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2.0 Annual Meeting
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General Session Papers:

- The use of High Throughput (HTP) testing systems for the rapid screening of potentially useful cleaning formulations for the removal of surface dirt from acrylic emulsion paints
- The Toledo Museum of Art Goes Green
- Reflectance Transformation Imaging: a new conservation tool for examination and documentation
- Integrating Advanced Imaging Technologies to Conservation - Challenges and Successes
- Analysis of the Capabilities of a Practical Multi-Spectral Imaging Camera for the Study of Modern Paintings: Case Studies from the MoMA Collection, New York
- Fingerprinting Objects as Protection against Illegal Trafficking
- The Conservation of Juanqinzhai, the Studio of Exhaustion from Diligent Service, as a Prototype for Architectural Conservation Projects in the Forbidden City, Beijing

“Slow and Steady” Does not Always Win the Race: Intermittent Water Washing of Carbonate Stones in Sculpture, Monuments, and Buildings

By *George Wheeler*

Among the methods for cleaning calcareous stones soiled with gypsum and black particulates, water misting still holds an important place (see box 1 on page 8 for an overview of various cleaning technologies for marbles). The last three decades have seen significant improvements in abrasive cleaning methods with orders of magnitude reductions in particle sizes and pressures of delivery, better employment of chemical cleaning methods, and the introduction and widespread use of lasers in some countries. Each of these methods has specific advantages, but despite these important developments, water misting retains its position as the most frequently employed method.

The technique involves the delivery of fine sprays of water filtered of iron and particulates at “garden hose” pressure (see box 2 on page 9 for a glossary of terms related to water washing). The water moves slowly over soiled surfaces until the gypsum is dissolved and the dark soiling is carried away. While there are numerous schemes to deliver the water in a fine mist, more recently the preferred devices employ multiple articulated armatures that can be preferentially directed towards areas of soiling (see box 3 on page 9 and box 4 on page 10). It is difficult to pinpoint the first use of this method, but it is certain that sculpture conservators Douglass Kwart and Steve Tatti and architectural conservators such as Frank Matero were early users of these articulated armatures.

All water misting techniques rely on the difference in solubility between the principle component of the soiling – gypsum – and the principle component of the stone – calcite. The ratio of solubilities, approximately 150:1, clearly favors the removal of gypsum. However, the absolute solubility of calcite in water is still high – at 1.5×10^{-2} grams/liter it is 2000 times more soluble than other common rock-forming minerals such as quartz. With the solubility of calcite in mind, there is an incentive based on chemical thermodynamics for using minimal amounts of water to remove gypsum from calcite substrates in order to reduce the dissolution of calcite. Other incentives for limiting the volume of water and associated water flow are: reducing grain dislodgment on friable stone and limiting the potential for freezing damage, biological growth, migration of salts, water infiltration and water staining.

For a cleaning technique in such widespread use, it was surprising to learn that the body of literature on water misting is not large – fewer than 40 citations deal directly or peripherally with the technique. A background literature search conducted as part of a research project on water washing being carried out by Art2Facts, the non-profit entity of Building Conservation Associates, for the National Center for Preservation Technology and Training (NCPTT) found several references to the use of intermittent spray – wetting of surfaces followed by periods

continued on page 8

AIC NEWS

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ADVERTISING

AIC accepts position-available ads only from equal opportunity employers. All position ads must conform to the standards for equal opportunity employment. The cost of Internships and Fellowships, Positions Available, and Classified Ads is: \$1.05 per word for members and \$2.15 per word for nonmembers; the minimum charge is \$75. The cost of advertising in Supplier's Corner is \$175 for 100 words. The cost of display ads is: 1/6 page \$215; 1/3 page \$360; 1/2 page \$445; 2/3 page \$570; full page \$695.

Deadlines for advertising copy are: February 10, April 10, June 10, August 10, October 10, and December 10.

All ads should be submitted to Ruth Seyler at rseyler@aic-faic.org.

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From the Executive Director



As we rapidly approach 2009, AIC and FAIC are bringing a number of important projects to fruition. I'll just mention a few outstanding accomplishments that are gaining momentum.

FAIC Strategic Planning Award

With receipt of \$100,000 from the Getty Foundation, we can begin the work on a strategic planning model for FAIC that includes research on the conservation field and end-users, focused meetings with key experts and stakeholders, board development, and exploration of partnerships with other organizations. Throughout the process we will be relying on a variety of consultants and key strategists, in addition to AIC and FAIC staff and boards. Together, AIC and FAIC are in a strong position to undertake a major strategic planning process with the goal of transforming FAIC into an effective leader and partner in supporting the conservation profession and promoting public awareness and appreciation of the preservation of cultural heritage.

See the award information on page 4 and think about how you, too, can assist!

Collections Emergency Response Team (AIC-CERT)

Recognition of AIC-CERT activities is growing, as is its stature! The AIC-CERT brochure has been or will be distributed at several conferences, including AAM, AASLH, APT, and National Trust for Historic Preservation. Copies of the brochure are provided to team members who are aiding sites affected by a disaster or speaking at a conference. The PDF document is also available on the AIC website. The 24-hour hot line is fielding questions ranging from "can we put your information in our emergency plan?" to "can you help us with on site assistance and supplies?" We are also sending press releases about AIC-CERT and its activities to targeted groups through our emergency contact email list.

continued on next page

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y. Total Free Fulfillment (Sum of x and i)		0	0
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ab. Total Copies (Sum of j and aa)		3400	3400
ac. Copies not Distributed (See instructions on Publication at page 40)		0	0
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Correction: The internship site of Tara Horning of the Conservation Center of the Institute of Fine Arts, New York University, was listed incorrectly in the "People" column of the July issue of AIC News (Vol. 33, no. 4:15). The correct site is the Denver Art Museum. We apologize for this error.

In addition, IMLS continues to provide invaluable financial support for AIC-CERT activities and to encourage institutions to contact us for assistance. AAM is helping to promote AIC-CERT and to direct funds in support of the team's work. We are listed on the Heritage Preservation website and continue to participate in the National Emergency Heritage Task Force. See the article below for a summary of recent AIC-CERT activities.

Launching a New Website and Database

The new AIC and FAIC website will be up and running in November. The site not only looks terrific, with many captivating photographs and clear navigational pathways, it also provides the flexibility for us to continue to improve our communication with members and the public. Coupled with the new web-based database, the site will allow members to update their own contact information, register for meetings and workshops, and purchase publications. Take advantage of this enhanced benefit and let us know how it works for you!

—Eryl P. Wentworth
Executive Director, AIC/FAIC

AIC News

AIC-CERT (Collections Emergency Response Team) Update

In 2007, with a grant from the Institute of Museum & Library Services (IMLS), AIC trained 60 "rapid responders" for collections emergency response. The AIC-CERT members have been kept busy recently, between the floods in the Midwest and an active hurricane season. For more information on AIC-CERT, see "From the Executive Director" on the previous page.

The Institute for Museum and Library Services, which funded the initial AIC-CERT training, awarded FAIC an additional \$34,838 to assist cultural institutions by providing deployment of trained responders and supplies necessary for recovery, cleaning, drying, and re-housing of water-

damaged collections.

Barbara Moore fielded calls made to the AIC-CERT hotline during late August and September. Phone and email assistance was provided to several institutions in Iowa, Louisiana, and Texas. AIC-CERT coordinator Aimée Primeaux developed Incident Action Plans and organized response teams.

In a follow-up to earlier responses, a third AIC-CERT team, consisting of Vicki Lee, Sylvia Schweri, and Callie Stapp, was deployed to the Cedar Rapids, Iowa area to assist three institutions. Team members conducted an assessment, began drying materials, and provided recommendations to the Mother Mosque. The Mosque is significant as being the first structure in the United States built specifically as a place of Islamic worship, and houses the papers of Islamic scholar and translator T. B. Irving. For the Ice House Museum, a property of the Cedar Falls Historical Society, the team was able to provide suggestions on the treatment of a collection of lantern slides as well as on the cleaning of unvarnished wood. The team also advised the Dan Gable International Wrestling Institute and Museum on how to dry wet books and photographs in their collections.

Immediately following Hurricane Ike, Steven Pine conducted an assessment at Ashton Villa, a site managed by the Galveston Historical Foundation, and advised them on drying and moving furniture and other issues. Steven returned with a team of volunteers from the Museum of Fine Arts, Houston to safely pack paintings and other framed objects and to reposition collection objects that need to be moved for contractors working in the building. He provided advice on drying and storage of collections held by the University of Texas Medical Branch at the Sealy Home and the Rosenberg Home. Recommendations on environmental conditions for the Rosenberg Library and the Galveston & Texas History Center archives were also provided.

Karen Pavelka, with Red Wassenich, gave an impromptu "clinic" for staff of the Galveston Historical Foundation. She briefly toured the collections at the Rosenberg Library,

where efforts by staff members to move collections to the upper floors before the storm assured that the level of damage to irreplaceable collection materials was minimal. She also responded to a request to assess the archival collections at the Mary Moody Northern Endowment.

As power and access are restored along the Gulf Coast, additional requests for team deployments are being received. AIC continues to work closely with the American Association of Museums, Heritage Preservation, the Heritage Emergency National Task Force, and other organizations to coordinate response and share information. A list of key state organizations and agencies has been developed and is used to provide information about AIC-CERT in advance of hurricanes.

For more information please visit the Disaster Response page or aic-faic.org, or e-mail Aimée Primeaux, AIC-CERT Coordinator at: aprimeaux@gmail.com. The AIC-CERT hotline number is (202) 661-8068.

Certification Update

The Certification Implementation Task Force has been working to refine the certification model proposed at the 2008 Denver meeting. Comments and suggestions from individual responses, Specialty Group conference calls, and survey responses have been gathered and evaluated, resulting in some modifications in the model. The revised AIC Certification Program model was submitted to the AIC Board for review in late September. Pending the Board's approval, the revised model will be published on the AIC website for member consideration and comment. To allow time for consideration, the member vote scheduled for Fall 2008 has been moved to January/February 2009.

AIC 2008 Award Nominations: Reward Your Colleagues

AIC presents six annual awards to members and other supporting professionals for outstanding and distinguished contributions to the field of conservation. These awards are:

- The Sheldon and Caroline Keck Award, which recognizes a

Slate of 2009 AIC Board Candidates Offered by the AIC Nominating Committee

The AIC Nominating Committee is pleased to present the following slate of candidates for the AIC board of directors for the year 2009.

President (2-year term): **Meg Loew Craft** (1st term)

Vice President (2-year term): **Pam Hatchfield** (1st term);
Jane Klinger* (1st term)

Director, Com & TF (3-year term): **Catherine Hawks** (2nd term)

**Pending approval of Fellow status*

The Nominating Committee sincerely thanks those who have agreed to run for office, those who considered running, and all those who offered guidance and helpful suggestions. Remaining in office through June 2010:

Lisa Bruno, Secretary (1st term)

Brian Howard, Treasurer (1st term)

Paul Messier, Director, Communications (2nd term)

Ralph Wiegandt, Director, Specialty Groups (1st term)

Karen Pavelka, Director, Professional Education (2nd term)

Call for Nominations from the Membership for Additional Candidates for AIC Board Elections

The AIC Nominating Committee encourages the AIC membership to submit additional nominations for qualified individuals as candidates for the 2009 AIC Board elections.

To facilitate the process, nominations should be submitted in writing, accompanied by:

- a signed, "Willingness-to-Serve" statement (form available from the committee chair)
- a brief biographical sketch (format available from the committee chair)

The AIC Bylaws require that candidates for president and vice president must be fellows and candidates for director may be fellows or professional associates. Nominees must be members in good standing of AIC and should have prior experience with the functioning of the organization through service on committees, task forces, specialty groups, subgroups, or in other capacities.

The Bylaws require that the Nominating Committee chair receive completed nominations by February 20, 2009 (three months prior to the May AIC Business Meeting in Los Angeles, CA).

All completed nominations or queries regarding submission of a nomination are to be sent to: Jessica Johnson (johnsonjs@si.edu).

Call for Nominations for Candidates for the AIC Nominating Committee

The Nominating Committee is seeking nominations of qualified individuals as candidates for the Nominating Committee election to be held at the 2009 AIC Business Meeting in Los Angeles, CA. The committee, composed of three members serving one three-year term each, has one vacant position each year. The 2009 candidate must be a Fellow of AIC.

Nominations may be made in writing to Martin Burke, AIC President, no later than February 20, 2009, or from the floor at the Business Meeting. A signed willingness-to-serve statement, available from the Nominating Committee chair, must accompany written nominations.

The Nominating Committee is pleased to discuss any aspect of the nominating and election process with potential candidates and anyone interested in nominating candidates.

—AIC Nominating Committee: *Jessica Johnson* (johnsonjs@si.edu), *Teresa Moreno* (tkmoreno@email.arizona.edu), *Mary Striegel* (striegelm@nsula.edu)

sustained record of excellence in the education and training of conservation professionals.

- The Rutherford John Gettens Merit Award, which recognizes outstanding service to AIC.
- The University Products Award, which recognizes distinguished achievement in the conservation of cultural property.
- The Honorary Membership, which recognizes a member for outstanding contributions to the field of conservation.
- The Special Recognition for Allied Professionals, which recognizes the work and contributions of professionals in other fields to the advancement of the conservation profession.
- The Forbes Medal, which recognizes distinguished contributions to the field of conservation.

In addition, AIC and Heritage Preservation jointly select and present an award, the **Joint AIC/Heritage Preservation Award for Outstanding Commitment to the Preservation and Care of Collections**. This award recognizes an organization that has been exemplary in the importance and priority it has given to conservation concerns and in the commitment it has shown to the preservation and care of its cultural property.

Nominations for the first six awards are reviewed by the AIC Awards Committee members, who make recommendations to the Board for their approval. The Joint AIC/Heritage Preservation Award nominations are reviewed by the AIC Awards Committee and representatives of Heritage Preservation.

The nomination deadline for all awards is December 15. Let us hear from you. You can download award information and applications at www.aic-faic.org. Please take a few minutes to let us know about colleagues and institutions that deserve recognition for their significant contributions to our field.

—*Deborah Lee Trupin*, Chair,
AIC Awards Committee

Revisions to the Commentaries

The AIC Board has approved the proposed revisions to the Commentaries to the Guidelines for Practice of the American Institute for Conservation of Historic & Artistic Works. The Commentaries with approved revisions are available online at www.aic-faic.org and will be included in the 2009 Directory.

Wiki Update

AIC's wiki catalogue project is underway. In the late summer, Specialty Group representatives met on a conference call to discuss aspects of the project and offer input on current and future catalogue developments. Since then, the AIC office has been compiling electronic files of existing catalogue chapters to input into a new wiki site, currently being developed in conjunction with the AIC website redesign.

Conservation Representation: Wikipedia

At the 2008 annual meeting in Denver, the AIC Publications Committee set a goal to review and upgrade the entry for "Art Conservation" on Wikipedia. Coincidentally, Daniel Cull, Mellon Fellow at the National Museum of the American Indian, Richard McCoy, Assistant Conservator of Objects at the Indianapolis Museum of Art, and Crista Pack, Conservation Technician at the Eiteljorg Museum of American Indians and Western Art, have also expressed interest in Wikipedia and in improving the article. Thanks to them and many other Wikipedians around the world, we're happy to report that the article has been significantly expanded.

While great strides have been made in developing the information in the article, much work still remains. If we work together we can produce an article that is truly useful on a global scale.

The English version is located at <http://en.wikipedia.org/wiki/Conservation-restoration> (there are articles in many languages linked on the side bar). The article contains links to sub articles on related topics including definitions, ethics, history and

Did You Know?

AIC and FAIC are now sending out press releases electronically. One email contact list is for press releases on grant awards and other special announcements and another is specifically for emergency response efforts. Do you have a media contact or other ideas for additions to our list? Write to ewentworth@aic-faic.org with your suggestions.

important personages, and lots of other information.

Because Wikipedia has become one of the most popular places on the Internet to find basic information about nearly all topics, it is now more important than ever that we collaborate as a community to improve this article and work to publicly define our profession in this venue. English is one of the primary languages used in conservation literature and conferences around the world, so it seems best suited to keep the English based version of Wikipedia as a base while we work towards a world-wide definition of our profession. For example, current discussion centers on the naming and definition of our profession: are conservation and restoration linked together; if so how? Should the title of the article be "Art Conservation" or "Conservation-Restoration"?

The Wikipedia page about Wikipedia (<http://en.wikipedia.org/wiki/Wikipedia:About>) will be a useful starting point if you are new to Wikipedia and would like to make your first edit. Even if you aren't interested in making actual edits and additions to the article, you can share your opinion and thoughts on the "discussion page" associated with the article: <http://en.wikipedia.org/wiki/Talk:Conservation-restoration>. We encourage you to use your real name when making edits and when contributing to the discussion pages, not an alias, and to create a "user page" so further discussions can occur.

Please remember, Wikipedia articles are never "fixed" or "permanent." They require the continued collaboration of the conservation profession if they are to mirror our evolving profession, and to realize their potential as a

significant resource for both the profession and the public at large. Please join in and improve the article by adding to it directly or sharing your ideas and knowledge on the discussion page.

—*The Publications Committee, with other AIC members working on the Wikipedia article.*

U.S. Ratifies Treaty to Protect Cultural Property in Time of War

AIC joined fifteen other cultural preservation organizations in submitting a Statement to the Senate Foreign Relations Committee in support of the ratification of the 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict. The Statement, available at: www.culturalheritagelaw.org/advocacy, was developed by the Archaeological Institute of America, Lawyers' Committee for Cultural Heritage Preservation, and U.S. Committee for the Blue Shield.

On September 25, the United States Senate voted to give its advice and consent to ratification of the Hague Convention, which regulates the conduct of nations during war and military occupation in order to assure the protection of cultural sites, monuments and repositories, including museums, libraries and archives. The United States now joins 121 other nations in becoming a party to this historic treaty, which establishes the principles for protecting cultural sites, monuments, and collections during both armed conflict and military occupation. By taking this significant step, the United States demonstrates its commitment to the preservation of the world's cultural, artistic, religious, and historic legacy. Please see additional information on the News page of www.aic-faic.org.

FAIC News

FAIC Receives Strategic Planning Grant from the Getty Foundation

The Getty Foundation recently awarded FAIC \$100,000 to begin a comprehensive transformation of FAIC

that will enable it to more effectively serve and promote the field of conservation. This comprehensive strategy will provide the expertise and resources needed to identify specific needs, create thoughtful plans for change and growth, and develop the means to sustain a public outreach campaign.

The strategic planning process will begin with a fact-finding component consisting of a series of surveys assessing the needs of conservators, allied professionals, and the users of conservation services. The research data gathered will inform the planning and outreach phases of the project. A series of summits will be convened with leaders in conservation and allied professions, subject experts, AIC and FAIC board members, and potential board members to determine the most effective role FAIC can play in promoting conservation. Through the strategic planning process, FAIC will develop a deeper understanding of the scope and needs of the conservation community, will build on and create partnerships with a variety of organizations, and strengthen the organization and its board of directors.

Deadlines for FAIC Grant and Scholarship Applications

December 15 is the deadline for receipt of applications for FAIC George Stout Memorial Awards

February 1 is the deadline for receipt of applications for the following FAIC grants and scholarships:

- Christa Gaehde Scholarships
- Carolyn Horton Scholarships
- Carolyn Rose "Take A Chance" Grants

February 15 is the deadline for receipt of applications for:

- FAIC Individual Professional Development Scholarships
- FAIC/NEH Individual Professional Development Scholarships
- Workshop Development Grants
- Regional Angels Grants
- Lecture Grants

Guidelines and application forms are available at www.aic-faic.org or from the AIC office. All materials must be received by the published deadlines for consideration.

Electronic submissions are

encouraged, if prepared according to the guidelines published with each grant category. Letters of support may be sent electronically, but only if signature is included. Text-only emails and faxed materials will not be accepted. For more information, contact Eric Pourchot at epourchot@aic-faic.org or (202) 452-9545, ext. 5.

JAIC News

Staff changes

Regretfully, Jeff Maish, a JAIC associate editor for objects conservation for the past several years, resigned this year. Jeff could always be counted on for his thorough assessment of manuscripts and he will be missed. Luckily for JAIC, John Hirx, Head of Objects Conservation at the Los Angeles County Museum of Art has stepped up to the task as one of our associate editors for manuscripts on the technical examination, research and treatment of objects. We look forward to working with John and welcome him to the editorial team.

—Michele Derrick, *Editor-in-chief, JAIC*,
mderrick@mfa.org

The editors of the *Journal of the American Institute for Conservation* are always looking for book reviewers to assess titles that have been published in recent years. Please contact Harriet Stratis, Book Editor, at hstratis@artic.edu, or Michele Derrick, Editor-in-Chief, at MDerrick@mfa.org for more information.

People

Nadina Gardner has been appointed director of the National Endowment for the Humanities' Division of Preservation and Access. She has served as acting director of the division since June, and has served as a senior program officer for nearly four years.

Ross Harvey, PhD., is now at The Simmons College Graduate School of Library and Information Science (GSLIS) in Boston as a specialist in the preservation of library and archival materials. Harvey will be a vis-

iting faculty member for two years.

Shelley Smith has been appointed as conservator of furniture and artworks for The Judd Foundation's 16 properties in New York and Texas. Smith comes to the Foundation from the Intermuseum Conservation Association of Cleveland, Ohio, where since 2006 she held the position of Associate Objects Conservator.

Allied Organizations

HERITAGE PRESERVATION

CAP Applications Available

The Conservation Assessment Program (CAP) provides a general conservation assessment of your museum's collection, environmental conditions, and site. Forms for applying to CAP for 2009 are now available online at www.heritagepreservation.org. The postmark deadline for submitting applications is December 1, 2008.

For more information, call (202) 233-0800 or email cap@heritagepreservation.org. Heritage Preservation's CAP is supported through a cooperative agreement with the Institute of Museum and Library Services.

CAP Changes for 2009

The Institute of Museum and Library Services (IMLS) will fund the 2009 CAP with an extension to its three-year cooperative agreement with Heritage Preservation.

For the 2009 year, the allocation amounts will be raised 10%. While fewer museums will be able to participate in the program, Heritage Preservation increased the allocation amounts due to the rising cost of energy.

Heritage Preservation will also pilot an expedited process. Eligible 2009 participants will be notified of their acceptance into the program one month after the receipt of their completed application and will be encouraged to contact assessors immediately. Site visits may occur as early as January 1, 2009. Heritage Preservation hopes that this new schedule will capture the enthusiasm of applicants who are motivated to start CAP to improve condi-

tions at their museums. By shortening the length of time it takes to complete the program, CAPped museums will be able to move forward accessing other grant opportunities, such as the National Endowment for the Humanities' Preservation Assistance Grants (annual deadline in the spring) and IMLS' Conservation Project Support (annual deadline in the fall).

AMERICAN ASSOCIATION OF MUSEUMS

AAM Announces New Standards on Cultural Property

AAM has established new standards for museum acquisition of archaeological material and ancient art that emphasize proper provenance of such objects and complete transparency on the part of the acquiring institutions. The product of two years of research and vetting from the museum field, the Standards Regarding Archaeological Material and Ancient Art provide clear ethical guidance on collecting such material to discourage illicit excavation of archaeological sites and monuments.

Crafted by the specially created AAM Task Force on Cultural Property, the standards were approved by the AAM Board of Directors at its July meeting in Minneapolis and announced on Aug. 11. They require museums to create a publicly available collections policy that sets institutional standards for provenance when acquiring archaeological material and ancient art. Museums should also make publicly available the known ownership history of all such objects already in their collections. The standards recommend Nov. 17, 1970, the date on

which the UNESCO Convention on the Means of Prohibiting and Preventing the Illicit Import, Export, and Transfer of Ownership of Cultural Property was signed, as the minimum date to which museums should require documented provenance for future acquisitions.

AMERICAN ASSOCIATION FOR STATE AND LOCAL HISTORY (AASLH)

Federal Formula Grants for Museums

AASLH is providing leadership for a coalition of over 60 museum service organizations, including AIC, focused on securing substantially increased funding for America's museums. The Federal Formula Grant Coalition is all about the reauthorization of IMLS scheduled for 2009, and asking Congress to include formula grants that would be granted from IMLS to the states, then distributed to museums based on the needs articulated within each state. It's a mechanism Congress likes because it takes federal dollars back home to the states, rather than attempting to meet the needs of America's museums from Washington, D.C. It's also a mechanism already used by IMLS for the library side of its agency.

In FY 2008, America's libraries received \$160.8 million from IMLS through federal formula grants to the states, and an additional \$39.2 million in national grants funded directly from IMLS, for a total of \$200 million for libraries. Museums received only \$30.4 million in total! The same mechanism is used to bring federal dollars home to the states for arts programs, historic preservation, after school programs for kids, and a multitude of other federal programs.

The Federal Formula Grant Coalition thinks it's time Congress stands up in support of America's museums – but we need you if we are to succeed. Here's what you can do to help:

- Go to the Coalition's website at www.aaslh.org/FederalFormulaGrant2.htm to learn more about this important national movement.
- If you are involved with a service

organization that's not a member of the Coalition, tell them you want them to speak out in favor of federal formula grants for museums.

- Later this year AASLH and other members of the Coalition will be asking our members to speak out and be heard – to write your members of Congress, to visit with them when they are home on recess, and to be active advocates for increased funding for museums. When we ask, it's imperative that you act. Members of Congress have already told us they will listen, but only if they hear from museums in their state.
- Get your board involved – ask them to be advocates too.

Please be prepared to help the Federal Formula Grant Coalition help you. Your voice and action could be the difference between \$30.4 million in funding for museums and \$200 million. We're only as loud as the number of voices that join us. We're counting on you to sing loud and clear!

—Terry Davis, President & CEO

ASSOCIATION FOR LIBRARY COLLECTIONS AND TECHNICAL SERVICES (ALCTS)

Call for Nominations for the ALCTS LBI George Cunha and Susan Swartzburg Award

The deadline for nomination and supporting materials is December 1, 2008. Information on the LBI George Cunha and Susan Swartzburg Preservation Award is available at <http://www.ala.org/ala/mgrps/divs/alcts/awards/profrecognition/lbicunhaswartz.cfm>.

The award acknowledges and supports cooperative preservation projects and/or rewards individuals or groups that foster collaboration for preservation goals. Recipients of the George Cunha and Susan Swartzburg Award demonstrate vision, endorse cooperation, and advocate for the preservation of published and primary source resources that capture the richness of our cultural patrimony. The award recognizes the leadership and initiative required to build collaborative networks designed to achieve specific

continued on page 11

Tru Vue Website Redesign

Tru Vue, a manufacturer of high-performance glazing options, has redesigned their web site, www.tru-vue.com, for the museum community. The site was redesigned to extend the reach of Tru Vue's glazing products to an audience of custom framers, museum professionals, and members of the general public interested in selecting the best glazing materials for protecting and enhancing their works of art.

Box 1: NCPTT Research Project on Stone Cleaning Technologies:

The Historic Congressional Cemetery's Arsenal and Macombe Monuments have been the focus of NCPTT's recent research into cleaning technologies for grave markers. The monument's marble surfaces are sugaring and fragile, likely due to long-term pollution effects. To avoid potential loss of surface materials and details, NCPTT exercised care and consideration in choosing the proper cleaning methods for these monuments.

NCPTT consulted with Monument Conservation Collaborative to consider stone consolidation as a pretreatment before cleaning the monuments. The ideal treatment would be environmentally friendly and meet Washington, DC environmental standards. Additionally, the treatment would provide some additional strength to the surface of the stone while allowing dirt and degradation products to be removed. Prosoco's Hydroxylating Conversion Treatment (HCT) was chosen as a pretreatment.

Next, NCPTT undertook a year-long comparative study of cleaning methods for possible use on the Arsenal and Macomb monuments. NCPTT evaluated seven cleaning methods including:

- (1) Prosoco's Biowash,
- (2) Cathedral Stone's D/2,
- (3) World Environmental Group's Marble and Granite Cleaner,
- (4) JOS micro-abrasive system,
- (5) Neodymium YAG lasers,
- (6) ammonium carbonate poultices, and
- (7) intermittent water misting.

The cleaning methods were applied to Royal Danby marble and Berkshire Lee marble samples that had been artificially degraded and blacked with carbon deposits. After cleaning these samples, methods were evaluated

of drying and then re-wetting – as a more efficient way of conducting water cleaning.

The NCPTT research project explored two questions: 1. Can intermittent water washing limit the

on color change, visual appearance, weight loss, and surface roughness.

NCPTT found intermittent water misting as an effective cleaning method for application in Congressional Cemetery. It is an environmentally friendly method that doesn't use excessive amounts of water. The solvent effects of water are capable of removing particles loosely bound in gypsum crusts found on the monuments. The misting and drying cycles appear to be gentler and remove less surface materials than abrasive techniques such as the JOS micro-abrasive system.

To further test the cleaning method, NCPTT repeated cleaning tests on naturally weathered, fragile marble that was soiled with local clay soils. These stones, thought to be Colorado Yule marble, were pretreated with HCT then cleaned using a custom built holder and spray system. Water was filled into a holding tank and a pump was used to supply water to the misting system. The water was carefully filtered and the inner workings of the cast iron pump were treated to prevent rust. Samples were misted repeatedly for three seconds with 40 second drying intervals for 48 hours. To assist in removing any biological growth and inhibit any subsequent re-growth, NCPTT tested the addition of D/2 antimicrobial cleaner for two full cycles in the misting system after the first 24 hour time period. The D/2 caused a foaming spray to coat the surface of the stones; the cleaner remained on the stone's surface through out the on/off cycle without drying. The spray continued to foam for approximately one hour. After treatment these stones were visibly cleaner in appearance.

The research is being conducted in partnership with the NPS Historic Preservation Training Center and the Department of Veteran Affairs' National Cemetery Administration.

—Mary Striegel, NCPTT

amount of water used during cleaning, and 2. Does intermittent water washing reduce the amount grain dislodgement? These questions were examined in both laboratory and field experiments. In this article the results of the

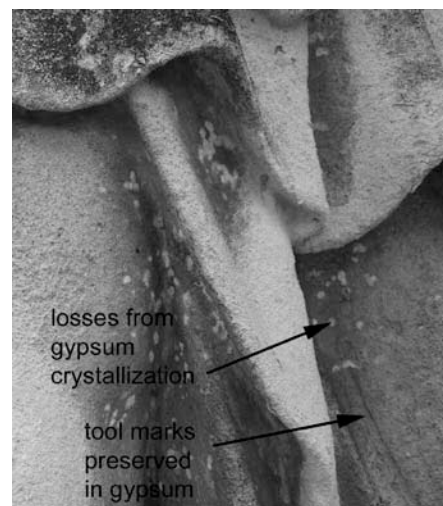


Figure 1. Note where surfaces of the limestones are protected from the run-off of rainwater, thin gypsum crusts form that bear the tool marks of the original surface. For a time, these gypsum crusts are protective of the underlying stone. However, over time these surfaces begin to rupture under the force of the dissolution and recrystallization of the gypsum, and, in so doing cause damage to the surface. The damaged areas are the white spots in the image.

research are put into context and supplemented by the experiences of practitioners who have employed intermittent water washing in their projects. More information about the NCPTT research project can be found in box 1.

The laboratory experiments consisted of spraying either distilled water or water previously saturated with calcite onto marble or limestone squares – some with artificially created gypsum crusts – and measuring the conductivity of the resulting run-off. Both continuous and intermittent spray protocols were tested.

The laboratory work allowed for two interesting conclusions. The first involved the cleaning efficiency of water saturated with calcium carbonate. The limestone squares were exposed to continuous cleaning for one hour or intermittent cleaning for the same one hour with sprayer turned on for one minute and off for three minutes, i.e. using one-fourth the amount of water for cleaning. The rationale for using such calcium carbonate saturated water is that it would prevent or limit the dissolution of calcite comprising the stone. Both distilled water and calcium carbonate saturated water produced similar levels of

Box 2: Anatomy of Water Misting

Nebulization: Water nebulization or nebulized mist is the process of reducing the size of water droplets down to fine particle spray.

Misting: A more generic term that may indicate true nebulization or may indicate a slightly larger spray. Misting is employed by a wide range of industries for cooling, coating, food preservation, insect control and other uses.

Intermittent Water Misting: This is a process of misting that allows the water mist to only perform in intervals. This may be accomplished by specifically timing the water delivery by using a water timer, it may be done manually by using a clock and turning

cleaning of artificially produced gypsum on Indiana limestone whether continuous or intermittent protocols are used. However, the level of cleaning was significantly less with intermittent water washing. Limestone exposed to continuous cleaning is nearly absent of

the water source on and off, or it may be done by redirecting water at timed intervals. Continuous misting may not allow for the breakdown of particles attached to the building surface. Intermittent misting's added benefit is that it limits the amount of runoff.

Misting Nozzles: Misting nozzles or misting heads vary greatly and are the key to defining the particle size and distribution of the spray. The variables of particle size and distribution of the spray play a role in even and efficient cleaning. Nozzles may be sold in full or solid cones and nozzle materials range from inexpensive plastics to very durable brass and even jewel tips. Fine heads are more susceptible for clogging due to impure water while larger heads are more durable but also

more aggressive.

Rig: The structure that mounts the misting nozzles and allows the water source to flow through multiple heads. Misting arms are used in a variety of industries including grocery stores, greenhouses, industrial cooling, and product application. With variably shaped surfaces, flexibility is important.

Water Source: Water can contain any number of minerals or other impurities. Some projects may be compromised by cleaning with contaminated water. In particular, high calcium, salt, or iron loads may be dangerous. Filtered water may be necessary.

—Alfonso Narvaez and Lane Burritt,
John Milner Associates, Inc.

gypsum. A similar level of cleaning with the intermittent protocol requires four times the duration and therefore the same volume of water as continuous cleaning. The conclusion is that there is no savings in water by using intermittent protocols with nebulized

water, when it is not assisted by mechanical means such as power washing or surface agitation, as is so often used in the field. Whatever on-off protocol is used, the laboratory results indicate that it is the volume of water that determines the dissolution of gyp-

Box 3: JMA Use of Water Misting as a "Go-to" Technology

John Milner Associates, Inc. (JMA) has started to use nebulized cleaning to remove gypsum crust from marble surfaces as a go-to methodology over more commonly relied on methods such as chemical or micro-abrasive cleaning. After testing multiple technologies and products, JMA implemented nebulized mist cleaning at the Cathedral of the Sacred Heart in Richmond Virginia. JMA is also in the middle of cleaning the exterior of the Corcoran Gallery of Art in Washington DC with nebulized cleaning.

Removing the crust is a very delicate process that requires a minimal amount of water pressure in the form of a nebulized mist to retain as much of the original surface as possible. JMA set up a test panel to determine how long it would take to remove the crust. The test panel included a sprinkler system rig with a hose, plastic pipe, and spray nozzles mounted to interlocking adjustable hose to concentrate the water on the



Figure 2. Inner face of a column capital at the Cathedral of the Sacred Heart pretreatment. Photograph by John Milner Associates, Inc. darkest areas.

When we first began to look at testing equipment for nebulized mist we realized that droplet size, the intensity of spray, nozzle shape, and the duration of the mist all played a role in the effectiveness of the cleaning process. Where surfaces were not vulnerable to aggregate loss, larger nozzles could be used to speed the misting process.

During our initial in-situ test, the misting system ran for six consecutive hours. Every hour, we adjusted the nozzles to apply the mist on the most concentrated areas and crevices. Towards the end of the test period, in isolated locations, we used nylon brushes to aid in the removal of the loosened black crust. Most of the crust was removed after this time period and the carved details remained intact. All run off water was collected and monitored for aggregate loss.

Most misting equipment often requires building homemade rigs that can adapt to the needs of the project. Although the systems tend to be custom made, they are constructed from available parts that can be assembled onsite. For our large scale cleaning projects, we were able to use public water sources. Once the misting rigs were assembled they were easily moved around our buildings to keep the cleaning process moving. We learned that adaptability in the misting design is key to production.

—Alfonso Narvaez and Lane Burritt,
John Milner Associates, Inc.

**Box 4: Conservation of the
“The Tripoli Monument” at
the U.S. Naval Academy,
Annapolis, Maryland**

Dates of Treatment: September 1999
through July 2000

Materials: Carrara marble, Aquia
Creek sandstone, gilded bronze.

Gypsum crust removal: a fine non-ferrous nebulous water misting system was set up so that all of the areas of gypsum crusts were subjected to an intermittent spray. Testing showed that the best results were achieved with a frequent intermittent cycling of sprays rather than a long cycling duration, i.e., 3 minutes on/15 minutes off. Once the crust was sufficiently soft, it was gently agitated using nylon brushes and rinsed from the surface using filtered tap water at a pressure less than 50 psi. Friable areas of the stone were not scrubbed in order to avoid further disaggregation of the substrate.

—*Joseph Sembrat,*
Conservation Solutions, Inc.



Figure 3. “During” treatment image showing nebulous misting system in place. Photograph by Joseph Sembrat, Conservation Solutions, Inc.



Figure 4. “After” treatment image of the Tripoli Monument. Photograph by Joseph Sembrat, Conservation Solutions, Inc.

sum.

With these results in hand, a field experiment was devised to determine if intermittent water washing could reduce grain dislodgement when cleaning friable stone. In this experiment Indiana limestone window lintels were cleaned using both continuous and intermittent protocols. All of the run-off from the cleaning was collected, the solids in that run-off were weighed, and the proportion of calcite in the solids determined by x-ray fluorescence and x-ray diffraction. These solids, containing mostly gray-to-black fly-ash, were reduced by nearly 30% w/w when using intermittent protocols and the total amount of calcite was reduced by more than 50% w/w. Therefore, the clear advantage of the use of intermittent protocols is the reduction in the loss of stone.

An aspect of water washing not explored in the NCPTT project but often discussed by practitioners is the temperature of the water. Gypsum is unusual in that it is slightly more soluble in cold water than in hot water. We are not aware of any study that has looked at water temperature and efficiency of cleaning but there is anecdotal evidence that warm or hot water

is more effective. While this evidence seems to fly in the face of chemical thermodynamics there may be logic to support it. Soiling on carbonate rocks comprises gypsum, flyash – primarily aluminosilicate and carbon particles – and a wide array of hydrocarbons deposited as aerosols from partially burnt fossil fuels. These hydrocarbons provide significant water repellency to gypsum crusts. Warm or hot water can more easily mobilize or even emulsify these hydrocarbons and wash them away, allowing the water easier access to the gypsum that must be dissolved in order carry away the black particles. The influence of water temperature on cleaning efficiency of water misting is a ripe topic for further research.

A final point of interest that may resonate with all conservators is whether to remove gypsum crusts at all, or to what level cleaning should take place. The argument with respect to gypsum is that relatively thin zones of gypsum on stone surfaces often retain original tool marks and protect the underlying stone from further attack by acid rain (figure 1). One of the important advantages of the laser systems currently being used to clean these fragile soiled surfaces is that they

can remove the flyash without removing this epidermis or dermis of gypsum that retains the morphology of the original surface. One of the risks in leaving the gypsum in place, however, is that in the long term, exposure to atmospheric moisture or rain water and subsequent drying damages the stone by dissolution and recrystallization of gypsum (figure 1). There is no correct answer here. For example, lasers provide a technique to clean fragile stone in degrees – but require a highly skilled operator, can be quite slow, can discolor stone surfaces and leave gypsum in place that may cause later damage. Intermittent water washing can clean somewhat fragile surfaces (not as selectively as lasers), requires less skilled operators, and removes gypsum that can cause later damage, but offers less flexibility in determining the level of cleaning. As with other media, to clean, not to clean, or how to clean lies in the judgment – mind, eye, and hands – of the conservator.

—*George Wheeler, Columbia University
and the Metropolitan Museum of Art,
gw2130@columbia.edu*

preservation goals. Any person or group is eligible for this award; membership in ALA is not required. The award is sponsored by LBI: The Library Binding Institute and includes a \$1,250 grant and citation.

Send nominations, including the name of the person or group being nominated; address, phone number, and email address of nominee and nominating party; a formal statement of nomination, with rationale for the nomination; resume, vita or extensive narrative career outline upon which the award jury can base its determination; and letters of support and endorsement, to Cathy Martyniak, by December 1, 2008, cathy@uflib.ufl.edu.

SOCIETY FOR HISTORICAL ARCHAEOLOGY (SHA)

At the SHA meeting in Toronto, January 6-11, 2009, archaeological conservators from Canada and the U.S. will present a session entitled "Testing Borders: Conservation, Accessibility and Collections Management." The session will highlight the ways in

which conservators contribute to making collections and fieldwork accessible to the general public and the ways in which this tests the traditional boundaries between archaeology, conservation, and collections management. Although some of these boundaries are logical, the blurring of their edges frequently leads to a greater sense of synergy that can contribute to a better understanding of the sites and materials involved.

As an organization, SHA has been receptive to the topic of conservation. Although acknowledging that conservation is not part of the traditional training for most historical archaeologists and that on many collections resource management (CRM) sites archaeologists may never interact with conservators, SHA has encouraged conservators to contribute conservation-related information to its website, develop short courses for its members, and present symposia at its conferences. For the last five years, conservation sessions have been offered on a biennial basis. These sessions, designed to highlight the evolving roles of conservators

on archaeological sites, have focused less on treatment related information and more on the ways in which conservators can add value to an archaeological excavation. Wherever possible, the sessions have been offered in cities where archaeological conservation labs exist and can be toured. As a whole, they have been remarkably well received and a new and more collaborative relationship is being formed."

—Emily Williams, *Conservator of Archaeological Materials, The Colonial Williamsburg Foundation*

Worth Noting

New Media News

"Preservation Today" includes a newscast that integrates a wide variety of social media platforms like Flickr, YouTube, FaceBook, and iTunes. The newscast recently reported AIC's response to floods in the Midwest.

An accompanying "shownotes" website allows viewers to interact. Among the features of the website are preservation blogs and news. Currently,



- **Analyzing paintings, ceramics, photos, glass, obsidians, bronzes, coppers and alloys?**
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● **For more information, please visit www.bruker.com/aic**

David Connolly, an archaeologist from Scotland, is video blogging on the site about his archaeological survey in Jaresh, Jordan.

This effort is the result of a partnership between Northwestern State University of Louisiana (NSU) and the National Center for Preservation Technology and Training (NCPTT). Conservation organizations are encouraged to send in video and news reports from their projects. For more information, visit the Preservation Today shownotes site at www.preservationtoday.com or call (318) 356-7444.

—Jeff Guin, National Center for Preservation Technology and Training

GCI Bulletin

The Getty Conservation Institute announces the launch of the GCI Bulletin, the Institute's new electronic bulletin. It will complement the GCI's print newsletter, *Conservation*. Published six times a year, the GCI Bulletin offers updates on events, science and field projects, educational initiatives, publications and videos. To register for

the bulletin visit www.getty.edu/subscribe/gci_bulletin/index.html

ANAGPIC Internship Placement Schedule

The following schedule is recommended to prospective internship sponsors in order that they and three U.S. graduate conservation programs—University of Delaware, Buffalo State College, and New York University—can better coordinate the internship selection process. Those not able to adhere to this schedule are encouraged to convey their interest in potentially hosting an intern directly to these schools, who will make every effort to accommodate their needs.

- September–November: Initial inquiries from students/programs
- October–December: Formal letter from students requesting interviews
- Late December–February 15: Interviews at hosting institutions
- March 1–April 1: Decisions

—Association of North American Graduate Programs in the Conservation of Cultural Property (ANAGPIC)

Conference Review

X-ray Spectroscopy Conference Hosts Cultural Heritage Preservation Lectures and Workshop

In early August, the 57th annual Denver X-ray Conference (DXC 2008) hosted sessions devoted to the application of X-ray analysis in the examination of art and cultural heritage. The sessions were organized by Karen Trentelman of the Getty Conservation Institute. The DXC is a highly respected conference in the area of x-ray spectroscopy and draws an international audience of researchers and vendors demonstrating the latest equipment. This was the first time the DXC included research from scientists working in museums. Conservation scientists had the opportunity to learn about advanced techniques in x-ray spectroscopy and disseminate some of the current issues and challenges to researchers and equipment manufacturers.

The presentations fell into three categories: the examination of artist's



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Heavy Metals, their Salts, and other Compounds

A Quick Reference Guide from AIC and the Health & Safety Committee

A Special Insert By

Cheryl Podsiaki

PERIODIC TABLE OF THE ELEMENTS

Period	Group IA											Group IIA											Group IIIA	Group IVA	Group VA	Group VIA	Group VIIA	Noble gases												
1	1 Hydrogen H 1.00797											2 Helium He 4.0026											3 Boron B 10.811	4 Carbon C 12.011	5 Nitrogen N 14.0067	6 Oxygen O 15.9994	7 Fluorine F 18.9984	8 Neon Ne 20.183												
2	3 Lithium Li 6.939											4 Beryllium Be 9.0122											13 Aluminum Al 26.9815	14 Silicon Si 28.086	15 Phosphorus P 30.9738	16 Sulfur S 32.064	17 Chlorine Cl 35.453	18 Argon Ar 39.944												
3	11 Sodium Na 22.9898											12 Magnesium Mg 24.312											19 Potassium K 39.102	20 Calcium Ca 40.08	21 Scandium Sc 44.956	22 Titanium Ti 47.90	23 Vanadium V 50.942	24 Chromium Cr 51.996	25 Manganese Mn 54.938	26 Iron Fe 55.847	27 Cobalt Co 58.933	28 Nickel Ni 58.71	29 Copper Cu 63.54	30 Zinc Zn 65.37	31 Gallium Ga 69.72	32 Germanium Ge 72.60	33 Arsenic As 74.922	34 Selenium Se 78.96	35 Bromine Br 79.916	36 Krypton Kr 83.80
4	37 Rubidium Rb 85.447	38 Strontium Sr 87.62	39 Yttrium Y 88.905	40 Zirconium Zr 91.22	41 Niobium Nb 92.906	42 Molybdenum Mo 95.94	43 Technetium Tc (98)	44 Ruthenium Ru 101.07	45 Rhodium Rh 102.905	46 Palladium Pd 106.4	47 Silver Ag 107.870	48 Cadmium Cd 112.40	49 Indium In 114.82	50 Tin Sn 118.69	51 Antimony Sb 121.75	52 Tellurium Te 127.60	53 Iodine I 126.904	54 Xenon Xe 131.30																						
5	55 Cesium Cs 132.905	56 Barium Ba 137.34	57 Lanthanum La 138.91	72 Hafnium Hf 178.49	73 Tantalum Ta 180.948	74 Wolfram (Tungsten) W 183.85	75 Rhenium Re 186.20	76 Osmium Os 190.2	77 Iridium Ir 192.2	78 Platinum Pt 195.09	79 Gold Au 196.967	80 Mercury Hg 200.59	81 Thallium Tl 204.37	82 Lead Pb 207.19	83 Bismuth Bi 208.980	84 Polonium Po (210)	85 Astatine At (210)	86 Radon Rn (222)																						
6	87 Francium Fr (223)	88 Radium Ra (226)	89 Actinium Ac (227)	104 Unnilquadium Unq (261)	105 Unnilpentium Unp (262)	106 Unnilhexium Unh (263)																																		
7																																								

58 Cerium Ce 140.12	59 Praseodymium Pr 140.907	60 Neodymium Nd 144.24	61 Promethium Pm (147)	62 Samarium Sm 150.35	63 Europium Eu 151.96	64 Gadolinium Gd 157.25	65 Terbium Tb 158.924	66 Dysprosium Dy 162.50	67 Holmium Ho 164.930	68 Erbium Er 167.26	69 Thulium Tm 168.934	70 Ytterbium Yb 173.04	71 Lutetium Lu 174.97
90 Thorium Th 232.038	91 Protactinium Pa (231)	92 Uranium U 238.03	93 Neptunium Np (237)	94 Plutonium Pu (242)	95 Americium Am (243)	96 Curium Cm (247)	97 Berkelium Bk (249)	98 Californium Cf (251)	99 Einsteinium Es (254)	100 Fermium Fm (253)	101 Mendelevium Md (256)	102 Nobelium No (253)	103 Lawrencium Lr (257)

*Lanthanide series

*Actinide series

*Numbers in parentheses are mass numbers of the most stable or best-known isotope of radioactive elements.

Figure 1. The 35 shaded elements in this periodic table are those regulated by OSHA under the classification of Heavy Metals [1, 2].

Introduction

The term heavy metal is a loosely used term generally accepted to mean dense metals of relatively high atomic mass, with a specific gravity of 4 or above. Although there are several other definitions of the term there is no specific set of elements that would imply any common set of properties such as high toxicity or high atomic weight [3]. The heavy metals group includes transition metals, some metalloids (elements that exhibit both metal and non-metal properties), some lanthanides and actinides, and often includes reference to certain light and trace metals with an inference to toxicity. An example of the ambiguity of the term heavy metal is that of molybdenum, a heavy but essential trace ele-

ment and beryllium, a light but very toxic metal [4]. All metals are characterized by their excellent ability to conduct heat and electricity (the metalloids being semi-conductors), and are malleable, ductile, hard, and shiny, the exception being mercury which is liquid at room temperature.

One of the most significant factors about metals is their residual persistence over time. Metallic compounds such as oxides, sulfides, chlorides, carbonates, nitrates, and other salts are formed when positively charged metals called cations react with negatively charged elements called anions in ionic or covalent bonds. The resulting metallic compounds can result in very different properties of solubility and toxicity [5]. For example, trivalent chromium, Cr (III), is an essential trace ele-

ment [6] and its compounds, including soluble chromium salts, are considered to be of low toxicity and are thought to present few industrial hazards [22]. Hexavalent chromium, Cr (VI), however, is highly toxic [6] and its compounds, including chromic acid and chromates, are potential carcinogens [22].

Posted on the AIC website, the "Chart of Heavy Metals, their Salts, and other Compounds" provides a quick reference to the 35 elements and some of their compounds classified and regulated by OSHA as heavy metals [1]. Additional compounds often encountered in conservation are also listed. The guide is not definitive or all-inclusive; it is meant to be used in conjunction with other resources. Complete information about each of

their properties, toxicity, and specific compound or additional occupational exposure levels can be found in MSDS sheets, OSHA and NIOSH publications, and other health and regulatory governing agencies found on the Internet and listed at the end of this guide. All health and safe handling guidelines and hazardous waste disposal should be followed as outlined by the various governing bodies; appropriate personal protective equipment (PPE) should be used as described in OSHA regulations with particular attention paid to the use of respirators.

Detection Methods

The appropriate testing method to use for the detection of a specific heavy metal will depend on the answers to some key questions:

- What do you want to know and why?
- What is the material type of the object to be tested?
- Can a sample be taken or must the test be non-destructive?

Regardless of the testing method, test results on homogeneous samples are usually indicative of the entire object, however, results on heterogeneous samples (such as organic substrates) are indicative of the specific test site/sample only. Quantitative results are relevant only for the sample or site tested.

Spot Tests

Spot test procedures are relatively reliable indicators of the presence of residual surface chemicals. They can

provide results ranging from qualitative to semi-quantitative. Some tests are available in pre-packaged test kits. Spot tests can be destructive or non-destructive to the object or surface being tested depending on the method used. They all involve chemical reactions and need to be conducted in a safe controlled environment whether in the laboratory or in the field by trained personnel. Proper waste disposal guidelines for hazardous waste generated from the test procedure should be followed [7, 8].

Analytical Instruments

Hand-held X-ray Fluorescence Spectrometry (XRF) - A surface technique, the XRF analyzer conducts multiple elemental analyses and is considered to be non-destructive to the object. It can be used with swabs, wipes, or in direct contact with the surface. The instrument yields quantitative results for modern metal alloys or soils based on approved NIST industrial standards and calibrations for which the instruments were made. Results on archaeological metals and glass substrates range from qualitative to quantitative; results on organic substrates are presently qualitative, but with appropriate reference materials, instrument calibrations may be able to offer semi-quantitative ranges. The instrument is easy to use but spectrum and data are complicated to interpret, especially on organic substrates because the data alone cannot be relied on for accurate results and spectrum must be interpreted. Trained personnel are necessary for application and accurate interpretation.

The hand-held XRF is an excellent screening tool and can easily be used in storage rooms and exhibition cases, as well as on-site for field archaeology.

Inductively Coupled Plasma Spectroscopy (ICP) - Conducts multiple elemental analyses using a tiny sample that must be dissolved for the analysis (a destructive technique). Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry (La-ICP-MS) models have the capability to analyze certain whole objects. The instrument yields highly accurate quantitative results for low levels of elements. It is an excellent tool to crosscheck semi-quantitative to quantitative results of the hand-held XRF [9]. ICP is a laboratory procedure that must be conducted by qualified personnel [7, 10, 11].

Atomic Absorption Spectroscopy (AAS) - Analyzes one element at a time using a tiny sample that must be dissolved for the analysis (a destructive technique). The instrument yields highly accurate quantitative results for low levels of elements. The use of High Performance Liquid Chromatography (HPLC) in conjunction with AAS analysis (used as the detector) can provide speciation of the sample [12.] AAS is a laboratory procedure that must be conducted by qualified personnel [7, 10, 11].

Spark Emission Spectroscopy - A destructive technique that tests mostly solids and is good for bulk constituents [7].

Wet Chemical Techniques - Samples must be dissolved (destructive techniques). Wide variety of possible techniques, titrations, ion-specific electrodes, etc; may be very useful depending on the analyte and levels to be analyzed [7].

Ion Chromatography - Low levels (range of 0.1 ppm) of multiple ions can be determined giving quantitative results. The samples must be dissolved making it a destructive technique [7, 10].

Health and Safety

Unlike industrial workers who are more likely to encounter higher doses of potentially hazardous materials resulting in acute exposure [13], museum workers are more likely to be

List of Acronyms

For a comprehensive lists of acronyms, health agencies and governing bodies refer to the following websites:

- ACGIH:** American Conference of Governmental Industrial Hygienists, www.acgih.org
CDC: Center for Disease Control and Prevention, www.cdc.gov
DHHS: U.S. Department of Health and Human Services, www.os.dhhs.gov
EPA: U. S. Environmental Protection Agency, www.epa.gov
OSHA: Occupational Safety and Health Administration, www.osha.gov
NIOSH: National Institute for Occupational Safety and Health, www.cdc.gov/niosh

Acronyms used in the chart and references:

- CAS:** Chemical Abstract Service (chemical registry number)
MSDS: Material Safety Data Sheets
PEL: Permissible exposure limit - OSHA regulated concentrations
TLV: Threshold limit value - ACGIH suggested concentration guidelines
TWA: Time-weighted average - NIOSH recommended exposure limits (RELs)
ppm: parts per million (conversion factors: parts of vapor or gas per million parts of contaminated air by volume at 25°C and 1 atmosphere)
mg/m³: milligrams per cubic meter (conversion factors: milligrams of vapor or gas per cubic meter of contaminated air at 25°C and 1 atmosphere)

exposed to low-level doses of heavy metals over an extended period of time, resulting in chronic health problems. Heavy metal exposure in the environment along with that from museum collections and buildings is of particular concern to museum professionals involved in emergency and disaster rescue and recovery efforts. Health and safe handling guidelines for specific metals and their compounds have been developed by national and international governing health and environmental agencies and are readily available in electronic form and in numerous hardcopy publications. Institutions in the U.S. are required to follow OSHA health and safety regulations and dispense all known information about existing hazards to personnel and handlers of the materials under OSHA's 1986 Hazard Communication Standard providing employees with the right to know [7].

Personal Protective Equipment (PPE) - Consult OSHA regulations, NIOSH recommendations, and MSDS sheets as well as other resources pertaining to specific PPE required for use with certain hazardous materials and standard lab procedures. Nitrile gloves, lab coats, booties, hair nets, protective suits, dust masks and respirators are standard PPE for use in conservation laboratories. Respirator use is governed by OSHA [14]. Those who need/choose to use respirators must obtain medical clearance, receive use training and have their respirator individually fit tested by authorized testers prior to use. Members of the Health & Safety Committee provide training and fit testing at the annual AIC meetings. All respirators must be NIOSH approved for the specific type of mask, filter, or cartridge needed [14, 15].

Handling and Storage - In general, most objects containing hazardous materials should be kept in a tightly closed container, stored in a cool, dry, ventilated area, isolated from any source of heat or ignition and in an area where it will be protected against physical damage. Do not use or store hazardous materials on porous work surfaces (wood, unsealed concrete, etc.). Follow strict hygiene practices. Containers may be hazardous when empty since they can retain product residues (dust, solids, vapors, liquid);

observe all warnings and precautions listed for the product. Dispose of containers and unused contents in accordance with federal, state and local requirements [16]. Laboratory safety protocol should be followed. MSDS documents must be on the premises in the lab for each substance present. Unless a substance is known to not be hazardous, it should be treated as though it was hazardous.

Documentation- All test results, suspect hazards and known archival information should be documented (written, photo, analytical test results) and filed appropriately (electronically/hard copy) for easy access by personnel who handle the material. All tested objects, shelves, drawers, and storage room doors should be identified as having been tested with clear and concise hazard identification labels or tags, and for an individual item, both the object and the container (polyethylene bag, box) and/or isolated shelf or drawer should be labeled.

A Specific Note About Mercury

Inhalation of mercury vapor is of particular concern if working in an enclosed, not well-ventilated room. Therefore, it is suggested that personnel not work in certain storage areas or the confines of an exhibit case. To retrieve an object suspected or known to be fabricated or contaminated with a mercury compound, it is suggested that the drawer or cabinet where the object is housed be opened and that individuals immediately leave the room for a period of time* without breathing in the air directly in front of or above the housing unit. This will allow any mercury vapor that may have built up in the enclosed drawer or cabinet to be released into the ambient air. Once it is safe to return to the room, remove the object to a well-ventilated area rather than work in the store room if at all possible. The same precaution should be taken when opening an enclosed container to retrieve an object: e.g. open/unseal a bagged object in a fume hood or well-ventilated room, leave the area and return after a period of time* to continue work. When work is completed then re-seal

the container before returning it to the store room [8]. All pertinent PPE should be used throughout the process.

**The specific time interval is unknown as it relates directly to the level of airflow and other factors in the room. Air quality tests can be conducted to determine the time frame using a Jerome 431-X Mercury Vapor Analyzer and a Lumex RA-915+ Multifunctional Mercury analyzer [8].*

A Specific Note About Arsenic as Arsine

Possible exposure to arsine for conservators, collection managers and other museum workers is normally confined to controlled chemical reactions such as in the arsenic spot test. In view of the recent natural disasters that have been occurring, museum workers and disaster recovery teams should be aware that arsine gases can also form as a result of the natural (and complex) biomethylation process undertaken by certain organometallic micro-organisms in the environment [17]. Although highly unlikely to be found in environmentally climate-controlled institutions, it is possible that under certain moisture/ high humidity conditions where mold may form, these micro-organisms could be present and this increases the potential of arsine being present [18, 19]. High levels of methylated arsenic compounds have been found in confined spaces in greenhouses and in relation to arsine poisoning incidents involving the pigment, Paris Green (copper acetoarsenite), in wall paper [17, 20]. Arsine has a subtle garlic odor associated with its presence.

An expanded version of the Heavy Metals Reference Guide is available online through the AIC Health & Safety Committee's webpage. This document includes a chart with an extensive listing of OSHA regulated heavy metals, their salts, and other compounds. This handy reference guide details the physical description, use, occupational exposure limits, and chemical formulae of over one hundred compounds. Visit www.aic-faic.org to download a copy for your lab today.

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materials, the identification of heavy metal pesticides in cultural artifacts, and the application and development of advanced x-ray techniques. To obtain a sense of the breadth of presentations applied to cultural heritage, some examples follow. Jennifer Mass demonstrated the capacity to perform non-contact elemental depth profiling using confocal x-ray fluorescence and revealed a lost painting by N. C. Wyeth which was hidden by overpaint and Zhi Liu used synchrotron radiation to conduct phase analysis of Chinese purple from the Qin Warriors to identify the pigment as a by-product of glass meant to imitate jade. Lynn Brostoff demonstrated the complementary qualities of XRF and XRD in her examination of converted lead pigments on a pastel drawing by Georgia O'Keefe and Jennifer Giaccaï illustrated the value of identifying anachronistic elements on an ornate medieval reliquary. Giacomo Chiari introduced a first generation portable XRF/XRD instrument named the Duetto. This instrument is the result of collaboration between the GCI and inXitu, a com-

pany also making equipment for the mobile laboratory on the Mars Rover.

Several presentations focused on the area of identification of heavy metal pesticides in cultural artifacts. Aaron Shugar discussed the problems associated with analysis of heavy metals in tribal heritage materials scheduled for repatriation. He announced a joint collaboration between Buffalo State College, numerous museums, handheld XRF equipment manufacturers, U.S. National Institute of Standards, Canadian Conservation Institute, and the US Environmental Protection Agency to address this issue. This collaborative group is working on developing standards to quantify key inorganic pesticides used in museums and natural history collections. Both Shugar's and another presentation by Kara Cross indicated the difficulty in dealing with spectral overlaps of arsenic and mercury. Cheryl Podiski also illustrated the use of XRF as a screening tool for natural history collections.

In addition to the lectures, the conference included a one day workshop that discussed the results of a

round-robin test featuring test paint samples prepared by Karen Trentelman and Carole Namowicz from the GCI, and Chris McGlinchey and Becca Pollak at the Museum of Modern Art. Twenty-five institutions from around the world and equipment manufacturers serving the conservation community participated in the study. Prior to discussing the answers, several presentations covered the fundamentals of applied XRF spectroscopy and recommended protocols for collecting XRF data from paintings. Namowicz presented the results from the round-robin. Some of the samples that proved difficult to identify included small amounts of titanium (white) in barium (white), small amounts of arsenic when mixed with lead and mercury, and small to moderate amounts of cadmium yellow in lead white. Each participating institution kept a set of test paint samples to use as a training set for future users applying XRF to the examination of paintings.

Handheld XRF has become easy to use and more accessible to many; the discussions often stressed the limi-



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tations of the technique and what additional analytical methods are necessary to obtain a more complete assessment of the pigments present. The paintings round-robin and workshop were the fourth such event organized by Karen Trentelman. The first and second round-robins, held in 2002 and 2004 at the Detroit Institute of Arts, focused on photographic materials. Metal alloys were the focus of a 2006 round-robin workshop held at the GCI. These round-robins have served as a valuable tool to stimulate discussion between conservators and scientists on appropriate use of x-ray technologies. They have also helped conservation scientists identify areas where advancements in instrumental analysis are needed in order to advance the technical understanding of fine art and cultural heritage.

The conservation scientists in attendance in addition to the organizing committee of the DXC all hope this will become a routine venue where technical information is shared and exchanged. If this past meeting is any indication, DXC-Cultural

Heritage sessions will advance the application of scientific analysis and serve the conservation community with the best available technology.

—Chris McGlinchey,
The Museum of Modern Art (MoMA)

Grants and Fellowships

Rome Prize Deadline Extension

The American Academy in Rome is offering an extended deadline for applications for the the 2009 Rome Prize 2009. The extended deadline is November 15, 2008 (Additional fee applies). For further information, or to apply, visit www.aarome.org or contact:

American Academy in Rome
7 East 60 Street
New York, NY 10022
Att: Programs
(212) 751-7200 ext. 47, fax: (212) 751-7220
info@aarome.org

Winterthur Research Fellowship

The Winterthur Museum & Country Estate announces its 2009-2010 Research Fellowship Program consisting of NEH, McNeil Dissertation, and short-term residential fellowships to support advanced study of American art, culture, and history. Fellows have full access to library collections of more than 87,000 volumes and one-half million manuscripts and images, searchable online at winterthur.org/research/library_resources.asp. Fellows may conduct research based on the museum collection of objects and artworks made or used in America to 1860. Applications are due January 15, 2009. For details or to apply, visit winterthur.org/research/fellowship.asp. For information, contact: Rosemary T. Krill at (302) 888-4637, rkrill@winterthur.org

Please see the AIC website for grant opportunities and deadlines. Visit www.aic-faic.org

What's *your* definition?

con·ser·va·tion (kän'ser vā'shən) *n.* [ME. *conservacioun*]

1. The act of restoring materials damaged by hot, ugly, inefficient, 94% IR, track lighting, and it's associated IR driven temperature and humidity cycles.
2. The act or practice of extending artifact and exhibit life 3 to 20 times while reducing gallery energy use up to 70% with NoUVIR Fiber Optic Lighting.

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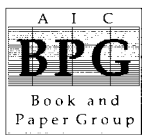


SPECIALTY GROUPS



ARCHITECTURE

ASG did not submit a column for this issue.



BOOK AND PAPER

AIC Annual Meeting: The 2009 annual meeting in Los Angeles on May 19–22 will provide BPG members with one of the best programs we have ever produced. Over 30 abstracts were submitted for the BPG program. As a result, Yasmeen Khan and the Selection Committee have chosen an excellent array of talks on diverse topics for the BPG program in LA. The BPG sessions are scheduled for two half days on the 20th and 21st and one full day on the 22nd. Many thanks to all those who submitted abstracts this year.

Discussion Groups: The BPG Discussion Groups have several wonderful new co-chairs that have plans for the annual meeting. BPG has set aside a half day of its programming to devote to these important discussions. Fortunately, the two groups' time slots will not overlap. Below are their requests for abstracts:

The Library Collections Conservation Discussion Group (LCCDG) of the Book and Paper Group is pleased to announce the 2009 session topic: LCCDG 2.0–New Directions, new and/or adaptive materials, methods and technologies used in the conservation treatment and housing of library collections.

The theme is in keeping with the AIC's 2009 Annual Meeting theme: Conservation 2.0–New Directions, and

from BPG members feedback. In preparation, the co-chairs are seeking individuals to present on all types of innovative and/or adaptive uses of materials or technologies, as well as changes in methodology or application of treatments and housings for library collections.

The Archives Conservation Discussion Group (ACDG) is pleased to announce the 2009 session topic: Conservation and Preservation approaches for large-scale stabilization of collections. Continuing the theme of the conference, ACDG will look at treatment advances applied more broadly to large-scale collections, such as triage treatment and preparation of collections for relocation, digitization projects, or general cataloging and processing. The co-chairs are seeking individuals to present on all types of large-scale conservation efforts of paper-based collections in archives, libraries and/or museums.

For each group, speakers are asked to prepare a ten to fifteen minute presentation, and provide a one-page hand-out for reference and Web posting. If you are interested in participating with either group please contact us at the email addresses listed below with a short description of your project by January 16, 2009 for ACDG, and December 12 for LCCDG.

LCCDG Co-chairs: Laura McCann, New York University Libraries, and Werner Haun, The New York Public Library, lccdg.chair@gmail.com

ACDG Co-chairs: Laura O'Brien Miller, Lewis Walpole Library, Yale University; Marieka Kaye, Huntington Library; and Jody Beenk, Special Collections, Princeton University Library, acdg.chair@gmail.com.

Paper Conservation Catalog: The Paper Conservation Catalog is online at <http://aic.stanford.edu/sg/bpg/pcc/>. A tremendous thanks goes to Walter Henry, who scanned and assembled these pages!

BPG Website: Bruce Bumbarger has updated the list of officers and chairs on the new BPG website. He'll let us know when he gets the archive of business meeting minutes up. Our thanks to Bruce for his continued hard work. The new site looks terrific. Please check it out if you haven't already.

Wiki: Just a quick update on this important project – BPG liaison Alan Puglia and others representing their respective specialty groups held a conference call to discuss the project and initial concerns and questions. They are now in the process of collecting electronic format files of the paper and book catalogs that will be converted into wiki files.

—Sue Murphy, BPG Chair
suemurphy2@mac.com



CIPP

Call For Nominations: The CIPP Nominating Committee is pleased to announce that interest in serving on the board has increased and this year, for the first time, we will be assembling a full ballot with a contested slate. This means that the membership will have a choice of candidates and your votes will count more than ever. In order to complete this objective, we are opening up the nominations to the whole membership. Therefore, we ask our membership to nominate individuals they feel are competent, passionate, and informed about the important issues facing conservators in private practice. We must continue to elect dynamic and effective Board members to serve the membership and represent our views within AIC. Nominees should ideally be PAs or Fellows, members of AIC for at least 5 years, and CIPP members for at least two years. The positions, which will become vacant in April, are as follows:



Vice Chair (1 year term with an additional year as chair and a third as Chair Emeritus) The vice chair is responsible for coordination of publications and works with the Second Director to plan the annual meeting program.

Treasurer (2 year term) The treasurer works in cooperation with AIC to maintain the financial records of CIPP and accounting thereof. Publishes annual financial reports and distributes the reports to the membership.

Director (3 year term) The first director is responsible for planning the CIPP dinner and business meeting at the annual meeting and making sure that the dinner is listed in the registration booklet and final program. Serves as second director and third director in successive years.

Nominating Committee (3 year seasonal commitment, third year as chair) The nominating committee is responsible for compiling a slate of candidates for the CIPP board and nominating committee from the membership body.

If you are considering running for a position on the CIPP Board, or would like to nominate someone, please contact one of us on the Nominating Committee: Linda Roundhill, Chair, Paul Garbarini, Scott Haskins

Business Handbook Update: A table of contents for a proposed CIPP business handbook was published (see it in the CIPP website archives) and many of the presentations given at CIPP over the years have been fit into appropriate areas but there hasn't been a lot of activity in this area of late. George Schwartz, one of CIPP's directors, is currently working to remedy this situation and is starting with the one area that has generated a lot of discussion over the years—contracts. See the CIPP list serve for more information, and if you have contracts or other pertinent documents you'd be willing to share please contact George directly via the website www.ConservArt.com.

NEW! CIPP Student

Memberships Now Available:

Conservators in Private Practice invite all undergraduate and graduate students of conservation to become members of CIPP at the Special Student Membership rate of only \$5!

- Start networking now on our listserv cippnews-l
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- Use our website to find news and to contact other members via the CIPP Members Online Directory at <http://aic.stanford.edu/sg/cipp/>

Save time and money by signing up online. To join at the student member level simply go to the AIC website and click on the membership link to download a 2009 renewal form.

—Victoria Montana Ryan, CIPP Chair
acs@artcareservices.com



ELECTRONIC MEDIA

AIC Annual Meeting: We are in the process of planning the EMG Session at the AIC 2009 Annual Meeting in Los Angeles. EMG Program Chair Gwynne Ryan got a strong response to the call for papers and is preparing an EMG session that promises to be an exciting lineup of professional presentations on the topic of preservation and conservation of installation art, the preservation, archiving, and migration of formats, and the preservation of web based art.

In addition to the EMG session, we are planning to offer a workshop. This workshop will be a full-day course introducing the topic of videotape, audio recording, and optical media preservation. As an introductory course, participants will learn about the variety of media formats: their history, technology, and deterioration phenomena as well as the basics of proper care

and preservation of these media formats. Please plan on attending the EMG session, the EMG workshop and the EMG Business Meeting. We are looking forward to see you in LA.

The Digital Photographic

Documentation: *The AIC Guide to Digital Photography and Conservation Documentation* is available for sale at the AIC office (\$20 for members, \$30 for non-members). Please visit the AIC website and download the publications catalogue and ordering form at aic-faic.org

Membership and Listserv:

Please consider becoming part of EMG and joining for only \$20 to support our initiatives and programs. With the membership, you will receive the EMG Optical Pen for proper labeling of optical media. The EMG listserv is available for posting questions and comments. If you are an EMG member and would like to be included in the listserv, please visit the EMG website at <http://aic.stanford.edu/sg/emg/about/listserv.html> for details.

—Christine Frohnert, EMG Chair
c.frohnert@verizon.net



OBJECTS

AIC Annual Meeting: Program Chair Helen Alten has received a large number of very good submissions and is busy sorting through them to create the OSG program. You'll see the results in the Registration Brochure. Howard Wellman is working to find a restaurant near the hotel in LA for our annual business meeting.

Ginny Greene: Ginny wrote to thank the members for the gift we sent her. This was in appreciation of her years of service as *Postprints* Editor, from which she retired last year. She hopes the 2007 *Postprints* (her last edition) will be out by the end of October.

Nominating Committee: OSG



members can look forward to the first election of OSG Program Chair using electronic balloting. Members will receive postcards in March offering the opportunity to vote using a mail ballot, and then e-mails will follow informing members about the website where nominee information and the ballot may be found. This system has been used successfully by EMG. If you are interested in running for OSG Program Chair please contact Julia Day at day.julia@gmail.com or Ellen Pearlstein at epearl@ucla.edu.

OSG "Grants": As discussed in previous columns, Howard Wellman has been researching if and how OSG can best spend down our reserves by funding requests for research, publication, education, etc. To date, there seem to be three options: 1) donate funds to FAIC's existing grant structure, but we would have no say in how they would be spent; 2) create our own granting system, with a panel of reviewers, and a final vote either by a representative panel, or by the members; or 3) continue in an ad hoc fashion with presentations to the membership and immediate vote at the annual meetings. Please send comments to Howard on these options at wellmanconservation@comcast.net.

—Howard Wellman, OSG Chair
wellmanconservation@comcast.net



PAINTINGS

AIC Annual Meeting: Thanks to those who submitted proposals for the annual meeting in Los Angeles. We received many more submissions than we could fit in the program. Our Program Chair, Sue Ann Chui, had a difficult time choosing between them, but she has put together an exciting program and we hope to see many of you in L.A. Don't forget our renowned tips luncheon and please think about sharing any tips you might have. We

want your tips!

Change in PSG Rules of

Order: At last year's business meeting we voted unanimously to switch to online elections. This required a change in our Rules of Order. I proposed this change to the AIC Board of Directors and they approved it at their September meeting. Section V Elections used to state:

"The outgoing Chair of PSG will not serve as Chair of the committee. Nominations for the Nominating Committee will be taken from the floor during the annual business meeting. Members nominated need not be present, but must have expressed a willingness to serve prior to the meeting. The Nominating Committee will be responsible for submitting a slate of candidates to the membership. A call for nominations for officers from the PSG membership will be announced in AIC News and other appropriate forums in the months preceding the annual business meeting, and additional nominations will be accepted from the floor during the annual business meeting. Members are welcome and encouraged to nominate themselves. The election of officers will be held during the annual business meeting, with incoming officers taking office at the close of the annual AIC meeting."

It now states:

"The outgoing Chair of PSG will not serve as Chair of the committee. The Nominating Committee will be responsible for submitting a slate of candidates to the membership. A call for nominations for officers from the PSG membership will be announced in AIC News and other appropriate forums in the months preceding the election. Members are welcome and encouraged to nominate themselves. The election of officers will be held electronically. The voting will close at least two weeks prior to the start of the annual meeting, with voting open for a minimum of two weeks. Incoming officers will take office at the close of the annual AIC meeting."

PSG Award for Outstanding Contributions to the Field of Painting Conservation:

This award will be presented for the first time at the 2009 annual meeting. The award will include a year's membership to AIC and PSG. Please consider nominating a colleague. Candidates must be a member of AIC and PSG.

Outstanding service can be in any number of categories including mentoring interns and fellows, teaching either in a formal academic setting or more informally through workshops and lectures, paintings related research or publications, service to the paintings specialty group, public outreach and advocacy, or any other category that serves the paintings conservation profession. By the time this column is published, the nomination form and instructions should be posted on the PSG website. The applications are due by January 15, 2009.

—Joanna Dunn, PSG Chair
j-dunn@nga.gov



PHOTOGRAPHIC MATERIALS

Winter Meeting General

Information: Thank you to those members who agreed to give talks in Tucson. This year's line-up is very impressive and reflects the diversity of specialties and interests of our members. The talk time, due to popular demand, was changed back to 20 minutes, allowing for more presentations each day.

On January 23, there will be a tour of the Arizona State Museum followed by registration and an opening reception at the Center for Creative Photography. The galleries will be open during the reception. In addition, there will be an open house and tour of the Arizona State Museum on January 25.

For the first time, the



Photographic Materials Group is offering an Angels Project to assist a local institution with preservation needs for their photograph collection. The initiative will take place on January 26 immediately following the Winter Meeting. The Arizona Historical Society in Tucson, Arizona was chosen this year. We hope everyone will stay on an extra day to join us in this effort. Please email Laura Staneff, ldstaneff@gmail.com, with any questions you may have and especially if you plan on attending. Our project goal is directly linked to the number of people involved so please let her know as soon as possible. Check the website for links, maps, registration forms, and the program for the meeting.

Winter Meeting Registration:

Due to delays in the AIC website upgrade, the anticipated online registration features will not yet be available. Online payment will not be possible in time for the meeting registration. However, we will be still moving towards the idea of a totally online interface. Thus, we will only be providing information regarding the meeting and registration forms through the website. **Do not wait for a mailing to submit your registration.** To register, visit the PMG site (<http://aic.stanford.edu/sg/pmg/meetings.html>) and print out the registration form. Fill out the form and then send or fax the form to the AIC office.

You may be asking why we are doing online registration rather than mailings. By conducting registration online we save hundreds of your membership dollars that we can instead put towards research projects, awards, and publication efforts. This method also saves the officers a huge amount of time that they would spend in photocopying, collating, and stuffing envelopes. And, by making this information available via the web we are hoping that you can reference it at any time and that you will not have to print it out, hence making the process more environmentally friendly!

Nominating Committee: The Nominating Committee has received nominations for the upcoming officer election. The ballots will be sent out on October 31. If you do not receive a ballot, it is likely that your e-mail address is not up to date with the AIC office. Please contact AIC if you do not receive a ballot. Voting will close on December 5.

Color Checker Sets: The Color Checker Sets are sold out! Plans for reprinting them are in the works. An announcement will be sent out on the Dist-List when they are available.

—Adrienne Lundgren,
PMG Chair, alun@loc.gov



RESEARCH AND TECHNICAL STUDIES

RATS did not submit a column for this issue.



TEXTILES

Hello and happy autumn, I have lots of exciting progress to report.

AIC Annual Meeting: Thanks to Patricia Ewers' hard work next year's AIC annual meeting in Los Angeles is shaping up to be a terrific time. We will have an exciting 1.5 days of papers on the topics of cleaning, digitization issues, and lab/storage design with a panel discussion and a tips session.

Wiki: The wiki committee, with Mary Kaldany as our representative, is continuing to work on the development and launch of the website. Currently committee members and TSG catalogue editors are compiling completed chapters in digital form. We are happy to report that there is considerable activity for the Textile

Conservation Catalogue right now. The "Environment" chapter, first drafted by Sarah Stevens, is ready for printing. The "Stabilization/Consolidation by Adhesive Methods," section, first drafted by Irene Karsten and Nancy Pollak, the "Dyeing" sub-section of the "Compensation for Loss" section, first drafted by Susan Mathisen, and the "Supports and Mounts" section, first drafted by Teresa Knutson, are nearing final review and should be completed within a year. All of these are part of the "Treatment of Textiles" chapter. The editors have just received first drafts from Anne Murray for the "Moving and Handling" chapter and from Denyse Montegut and Fran Mayhew for the "Fiber Identification" section. These will go out for review within a month. The catalogue editors - Kathy Francis, Mary Kaldany, Nancy Love, Nancy Pollak, and Deborah Trupin - are delighted, if a bit swamped with the work, but are pleased that there is so much progress! They may be putting out a call for additional editors. I encourage you all to volunteer and help them on their task.

I want all of you to consider sponsoring one of your fellow textile conservators for Professional Associate or Fellow of AIC status. We all benefit from fostering professional participation in our field. And once again please check out the certification page at www.aic-faic.org for the latest information and upcoming vote.

—Anne Murray, TSG Chair
anne_murray@msn.com



WOODEN ARTIFACTS

WAG did not submit a column for this issue.

COURSES, CONFERENCES, AND SEMINARS

CALL FOR PAPERS

May 29-31, 2009. 35th Annual Conference of the Canadian Association for Conservation of Cultural Property, Vancouver, Canada—Contact: Heidi Swierenga, (604) 822-2981, heidiswi@interchange.ubc.ca. The deadline for abstracts is December 11, 2008.

August 2-7, 2009. Chemistry Solutions, 42nd IUPAC Congress. Glasgow, UK. Contact: <http://www.iupac2009.org/>. Oral abstract submissions accepted until January 16, 2009; poster abstract submissions accepted until June 5, 2009.

GENERAL

November 20, 2008. "Cultural Respect in Preservation and Conservation." Chapel Hill, North Carolina—Contact: <http://www.ncpreservation.org>

November 24-December 6, 2008. "Management Planning for Cultural

Heritage." Shanghai, China—Contact: Ms Ping KONG, 0086 21 6598 7687, www.whitr-ap.org

January 6-11 2009. Society for Historical Archaeology Annual Meeting. Toronto, Canada—Contact: 301-990-2454, hq@sha.org, <http://www.sha.org>

February 26-28, 2009. Building Museums Symposium 2009, Mid-Atlantic Association of Museums, Washington, DC—Contact: www.midatlanticmuseums.org/buildingmuseums.html, maamquestions@gmail.com

April 1-3, 2009. DigCCurr 2009: Digital Curation Practice, Promise and Prospects, Chapel Hill, North Carolina. Contact: Rachael Clemens, rclemens@unc.edu or <http://www.ils.unc.edu/digccurr2009/>.

April 24, 2009. Going Green: Towards Sustainability in Conservation. The British Museum, London, UK—

Contact: goinggreen@britishmuseum.org, +44 (0)20 7323 8678

April 30-May 4, 2009, 2009 AAM Annual Meeting, The American Association of Museums, Philadelphia, PA—Contact: www.aam-us.org.

June 1-3, 2009. Forum for the Conservation and Restoration of Stained-Glass Windows, New York, NY—Contact: www.forum2009ny.org.

TEXTILES

January 11-21, 2009. Ancient Peruvian Textiles Workshop, Lima, Peru—Contact: Camille Myers Breeze, museumtextiles@gmail.com, www.museumtextiles.com, (978) 851-0110

COURSE OFFERINGS

Campbell Center for Historic Preservation Studies
Mt. Carroll, IL. Note: Scholarships available for select courses through



2009 PROFESSIONAL DEVELOPMENT WORKSHOPS

The following courses are presented with funds from the FAIC Endowment for Professional Development, which is supported by The Andrew W. Mellon Foundation and by contributions from members and friends of AIC. Full descriptions and registration forms are available on the AIC website (www.aic-faic.org) or from the AIC Office: (202) 452-9545, ext. 0.

REGIONAL WORKSHOPS

Workshops, AIC Annual Meeting, Los Angeles, CA, May 19

Paper and Water*, Austin, TX, July 28-31

Paper and Water*, Buffalo, NY, August 4-7

Adhesives for Conservation*, Shepherdstown, WV, October 5-9

Airbrush Techniques, location and dates TBA

Bleaching Techniques*, San Francisco, CA, dates TBA

Plastics and Rubber*, Omaha, NE, dates TBA

*Event is funded in part by a grant from the National Endowment for the Humanities. Special scholarship funds available for U.S. residents

FAIC ONLINE COURSES (2009 DATES TO BE ANNOUNCED)

Digital Photography 101 for Conservation

Establishing a Conservation Practice

Estimating Conservation Projects

Laboratory Safety for Conservation

Marketing for Conservation

Mitigating Risk: Contracts and Insurance for Conservation

Professional Responsibility in Conservation

Records and Information Management for Conservation

See the AIC website for complete course listings and FAIC co-sponsored courses.

COURSES, CONFERENCES, AND SEMINARS

AIC—Contact: Campbell Center; (815) 244-1173; Fax: (815) 244-1619; registrations@campbellcenter.org; www.campbellcenter.org

Centre for Photographic Conservation Courses

Preservation and Conservation of Photographic Materials (April 20–June 5, 2009); Preservation & Conservation of Photographic Materials–Theory (April 13–15, 2009); The Identification of Photographic Processes (April 27–29, 2009); MASTER CLASS - Advanced Photographic Conservation Techniques (June 15– July 17, 2009); Rediscovering Historic Photographic Processes (April 20–24, 2009); Preservation of Photographic Negatives: Paper, Glass and Nitrate, Acetate and Polyester sheet and roll film systems–Theory (April 30–May 1, 2009); Suppressed Storage Environments, Systems & Materials for Photographic Albums, Prints, Glass & Plastic Negatives & Positives including Colour (October 5–7, 2009).

UK—Contact: Angela Moor, +44 020–8690 3678; Fax: +44 020–8314 1940; cphotoconservation@cpc-moor.com; www.cpc.moor.dial.pipex.com

International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) Management Planning for Cultural Heritage (November 24–December 6, 2008); International Course on Stone Conservation (April 16–July 3, 2009, Venice, Italy—Contact: ICCROM, +39 06 585531; iccrom@iccrom.org

McCrone Research Institute Polarized Light and Forensic Microscopy (December 1–5, March 16–20, June 8–12); Indoor Air Quality: Fungal Spore Identification (December 15–19, April 20–24); Practical Infrared Microspectroscopy – FTIR (December 8–12); Fluorescence Microscopy (November 5–7); Advanced Polarized Light Microscopy (March 23–27 and

September 14–18); Hair and Fiber Microscopy (April 6–10); Microscope Cleaning, Adjustment and Maintenance (April 13–14); SEM/X-Ray Spectroscopy (April 27– May 1). Chicago, IL—Contact: Lauren Logan, (312) 842-7100; registrar@mcricri.org; www.mcricri.org.

Northern States Conservation Center Online Courses/Online Museum Classes

Introduction to Museums (Nov 3 - Nov 28, 2008, online at www.museumclasses.org), Care of Textiles (Nov 3 - Nov 28, 2008, online at www.museumclasses.org), Materials for Storage and Display (Nov 3 - Nov 28, 2008, online at www.museumclasses.org), Preservation Environments (Nov 3 - Nov 28, 2008, online at www.museumclasses.org), The Mission Statement: Is it really that important? (short course) (Nov 10 - Nov 14, 2008, online at www.museumclasses.org), Exhibit Fundamentals: Ideas to Installation (Nov 3 - Dec 12, 2008, online at www.museumclasses.org) Contact: Helen Alten, helen@collectioncare.org

ditional and modern/contemporary artists' materials and techniques. Provides analytical services to the Straus Center conservators and research curator in the study and preservation of the collection and documents findings. Organizes workshops and symposia to engage others in examining issues related to conservation science research. Assists with instrument maintenance and repair as necessary, and in training others to use the instruments.

Required Education, Experience, and Skills: Ph.D. in chemistry/physical science combined with a demonstrated interest in the visual arts is required. The successful candidate will have a high level of scientific achievement and a serious interest in a career as a scientist in the museum field. Experimental research experience and an ability to conduct academic research required. Experience with microscopy of diverse types, image analysis, and advanced computational skills desirable. Strong oral and written communications skills required. Record of publication or presentation preferred. Knowledge of one or more foreign languages preferred.

Additional Information: The Andrew W. Mellon Foundation funds this 3-year research fellowship. The Straus Center has a long history of multi-disciplinary collaboration between scientists, curators, and art historians. The Harvard Art Museum houses world-renowned art collections and important study collections of art and artists' materials. The laboratories are equipped with polarized light and reflectance/UV fluorescence microscopes, GC-MS, FT-IR, Raman and XRF Spectrometers. Beyond the resources of the Center, Harvard University offers access to specialized analytical equipment and a large scientific community.

Application Instructions: Please apply online via the Harvard University Jobs website at www.jobs.harvard.edu, Requisition #35528. Inquiries may be directed to kathleen_kennelly@harvard.edu (telephone - 617.495.2392; fax -

POSITIONS

HARVARD ART MUSEUM

Andrew W. Mellon Postdoctoral Fellowship for Scientists in Conservation

Duties and Responsibilities: The Straus Center for Conservation and Technical Studies is seeking a post-doctoral scientist for a 3-year research fellowship in the field of conservation science. This position reports to the Senior Conservation Scientist and works with scientists, conservators, conservation fellows, curators, and academic art historians on research projects. Utilizes a broad range of art and artists' materials collections in the Art Museum and other institutions. Emphasis will be shared between tra-

POSITIONS, INTERNSHIPS, AND FELLOWSHIPS

617.495.0322). The Harvard Art Museum requires a pre-employment reference and background screening. Harvard University is an Affirmative Action / Equal Opportunity Employer.

METROPOLITAN MUSEUM OF ART

Research Scholarships in Photograph Conservation 2009-2011

The Metropolitan Museum of Art seeks qualified applicants for the position of Research Scholar in Photograph Conservation. The Research Scholar will have a two-year term with the possibility of renewal for a third year. The Scholar will work on-site in the photograph conservation lab of the Sherman Fairchild Center for Works on Paper and Photograph Conservation. He or she will report to the Sherman Fairchild Conservator of Photographs who in turn reports to the Curator in Charge of the Department of Photographs. The stipend will be \$40,000 per year, plus a \$3,000 travel allowance and a \$2,000 contribution to health insurance.

Research Scholars will be expected to have a graduate degree in conservation or equivalent experience and should be completely committed to the conservation of photographs as their area of specialization. The Scholar will be selected by a committee comprised of the Conservator of Photographs, the Curator in Charge of the Department of Photographs, the Associate Director for Administration, and the Senior Manager for Academic Programs.

The Research Scholar's term will follow the academic calendar, with successful candidates beginning in September. Scholars may apply during the second year of their tenure for an extension to a third year.

A typed application (in triplicate) should include: full resume of education and professional experience, statement (not to exceed one

thousand words) describing what the applicant expects to accomplish during the fellowship period and how the Museum's facilities can be utilized to achieve the applicant's objectives, tentative schedule of work to be accomplished, official undergraduate and graduate transcripts, and three letters of recommendation (at least one academic and one professional). The deadline for completed applications is January 2, 2009. Applications should be sent to Attn: Marcie Karp, Fellowships in Conservation Program, The Metropolitan Museum of Art, 1000 Fifth Avenue, New York, New York 10028-0198. More information is available on the Metropolitan's Museum's website at http://www.metmuseum.org/education/er_fellow.asp.

METROPOLITAN MUSEUM OF ART

Conservation Fellowships

The Andrew W. Mellon Foundation and the Sherman Fairchild Foundation, through The Metropolitan Museum of Art, award a number of annual conservation fellowships for training and research in one or more of the following museum departments: Arms and Armor, Asian Art Conservation, The Costume Institute, Musical Instruments, Objects Conservation (including sculpture, metalwork, glass, ceramics, furniture, and archaeological objects), Paintings Conservation, Paper Conservation, Scientific Research, and Textile Conservation. Also available through The Metropolitan Museum of Art is a Polaire Weissman Fellowship for conservation work in The Costume Institute. Fellowships are typically one year in duration. Shorter-term fellowships for senior scholars are also available.

It is desirable that applicants should have reached an advanced level of experience or training. All fellowship recipients are required to spend the fellowship in residence in the department with which they are affiliated.

The stipend amount for one year is \$40,000 for senior conservators/scientific researchers and \$30,000 for junior conservators/scientific researchers, with up to an additional \$5,000 for travel and miscellaneous expenses. Senior fellowships are intended for well-established professionals, with advanced training in the field and proven publication record. A typed application (in triplicate) should include: full resume of education and professional experience, statement (not to exceed one thousand words) describing what the applicant expects to accomplish during the fellowship period and how the Museum's facilities can be utilized to achieve the applicant's objectives, tentative schedule of work to be accomplished, official undergraduate and graduate transcripts, and three letters of recommendation (at least one academic and one professional). The deadline for completed applications is January 2, 2009. Applications should be sent to Attn: Marcie Karp, Fellowships in Conservation Program, The Metropolitan Museum of Art, 1000 Fifth Avenue, New York, New York 10028-0198. More information is available on the Metropolitan's Museum's website at http://www.metmuseum.org/education/er_fellow.asp.

DENVER ART MUSEUM

Conservator of Textiles

The Denver Art Museum seeks a senior-level Conservator of Textiles who will be responsible for the care and conservation treatment for all of the textiles in its diverse collections. This includes over 7000 pieces from seven curatorial departments. In addition there are 20,000 objects Native Arts collection, many of which have textile components. The museum's holdings include a large collection of quilts and other flat textiles, tapestries, samplers, costume, Pre-Columbian and ethnographic materials. The candidate will help outfit and develop a new conservation lab for textile treatments.

POSITIONS, INTERNSHIPS, AND FELLOWSHIPS

The Conservator should have an advanced degree from a recognized conservation training program or the equivalent. A minimum of ten years experience is required, preferably working in a museum-based conservation laboratory. The position requires excellent written and verbal communication skills as well as the ability to promote the conservation department through research, lectures, professional publications, and teaching. The candidate should be able to work with a broad range of individuals inside/outside the museum.

Applications will be accepted through 5 PM, November 20, 2008. Interviews will begin in late November. Informal inquiries may be directed to Carl Patterson, Director of Conservation, 720-865-5029, cpatterson@denverartmuseum.org.

The museum offers an excellent benefit package. Position and salary will be based, in part, on the successful candidate's qualifications and experience.

To apply, please submit a letter of application, a resume, the names and telephone numbers of three professional references, and three conservation treatment examples to:

HR Coordinator
Denver Art Museum
100 W. 14th Ave. Parkway
Denver, CO 80204
or hrcoordinator@denverartmuseum.org

WINTERTHUR/UD PROGRAM IN ART CONSERVATION

Director

The Department of Art Conservation invites applications for a tenure-track position at the Associate or Full Professor level, who will serve as the Director of the Winterthur/UD Program in Art Conservation (WUDPAC), starting September 1, 2009.

The Director of WUDPAC is responsible for leadership of the Master's-level graduate program in art conservation and teaching in his or her specialty (conservation treatment, con-

servation science, or related fields such as technical art history or archaeology). The Director reports to the Chairperson of Art Conservation and responsibilities include but are not limited to mentoring and advising students, supervising placements for internships and summer work projects, managing the teaching schedule and the WUDPAC budget, and coordination of faculty appointments, admissions, orientation, and final oral presentations, portfolios, and exams. The position also involves donor cultivation, tours and public outreach. The WUDPAC Director chairs the Executive Committee and serves on the Curriculum and Admissions Committees. It is anticipated that the WUDPAC Director will be assisted by an Associate Director. The WUDPAC program, which began in 1974 and is one of five graduate-level conservation programs in the United States, accepts up to 10 students a year. The WUDPAC director will be expected to work closely with the Director of the Winterthur Conservation Department, the faculty at Winterthur and the University of Delaware, faculty at other North American and international graduate conservation programs, and graduates of the WUDPAC program. He or she will be expected to teach and to carry out research as is expected of all University of Delaware tenure-track and tenured faculty members.

Qualifications: Senior professional in conservation or related fields, with a Master's degree and possibly a Ph.D. Salary and level of faculty appointment will be commensurate with experience, research, and publications.

Contact: Send cover letter and curriculum vitae by December 1, 2008 to Dr. Joyce Hill Stoner, Director, UD Preservation Studies Doctoral Program, c/o Winterthur Museum, Rt. 52, Winterthur, DE 19735; or by email to jhstoner@udel.edu. The curriculum vitae and all application materials shall be shared with departmental faculty. The University of Delaware is an Equal Opportunity Employer which encourages applications from Minority Group Members and Women.

WEST LAKE CONSERVATORS Paper Conservator

West Lake Conservators, a Central NY, 33 year-old practice known for specializing in paintings, seeks an experienced paper conservator. Our spacious paper lab established in 1998 is well equipped to serve our clientele of small to mid-sized museums and private collectors. Requirements as our sole paper conservator are; competent computer skills, the ability to work independently and estimate treatment times on a wide range of paper-based art and artifacts, conduct surveys, undertake preservation framing, interface with clients and educate the public. Send resume and letter of intent to Susan@westlakeconservators.com.

THE ETRUSCAN FOUNDATION

Request for
application

2009 Conservation Fellowship

The Etruscan Foundation Conservation Fellowship is available to objects conservators and/or graduate students enrolled in North American conservation programs.



The 2009 Etruscan Foundation Conservation Fellowship is made possible through the generous support from the Ferdinando & Sarah Cinelli Trust.

APPLICATION DEADLINE
February 20, 2009

For application details go to:
www.etruscanfoundation.org

Richard F. String, *Executive Director*
The Etruscan Foundation
P.O. Box 26 • Fremont, MI 49412
T: 231 519 0675 • F: 231 924 0777
Email: office@etruscanfoundation.org
www.etruscanfoundation.org
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APS

Art Preservation Services, Inc.

preserving objects of the past
for future generations

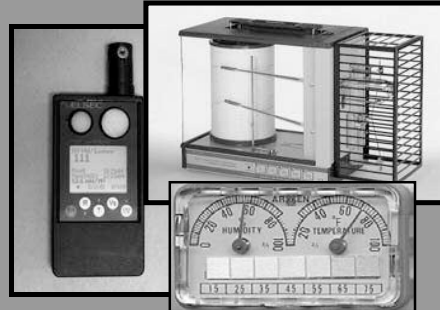
315 East 89th Street
New York, NY 10128

(212) 722-6300 tel
(212) 427-6726 fax

information@apsnyc.com
consulting@apsnyc.com

Environmental Monitoring Equipment

- Arten Thermohygrometer
- Isuzu Hygrothermograph
- Psychrometer
- Elsec UV Monitor
- Visible Light Meter



Microclimate Preservation Systems

- RHAPID Pak, Pre-conditioned Silica Gel
- Scavenger Pollution Control Sheet

NOW IN OUR 20TH YEAR

Founded in 1988 by Steven Weintraub, APS specializes in the environmental preservation of museums, art collections, archives, and historic buildings. In addition to the products listed above, we also provide environmental consultation and preservation research services.

For more information, please visit our web site: www.apsnyc.com.

COMING SOON!

We are currently updating our web site to allow our customers to place their orders online. Look for upgrades in the coming months.

American Institute
for Conservation of
Historic & Artistic Works

1156 15th Street, NW
Suite 320
Washington, D.C. 20005

info@aic-faic.org
www.aic-faic.org



PERIODICAL