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## Annual Meeting Presentations

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*The 2010 WAAC Annual Meeting  
was held September 15 - 18  
in Portland, Oregon.  
The papers from the meeting are  
listed below along with summaries  
prepared by the speakers.*

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### **Breaking through the Glass Ceiling: Exhibiting Art under Natural Light at LACMA**

Mark Gilberg, Charlotte Eng, and Frank Preusser

In February 2008 the Broad Contemporary Art Museum (BCAM) opened on the campus of the Los Angeles County Museum of Art (LACMA). Designed by the renowned architect, Renzo Piano, the three-story building features 60,000 square feet of gallery space, a distinctive red escalator that transports visitors to the third-floor main entrance, and a horizontal roof composed of glass panels and saw-tooth skylights that channel north light into the third floor galleries while excluding direct sunlight.

The use of diffuse natural light to illuminate the third floor galleries is one of the character defining features of the building and was purposely incorporated into the design to take advantage of the varying intensity and color of natural light to enhance the visitor viewing experience.

To control the amount of light entering the building a passive roof-light system is used consisting of three layers: (1) inclined fixed external shading, (2) external motorized roller blinds, and (3) horizontal roof glazing. Using this passive system the total illumination exposure and the instantaneous light levels are controlled.

In this paper, the authors will review the design of the roof lighting system and present an assessment of its overall effectiveness using environmental data collected over the past two years. The practical implications associated with recent changes in museum architecture to take advantage of diffuse natural light to illuminate artwork will be discussed in terms of the changing nature of exhibition and conservation practice.

### **The New Mexico History Museum: Before and After Opening**

Anya McDavis-Conway

A wide array of conservation challenges were faced both before and after the opening of the New Mexico History Museum (NMHM). The NMHM opened Memorial Day weekend 2009 in Santa Fe and strives to tell the story New Mexico's vibrant and multicultural past (and present) through its artifacts.

The entire New Mexico Department of Cultural Affairs conservation staff was involved and invested in the opening of this new museum, which is the largest in the state. This talk focuses on several of the difficulties encountered before and after opening of the museum, and will share some of our department's experiences and lessons learned. Included in our initial concerns were: preparing objects for long-term display, the exhibit environment, and working with an external design firm.

Before construction began on a single object was moved, extensive planning went into the creation of the NMHM, which was built to house and display the history collections of the Palace of the Governors (POG). The POG, a historic adobe building built in 1610, is located on the main Santa Fe plaza and was renovated to house the Museum of New Mexico in 1909. Opening the NMHM gave the POG the ability to have more gallery space as well as a controlled environment to display and safely store its collections.

As the museum was being constructed, The NMHM/POG was awarded a National Endowment for the Humanities (NEH) grant in 2007 in order to move and rehouse its 3D history collection. This collection of 10,735 objects includes such diverse artifacts as leather saddles, large furniture, household items, weapons, and fine jewelry.

After the museum's opening, the NEH project has allowed us to finally unpack items, reorganize, and provide objects with customized safe storage mounts kept on compactor units. This complex project, which includes environmental monitoring and IPM, will help to ensure the long term preservation and accessibility of these collections. Although the

NMHM is a modern facility, working in a new building and sometimes unknown environment has presented challenges.

It has been a job requirement to act quickly and answer questions such as: how can eight pianos be relocated given that a smaller elevator was installed in the off-site storage building after the objects were originally moved in? What happens when your specially designed storage compartments are just too small for antique pistols? How do you deal with mysteriously leaking oil in exhibit galleries? We strive to work through these and other issues while collaborating with other departments and still always keeping the best interest of the NMHM.

### **White Stag Block**

Art DeMuro

Art DeMuro has been a developer of historic properties in Portland for nearly twenty years. In this presentation, he will discuss his most challenging and impactful project to date—the White Stag Block—which brought back to life three turn-of-the-century buildings in the Skidmore/Old Town Historic District. Art will discuss the restoration of some of the key historic features such as cast iron elements, wood storefronts, fire-damaged interiors, and deteriorated plaster.

### **In Pursuit of the Ideal: The Restoration of the Sainte-Chapelle**

Brooke Masek

“To restore a building is not to preserve it, to repair, or rebuild it; it is to reinstate it in a condition of completeness which could never have existed at any given time.”

*Viollet-le-Duc, Dictionnaire  
raisonné de l'architecture française du  
X<sup>e</sup> au XVI<sup>e</sup> siècle, 1868*

The early 19th century found France in a state of political turmoil. Still reeling from the Revolution, the French were unsure of their government and what it meant to be 'French.' By 1830, however, some stability had returned after the July Revolution and the ascension to the throne of Louis-Philippe. It was now important, more than ever, to establish a government that helped to

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define what it was to be 'French.' The idea of formulating a national heritage was dominated by a scientific approach that would demarcate those monuments considered to be "eternal masterpieces and specimens of each epoch." Using the 1857 text *La Sainte-Chapelle de Paris* on the restoration of the Sainte-Chapelle in Paris published by its restorers, this paper explores the 19th-century idea of 'restoration,' how it was used in the restoration of the Sainte-Chapelle, and how it has affected our current understanding of Gothic architecture today.

### **Brass and Wood Screws in American Furniture**

Chris White

The original brass hardware on American furniture is a useful documentary resource that records the aesthetic style of a period. The chemical composition of that metal also records the developing technology of the time. This study outlines the changes in brass alloy composition as observed using X-ray fluorescence analysis on dated examples. It will summarize the results and conclusions of brass hardware analyses from the Museum of Fine Arts, Boston and offer some suggestions for why these changes occur. A coincident study of 18th and 19th-century wood screw morphology will also be summarized, indicating the uses and limitations of wood screws in dating.

### **Desalination of Archaeological Ceramics: Measuring Progress and Success**

Chris White

Ceramic desalination is a common treatment for archaeological materials from high salinity environments and is often performed to prevent salt-based damage. The Arizona State Museum Conservation Lab has performed a significant number of desalination treatments that have resulted in revisions to common desalination calculation practices as well as the tentative development of several proxy measurements. The revised measurement technique provides a flexible tool to monitor desalination treatments and has highlighted the strengths and limitations of current practice.

The numerous desalination treatments offered Arizona State Museum staff the opportunity to begin to understand ceramic desalination, its pitfalls, and potential. The work was undertaken as part of conservation treatments associated with the Pottery Project, a project that included assessment, preservation, rehousing, and research on more than 20,000 southwestern Native American ceramic vessels.

### **Understanding Performance Properties and Limitations of Coatings for Metals**

Tami Lasseter Clare

The conservation and preservation professions in the USA and in Europe face the real prospect that in the near future there will be no viable clear coating systems to protect outdoor monuments, sculptures, buildings, and other significant artifacts made of copper or iron alloys against corrosion and degradation.

If regulations outlawing the use of solvents common to the formulation and application of such coatings are expanded in the next two or three years, the only options available may be short lived wax pastes that typically require reapplication every one to three years and contain some percentage of solvents that are also likely to be restricted. In this paper, novel, environmentally safe, and long lasting clear coatings for metal will be discussed. Through the use of a variety of additives, the mechanical and chemical properties of coatings may be tuned to improve coatings' performance.

### **Uncovering Mysteries of a Chinese Burial Relic**

Tami Lasseter Clare

In the Han Dynasty elaborate bronze Money Trees were entombed with the deceased to provide prosperity in the afterlife. In the collection of the Portland Art Museum is a curious example of one of these trees: it shows heavy soil encrustations and plant roots that have grown onto the branches. And, some of its branches appear to have been replaced while other broken branches may have been repaired. This study demonstrates how scientific analysis (XRF, FTIR, and

X-radiography) of the tree can be used help establish whether all or part of the tree could date to the Han dynasty.

### **Art Conservation at the JSMA**

Jan Cavanaugh

Public awareness of art and artifacts conservation has increased exponentially over the last 20 years or so. At the same time demands have risen on institutions to meet national standards aimed at preserving cultural property. After the Portland Art Museum, the main museums of art in Oregon are at universities. The largest one is the Jordan Schnitzer Museum of Art at the University of Oregon in Eugene.

The museum has become more and more actively engaged in conservation concerns since 1990. That year an IMLS General Conservation Survey was conducted to improve collection care, address environmental conditions, and identify long-range conservation goals. Eventually funds were raised for a major renovation and expansion of the museum, which was completed in 2004. This paper will discuss the conservation projects of the JSMA that have been supported by grants, focusing on those since the expansion.

### **Developing Recommendations for Historic Interiors that Are Compatible with Art and Object Conservation Recommendations: A Case Study**

Jill Johnson

This presentation will address maintenance and capital improvement recommendations for buildings owned or leased by the Southern Oregon Historical Society (SOHS). Of the 28 buildings under the management of SOHS, seven house the institution's research library or collections. Six of the seven buildings are historic or potentially historic; they include the Old Jackson County Courthouse, the Catholic Rectory, the Beckman Bank, and the C.C. Beckman House in Jacksonville; the Hanley House, located outside Jacksonville; and the History Center in Medford.

The recommendations were prepared by Historic Preservation Services. Com-

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panion recommendations concerning the SOHS collections were prepared by Marie Laibinis-Craft of MLC Objects Conservation, LLC, Portland, Oregon and integrated with the architectural recommendations into a jointly-issued report. The presentation will examine the preparation of recommendations as a multidisciplinary effort to ensure that guidance provided for the historic interiors and collections was mutually compatible. Recommendations that will be discussed include: daylighting controls; environmental controls; non-structural restraints for elements on exhibition and in storage; pest management; emergency planning; and security and fire protection.

### **Finding Cures for the Common Heritage Flu**

Kyle Jansson

Cultural organizations across the West are dealing with a variety of ailments resulting from unstable funding, higher public expectations, and limited capacity. Taking aspirin, drinking plenty of liquids, and enjoying long naps won't solve them. Several coordinated efforts are underway in Oregon to identify systemic cultural issues and creatively find treatments for them. The treatments might change the way the state's heritage organizations collect and preserve materials, as well as how preservation training is provided.

### **Parafilm M Fills for a Mexican Lacquered Gourd Vessel**

Yoonjo Lee

An example of a Mexican lacquered gourd container from the Michoacán State in Mexico was selected to be in the exhibition at NMAI's George Gustav Heye Center in New York City opening in the Fall of 2010. A made-for-sale item, the gourd container was an eye-catching red on black using the rayado incising technique to create a flora and fauna design.

The container had some minor losses to the red lacquered design, but the red lacquer on the lid was actively flaking and tenting, and the majority of the flora and fauna designs had significant losses. As a decorative piece, the beauty of the gourd container was compromised by the amount of loss on the lid; and to give

the container and lid a cohesive aesthetic appearance, the areas of loss needed to be filled. A filling technique using Parafilm M was selected to replace the losses in the red lacquered areas on the lid. A method mentioned in a *JAIC* article in 1998 by Marianne Webb, was successfully utilized to revitalize the beauty of this Mexican lacquered gourd container.

### **The Putti Project**

Jonathan S. Fisher

This talk discusses the restoration and preservation of two caste zinc fountain sculptures for a historic property in Northern California. The figurines were badly damaged and had been repaired before; their patina had been ruined, there were cracks and distortions, as well as separated parts.

My plan was to collaborate with experts in the field and research a variety of treatment options before deciding on best methods and materials available. After completing a thorough examination, documentation of condition, and analysis of possible treatments, the process of restoring the Putti was charted, and then implemented step by step. Once the work was completed and the figures were made whole again, they were ready to function in their intended setting, performing as fountains, at the entrance to a grand garden.

Products: PC7 Epoxy Paste, Protective Coating Co.  
Super Alloy 1, Mugeyeweld LLC.

### **Technical Study and Conservation of Two Japanese Masks: Investigating Their Attribution as a Pair and Stabilizing Fragile Matte Paint**

Linda Ying-Chun Lin

The impetus for carrying out a comparative technical study on two stylistically related Japanese demon masks in the collection of the UCLA Fowler Museum was to answer the questions regarding their material composition, provenance, and suspected manufacture by the same hand as noted in the museum's records. A study of the Fowler masks' iconographic origins revealed that the pairing of open and closed-mouth expression of each mask represents "aun no ittsumi," a Buddhist iconography that was adopted by

the purification rituals indigenous to the Japanese religious tradition of exorcising evil spirits embodied by mask-wearing scapegoat demons.

As the pairing of the iconographic expressions supported the pairing of the Fowler masks when used in the same ritual context, results of the technical investigation also informed that the masks were manufactured in close association with one another. However, there lacked convincing evidence that could firmly attribute the masks to the same maker. Commencing with an analytical investigation into the masks' material composition and current state of preservation, this research project concluded with stabilizing the fragile matte paint and locally reinforcing the structural defects with a light-weight and mechanically-reversible fill.

### **Nip, Tuck, and Fill: Producing Digitally Printed Textile Infills for a Group of Pre-Columbian Textiles at LACMA.**

Lynn Ellen Bathke

A group of Pre-Columbian textiles on rotation for the light sensitive gallery at the Los Angeles County Museum of Art were considered suitable for a new method of loss compensation. At LACMA, a fine art museum, aesthetics and imagery of objects are a major priority for display and exhibition. The imagery within these textiles is integral to contextualizing the object's history and relationship to the viewer. Currently, through the technological development of digital textile printing, transferring an image directly onto fabric provides a conservator with unique treatment options. The process of creating a digitally printed infill is a collaborative effort, and is dependent upon three main steps.

One, a digital image file is created for reproduction using Adobe Photoshop. Conservation photographer, Yosi Pozeilov, produced these digital images along with the consultation of conservation. Two, the digital image file is used to print on a suitable substrate with a digital textile printer. CadFabulous, a Los Angeles based printer, supplied the printing materials. The Mimaki TX4, a Japanese dye-sublimation printer, was used to print the photographic infill. In order to create a suitable digital textile

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print for use in conservation, a close collaboration is required between the conservator and printer. Three, the final textile print is used to infill the area of loss on the textile, and complete the conservation of the object for exhibition.

While this process provides conservators with a unique option for conservation, display, and exhibition, further analysis of dye fading and longevity of prints needs consideration.

### **Building as Art: Preserving the National Maritime Museum**

Mary Slater, Paul Nachshiem, Jason Wright, Mark McMillan, Katharine Untch, and David Wessel

The building that currently hosts the Maritime Museum, a National Historic Landmark built in 1939, was originally the main building of San Francisco Aquatic Park, a Works Progress Administration (WPA) project carried out during the Great Depression. The building was intended to serve as a bath house with changing rooms, an emergency hospital, banquet rooms, sun rooms, and a lounge.

The structure, built to resemble an ocean liner, was designed in the streamline Moderne style by the architects William Mooser II and William Mooser III. A team of artists including Hillare Hiler and Sergeant Johnson contributed to the cohesive aesthetics of the building. The reinforced concrete building is ornamented with nautical architectural elements, metalwork, and a multitude of WPA art works including murals, mosaics, bas reliefs, and terrazzo floors. The result is a building that is equal parts art and architecture, where curvilinear forms combine in a monumental study of light and water as expressed by the sea. Over time, innovative architectural design and artistic details have proven vulnerable to climatic conditions, resulting in deterioration of building features and artworks alike. Water leakage through window frames and flat roof decks has undermined plaster and canvas mural substrates. The original attachment method of the bas relief led to staining and efflorescence of the slate panels. In addition, changing tastes and political agendas have led to the over-painting of

several murals. This paper will explore how Architectural Resources Group has been working with the National Park Service to develop and implement repair, rehabilitation, and conservation solutions to address issues that threaten the significant architecture and works of art in this charming San Francisco icon.

### **Identifying Salts during the Desalination Process Using Spot Test Papers**

Nancy Odegaard, Pat Hill, and Werner Zimmt

Desalination is a relatively common conservation treatment that is used to remove soluble salts and prevent ongoing damage on objects. Protocols have been developed to carefully track the results for thousands of archaeological objects every year because of the direct relationship between the salinity of a solution and the conductivity of a solution. While conductivity readings are generally used to interpret quantities of soluble salts through the measure of current carried by salts in bath solutions, they cannot be used to calculate exact amounts. Nor do they indicate the types of salts present.

Analytical instruments used for identification salts have included XRD, FTIR, Ion chromatography, Microscopy, and Microchemistry. This paper describes a study of EM Quant test strips which allow for an inexpensive, time-saving, and semi-quantitative determination of chloride, nitrate, and sulfate ions held in bath solutions in the mg/l range without additional preparation of the samples.

### **Conservation and Beyond: The Fire Restoration of the Governor's Ceremonial Suite in the Oregon State Capitol**

Peter R. Meijer

As a result of the third fire in the Oregon State Capitol's history, the Governor's Ceremonial Suite required complete restoration and renovation from fire and smoke damage. Rapid response by the Facility Services saved historic material from disposal by fire restoration contractors allowing the conservation and restoration teams to restore the historic spaces. A combination of conservation and restoration were employed for the

repair and replacement of fixtures, finishes, exterior marble, interior walnut paneling, plaster work, and WPA pieces. All work was based on research, field analysis, conservation standards, and preservation practice. The presentation of the restoration will elaborate on the coordination between conservators, preservation architects, design architects, owners, and insurance representatives. The decisions to employ conservation principles or move beyond conservation will be discussed and elaborated upon.

### **Chinese Altars at the Historic Site of Kam Wah Chung & Co**

Thomas Fuller

There are several Chinese altars in the historic site of Kam Wah Chung & Co. in John Day, Oregon. This paper concerns the conservation of these altars during the period 2006 to 2008. It also presents the search, not ended, for the material cultural context for the altars and their paper-based offerings.

### **The Use of the iPad as an Image-Based Tool for Condition Reporting and Location Marking for Scientific Analysis at LACMA**

Yosi Poseilov

For years the Conservation Center at LACMA has tried to implement an image-based condition reporting system using digital technology. It was not until recently that this implementation became a viable solution with practical results using the iPad platform as the technological base. This presentation reviews briefly the history of condition reporting and establishing a workflow that is simple and organic using the touch-based device. Examples of this digital documentation will be shown, positive and negative aspects will be discussed, and future work will be outlined.

### **Silver Tarnishing Properties of Gloves Used in Conservation**

Will Hoffman

Over the last decade, concern has grown over the possible presence of harmful materials, such as sulfur and chlorine,

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in gloves used in conservation. Unfortunately, upon reviewing the current conservation literature, little information on the subject was found. Therefore, this project was designed to determine if any commonly used gloves induced tarnishing to silver and sterling silver.

Gloves tested included cotton, cotton with rubbery grips, latex, three nitrile (blue, purple, green colors), vinyl, and nylon with polyurethane fingers. An Oddy test was adapted in which samples of the various glove types were placed in direct contact with coupons of both pure and sterling silver. The gloves were also tested for chlorine (Beilstein test), soluble chloride ions (silver nitrate), and sulfur in a reduced oxidation state (azide test).

Further analysis was conducted using Fourier Transform Infrared Spectroscopy (FTIR) via an Attenuated Total Reflectance (ATR) attachment to determine if glove materials transferred residues, which could possibly lead to tarnishing. Results have shown that all glove types except for the nylon glove with polyurethane fingers induced tarnishing ranging from slight to severe with the worst tarnishing associated with high content of sulfur in a reduced oxidation state in glove materials. FTIR analysis indicated that only white cotton and one nitrile variety glove did not transfer residue.

### **Exploring 19th-century Restorations; the Study of Four Apulian Vases from Berlin**

Marie Svoboda

This paper will present the study and treatment of a group of South Italian vases, a collaborative project initiated in 2008 between the Antikensammlung in Berlin and the J. Paul Getty Museum. The history of the vases and general scope of the project will be reviewed, focusing primarily on the examination of two colossal artifacts from this group, loutrophoroi (F 3263 and F3264), both of which were restored in the early 19th century. Information obtained from historic documentation, visual examination, and scientific analyses provides clues for who the 19th-century restorer may have been, and raises issues regarding their ultimate display.