

Protecting the Resource

As the nation's archeological sites continue to be plundered, their protection becomes ever more crucial to future research and public appreciation. Despite major strides in law enforcement, widespread looting and vandalism are robbing America's citizens of these valuable, but non-renewable, resources.

Federal agencies, who are moving toward comprehensive program management, must continue to extend their efforts. Although there have been major improvements in law enforcement, information sharing, public education, and land management planning, resource protection remains a never-ending battle.

Law enforcement has made significant strides in criminal prosecutions, information exchange, training, and interagency coordination and partnerships. The protection crisis, detailed in 1987 by a General Accounting Office study on looting in the Four Corners area, stimulated congressional concern about Federal efforts. Congressional action, reinforced by data on archeological vandalism from the Secretary of the Interior's Report to Congress, led to the 1988 amendments of the Archaeological Resources Protection Act, which expanded prohibited acts and lowered the felony threshold to \$500, helping tremendously with criminal prosecutions.

Successful casework is strengthening the Act. A recent case, *United States v. Austin*, upheld the Act's constitutionality when the U.S. Supreme Court denied Austin's petition for writ of certiorari. In *United States v. Gerber*, the defendant was indicted under Section 6(c) of the Act, which prohibits the interstate trafficking of archeological resources removed in violation of state or local law. The case was the first successful application of ARPA Section 6(c) and the convictions were upheld on appeal. Also of significance are initiatives by Federal agencies and tribes to employ the Act's civil penalties section, which provides a cost-effective and efficient method of prosecution. Civil penalties and rewards need to be actively pursued in the future.

Other meaningful legislation recently passed includes the Abandoned Shipwreck Act and the Native American Graves Protection and Repatriation Act. The former law protects abandoned shipwrecks and associated cargo on submerged lands. The U.S. Court of Appeals affirmed the constitutionality of the Act in *Zych v. Unidentified, Wrecked and Abandoned Vessel*.

Many Federal personnel have been exposed to the protection issue through training programs for managers, law enforcement personnel, and archeologists. Attendance in these courses, particularly by employees of land management agencies, has increased substantially over the last five years, indicating a growing concern and commitment. The 40-hour course offered by the Federal Law Enforcement Training Center (now available in shorter, regionalized versions) provides the most intensive training in field investigation.

Protection issues are becoming integrated into other cultural resource training courses—such as the

“Archeology for Managers” course sponsored by the National Park Service—that are designed for agency use or interagency participation. Training is now available for attorneys and solicitors, as is the *Archeological Resources Protection: Federal Prosecution Sourcebook*, copublished by the National Park Service and the Department of Justice. All of the training and education initiatives intend to encourage a team approach among law enforcement officers, archeologists, and attorneys.

Interagency cooperation is key to improving law enforcement. Cooperative agreements have been developed among Federal, state, and local law enforcement agencies for monitoring, surveillance, and patrolling efforts. Organizations such as the Interagency Mobilization to Protect Against Cultural Theft, organized by the Bureau of Land Management, and the Interagency Archeological Protection Working Group, coordinated by the National Park Service, combine the efforts of several agencies. More agencies are contributing information to the LOOT Clearinghouse, which serves as a principal source of data about ARPA prosecutions. Looting has no agency boundaries, nor should the efforts to combat the problem.

It also is vital to keep the public informed. Congress clearly recognized that need with the 1988 amendments to ARPA. Archeologists, especially those working for public agencies, have come to recognize that the public is essential to preservation. Not surprisingly, most land managing agencies now sponsor outreach programs and are active participants in state archeology weeks. The Bureau of Land Management has played a strong role through initiatives such as Project Archeology, an innovative educational program.

Unfortunately, many agencies, when pressed with cut-backs, continue to view outreach as a “nice to do” activity with little tangible result. It will take persistent, proactive efforts from supporters of public education to keep these projects healthy.

One way to reach the public is through volunteer programs, which result in productive work and provide participants with an enjoyable learning experience. The volunteer is left with a sense of responsibility for resources on public land. The success of the Forest Service program Passport in Time (see article under “Engaging the Public”) demonstrates the growing demand and popularity of these programs. Avocational societies, particularly, should be enlisted in them.

Interpretation, the traditional medium for informing the public, is a growing component in programs of land management agencies, particularly through tourism and rural economic development. When protection is part of the message, the impact is far-reaching; for example, the National Park Service brochure “Participate in Archeology” has reached over 200,000 readers.

Agency archeologists know the frustration of “crisis management” and so realize the importance of long-range planning. Planning is a required aspect of program development because it provides a comprehensive strategy for identifying, evaluating, registering, treating, and protecting archeological resources. The land management planning process utilized by the Forest Service is an excellent example. The Department of Defense, as well, is extensively involved with preservation plans for its installations. Most importantly, these planning efforts require full public participation.

As Federal curation facilities near capacity, it is more important than ever to preserve sites in place. The Corps of Engineers has taken the lead in studying curation issues and in developing site conservation practices.

Equally important is sustaining the existing form and condition of sites. Site conservation is a growing research area. The University of Mississippi Center for Archaeological Research, in partnership with Federal agencies, has developed and distributed numerous guidelines on conservation and maintains a clearing-house of project report information. The Corps of Engineers Waterway Experiment Station has also taken a leading role in site stabilization.

The papers to follow illustrate the wide range of protection methods employed by agencies and organizations. The Bikini Atoll article exemplifies interagency cooperation and in-place protection and management of sunken ships. The two pieces on the Corps demonstrate interdisciplinary technical studies in conservation planning. The article on ivory protection in Alaska illustrates the use of public outreach to combat a serious artifact trafficking problem. The Soil Conservation Service piece is an exciting example of a Federal/state/private partnership to protect a site on a North Carolina farm. The ARPA task force article shows the value of pooling technical expertise to improve casework, training, and education. The piece on the Boundary Waters Canoe Area Wilderness underscores the need for aggressive attention to deteriorating sites in “no touch” areas. These are just a few examples of the resource protection strategies in the Federal archeology program.

—Dan Haas
National Park Service

Down on the Farm

Wheat is a vital source of income for many farmers in North Carolina. But on one two-acre plot near Hunting Creek, what was below the surface proved just as important as what was above.

While plowing new land for planting, the plot's owner started turning up artifacts. Realizing he had uncovered an archeological site, the farmer contacted the state archeologist, who enlisted the help of the Soil Conservation Service. A preliminary investigation revealed a Late Woodland Indian settlement and burial complex dating from ca. AD 900-1500.

Once the site was found to be significant, the landowner worked with the state and the Service to prevent further disturbance while continuing to farm. In a unique cooperative effort, the government agencies provided resources to investigate the site and the farmer switched to growing hay, which requires no plowing and provides a soil-stabilizing cover. The plan allowed archeologists to excavate a 1,500-square-foot area.

The excavations turned up numerous artifacts crafted and used by the ancestors of the Eastern Siouan Indians. This type of site, from the Uwharrie culture, was a particularly significant find as only a few have been discovered in the area.

Many of the artifacts, including handcrafted stone tools such as a hoe, notched arrow points, and implements for grinding foods, were in good condition. Shells from the Atlantic Ocean indicated extensive trade or travel networks, and decorative ceramic shards gave hints as to the time of settlement. Additional studies are underway on stone tools whose function is unclear to archeologists.

Soil stains—marking human burials and trash disposal pits—were among the most important finds. Also of interest were pits containing two turkey skeletons. While the purpose of the animal interments is not certain, they may suggest ceremonial or ritual activity.

The cooperative spirit in this case allowed for the recovery of important information for scholars and the public on North Carolina's past. For the Soil Conservation Service, the site provided not only a unique challenge in archeological resource protection, but—as a backdrop for a training video—an opportunity to train field employees. The landowner, for his part, had a chance to witness a discovery about which little was previously known. Thanks to his cooperation and the partnership of the involved agencies, the Hunting Creek site has been excavated for information, stabilized from further erosion, protected from further mechanical damage, and preserved in place for future generations.

For information contact the Soil Conservation Service, Economics and Social Sciences Division (Attn: Michael Kaczor), P.O. Box 2890, Washington, DC 20013, ph. 202-720-6360.

Resources of the Wilderness

Early European immigrants viewed the entire nation as wilderness, with all its connotations of “wildness, fear, howling, dismal and terrible,” in the words of one colonial settler. To native occupants, it was simply home to them and their ancestors for at least 12,000 years.

Times change. Now overuse threatens America's wild places—particularly in the East—along with their valuable cultural resources.



Crocodile Lake, Boundary Waters Canoe Area Wilderness, Minnesota (courtesy Superior National Forest).

Minnesota's Boundary Waters Canoe Area Wilderness faces an unusual dilemma in dealing with the problem. Visitors are limited to the same canoe landings, camping areas, and portages that people have favored for hundreds or even thousands of years. Damage has taken its toll; at least 41 percent of known cultural resource sites are too badly deteriorated to merit further protection.

Wilderness areas are generally not managed in compliance with preservation laws requiring that cultural resources be inventoried, evaluated, and protected. Inventories are costly. Wilderness designation circumscribes how they can be done, and many regions are difficult to access.

Boundary Waters, managed by the Forest Service, is one of the few places to meet the challenge. Archeologists have developed an active inventory plan as part of a broad effort to protect the area.

Boundary Waters has numerous sites dating as far back as 10,000 BC, when Paleoindians exploited the region's rich natural resources. Subsequent cultures also used the area, including Archaic peoples whose sites are mostly submerged due to increasing water levels during the past 2,000 years. Woodland and historic Native American settlements—including campsites, villages, cemeteries, and places of spiritual and traditional importance—are distributed heavily along major travel routes, such as the lakes along the U.S.-Canada border. Conversely, sites are less common on smaller lakes isolated from major thoroughfares.

Boundary Waters also contains evidence of historic European activities, from fur trading to early Forest Service buildings that are still in use. These sites include mines, homesteads, logging camps, fisheries, resorts, and recreational cabins.

Research into the location, nature, and physical condition of Boundary Waters cultural resource sites has been ongoing since 1982. Each site is individually examined for its significance, and a decision is made whether it merits protection based on potential eligibility for the National Register of Historic Places. If the site is badly disturbed, no protective measures are taken.

Of the approximately 90 percent of sites inventoried as of 1993, 40 percent contain cultural resources. This means that nearly half have been used for the same purpose for centuries. The bulk of known sites may still be undisturbed enough to qualify them for National Register protection, but they require further formal evaluation to prioritize the urgency required to avoid further damage.

Archeologists are developing ways to balance wilderness use and site protection. The staff at Boundary Waters has developed a plan that offers six different alternatives for managing archeological and historical sites. These range from limiting party size, to reducing parties allowed to enter, to redistributing visitors to other areas, to allowing unrestricted camping in primitive conditions.

Wilderness managers are becoming aware of their responsibilities to identify, protect, and manage cultural resources. Opportunities to increase stewardship values for wilderness users and local communities exist through interpretation of a wilderness area's historic uses. These efforts can build bridges between local and national environmental groups.

While protecting cultural resources in non-wilderness areas continues to compete with other priorities, most in



Trapper's cabin, ca. 1900, in Minnesota's Boundary Waters Canoe Area Wilderness (courtesy Superior National Forest).

wilderness will be allocated to "quiet protection." Many will survive for future generations if proactive inventory and protective plans are initiated in the near future.

For information contact Gordon Peters, Superior National Forest, Box 338, Duluth, MN 55801, ph. 218-720-5679.

Inroads in the Northwest

Until recently, the magnitude of artifact theft in the Southwest overshadowed that of other regions, including the Pacific Northwest. However, successful casework in Oregon and Washington over the last decade, including three felony convictions under the Archaeological Resources Protection Act, has led to greater public awareness of site looting there.

The Pacific Northwest Region of the Forest Service has published a monograph detailing the progress. *Antiquities Violations and Site Protection Efforts on National Forests in Oregon and Washington*, by Carl Davis with contributions by Tom Russell and Carola Stoney, summarizes all prosecuted antiquities violations that occurred on national forest lands in Oregon and Washington from 1978 through 1992.

The book also describes current initiatives to protect the region's sites and highlights the programs and tools available to national forests to extend the effort. By providing such information, the report seeks to help archeologists, law enforcement and justice personnel, and land managers to realize the deterrent effect of efficient casework.

A task force was chiefly responsible for the success, formed in 1986 as a result of requests from the field for forensic and investigatory guidance specifically tailored to the looting problem. The task force serves as an information clearinghouse and assists in antiquities casework while helping several national forests complete site condition studies.

The task force also sponsors a 40-hour field training course for agency personnel and American Indian representatives. For the public, it has developed the popular "Thieves of Time" brochure and videotapes including "Vanishing Legacy" and "Gus Finds an Arrowhead" for children.

For information contact Carl Davis, Willamette National Forest, Box 10607, Eugene, OR 97440, ph. 503-687-6521.

Waterside Research

Along the shores of the Mississippi lies the Corps of Engineers Waterways Experiment Station, a six-laboratory research, development, and testing complex charged in part with supporting cultural resource management. To further its mission, the Corps recently opened the Center for Cultural Site Preservation Technology at the station, in Vicksburg, Mississippi, to facilitate scientific and engineering site work, training, and interagency coordination as well as serve as an information clearinghouse.

Since 1984, the Corps has researched and developed many techniques for protecting and preserving prehistoric sites. This work, sponsored by the Corps'



Severe erosion along the middle Missouri River (courtesy U.S. Army Corps of Engineers).

Environmental Impact Research Program, was based at the station. Results were distributed to Corps field offices, other Federal and state agencies, and private industry through numerous technical reports.

The station's guidance on site stabilization and protection technology encompasses a range of subjects: evaluating adverse impacts to sites; selecting solutions to problems; budgeting, scheduling, and coordinating projects; and monitoring sites. In assembling this guidance, the station has investigated conventional engineering techniques as well as emerging technologies like filter fabrics, biostabilization, and intentional site burial. The causes and patterns of site vandalism have also been examined, along with the effectiveness of methods to control it.

The center taps the diverse interdisciplinary expertise found in the station's labs, which together make up one of the world's largest research and development facilities. These disciplines include geotechnical engineering, environmental sciences, natural resources management, earth/structure systems and material properties, automated information technology, coastal engineering, and physical and mathematical modeling. The center also draws on the expertise at other Corps labs, such as the Construction Engineering Research Laboratory and the Cold Regions Research and Engineering Laboratory.

The center primarily serves the Corps civil works program and Department of Defense projects, but can also assist other agencies and, under certain circumstances, private industry.

For information contact the U.S. Army Corps of Engineers Waterways Experiment Station, CEWES-EE-R (Dr. Fred Briuer), P.O. Box 631, 3909 Halls Ferry Road, Vicksburg, MS 39180-0631, ph. 601-634-4204.

Artifacts for Sale

Digging archeological sites to obtain ivory artifacts for sale is a long tradition in Alaska. In the 1800s and the early part of this century, institutions and private collectors encouraged the pillaging of sites to fill museums, often paying local people to do the work.

Today the story has a new twist. Sites are being mined to obtain fossil ivory to make jewelry, scrimshaw, and other carved items. From archeological artifacts to unmodified chunks of walrus tusks carried to a site by the original inhabitants, Alaska's ivory is disappearing.

Extremely profitable, the fossil ivory business has grown tremendously in the last five years. It will continue to grow with Alaska's tourism boom, further threatening undisturbed archeological sites.

At least one archeological National Historic Landmark on private land has already been so severely damaged by mining for artifacts and ivory that it had to be de-designated by the Secretary of Interior. Two other National Historic Landmarks, also privately owned, may soon meet the same fate. The damage is beginning to spread to sites on Federal lands as well.

To deal with the problem, the Alaska office of the archeological assistance program is preparing a brochure to educate the public about the illegal ivory trade and the destruction of sites. For more information, call Susan Morton, Chief, Archeological Assistance Program, National Park Service, Alaska Regional Office, 2525 Gambell, Anchorage, AK 99503, ph. 907-257-2559.

Saving Sites in St. Paul

From alluvial fan sites to prehistoric cemeteries, the Corps of Engineers has been busy protecting archeological resources in its St. Paul district.

In December of 1989, University of Wisconsin-La Crosse archeologists—sponsored by the Corps—located a prehistoric archeological site near the center of a proposed disposal area for a state road project in La Crosse. Although previous surveys had not identified them, nearly 45 burials were located by the end of the project's first week in June 1990.

During the winter, the St. Paul district, the project's local sponsor, and the property owner, along with the Wisconsin Burial Office, the Winnebago Tribe, and the Bureau of Indian Affairs, met to determine the fate of the burials. The group concluded that the burials should be covered with a 3-4 foot buffer of fill to preserve them.

More recently, under contract by the Corps, the underwater program of the Wisconsin state archeologist's office completed a study of historic shipwrecks along the upper Mississippi between the Twin Cities and Guttenberg, Iowa. In addition to identifying historic wreck locations, the study developed an historic context for upper Mississippi River vessels, which were the backbone of the early commerce on the river. The St. Paul district intends to use the report as a management tool for future river projects that could adversely impact these resources.

In another project, a survey around Lake Pepin, a glacial lake near the upper Mississippi, confirmed the hypothesis that the river delta has shifted downstream about 5 to 6 meters a year. While the survey did not locate any archeological sites on the islands between Redwing, Minnesota, and the head of the lake 11 kilometers to the south, sites were found on small alluvial fans extending into the flood plain from the mainland. A radiocarbon sample of clays from the lake bottom suggests that the adjacent islands formed in the last 700 years, and that this site was associated with the environments of Lake Pepin rather than the Mississippi River.

And in yet another project, over 30 small sites dating back 12,000 years were found during the survey of a prairie-wetland complex. The large scale of this project provided the Corps and the State Historic Preservation Office with an opportunity to investigate the prehistoric use of prairie-wetland environments. Detailed environmental reconstruction allowed Dr. David Overstreet of the Great Lakes Archaeological Research Center to correlate the locations of PaleoIndian through Late Woodland sites with presettlement vegetation and to develop better investigation methods for future studies in southeastern Wisconsin.

For information contact the U.S. Army Corps of Engineers, St. Paul District CENCS-PD-ER (Dr. John Anfinson), 1421 USPO and Custom House, St. Paul, MN 55101-1479, ph. 612-220-0260.

The Bomb's Pacific Legacy

At the bottom of a Pacific lagoon lies a fateful reminder of the atomic fury visited on Bikini Atoll in 1946. The *Arkansas*...the *Saratoga*...the *Pilotfish*—among many battle-scarred veterans of World War II—nestle in the deep of once-radioactive waters. Today, the image of an atomic



Taking measurements aboard the *Saratoga* (courtesy National Park Service).

tidal wave lofting the fleet skyward still haunts American TV screens.

Divers from the Navy and the National Park Service surveyed the vessels sacrificed to test the might of the new weapon. The project, funded by the Department of Energy (which now oversees nuclear tests), may lead to a marine park managed by the residents of Bikini, finally returning to their homeland decades after being displaced. Marine parks are the forté of the Park Service submerged cultural resources unit, whose divers joined the project.

A report issued in 1991 evaluated the ships as historical, archeological, and recreational resources. Researchers studied the vessels in minute detail—their specifications, why they were used in the tests, and how they went down. Scale drawings of ordnance and radar equipment were gleaned from Navy manuals. Archeologists Dan Lenihan and Dan Murphy, along with historian James Delgado, swam through the site, recording their observations on video and in notes after the dive.

The study concentrated on the *Arkansas* and the *Saratoga*, the two ships closest to ground zero in the Bikini blast. The *Prinz Eugen*, the *Pilotfish*, the *Nagato*, the *Gilliam*, and smaller unnamed vessels were also surveyed during underwater reconnaissance. The results included graphics, photographs, and site descriptions as well as several hours of video footage.

For information contact the National Park Service, Southwest Regional Office, Underwater Archeology Unit (Attn: Dan Lenihan), P.O. Box 728, Santa Fe, NM 87501, ph. 505-988-6750.