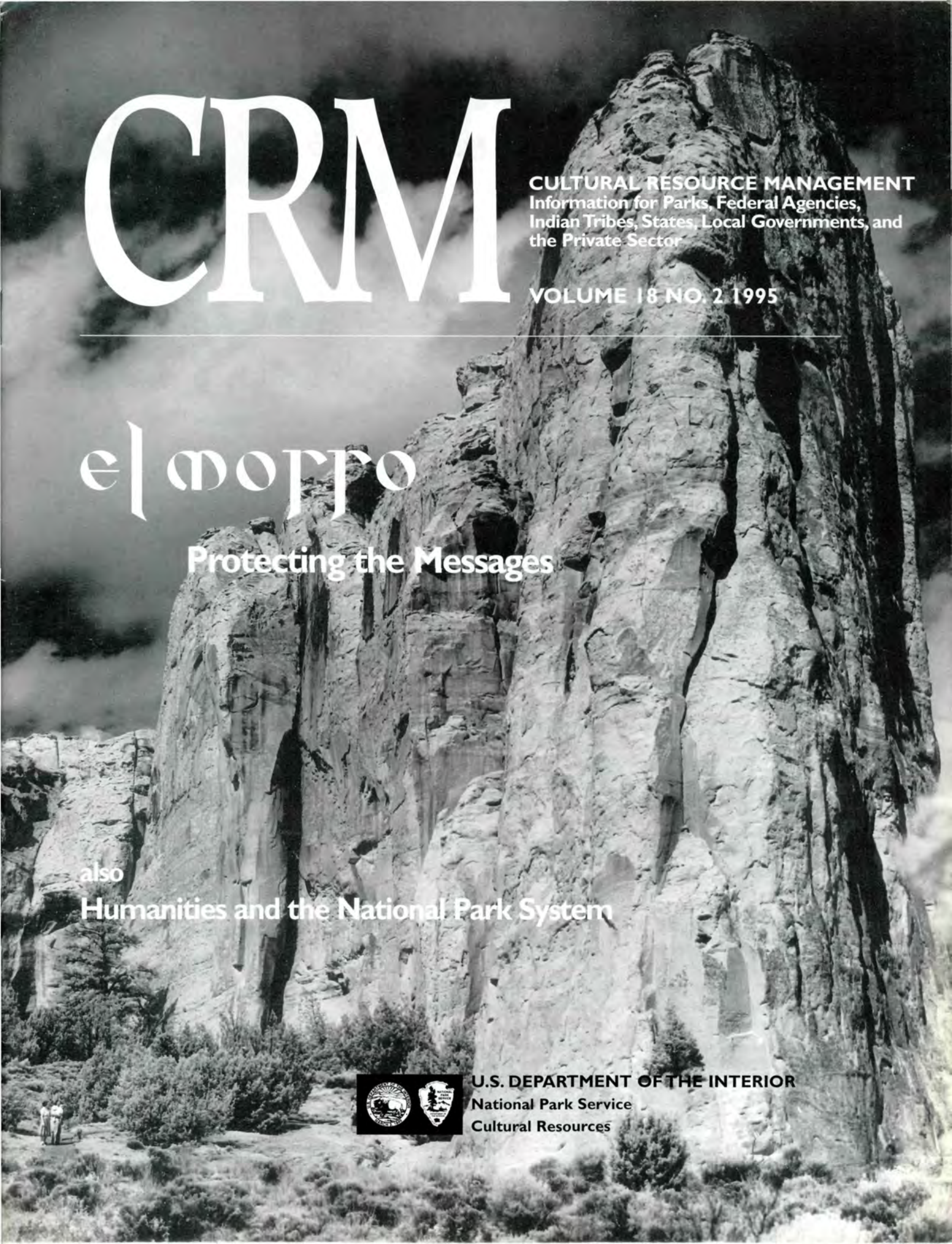


# CRM

CULTURAL RESOURCE MANAGEMENT
Information for Parks, Federal Agencies, Indian Tribes, States, Local Governments, and the Private Sector

VOLUME 18 NO. 2 1995

## Petroglyphs

### Protecting the Messages

also

### Humanities and the National Park System

U.S. DEPARTMENT OF THE INTERIOR
National Park Service
Cultural Resources

**PUBLISHED BY THE NATIONAL PARK SERVICE**

To promote and maintain high standards for preserving and managing cultural resources

**DIRECTOR**
Roger C. Kennedy

**ACTING ASSOCIATE DIRECTOR**
Rowland T. Bowers

**EDITOR**
Ronald M. Greenberg

**PRODUCTION MANAGER**
Karlota M. Koester

**ADVISORS**
David Andrews
Editor, NPS
Joan Bacharach
Museum Registrar, NPS
Randall J. Biallas
Historical Architect, NPS
John A. Burns
Architect, NPS
Harry A. Butowsky
Historian, NPS
Pratt Cassity
Executive Director,
National Alliance of Preservation Commissions
Muriel Crespi
Cultural Anthropologist, NPS
Craig W. Davis
Archeologist, NPS
Mark R. Edwards
Director, Historic Preservation Division,
State Historic Preservation Officer, Georgia
Bruce W. Fry
Chief of Research Publications
National Historic Sites, Parks Canada
John Hnedak
Architectural Historian, NPS
H. Ward Jandl
Architectural Historian, NPS
Roger E. Kelly
Archeologist, NPS
Antoinette J. Lee
Historian, NPS
John Poppeliers
International Liaison Officer
for Cultural Resources, NPS
Brit Allan Storey
Historian, Bureau of Reclamation
Federal Preservation Forum

**CONTRIBUTING EDITORS**
Stephen A. Morris
Certified Local Governments (CLG) Coordinator, NPS
Kay D. Weeks
Technical Writer-Editor, NPS

**CONSULTANTS**
Michael G. Schene
Historian, NPS
Wm. H. Freeman
Design, Imaging, Production–Freeman Publishing Services

# Contents

**VOLUME 18 NO. 2 1995**
**ISSN 1068-4999**

## DEPARTMENTS

Point of View . . . . . 3

Washington Report . . . . . 5

Preservation Resources . . . . . 19

National Center . . . . . 23

Bulletin Board . . . . . 24

## FEATURES

Humanities and the National Park System . . . . . 6
E. Shannon Barker, James O. Horton, Dwight T. Pitcaithley

Protecting the Messages on El Morro . . . . . 8
Don Goldman

Aircraft as Cultural Resources
The Navy Approach . . . . . 10
David B. Whipple

Archival Certification and the National Park Service . . . . . 13
Diane Vogt-O'Connor

Blood Residue Analyses of Ancient Stone Tools Reveal Clues to Prehistoric Subsistence Patterns in Yellowstone . . . . . 14
Kenneth P. Cannon

Museum Information Standards in the 21st Century . . . . . 17
Diane Vogt-O'Connor

*Cover photo: Inscription Rock, El Morro National Monument, Ramah, New Mexico. Photo by Jack E. Boucher, NPS.*

Statements of fact and views are the responsibility of the authors and do not necessarily reflect an opinion or endorsement on the part of the editors, the *CRM* advisors and consultants, or the National Park Service. Send articles, news items, and correspondence to the Editor, *CRM* (400), U.S. Department of the Interior, National Park Service, Cultural Resources, P.O. Box 37127, Washington, DC 20013-7127; (202-343-3395).

# Departments



## POINT OF VIEW

### Letters

*Dear Editor:*

When I first read the article by Paul C. Diebold on the National Register listing of B-17G #4483690 (*CRM* Vol. 16, No. 10) I found it both interesting and problematic. The article brought up the resistance and conceptual confusion involving the nomination of significant structures (most often machines) that do not derive their significance from association with a specific location. The response by Richard E. Gillespie (*CRM* Vol. 17, No. 4) also made good points, and highlighted a number of differences in perception regarding this general class of resources. I think that it is appropriate to have a representative example of the B-17 on the National Register of Historic Places because of the important role this type of aircraft played in national history. I do not agree with the recent contention of Michael S. Binder (*CRM* Vol. 17, No. 9) that the Register should be restricted to geographic locations (places), and that the integrity of location and setting should be paramount considerations in all cases.

I have some problems accepting this particular B-17G as a National Register property because it is from a late production run and never saw action in World War II. I cannot personally accept postwar or Cold War missile and nuclear testing as a context in which this particular aircraft achieved significance of exceptional importance within the past 50 years, or that this particular aircraft is most importantly associated with historic events that made this class of aircraft important in history. I see this essentially as an issue of comparison with comparable properties in the same historic context, i.e., the other 50 or so extant B-17 Flying Fortresses. I feel that first choice for nomination of a B-17 Flying Fortress to the Register should go to a surviving World War II combat veteran. It is the role of the B-17 in the war effort that makes this class of aircraft significant in national history, and not the fact that these aircraft were among the many classes of obsolete and decommissioned aircraft relegated to testing functions after the war. However, I cannot agree that integrity of location and setting are crucial considerations in this case. There are no B-17s, or any other significant historic machines of World War II, aside from wrecks preserved in place, that retain integrity of location and setting. Perhaps we still lack historical perspective for this context.

I think that the controversy over this aircraft has brought up more pervasive issues regarding the nomination of portable or mobile structures that were significant in national history. Since the inception of the National Register of Historic Places there has been an evident emphasis or bias in wording and practice toward buildings and the locations of discrete historic events. At the same time, other classes of historic properties, including districts, sites, structures and objects associated with archaeology, innovations in engineering, and patterns of cultural events have been accepted as essential components of the Register. There is a well-established precedent for historic structures and other cultural properties that are not places per se being listed in the National Register of Historic Places. Many types of structures associated with national defense, transportation, or boom-and-bust industries do not derive their significance from association with specific geographic locations. In many cases the mobility of these structures is an essential aspect of the context within which they achieved significance in history.

For the sake of debate, I suggest a hypothetical case without, at the moment, having an actual example: a narrow gauge steam locomotive in good physical condition that was directly associated with the industrialization of precious metal mining and the expansion of railroads into the Middle Rocky Mountains in the 1880s. I contend that the essential aspects of integrity of such a structure would be design, materials, workmanship, and association with the general patterns of events and innovations of that important period in national history. An essential component of the importance and significance of these machines (structures) was their mobility and their active and dynamic role in a variety or sequence of locations and settings during their useful lives. The issue that I wish to provoke is whether integrity of loca-

tion is essential to the eligibility of an inherently portable or mobile structure. Steam locomotives have been at the center of much interest and controversy and have played important roles in many issues important in National Register eligibility, historic preservation, and cultural resources management. Steam locomotives share parallel aspects of historic roles and romantic cultural mythology with aircraft, but have achieved a degree of historical perspective that can help to clarify their historic context.

If integrity of location and setting for a steam locomotive is embodied in the rail route and stops that the locomotive served in the period that it achieved significance, then we are not likely to find any examples of steam locomotives that retain these aspects of integrity. We may not even be able to find a particular type of locomotive that is still associated with artifacts or other structures that are appropriate to its period of significance. It is the nature of machines of transportation, no matter how significant their role in history, to be retired and displaced from their historic location and setting. When no representative examples remain that retain those aspects of integrity, emphasis must shift to other aspects of integrity. What then would be the rule of thumb standards to evaluate the eligibility of an historic locomotive in the absence of a thematic Multiple Property Document covering the appropriate historic context? In what ways would "restoration" or "rehabilitation" contribute to, or detract from the significance of the locomotive? What are the critical distinctions between a restored historic locomotive, a faithful replica, and a "made-over cultural icon" (cf. Richard E. Gillespie, *CRM* Vol. 17, No. 4)? I can't visualize answering any of these questions without reviewing the overall history of use of the particular class of locomotives, and comparing the physical condition, use history, and historical associations of a substantial sample of extant steam locomotives of the same class.

Say we have a 2-6-0 Mogul narrow gauge locomotive that was active in the expansion of an historic railroad into the Rocky Mountains and we have reasonably complete documentation of the use history of that specific locomotive. This hypothetical locomotive has been restored to the extent that it has had rust removed, has had missing elements replaced as much as possible with appropriate elements of the period, has had some perishable wooden elements replaced with replicas made to match available photographs, and has been painted to retard weathering and to match available photographs. The locomotive has not been rehabilitated to operating condition, but is on static display in a community near a short stretch of restored narrow gauge track where a mixed collection of rehabilitated steam locomotives is in use as a tourist attraction. The restored locomotive never operated in the community where it is now on display, although the railroad that operated the locomotive served this community.

For the sake of discussion I will say that most of the other extant Moguls that had served the Colorado mining districts in the 1880s and 1890s lack secure documentation of their use histories, have deteriorated substantially and lack key structural elements, or have been rehabilitated for use as tourist attractions with substantial mixing of parts from similar locomotives and replacement of materials to make them operational. As a rule, the rehabilitated locomotives operate along a restored stretch of scenic historic railroad and pull a mixture of restored late-19th-century cars and modern open railroad cars built specifically for tourism. In other words, our hypothetical locomotive is an unusually complete example of the type and period. This locomotive is on display in an area where this class of locomotives was important to settlement and subsequent economic development. None of the extant locomotives of the period in this general area, whether restored, rehabilitated, or brought in for spare parts, ever operated in this location. This locomotive represents a type that was important in the early economic development of an area, retains a comparatively high degree of integrity of design, materials, and workmanship, and has a documented association with an important historic period of use of this class of locomotives. Broadly speaking, the locomotive is in a setting in which this class of locomotives was historically important, but it is not now directly associated with any other structures, objects, or constructed landscape features of that period of railroad development.

Although I have not used an actual example, this scenario has borrowed elements from a number of actual, less ideal situations. I have intentionally created some conceptual considerations parallel to the case of the Indiana B-17. I have chosen a narrow gauge example because the majority of the early mountain railroads important in the development of this region were narrow gauge, and all of the narrow gauge lines have been abandoned or replaced by standard gauge. Several locations in the state have restored stretches of historic narrow gauge rail and operate rehabilitated steam locomotives. I suggest that I have fabricated a locomotive that would be eligible for the National Register of Historic Places because it is associated with patterns of events that made a significant contribution to state and national history (Criterion A) and because it represents a significant and distinguishable entity (Criterion C). This machine, and probably most other historic machines of this class, does not retain integrity of loca-

tion. How important is integrity of location for the eligibility of this transportation structure? For that matter, what constitutes integrity of location for a mobile machine? Is it sufficient that it is in an area where this particular class of machines was important? I invite debate on this issue.

—Carl Späth, Ph.D.
Senior Staff Archaeologist
Metcalf Archaeological Consultants, Inc., Eagle, Colorado

# WASHINGTON REPORT

## *National History Standards*

National media in recent months have carried stories about debates generated by the National Standards in United States History. These standards were released on October 26 by the UCLA National Center for History in the Schools. Because this debate is drawing so much attention nationwide, the following information about the standards is provided for anyone who wishes to read the actual text of the standards.

Copies of the standards may be obtained from the National Center for History in the Schools, at 10880 Wilshire Boulevard, Suite 761, Los Angeles, California 90024-4108.

Prices for the standards vary:

US History—$18.95 – educators; $24.95 – institutions
World History— $18.95 and $24.95
Grades K-4—$ 7.95 and $12.95

Shipping costs for UPS (ground service) are:

1 book — $5.00
2 books — 6.00
3 books — 7.00
4 books — 8.00

Allow 2-4 weeks for delivery. Make checks payable to: Regents, University of California.

## *News from the National Register of Historic Places*

Fiscal Year 1994 (October 1, 1993 through September 30, 1994) was a productive year for the National Register staff. Herewith is an update on their activities.

▮ **1,749 new nominations listed in the National Register of Historic Places in FY 1994.** This represents an increase over the 1,590 listings in the previous FY and brought the total number of listings in the National Register to 63,350, encompassing nearly 1,000,000 contributing resources by the end of FY 1994.

▮ ***African American Historic Places* published by the National Trust for Historic Preservation's Preservation Press.** Over 1,000 copies were pre-sold. This book describes more than 800 places significant in African American history and includes articles on the role of African Americans in our history. The publication is a cooperative effort of the National Park Service, the Preservation Press, and the National Conference of State Historic Preservation Officers (NCSHPO). The book can be ordered for $25.95 from the Preservation Press, National Trust for Historic Preservation, 1785 Massachusetts Avenue, NW, Washington, DC 20036; 202-673-4058, or call toll free 800-766-6847.

▮ ***National Register of Historic Places 1966 to 1994* published by the Preservation Press.** It is the cumulative list of the more than 62,000 historic districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, engineering, and culture listed up to January 1, 1994. The publication is a cooperative effort of the National Park Service, the Preservation Press, and NCSHPO. The book can be ordered for $98 plus $4 postage and handling from the Preservation Press, National Trust for Historic Preservation.

▮ ***Presenting Nature: The Historic Landscape Design of the National Park Service 1916 to 1942* published.** This publication relates the story of the development of naturalistic landscape design for parks under National Park Service stewardship and how the bureau met the dual challenge of developing national parks for visitor appreciation and enjoyment, while ensuring the preservation of scenic resources for future generations. The book provides the context for evaluating cultural resources in national and state parks. It can be ordered for $20.00 from the Superintendent of Documents, Government Printing Office, P. O. Box 371954, Pittsburgh, PA 15250-7954, 202-512-1800, #024-55-01140-4, GPO Processing Code *7517.

▮ **A special issue of *CRM* on "Using the National Register of Historic Places," published (March 1994).** This issue includes 23 essays on using the National Register program in planning, research, local government programs, community revitalization, heritage tourism, education, and interpretation.

▮ **"My Property is Important to America's Heritage: What Does That Mean?" published.** This brochure answers questions about various federal government historic designation programs.

▮ **More than 110,000 National Register publications distributed in response to requests.** National Register Bulletins, special *CRM* issues on the National Register (heritage education, cultural diversity, and using the National Register), registration forms, brochures, and information on Teaching With Historic Places are available upon request.

▮ **Over 5,501 National Register Information System (NRIS) database searches were performed.** The National Register handles requests for information on National Register listings,

*—continued page 19*

E. Shannon Barker, James O. Horton, Dwight T. Pitcaithley

# Humanities and the National Park System

The National Park Service, like most federal agencies, is re-organizing, re-engineering, and generally re-assessing its ability to serve the public and preserve park resources. The Vail Agenda* provides our conceptual framework and a Strategic Plan charts our course. Following this lead, the National Park System Advisory Board prepared and approved "Humanities and the National Parks: Adapting to Change," a plan to enhance the interpretation of the historic resources of the national parks and historic sites and to improve the public education they provide. The plan was prepared in March 1994 by a special committee of the Advisory Board, consisting of historical and archeological scholars inside and outside the Park Service. It offers specific recommendations for strengthening the environment for education within the Park Service. As the Vail Agenda suggests, "the national park system has the potential to bring together the landscapes, places, people, and events that contribute in unique ways to the shared national experience and values of an otherwise diverse people." The NPS can serve the nation by helping to encourage a national community, revealing and exploring the diverse cultures which give us both individual and shared identity.

This responsibility goes beyond mere recitation of events that took place at a particular site, however. The Service has an obligation to teach the meaning of these events as well as the contextual issues and values which have shaped the nation's course. The Humanities Report seeks to "raise the quality of research and scholarship in the parks, encourage the professional development of Park Service personnel, and reach a national audience more effectively." These objectives are imperative when one considers the important role the Service will have in the education of our nation's public during the 21st century as more people than ever will learn their nation's history outside of traditional classroom settings.

Considering the size and scope of this audience, the "new social history" is clearly in keeping with the educational opportunities the National Park Service has to offer. This "new" scholarship (which is now several decades old) has given increased attention to the diversity of ordinary people, their experiences and contributions to our national story, and has greatly influenced historical writing and interpretation in the last 30 years. Many parks already integrate the "new social history" into their historical interpretation. "Black Voices at Harpers Ferry" and "Lowell: Visions of Industrial America" are just two examples of exciting recent exhibits which bring to life the complexities of everyday experiences for previously voiceless populations. The recent publication of *African American Historic Places* (1994), by the National Trust for Historic Preservation, identifies the potential resources many park sites hold for not only providing a critical context for the study of America's diverse population, but also for contributing to the multifaceted character of our nation's history, which provides a more realistic look at all of America's past. The Humanities Report has designed objectives to build upon these existing efforts and to facilitate further integration of current scholarship into the Service's interpretive programs.

In order to fulfill its responsibility for education and research, it is also important that at all levels the Service increase its association with colleges, universities, museums, research libraries, and other educational and cultural institutions. Building cooperative programs for sharing person-

*Pages 6 and 7: Executive Board, Organization of American Historians, Pecos National Historical Park, New Mexico, October 1994.*

nel, resources, and knowledge for mutual benefit will increase the opportunities for public education, enhance its quality, and broaden its scope.

Several projects are currently underway to further these specific goals, the most comprehensive of which is an official agreement signed in

October 1994, between the National Park Service and the Organization of American Historians to facilitate interaction between the two organizations for their mutual benefit. Proposed cooperative activities include the sharing of information, knowledge, and methodology in the fields of history, historic preservation, cultural resource management, and interpretation by means of seminars, workshops, site visits, lectures, and symposia. The agreement encourages cooperative efforts designed to evaluate, redesign, and develop educational and interpretive research, exhibits, films, publications, and other public media. The two organizations will share resources, facilities, information, and expertise to enhance the public's understanding of history and historic preservation. The agreement is already being acted upon in several parks, including Antietam National Battlefield in Maryland and General Grant National Memorial in New York, enhancing their historical interpretation programs.

Effectively educating our nation's vast and diverse public in the future will require the implementation of innovative techniques, ones which should take full advantage of new communication technologies. Through the production of video, film, and radio and television programs, the Service can begin to reach a wide audience, many of whom may have no other access to the national park system. One of the ways in which the NPS is encouraging this effort is through the establishment of a cooperative relationship with private corporations who can provide the technology for many educational innovations, such as interactive television in the classroom. The Service is currently considering a project to link a social studies classroom in a Denver middle school with Harpers Ferry for an interactive seminar on John Brown's Raid to enhance the students' educational experience as well as provide access to Park Service resources that would otherwise be unavailable to these young students.

Implementing the diverse recommendations of Humanities and the National Parks will be an ongoing process. It is our goal to get the process underway so that basic mechanisms will exist for others to take the initiative in creating programs which will integrate recent scholarship into exhibits and research, promote interaction with other scholars in public and private institutions, and expand the technological abilities of the National Park Service to educate the American public. The Humanities Program office welcomes and encourages any suggestions or proposals you may have for the implementation of these goals. By addressing the challenge of the Humanities Report, together we can further the preservation of our national heritage and enrich the educational experience that parks and historic preservation programs offer all Americans.

---

Note

* As part of its 75th anniversary celebration, the NPS undertook an intensive review of its responsibilities and prospects. The central focus of the review process was the 75th Anniversary Symposium, "Our National Parks: Challenges and Strategies for the 21st Century," held in Vail, CO, October 1991. The symposium's steering committee was charged with preparing a comprehensive report and set of recommendations for improving the stewardship and management of the national park system. *The National Parks for the 21st Century—The Vail Agenda* is the steering committee's report to the Director of the National Park Service.

---

*E. Shannon Barker, a Ph.D. candidate in American Studies at The George Washington University, is project historian for the Humanities Program.*
*Dr. James O. Horton, Professor of History and American Studies at The George Washington University, is a special advisor to the Director of the National Park Service.*
*Dr. Dwight T. Pitcaithley, Chief, Cultural Resources Services, National Capital Region, NPS, is a special assistant to the Director, National Park Service.*

For further information about the Humanities Program, you may contact any of the above at 202-208-4621.

Don Goldman

# Protecting the Messages on el Morro

A multi-year project is underway at El Morro National Monument in west central New Mexico, to document and preserve historic writings and drawings on the face of the rock. The work is being done by the Southwest Regional Office of the National Park Service, with assistance from the University of Pennsylvania through a cooperative agreement.

El Morro is a prominent, 200' high sandstone mesa, located between Grants and Gallup. Rain falling on the mesa top is channeled by the surface topography to one edge, where it falls and cascades to the bottom. There through centuries of splash and erosion, the waterfall has created a rock basin, a dependable source of water. In this semi-arid region, where water is scarce and far between, the pool at El Morro has for centuries attracted people, both to live nearby and to rest at during their travels.

As is true elsewhere, those people left records of their passing on the rock: early Indian petroglyphs (incised or pecked into the rock), and inscriptions (names, dates, messages) left by recent and contemporary Europeans and Americans. The face of El Morro, therefore, bears the marks of the Native Americans who originally inhabited the area, the Spaniards who arrived in the 17th century, and subsequent American emigrants, soldiers, surveyors, and settlers. All passed El Morro because of its water, and many left their marks on the sandstone.

*El Morro National Monument. Photo by Jack E. Boucher, NPS.*

Today, and since 1906, El Morro is a national monument administered by the NPS, established so that this one-of-a-kind historic place will be preserved as a permanent record of the historic people who stopped here. The NPS has as its charge the protection and preservation of the El Morro messages for all time.

Poet Robert Frost noted the frost-heaved stones that annually left New England rock fences in disarray and wrote, "Something there is that doesn't love a wall ...." In the same sense, and for similar reasons, the NPS has learned through many years of observing the inscriptions that something doesn't love them. That something, of course, is the natural result of rain and frost, wind and heat. A partial photo survey was taken of the writings in 1955 by Channing Howell and Irving McNiel. A comparison between those photos and the rock face today shows that many of the inscriptions are less distinct now than they were 40 years ago, and some are missing completely.

The natural erosion of El Morro is not new. The face of the sandstone rock was being removed grain by grain and falling slab by slab long before the first Native Americans thought to place their ideas on the stone, and the work of every artist and writer who left their mark on this surface since then is slowly being erased. The NPS, then, is charged with preserving something which, by its very nature, is ephemeral.

How to preserve these inscriptions and drawings—as well as determining what to preserve—has always been a conundrum. For example, in the 1920s, an early NPS superintendent realized that people were still writing on the wall, and he judged—just as we do today—that it was graffiti, and he conscientiously removed all post-1906 inscriptions. Because later inscribers at the wall have often written over earlier ones, we don't know what else might have been removed. Another superintendent of those years, assuming that winter was the hardest season on the inscrip-

tions, painted them over with paraffin to protect them. And finally, one well-meaning administrator tried to prolong the inscriptions' life by deepening them (and sometimes "correcting" the spelling) with a sharp tool.

In recent decades, the stewardship of cultural resources has fortunately been professionalized, and is now based on scientific research. The NPS knows that those well-intentioned attempts to protect the marks on the wall were, at best, futile, and in some cases destructive. But the question still remains of how to preserve something that is inherently impermanent, yet do so in a way that leaves it open and available to the public. The current project by the NPS is trying to answer that practical-philosophical dilemma.

The project began with a study by conservator Antoinette Padgett to identify the forces and conditions that cause wastage of the rock wall and the resultant loss of the historic inscriptions. The causes that she identified are: the unstable nature of the sandstone surface, which causes spalling and breaking off of pieces of the rock; the removal, grain-by-grain of the sandstone by weather; the effects of lichens and micro-flora growing on the rock, such as by the physical prying of their roots and the rock-dissolving chemicals that they excrete; and the deposition of fine, clayey materials that are washed down the face from the mesa top and which dry and harden on the face, becoming almost a part of the rock (and covering the underlying inscriptions).

*Top photo: Pablo Morales inscription in 1955.*

*Bottom photo: Pablo Morales inscription in 1992. By 1994 this inscription had further deteriorated, and was nearly gone.*

The next phase of the project was to photodocument every inscription (precisely replicating, where possible, the photographs from 1955) and to conduct an assessment of their condition. Where one or more of the above listed conditions was identified on the inscriptions, it is outlined on the photos. Based on this new knowledge of conditions and causes, a priority rating was assigned to each inscription or section of wall: from 0, which means that the section is stable and there is no apparent threat, to 6, which means that the section is very unstable and its inscriptions or rock art are in danger of imminent loss.

The University of Pennsylvania created an epoxy and a grouting adhesive to be injected into the El Morro sandstone. The current phase of the project is a test of this material, in which it was injected through fissures into spaces behind the rock face. The hope is that it will adhere to the two surfaces and bond the rock face (with its inscriptions) to the bedrock. The NPS hopes that this will prevent the surface spalling that seems to be a major cause of loss of the inscriptions. It will take a year or more to know if this treatment is successful. In the meantime, the monument staff is monitoring the inscriptions annually.

For the first time, the NPS has a comprehensive photographic record of the El Morro inscriptions and an assessment of their current conditions. Now, the NPS must meld its new scientific knowledge of the inscriptions and the rock with its philosophy and practice of cultural resources preservation. Certain treatments might work, but are they acceptable? Glass-over the rock wall? Physically remove the inscriptions and place them in museum cases? Spray a protective chemical over them? Let nature take its course?

Cultural resource preservation is a complex issue, and the solutions at El Morro are not self-evident. The inscriptions, petroglyphs, and pictographs on the face of El Morro will ultimately disappear, regardless of what the NPS does. This research provides a lasting record of the inscriptions, and the resource management techniques that result will help forestall the inevitable. But the intention of the NPS is that for whatever decades or centuries these historic writings and drawings on the cliff remain, visitors will be able to see them where they were drawn—open, observable, and unaltered.

---

*Don Goldman is a planner with the National Park Service Southwest Regional Office.*

For more information about this project, contact Ms. Kaisa Barthuli, Archeologist, National Park Service, Division of Conservation, P.O. Box 728, Santa Fe, NM 87504-0728; telephone 505-988-6701; FAX 505-988-6876.

David B. Whipple

# Aircraft as Cultural Resources
## The Navy Approach

The Navy Department's Naval Historical Center, through a joint Department of Defense Legacy Resource Management program with the National Park Service's National Maritime Initiative and the National Conference of State Historic Preservation Officers, is developing a preservation management plan for the protection of the Navy's historic naval aircraft and aircraft wreck sites. This plan, among other things, seeks to comply with the National Historic Preservation Act (NHPA) by creating a framework that allows systematic identification, evaluation, and nomination of significant historic and archeological aircraft to the National Register.

For the purposes of this discussion, "archeological aircraft" are those aircraft that exist as crash sites or crash site debris fields. Initial work in the developing Navy management plan focuses on underwater sites since these are the best preserved and consequently most threatened by salvors. The staff at the Naval Historical Center (NHC) has encountered issues surrounding aircraft preservation previously identified in *CRM* as well as some new concerns. The first issue confronting the Navy is the scope of the work. Excluding trainers and utility aircraft, the U.S. Navy acquired 73,414 aircraft between 1916 and 1969.[1] Between July 1940 and June 1945 the Navy purchased 75,032 aircraft. Thus, for the World War II era alone there are 75,032 potential structures over 50 years old to be evaluated for historic significance. If we use participation in combat as a flag for potential significance we find nearly 3,000 combat losses in the Pacific alone. What is the most practical manner of handling this number of resources in the identification phase of NHPA compliance? The second issue confronting the Navy is universal to all potentially historic aircraft—application of the standards of integrity to aircraft. Finally, and perhaps most importantly, the NHC has found an almost universal failure to recognize the potential importance of aircraft crash sites as archeological sites.

*This F4F-3A, recovered from Lake Michigan in 1993, is an example of the challenges facing aircraft preservation specialists.*

The solution proposed to the first concern is not the simple, concise fix for which we had hoped. Using Mr. Paul Diebold's recommendation for wrestling with numbers in the identification phase, we sought to identify a concise source on aircraft status and inventory.[2] It was hoped that a document could be found in the National Archives, NHC Operational Archives, or NHC Aviation History branch that identified by bureau number the location and status of aircraft in a given period. For instance, a report that lists the bureau number of aircraft assigned to the various squadrons on board aircraft carriers in TF-58 in June of 1944 would provide a working list of aircraft that participated in the June 19 "Marianas Turkey Shoot" and the attack on the Imperial Japanese Navy the following day. Comparison of such a list with crash site data would quickly identify potential candidates for the National Register. Unfortunately, a report with such a format has yet to be located and will probably have to be compiled from other documents.

The solution developed and currently being tested centers on the idea that the Historical Center is seeking to identify crash sites. The primary sources to identify these sites are the Aircraft Accident Report cards and Aircraft History cards on file with NHC's Aviation History Branch. The Accident cards are synopses of accident investigations. These cards list Navy aircraft accidents, including crashes, by type of aircraft and bureau number. Each Navy aircraft is assigned a bureau number for identification, thus individual aircraft can be identified. The problem with this file is its size. The accident report files at NHC Aviation History currently contain over 150 reels of microfilm.

The Aircraft History cards are also filed by bureau number. These cards document the aircraft's assignment history from acceptance by the Navy to the time they are struck from the active list. Thus, a crash site aircraft can be evaluated for its historic potential by reviewing which units it was assigned to and when it was assigned.

Two approaches were considered for the crash site survey. The first was a regionally organized inventory of sites, the second, a survey prioritized by aircraft type. A regional survey would allow identification of a threatened area and produce a relatively quick database of sources in that region. The problem with this approach is that it means duplication of effort. Each time a region that flew SBD Dauntless dive bombers is surveyed, the SBD section of the accident cards will be surveyed again. The alternate method considered was a systematic survey of the accident cards by aircraft type. For example, all of the lost SBDs would be culled, then all of the F6F Hellcats, and so on. While this approach eliminates duplication of effort, it delays the production of a usable database.

*This SBD-1, recovered from Lake Michigan in 1994, is being restored by the Battleship Alabama Memorial. Courtesy Battleship Memorial Park, Mobile, AL.*

Our solution to the problem is to prioritize regions to be surveyed, identify the historic Navy flying units within that region along with the types of aircraft they flew, compile a priority list of aircraft types to be surveyed, and then survey the accident cards by those types. The accident card survey will produce a database of potential crash sites by type of aircraft. The bureau numbers identified by this survey will then be researched in the aircraft history cards to identify their previous assignments and potential involvement in a historic event. The assignment information on the history cards will be added to the accident report information in the database. For example, Navy aircraft in Lake Michigan have been identified as sites under pressure from salvage operations. A unit survey found a Naval Air Station Glenview, near Chicago, and the training aircraft carriers associated with Glenview, Wolverine and Sable. These units operated fighters such as the Wildcat and Corsair as well as the Dauntless dive bomber. With this list, priorities were set to survey SBD Dauntless, FM-1, FM-2, and F4F Wildcats, and the various Corsair types that crashed world wide. This approach allows a compromise between focus on aircraft in specific threatened areas and a single pass through the records by aircraft type. However, it will take more time to complete information on a specific area.

The second issue confronting our preservation planning is universal to all aircraft—the application of the National Register standards of integrity. The Naval Historical Center Aircraft Cultural Resource Management plan has examined each category of integrity and interpreted it in terms of potentially historic aircraft. The fundamental questions revolve around aircraft as mass produced mobile machines. National Register integrity standards do make provisions for properties designed to be moved, thus an aircraft that participated in the battle of Midway need not be on or near Midway Island to qualify as significant under Criterion A.[3] Integrity of design is a function of research into the design of a given aircraft type; therefore, it is handled no differently than other property types. A researcher with a background in aviation history can quickly verify integrity of design. An aircraft is either an F4F-3 or it is not. It either has design features associated with F4F-3 aircraft (wings that do not fold and four machine guns, to site two examples) or it does not. Integrity of feeling and association are also comparable to requirements for other property types. The most difficulty comes with determining integrity of materials, setting, and workmanship.

Aircraft are relatively fragile machines intended to operate in an environment unforgiving of failures in judgment or materials. As a result, aircraft incorporate redundant critical systems and a systematic process of inspection and replacement of components. It is the nature of an aircraft to have components replaced on the basis of time in operation and condition. Thus, an SBD that participated in the battle of Midway and which was subsequently lost in a training accident two years later almost assuredly does not have the same engine it had when it participated in the historic event. Is this a breach of integrity of materials? It should not be considered a lack of integrity since the aircraft was designed to have the engine replaced on a systematic basis. Integrity of materials should be evaluated in the context of materials that are appropriate to the type of aircraft and which are contemporary to the aircraft's service life. A 1943 SBD-2 Dauntless dive bomber should have a Pratt and Whitney R-1820-32 radial engine. If it has an R-1820-32 engine that was installed by restoration activity rather than its last operational unit, the aircraft would have less integrity of material. If it had an engine that was not an R-1820-32 it would lack integrity of materials at least as far as the engine is concerned. Yet, neither of the last two instances cited above

should, by itself, disqualify an aircraft for nomination. As Diebold indicated, final integrity of materials evaluation should be based on how much of the aircraft's structural material (spars, stringers, frames, and skin material) is contemporary to the aircraft's operational life.

Integrity of workmanship is also a concern for evaluation of aircraft as National Register properties. What evidence of workmanship can be found in a mass produced item? Integrity of workmanship, like that of materials, should be assessed in terms of the aircraft's operational life. The workmanship on aircraft that are still flying is vulnerable to operational needs, thus the importance of aircraft crash sites and static aircraft. The maintenance requirements for aircraft mean that indications of workmanship may supplant each other. For instance, in April 1944, an F6F squadron realized that pilots were inadvertently hitting the "Flap Up" switch as they advanced the throttle during their take-off roll. Since a flap up condition during take off could and did result in an unintended landing, usually in the water, the squadron installed a locally-manufactured switch guard and attached it, using the existing flap switch mount bolts.[4] As time went on the Navy's Bureau of Aeronautics may have issued a fleetwide repair for this hazard that called for complete relocation of the flap switch box. Thus, an F6F-3 from VF-2 that crashed on April 28, 1944, would have a flap switch guard as evidence of workmanship while an F6F-3 crash site from March (prior to the modification) or June (after a theoretical Bureau of Air modification) might lack this modification. Evidence of workmanship on aircraft should be viewed in the same light as information in a terrestrial habitation site that has been occupied for generations—there will be a "stratigraphy" of workmanship provenance. Two examples of workmanship found on aircraft recovered from underwater sites to date are the engine case bolts on an SBD-2 recovered from Lake Michigan and a chow hall butter knife found on an F6F-5. On the SBD-2, the safety wire connecting the engine bolts, intended to keep the bolts from backing out, is installed backwards on the entire engine. The government-issue butter knife found in the cockpit of an F6F-5 recovered from the waters off Nantucket Island, Massachusetts, was found mounted in the cockpit. This knife, found mounted in a bracket, has been sharpened to a point and honed to a sharp edge. In the F6F-5, the life raft sat in the cockpit seat pan acting as a seat cushion for the pilot. The modified butter knife was probably used to deflate the raft in case of accidental inflation. The F6F-5 also has pencil marks on an interior bulkhead that probably are factory production floor directions. The Air and Space Museum's Garber Facility has found Japanese lettering on an internal bulkhead of an Ohka flying bomb that indicated it had been built by a class from a girls' high school.

The above indications of workmanship are evidence of the importance of studying aircraft crash sites for their information potential. Presently, the lack of research on aircraft's role in American culture means that old aircraft and aircraft crash sites are often regarded as junk except by the relatively few restoration enthusiasts and those who supply them. An undisturbed crash site offers evidence of operational and maintenance usage as well as information about the cause of the crash itself. The site location itself may hold clues to unsuspected activity. For instance, a practice carrier landing deck was found in Rhode Island by recognizing a pattern of local crashes.[5] It is proposed in our management plan that aircraft crash sites, potentially eligible for the National Register, be surveyed for archeological data that indicate cause of crash, operational modifications, or other significant data that might in themselves make the site eligible for nomination under Criterion D.

The Navy's approach to management of its historic and archeological aircraft seeks to comply with National Historic Preservation Act tasking in a responsible manner. The number of potential sites to be evaluated and the context of their evaluation are problematic. However, as the preservation community and others are made aware of the value of aircraft as sources of information on our industrial and aviation heritage, and become informed about the operational life of these machines, the process of identification, evaluation, and nomination to the National Register will become less ambiguous and, thus, less subject to controversy.

---

Notes

1 United States Naval Aviation 1910-1970 Appendix V.

2 Paul C. Diebold, "Aircraft As Cultural Resources, The Indiana Approach." *CRM* Vol. 16, No. 10, 1993.

3 *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation*. p. 31.

4 Action Report VF-2 17 April 1944 NHC Operational Archives, Box 434.

5 Conversation with Peter Capelotti, 21 October 1994.

---

*David Whipple is the Aviation Cultural Resource Coordinator, Naval Historical Center, Washington Navy Yard.*

For further information, write to Mr. Whipple at the Washington Navy Yard, 901 M St., SE, Washington, DC 20374-5060.

Also see *Point of View*, this issue, for additional discussion.

Diane Vogt-O'Connor

# Archival Certification and the National Park Service

Both the NPS reengineering process and the Vail Agenda have placed high priority on professionalism servicewide. A new test for archival professionalism, certification, has emerged during the last seven years. Unlike the museum profession, which accredits institutions, the archival profession has chosen to examine and certify individuals for archival proficiency. Archival certification is a way for individuals who have worked with archival and manuscript materials to affirm and demonstrate their professionalism. Here is a brief summary of the archival certification process.

*What is the Academy of Certified Archivists?*

Established in 1989, the Academy of Certified Archivists (ACA) is an independent nonprofit organization of professional archivists from many countries. The ACA participates in the definition and advancement of international professional archival goals, ethics, practices, education, and standards.

*How do I join the ACA?*

To become a certified archivist it is necessary to prove your academic and professional qualifications; pass a certification examination; and apply formally to the Academy of Certified Archivists Secretariat. In order to join the ACA an archivist must demonstrate expertise in and knowledge of all aspects of archival management including selection of records, manuscripts, and collections; arrangement and description; reference services and access issues; preservation and protection; outreach and promotion; program planning and assessment; and professional, ethical, and legal responsibilities.

*What are the requirements to take the certification examination?*

- a master's degree that includes a minimum of 9 semester hours or 12 quarter hours of graduate archival education. (Note: this level of experience qualifies an individual to take the examination for certification. Actual certification can only be received after a full year's qualifying professional archival experience can be proved. All archival education must be education in an accredited university that follows the Society of American Archivists Guidelines for Graduate Education Programs and the Program Standard for Archival Education: the Practicum. A course in records management or preservation management may be accepted within the 9 hours.)

or

- a minimum of 1 year of qualifying professional archival experience, plus a master's degree, either including or supplemented by at least 9 semester hours or 12 quarter hours of graduate study in archives administration,

or

- 2 years of qualifying professional experience plus a master's degree,

or

- 3 years of qualifying professional archival experience, plus a bachelor's degree.

*What are the requirements for qualifying professional experience?*

Archivists should have a comprehensive understanding of archival principles. A professional archivist actively exercises responsibility for one or more of the following: the acquisition, preservation, management, reference, and control of archival materials. Managing other archivists or an archival repository qualifies as professional experience if the job requires substantial knowledge of archival principles and practices. Collateral duty or part-time positions that include a mixture of archival and other duties may be counted as qualifying experience on a pro-rated bases. If half of full-time work is archival, each year on the job would count as a half-year of experience.

*What is the duration of certification?*

Initial certification is for five years, after which recertification is necessary.

*How do I apply for the examination?*

Write the Academy of Certified Archivists Secretariat, Society of American Archivists, 600 South Federal, Suite 504, Chicago, IL 60605; or call 312-922-0140 or fax 312-347-1452 for an

application form. A non-refundable fee of $50 in the form of a check or money order payable to the Academy of Certified Archivists must accompany the application. The application is reviewed by the certification regent and two board members to evaluate the applicant's education and experience to determine if the individual is qualified to take the exam. Unsuccessful applicants will be told why they do not qualify. Decisions may be appealed.

*Where and when is the examination offered?*

The examination is offered on August 30, 1995, in the following cities: Washington, DC; Columbus, Ohio; Arlington, Texas; and Denver, Colorado. Requests for application forms must be received by the ACA secretariat at least three weeks prior to the application deadline.

*What happens after the examination?*

Archivists who pass the test and have demonstrated the necessary education and experience must pay a certification fee ($150) within 30 days. Annual dues of $50 per year begin upon July 1, of the following year. Successful candidates may put the initials A.C.A. after their name and may join in the activities of the Academy.

---

*Diane Vogt-O'Connor is the Senior Archivist, Curatorial Services Division, National Park Service, Washington, DC.*

Kenneth P. Cannon

# Blood Residue Analyses of Ancient Stone Tools Reveal Clues to Prehistoric Subsistence Patterns In Yellowstone

Since 1989, archeological fieldwork has been conducted along the shore of Yellowstone Lake by the National Park Service's Midwest Archeological Center in response to a number of construction projects, the largest being the reconstruction of the park's road system, and the rehabilitation of the Fishing Bridge developed area. Research has focused on a number of issues concerning prehistoric settlement and subsistence patterns and the reconstruction of paleoenvironmental conditions, both climatic and geomorphic (Cannon et al. 1992). Funding for these various projects has been provided by the Federal Highway Works Administration and the National Park Service.

How to obtain this information from buried contexts that are notorious for poorly preserving organic materials was a challenge. Typically, if preservation is good subsistence patterns can be reconstructed from direct evidence, such as the discarded remains of food items (e.g., processed animal bone). Poor organic preservation has plagued our work and we have had to resort to other methodologies to obtain this information (Cannon and Newman 1994). Fortunately, recent studies have demonstrated that biochemical and immunological methods have the potential to identify species of origin of animal residues on stone tools (Hyland et al. 1990; Kooyman et al. 1992; Newman 1990) and in soils (Newman et al. 1993), which has direct implications for reconstruction of prehistoric subsistence patterns, tool use, and paleoenvironmental studies.

The technique used is a modified version of cross-over immunoelectrophoresis (CIEP) analysis, used by the Royal Canadian Mounted Police Serology Laboratory (Ottawa) and the Centre of Forensic Sciences (Toronto) for identification of residues in criminal investigations (Culliford 1963; Gaensslen 1983; Royal Canadian Mounted Police 1983), and applied to archeological specimens by Dr. Margaret Newman of the University of Calgary. A full discussion of the techniques is presented in Newman and Julig (1989).

The artifacts were selected from subsurface deposits from sites in the Arnica Creek area of West Thumb on the western side of Yellowstone Lake and the Fishing Bridge peninsula on the northshore of the lake (figure 1). After discovery, each artifact was placed in a ziplock plastic bag

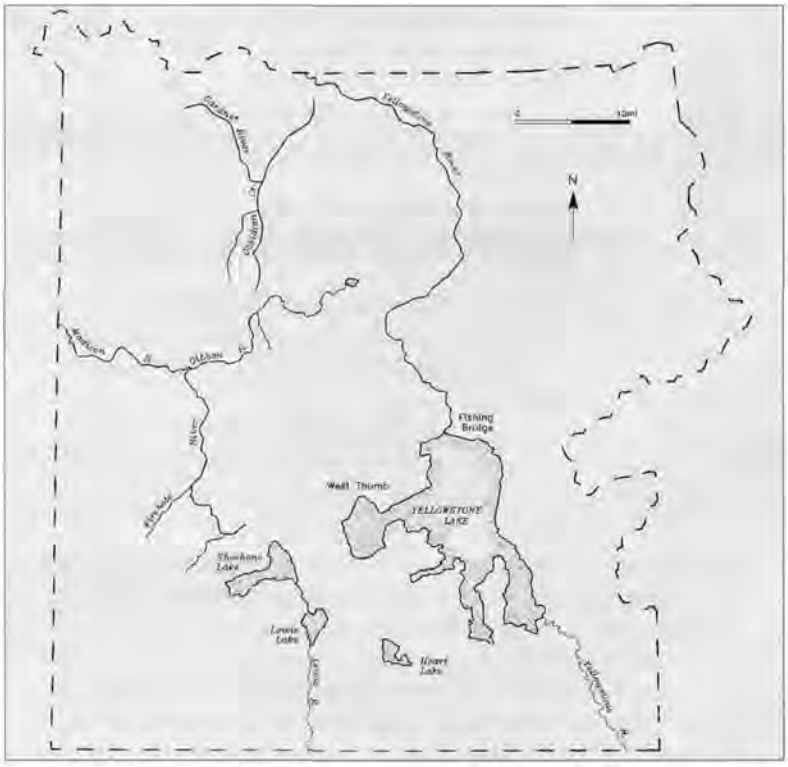



*Figure 1. Map of Yellowstone National Park illustrating location of Fishing Bridge and West Thumb areas discussed in text.*

and was not washed. Lakeshore landforms which contain the archeological deposits consist generally of constructional landforms of Pleistocene deltaic sediments, storm bars of Holocene-aged open-worked gravels, and Holocene eolian sands. A complex geomorphic history is apparent due to dynamics of the resurgent dome of the Yellowstone caldera, which has caused uplift and subsidence along the north shore of the lake on the order of tens of meters, significantly influencing landforms (Pierce et al. 1993), and human settlement (Pierce et al. 1994). Sediments tend to be acidic limiting the potential for organic preservation. Bioturbation, such as tree-throw and rodent burrowing, exacerbate the problem through destruction of stratification and site integrity, as well as the physical destruction of bone and other organic materials.

To date, 36 stone tool artifacts have been submitted to Dr. Newman for analysis. Positive results on 10 of the artifacts (28%) are very compelling. The assemblage includes projectile points, drills, utilized flakes, scrapers, and a sandstone metate (figure 2). The earliest projectile point is attributed to the Cody Complex, a northwest plains archeological tradition, which dates to 9,000 radiocarbon years ago, and is generally referred to as an economy focused on bison procurement (Wheat 1972; Frison and Todd 1987).

Species identified by residue analysis include deer, elk, rabbit, canid, and bear. Diversity of faunal species, in contrast to the bison-dominated Plains economy, appears to be a hallmark of prehistoric mountain economies (Husted 1969; Frison 1991, 1992). A rather unexpected result was the presence of elk blood on the sandstone metate. Traditionally, metates found on intermountain archeological sites have been interpreted as representing evidence of plant processing. While these results do not preclude the processing of plant resources, it does provide an additional dimension to how these tools functioned in the hunter-gatherer economic system.

These results are consistent with other studies using the same technique of CIEP: Hidden Cave in Nevada had 25% of 356 artifacts; 29% of 31 artifacts from Head-Smashed-In Buffalo Jump, Alberta; 25% of 36 artifacts from the Cumins site in western Ontario; and 42% of 12 grinding implements from two sites in southern California (Newman 1990; Newman and Julig 1989; Yohe et al. 1991). The range of site types and environments represented in this sample suggest one-quarter to one-third recovery rate can be expected.

Retouched artifacts, instead of sheer edges of flakes, seem to have better chances of preservation (Cattaneo et al. 1993). And while some researchers have suggested clay matrices may provide the best opportunity for preservation due to electrostatic interactions, experimental work indicates sandy soils may be a better matrix for preservation (Cattaneo et al. 1993). The results in Yellowstone suggest well-drained sandy soils, while poor matrices for faunal preservation, appear to be well suited for blood residue preservation.

Material types also influence preservation of residues. The Yellowstone assemblage includes obsidian, basalt, chert/chalcedony, quartzite, and sandstone. Obsidian at 11% (2/18) has produced the poorest results, although no quartzite artifact has produced positive reactions, but this may be a sampling issue since only two artifacts were submitted. With the exception of basalt (n=2) and sandstone (n=1) at 100%, chert/chalcedony at 38% (5/13) have been the most consistent material types. The capillary action which embeds the residue in the stone tool may be more effective on coarse-grained materials (e.g., cherts vs. obsidian), although amount of usage may also be a factor. A larger sample size and additional experimentation are necessary before these trends can be more adequately explained.

While immunological studies should be viewed with some skepticism, the results of these analyses by Dr. Newman, as well as those by other researchers, are providing more reliability in the techniques and the results. This data used in conjunction with use-wear studies of stone tools, and more traditional evidence (e.g., faunal remains), are exciting examples of how archeology is continuing to integrate and develop multi-

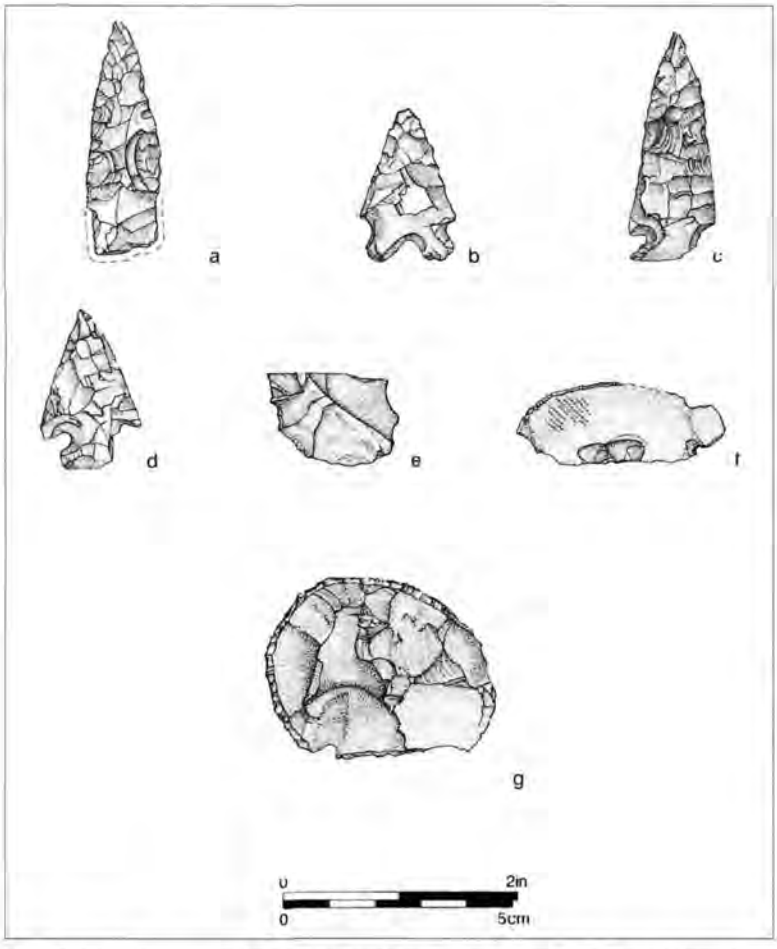



*Figure 2. Selected lithic artifacts which produced positive anti-sera reactions: (a) chalcedony Cody-like (ca. 9000 yr B.P.) projectile point which tested positive for rabbit anti-sera; (b) basalt Oxbow (ca. 5000 yr B.P.) projectile point; (c) chert Avonlea-like (ca. 2000 yr B.P.) projectile point which tested positive for deer anti-sera; (d) chert corner-notched projectile point basalt which tested positive for bear anti-sera; (e) retouched basalt flake which tested positive for deer, elk anti-sera; (f) chert retouched flake which tested positive for canid; (g) chert scraper which tested positive for deer anti-sera.*

disciplinary techniques in unraveling prehistoric lifeways.

## References


Cannon, K.P., and M.E. Newman

1994 Results of Blood Residue Analysis of a Late Paleoindian Projectile Point from Yellowstone National Park, Wyoming. Current Research in the Pleistocene 11:18-21.

Cannon, K.P., K.L. Pierce, and G.M. Crothers

1992 The Ups and Downs of the Yellowstone Caldera: Archeological Investigations at Arnica Creek and Fishing Bridge, Yellowstone National Park, Wyoming. Paper presented at the Fiftieth Plains Anthropological Conference, Lincoln, Nebraska.

Cattaneo, C., K. Gelsthorpe, P. Phillips, and R.J. Sokol

1993 Blood Residues on Stone Tools: Indoor and Outdoor Experiments. *World Archeology* 25(1):29-43.

Culliford, B.J.

1963 Precipitin Reactions in Forensic Problems. *Nature* 201:1092-1094.

Frison, G.C.

1991 *Prehistoric Hunters of the High Plains.* Second Edition. Academic Press, New York.

Frison, G.C.

1992 The Foothills-Mountains and the Open Plains: The Dichotomy in Paleoindian Subsistence Strategies Between Two Ecosystems. In *Ice Age Hunters of the Rockies,* edited by D.J. Stanford and J.S. Day, pp. 323-342. Denver Museum of Natural History.

Frison, G.C., and L.C. Todd (editors)

1987 *The Horner Site: The Type Site of the Cody Cultural Complex.* Academic Press, New York.

Gaensslen, R.E.

1983 *Sourcebook in Forensic Serology, Immunology and Biochemistry.* U.S Department of Justice, Washington, DC.

Husted, W.M.

1969 Bighorn Canyon Archeology. River Basin Surveys, Museum of Natural History, Smithsonian Institution, Publications in *Salvage Archeology, No. 12.* Lincoln, Nebraska.

Hyland, D.C., J.M. Tersak, J.M. Adovasio, and M.I. Siegel

1990 Identification of the Species of Origin of Residual Blood on Lithic Material. *American Antiquity* 55(1):104-112.

Kooyman, B., M.E. Newman, and H. Ceri

1992 Verifying the Reliability of Blood Residue Analysis on Archeological Tools. *Journal of Archeological Science* 19(3):265-269.

Newman, M.E.

1990 The Hidden Evidence from Hidden Cave, Nevada. Unpublished Ph.D. Dissertation, University of Toronto, Canada.

Newman, M.E., and P. Julig

1989 The Identification of Protein Residues on Lithic Artifacts from a Stratified Boreal Forest Site. *Canadian Journal of Archeology* 13:119-132.

Newman, M.E., R.M. Yohe, H. Ceri, and M.Q. Sutton

1993 Immunological Protein Residue Analysis of Nonlithic Archeological Materials. *Journal of Archeological Science* 20(1):93-100.

Pierce, K.L., K.P. Cannon, and G.M. Crothers

1994 Archeological Implications of Changing Levels of Yellowstone Lake, Yellowstone National Park, Wyoming. *Current Research in the Pleistocene* 11:106-108.

Pierce, K.L., K.P. Cannon, G.M. Crothers, G. Meyer, and M. Rubin

1993 Backflooding Upstream from the Resurgent Dome of the 0.6 Ma Yellowstone Caldera—Two Backflooding Cycles in the Last 8,000 Years (abs). *Eos* 74(43):592.

Royal Canadian Mounted Police

1983 *Methods Manual, Serology Section.* Ottawa, Canada.

Wheat, J.B.

1972 The Olsen-Chubbuck Site: A Paleo-Indian Bison Kill. *Memoirs of the Society for American Archeology,* No. 26.

Yohe, R.M., M.E. Newman, and J.S. Schneider

1991 Immunological Identification of Small-Mammal Proteins on Aboriginal Milling Equipment. *American Antiquity* 56(4):659-666.



*Kenneth Cannon is currently a project archeologist with the National Park Service's Midwest Archeological Center. He has been with the Center since 1987 and served as project director for a number of archeological investigations in Yellowstone National Park since 1989.*

Diane Vogt-O'Connor

# Museum Information Standards in the 21st Century

Museums have been developing automated systems since the 1960s. Generally, these systems were stand-alone systems used for limited applications, such as registration of donors and objects and occasionally collections management. Automated museum systems were developed to track and contain descriptions of museum property locally. Developed by staff or contractors for use by trained staff, museum systems were idiosyncratic. While the museum systems required standardization of data to avoid the "garbage in, garbage out" phenomenon, the systems could afford to use locally derived information standards. Until recently, museums had no major incentive to develop national standards such as those used by libraries and archives.

*Why Have Museum Information Standards?*

As we approach the year 2000, the situation has altered significantly. Museums are now interested in joining the networked information environment, developing distributed systems, and sharing information internationally with colleagues, scholars, and other customers. Standardized data is a prerequisite for such sharing and development.

Scholars use common search strategies when researching in networked systems and/or distributed system environments. Without internationally standardized information or built-in cross-references from one synonymous term to another, researchers will fail to use museums systems effectively. How is the poor researcher to know if the museum has selected the term "bureau," "dresser," "dressing chest," "chest, dressing," "drawers, chests of," or "chest of drawers," without searching all six terms? More often than not, the researcher will give up in frustration. Museum data standardization, indexing, and cross-referencing capabilities will have a fundamental impact on how well our systems please our customers in the future.

Standardizing these terms also provides some assistance to the museum curator, who just wants to get the information into the computer correctly. Imagine having to make these decisions afresh each time an object requires description. Without using standards, each act of cataloging becomes a major etymological debate. Such decision-making takes time and costs money. If the museum follows international standards, the skills learned at one museum are transferable to the curator's next job. This also helps to ensure that the best qualified person is selected for the new position—not simply the person who knows a particular software package. When standards are in place, training programs may be shared among many institutions. Shared standards provide economies of scale for data interchange, training of staff and researchers, and for maximizing the amount of data discovered during research across networked systems.

The development of the National Information Infrastructure has given additional urgency to this need, as it provides a low-cost way for all institutions to share data on collections. Starting in the 1980s, a number of organizations, including the J. Paul Getty Trust, the Documentation Committee of the International Council on Monuments (ICOM), the Committee on Computer Interchange of Museum Information (CIMI), and the Museum Computer Network have begun working on supporting or developing museum information standards. Several sets of documentation standards have been issued.

*What Kinds of Standards Are Needed?*

In general, museum automation specialists talk about the need for four basic kinds of standards: data value standards; data content standards; data structure standards; and information system standards.

***Data value standards*** are the authorized terminologies or vocabularies used to classify and describe the museum objects and collections. Data value include not only the selected term itself, but also how that term is expressed, punctuated, classified, and formatted (e.g., style). The Getty's *Art and Architecture Thesaurus* and Blackaby et. al, the *Revised Nomenclature* (AASLH) are data value standards; as are the descriptive rule books, Archives, Personal Papers, and Manuscripts and the Anglo American

Cataloging Rules. Data values can also be called authority files, value tables, classification systems, and style manuals. If posted electronically on the system, data value standards may also be used to assist researchers in identifying fruitful search terminology when the researcher has been searching on a non-productive term.

*Data content standards* are the information system's data fields (i.e., broad categories of information such as artist, inventor, date, object name) that determine the system's capabilities to answer research questions and serve business functions. Data content standards are the "buckets" that hold the data values (e.g., actual terms). The Machine Readable Cataloging Format (MARC) of the Library of Congress is a data content standard. Others include list of fields selected by the Canadian Heritage Information Network (CHIN) and there is also CIMI's Standards Framework for Computer Interchange of Museum Information. The purpose of the information system (e.g., collections management, scholarly research, registration) should shape what data content standards are selected, rather than selecting standards based upon an ideal model of what a computer system should be. Certain functions, such as recording gifts in a deed of gift, require specific data content standards, such as the donor's name, the date, the object name, and so forth.

*Data structure standards* are the system specific linkages forged between different categories of data. These linkages express relationships between the data fields. The linkages affect the way that the system functions. It may be desirable to provide data at several different levels, for example, an overview of the entire museum's holdings for Internet posting, an overview of all materials from a specific donor, and so forth. Another example is a hypertext system in which certain words will be highlighted indicating the possibility of traveling from the concept in the text to a separate database which contains further information on the concept. The relationship between those separate files is indicated within the system's data structure standards. The CIMI Standards Framework mentions a number of existing technical standards used within other non-museum communities such as the computer and publishing communities.

*Systems standards* are the final category of information standards. Systems standards determine how a system's hardware and software work together to ensure searchability, data security, and other system capabilities. Primarily developed by the computing community and information professionals, these standards include Internet's standards and the Open Systems Environment. Developed to provide functionalities such as system security, networking, or directory capabilities, these standards are necessary to ensure that museum systems can work within networked environments. Museums which ignore these standards do so at their own peril; as they severely limit the future capability of their systems to operate in the museum information environment of the 21st century.

To effectively become major players in the International Information Infrastructure and to please our customers, museums must master the issue of information standards. The networked information environment of the 21st century demands that museums not only provide information on our collections electronically, but that we learn to work with pre-existing standards developed by our colleagues in computing, information science, archives, and professional organizations and currently in use in networks and the Internet. As museums begin to have a hand in shaping these standards, museum systems will become more useful to our colleagues and our customers by facilitating research, supporting greater electronic or "virtual" visitation, sponsoring educational access, and encouraging partnerships.

---

**The following entry was not received in time to be included in the *Cultural Resource Training Directory.***

**Remote Sensing/Geophysical Techniques for Cultural Resource Management**

*Date and location:* May 22-26, 1995, Cahokia Mounds State Park, Collinsville, IL

*Cost:* $475.00

Practical application of geophysical equipment and aerial photographic techniques available for identification, evaluation, conservation, and protection of cultural resources. Hands-on use of magnetometers, conductivity and resistivity meters, metal detectors, ground penetrating radar, and low altitude large scale aerial reconnaissance.

*Intended Audience:* Archeologists, architects, cultural resource managers and specialists

*Contact:*
Steven L. De Vore
U.S. Department of the Interior
National Park Service
Rocky Mountain Region
Interagency Archeological Services
12795 West Alameda Parkway
P.O. Box 25287
Denver, CO 80225-0287
Telephone: 303-969-2882

*Topics:* Archeological (treatment), Architectural (Treatment), Documentation (Treatment), Evaluation, Identification, Interpretation, Preservation Planning, Registration, Section 106, Technology.

# Departments



*—continued from page 5*

including NRIS printouts and copies of registration documentation.

■ Information on listings in the National Register of Historic Places is now available online by Internet and dial access to Victor, the University of Maryland's library catalogue system.

In addition, 21 Teaching With Historic Places lesson plans have now been published. New lesson plans include the Building of the Chesapeake and Ohio Canal (DC and MD), Andersonville: Prisoner of War Camp (GA), and Woodrow Wilson: Prophet of Peace (DC). Four were published in the National Council for the Social Studies' journal *Social Education*. Each lesson plan can be ordered for $5.95, plus tax, from the Preservation Press, National Trust for Historic Preservation.

Forthcoming National Register products include videotapes on multiple property nominations, an introduction to the National Register, and traditional cultural properties; revised National Register Bulletins on applying the National Register criteria to post offices and defining boundaries; and new bulletins on historic aircraft and related resources, suburbanization, and using the National Register for education and interpretation. Additional Internet access is also planned. The Teaching With Historic Places program will offer a summer institute for teachers and a workshop on writing lesson plans. Scheduled Teaching With Historic Places publications include additional lesson plans, several of which will appear in *Social Education*, a curriculum framework, and technical assistance kit.

All information on the Teaching with Historic Places program is available from the National Register of Historic Places, Interagency Resources Division, National Park Service, P. O. Box 37127, Washington, DC 20013-7127; 202-343-9536. Unless otherwise indicated, all products and services listed above are available from: Reference Desk, National Register of Historic Places, Interagency Resources Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; 202-343-9559.

## PRESERVATION RESOURCES

### Publications

*Archeology of the Pueblo Grande Platform Mound and Surrounding Features, Volume 2: Features in the Central Precinct of the Pueblo Grande Community*, edited by Todd W. Bostwick and Christian E. Downum; 1994; 451 pp; $30.00 (incl s/h).

This publication presents the results of a five-year archival study of previously unpublished records generated over the last 70 years for the prehistoric Hohokam village at Pueblo Grande Cultural Park in Phoenix, Arizona. More than 400 archeological features are described.

For more information, write Todd Bostwick, Pueblo Grande Museum, 4619 E. Washington Street, Phoenix, AZ 85034.

*Appraising Historic Properties*, by Judith Reynolds. The new publication in the National Trust for Historic Preservation's Information series demystifies the appraisal process and addresses the cultural and economic role of historic properties in today's real estate market. It clarifies the appraiser's job and the methodology that produces the correct appraisal of a historic property. The book is meant for appraisers, for those who own or administer historic properties, and for all those who are interested in the link between history and the associated real estate.

Other new *Information* booklets include: *A Guide to Tax-Advantaged Rehabilitation* by Donovan D. Rypkema, and *Design Review in Historic Districts* by Rachel S. Cox. First printed in 1986, *A Guide to Tax-Advantaged Rehabilitation* has been updated to reflect current tax law. *Design Review* introduces the reader to the basic concepts of design review.

*Information* series publications are available at $5.00 per booklet, including postage and handling. Order from Information Series, National Trust for Historic Preservation, 1785 Massachusetts Avenue, NW, Washington, DC 20036; 202-673-4286.

*Conservation of Stained Glass in America* by Julie L. Sloan; 1995. "Stained Glass" is a complete guide for both the owners of

stained glass windows and for artists and studios who restore them. Its examples and illustrations are focused on American stained glass, even though many of the techniques were developed in Europe, where stained glass has a long and noble history.

For ordering information, contact Art in Architecture Press, Inc., Tonetta Lake Road, Brewster, NY 10509; phone: 914-278-2187; fax: 914-278-2481.

### *From the NPS Preservation Assistance Division*

*Making Education Decisions: A Landscape Preservation Bibliography,* edited by Charles A. Birnbaum and Cheryl Wagner; $5.50; Stock Number 024-005-01142-1.

First published in 1990, the new bibliography references the most current publications and case studies in the field. Major subject areas include research, documentation, evaluation, treatment, maintenance and management of cultural landscapes.

*Affordable Housing Through Historic Preservation* by William F. Delvac, Susan Escherich, and Bridget Hartman, with a Preface by Richard Moe; 74 pp.; $3.50 (incl p/h); GPO Stock Number: 024-005-01148-0.

"Affordable Housing" presents an overview of how to finance historic buildings for affordable housing, discussing the nuts and bolts of two federal tax incentive programs—the Historic Rehabilitation Tax Credit and the Low-Income Housing Tax Credit—and how the two programs can be combined to raise additional project funds. Six case studies illustrate successful rehabilitation projects by nonprofits and for-profit organizations.

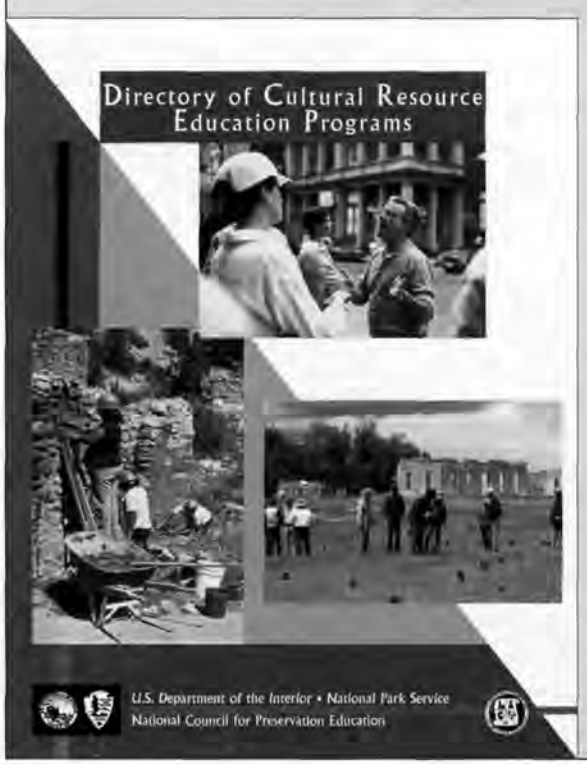
Produced by the National Park Service's Preservation Assistance Division and the National Trust for Historic Preservation, the publication is available from Superintendent of Documents, Government Printing Office, Washington, DC 20402-9325.

***Preservation Brief 34: Applied Ornamentation for Historic Interiors: Preserving Composition Ornament,*** by Jonathan Thornton and William Adair, FAAR; $1.50; Stock Number: 024-005-01137-4.

*Preservation Brief 35: Understanding Old Buildings: The Process of Architectural Investigation,* by Travis C. McDonald, Jr.; $1.50; Stock Number: 024-005-01144-7.

**Directory of Cultural Resource Education Programs**

The National Park Service and the National Council for Preservation Education are pleased to announce a new compendium of long-term educational opportunities. The Directory of Cultural Resource Education Programs at Colleges, Universities, Craft and Trade Schools in the United States provides more than 100 pages of information about graduate and undergraduate programs, among them, those based in community colleges, technical schools, and craft schools. The description of each includes notes on the faculty, curriculum, tuition, the degrees or certificates offered, and the length and nature of the programs. The directory updates and expands the 1992 edition.




The directory is divided into three parts. Section 1 defines cultural resource terminology and lists the schools that offer education programs in specific cultural resource disciplines. Section 2 provides detailed information on the specific programs on a state-by-state basis, including current faculty and available courses. Section 3 provides a listing of additional useful directories and resources.

This directory is intended for use by students at the high school or undergraduate level (and their counselors and advisors) who are looking for advanced training relating to the preservation and management of cultural resources and cultural heritage in the United States. Preservation professionals may find this a useful reference in locating new contacts and possible partners in new preservation endeavors.

This publication is a joint project of the National Park Service and the National Council for Preservation Education (NCPE), a private non-profit organization primarily composed of colleges and universities with historic preservation programs.

Compiled by Emogene A. Bevitt and Heather L. Minor, with Sylvia Rose Augustus, Karen V. Heege, A. Brooks Prueher, Michael A. Tomlan. 1994-95. 104 pages, $6.50 per copy. Government Printing Office Stock Number 024-005-01146-3. Order from Superintendent of Documents, P.O. Box 371954, Pittsburgh, Pennsylvania 15250-7954.

# Teaching with Historic Places

*A program of the National Park Service's National Register of Historic Places and the National Trust for Historic Preservation*

## AVAILABLE LESSON PLANS

*Knife River: Early Village Life on the Plains/#1*
Discover the complex culture and trading economy of the Hidatsa and Mandan tribes in North Dakota during the 18th century, as seen by archeologists, anthropologists, and artists.

*San Antonio Missions: Spanish Influence in Texas/#2*
Explore a group of 18th-century missions in modern San Antonio to learn about Spanish influence on native peoples and the patterns of Texas culture.

*When Rice Was King/#3*
Investigate early rice plantations in Georgetown, South Carolina, to learn how rice cultivation transformed the native environment and promoted the South's dependence on a plantation economy.

*Log Cabins in America: The Finnish Experience/#4*
Consider how simple, functional cabins, like those built by the Finns in Idaho, became symbols in American politics and folklore.

*Run for Your Lives! The Johnstown Flood of 1889/#5*
Determine how environmental management and technology, and the social and economic attitudes of 19th-century industrialism, contributed to a disaster in Pennsylvania that shocked the nation.

*Roadside Attractions/#6*
Follow the highways of the 1920s and 1930s, exploring the whimsical, extravagant architecture that came with American autoculture.

*Attu: North American Battleground of World War II/#7*
Examine military maps and photos to better understand why an isolated battle on a remote island in Alaska alarmed the nation.

*Californio to American: A Study in Cultural Change/#8*
Evaluate several centuries of dramatic changes to an adobe ranch house and its surroundings in suburban Long Beach to analyze the interaction between Spanish and Anglo culture in California.

*The Old Courthouse in St. Louis: Yesterday & Today/#9*
Compare two images of St. Louis's handsome Courthouse—a gathering place for pioneers heading west and dramatic focus for Dred Scott's heroic efforts to free his family from slavery.

*Building of the C & O Canal/#10*
Explore the Chesapeake and Ohio Canal from Washington, D.C., to Cumberland, Maryland, and decide why canal building was important during the National Period of the 1820s and 1830s.

*Andersonville: Prisoner of War Camp/#11*
Examine conditions of the Civil War's most notorious prison, and learn how inmates were able to cope.

*The Battle of First Manassas /#12*
Study personal accounts of soldiers who fought in the first battle of the Civil War, and discover how the day set the tone for the many bloody battles to come.

*Camp Hoover: Presidential Retreat/#13*
Evaluate the impact a quiet mountain retreat in Virginia had on Herbert Hoover's presidency and on the conservation movement.

*Woodrow Wilson: Prophet of Peace/#14*
Learn about the last years of this president who had a lasting vision for peace following World War I and the opposition he encountered.

*William Howard Taft's Boyhood Home/#15*
Visit the home of the only man to serve the country both as president and chief justice, and meet the rest of his public service-oriented family.

*Life on an Island: Early Settlers Off the Rock-Bound Coast of Maine/#16*
Discover how early settlers survived and prospered on Maine's coastal islands despite harsh living conditions.

*Castolon: A Meeting Place of Two Cultures/#17*
Compare the Spanish and Anglo influences on settlements along the Texas-Mexico border region of the Rio Grande.

*Remembering Pearl Harbor: The USS Arizona Memorial/#18*
Trace the course of the Japanese surprise attack on the U.S. Pacific Fleet at Pearl Harbor, and consider the significance of the sunken USS *Arizona* as a war memorial.

*Decatur House: A Home of the Rich and Powerful/#19*
Inspect Commodore Stephen Decatur's home near the White House, a gathering place for the politically ambitious, and learn why the naval hero was compelled to fight a fateful duel.

*The Vieux Carré: A Creole Neighborhood in New Orleans/#20*
Examine New Orleans' distinctive French Quarter, a vibrant reflection of Creole heritage, and recall the city's role in American westward expansion.

*Building America's Industrial Revolution: The Boott Cotton Mills of Lowell, Massachusetts/#21*
Learn how technology applied to textile mills revolutionized industry, affecting mill architecture, city planning, and transportation.

*Weir Farm: Home of an American Impressionist/#22*
Examine how this New England country retreat epitomized the ideals of the American Impressionist and back-to-nature movements.

***TO ORDER, CALL TOLL-FREE***
***1-800-766-6847***
***OR SEE BACK TO ORDER BY FAX***

# Teaching with Historic Places

*A program of the National Park Service's National Register of Historic Places and the National Trust for Historic Preservation*

## Order Form

| Qty | Title | Cost | Total |
|---|---|---|---|
| ___ | Knife River: Early Village Life on the Plains/#1 | $5.95 | ___ |
| ___ | San Antonio Missions: Spanish Influence in Texas/#2 | $5.95 | ___ |
| ___ | When Rice Was King/#3 | $5.95 | ___ |
| ___ | Log Cabins in America: The Finnish Experience/#4 | $5.95 | ___ |
| ___ | Run for Your Lives! The Johnstown Flood of 1889/#5 | $5.95 | ___ |
| ___ | Roadside Attractions/#6 | $5.95 | ___ |
| ___ | Attu: North American Battleground of World War II/#7 | $5.95 | ___ |
| ___ | Californio to American: A Study in Cultural Change/#8 | $5.95 | ___ |
| ___ | The Old Courthouse in St. Louis: Yesterday & Today/#9 | $5.95 | ___ |
| ___ | Building of the C & O Canal/#10 | $5.95 | ___ |
| ___ | Andersonville: Prisoner of War Camp/#11 | $5.95 | ___ |
| ___ | The Battle of First Manassas /#12 | $5.95 | ___ |
| ___ | Camp Hoover: Presidential Retreat/#13 | $5.95 | ___ |
| ___ | Woodrow Wilson: Prophet of Peace/#14 | $5.95 | ___ |
| ___ | William Howard Taft's Boyhood Home/#15 | $5.95 | ___ |
| ___ | Life on an Island: Early Settlers Off the Rock-Bound Coast of Maine/#16 | $5.95 | ___ |
| ___ | Castolon: A Meeting Place of Two Cultures/#17 | $5.95 | ___ |
| ___ | Remembering Pearl Harbor: The USS Arizona Memorial/#18 | $5.95 | ___ |
| ___ | Decatur House: A Home of the Rich and Powerful/#19 | $5.95 | ___ |
| ___ | The Vieux Carré: A Creole Neighborhood in New Orleans/#20 | $5.95 | ___ |
| ___ | Building America's Industrial Revolution: The Boott Cotton Mills of Lowell, Massachusetts/#21 | $5.95 | ___ |
| ___ | Weir Farm: Home of an American Impressionist/#22 | $5.95 | ___ |

Subtotal ___
Less 10% National Trust member discount(see below) ___
Sales tax (see below) ___
Shipping & handling (see below) ___
Introductory individual National Trust membership ($15 ) ___
**TOTAL** ___

PAYMENT METHOD:
❒ Check or Money Order (payable to The Preservation Press)
❒ Credit Card (check one)
❒ Visa ❒MasterCard ❒ American Express

Signature_____
Account No._____
Exp. Date_____ Daytime Phone No._____

SHIP TO:
Name_____
Address_____
_____
City_____State_____Zip_____

To order with Visa, MasterCard, or American Express, call toll-free (800) 766-6847; 9am - 5pm, Monday - Friday, E.S.T., OR complete this order form and mail to:

The Preservation Press
National Trust for Historic Preservation
1785 Massachusetts Avenue, N.W.
Washington, D.C. 20036

Credit card orders can be faxed 24 hours a day to (202) 673-4172.

SHIPPING & HANDLING:
Please add $3 for the first lesson plan and $1 for each additional up to a maximum of $10 per order. All orders are shipped via UPS or RPS.
Allow 2-4 weeks for delivery.

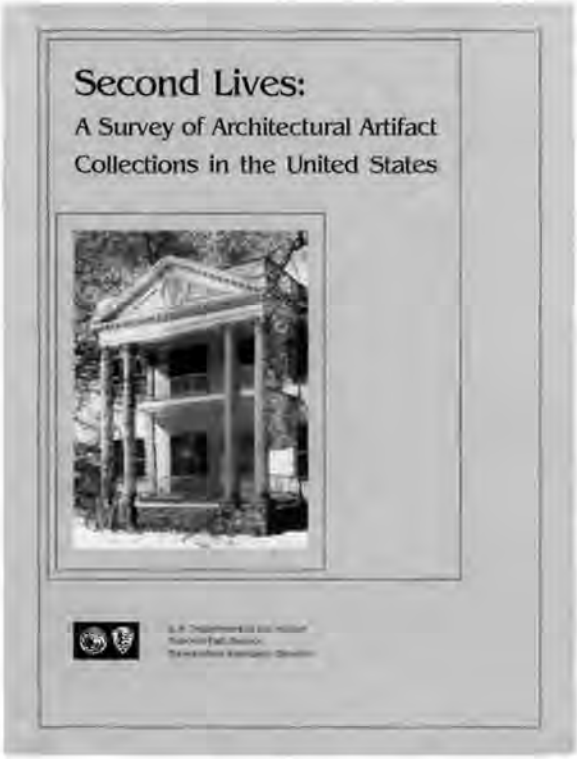
SALES TAX:
Residents of CA, CO, DC, IL, IA, LA, MD, MA, NY, PA, SC, TX, and VA, please add appropriate sales tax or include tax-exempt certificate.

MEMBER DISCOUNTS:
National Trust for Historic Preservation members receive a 10% discount. Membership number must be included.
Membership No._____
Join now and receive your 10% discount starting with this order.

THANK YOU!

*Preservation Brief 36: Protecting Cultural Landscapes: Planning, Treatment, and Management of Historic Landscapes*, by Charles A. Birnbaum, ASLA; $1.50; Stock Number: 024-005-01143-9.

*Second Lives: A Survey of Architectural Artifact Collections in the United States*, compiled by Emogene A. Bevitt, 112 pp; $4.75; Stock Number 024-005-01145-5. This survey provides information on 170 collections of architectural fragments removed from historic structures. Information about collections is organized by state and




then indexed by category of structural or building element. Since most of these objects are in storage, appointments must be made in advance to view the collections. This survey provides critical addresses, contact persons, and telephone numbers.

The above publications may be ordered from Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954.

# NATIONAL CENTER

Center staff currently includes executive director John Robbins, training coordinator Fran Gale, and information management specialist Mary Carroll. In January, two conservation scientists joined the National Park Service and the Center: Mark Gilberg and Mary Striegel. Dr. Gilberg comes to the Center with experience as a private conservator and as a scientist with the Australian Museum and the Canadian Conservation Institute. Dr. Striegel comes to the Center from a distinguished career at the Getty Conservation Institute.

## *1995 Preservation and Technology Grants*

As a reminder to those who already may have seen the announcement of the Center's grants program, instructions for preparing and submitting grant applications are available now. In fiscal year 1995, the Center will award $900,000 for innovative research and training projects in historic architecture, archeology, historic landscapes, materials conservation, and history or interpretation. Applications must be postmarked by April 1, 1995; grants will be awarded by September 30, 1995. For more information, contact Ellen Kish by telephone (318-357-6464), fax (318-357-6421) or by mail (NCPTT, NSU Box 5682, Natchitoches, LA 71497).

## *Internet Developments*

Developing the Center Gopher is underway and the gopher soon will be accessible to the preservation community and the public on the Internet. Planned services include centralized access to other preservation-related gopher sites such as the Southeastern Archaeological Gopher, ICOMOS Gopher and the National Archives Gopher, databases such as NADB and NRHP, and FTP sites. Information about the Center's grants and training programs as well as National Parks and their cultural resources also will be available. The Center is placing Preservation Briefs and other NPS publications online via the gopher and hopes to host a preservation listserv discussion forum. For more information about the Center's gopher and access to the gopher contact Mary Carroll by email (mcarroll@alpha.nsula.edu).

## *Training*

During 1995 the Center will be developing training courses and workshops on a variety of topics for the general public and for preservation practitioners. For the general public, our goal is to increase awareness and sensitivity to preservation issues. The Center also will develop continuing education courses for practitioners engaged in a variety of activities.

The Center began 1995 by hosting two courses that were organized with the Archeological Assistance Division and the Division of Continuing Education at University of Nevada at Reno. The first, Archeology for Managers, was scheduled for February 13-17, in Natchitoches. This course is designed for federal, state, and local managers with little or no background in archeology and whose responsibilities include archeological resources. Archeology for Managers familiarizes participants with archeology and archeological resources so problems can be identified early and effective solutions selected. Field work for this course was at sites in the Cane River-Creole National Historical Park and Heritage Area.

A second course is Native American Graves Protection and Repatriation Act: Implications

and Practical Application (NAGPRA), is scheduled for March 16-18 in Natchitoches. This course focuses on NAGPRA legislation and the questions surrounding the ownership of Native American burials and cultural artifacts. The NAGPRA course is designed to help those affected by the law comply in a timely and meaningful manner.

Also scheduled for 1995 are two workshops that the Center has undertaken in conjunction with the Social Sciences Department at Northwestern State University. The first workshop is part of a multi-phase research project on the Cane River heritage area. The workshop is scheduled for June in Natchitoches and will address researching the history and cultural resources of a heritage area. Conducting oral history interviews will be a particular focus of this 5-day workshop. The Cane River heritage area will be used as a case study for the workshop which should attract a national audience. A second workshop is a 3-day session for archeologists and soil scientists on soil horizons and strata in mound fill. The workshop will promote cooperation between the two disciplines in collecting data from endangered mound sites in Louisiana, Arkansas, and Mississippi.

In the planning stages are courses on other timely topics including rural preservation for communities in the Lower Mississippi Delta region and lead-based paint abatement in low income housing in historic districts. For information on all of the Center's training activities, contact Fran Gale at 318-357-6464 or by e-mail (gale@alpha.nsula.edu).

—Mary Carroll

# BULLETIN BOARD

### Guide to Hostels Available

The 1995 edition of "Hostelling North America: The Official Guide to Hostels in Canada and the United States" provides information on 225 hostels in 36 states, Washington, DC, and 11 Canadian provinces. Included are suggestions on what to see and do at cultural, historical, and recreational attractions, such as historic neighborhood walking tours. For more information, contact Toby B. Pyle, 733 15th Street, NW, #840, Washington, DC 20005; phone: 202-783-6161; fax: 202-783-6171;
email: Tpyle@attmail.com.

### APTI Conference

The Association for Preservation Technology International Annual Conference 1995 will be held in Washington, DC, from October 29 to November 5, 1995. The sessions offer an insider's view of national preservation policy, its policymakers, and how the "rules of the preservation game" affect rehabilitation projects across the country. Field sessions will include world-class landmarks undergoing or recently having completed rehabilitation; these tours are not available to the general public. Papers on the latest technical findings and preservation practices will be presented, as will sessions on international preservation. For more information, write APTI 1995, P.O. Box 16236, Alexandria, VA 22302-9998.

### Museums Exhibition and Symposium

A World Heritage and Museums (WH&M) Exhibition and Symposium will be held in London, England from May 2-5, 1995. This major new international event includes the fields of museum and gallery design, planning and management; the presentation and interpretation of historic and natural sites; and visitor management in vulnerable heritage environments. The theme of the first WH&M will be "Towards the Millennium." In many countries, major new projects are being planned for the years 2000 and 2001. U.S. exhibitors are invited to display and sell products and services such as conservation technology, museum hardware; management and marketing services; and interpretation, design and architectural skills.

For more information, contact The Museums & Heritage Show Ltd., The Town House, Leigh, Worcester, WR6 5LA, England.

### Virginia Preservation Conference

The Tenth Annual Virginia Preservation Conference will be held April 5-7, 1995, in Hampton Roads. The theme is "Preservation and Community: Building Bridges to New Constituencies." For more information, call 703-886-4362.

### Pathways to American Culture—A Conference

The Institute for the History of Technology and Industrial Archaeology at West Virginia University is sponsoring a two-day conference on topics such as transportation and community, the 19th century internal improvements movement, Indian trails, and river channels and ending with a panel discussion on the use of history by national parks, heritage corridors, and projects documenting historic engineering structures. Titled "Pathways to American Culture: A Conference on Transportation and Settlement Patterns in the United States," the event will be held in Wheeling, West Virginia, terminus of the Baltimore and Ohio Railroad and the Cumberland Road, and the site of such historic structures as the Ellet-Roebling suspension bridge.

For more information, contact Michal McMahon, IHTIA,

West Virginia University, 1535 Mileground, Morgantown, WV 26506-6305; phone: 304-293-2421, ext. 5242; or E-Mail: MMCMAHO@WVNVM.WVNET.EDU.

### NPS Receives Award of Merit from the Society for Historical Archaeology

The National Park Service received the Society for Historical Archaeology's Award of Merit at its 28th Annual Meeting held on January 5, 1995, in Washington, DC. The society's prestigious Award of Merit was presented "for providing a new discipline its first home and for an unbroken tradition of supporting national historical archeology." The award was presented by the Society's incoming president, Dr. Elizabeth J. Reitz. Outgoing president Dr. Robert L. Schuyler, in recounting the Service's contributions to American historical archeology, stated that "Between 1935 and 1960 the National Park Service, more than any other institution, recognized, encouraged, and provided a foundation for a scholastic fledgling—American Historical Archaeology. This support did not disappear in 1960 but expanded and continued powerfully to the present. A 1995 examination of the internal structure of the NPS will find historical archaeology well represented at all levels.

"The National Park Service gave historical archaeology its first major institutional foundation, its first national recognition, it gave the Society for Historical Archaeology its first President, and many other officers, including the current Secretary-Treasurer. The SHA now honors the National Park Service with a 1995 Award of Merit."

NPS Chief Anthropologist, Douglas H. Scovill, accepted the award for the Service.

### Section 106 Courses

"Introduction to Federal Projects and Historic Preservation Law" will be offered in several cities on different dates during 1995. The three-day course, which helps attendees understand how the National Historic Preservation Act protects historic properties, is jointly sponsored by the Advisory Council on Historic Preservation and the GSA Interagency Training Center. To receive a schedule or for registration information, contact GSA Interagency Training Center, P.O. Box 15608, Arlington, VA 22215-0608; phone: 703-603-3216; fax: 703-603-3239.

### Museum Conservation Course

Indiana University's Division of Continuing Studies, Art Museum and Lilly Library will sponsor a week-long course on museum conservation, "Preventive Conservation." Scheduled for April 30-May 5, 1995, the course will give participants a basic introduction to preventive conservation for collections on display, in storage, and in transit.

For more information, contact Jane Clay, Division of Continuing Studies, 204 Owen Hall, Indiana University, Bloomington, IN 47405-5201; phone: 812-855-6329; fax: 812-855-8997; internet: JCLAY@INDIANA.EDU.

### Parks Canada Presentation Workshop

Parks Canada is hosting a workshop on the presentation of cultural heritage from March 27-29, 1995. It will feature talks by presentation and interpretation experts, as well as practical group sessions, to determine the future of presentation, interpretation and outreach at Parks Canada. For more information, contact Andre Gousse, Parks Canada, Heritage Presentation and Public Education Branch, 2630 Sheffield Road, Ottawa, Ontario K1A 0M5; phone: 613-993-4083; fax: 613-990-6627; email: GOUSSEA@NCR.DOTS.DOE.CA.

### Charles E. Peterson Prize

The Historic American Buildings Survey (HABS) of the National Park Service and The Athenaeum of Philadelphia announce the 1995 Charles E. Peterson Prize, awarded for the best set of measured drawings prepared to HABS standards and donated to HABS by students. The Charles E. Peterson Prize is intended to increase awareness and knowledge of historic buildings throughout the United States while adding to the HABS collection of measured drawings. This prize honors Charles E. Peterson, founder of the HABS program. Acceptable entries will be transmitted to the permanent HABS collection at the Library of Congress. This is the 13th year the Charles E. Peterson Prize has been offered.

To obtain an entry form or for more information, write to Brian L. Cary, Charles E. Peterson Prize, Historic American Buildings Survey, National Park Service, P.O. Box 37127, Washington, DC 20013-7127.

### Alaska Conference

Historic Ketchikan will host the Alaska Heritage Development Conference with support from the National Trust for Historic Preservation, the State Historic Preservation Office, the University of Alaska, and the Alaska Visitors Association. The sessions will focus on the economic impact of historic preservation and heritage tourism. This regional conference, to be held May 4-6, 1995, in Ketchikan, Alaska, will bring together individuals and organizations from Alaska, Oregon, Washington, and Idaho to focus on opportunities for economic development and promotion of our rich historic resources. Session highlights cover Economics of Historic Restoration and Heritage Development, Economic Development Partnerships, and Heritage Tourism. Invited speakers include Henry Cisneros, Secretary of the

Department of Housing and Urban Development, Richard Moe, President of the National Trust for Historic Preservation; and Ted Stevens, Alaska Senator. For more information, call Historic Ketchikan at 907-225-5515.

## *Call for Papers*

**The American Society for Ethnohistory** will hold its annual Meeting in Kalamazoo, Michigan, from November 2-5, 1995.

Papers, organized sessions, special events, and speakers that treat any world area are encouraged. Abstracts of 50-100 words on appropriate submission forms and preregistration fees of $45 (non-members), $35 (members), and $15 (students/retired) are due by June 2, 1995. Write for submission forms and return to ASE 1995 Meeting Chair, Dr. Donald L. Fixico, Department of History, Western Michigan University, Kalamazoo, MI 49008-5020; phone: 616-387-4629; fax: 616-387-3999.

### Timberframing Workshops

Workshops in Timberframing are offered in 1995 by Upper Loft Design, Inc. For a brochure and list of dates, contact Nikki or Jill at 706-782-5246, fax: 706-782-6840, or 1-800-242-7474 (SE only), Upper Loft Design, Inc., Route 1, Box 2901, Lakemont, GA 30552.

### Council on America's Military Past (CAMP) Meets

CAMP, the country's leading national organization dedicated to the twin objectives of military history and historic preservation, will hold its 29th annual military history conference April 19-22, 1995, in Savannah, GA. The council will hear papers on historic subjects ranging from pre-Revolution to the Cold War, and will visit various military history sites, forts, and battlefields.

The annual military history conference is one of several projects of CAMP, founded in 1966 as a tax-exempt educational organization. It also publishes a monthly tabloid newspaper, Headquarters Helliogram, and Periodical, a periodic scholarly journal. CAMP becomes regularly involved in military history preservation projects and history throughout the country.

For more information, write to CAMP, P.O. Box 1151, Fort Myer, VA 22211.

### AmeriCorps Environmental and Cultural Resource Projects

One of the new federal environmental programs in the Corporation for National Service is the AmeriCorps*National Civilian Community Corps (NCCC). With roots in the CCC of the 1930s, AmeriCorps is the new domestic Peace Corps where thousands of young people get things done through service in exchange for help financing their higher education or repaying their student loans. The program should be of great interest to the professional environmental and cultural resources community.

The AmeriCorps National Civilian Community Corps is a residential national service program and includes four residential campuses located at downsizing or closed military facilities (Aberdeen, MD, Charlestown, SC, Denver, CO, and San Diego, CA). Each campus is divided into teams of 10-12 corps members, each with a team leader. The teams conduct remote project programming for up to six weeks and come provided with a van and basic tools. Project length ranges from a single day to nine months. The teams have worked on a wide range of ecosystem and cultural restoration projects including restoration of the San Diego Presidio, restoration of CCC structures, bio-engineering of coastal shoreline and stream banks, slope stabilization, and rock wall construction. Federal agencies such as USDA and Interior have acted as sponsors, on-site supervisors, and have provided technical assistance on several projects.

AmeriCorps is particularly interested in developing projects that have obvious immediate local community involvement and provide the basis for environmentally sound economic development.

The new Corporation for National and Community Service was formed in conjunction with the White House Office of National Service, built upon the foundation of the former Commission on National and Community Service and ACTION, and incorporates the new Civilian Community Corps.

For more information on how to develop an AmeriCorps*NCCC project, contact Dr. David Silverberg, Associate Director for Environmental Programs, Corporation for National Service, AmeriCorps*NCCC, 1201 New York Avenue, Stop 9405, Washington, DC 20525; phone: 202-606-5000, ext. 120; fax: 202-565-2791; internet: silverberg@igc.apc.org.

### Safeguarding Our Cultural Heritage

In December 1994, a "National Summit on Emergency Response: Safeguarding Our Cultural Heritage" was held in Washington to discuss the urgent needs created by natural disasters and other emergencies to museums, libraries, archives, and historic sites. Sponsored by the Federal Emergency Management Agency (FEMA), the Getty Conservation Institute (GCI), and the National Institute for the Conservation of Cultural Property (NIC), the summit brought together more than 80 representatives of cultural and historic organizations.

FEMA Director James Lee Witt and Richard Krimm, FEMA's associate director for response and recovery, signaled the agency's willingness to work more closely with national organizations to prevent and mitigate loss to significant cultural and historic property.

The agency plans to collaborate with NIC to develop public service announcements which will explain how the public can take preventive measures to protect cultural property against natural disasters. Krimm offered five ways FEMA is willing to collaborate: hosting quarterly meetings with cultural and historic leaders to discuss ways of improving their relationship; adding cultural and historic representatives to postdisaster damage assessment teams; publishing articles and recovery tips by cultural and historic leaders in Recovery Times, a newspaper FEMA distributes to disaster victims; inviting representatives of groups to appear on the television network FEMA sets up after a disaster; and having representatives accept relevant calls on the agency's postdisaster toll-free telephone lines.

The summit members discussed forming a national partnership of cultural and historic agencies that would create an emergency infrastructure to coordinate help to properties endangered or damaged by natural disasters. Among other responsibilities, the partnership could assess damage, provide credibility for private and public funding and serve as a clearinghouse for information on how to protect property and apply for federal relief.

The summit was also cosponsored by the American Institute for the Conservation of Historic & Artistic Works, the National Park Service (NPS), and the National Trust for Historic Preservation (NTHP). NTHP President Richard Moe stated, "Valuable things are at risk, and if they're lost, they're lost forever." NPS Director Roger Kennedy concurred with Moe's assessment. "We are dealing with the containers of community," he said. "In every container, the community manifests itself. These containers are not empty. They are full of ghosts; they are full of angels...We're here to protect them."

The 1990s have been declared the International Decade for Natural Disaster Reduction by the United Nations. It is felt that strong leadership and a coordinated emergency response using recent scientific and technological advances can ensure the protection and preservation of the cultural treasures that enrich our lives and our nation.

**New Master of Arts in Historic Preservation Program**

Goucher College, one of America's leading liberal arts colleges, has introduced the nation's first limited residency Master's in Historic Preservation. Scheduled to begin in August 1995, this new program puts a Master's in Historic Preservation within reach.

The program enables degree candidates to complete much of their coursework at home, it includes a faculty of nationally-known preservation experts, and addresses current issues in preservation. The program's advisory committee consists of representatives from the National Park Service, the National Trust for Historic Preservation, the National Council of Preservation Education, and others.

For more information, call Goucher's Center for Continuing Studies at 1-800-697-4646 or 410-337-6200.

## *Mailing List Update*

Do you want to continue to receive *CRM*? We are updating our mailing list and we need to know if we should retain your address. Please return this form no later than May 31, 1995. If we do not receive your response, we will delete your address. Thank you.

____**Yes**, I want to remain on the *CRM* mailing list.
(Changes to my address are noted on the reverse of this form.)
____**No**, I do not want to receive *CRM*.

For our further information:
Do you have access to Internet? ____Yes ____No

Comments:_____

_____

Mail to:

*CRM* Production Manager (400)
National Park Service
P.O. Box 37127
Washington, DC 20013-7127

# Let us help.

**NPF awards grants to support the National Parks.**

**In 1994, more than $2.3 million in grants were awarded for:**

- **education and outreach**
- **visitor services and interpretation**
- **volunteer activities, and**
- **NPS employee programs.**

**Grants are awarded three times a year. Deadlines are Feb. 15, June 15 and Oct. 15.**

**For guidelines and grant applications, contact**
**National Park Foundation**
**1101 17th St., NW, Suite 1102**
**Washington, DC 20036, 202-785-4500.**

*National Park* FOUNDATION

*the nonprofit partner of the National Park Service, chartered by Congress to preserve, protect and enhance the National Parks.*


## US/ICOMOS Names New Executive Director

Effective the end of January 1995, Terry B. Morton, Hon. AIA, retired as President of US/ICOMOS after more than 14 years as Chairman and then President of the organization. During her tenure, Mrs. Morton transformed US/ICOMOS from a small group to a respected preservation organization with hundreds of members and supporters.

In deference to Ms. Morton's accomplishments, the title of President is being retired also, and the new CEO will assume the title of Executive Director. Chosen to fill this position is Gustavo F. Araoz, AIA, of Bethesda, Maryland.

For more than 20 years, Mr. Araoz has dedicated his professional life to the conservation of the built environment. An architectural graduate of the Catholic University of America, Mr. Araoz completed graduate studies at Georgetown University and the Instituto Nacional de Antropologia e Historia in Mexico. He first became a member of US/ICOMOS in 1974 and maintains close relations with the other ICOMOS National Committees in this hemisphere.

Mr. Araoz is a member of the Historic Resources Committee of the American Institute of Architects and a past-chair of its DC Chapter Committee. He has served as Treasurer of US/ICOMOS and the DC Chapter of the Association for Preservation Technology. He is a member of the National Trust for Historic Preservation, APOYO (Asociacion para la Conservacion del Patrimonio Cultural de las Americas) and is on the Board of Advisors of the Cuban National Heritage Trust for Historic Preservation. Mr. Araoz also sits on the Architectural Conservation Advisory Committee of the Getty Grant Program.

In response to the US/ICOMOS Strategic Planning process last year in which he was an active participant, Mr. Araoz expressed his determination to broaden the international professional involvement of US/ICOMOS members and of the entire U.S. preservation community by creating new programs and activities that respond to the member's needs. He will strive to establish stronger partnerships for international activities with federal, state, and local preservation agencies, private preservation organizations and other groups whose mission is closely related to that of US/ICOMOS.


CRM

U.S. Department of the Interior
National Park Service
Cultural Resources
P.O. Box 37127
Washington, DC 20013-7127

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE $300

VOLUME 18 • NO. 2
Cultural Resources
Washington, DC

FIRST CLASS MAIL
Postage & Fees Paid
U. S. Department of the Interior
G-83