cultural context; guided by reasonable ideas of how tools reflect that context, our archeologist could infer many aspects of our society apparently unknowable.

### The Sculpted Landscape

Broadly, the Midwest comprises the Big Ten states of Indiana, Illinois, Iowa, Michigan, Minnesota, Ohio, and Wisconsin, as well as Missouri. It is defined by some of the greatest natural features of North America. To the west lie the Great Plains, to the east the Appalachian Mountains. The Midwest's southern boundaries are formed roughly by the Ohio and the lower Missouri Rivers. To the north lie the Great Lakes and the Canadian border. Through the Midwest flows the continent's greatest river, the Mississippi.

The landscape was carved chiefly by successive glacial advances during the Pleistocene Epoch. The last, Wisconsinan, advance, named after the state where glacial deposits were first identified, covered roughly the north half of the Midwest—almost all of Michigan and Minnesota, most of Wisconsin, and some of Ohio, Indiana, Illinois and Iowa—and began retreating around 18,000 years

ago. It left behind a landscape of rolling plains, hilly moraines, and tilted, sandy outwash plains. Northern Ohio, Indiana, and Illinois were occupied by flat lowlands, and the floors of the Great Lakes were higher than at present. Farther south, the Appalachian Plateau reached into southeastern Ohio. Today southern Indiana and Illinois feature ranges of hills that predate the Wisconsinan advance.

### A Patchwork of Habitats

When Paleoindians reached the Midwest, it was a complex patchwork of habitats that owed their character to a combination of glacial climate, topography, and soils. Since a massive glacier lay across the north, the climates and habitats to the south naturally were under its influence. Winters, obviously, were cold, summers warm but short. Progressively after about 12,000 years ago, climates slowly shifted toward modern conditions. Yet from about 10,900-10,100 years ago, North America experienced an abrupt and rather severe cold, dry period called the Younger Dryas. Thereafter, the climate again ameliorated.

As Paleoindians entered the Midwest, probably from the west or northwest, its northern zone was a thin band roughly comparable to the modern tundra of northern Canada. Farther south were boreal and deciduous forests, the latter not greatly different from the forests that occupy much of the Midwest today. These people crossed a Mississippi River swollen with meltwater and still incising

parts of its floodplain as it coursed southward from the glacial front. Within their lifespans, some Paleoindians witnessed catastrophic drops in the Great Lakes from levels above to far below modern ones. They saw a landscape transformed on a scale that we scarcely can imagine. Suppose you returned to Chicago after several years' absence to discover that Lake Michigan had receded, leaving the city stranded 20 miles inland. This was the momentous transformation of the post-glacial world.

Paleoindians, in short, responded to environmental and geological changes that would stagger us. *Dynamism* is a hackneyed buzzword, but these people survived environments vastly more dynamic than any known to history. And they adapted successful-

the newcomers, and no one was there to impart knowledge or guidance for survival, let alone prosperity.

When people reached the Midwest, for instance, mammoths and mastodons inhabited the region. Thomas Jefferson asked Lewis and Clark to search for them in the course of their western exploration. As they did Thomas Jefferson, these beasts fascinate Paleoindian archeologists. Ancient association with them was well established years ago in the West. We can only wonder what Midwestern evidence was unearthed long ago but not recognized. Indeed, tantalizing hints of association are part of Midwestern folklore; most archeologists know a farmer who knew a farmer who had a father who said that his grandfather had a friend who long ago found "spear points" with the fossils of an antediluvian beast. What, for instance, can we make of an Illinois collector's

## Glacial Retreat



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ly, laying the foundation for the cultures that succeeded them and persisted for perhaps 12,000 years before Europeans invaded what they called the "New World."

Eighteenth and nineteenth century settlers contemplated a landscape that they mistook for an unspoiled wilderness. They marveled at the abundance of plant and especially animal species that they encountered, attributing it to nature alone. Yet this abundance was as much the product of 12,000 years of careful, ecologically sophisticated native husbandry as it was the unimproved bounty of nature. In contrast, when Paleoindians reached the Midwest, they were the first humans to tread upon its ground. The region lacked human landmarks, some animal species were unknown and foreign to

1921 account of three projectile points "found with a tooth as big as your fist," unless the tooth was a mastodont molar?

The fate of the mammoths suggests a natural global process amidst drastic environmental change. People perhaps hastened the end, but seem not to have caused it. Dramatic reordering of the plant world attended the transformation, especially during the Younger Dryas event. Such change is bad for large-bodied, slowly reproducing, narrowly adapted mammals. The extinctions were waiting to happen. Instead of inquiring whether people extinguished them, we may as easily wonder how they persisted so long.

**Left:** This point, found in Ohio, was probably damaged during use, evidenced by the fractured left edge. **Right:** Although there are clues of mammoth hunting in the Midwest (such as at Missouri's Kimmswick site), Paleoindians likely predicated their survival on a wide range of plants and animals.

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### The Earliest Occupants

Years of determined effort have produced a number of claims of pre-Paleoindian human antiquity in the Midwest and nearby regions. Most claims are questionable on various grounds. Several outside the Midwest and from as far afield as southern Chile, however, are not discredited and may attest to the presence of humans in the Americas before about 12,000 years ago.

The dates of historical events can be elusive, even with the advantages of written records. Imagine the problems that confront archeologists in their efforts to date the remote past. In the face of such difficulties, we use all available methods and evidence. They include radiocarbon dating, the foremost method for events that occurred within roughly the past 60,000 years. But radiocarbon dating requires preserved organics like wood charcoal, comparatively rare in Midwestern sites owing to the region's acidic soil. These are exciting times for Paleoindian chronology, as we learn more about the problems of radiocarbon calibration between roughly 13,500-11,000 years ago. Most if not all Paleoindian occupation falls within this interval, probably comfortably so.

The Midwest is the crossroads of North America. Today the region is a complex, changing pastiche of cultural traditions. Comparable diversity existed in its earliest human history, mirrored by the many styles of projectile points found here, evidence of peoples intersecting. Considering the dynamism of both culture and environment, it is no surprise that we can perceive cultural change throughout the interval.

The earliest identifiable/identified style, Clovis, is found in the western part of the region, along with its successor in the West, the Folsom style. Farther east, the Gainey style, found in the Great Lakes area, represents something of a Clovis-Folsom hybrid, though it seems closer to Clovis. Along the Ohio River, southeastern styles appear too. The Dalton style, which arose late in the period, is scattered widely, but apparently thinly, across the Midwest.

**Right: A 1963 excavation at Missouri's Rodgers Shelter site. This overhang in a sandstone bluff was occupied by Native Americans until about A.D. 1200. The view is from inside the shelter.**

### Daunting Complexity

Paleoindian land use was complex. Groups of varying size and composition did different things at different places, leaving behind different kinds and numbers of stone tools and other remains. This has produced a complex archeological record, in which assemblages—collections of tools—accumulated at some places after brief visits by a single social or task group, at others after repeated visits by groups of differing size, composition, and purpose.

In the remote past, as today, assemblages of objects refracted, not simply reflected, patterns of activity in the landscape. This being so, we must be cautious in the meanings we assign. The Earliest Americans Theme Study identifies several Paleoindian property types; all might have different meanings. One is isolated finds, legion in archeological lore. No doubt many such finds are genuine isolated losses in hunting and other acts. Some, however, probably are all that was visible of a larger assemblage on the surface of a plowed field.

Caches—sets of tools placed in graves or deliberately stashed below ground for storage—are a second property type. Clovis caches of fluted bifaces and blades are known from several western states. In the Midwest, although confirmed early Paleoindian caches are rare, tantalizing evidence exists. Besides several in Ontario, a confirmed cache was found in southeastern Iowa. It contains eleven Clovis or Gainey fluted bifaces, most apparently composed of local chert. Perhaps the cache was one person's hunting or tool kit.

**“We must avoid romantic notions about noble hunters in harmony with their environment. That view reduces Paleoindians and their descendants to caricatures, idealized embodiments of all the virtues thought not to characterize modern society.”**



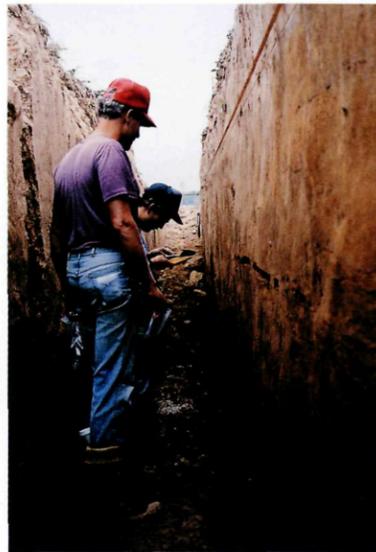
R. BRUCE MCMILLAN

Burials are special types of caches, and they can contain stone tools. The Crowfield site in Ontario may be a cremated burial. Late Paleoindian cremation caches include Renier on Wisconsin's Door Peninsula and Gorto in the Upper Peninsula of Michigan. Because Midwestern soils and climate act against preservation, there are few known kill sites of Paleoindian age. Near St. Louis, Kimmswick yielded Clovis projectile points with mastodons, the only clear association with people in the Midwest. Southwestern Wisconsin's Boaz and other sites yielded some clues that Paleoindians hunted the beasts. Several sites in Michigan, Ohio, and southeastern Wisconsin look promising, but the evidence is not firm because chipped stone tools are absent or rare. At these sites and elsewhere, human association is suggested—but not yet demonstrated—by meticulous studies of cut marks on bone, along with the patterns of skeletal disarticulation and the general absence of bones, which may mean butchery (there has even been some ingenious deduction of season of death).

No doubt, Paleoindians hunted many other species too, but the only evidence in the Midwest is a caribou bone at southeastern Michigan's Holcombe site.

Quarries and workshops are important because they reveal how people made the fluted bifaces and other tools found at Paleoindian properties. Chert is abundant across the Midwest; lamentably, documented quarry/workshops are few. Near the mouth of the Illinois River and several chert quarries lies Ready, the best known early workshop in the region.

On the evidence, occupations are the most common property type. Few are properly documented. No doubt dozens, likelier hundreds, are scattered across the Midwest.



### Our Debt to the First Americans

We owe many things to Native Americans, and not just the place names like Wisconsin or Ohio that grace our landscape. We owe them also an agricultural tradition going back millennia, including native domesticates like goosefoot and squash and tropical imports like corn and beans. We owe them a system of river and land routes, natural and forged roads. (The coincidence of our interstate highways and major Native American overland routes is

noticeable.) Most broadly, we owe them a landscape that combines natural diversity with the abundance of careful, if often oblique, human cultivation. In turn, they owed it to their forebears. Paleoindians are no footnote to Midwestern history; they are where that history begins.

It took Europeans two centuries or more to complete their occupation of the Midwest, and they had tremendous technical advantages as well as a system of trade and travel routes. Paleoindians did it in about the same time, without the advantages Europeans enjoyed. How they did it is a story at least as important as the history of European occupation. Thus, the Paleoindian subject takes on importance as a case study in the adaptability and resourcefulness of humankind.

Paleoindians created the institutions of lineage and society that later native cultures inherited and transformed in their turn. They forged a political landscape where none existed before them, probably investing the major natural features with great symbolic meaning. Paleoindians also negotiated boundaries between neighboring groups, and altered those boundaries with time as their numbers grew and their habitats and social institutions changed. Crudely, we can map changes over time in the size and orientation of these territories through the distribution and abundance of chert, settlements, and other property types. Paleoindians established the Midwest's first economy—of raw materials like chert, wood, leather, and food sources like caribou and deer. Paleoindian stone-tool technology was sophisticated, flexible, and deeply embedded in social systems that combined practical reason with cultural meaning.

### The Promise of the Future

We know a great deal about the Paleoindians of the Midwest, but the gaps in our knowledge are larger still. Fortunately, future directions of research are easily assayed. We must learn even more about local habitats, which will require coordination with the botanists and paleontologists. We must do more geological mapping of bedrock and other chert sources to better gauge the abundance and distribution of the raw materials from which Paleoindians fashioned their stone tools. Only then can we estimate the ranges over which groups traveled and the relationship between the toolstone supplies and their consumption of them. We must selectively excavate more sites, and on a large scale. Especially important will be careful excavation of hearths and other features, in particular those in which tools are found, for the charcoal samples that will reveal more of paleoenvironments and serve for radiocarbon dating. Some features might also yield burned animal bones that will tell us more about the Paleoindian diets. In plowzone sites, we must use machines that excavate efficiently but quickly, and selectively collect stone tools from the soil removed. As we enter the 21st century, we continue to excavate inefficiently using tools of Medieval origin. Midwestern farmers long since abandoned similar tools for the efficiency of modern machinery.

**Left: At the Manning site in Clermont County, Ohio, archeologists found evidence of Paleoindians beneath an occupation from the Archaic period (8,000-1,000 B.C.).**

Working with geomorphologists, we must identify buried landforms in river valleys and elsewhere, and sample them with deep excavations using power equipment. As we accumulate more tool assemblages, we must analyze them with the best techniques that alone will reveal their complex variations.

Most important of all, we must look more systematically for sites across the vast landscape, most of it farmland. Much—by no means all—of the land surface is the same the Paleoindians trod. Many sites lie on or near the surface. As a practical matter, such sites will always be the most common and therefore most important components of the archeological record. Because Paleo land use was a large-scale enterprise, our surveys must be of commensurate scale. They must be sustained over at least several years to account for the complicating effects of annual cultivation. Ideally, surveys should be part of a coordinated effort across the Midwest such that, for instance, we survey concurrently and using similar methods in Iowa and Ohio, Minnesota and Indiana.

Rightly, American archeology today is eager to enhance public understanding of our past. Arguably one of the greatest opportunities ahead is for collaboration between professionals and lay people (see sidebar next page). Most Paleoindian artifacts are in private hands, often in collections compiled from one's own and neighboring farms. Yet professionals have the widest knowledge of the Paleoindian record and the cultures that produced it. The checkered history of lay-professional relations must be put behind us. Working together, all persons committed to the responsible study of Paleoindian cultures will ensure future growth in our knowledge of the most remote American past.

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# Lost Legacy

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**Right: Projectile points from Coshocton County, Ohio.**

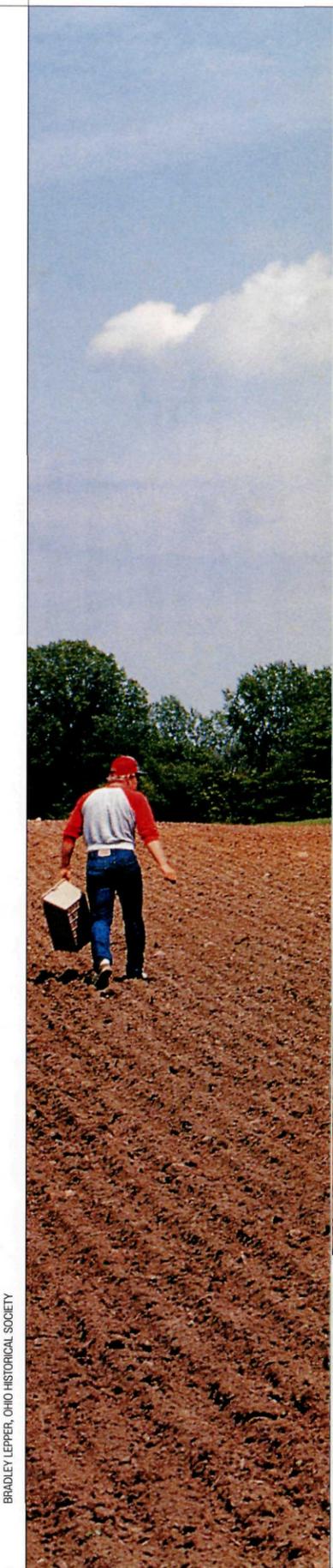
**Far right: Scanning for clues at the state's Payden Run site, where avocational archeologists found a mastodon tooth close to a pair of projectile points.**

Much of the Midwest has already been surveyed, often closely and repeatedly. Archeology, like geology and astronomy, is a science to which lay people sometimes can make great contributions. Because of the Midwest's vast agricultural expanse, it offers perhaps better prospects for collectors and other lay people than any other part of the United States. For more than a century, people have seized this opportunity, accumulating large collections, many including Paleoindian tools. Most now reside in trunks, cigar boxes, or display cases in homes, basements, and county museums.

Tragically, many such collections are lost to scientific study when they fall into the hands of heirs or others who lack the collector's passion. They are dispersed as curiosities or commodities. Imagine the pages of medieval church records or Gutenberg bibles torn out and sold for a few dollars each. Something very similar is the fate of many Midwestern collections. Once lost to study, they can never be restored. The gain to the few is small and momentary, the collective loss to us all immeasurable and tragic.

Who knows how many Paleoindian sites have been destroyed unwittingly in modern development? How many artifacts were discovered and then lost through indifference or accident? The attrition of our heritage, the damage to our scientific data base for studying the past, is incalculable. Walter Schmidt, a long-time collector in the Saginaw Bay area of Michigan and a charter member of the Michigan Archaeological Society, was a responsible student of his area's past. Yet Schmidt, a fallible human being like the rest of us, made mistakes that he later regretted. In 1937, he wrote to W.B. Hinsdale of the University of Michigan: "A couple of years ago on a real high ridge about 1/4 mile from the Pinconning River . . . [I] found an arrow much different than the usual but as it was broken off [I] gave it to Jr. and he traded it off . . . The other day a man told me that this type is called Folsomite [i.e., a fluted biface, perhaps a Folsom point] and is the oldest type of implement known."

No one knows how many variations of this sad story there are, but it illustrates the alarming and prolonged attrition of the archeological record. Without doubt, many collections amassed in past decades have been lost, discarded, or destroyed, and the priceless information they contained lost with them.



BRADLEY LEPPER, OHIO HISTORICAL SOCIETY

# the northeast

BY DENA F. DINCAUZE

The Northeast covered 360,000 square miles, from the Atlantic coastal plain, west across the broad Piedmont valleys, to the folded and crumpled Appalachian Mountains and the eastern Allegheny Plateau. During Pleistocene times, except for the southerly reaches of what is now Delaware and lower Pennsylvania, even the highest peaks were periodically covered by massive glaciers up to a mile thick. Ice, wind, and water scoured bedrock, moved sediment, and left a veneer of sand and gravel everywhere in the region. Glacial lakes formed and drained as the ice melted, and the sea level rose as the water flowed in. Forests and grasslands succeeded the tundra on ice-free land, and deer, bear, and other modern animals lived with caribou, mastodons, and other animals that are now extinct or that have since moved farther north.

Paleoindian exploration of the region was comparable to a moon walk, or settling islands in the Pacific—relying entirely on one's own ingenuity. The first people showed



**Previous pages:** Reaping the bounty at the edge of the Champlain Sea, looking north from what is now Vermont. The first people in the Northeast took advantage of a flyway bordering the sea, traversed by vast flocks of birds.

themselves equal to the challenge, creating mental maps and gazetteers for naming and organizing knowledge about landforms, sources of useful stone and other raw materials, vegetation, and animals, many of which they had never before encountered. Exploring unknown terrain, the first Paleoindian settlers had to adapt quickly to strange environments and to different and often rapidly changing climatic conditions.

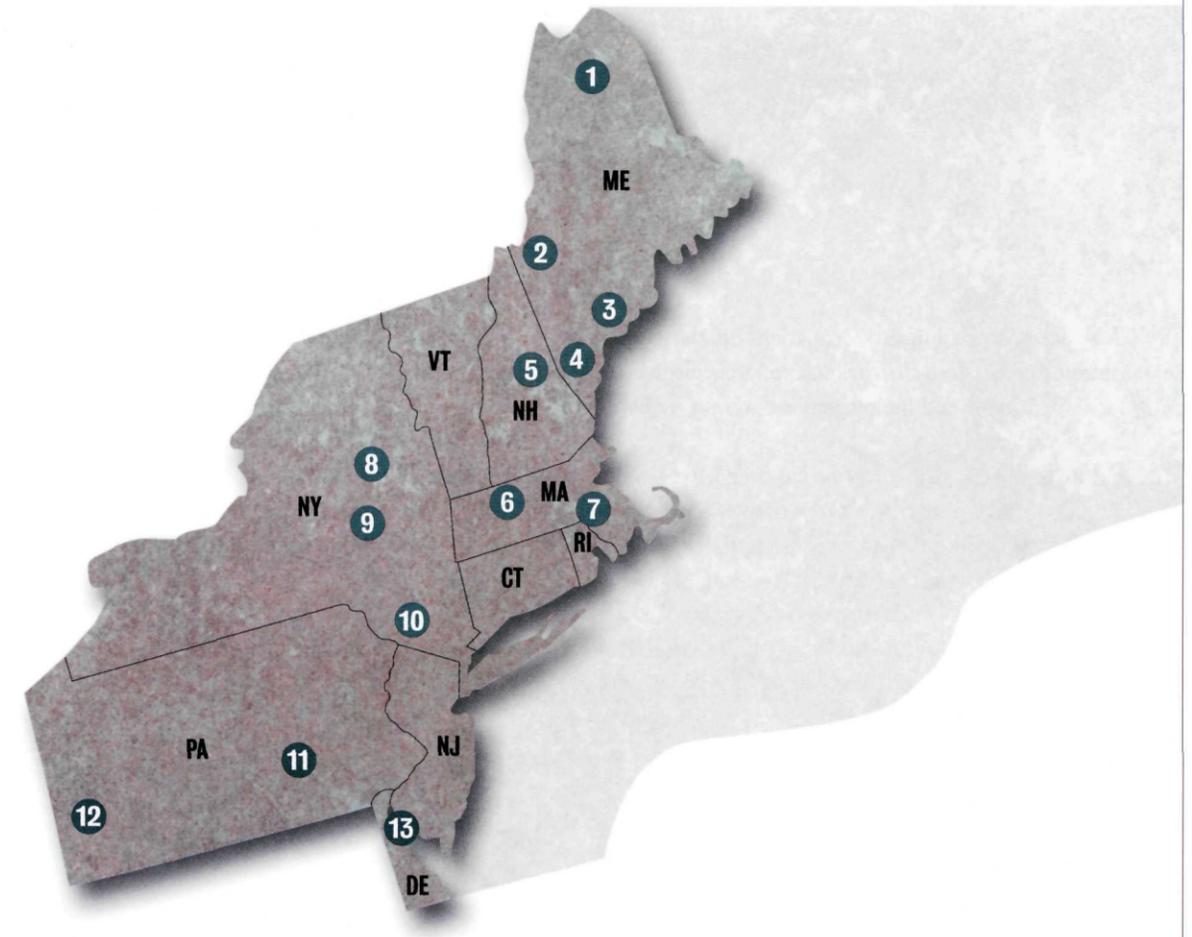
How did people first reach the Northeast? Traditional Native Americans believe they were created there. Most scientists think they first came from places farther south or west at the end of the most recent Ice Age, known as the Wisconsin Glaciation, sometime between 12,000 and 15,000 years ago (see sidebar on dating the era, page 25). Scholars debate the routes traveled by these pioneers, having minimal direct evidence. Formidable obstacles had to be overcome along whatever route they chose. Deep iceberg-strewn lakes filled the eastern Great Lake basins where the edge of the melting glacier stood. Farther east, an arm of the Atlantic Ocean called the Champlain Sea covered today's Lake Champlain and the adjacent St. Lawrence lowland. Rivers swollen with torrents of glacial meltwater—clogged with silts, sands, and gravels—presented daunting barriers. Expanses of swamp and wetlands bordered the glacial lakes, seas, and rivers; these too impeded free passage. Migratory waterfowl and other animals were the guides across and around the steep Appalachian ridges and broad Piedmont valleys, as well as over a coastal plain whose broad sandy flatlands covered what is now the Gulf of Maine and the Nantucket and Long Island Sounds to as far as 100 miles east of the present-day shoreline.

The timing of these arrivals remains uncertain. The earliest radiocarbon readings for human occupation in the Northeast, dating to as long as 17,000 years ago, are from the Meadowcroft site in southwestern Pennsylvania, the only systematically excavated rockshelter in the region where intact Paleoindian deposits have been reported. These dates, not yet replicated elsewhere in the Northeast, remain controversial. Elsewhere in the region, sites dating around 10,800 years ago—containing chipped stone blades, scrapers, knives, and Clovis-style fluted projectile points similar to those found farther south and west—represent the earli-

# On the Record

## On the National Register of Historic Places

- 1. MUNSUNGAN-CHASE LAKE THOROUGHFARE ARCHEOLOGICAL DISTRICT.** Featuring quarries and workshops for making stone tools, the site was a source of Munsungan chert, found in Paleoindian sites throughout northern New England. Listed 1979.
- 2. VAIL SITE.** Where archeologists discovered the largest collection of tools yet found in northern New England. Listed 1983.
- 3. LAMOREAU SITE.** This habitation yielded an assemblage of tools, including an unusually small fluted point. Listed 1989.
- 4. HEDDEN SITE.** Beneath a large sand dune, archeologists found stone tools and debris of high quality chert from New York's Hudson Valley, coastal Massachusetts, and other locales. They also discovered charred botanical remains that date from 10,500 to 10,600 years ago. Listed 1991.
- 5. THE WEIRS.** Paleoindians used this lakeshore locale for a variety of purposes, leaving behind artifacts and other signs of their presence. Listed 1975.
- 6. DEDIC SITE.** Large numbers of projectile points and other tools were preserved in this habitation's intact deposits. Listed 1978.
- 7. WAPANUCKET SITE.** Many artifacts were recovered from this 100-acre site, which, during Paleoindian times, was probably covered by tundra. Listed 1973.
- 8. FLINT MINE HILL ARCHEOLOGICAL DISTRICT.** One of the most extensive quarry-workshop areas from the Paleoindian era in the eastern United States. Chert from the district has been found widely throughout the Northeast. Listed 1978.
- 9. WEST ATHENS HILL SITE.** A large quarry-workshop closely associated with the nearby Flint Mine Hill archeological district. Listed 1973.
- 10. DUTCHESS QUARRY CAVE SITE.** Archeologists discovered a style of late Paleoindian projectile points known as Cumberland here. The fact that a charred caribou bone was found near a projectile point is now believed coincidental. Listed 1973.



PALE SHADOW INDICATES SHORELINE BEFORE GLACIERS MELTED AT THE END OF THE ICE AGE.

- 11. SHOOP SITE.** Large habitation consisting of several major features on a high knoll. Extensive collections of tools have been discovered. Listed 1986.
- 12. MEADOWCROFT ROCKSHELTER.** Although the site's chronology remains controversial (the deepest cultural feature produced dates more than 17,000 years old), the shelter is one of the most carefully excavated early occupations in eastern North America. Listed 1978.

- 13. HUGHES EARLY MAN COMPLEX.** The site has six discrete activity areas representing some of the earliest human occupations on the central Delmarva Peninsula. Listed 1979.

Research by Student Conservation Association diversity intern Andrew Bashaw.

est widely documented human occupations in the Northeast. Charcoal from northeastern sites has enabled archeologists to create the nation's largest and most complete suite of radiocarbon dates for fluted points.

The initial peopling of the Northeast has long been a source of scientific speculation. More than a century ago, New Jersey resident Charles Conrad Abbott mistakenly asserted that crude-looking tools found in gravels near Trenton were as old as Lower Paleolithic tools in Europe (older than 100,000 years). Modern scientific research began in the 1950s with investigations at

Pennsylvania's Shoop site and the Bull Brook site in Massachusetts. Both were multi-acre locales larger than Paleoindian sites elsewhere in the country. Each contained hundreds of whole or fragmentary fluted projectile points resembling the Clovis points found farther west.

Assays from western sites, using the newly developed radiocarbon dating technique, revealed that the Clovis sites contained the oldest evidence of human habitation on the continent. Unfortunately, investigators projected the interpretation of these people as big game steppe hunters into the Northeast's forested, mountainous terrain.

This and many other ideas about Paleoindian life have been challenged by an avalanche of recent

findings, funded in large part by programs mandated by the National Historic Preservation Act. None of the sites discovered has yet to yield evidence of the dramatic herd-kills that point to big game hunting. It is true that all but the most deeply buried Paleoindian sites have been damaged by plowing, development, vandalism, or collectors seeking the exquisite ancient artifacts

that command high prices on the international antiquities market. That said, analysis of the Northeast's sites and artifacts has shed new light on how the early Americans adapted to challenging and rapidly changing environments.

Fluted projectile points are the most numerous, most widespread, and most telling artifacts associated with Paleoindian occupation in the Northeast. Most are crafted from high quality cherts and other rocks particularly suited for stone tool manufacture. Usually they are found near rivers, lakes, and wetlands, which were frequented by the earliest Americans. Others are associated with exposed bedrock outcrops where Paleoindians quarried and worked stone into fluted points and other implements.

#### New Insights

Burned animal bone recovered at Bull Brook and several other sites affirm that Paleoindians were a major new predator on the scene. However, the absence of convincing evidence implies that people were not the primary cause of the extinctions already well underway in the region. Discoveries of charred nutshells and fish bones at Pennsylvania's Shawnee-Minisink site suggest more generalized subsistence patterns focused on fishing, hunting, trapping, collecting, and harvesting.

The largest sites were almost certainly residential. Archeologists have variously interpreted them as places for seasonal hunts, group gatherings, and staging areas for colonizing forays into unfamiliar territory. Evidence at the smaller sites, usually called camps, is less diverse than at the large ones, indicating shorter, more focused, residence.

Research in bedrock quarries has increased lately. Analyses of the cherts and other stones used for tool manufacture indicate that Paleoindians quickly located the best and most readily available quarries, both bedrock and gravel spreads. Some of the largest are the Munsungan Lakes group in Maine, and the West Athens Hill, Flint Mine Hill, and Divers Lake sites in New York.

Archeologists in the region adapt the Great Lakes projectile point style sequence, developed for Michigan, to link Paleoindian sites with time periods and environmental conditions. Overall, the point styles are not cleanly discrete in time—there are intermediates between all of them, and more than one may appear in a given site. These two observations support the inference that Paleoindian use of the region was essentially continuous following



LEFT, RIGHT: BRIAN JONES, MASHANTUCKET PEQUOT MUSEUM AND RESEARCH CENTER

Left, above: Archeologists working at the Hidden Creek site on Connecticut's Mashantucket Pequot Reservation.

the initial colonization. The earliest securely dated fluted projectile points found widely in the Northeast date between 10,800 to 10,500 years ago. These are straight-sided, concave-base fluted points ground dull around their bases, comparable to Clovis

points found farther west. Variously known in the region as Gainey and Bull Brook-style artifacts (named after the sites where they were first scientifically described) these are found widely in the Northeast. Deeply concave-based Debert/Vail types largely

occur in more northerly sites, while distributions of distinctive Shoop-style points concentrate in the south-central reaches of the region (the Middle Atlantic states). Several varieties of fluted point styles with recurved margins appear in sites dating from 10,500 to 10,100 years ago. Found throughout the region, these Barnes-Parkhill-Neponset points are the most numerous and widespread fluted points in the Northeast. A stylistically similar

### Ancient Economies

Projectile points represent only a small part of the evidence of how Paleoindians satisfied basic needs for food, raw materials, shelter, and finished goods. The notion that Paleoindians used their projectiles primarily to hunt big game is fading—caribou, for example, were present but not in huge herds, nor were they larger than the native deer, moose, and elk. A new consensus has emerged that in

Studies of stone tool wear patterns and hafting elements illustrate the versatility of Paleoindian toolkits, with their range of tools and other artifacts created from diverse materials. The earliest Americans relied upon lightweight and multipurpose implements crafted from the best available materials. Bifaces served as projectiles, knives, and flake cores. Unifacial scrapers removed flesh, hair, and fat from skins, shredded bark and wood to line cra-

We should be prepared for surprises here. Even if the assumption is correct, the meaning may vary depending on the density of settlement, the environment, and a host of other variables.

How populous were these groups? Estimates depend on the vagaries of radiocarbon dating. Long spans of time can become compressed within relatively narrow bands of radiocarbon dates, suggesting larger, denser populations than actually existed. The



**Above:** Signs of Paleoindians—such as this graver—were found at the Plenge site in the cultivated fields of rural New Jersey.

type, the Cumberland point, occurs mainly in the southerly and westerly parts of the Northeast.

The final fluted point style, known as Crowfield and mainly found in the northwestern portions of the region, dates around 10,100 years ago. Holcombe, Turkey Swamp, and other unfluted lance-like or triangular points occur in sites dating from 10,100 to 9,000 years ago, the Early Holocene period. They overlap in time with large lance-shaped points that were typical of the St. Lawrence Valley until about 8,000 years ago.

a rapidly changing and diverse environment, one eats what is available. Small animals including birds, rabbits, fish and seals as well as edible plants were no doubt essential to survival.

Scientific analysis has shown that the bedrock sources are often far from places where points are discovered. Some archeologists speculate that such distribution patterns indicate the existence of long-range trade routes. Others, however, argue that trade was far too uncertain a mode of distribution for people spread so thinly on the land. Instead, scholars increasingly view the evidence as indicating residential mobility, marriage ties, symbolic exchange networks, and regularly scheduled seasonal moves.

dles and make cordage, and shaped bone, ivory, horn, and wooden hafts and handles. Gravers scored bone and horn, and pierced skins; knives cut and shaped soft materials—meat and skins. Many of these tools doubtless were used by women. Further archeological analysis can offer clues to gender roles in the region's first economies.

### Picturing Culture

Today, researchers in the region are using the archeological record to test models of Paleoindian population size, density, composition, mobility, and identity. One of the assumptions guiding interpretations—that uniformities in artifact style and material-use may be indicators of social identity—may not apply to thin, mobile populations such as those of late glacial North America.

substantial number of small sites (many containing remains of more than one occupation) suggests small mobile societies of less than 50 people exploiting territories ranging from several hundred to many thousands of square miles. Changes in settlement patterns and artifact styles through time suggest shrinking territories and mobility, abandonment of certain regions, and rising social complexity after the short period of return to cold called the Younger Dryas.

Central Pennsylvania may have been a political and demographic watershed between the Northeast and the Southeast. Although there is debate, archeologists note that the occupants of the Shoop site may have collected chert from the gravel outwash of the near-

HERBERT C. KRAFT

by Susquehanna River, not from bedrock near Lake Ontario, another supposition. Since the point styles resemble those of farther south, Shoop may lie near the limit of populations moving from that direction. Farther north, the Gainey-Bull Brook and Debert-Vail styles apparently arrived from the west.

Of more ephemeral things like cultural values and beliefs, we have little in hand. No clearly identifiable Paleoindian rock art has been found in the Northeast. The meaning of the donut-shaped stone beads found at New York's Hiscock site and the DEDIC site in Massachusetts remains uncertain. Small fluted projectiles discovered at numerous sites in the region may be shamanic paraphernalia, toys, or simply small points.

#### A New Dawn for the First Americans?

With the volume of information gathered over the last decade and a half—a harvest of efforts to preserve sites endangered by public projects like highway construction—researchers are looking beyond traditional site surveys and excavations to advance the state of knowledge. Recent studies of the extraordinary number of artifacts unearthed in accordance with preservation laws hint at the enormous research potential.

Although the Paleoindian point-style chronology in the Northeast needs refinement, it is the best-dated and most complete in North America. Site-distribution studies, such as intensive statewide inventories, can bring more properties under the wing of public protection. Improved ability to recognize raw materials and where they came from will permit a more accurate picture of how they were used and transported. With the right equipment, artifact research will inform about individual sites, perhaps even about how and where men and women went about their respective tasks. Detailed mapping of settlement floors through excavation will give us a better idea of how many people were there, and for how long. Better paleoenvironmental data will improve our understanding of how the earliest Americans adapted to changing times. GIS mapping programs at both the regional and continental levels will support studies of human geography in these remote times.

This exploratory regional review should help to open discourse about northeastern Paleoindians and stimulate consideration of alternative interpretations of new evidence.

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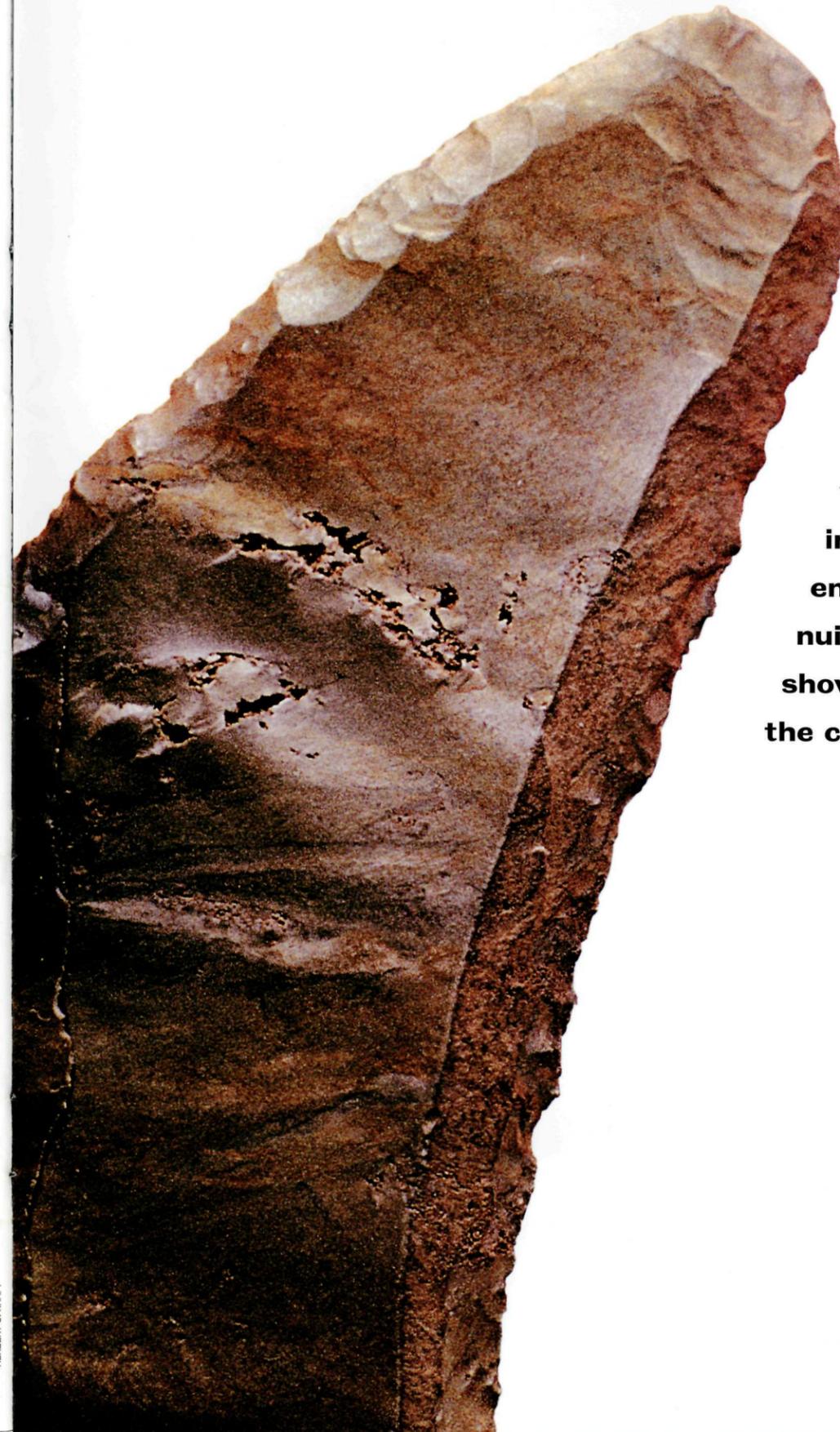
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**Right: Stone knife from the Port Mobil site, Staten Island, New York.**

HERBERT C. KRAFT



**“Paleoindian exploration of the region was comparable to a moon walk, or settling islands in the Pacific—relying entirely on one’s own ingenuity. The first people showed themselves equal to the challenge.”**

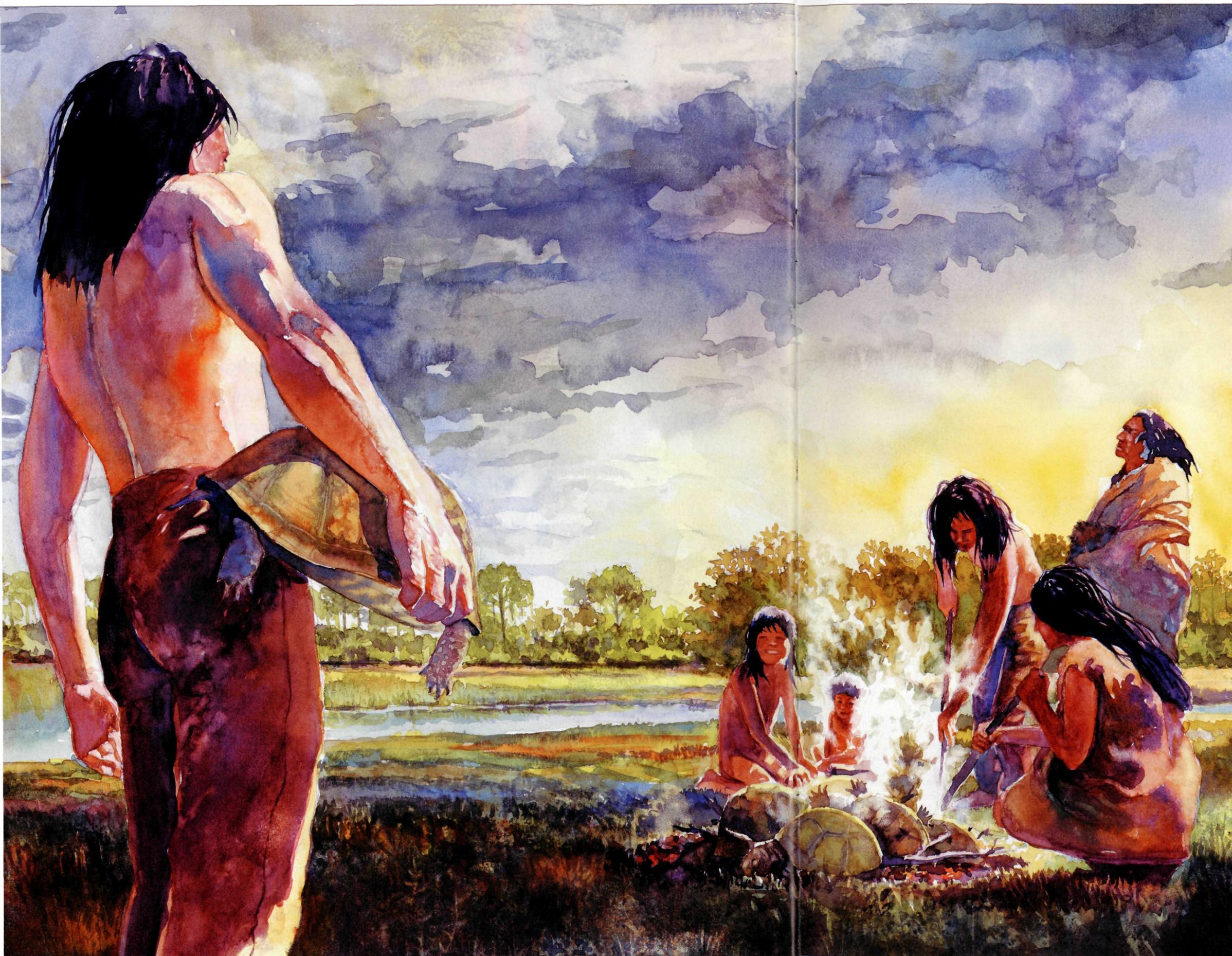
# the southeast

BY DAVID G. ANDERSON

The Southeast is critical to understanding early human occupation in the New World. Large numbers of artifacts have been discovered at a wide range of sites. The diversity of projectile points is so great, the region was certainly a center of technological and social innovation. Several areas evidence continuous habitation, making the Southeast an ideal laboratory for examining the period.

The region roughly encompasses terrain south and east of the Ohio River, east of the Mississippi, and south of the Chesapeake Bay. There are two major zones: the low lying coastal plain, and the higher, more variegated hills, mountains, and plateaus of the interior.

In the late prehistoric era, and into the early years of European contact, the area hosted a number of related societies whose cultural similarities were believed due, in part, to the environment, the geography, and a shared history. How true this was in the Ice Age is uncertain, but a topic worthy of study.



**Previous pages:** Turtle roasting in the Southeast.

Though facing formidable barriers in the snow-covered Appalachians and a Mississippi River rushing with glacial melt, Paleoindian people filtered into the region, firmly establishing their cultures and leaving behind a rich record of their presence.

During the period of presumed early settlement, sometime after the maximum glaciation 15,000 years ago, the coastal plain was almost twice its present size due to lowered sea levels. When the glaciers began their rapid retreat about 12,600 years ago, rising sea levels moved the shoreline ever inward (see sidebar on dating the era, page 25). Although rivers likely served as travel arteries, the Mississippi, swollen with melt, was probably a barrier, as were the Appalachians. With the Ice Age at its peak, conifers like spruce and jack-pine dominated many interior forests. With the onset of rapid deglaciation, mixed hardwood-pine forests began to move northward from the lower Southeast, and by 10,000 years ago spread across the entire region. Many animal species went extinct, such as mammoth, mastodon, horse, giant sloth, saber-toothed tiger, and camel.

### The First Colonists

Settlement falls into three successive intervals, characterized by the initial and somewhat tentative colonization of the region, subsequent widespread exploration and settlement in many areas, and the development of distinctive local cultural traditions as populations settled into territories.

Sites that appear to be more than 11,500 years old—such as Virginia's Cactus Hill, Florida's Little Salt Spring and Page-Ladson, and South Carolina's Topper—are something of an enigma. Traditionally, such sites are called "pre-Clovis," meaning older than the fluted points discovered in Clovis, New Mexico—for many years the earliest clues of human presence in the New World. The evidence at Topper and Cactus Hill, though tentative, suggests that small blades

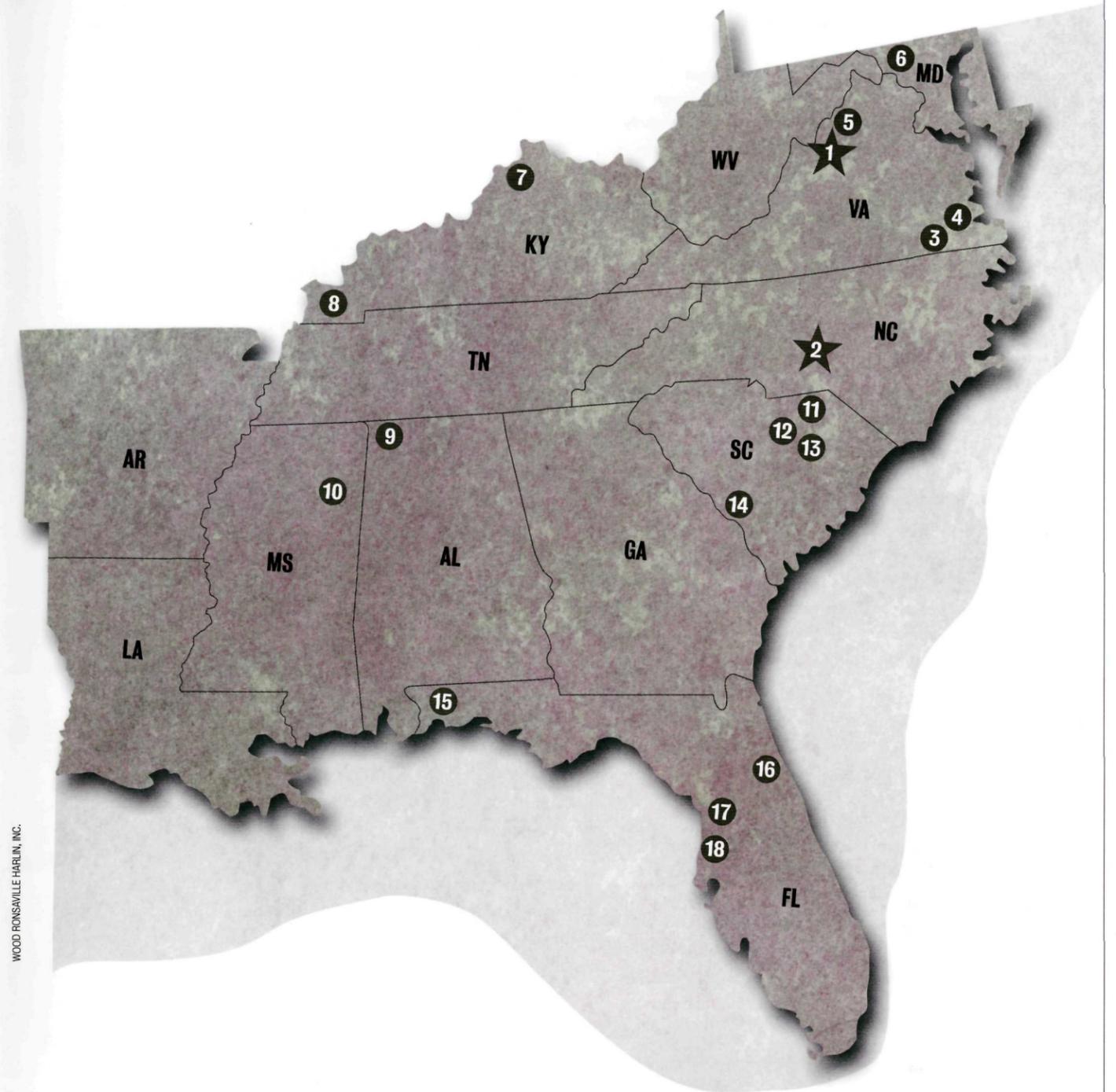
# On the Record

## National Historic Landmarks

- 1. THUNDERBIRD ARCHEOLOGICAL DISTRICT.** One of the most extensive (and intensively tested) Paleoindian sites in North America, Thunderbird contains habitations, workshops, and quarries, along with post molds offering evidence of perhaps the oldest structure on the continent. Designated 1977.
- 2. HARDWAY ARCHEOLOGICAL SITE.** A 37-acre quarry crucial to defining artifact types and cultural sequences. Designated 1990.

## On the National Register of Historic Places

- 3. WILLIAMSON SITE.** On a plateau overlooking a creek, this quarry-workshop yielded projectile points, scrapers, knives, hammers, and workshop debris. Listed 1969.
- 4. CONOVER ARCHEOLOGICAL DISTRICT.** A small habitation in Virginia's uplands; also appears to have been a tool-making area. Listed 1985.
- 5. FLINT RUN ARCHEOLOGICAL DISTRICT.** Quarries, workshops, and living areas spread over 2,000 acres—encompassing the Thunderbird archeological district, above—documenting the extensive use of Virginia's Shenandoah Valley by the earliest Americans. Listed 1976.
- 6. NOLAND'S FERRY I SITE.** Habitation site used continuously into historic times. Listed 1985.
- 7. BIG BONE LICK.** Many archeologists believe the bones of mammoths, mastodons, and other animals in and around the site's salt springs indicate Paleoindian occupation. Listed 1971.
- 8. YOUNGBLOOD SITE.** This small site yielded an extensive collection of late Paleoindian tools, along with well-preserved charred plant remains. Listed 1986.
- 9. LAGRANGE ROCK SHELTER.** Charcoal samples from the lowest strata date to about 11,280 years ago. Listed 1974.
- 10. HESTER-STANDIFER CREEK SITE.** Artifacts from the site have helped clarify the sequence of the area's cultural development. Unusually well-preserved soil strata. Listed 1975.
- 11. TAYLOR SITE.** Multi-use site with one of South Carolina's most extensive collections of Paleoindian artifacts. Listed 1974.
- 12. MANNING ARCHEOLOGICAL SITE.** On a ridge near a host of microenvironments, the site was used for millennia. Listed 1978.
- 13. NIPPER CREEK SITE.** This environmentally diverse site promises to clarify the sequence of Southeastern cultures. Listed 1986.



WOOD RONSAVILLE HARLIN, INC.

PALE SHADOW INDICATES SHORELINE BEFORE GLACIERS MELTED AT THE END OF THE ICE AGE.

- 14. ALLENDALE CHERT QUARRIES.** Quarries, workshops, and habitation areas spanning over 1,500 acres. Listed 1984.
- 15. THOMAS CREEK ARCHEOLOGICAL DISTRICT.** This watershed of the Escambia River served a host of purposes for the first Americans. Listed 1985.
- 16. WINDOVER ARCHEOLOGICAL SITE.** Artifacts and human remains were found in peat deposits near a pond. Listed 1987.

- 17. WARM MINERAL SPRINGS.** Submerged human remains were discovered on a ledge in this sinkhole. Listed 1977.
- 18. LITTLE SALT SPRINGS.** Underwater site with human remains as well as those of ground sloth, mammoth, mastodon, and giant land tortoise. Listed 1979.

Research by Student Conservation Association diversity intern Andrew Bashaw.

**Right:** Although the evidence is slim so far, Southeast Paleoindians probably shaped their surroundings through controlled burning as their descendants did. **Below:** Carefully uncovering 11,000-year-old artifacts at Virginia's Thunderbird archeological district.

and triangular points may become similar touchstones, or diagnostics, for the pre-Clovis period.

Between 11,500 to 10,800 years ago, Clovis points appear widely over the Southeast. Populations seem to have expanded rapidly, settling permanently in a number of places. These people were highly mobile, exploiting a range of plants and animals. They favored areas that were probably rich in game, plants, and other resources, particularly parts of Florida, the Atlantic coast, and along the major rivers of the Midsouth and Midwest, such as the Mississippi, Ohio, Cumberland, and Tennessee. Where they settled appears to have been influenced, to some extent, by outcrops of high quality chert, which the people preferred for their tools. Finds at these sites are characterized by fluted Clovis and Clovis-like points, blades, and blade cores, along with worked animal bone and ivory.

### The Rise of Cultures

Between about 10,800 to 9,200 years ago, the population grew even more dramatically as cultures evolved to accommodate essentially modern-era climate and resources. Projectile point forms exhibit appreciable stylistic variability and in some cases fairly restricted distributions, probably due to rising populations and decreasing group mobility. The Clovis styles are followed in time by a range of notched and resharpened points, evidence of a fundamental reorganization in culture. Sites occur widely over the landscape, including, for the first time in any number, in rockshelters. Well-made tools continue to occur, though increasingly made of local, lower grade materials.

Not surprisingly, quarries and workshops are the best known and certainly among the most easily recognized Paleoindian properties in the Southeast. Isolated finds of fluted points are also common, with several thousand reported from across the region.



SANDRA SPEIDEN

Sites with well preserved plant and animal remains are crucial to understanding adaptation during the era. An extinct bison skull with a projectile point broken off in its forehead was found in Florida's Wacissa River, just about the clearest association possible between humans and extinct animals. Also in Florida, at Little Salt Springs, a giant land tortoise was discovered that may have been speared with a wooden stake. Butchering or other tooling marks on mammoth bones, as well as finished points, foreshafts, and other objects carved from green bone or ivory, have been found at several other places in Florida. Remains of essentially modern animals have been found at a number of later Paleoindian sites across the region, typically in rockshelter settings like Dust Cave and the Stanfield-Worley buff shelter in Alabama.

Given the elaborate caches of ceremonial goods discovered in the West, it is no surprise they also occur in the Southeast. The best documented example is the Sloan site in northeast Arkansas, where a remarkable assemblage of stone tools was found. Burials from this time are rare in the Southeast, however, as indeed they are throughout North America.

### Through the Lens of Science

The Southeast has seen some highly innovative research, offering a tantalizing glimpse of life among the region's first inhabitants. Until more sites are examined, however, the answers will continue to be outnumbered by the questions.

Recognizing possible new diagnostics, such as Cactus Hill's early triangular points, could transform much of our knowledge. We still aren't sure how the region was settled, but once we ascertain the landforms, soil types, and microenvironments favored by different groups, we can target where and how to look.

Recent years have seen considerable effort in plotting the extent of settlement, using analyses of artifact styles and patterns of raw material movement away from quarry areas. Suwannee points, for example, are found almost exclusively in the Florida peninsula, while Cumberland points occur mainly in the Midsouth. These distributions may represent group territories and, hence, distinct cultural traditions.



GREG HARLIN—WOOD RONGSAVILLE HARLIN, INC.

**Right:** The Shenandoah River winds past a reconstructed native dwelling at Virginia's Thunderbird archeological district, a National Historic Landmark. When people first came to the area, snow covered the mountains year-round while mammoths, mastodons, and camels grazed in grasslands. **Below:** Plotting coordinates at T-bird.

Why were some areas more heavily occupied than others? Finds of fluted points are typically concentrated along transportation arteries, notably near major river channels, and particularly in resource-rich areas. Likewise, why were some places, such as the Appalachian highlands and parts of the Gulf coast, minimally visited by fluted point-using peoples? Analysis of all artifact categories, and not just points, needs to be conducted.

Why are adzes, for example, fairly common in the central Mississippi Valley, yet quite rare everywhere else? Are tools like Florida's Aucilla adze an equivalent form? If these tools were used to build watercraft or substantial dwellings, as many researchers think likely, what does their uneven distribution over the landscape mean? Were other tools used, or were different types of structures or modes of transportation employed?

What role did artifacts play in defining cultural identity? There is no question that Paleoindian peoples placed great value on their tools of stone, bone, and ivory. The workmanship was often superb, reflecting a level of expertise rarely achieved by later peoples. Was the fascination with high quality materials due solely to the needs of a highly specialized toolkit? Or was it also shaped by the ceremonial potential of artifacts made from these materials, or their role in facilitating ceremony and interaction?

Was the gradual abandonment of the highly specialized toolkit related to the increasing importance of more general foraging for a wider range of plants and smaller game? These questions are difficult, first because sites with well preserved subsistence remains are rare, and second because the

# Landmark Experience

JOHN H. SPRINKLE, JR., NATIONAL HISTORIC LANDMARKS SURVEY

I distinctly remember my first visit to the Thunderbird archeological district, designated a National Historic Landmark in 1977 for its association with the Paleoindians of central Virginia. Like every other undergraduate anthropology student at the University of Delaware in the late 1970s, I'd heard lectures on the base camp at "T-bird," the hunting camp at the "Fifty Site," and the quarry across the Shenandoah River where Paleoindians crafted their distinctive fluted projectile points and other tools.

To us, the Paleoindians inhabited a foreign country, one whose material culture was being teased from the floodplain using a radical method of "piece-plotting" each artifact as it was found in the stratified soil. Another tool, pollen analysis, was revealing just how different the climate was at the end of the last Ice Age, documenting the cold, wet weather and exotic plants and animals that helped shape Paleoindian culture.

Under the stars that night, I think many of us came to understand just how distant, rare, and ineffable was the era of the earliest Americans, and how essential experiencing the site in context—

with its river and floodplain and terraces—was to our comprehension.

Since the late 1970s, archeologists have continued their fascination with the Paleoindians, pushing back North America's earliest suspected habitations by thousands of years. The oldest sites are extremely rare—there were only about a thousand people in Virginia 10,000 years ago. In the 1980s, T-bird was saved from suburbia because of its significance to American history, a fact recognized by the landmark designation.

Across the country, other Paleoindian sites deserve the honor. The NHL Theme Study underpinning this issue joins a tradition of recognizing our shared heritage of migration, of which the story of Paleoindian settlement is only the first chapter. The National Historic Landmarks Survey looks forward to documenting the experience of the earliest Americans by designating sites through this study.



LEFT, RIGHT: SANDRA SPEDDEN



**Right: Archeologist at South Carolina's Topper site.**

systematic collection of this kind of data is comparatively recent. The fine screening and flotation work at Alabama's Dust Cave is a model of the research that should occur. Pollen samples should be examined along with the remains of bones, shells, and plant macrofossils.

Did Paleoindians shape their surroundings through the controlled use of fire, as their descendants did? How did the changing shoreline affect them? Did they adapt the same way on the Atlantic coast as they did along the rivers of the interior?

Prominent places in the landscape held a particular attraction for these early peoples. Major sites have been found near peaks, outcrops of high quality stone, and major shoals, sinkholes, or confluences. Were these sacred sites as well as convenient places to rendezvous and aggregate?

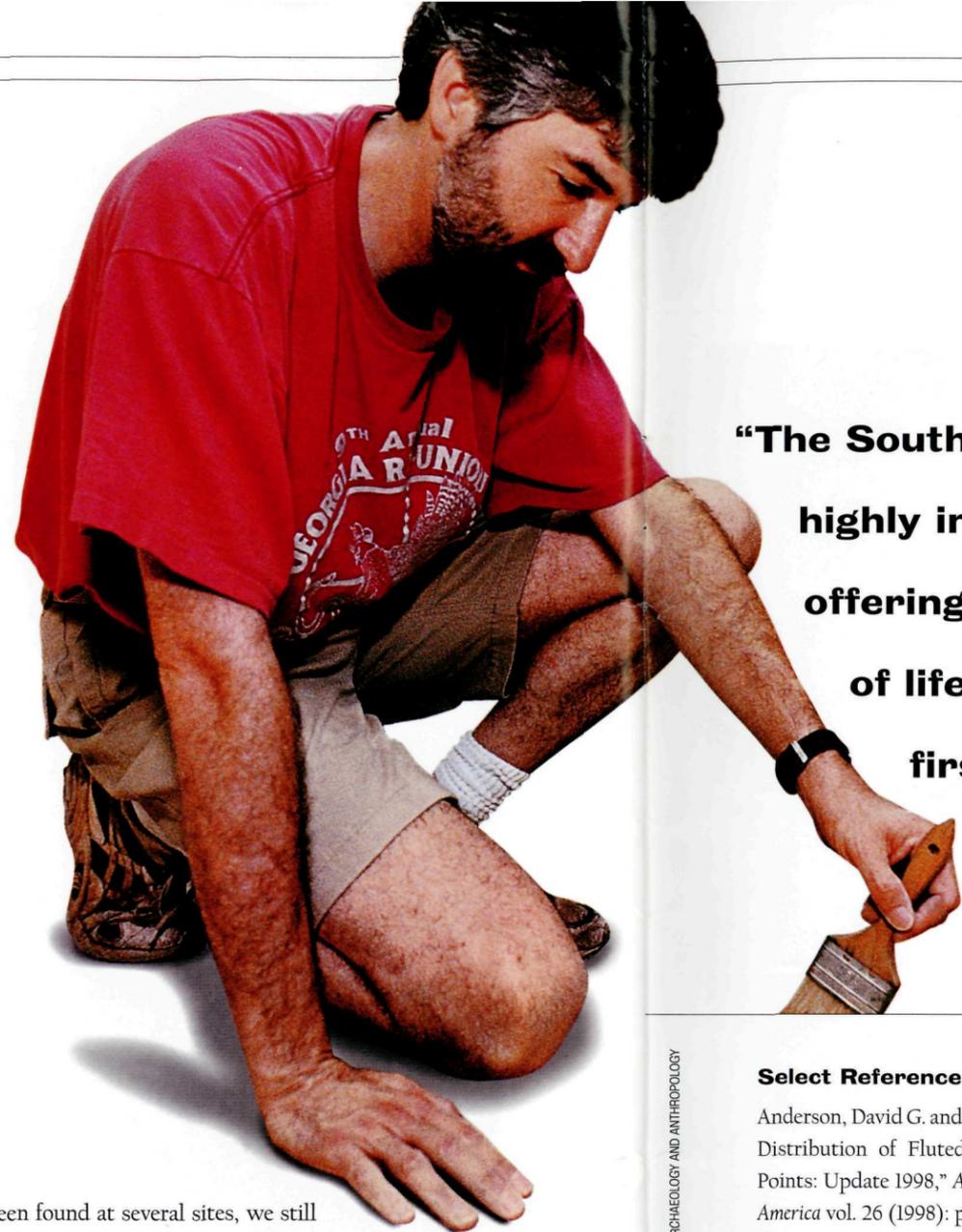
#### **A View of the Future**

The Southeast has two National Historic Landmarks from the period: the Thunderbird district (designated May 5, 1977) and the Hardaway site (designated on June 21, 1990). Many more sites in the region warrant nomination, and are currently under consideration.

Where do we go from here? Settlement and subsistence, while the subject of innovative analysis, are still not well understood. We are not certain, for example, whether these early populations were highly specialized hunters regularly targeting large animals such as mammoth or bison, perhaps contributing to their extinction, or more generalized foragers making use of a wide range of resources, including plants and smaller animals like deer, raccoon, opossum, and rabbits. Likewise, while hints of early occupation

have been found at several sites, we still do not know when people entered the region. We need better models, and more surveys, excavations, and reports. Our picture of life during this period will undoubtedly change greatly as more work is done in the years to come.

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**“The Southeast has seen some highly innovative research, offering a tantalizing glimpse of life among the region’s first inhabitants.”**

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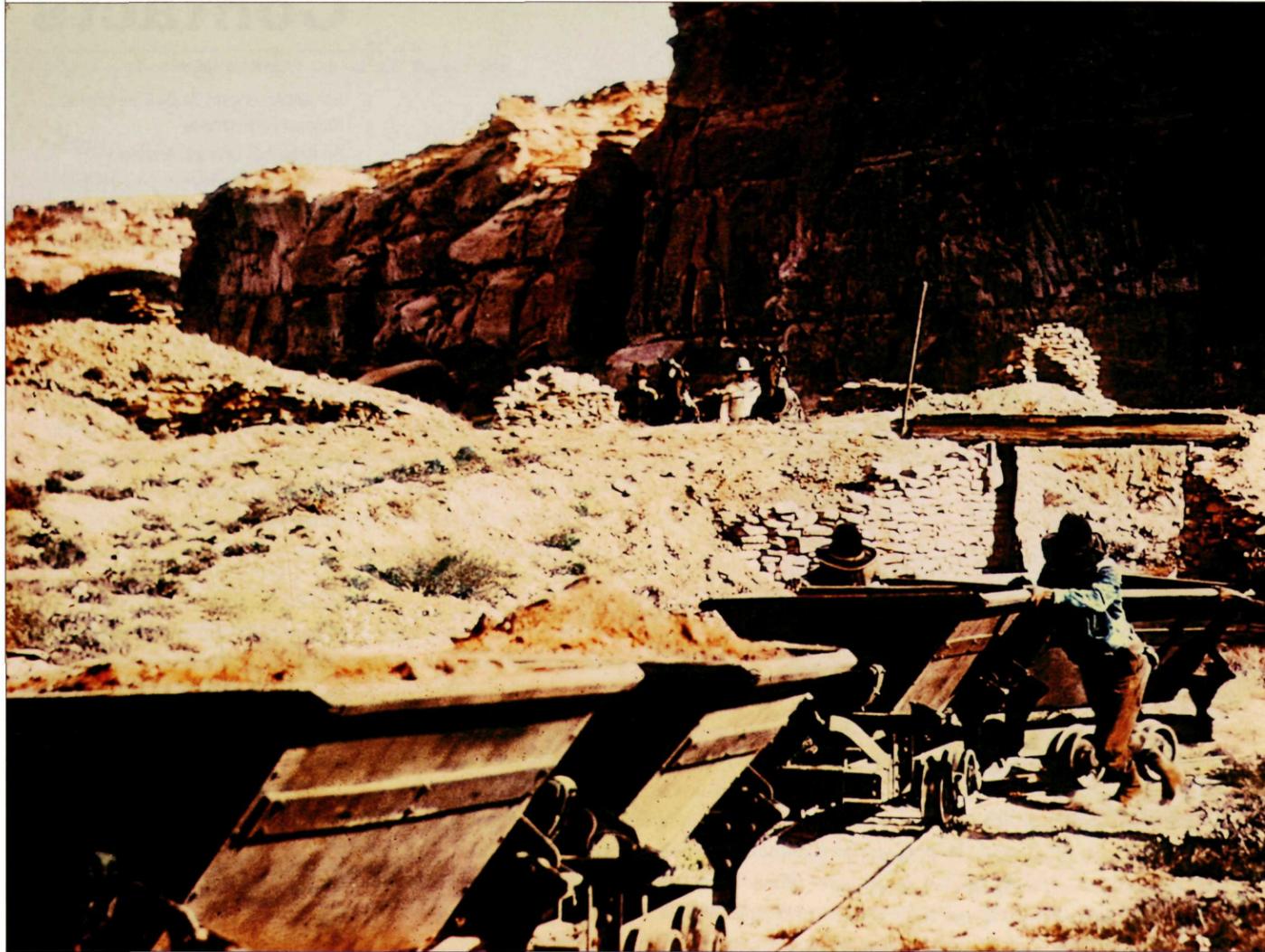
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# -pastpresent-



SMITHSONIAN INSTITUTION

In 1921 Neil Judd, curator of archeology at the United States Museum (now part of the Smithsonian), conducted an expedition to Pueblo Bonito and Pueblo del Arroyo in New Mexico, which later became Chaco Culture National Historical Park. The federally authorized project intended to shed light on the large Anasazi desert towns built in the 10th century, which continue to awe visitors today. | To reveal the masonry structures, members of the expedition cleared away tons of fill and rubble, carting it away in the backbreaking process shown above. Archeologists then used the new technique of tree-ring dating on the exposed beams and lintels. | Judd tested only a few samples, however, and the technique could be destructive. Now archeologists use subtler methods, which permit wider testing. Judd's one-inch borer has been replaced by a delicate technique that samples tiny increments. | Recent tree-ring dating at Chaco has shown much about the people and their times. The tool kit has expanded too. Archeologists use ground-penetrating radar, electron resistivity, and magnetometry to "see" buried features. These non-destructive methods promise to bridge the gap between probing the past and preserving it.

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“Some Paleoindians witnessed catastrophic drops  
in the Great Lakes from levels above to far below  
today. They saw a landscape transformed on a  
scale that we can scarcely imagine.”

Michael Shott, “The Earliest Americans of the Midwest,” page 20

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