

# NCPTT NOTES

National Center for Preservation Technology and Training

UNITED STATES DEPARTMENT OF THE INTERIOR • NATIONAL PARK SERVICE



## INTERNET ARCHAEOLOGY <intarch.ac.uk>

**T**raditional print publication has become increasingly limiting for archeology due to small and expensive print runs, high distribution costs, declining library subscriptions and small readership. As a consequence, it is necessary to be more selective about publication media. Some publishers choose microfiche as a method of distributing supporting information and specialists' reports, but microfiche has limitations and has proven consistently unpopular. Archeological fieldwork can generate huge quantities of data and much of this data is now captured digitally. Perhaps electronic data distribution can overcome the limitations of other technologies.

Archeological reports are well-suited to multimedia publication which allows access to color images and large data sets and permits several possible journeys through the hypertext.

In the mid-1990s, a consortium of archeological organizations, including the Council for British Archaeology, the British Academy and several UK university archeology departments proposed developing an electronic journal for archeology.<sup>1</sup> A successful bid was made to the

**Archeological reports are well-suited to multimedia publication which allows access to color images and large data sets and permits several possible journeys through the hypertext.**

UK's Electronic Libraries program, "eLib," of the Joint Information Systems Committee, and *Internet Archaeology*, based at the University of York, was established in August 1995. Funding from eLib continues for six years on a tapering basis — initially allowing free access to the journal for all users, with sub-

scription charges eventually introduced to ensure continuing revenue.

*Internet Archaeology* aims to become one of the world's foremost archeological journals. The journal presents the results of archeological research in an interesting manner, and at the same time allows readers to explore the data upon which research conclusions are based. *Internet Archaeology* covers all elements of world archeology, is fully refereed and, with no print equivalent, full functionality of the electronic environment can be utilized.

Five issues of the journal have been published. Varied content includes contributions on selected artifact groups and environmental data, and discussions of developments in archeological methodology. As well as text and color graphics, contributions include searchable

databases, virtual reality models and interactive maps.

**Academic concerns**

*Internet Archaeology* seeks to respond to serious concerns that affect the academic community's acceptance of online journals.

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# NCPTT NOTES

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## Internet Archaeology

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The first concern is quality. Because of the uncontrolled way the Internet has developed, there is genuine concern that much of the information available is not reputable, and that locating and distinguishing resources of value are difficult. *Internet Archaeology* has followed traditional academic publishing models by adopting peer review of all articles, both for content and for Web-based realization. *Internet Archaeology* also has adopted a traditional citation style modified with the substitution of URL for publisher and place of publication.

The second concern is long-term access. Much Web-disseminated material is transitory and ephemeral. Links may disappear from one week to the next, underscoring the fragility of digital data. Authors may be reluctant to offer substantial research articles for sole publication in a journal that may not be accessible in one hundred years — or even ten years. Electronic publications need to be archived so that their content is protected from change whether by accident or design by anyone, including the author.

*Internet Archaeology* has adopted the editorial policy that the content of a paper will not be changed once published even if errors are identified, although further editions are possible through the use of version control. In addition, links to other Internet sites are allowed only in the bibliography sections of papers in or-

der to minimize broken links. Finally, it has also sought to ensure the long-term preservation of back issues by depositing them with the Archaeology Data Service.<sup>2</sup>

The third concern is academic respectability and tenure. Promotion in higher education depends on publication, and some academics worry that electronic publications might not count as "real" publications. Many universities in the US now consider electronic publication to be an appropriate means of scholarly communication and will evaluate electronic publications on the same basis as paper publications for purposes of appointment and promotion. Similarly in the UK, the 1996 Research Assessment Exercise was the first in which electronic publications were given the same weight as their paper equivalents.

### First impressions

*Internet Archaeology's* first issue was published on the Web in September 1996 and each subsequent issue covers a six-month period. Papers are published when the refereeing process and consequent revisions are completed and an issue is "closed" at the end of the six-month period.

Access to the journal's papers has been controlled by the use of a registration system. By the end of January 1999, over

13,000 individuals were registered. This information augments data that is recorded automatically by the Web server software each time a "page" is requested from the server. Combining the two data sets, the *Internet Archaeology* audience can be characterized and questions can be answered about the way the journal is used. A detailed analysis of the first issue's usage was conducted in 1997 and published in *Internet Archaeology's* third issue.<sup>3</sup> Further evaluation work is now underway to gauge reactions to the journal from both users and contributors to guide the journal's future development.

— Mike Heyworth,  
Julian Richards,  
Alan Vince and  
Judith Winters

*For more information about Internet Archaeology, contact Dr. Mike Heyworth, Bowes Morrell House, 111 Walmgate, York YO1 9WA, United Kingdom; telephone +(44) 1904 671417, facsimile +(44) 1904 671384, e-mail <m.heyworth@dial.pipex.com>.*

*Drs. Heyworth and Richards are co-directors of Internet Archaeology. Dr. Vince is the managing editor and Ms. Winters is assistant editor of Internet Archaeology.*

1. Heyworth, M., S. Ross and J. Richards 1996. "Internet archaeology: an international electronic journal for archaeology," in *Interfacing the past: computer applications and quantitative methods in archaeology CAA95*, H. Kamermans and K. Fennema (editors), 517-23. *Analecta Praehistorica Leidensia series, no. 28*. Leiden: University of Leiden.
2. <<http://ads.ahds.ac.uk>> See *NCPTT Notes* 25, page 3 for a discussion of digital data preservation.
3. Vince, A. 1997. "Publishing archaeology on the Web: who reads this stuff anyway?," *Internet Archaeology* 3, <[http://intarch.ac.uk/journal/issue3/vince\\_index.html](http://intarch.ac.uk/journal/issue3/vince_index.html)>.



## ePublishing the Past

[www.sscnet.ucla.edu/ioa/labs/digital/imprint/imprint.html](http://www.sscnet.ucla.edu/ioa/labs/digital/imprint/imprint.html)

The importance of publishing research results is recognized by every scientific discipline. But for archeologists, there is the added responsibility of making primary field data — the innumerable photographs, maps, drawings, and notebooks that make up the archeological excavation record — available to the archeological community. The inaccessibility of most of archeology's primary data is a significant problem in a discipline where destruction of the data's context is inherent in the archeological method. Contextual evidence can be encountered only once in its pristine state; if not published or deposited in an archive, contextual evidence is lost forever.

In the past, publishing all field data has been nearly impossible. Publishing an entire collection of maps, field drawings, photographs or datasets from a multi-year project almost always is impractical and expensive. With new technologies such as desktop computing and the World Wide Web, sharing archeological data through digital publications is possible and practical.

While many archeologists have embraced personal com-

puters for data processing and modeling, using digital media to present research findings to both professional colleagues and the public remains largely unexplored. University of California-Los Angeles' Institute of Archaeology has taken up the challenge of encouraging archeologists to adopt digital publishing by establishing the Digital Archaeology Lab, a state-of-the-art production facility for digital media. The lab's charge is to translate the research of the institute's faculty and staff into various digital media including CD-ROMs, K-12 curricular materials, Web sites, and professional monographs published in hybrid portable media and Web formats.

The Digital Archaeology Lab's projects investigate the new territory of digital publication of primary field data and make the transition to digital publishing professional, cross-platform, consistent and easy to use. Many archeologists have been exploring this territory and have created very valuable records of their projects. What has not been available in coordinating digital publication efforts is institutional leadership.

With generous funding from the Ahmanson Founda-

tion, the Digital Archaeology Lab has launched a two-year project to help develop standards, prototypes and templates for digital publication of archeological monographs. This project, called "The Digital Imprint," is exploring new approaches for organizing and presenting primary field data. The goal is to preserve more effectively and economically the years of investment and the great quantity of irreplaceable information associated with archeological excavations. The Digital Imprint project recently convened a meeting of the Working Group on Digital Publishing in Archaeology to evaluate the interest of archeologists in digital publication, differences between archives and monographs, and the forms that data could take in a digital monograph. The group also reviewed a Digital Archaeology Lab prototype publication that will serve as a template for future UCLA Institute of Archaeology publications.

Digital monographs will not look like print monographs simply transferred to the com-

puter. New technologies make it possible to visualize — rather than merely describe — archeological data. While archeologists have always made maps and taken photographs, now archeologists can easily and accurately create computer graphics, three-dimensional models, and searchable visual databases storing thousands of maps, photographs and drawings. Digital publication also makes possible the inclusion of video records, audio comments and explanations, animations, virtual reality simulations, and architectural reconstructions. All of these rich forms of information enhance and verify the interpretations and conclusions that comprise the traditional archeological monograph. A more dynamic and complex consideration of archeological data results, and much of the primary data is returned to the archeological community for further study.

— Louise Krasniewicz

*Ms Krasniewicz is the director of the Digital Archaeology Lab at UCLA.*

## Andrew Ferrell Joins NCPTT

Andrew Ferrell has joined NCPTT as Training Associate. Andrew holds a Bachelor of Arts degree in German Language and Linguistics from Louisiana State University, a Master of Arts degree in International Relations from Boston University-Brussels and a Master of Science degree in Architecture/Historic Preservation from Louisiana State University. Andrew's work at NCPTT will focus on the use of new technologies to deliver

training in historic preservation. Additionally, Andrew will help NCPTT develop stronger ties with international organizations that provide training in preservation and conservation.

Prior to joining NCPTT, Andrew worked at Gulf Engineers and Consultants and taught in the Cultural Resource Management Program at Southeastern Louisiana University.

## Conserve O Grams

<[www.cr.nps.gov/csd/publications/conservoogram/conserv.html](http://www.cr.nps.gov/csd/publications/conservoogram/conserv.html)>

**C**onserve O Grams, produced by the National Park Service's Museum Management Program, are short, focused leaflets about caring for museum objects and archival materials. Originally published only in loose-leaf format, these leaflets now are available at the Museum Management Program's Web site.

All existing *Conserve O Grams* have been scanned as pdf files and uploaded to the site. The scanning process creates an exact electronic replica of the publication — an image file — which can be viewed and printed on any computer system, regardless of operating system, where Adobe Acrobat Reader, the pdf viewer, is installed. The viewer can be downloaded free from the Adobe Web site to which a link is provided in the *Conserve O Gram* table of contents. A drawback to the pdf format is that the document is not searchable. Since the file is, in essence, a picture of the printed publication, readers cannot search for keywords or phrases within the text. However, the leaflets are listed by topic on the site for easy access.

New topics are added to *Conserve O Grams* as needed, and out-of-date issues are revised or deleted as semi-annual supplements are issued. In August 1998, the series contained 96 leaflets, all of which are available electronically.

*Conserve O Grams* are

aimed at both experienced and inexperienced museum, historical society, archival and library staff responsible for the care and use of museum and archival collections. The series also may be useful for interested individuals who have fine art, furniture, ceramics and glass, leather, photograph, book and paper collections.

In addition to the new Web version, print versions of *Conserve O Grams* can be ordered through a subscription with the Superintendent of Documents, US Government Printing Office. Use the order form available through the Web site to receive the existing 96 leaflets and the semi-annual updates

for three years.

### Beyond *Conserve O Grams*

The Museum Management Program Web site, <[www.cr.nps.gov/csd](http://www.cr.nps.gov/csd)>, features NPS museum and archival collections from over 300 NPS units throughout the US. These collections document themes, events, movements, regions, ecosystems, and significant individuals and groups that represent the broad diversity of American culture from pre-history to the present.

Currently, the Museum Management Program site includes the *American Visionaries* series featuring Frederick Douglass and Thomas Moran, thematic exhibits such as *Camp Life: Civil War Collections from Gettysburg*, and the *Treasures of the Nation* exhibit which showcases park collections.

Individual park profiles — including summaries of holdings and scope of collection statements — and NPS museum publications are also presented. Links to technical information, activities and events — including conferences, training and volunteer opportunities —, a clearinghouse for the acquisition and deaccession of collections, and pertinent laws and regulations also are available at the Web site.

—Joan Bacharach

—Jessie Johnson

*Within the National Park Service's Museum Management Program, Ms Bacharach is a museum registrar and team coordinator of the Access and Use Team, and Ms Johnson is a conservator and team coordinator of the Preservation and Protection Team.*

## Federal Cultural Heritage Roster

**T**he Federal Emergency Management Agency and the National Task Force on Emergency Response are recruiting conservation and preservation professionals for post-disaster assistance teams and mitigation research.

FEMA is the Federal agency responsible for reducing loss of life and property and protecting our nation's infrastructure from all types of hazards. The National Task Force on Emergency Response is a public-private partnership that provides expert assistance to cultural institutions and the public in times of disaster. The task force is a collaboration among FEMA, The Getty Conservation Institute, and Heritage Preservation, Inc.

In the event of a major disaster, FEMA can "mission-assign" employees from other

Federal agencies to damage assessment and technical assistance teams. FEMA also can contract with private practitioners to assist with mitigation inspection and evaluation projects. Both Federal and private recruits will be selected from a new database: a Federal Cultural Heritage Roster of recruits available for temporary field assignments on short notice.

The Federal Cultural Heritage Roster project is managed by Greenhorne & O'Mara, Inc. To join the Federal Cultural Heritage Roster, request an application from Eric Letvin, Greenhorne & O'Mara, Inc., 9001 Edminston Road, Greenbelt, MD 20770; telephone 301/982-2800 (extension 611), facsimile 301/220-2606, email <[eletvin@G-and-O.com](mailto:eletvin@G-and-O.com)>.

## Evaluating Historic Masonry with the Pendulum Hammer

Virtually all masonry conservation projects involve pointing to repair damaged masonry. In pointing historic structures, conservators strive to match the original appearance and material properties of the original mortar. But selecting an appropriate pointing mortar often involves considerable guesswork, and the application of a pointing mortar with different properties than the original mortar can have disastrous consequences. Mortars with high Portland cement content, for example, are often incompatible with soft historic mortars in terms of strength and water permeability. Stress concentrations that lead to spalling and cracking can result from using a high-strength pointing mortar. Inappropriate pointing mortar can exacerbate rather than repair existing problems.

Masonry conservators long have needed an accurate means of identifying and evaluating masonry mortars *in situ*. Chemical and petrographic tests currently are used to determine mortar composition; although accurate, these procedures are expensive and time-consuming. A pressing need exists for simple, nondestructive techniques for evaluating mortars in place.

A 1997 Preservation Technology and Training Grants research project<sup>1</sup> took signifi-

cant steps toward fulfilling this goal. The project was led by Michael P. Schuller of Atkinson-Noland & Associates, a Boulder, Colorado-based engineering firm, Kevin Rens, assistant professor of civil engineering at the University of Colorado at Denver, and Ann Sullivan of the Rocky Mountain Masonry Institute. The project team sought to develop a methodology for using the Schmidt Type PM pendulum hammer to evaluate and characterize in-place mortars. First employed in Europe, the pendulum hammer is a simple device for testing mortar hardness that can be operated with minimal training.

Testing the pendulum hammer technique involved several steps. First, the project team built eight masonry test piers, each 22 by 14 by 48 inches. A range of common modern and historic mortars of different formulations, two types of brick — a circa 1900 molded brick and a modern extruded brick —, and three grades of sand — coarse, medium and fine — were used to construct the test piers. Researchers tooled concave masonry joints on two faces of each pier and struck joints on the remaining two faces.

Researchers then sub-

jected each type of mortar to standard tests to determine material properties such as compressive strength, water vapor transmission rate and mortar plastic properties. Test results supplied data for accurate evaluation of the pendulum hammer data.

To test the pendulum hammer technique, researchers began by establishing 66 grid points on both the concave and struck joints on each pier. At each point, researchers positioned the pendulum hammer to strike the mortar joint and then took a reading from the hammer scale with the impact head resting on the joint. A

suitable for harder mortar types, used the average of the last five of a series of ten impacts at a single location, resulting in a more accurate overall reading. Based on compiled test results, researchers created a database of pendulum hammer rebound readings for comparison with previously recorded material properties data from standard tests conducted on each mortar type.

Laboratory tests highlighted that several factors affect rebound hardness measurements taken with the pendulum hammer. Researchers found that rebound hardness measurements varied signifi-



*Pendulum hammer in use at Benjamin Latrobe's Basilica of the Assumption, Baltimore, Maryland*

series of ten or more successive rebounds with the hammer were recorded at each point. Tests on each pier took place at approximately 7, 14, 28, 60, 90 and 120 days after construction.

Researchers used two methods to analyze data gathered from the laboratory tests. The first method, suitable for testing soft mortars that might be damaged by a series of impacts, used only the first rebound reading from each location. The alternative method,

cantly among soft mortar types with compressive strength from 0 to 1000 psi, but harder mortars with compressive strength greater than 1000 psi consistently produced hardness measurements within a fairly narrow range. Researchers also found that joint tooling affected measurements taken with the pendulum hammer. Struck joints gave readings up to 40 percent less than concave joints on the same pier. On all eight

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1. See item 34, page 17, of *NCPTT Notes 28* for a description of this PTT Grants project.

## Digital Videographic Imaging Digital Recording, Preservation and Dissemination of Archeological Data

**W**ith funding from the 1997 Preservation Technology and Training Grants program, Drs. James Gibb and Al Luckenbach, archeologists with the "Lost Towns of Anne Arundel" project, are using digital video technology to record, preserve, interpret and disseminate archeological data. The project uses a Sony DCR-VX1000 digital video camera and a Pentium II/233 MHz computer to learn more about two colonial town sites on the western shore of the Chesapeake Bay: London Town, circa 1684, and Providence, circa 1649. Sites and objects found during excavation are being carefully recorded to digital videotape in order to produce high quality images for post-excitation analysis, fieldwork documentation and interpretation. Standard textual descriptions and field drawing measurements normally taken at field sites are not replaced by this technology, but instead are enhanced with a detailed visual record.

Before receiving NCPTT funding, the Anne Arundel County Trust for Preservation, Inc., had collaborated with the London Town Foundation, Inc., to encourage public education and participation in the archeological exploration of early colonial town life in Maryland. After five years of excavation however, images

recorded on standard VHS videotape were not of sufficient quality for post-excitation analysis. Magnetic videotape is subject to image quality degradation upon copying, a phenomenon known as generational loss. Since digitally recorded images can be copied numerous times without loss of image quality, the team felt that this new technology could greatly enhance their work.

In order to advance the analysis of existing data, the first phase of the project encompassed transferring the contents of the VHS videotapes

to digital format. The VHS videotapes were reformatted, catalogued, indexed and archived on CD-ROM disks.

Digital images from excavations were successfully imported into PhotoModeler 3.0 for three-dimensional manipulation. This program allows the computer operator to create three-dimensional wire frame models based on control points in the video images. Accompanying calibration software increases accuracy by accounting for errors in a particular camera model. Practice sessions with a plain cardboard box as the subject made a useful and successful test case for three-dimensional manipulation. However, creating videographic models for manipulating multiple curved or irregular surfaces has proven challenging.

Video data has been re-

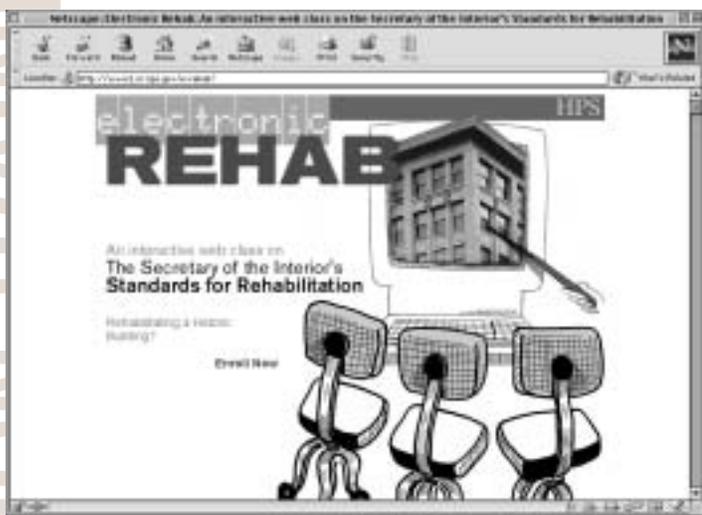
corded on several archeological projects conducted by the "Lost Towns of Anne Arundel" project and incorporated into a digital videographic database. The projects include the Grunwald site, a 17<sup>th</sup> century earthfast structure located in Galesville, Maryland; Hancock's Resolution, a late 18<sup>th</sup> century farm complex continuously occupied until 1962; the Edmondo site, an 18<sup>th</sup> century brick structure associated with the colonial port town of London; the Robert Burle house, a 17<sup>th</sup> century house in the settlement of Providence near present-day Annapolis; and Rumney's Tavern, a 17<sup>th</sup> century earthfast structure located at historic London Town Park in Edgewater, Maryland.

Work at the Burle house and Rumney's Tavern has pro-

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*Three-dimensional images based on drawings of reconstructed objects from Rumney's Tavern, Edgewater, Maryland*



## Electronic Rehab

<[www.2.cr.nps.gov/e-rehab](http://www.2.cr.nps.gov/e-rehab)>

Preservation training can be available to a national audience through distance learning programs, including correspondence courses, television and video programs, and computer-based training. *Electronic Rehab*, an online tutorial, is the National Park Service's first preservation distance learning program. This article describes its development.

Local historic preservation commissions, design boards, Certified Local Governments, and Main Street programs use the Secretary of the Interior's *Standards for Rehabilitation* for making decisions about rehabilitation work on historic buildings. Newcomers to commissions and design boards who will be actively involved in administering and interpreting local guidelines routinely seek training in appropriately applying the Standards.

Prior to developing *Electronic Rehab* for the Web, training on the Standards had been conducted in classroom settings at workshops and conferences. While effective, costs per trainee were high. As a result, the number of people

who could be trained was shrinking due to cutbacks in Federal, state and local funding. Using the World Wide Web provides substantially greater access to training at lower cost — helping to preserve resources in even the most remote areas of the United States by providing electronic access to training and resource materials.

### Methodology

*Electronic Rehab* uses a friendly approach to teach the principles of the *Standards for Rehabilitation*. Although *Electronic Rehab* begins with a textbook definition of rehabilitation and general historic preservation goals, it quickly turns to the more practical steps to take before starting

any project — documentation, evaluation and site assessment. Next, the meaning of each of the *Standards for Rehabilitation* is explored and linked to examples of work that met or failed to meet the Standards.

After sufficient preparation, users are invited to take a two-part quiz on what they have learned by applying the Standards to proposed rehabilitation work on commercial and residential buildings. First, users study the building's historical background, especially changes over time. Next, they evaluate a series of work options and, in each instance, select the approach that meets the *Standards for Rehabilitation*.

Throughout the quiz, there are no scores and the exercise is congenial, rather than judgmental. Immediate feedback follows each answer. If the approach selected fails to meet the Standards, the user simply returns to the question and tries again.

At the end of the Web class, congratulations is given for finishing the program, and users get to see what each building looks like after it has been successfully rehabilitated following approaches that meet the Standards.

### Results

Developing and implementing *Electronic Rehab* began a year ago, and *Electronic Rehab* was officially posted on January 15 as a feature on the National Park Service's *Links to the Past* home page, where it has the potential to receive 10,000 visitors a day.

The Web course is marketed with a postcard notice to State Historic Preservation Offices, Certified Local Gov-

ernments and others, with the message —

*"Electronic Rehab*, the National Park Service's very first historic preservation distance learning program, was designed to introduce the Secretary of the Interior's *Standards for Rehabilitation* to anyone who is thinking about rehabilitating a historic building — property owners, architects, engineers, contractors, developers, members of historic district commissions, and maintenance personnel and other caretakers of historic buildings... *Electronic Rehab* is both informative and fun. Going back to school has never been so easy!"

*Electronic Rehab* was funded, in part, by the National Park Service's 1997 Cultural Resource Training Initiative. It was developed by Heritage Preservation Services in the National Park Service's National Center for Cultural Resources Stewardship and Partnerships, in partnership with Goucher College Center for Graduate and Continuing Studies. The development team included Kay Weeks and Anne Grimmer of Heritage Preservation Services and Richard Wagner and Larry Bielawski of Goucher College.

— Kay Weeks

*Ms Weeks is a technical writer and editor for Heritage Preservation Services. Ms Weeks has authored and produced Preservation Briefs, standards and guidelines, interpretive bulletins, videos and children's books.*

## Evaluating Historic Masonry

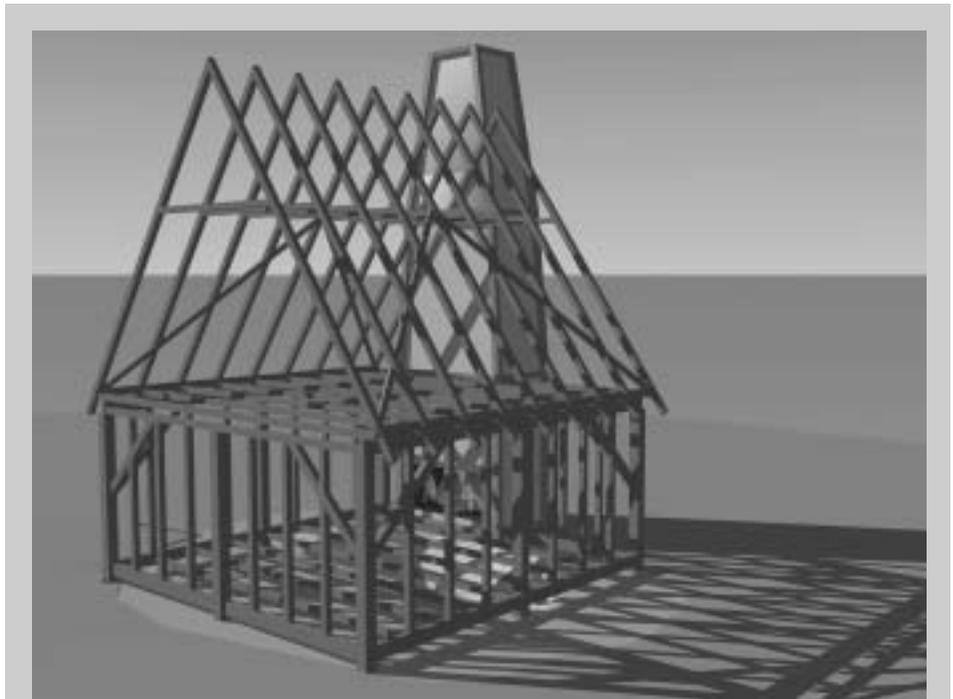
Continued from page 5

test piers, average hardness measurements from struck joints were 10 percent less than on concave joints. Readings from struck joints also showed greater variations than readings from concave joints.

With laboratory tests completed, the project team took the pendulum hammer into the field to obtain readings from existing masonry structures. Researchers took mortar hardness readings at eight late nineteenth-century buildings in the Denver, Colorado area and six historic structures in other states. The field tests showed the pendulum hammer to be generally effective in identifying mortar variations throughout a structure. Researchers found it difficult, however, to obtain accurate readings in some instances, such as rough-faced stone masonry and soft, deteriorated mortar.

The combined results of the laboratory and field tests demonstrate that the pendulum hammer is an excellent tool for undertaking rapid, nondestructive evaluations of in-place mortars. Based on the test results, the project team developed two methods of testing rebound hardness. For hard mortars, the team recommends that readings from a series of ten impacts be taken at each of nine locations in an area of masonry. Measured rebound hardness at each of these nine locations is the average of the last five of each series of ten impacts; overall rebound hardness for the entire area of masonry is the average of the measured rebound hardness at each of the nine locations. For soft mortars, the researchers recommend averaging readings from a single impact at each of twenty-six locations in an area of masonry to quantify an overall mortar rebound hardness. The project team has prepared and submitted detailed summaries of these two testing methods to the American Society for Testing and Materials for adoption as a standard test method.

Overall, the project confirms that conservators will find the pendulum hammer useful for evaluating mortar characteristics. Testing methods developed by the



*Digital reconstruction of Rumney's Tavern, Edgewater, Maryland*

## Digital Videographic Imaging:

Continued from page 6

duced the largest collection of three-dimensional images archived so far. Sufficient data has been collected to allow reconstruction of both the Burle house and the tavern using computer-generated graphics. Both appear to have been gable-end, timber-frame structures. Artifacts found in the cellar of the tavern include drinking glasses and decorated bowls and plates.

A demonstration of digital imaging and three-dimensional modeling was presented at the Vernacular Architecture Forum in May 1998 and at the January 1999 annual meeting of the Society for Historical Archaeology. The

project will be especially useful, for example, in evaluating mortar in buildings partially damaged by fire or water. The testing methods also are sufficiently accurate to determine whether the hardness of new mortar matches the original mortar of a structure. This work has provided a

archival collection of video and still images is growing and serves as a library where staff can retrieve images for report production and 'clips' for television and exhibit videos. Drs. Gibb and Luckenbach will collaborate with staff at the London Town Foundation's museum to produce a computer videographic exhibit that will be viewed by approximately 50,000 visitors over the next five years.

This project allows NCPTT's Materials Research Program to investigate digital imaging use within the conservation and preservation community. It utilizes technology that may eventually be used with computer-aided drawing for documentation and analysis of cultural resource decay.

simple and effective means of conducting a basic analytical task in masonry conservation.

## Further Reading

*Brief comments on some recent additions to NCPTT's library and Web resources*

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### Historic Resource Surveys and the Internet

*University of Houston Center for Historic Architecture*  
*Web site <www.arch.uh.edu/survey> (1999)*

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**I**nformation for experienced practitioners is best packaged as tools — straight-forward and ready to use. A good candidate as a preservationists' tool is this online guide to preparing historic resource surveys, which grew from the Center for Historic Architecture's experiences in surveying Texas towns under the direction of Barry Moore, FAIA. The guide was made possible, in part, with special funding by the National Park Service through its Cultural Resource Training Initiative and through partnership with NCPTT.

This tool would be especially useful in organizing a community to survey its resources. The online resource provides a framework for an undertaking that could be shared among participants, and centrally coordinated and edited by a preservation professional. Anyone who has been involved in a large-scale survey project such as *Save Out-*

*door Sculpture!* will recognize the potential of online survey techniques. Rather than providing a fixed methodology, this site provides guidance for designing and conducting a survey — recognizing that surveys will include both routine and specialized information, and that survey formats must respond to the resources under study.

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### Saving Our Architectural Heritage: The Conservation of Historic Stone Structures

*Edited by Norbert S. Baer and Rolf Snethlage*  
*Hardcover book, illustrated, 425 pp. West Sussex, UK: John Wiley and Sons, Ltd. (1997)*

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**S**aving Our Architectural Heritage is a volume of technical papers and reports from the 79<sup>th</sup> Dalhem Workshop, held in Berlin, March 3-8, 1996.

Dalhlem workshops initiate and facilitate discussion between interdisciplinary groups of scientists. The goals of these workshops included identifying critical gaps in our knowledge of deterioration mechanisms for treated and untreated stone, suggesting innovative approaches to the

study of deterioration mechanisms for treated and untreated stone, and addressing the socio-economic factors that determine preservation actions.

Through papers presented at the workshop and discussion groups, participants addressed such questions as the state of our knowledge of the mechanisms of damage, our estimates of rates of degradation, diagnosing the condition of stone monuments, suitable treatment programs, and responsible and effective use of treatments.

*Saving Our Architectural Heritage* presents systematic approaches to understanding stone decay, then builds on this understanding to develop new conservation treatments. With a multidisciplinary framework in place, these approaches could lead to better economic analyses based on technical data and sound conservation options. Ultimately these approaches might help establish better public policy for preserving stone structures.

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### Adobe Architecture Conservation Handbook

*Edited by Francisco Uviña Contreras*  
*Softcover book, illustrated, 170 pp. Santa Fe, New Mexico: Cornerstones Community Partnerships (1998)*

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**C**ornerstones Community Partnerships has a deservedly excellent reputation as stewards of traditional building types and techniques in the southwest-

ern United States. Information from many projects, experts and other sources comprise this volume that might serve as an encyclopedia of adobe conservation practice or as a reference on caring for adobe buildings.

The publication is arranged in three sections, plus a glossary and bibliography. Of the three main sections, "Introduction and Terminology" covers the adobe building history and types, "All about Adobe ..." covers basics of deterioration, crack repair, wall reconstruction, and mud and lime finishes, and "How to ..." covers specialized tasks such as installing earthen floors, and repairing wooden corbels and vigas.

Unlike many preservation manuals, the focus is nearly exclusively building technology — with no extended discussion of preservation principles or preservation activities beyond on-site treatment. For some preservationists, the book might seem to jump hastily to treatments — sometimes radical treatments — without analyzing the whole building or treatment choices, or discussing maintenance, documentation, or assistance from historic building or other cultural resource professionals. As a reference for encouraging or enhancing the skills of local adobe craftspersons, however, this work should prove valuable if used within a community of shared competence.

# April-December 1999

*NCPTT welcomes calendar items sent in care of NCPTT's Publications Manager. Only items with minimum two-month lead will be considered for publication. A more extensive listing of conferences, training and other preservation events is available in the Resources section of NCPTT's Web site.*

## April

- 1 **Call for presentations deadline for Restoration & Renovation** trade exhibition and conference in Charleston, South Carolina, November 7-9. For information, contact EGI Exhibitions; telephone 978/664-6455, facsimile 978/664-5822, e-mail <show@egiexhib.com>, Web <www.egiexhib.com>.
- 8 **Nomination deadline for Presidential Design Awards 2000** sponsored by US General Services Administration. For information, see *NCPTT Notes* 29, page 11, or contact Thomas Grooms; telephone 202/501-1888, e-mail <thomas.grooms@gsa.gov>.
- 16-19 **Rebuilding Downtown** conference in Detroit, Michigan, sponsored by the American Institute of Architects. For information, contact AIA; telephone 800/242-3837, Web <www.e-architect.com>, go to Professional Interests>> Conferences>> April.
- 17 **If Only We Knew: Landscape Preservation in Context, 1890-1950** conference in Bronx, New York, sponsored by Wave Hill. For information, contact Wave Hill, 675 West 252<sup>nd</sup> Street, Bronx, NY 10471, attention Chris Panos; telephone 718/549-3200 (extension 204).
- 25-29 **American Association of Museums** annual meeting in Cleveland, Ohio. For information, contact AAM; telephone 202/289-1818, Web <www.aam-us.org/program/index.htm>.
- 30 **Application deadline for Museum Assessment Program Institutional Assessment Grants** administered by the American Association of Museums. For information, contact Barbara Ballentine; telephone 202/289-9119, facsimile 202/289-

## May

- 2 **Sustainable America National Town Meeting** in Detroit, Michigan, online and via satellite, co-sponsored by the President's Council on Sustainable Development and the Global Environment & Technology Foundation. For information, see *NCPTT Notes* 29, page 11, or the Web <www.sustainableamerica.org>.
- 3-7 **Preserving the Architecture of Historic Cities and Sacred Places** conference in Washington, DC, co-sponsored by the World Bank Group and others. For information, contact Mark Halcrow; telephone 202/473-7811, facsimile 202/473-3112, e-mail <mhalcrow@worldbank.org>, Web <www.worldbank.org/cst>.
- 4-5 **Conservation of Architectural Terra Cotta** workshop in Chicago, Illinois, co-sponsored by RESTORE and others. For information, contact RESTORE; telephone 212/213-2020; facsimile 212/213-3743.
- 5-9 **Vernacular Architecture Forum** annual meeting in Columbus, Georgia. For information, contact Julie Turner, 3039 Star Point Road, Franklin, GA 30217; telephone 770/854-8813, e-mail <jturner648@aol.com>.
- 6-9 **American Institute of Architects Annual Convention and Exposition** in Dallas, Texas. For information, contact AIA; telephone 202/626-7395, Web <http://www.aiaconvention99.com>.  
*NCPTT presents two continuing education programs — Architectural Materials Conservation for Practitioners: Part I—Exteriors and Part II—Interiors — on Thursday, May 6.*
- 7-9 **Ground-Penetrating Radar Techniques for Discovering and Mapping Buried Archaeological Sites** workshop in Denver, Colorado, sponsored by the University of Denver and NCPTT. For information, contact University of Denver; telephone 303/871-2684, Web <www.du.edu/anthro/GPRCLASS2.html>.

- 10-12 **Preservation Technology and Training Board** meeting at Fort Lewis College, Durango, Colorado. For information, contact NCPTT.

*The PTTBoard, NCPTT's advisory board, provides leadership, policy advice and professional oversight to NCPTT.*

- 11 **Monumental Challenge: Memorials in the Nation's Capital** symposium in Washington, DC, co-sponsored by The Octagon and the Kreeger Museum. For information, contact the Kreeger Museum (telephone 202/337-3050) or The Octagon (telephone 202/626-7387).
- 17 **Preventive Conservation of Collections** training sponsored by Fundación Antorchas, Buenos Aires, Argentina. For information, contact NCPTT.  
*NCPTT is collaborating with the Smithsonian Institution on conservation training sessions that begin May 17 and continue through June 25. NCPTT's topics include conservation science, pest control, metals, stone and architectural materials.*

## June

- 1 **Call for presentations deadline for Restoration & Renovation** trade exhibition and conference in Boston, Massachusetts, February 27-29, 2000. For information, contact EGI Exhibitions; telephone 978/664-6455, facsimile 978/664 5822, e-mail <show@egiexhib.com>, Web <www.egiexhib.com>.
- 2-6 **The Alliance for Historic Landscape Preservation** annual conference in Niagara-on-the-Lake, Guelph, Ontario. For information, contact Nancy Ellwand; telephone 519/824-4120, e-mail <nellwand@la.uoguelph.ca>.
- 7-13 **American Institute for Conservation of Historic and Artistic Works** annual meeting in St. Louis, Missouri. For information, contact AIC; telephone 202/452-9545, facsimile 202/452-9328, e-mail <InfoAIC@aol.com>, Web <palimpsest.stanford.edu/aic/>.  
*NCPTT is sponsoring scholarships to students in preservation and conservation graduate programs to attend the AIC annual meeting and conference. The Foundation for the American Institute for Conservation will award the scholarships. For information, contact Sarah Stout at AIC; e-mail <sarahaic@aol.com>.*

15 **Scholarship deadline for National Trust for Historic Preservation's National Preservation Conference**, October 19-24, Washington, DC. For information, contact NTHP's Southern Regional Office; telephone 843/722-8552, facsimile 843/722-8652, facsimile-on-demand 202/588-6444, e-mail <scholarships@nthp.org>.

### July

19 **Conservation of Our Cultural Heritage** summer program, Los Angeles, California, sponsored by the University of Southern California, July 19 through August 3. For information, contact Jody Cherry, University of Southern California School of Architecture, Historic Preservation Program; telephone 213/740-2420, e-mail <cherry@usc.edu>.

*NCPTT will conduct architectural materials conservation sessions July 27-29.*

### September

1 **Application deadline for 1999 James Marston Fitch Charitable Foundation Mid-Career Grant Awards** sponsored by the James Marston Fitch Charitable Foundation and the Samuel H. Kress Foundation. For information, contact Margaret Evans, Beyer Blinder Belle; telephone 212/777-7800, facsimile 212/475-7424.

1 **Call for presentations deadline for American Association of Museums** annual meeting in Baltimore, Maryland, May 14-18, 2000. For information, contact AAM; Web <www.aam-us.org/guidelines.html>.

3 **Call for papers deadline for Society of Architectural Historians** annual meeting in Coral Gables, Florida, June 14-18, 2000. For information, contact SAH; Web <www.sah.org/cfpmi.html>.

30 **Redesign: The Conservation and Preservation of America's Resources at Mt. Rainier National Park** conference in Mt. Rainier National Park, Washington, to be held September 30 - October 3, sponsored by the American Institute for Architects-Historic Resources Committee. For information, contact AIA; telephone 800/242-3837, Web <www.e-architect.com/pia/hrc>.

### October

3-4 **Preserving the 20<sup>th</sup> Century Building Envelope** conference in Cambridge, Massachusetts, sponsored by Technology & Conservation and others. For information, contact Technology & Conservation; telephone 617/623-4488, facsimile 617/623-2253.

5-9 **The Broad Spectrum: The Art and Science of Conserving Colored Media on Paper** conference in Chicago, Illinois, sponsored by the Art Institute of Chicago and others. For information, contact Harriet Stratis; telephone 312/857-7662, facsimile 312/443-0085, e-mail <hstratis@artic.edu>, Web <www.artic.edu/aic/collections/dept\_prints/prints.html>.

8-10 **Ground-Penetrating Radar Techniques for Discovering and Mapping Buried Archaeological Sites** workshop in Denver, Colorado, sponsored by the University of Denver and NCPTT. For information, contact University of Denver; 303/871-2684, Web <www.du.edu/anthro/GPRCLASS2.html>.

19-24 **National Trust for Historic Preservation's National Preservation Conference** in Washington, DC. For

information, contact NTHP; telephone 202/588-6100, facsimile-on-demand 202/588-6444, Web <www.nationaltrust.org>.

*NCPTT contributes support to NTHP's Statewides Initiative; the Statewides meeting at the conference is October 19.*

20-23 **Association for Preservation Technology** annual meeting in Banff, Alberta. For information, contact Larry Pearson, Alberta Community Development, 8820 112<sup>th</sup> Street, Edmonton, Alberta, T6G 2P8, Canada; telephone 403/431-2307, e-mail <lpearson@mcd.gov.ab.ca>.

### November

7-9 **Restoration & Renovation** trade exhibition and conference in Charleston, South Carolina. For information, contact EGI Exhibitions; telephone 978/664-6455, facsimile 978/664-5822, e-mail <show@egiexhib.com>, Web <www.egiexhib.com>.

### December

27-30 **Archaeological Institute of America** annual meeting in Dallas, Texas. For information, contact AIA; telephone 617/353-9361, facsimile 617/353-6550.

### Ongoing Opportunities

**Campbell Center** courses in historic preservation, conservation and care of collections in Mount Carroll, Illinois. For information, contact the Campbell Center; telephone 815/244-1173, Web <www.campbellcenter.org>.

**International Center for the Study of the Preservation and Restoration of Cultural Property** courses in architectural and fine arts conservation in Rome, Italy; and elsewhere. For information, contact ICCROM, via de San Michele 13, I-00153 Rome RM, Italy; telephone (+39.06)585-531, facsimile (+39-06)5855 3349; e-mail <training@iccrom.org>, Web <www.iccrom.org>.

**National Preservation Institute** seminars in historic preservation and cultural resource management in various venues. For information, contact NPI, POB 1702, Alexandria,

VA 22313; telephone 703/765-0100, e-mail <infor@npi.org>, Web <www.npi.org>.

**University of Nevada Heritage Resource Management** courses in historic preservation and anthropology. For information, contact University of Nevada, Reno; telephone 775/784-4046 or 800/233-8928, facsimile 775/784-4801, Web <www.dce.unr.edu/hrm>.

**University of Victoria Cultural Resource Management Program** courses in museum studies, heritage conservation and cultural management, in Victoria, British Columbia, and via distance education. For information, contact Joy Davis, University of Victoria Division of Continuing Studies, POB 3030 STN CSC, Victoria, BC V8W 3N6 Canada; telephone 250/721-8462, facsimile 250/721-8774, e-mail <joydavis@uvic.uvic.ca>, Web <www.uvcs.uvic.ca/crmp>.

# Our Mission

## United States Department of the Interior

*The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and to honor our trust responsibilities to tribes.*

## National Park Service

*The National Park Service preserves unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education and inspiration of this and future generations. The Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.*

## National Center for Preservation Technology and Training

*The National Center for Preservation Technology and Training promotes and enhances the preservation of prehistoric and historic resources in the United States for present and future generations through the advancement and dissemination of preservation technology and training.*

*NCPTT, created by Congress, is an interdisciplinary effort by the National Park Service to advance the art, craft and science of historic preservation in the fields of archeology, historic architecture, historic landscapes, objects and materials conservation, and interpretation. NCPTT serves public and private practitioners through research, education and information management.*

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