

Newsletter

September 2013

Volume 35 Number 3

Nicholas Dorman

President's letter

After a year that has flown by more quickly than I could have imagined, it is time for me to yield the seal of office to Katie Holbrow and to warmly welcome her as the new president of WAAC.

Running an election and organizing and hosting a meeting do loom large in the VP/president's life for a while, so much so that the fleeting board tenure of a single year as vice president and a subsequent one as president, doesn't feel as though it really allows you sufficient time to get your hands dirty with other issues.

Contents President's Letter 1 **Regional News** 2 An Anti-Graffiti Coating 12 for Michael Heizer's Levitated Mass by Mark Gilberg and John Hirx 16 **Treatment of Native American Ethnographic Objects** The Use of Traditional **Techniques and Materials** for Modern Conservation by Nancy Fonicello An Alternative to Velcro? 20 Upper Edge Hanging Methods Using **Rare Earth Magnets** by Gwen Spicer **Book Review** 24 **AYMHM** 25 Still, those milestones in the WAAC calendar themselves are an achievement, particularly in the culminating moments in the months before the meeting, when the board team unites to bring in talks and spread the word, to fund, organize, and pull off another meeting, and the members sign up to present and attend.

This year's meeting was no exception to that pattern; I'm glad to say. Although it had been a few decades since Patricia Leavengood organized a WAAC meeting in Seattle in the early 90s, I had felt no small level of concern that Seattle might be a flight too far for sun-loving colleagues from across the region. I was delight-ed, therefore, to see first the number of talks and then the number of attendees, steadily rise to a very respectable number as the summer progressed.

Since we conservators are sometimes sensitive to the indignity of being invisible to the world at large, it seemed like an important step to make the meeting somewhat "porous," so that non-members would also be able to enter a dialogue about preservation issues during the conference. To that end, we implemented single day rates and student rates, and I was particularly delighted when Nancy Odegaard agreed to give a pre-conference keynote talk about the work that she and Vicki Cassman, the team at the Burke Museum, and the Army Corps of Engineers have undertaken to develop and maintain high standards for the preservation of Kennewick Man over the past fifteen years.

This evening presentation enabled a partner institution to join us in hosting the conference. And, beyond that, it gave an accessible forum for University of Washington students and members of the Burke Museum's Native American Council, as well as the WAAC members, to explore the web of considerations around caring for human remains. Mindful of ethical and legal driving principles, Nancy and her colleagues gave an account of practical methods and approaches that they have deployed to protect each ancestral fragment during study or handling.

The remains of Kennewick Man lay comfortably well-preserved in the mud for about 9 ^{1/2} thousand years until their discovery in 1996 by a Mr. Thomas and a Mr. Deacy who had gone to Columbia Park for a relaxing afternoon watching hydroplane races. Little did they know that their excursion would result in such a monumental discovery. Subsequent years of institutional management of the remains have hinged upon addressing concerns of varied constituencies as well as a classic archaeological paradox that leads custodians to seek ways to rigorously ensure that the recovered body remains just as safe now that it is the subject of modern scrutiny.

Another means of reaching beyond our professional bunker is the tried and tested activity that is the Angels Project. On the day before the Seattle meeting commenced, Alice Bear led a small but very talented team over to the Kitsap Peninsula to re-house and document objects at the Black Historical Society of Kitsap County. At the time of writing, we are waiting to hear whether we have received an FAIC Angels Project grant for this great day of volunteer work, but future presidents should be aware of this terrific grant that our sister organization provides. Whether we succeed in that application or not, what is already clear is that, under Alice's leadership, a small and under-funded cultural organization

President's letter, continued

has been given a massive boost and the preservation prospects of their collection have been greatly enhanced. To my mind this is WAAC, partnering with our fellow organizations and making a small but impactful response to the great preservation challenges identified in the Heritage Health Index.

Another highlight of the meeting was the opening of the exhibition 9 from L.A. at the Wright Exhibition Space in Seattle. This show incorporates the monumental sculpture Gray Column by De Wain Valentine and features an abbreviated version of the groundbreaking exhibition that Tom Learner and his colleagues at the GCI developed for Pacific Standard Time. Again, the opportunity to showcase conservation is a valuable one in a community that has so little in the way of visible preservation resources, and it was also a great joy to work with Tom and his colleagues, with the artist, and with the collector to bring the show to life.

In these pages, you will see more about the range of presentations at the conference that made for a fascinating two and a half days. As I have written in previous letters, the great diversity of work and the very remarkable showcasing of profound professional dedication, the spirit of respectful collegiality, and the fun that punctuates the proceedings, make WAAC meetings very special. I hope that those who attended this year feel that it was a very typical meeting in that regard.

I apologize again to anyone who was dismayed by my colleague Tim Marsden's masterful but revolting PG rated video culled from security footage at the sculpture park. Several of you have, slightly weirdly, asked me for a copy but the answer is that it will (please God) never see the light of day again!!

All in all, I wouldn't describe organizing the meeting as a walk in the park (and I would have been in big trouble without my wonderful colleague Lauren Barach, who helped in so many ways) but it was enormously gratifying. There is no denying the fact that the work is a challenge when the schedule is busy already (and whose schedule isn't over-packed?). But the chance to work with the brilliant team on the WAAC board, the opportunity to play a part in the running of this special organization, and the inspiring couple of months when hard work and the generosity of sponsors and colleagues coalesce to make the meeting happenthese are utterly rewarding experiences.

So I'll conclude my tenure by saying what a pleasure it has been to serve the organization and by urging you to stand as MAL or VP. And if you do, I hope you enjoy it half as much as I did.

Nick

Katie Holbrow

column editor

Regional News

Alaska

Ellen Carrlee presented a paper on PEG basketry treatment results, co-authored with Dana Senge, at the ICOM –CC Istanbul Conference on Wet Organic Archaeological Materials. She has moved to a temporary lab space in anticipation of museum demolition next spring, and is working with Getty student Madeleine Neiman and pre-program volunteer Lisa Imamura to treat hundreds of wet shipwreck artifacts. Preparation to move the collection continues, as well as planning for major conservation treatments including a locomotive, a lighthouse lens, a snow machine, and several watercraft for the new museum exhibits.

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Articles and most columns from past issues of WAAC Newsletter are available on-line at the WAAC website, a part of CoOL (Conservation OnLine) http://cool.conservation-us.org/waac/.

Deadline

Contributions for the January *Newsletter* should be received by the Editor before **December 15, 2013.**

Western Association for Art Conservation

The Western Association for Art Conservation (formerly, the Western Association of Art Conservators), also known as WAAC, was founded in 1974 to bring together conservators practicing in the western United States to exchange ideas, information, and regional news, and to discuss national and international matters of common interest.

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Regional News, continued

Scott Carrlee has been working with two conservation interns at the Klondike Gold Rush National Historic Park in Skagway. Intern **Kelly McCauley** just completed her 1st year at the Winterthur Delaware conservation program and **Nicole Peters** will be entering the Buffalo conservation program this fall. This is the second summer of work on a 3 year project to prepare hundreds of objects for reinstallation in the Soapy Smith's Parlor Museum.

Monica Shah has been treating and mount-making for a new exhibit, *Dena'inaq' Huch'ulyeshi: The Dena'ina Way of Living*, the first major exhibition about the Alaska Native people who first inhabited the area around Anchorage and Cook Inlet. The fish trap conserved by Getty student Madeleine Neiman was finished and mounted for exhibition. In addition, Monica has been mounting clothing – including modern and older bear gut parkas, feather headdresses, and quill decorated gloves – which are some of the more unique items in the exhibit.

Regional Reporter: Ellen Carrlee

Arizona

Chris Del Re, former senior conservator at the Milwaukee Public Museum, has recently relocated to Scottsdale, AZ. She is available to do on-site contract work for objects, surveys, preservation planning, and grant writing.

After organizing a successful 2013 Angels Project for Costume Society of America in June, Textile/Costume Conservator **Martha Winslow Grimm** is back examining and treating everything from flags, Buddhist scrolls to major league historic baseball jerseys. What a great way to spend summer.

Brynn Bender and **Dana Senge** at the National Park Service conservation lab worked with conservators Martha Winslow Grimm, **Theresa Voellinger**, **Mark Andersson**, and **Paulette Reading** to acquire condition surveys for the textile and paper collections of Little Bighorn Battlefield National Monument.

Dana traveled to Palo Alto Battlefield National Historic Park in Texas and Timpanogos Cave National Monument in Utah to survey collections. These visits provided insight into the museum collections in small parks in the West and exposure to natural resource conservation- including a evening up close and personal with bats at Timpanogos Cave! Back in the lab Dana has enjoyed treating decorative silver lamps from Scotty's Castle at Death Valley National Park.

Maggie Kipling assisted with final packing of fragile artifacts at Mesa Verde National Park. The trip was just in time for the grand opening of their new Visitor and Research Center, a LEED facility that also houses over 3 million objects.

Audrey Harrison surveyed and rehoused the basketry collection of Casa Grande Ruins National Monument. Interns **Bailey Kinsky** and **Paige Hoskins** are working on quillwork repairs for a remarkable collection of pipe bags from Grand Teton National Park.

Nancy Odegaard and Teresa Moreno have supervised the completion of

construction-renovation for the new climate-controlled Arizona State Museum Basketry Vault and the completion of insulated window panels and glass repair for the entire first floor of the museum.

Nancy and **Marilen Pool** have developed a treatment strategy for pine pitched baskets and Marilen continues to lead the condition survey process that has included over 4000 entries.

Nancy and Landis Smith presented at the Association of Tribal Archives, Museums and Libraries (ATALM) meetings on the expanded role of conservators in tribal museums. Nancy is working with the Table Mountain Rancheria staff on their basketry collection and lectured at the UA archaeology field school on conservation in the field.

Gina Watkinson has created a clever photo documentation stand and efficient protocol for documenting the basketry collection. Nancy, Martina Dawley, Jae Anderson, Werner Zimmt, and Joy Farley presented results of the arsenic removal research project at ATALM.

The ASM lab welcomes **Crista Pack** as the new Kress Fellow, **Madeleine Neiman** (UCLA/Getty) as a third year advanced conservation intern, **Katie Belton** as a pre-program intern, and **Stephanie Watson** as a visiting chemist from Scotland.

Regional Reporter: Brynn Bender

Hawaii

No news reported

Regional Reporter: D. Thor Minnick

Los Angeles

LACMA paintings conservation head **Joe Fronek** is continuing his research with conservation scientist **Charlotte Eng** and paintings conservator **Elma O'Donoghue** on the technical examination of paintings for the updated catalog of gifts of the Ahmanson Foundation.

Elma O'Donoghue presented a talk on the materials and techniques of Mexican colonial paintings at the annual WAAC meeting in Seattle.

In September **Morgan Hayes** graduated from the Winterthur/University of Delaware training program and began a Mellon Fellowship in paintings conservation at LACMA.

Natasha Cochran will be traveling to NYC in September to oversee deinstallation of the final exhibition of "Ken Price: A Retrospective" at the Metropolitan Museum of Art.

Lily Doan recently traveled to Tokyo for deinstallation of the traveling exhibition *California Design*. After returning, she joined the LACMA Watts Towers Conservation team for a brief period to help kick-start this summer's educational program, where conservators are mentoring high school graduates from the Watts community.

Siska Genbrugge presented a paper titled "Lost Line: Documenting Contemporary Art at LACMA" for the conference Performing Documentation in the Conservation of Contemporary Art in Lisbon, Portugal in June. She is currently focusing on organizing and establishing protocol for preserving the time based media collection at LACMA.

Silviu Boariu carried out an extensive treatment on silver shrine doors from India which are a recent addition to LACMA's permanent collection.

The Objects lab welcomed three summer interns, Marije Meddeler, Breana Latty, and Jacklyn Chi, who all worked on various interesting treatments ranging from outdoor sculpture to glass and wooden artwork.

Last August, Laura Maccarelli joined the conservation research section at LACMA for a 6 month internship. Laura recently graduated from the University of Bologna where she studied science for cultural heritage. She will be working with Post-Doctoral Mellon Fellow Diana Rambaldi on developing new methods for identifying natural and synthetic dyes.

Rosa Lowinger & Associates has recently been awarded the contract to serve as the consultant for public art conservation for the cities of West Hollywood and Inglewood, CA. Recently named a Fellow of the AIC, RLA Principal Rosa Lowinger is curating an exhibit at the Coral Gables Museum in Florida. Titled *Concrete Paradise: Miami Marine Stadium*, the exhibit chronicles the history of an iconic 1963 modernist building by Cuban architect Hilario Candela and the nationwide efforts to halt its demolition by neglect.

RLA Operations Director **Alison Tisue** has been named a Professional Associate of AIC.

Yadin Larochette has just completed lining a large (14 by 18 feet) 16th-century tapestry with Sarah Gates at the Fine Arts Museums of San Francisco, and they are about to line another (see San Francisco section of the Regional News for more details on this). Between lining projects, she attended ICOM in Rio de Janeiro, and traveled to several other Latin American countries, visiting conservators and other museum professionals as part of an effort to help Tru Vue establish connections and share information about their glazing products.

Interspersed among temporary exhibits and collections projects at the Natural History Museum, **Tania Collas** is reconstructing a very large sea urchin specimen from the northwest coast. She is also resuming work on main-

taining an oxygen-free display case for a geological sediment core specimen in the Natural History Museum's *Age* of Mammals exhibit.

Liz Homberger is excited to announce that she is devoting herself full time to her private practice in objects conservation in Los Angeles. She is experienced in materials of all kinds and welcomes new projects..

Donna Williams has recently restored Los Angeles artist Chris Burden's very large installation work *A Tale of Two Cities*, which belongs to the Orange County Museum, in preparation for its inclusion in the New Museum's survey of Burden's work in New York City.

The first step in the process involved demonstrating that the 32 year old piece could be effectively restored after decades of deterioration of the work's cardboard substrate which, when installed, is covered with damp sand. The poor condition of the work had led the artist to contemplate exercising his contractual option to alter the work via the "nuclear option" - blowing up the installation as a final performance piece.

Over 5000 models and toys, many collected by the artist as a child, were fully restored, remounted on honeycomb aluminum panels, and packed into 16 custom-made crates. "I'm really pleased," Burden remarked, "that it has been brought back to life."

Along with **Tom Learner** (GCI), **Bronwyn Ormsby** (Tate), and **Richard Wolbers** (Winterthur/UofD), **Chris Stavroudis** was a co-instructor at the fourth CAPS (Cleaning Acrylic Paint Surfaces) sponsored by the GCI and hosted by the Smithsonian American Art Museum and **Tiarna Doherty**.

Chris also gave a 3-day MCP workshop at the INP (Institute National du Patrimoine) in Paris in July, covering aqueous cleaning techniques, Pemulen and emulsions. (Thanks to **Nathalie Palmade-Le Dantec** and **Emilie** Masse of the INP, Laetitia Desvois, and Anne Baxter, who translated.)

On his way back to LA, Chris presented the full, week-long MCP workshop which was cosponsored by VCA (Virginia Conservation Associations), VMFA (Virginia Museum of Fine Arts), and FAIC, in Richmond, VA. (Thanks to **Carol Givens** and **Sheila Payaqui** for organizing and gathering the supplies for the workshop.)

In October, he presented a 3-day workshop for the conservators at the Guggenheim. (Thanks to **Carol Stringari** and **Hillary Torrance**.) While in New York, he visited the studios of **Daria Keynan** and **Sandra Amann / Elizabeth Estabrook** chatting informally about new developments in cleaning systems.

Also, while in New York, he was able to attend the opening of *Chris Burden: Extreme Measures* at the New Museum with Donna Williams and drop in, unannounced, at the opening of a oneman show by one of his artist clients, surprising the heck out of the hyperrealist painter Davis Cone.

As part of the Research into Practice Initiative at GCI and in support of the CAPS (Cleaning Acrylic Paint Surfaces) workshops, the Getty Conservation Institute has released a series of nine short videos. The videos show topics such as calibrating pH and conductivity meters, measuring surface pH of paint surfaces, preparing pH adjust water, preparing a Pemulen emulsion and preparing microemulsions based on silicone solvents and mineral spirits.

The videos were produced by **Sean Charette** and Tom Learner, filmed by **Peter Kirby** of Media Art Services, and are presented by Chris Stavroudis. Links to the videos can be found at <http://www.getty.edu/conservation/ publications_resources/teaching/ conserving_modern.html>http://www. getty.edu/conservation/publications_ resources/teaching/conserving_modern.html

Regional Reporter: Virginia Rasmussen

New Mexico

Conservation Solutions, Inc. (CSI) has been busy this summer on a wide range of projects across North America. Highlights include their role in providing conservation oversight for the West Block of Parliament façade restoration in Ottawa, Ontario, preparing the Atlantis Space Shuttle for display at the Kennedy Space Center in Florida, treatment of bronze features at the US Capitol, and conservation of four Alexander Stirling Calder statues from the I Miller Building in New York City.

CSI Senior Conservator **Joe Sembrat** presented a paper on CSI's work on the Atlantis Space Shuttle at the 2013 Big Stuff conference in September in Ottawa, ON.

Senior Conservator Justine Posluszny Bello recently presented on the subject of "South Florida Fountain Conservation" at the NPS Fountain Fundamentals conference in Kansas City, MO, in July. She will also be leading a workshop as part of the Association for Preservation Technology International (APTI) conference in NYC on instrumental analysis of decorative finishes on modern metals.

CSI conducted a tour of the exterior masonry conservation work that is being performed on the Canadian West Block of Parliament as part of the Heritage Canada Foundation's 40th Anniversary Conference held at the Chateau Laurier in Ottawa in November.

Regional Reporter: Silvia Marinas-Feliner

Pacific Northwest

In April and May **J.Claire Dean** carried out field work at two rock image sites in the Giant's Castle area of the Maloti-Drakensberg Park World Heritage Site, South Africa, as part of her on-going work with the Rock Art Research Institute, University of the Witwatersrand, Johannesburg.

In May Claire was part of a panel discussing the conservation of rock image sites as part of the International Federation of Rock Art Organization's convention which took place in Albuquerque. She is now back at the Hibulb Cultural Center, Tulalip, Washington, where over July and August she will be working with summer intern **Caitlin Mahony** (UCLA/Getty Conservation Program 3rd year student).

Nancy Thorn of Portland OR is a senior conservator on the *Salon de la Tremoille* Period Room project at the Legion of Honor in San Francisco. She and several other conservators are restoring the carved and gilded architectural elements. The reinstallation begins in November with final elements installed for the opening at the beginning of 2014. Nancy is traveling back to Portland every Friday to attend to her business and expects to be in S.F. through December of this year.

At Fine Art Conservation, **Rebecca Pavitt** remains immersed in the chemistry of iron, reducing agents, chelators, and antioxidants. She is now refining a system of treatment options which will be safe for paper that may contain iron, sharing ideas and information with **Ekaterina Pasnak** (paper conservator at the Kode Art Museum in Bergan, Norway) who is working on the same subject.

Rebecca is also putting the final touches on her revamped website under the able direction of the most patient web designer in the world, **April Kite**. These forays into chemistry and coding have been balanced by the pleasures of actual conservation treatment, working on eclectic mix of pastels, watercolors, prints, drawings, textiles, and archival materials.

Corine Landrieu has been busy this Summer working along with **Tiffany Hedrick** of the Office of Arts and Cultural Affairs on *The Story of North Island*, an historic Haida totem pole. Next week she will be undertaking the annual conservation of *Skip to My Lou* by Ursula Von Rydingsvard, on the Microsoft campus.

At the Seattle Art Museum, objects conservator **Liz Brown** is undertaking the customary intensive summer conservation program at the Olympic Sculpture Park, including orchestrating structural work on a Rickey mobile, taking X-radiographs of sculptures in the park, and replacing graffiti films on Teresita Fernandez' *Seattle Cloud Cover*, which spans the complete width of the BNSF rail tracks.

Tami Lasseter-Clare and her team from Portland State return to Seattle to undertake further research into degradation of coatings on outdoor sculpture, a project funded by the National Science Foundation.

Conservation technician **Tim Marsden** is assisting at OSP and organizing the stripping and waxing of SAM's other major public work, Henry Moore's *Three Piece Sculpture: Vertebrae*.

SAM's current intern, Josh Summer, is busy investigating a painted sculpture by Claes Oldenburg. Marta Pinto-Llorca recently accompanied one of the treasures of the Japanese collections, *Scenes from the Life of Gensei Shonin*, to Studio Sogendo in Alameda, where it will be treated thanks to a generous grant from the Sumitomo Foundation.

Chief conservator, **Nicholas Dorman**, has been very busy completing treatment of Jackson Pollock's *Sea Change*, assembling the schedule for the WAAC meeting in Seattle. He has also been a guest conservator at the J. Paul Getty Museum paintings conservation studio, where he is currently examining a painting by Bernardo Daddi. Everyone at SAM was delighted to welcome the WAAC membership to the 2013 meeting this September.

Regional Reporter: Corine Landrieu

Rocky Mountain Region

The conservation lab of The Buffalo Bill Center of the West is bustling with 7 interns this summer. **Benjamin Regel** is a British objects major in the University College London program. **Tania Desloge** is an American objects major in the University College London program. **Laura Villar** is a Spanish paper major who recently graduated from the conservation program in Madrid. **Tiia Yli-Kankahila** is a student in the Helsinki Metropolia Program in Applied Sciences.

Pre-program interns currently treating rare books, Plains Indian artifacts, and other collections include: Allison Rabent, Joesphina Maldonado, and Stephanie Carrato.

The theme for the 29th Annual Rocky Mountain Book and Paper Fair was "To Have and to Hold," which addressed the preservation of collections. Speakers included: **Barbara A. Johnson**, art objects conservator; **Karen Jones**, book and paper conservator; **Christopher W. Lane**, print, map, collections expert for the *Antiques Roadshow*; **Paulette Reading**, textile conservator; and **Camilla Von Vooren**, painting conservator.

The fair was hosted by the Rocky Mountain Antiquarian Booksellers Association (RMABA). It has built a reputation as one of the nation's leading antiquarian book fairs. The RMA-BA is an organization of used and rare book dealers in the Rocky Mountain west area.

The **Denver Art Museum** conservation staff wishes to extend a hearty congratulations to **Michal Mikesell** who just started her graduate training

at the Buffalo Art Conservation program. They will miss her enthusiasm and exceptional talents but wish her success in school and thereafter.

Caitlin Whaley will continue in a pre-program capacity in the lab. **Kate Moomaw** and **Steve Osborne** have been busy with outdoor sculpture conservation. In August, they cleaned the surfaces of *Big Sweep*, by Claes Old-enburg and Coosje van Bruggen. Kate also worked with an outside contractor for restoring abrasions and losses to the painted metal surfaces.

Objects conservator **Judy Greenfield** expertly removed accumulations of wax build up from several ornately carved bamboo objects. They, among dozens of other bamboo pieces, will be exhibited in the museum's dedicated Lutz Bamboo Gallery. Steve has also been busy fabricating custom mounts for this installation.

A collaborative effort to conserve a highly decorated, French sedan chair is underway. The chair's components consist of painted leather, painted canvas, and textiles on a wooden frame structure replete with gilded parts. Objects conservator, Gina Laurin, paintings conservator, James Squires, furniture conservator, Mark Minor, and textile conservators Allison Mc-Closkey and Paulette Reading will clean, stabilize, repair, and consolidate, this ornate object. Please visit the Denver Art Museum website for upcoming blog entries on its conservation.

The sedan chair will be exhibited in the *Passport to Paris* exhibit, which opened in October. For the same exhibit, **Sarah Melching** is busy treating a collection of lovely French drawings ranging from the 18th to 20th centuries.

The Denver Art Museum conservation lab is delighted to welcome **Courtney Von Stein** as a third year intern from the University of Delaware/Winterthur program. Courtney will work with both Gina and Kate on a range of objects treatments, from the traditional to the modern and contemporary. **Julie Benner** is also coming on board, working with Allison as the museum's first Mellon Fellow in textile conservation.

Victoria Montana Ryan recently gave a presentation on the murals of the historic Velino Herrera belonging to the Koshare Indian Museum as part of its 80th Anniversary celebration. Alumni and young Koshare dancers were enthusiastic to learn about the murals, their care, and future conservation plans for the museum's art collection.

Judy Greenfield reports the sad news of the death of Dick Beardmore, architect for A&E Designs, Fort Collins, CO. He was a CAP assessor for historic homes with whom she worked on a number of CAP surveys. He was extremely knowledgeable about mechanical systems, the special challenges of historic homes-turned-museums, and the anatomy and care of historic structures.

July saw some nice musical instruments march through **Mark Minor's** studio, including the full rebuild of a 1932 Gibson L-00 guitar, some major work on a 1918 Gibson mandolin, and some tricky cosmetic work on a 1969 Gibson Les Paul gold top. Mark is very pleased to be treating two pieces for an upcoming exhibit at the El Pueblo Museum on the tragic events around the CF & I strike at Ludlow, Colorado in 1914. (He wonders: Can it be Anarcho-Syndicalist conservation if the State pays for it?)

Regional Reporter: Paulette Reading

San Diego

Jacinta Johnson was accepted into the Winterthur/University of Delaware Program in Art Conservation, Class of 2016. She is very thankful for the internship opportunities, support, and guidance of many WAAC members. Regional Reporter: Frances Prichett

San Francisco Bay Area

Susan Roberts-Manganelli is now the Director of the Art + Science Learning Lab at the Cantor Center at Stanford University. The Cantor Center received a generous gift from Frances and Professor Emeritus Theodore Geballe that will provide four years of seed funding for the Lab.

The Lab will significantly expand the Cantor's efforts to integrate its artistic program with Stanford's curriculum, building on intermittent projects conducted over the past several years that brought together scientists, students, and museum professionals in the study of Cantor collections objects.

It will also offer research opportunities for undergraduate and graduate science students to study art objects in the Cantor collections and provide technical and analytical assistance using scientific equipment at the Cantor and elsewhere on campus.

The year has flown by for the SFMO-MA conservation department, which has participated in packing and moving the entire collection, as well as its operations, to South San Francisco while the museum begins a major renovation and 10 story expansion.

During the construction, the staff will be as busy as ever with exhibitions travelling to local sister institutions. Just before the museum closed on June 2nd, **Michelle Barger**, **Paula De Cristofaro**, **Martina Haidvogl**, and **Jill Sterrett** gave talks at the AIC conference in Indianapolis, where the topic was *The Contemporary in Conservation*.

Another milestone was the recent launch of the Rauschenberg Research Project, part of the Getty funded OSCI (online scholarly research catalogue initiative). The online catalogue, lo-

cated on the museum's main website is a result of four years of research across departments, including conservation, and revealed many notable findings and discoveries.

Yadin Larochette has joined Sarah Gates at the Fine Arts Museums of San Francisco to line two important sixteenth-century tapestries: The Triumph of Justice from the Triumph of the Seven Virtues series and The *Resurrection* from the *Redemption* of Man series. The latter is an especially large challenge being 27 feet wide and taking up most of the floor space of the main area of the de Young Textile Lab. Yadin's contract work is being funded by two awards: the McNeil Volunteer Award that went to senior lab volunteer Barbara Arthur last year and an unexpected gift from the FAMSF Auxiliary.

Meg Geiss-Mooney, textile/costume conservator in private practice, taught an all-day workshop "Collection Care Strategies for Textiles" at the Museums Association of Montana annual conference held in March. She also participated in the panel discussion "Storage On A Budget" and held an "Ask The Conservator" session at the same conference.

She thoroughly enjoyed teaching in the Big Sky state and hopes to do so again in the future. She also participated in the Angels Project held during the Costume Society of America annual meeting and national symposium held in May. She demonstrated how to make a torso form from buckram to the other participants and museum volunteers at the Boulder City Museum, the Angels Project site.

Mark Fenn accepted a two week Professional Placement with the Staffordshire Hoard Conservation Project at the Birmingham Museum and Art Gallery in England. He finally got up close and personal with the early medieval metalwork he has admired in photos and through exhibit cases for decades, examining and cleaning recently excavated early Anglo-Saxon sword fittings and as yet unidentified objects.

At SFO Museum, **Rowan Geiger** and **Alisa Eagleston-Cieslewicz** have been working on a number of exhibits, including shows on maritime folk art, Philippine baskets, contemporary art made by the artists in residence at the Recology recycling center, the history of plastics, Shaker furniture, and the America's Cup yacht races.

Antoinette Dwan traveled to New York in October where she gave a lecture at the Morgan Library for staff and NYU paper conservation students. She also visited and spoke at the Brooklyn Museum. She discussed aqueous use of ammonium citrate dibasic and sodium borohydride in paper conservation (an expanded version of her presentation at the Seattle meeting) and presented material on aesthetic mending using Western papers in lieu of Japanese tissues.

Regional Reporter: Alisa Eagleston-Cieslewicz

Texas

Jill Whitten reports that this past fall Whitten & Proctor Fine Art Conservation hosted a studio tour for visiting collectors during the Houston Contemporary Art Fair. Nathan Sutton of Sutton Greene Conservation in Kansas City, has been working with us on a suite of 12 large oval paintings depicting the apostles and Catherine Williams of Silver Lining Art Conservation, Austin, Texas performed objects treatments in the studio several times in the past year.

Whitten & Proctor Fine Art Conservation was awarded a Samuel H. Kress Conservation Fellowship for 2012-13. Jill Whitten and **Robert Proctor** welcome their new Fellow, **Gabriel Dunn**. Gabriel is an active member of the conservation staff and is assisting in research on the development of new adhesives in a collaborative project with Rob, **René de la Rie**, and Christopher McGlinchey of the Museum of Modern Art. As part of the 2013 AIC Annual Meeting in Indianapolis, Indiana, Gabriel presented her research on Matisse from her time at the Straus Center and Rob participated in a lively panel discussion.

Jill and Rob also welcome **Utah Snyder**, their new studio assistant. Utah has reorganized the digital archive to make it easier and more efficient to share information. He has made digital files keyword-searchable and accessible remotely in addition to installing a central server system for storage.

This fall Jill and Rob will be lecturing on picture varnishes with René de la Rie at the Instituto Superior De Conservación y Restauración Yachay Wasi in Lima, Peru.

Melanie Sanford reports on a recent lecture presented in Dallas entitled: "Recent Conservation Projects By Alton Bowman." The North Texas Association for Art Conservation and the Dallas Museum of Art were happy to host a lecture by Alton Bowman, September 9, 2013. Mr. Bowman, a fine art conservator from Flower Mound, Texas, specializes in French, English and American furniture. He has a long history of working with museums and private collectors on some very important pieces of furniture, such as the Rosedown American Goth Bed on exhibit at the DMA. His lecture, Recent Projects: Frames, Chairs, and a Desk, highlighted several new projects, and discussed the various conservation treatments he used on them.

Regional Reporter: Ken Grant

Mark David Gottsegen 1948-2013

It is with great sorrow that I write of the death of dear friend Mark Gottsegen. Mark was the founder and director of AMIEN, a highly valued online technical service for artists, a long time professor of art and materials education at the University of North Carolina – Greensboro, and the author of *The Painter's Handbook*, regarded as the standard painting manual for the contemporary artist. And, of course, Chairman of the American Society for Testing and Materials (ASTM), Committee D 01.57, Artists' Paints and Related Materials for many years.

But none of these positions and accomplishments describe the sometimes maddening, other times uproarious character whose great passion, in a nutshell, was to give artists "the tools to distinguish... quality art materials from junk." And he pursued that passion with blunt words, ferocious wit, the joie de vivre of a balloon-popper, and hard fastidious research.

To both friends and enemies, he could be cantankerous, corny, generous, wise, abrasive, sentimental, brash, fearless, supportive, authoritative, authoritarian, and almost always brilliant. We are all creatures of complex parts that most of us tend to hide. Mark wore his complexity as an exoskeleton. He let it all out. To me he was one of a kind, a great influence, an unforgettable friend whom I will greatly miss (along with his personal pepper shaker that he always took to restaurants with him).

Richard Frumess



I've yet to meet anyone who was able to balance such professional seriousness with total immersion in the most exuberant moments and pleasures of life.

Victoria and her husband, Charles Christopher Hill, constructed a full and extremely active personal life, packed with trips, social events, multiple friends, and most of these activities had some connection with the art world.

A few of her personal traits will be

impossible to forget. When Victoria was completely relaxed, she would sometimes break into a focused and personal dance, often sparked by music from the 60s to 80s, a familiar blues or popular song. I'm sure that many others will remark on another endearing quality, her infectious laugh. She also had a strong sense of personal taste, outfitting her studios and home with carefully selected objects, sometimes products of California design – pottery, Bakelite, textiles, or artworks traded with friends and local artists.

Victoria's dedication to the field of conservation was her constant source of joy. She worked with many types of works on paper, expanding her practice into Asian art in order to treat the wide-ranging collections at LACMA. Charles identified her interaction with Tibetan material as the most gratifying part of her practice.

After she retired from her position at LACMA, she was invited to undertake a survey of the holdings of the Dzongsar Temple by the Bhutanese lama and filmmaker Dzongsar Jamyang Rinpoche. Recognizing an opportunity to contribute to the preservation of these materials, she authored *Care and Handling of Thangkas: A Guide for Caretakers* (2008 and 2010). This was a non-copyrighted collection care document meant to be inexpensively and widely distributed to the monks and monasteries of Tibet, China, Nepal, Bhutan, and Japan to aid with the preservation and care of these National Treasures. Once the project was completed, she embarked on a remarkable trip to India to launch the guide and insure that it would be widely distributed.

Victoria was an exceptional friend and colleague, someone I will remember for the remainder of my life.

Debra McManus

(Victoria was also the first eidtor of the WAAC Newsletter. Ed.)

Victoria Blyth Hill

Victoria and I met at the wonderful Japanese screen symposium directed by Takashi Sugiura in 1984. We became close friends and colleagues, and as we overlapped on projects and traveled together, often with Charles, I came to appreciate how astute and well versed she was as an observer and as a conservator and how wide ranging were her interests.

I once happened to mention that I recollected her wearing glasses for the presentation she made at the 1982 AIC conference in Milwaukee on Leonardo's Hammer Codex, but that she never seemed to wear them since (at least at that time) - she confessed that they were frames with plain glass lenses worn only to make her look, in her opinion, more clever and serious! I've think of her a great deal and cherish that special place that only she could occupy in the lives of her many friends.

T.K. McClintock

One day, maybe around 1974, I got a call from Ben Johnson, who was head of the conservation lab at the LA County Museum of Art. He explained that someone on his staff was really hungry for opportunities to talk shop and expand her knowledge in the area of paper conservation. We agreed that she would come to San Francisco from time to time to participate in the work of our paper lab. So it was that one day Victoria Blyth-Hill walked into our paper lab, and a happy day it was! Vicky -- as she immediately insisted she be called -- had a simply unparalleled enthusiasm for almost everything, and her excitement over being with us, rubbing shoulders with other paper conservators, was contagious. Vicky's infectious laughter will always remain one of my fondest memories of her.

Roy Perkinson

I remember in the 80s when Victoria had intensely red hair. It was so startling and looked so great on her. It seemed to go with her delightfully outrageous personality. I told her I really liked it and, with a generosity so typical of her, she presented me with some Egyptian henna from her special source. I'd never done anything like that before but I applied it full strength and turned myself into a redhead too for a time. I don't know if I really wanted the red hair; maybe I just wanted some of Victoria's style!

Debbie Evans

Years ago...I was talking to Victoria about an up-coming Museum event. I asked if it was a typical little black dress event. She launched into her description of her attire and how tired she was of the typical boring little black anything at events. She was having an outfit made for her in red so as not to be missed. Entirely in RED LEATHER! I can imagine her in it today. It must have been amazing! Red hair, red suit, amazing laugh. She was a woman of style in so many ways.

Leslie Kruth

Victoria showed Bob and me great generosity personally and professionally from the very beginning of our relationship. She offered friendship and help, and she made good on her offers. She was very dear to us.

Mark Watters and Bob Aitchison

One of my fondest memories of how Victoria was always able to handle any situation with grace and dignity was how she saved the life of Dr. Armand Hammer.

Well she didn't really but he certainly acted as if she had.

When I first was hired at LACMA the old labs were on the top floor, and objects would get to it via a large freight elevator. Conservators often worked late at night, and that's how we did private work that involved Trustees and VIP collectors. Well there must have been a meeting one night, and Dr. Hammer inadvertently got into this elevator and managed to turn off the light by accident. In total darkness he couldn't find the light switch nor the buttons to move the elevator. So he began pounding on the sides of the elevator which were just steel sheets and sounded like huge kettle drums. Alarmed, Victoria came running out, opened the door and switched on the lights. Hammer was profusely thankful, remarking that "Young lady, You saved my life!"

Victoria told me about this the next day. Although she never got a hefty financial reward for saving his life, over time the Hammer Foundation was very generous to both of us in encouragement towards conservation research.

Jim Druzik

In the 1980s Victoria invited a group of conservators (in town for a conference) to share a meal at her home. Between the main course and dessert, husband Charles took us on a tour of his studio. Eight visitors, completely committed to conservation, unwittingly marched around on top of artwork that had been strategically strewn on the floor for the express purpose of accelerating the aging process. Charles later revealed that this was the necessary final step in the production of his latest work. Interesting to him was that conservators, in particular, would provide the desired patina. Victoria understood and accepted that the best in artistic expression can require deviation from convention; that artistic creation and decay and sometimes irony must be considered as essential parts of the same picture.

Bob Futernick

Working with Victoria taught me that just as a good work ethic and dedication were important, so was keeping family and friends close and finding ways to play.

Victoria and Charles were great in the department of finding and creating adventures. She was a great hostess and loved to have people come together and enjoy wine and food – preferably pork. They built a 40 foot lap pool for her new found love of water aerobics, but really I think it was another way to have people come together for pool parties and hooping (hula hooping was another love).

She was also a master of costumes. For Halloween whether she was a Tibetan demon, a Monet lady, a slinky tiger, or a character from the song by the Black Eye Peas "Shake it Like a Polaroid Picture," she owned the character and added a festive feel to the party with wine, laughter, and dancing.

Chail Norton

Victoria and I met in the early 1970s before either of us was involved with conservation. She loved to tell the story of how we became acquainted at Sotheby Parke Bernet. We didn't know each other and were both applying for different positions at the auction house. Independently, we both arrived each wearing a long knit maxi dress, boots, and sporting the then-fashionable shag hair cut. We were both interviewed and hired by James Lally on the same day, and as Victoria would always say, "he certainly liked a type!" She stayed at the firm for about one year, then left to open a blues bar called "Rick's Bar" in Venice and continue collecting vintage cars and furniture from the 1930s and 1940s.

We became and remained fast friends, a bond that was further strengthened by our close connection through conservation.

About 15 years ago Victoria and her husband, Charles, enthusiastically took up cross-country skiing, and I would often accompany them on outings to nearby mountains. After a somewhat cautious start, Victoria's skiing became very bold and I remember watching in amazement as she took off down quite a steep hill, laughing and screaming all the way down.

Victoria was an extremely dedicated, serious, and conscientious conservator always searching for the best solution and outcome for her projects. Her enthusiasm was contagious (as was her well-known laugh), and she was my inspiration to begin a career in conservation, as I'm sure she inspired many others that she encountered during her long and productive career.

Tanya Thompson



An Anti-Graffiti Coating for Michael Heizer's Levitated Mass



Introduction

Levitated Mass is a monumental sculpture by the contemporary artist, Michael Heizer, recently installed in the northeast corner of the campus of the Los Angeles County Museum of Art.

The installation consists of a 340 ton boulder straddling the walls of a 139 meter long trench. The boulder is bolted to two 6.35cm thick stainless steel shelves that are attached to the top of the trench. The trench descends from ground level to 4.5 meters below the boulder at its center allowing visitors to stand directly beneath it.

The boulder and trench are surrounded by 2.5 acres of compressed, decomposed granite and are encircled by an oval shaped line of Corten Steel embedded in the earth. The boulder and trench along with the surrounding acreage are considered an integral part of the artist's design.





by Mark Gilberg and John Hirx

The artwork was first conceived in 1968. The artist's first attempt at its construction using a 120 ton boulder failed when the boom of the crane broke. Later in 1996 Heizer discovered a much larger boulder at Stone Valley Quarry in Jurupa Valley in Riverside County, California. With the help of LACMA, the funding was secured for the removal and transportation of the boulder and for the construction of the finished work. The boulder was transported from the quarry in February 2012 on an 89.96 meter long (196 wheeled) custom built transporter. The trip took 11 days. Completion of the concrete trench and the final securing of the boulder took an additional three months.

Throughout the installation the artist was particularly concerned about the possibility of vandalism and graffiti given the large amount of publicity associated with the boulder's transport and installation at LACMA. After considering a number of options, the artist gave his approval for the application of an anti-graffiti coating provided the coating did not alter the appearance of the boulder making it look like "plastic."

Because the Conservation Center was given less than a month to address the artist's concerns prior to the public unveiling of the sculpture, no attempt was made to assess the performance and durability of the anti-graffiti coating using the ASTM standard (2008) or the newly developed European guidelines (Garcia 2008, 2012; www.graffitage.com). Nonetheless an assessment of the anti-graffiti coating was undertaken using actual samples of the boulder under conditions approaching its real-time application. In this paper the authors discuss the selection, testing, and application of a commercial anti-graffiti coating which yielded surprisingly good results.

Boulder

The granite boulder is pyramidal in shape with a flat bottom allowing it to straddle the channel. While this was its natural formation, the boulder was actually shaped to some extent by the artist using a range of tools including a blow torch to spall away areas of the rock surface that were aesthetically displeasing. The granite is extremely porous due to the presence of intergranular cracks randomly distributed and



propagating throughout the stone matrix, with veins of iron oxide running through it. The artist expressed a dislike for the areas with rust stains which he attempted to remove or minimize.

When removed from the quarry, a large section at the apex of the boulder was lost and had to be reattached with pins and epoxy resin and the seams blended in using colored epoxy. Epoxy was also injected into cores drilled into the boulder, as well as other areas, to give it added strength in areas of observed weakness.

Anti-graffiti coatings

Graffiti can be a major problem in both urban and rural environments and affects historic and non-historic buildings and monuments (Ashurst 2002; English Heritage 1998; Fidler 2002; Grimmer 1998; Urquhart 1999; Weaver 1995). While much has been published in the literature over the years on its prevention and removal, no one method for graffiti prevention and removal has found widespread application. While commercial anti-graffiti agents work well on concrete, glass, metal, and certain types of stone, their application on historical substrates is often problematic due to their porosity and inhomogeneity.

In general, anti-graffiti coatings fall into two categories: sacrificial coatings and permanent coatings. Sacrificial coatings are applied and then removed following vandalism and must be reapplied after each event. Permanent coatings on the other hand are meant to last indefinitely. They are designed so that the graffiti can either be easily removed from the substrate by means of a cleaning solution or the coating acts as a barrier to which the graffiti cannot penetrate or adhere. Many so-called permanent coatings, however, are in fact semi-permanent given they can only tolerate a finite number of cleanings and must then be reapplied.

In the case of Heizer's *Levitated Mass* the application of a permanent anti-graffiti coating was considered impractical. Once applied, if the artist was dissatisfied with its appearance, its removal would not be possible without significant damage to the granite substrate. For this reason only sacrificial coatings were given consideration.

A wide variety of sacrificial anti-graffiti coatings are commercially available today. These frequently include emulsions of carbohydrates, waxes, or acrylic polymers in water or organic solvents. The use of sacrificial coatings, however, is not without its drawbacks. Recent studies have shown that some coatings may undergo small but detectable changes in color and tend to soil more quickly than permanent coatings (English Heritage 1998). Also, the effectiveness of the sacrificial coating has been found to decrease in some instances with repeated application.

The use of hot water under pressure to remove these coatings has also been found to damage some weathered surfaces. Not surprisingly, sacrificial barriers respond differently to different markers which may penetrate some coatings and thus stain the underlying substrate. Some of these draw-

An Anti-Graffiti Coating for Michael Heizer's Levitated Mass, continued

backs however are not particularly relevant in the case of *Levitated Mass* given that small changes in appearance following the application of a sacrificial coating would not be detectable. Aggressive cleaning with high pressure washers would most likely have minimal effect on the stonework. Soiling of the stone surface would also not be a factor in selecting a suitable sacrificial coating.

PSS-20

A quick review of the conservation and commercial literature including conversations with colleagues soon yielded a promising product manufactured by KEIM Mineral Coatings referred to as PSS-20 (www.keim.com). PSS-20 is sold as a completely reversible protection system for protection against graffiti for both indoor and outdoor use. It is waterbased and made from vegetable polysaccharides. It can be brushed on or applied by spray applicator to give a thin invisible film with a high moisture vapor transmission rate.

In practice, it can only be used on vertical surfaces because once wet the treated surface becomes extremely slippery. It is recommended for both natural and artificial stone surfaces as well as concrete, brick, and metal facades. In addition to its reversibility and near neutral pH, its primary advantage for use as an anti-graffiti coating is its environmentally benign nature and biodegradability which is important given the amount of material needed to treat the boulder and the need for reapplication over time.

The manufacturer recommends PSS-20 be applied to the surface in two or three coats using an airless sprayer at a pressure of between 1450-2900psi. For each coat a quantity of PSS-20 between a minimum of 0.10 to a maximum of 0.20 liters/square meter should be applied. The thickness of the protective coating after drying should be approximately 1.18-1.38 mil.

For porous surfaces it is recommended that the surface is pre-wetted thus filling the pores allowing the PSS-20 to form a protective coat on the surface with as little as possible penetration of the coating into the substrate. It is important to note that judging the thickness of the coating is not easy and requires practice to visually apply the proper thickness. If the coating is invisible and too thin, graffiti will penetrate the substrate. When applied to be just visible with



a slight sheen, the thickness is correct and the graffiti can be removed as the coating is removed.

For the removal of the PSS-20 and graffiti the manufacturer recommends soaking the surface with hot water (60 °C) for several minutes to swell the coating underneath the graffiti prior to removing it altogether using hot water from a pressure washer. According to the manufacturer the coating protection last between three and five years before it needs to be renewed depending upon climatic conditions.

Widely employed in Europe to protect both historic and non-historic monuments and buildings, PSS-20 has been used continuously as an anti-graffiti coating on the Brandenberg Gate in Berlin since 1991 (www.keim.com). Every two years the gate is washed down to remove accumulated dirt and graffiti using hot water and the protective coating of PSS-20 reapplied to the damp stone.

Preliminary tests

A series of preliminary tests were conducted to verify the manufacturer's product description and to evaluate its graffiti resistance. The test samples (measuring approximately 10cm long x 10cm wide x2cm deep) consisted of small chips of granite provided by the artist which were spalled from the boulder. The test samples were coated with PSS-20 by brush and then marked using several different marking materials including: wax crayon, permanent ink marker, lipstick, tar, and alkyd spray paint. Graffiti resistance was determined after 3 days following application. The graffiti was easily removed by washing with hot water (60°C) without the need for brushing or scrubbing.

To simulate actual application conditions PSS-20 was also applied to the surface of several large granite boulders (152cm wide x 28cm wide x 55cm deep) collected from the same quarry as *Levitated Mass* and brought to LACMA. Each boulder was given three coatings of PSS-20 using an airless sprayer allowing each coat to dry in-between applications. Using the markers mentioned above graffiti was applied to large areas of the granite surface and then allowed to set for three days. The graffiti was then removed using a hot water pressure washer operated at 60° C. In all cases the graffiti was removed with little or no residual evidence.



An Anti-Graffiti Coating for Michael Heizer's Levitated Mass, continued

Application

Given the above, it was decided to apply PSS-20 to *Levitated Mass*. The coating was applied by a professional applicator. Prior to the application of the anti-graffiti coating the stone was steam cleaned. The stone was then given three coats of PSS-20 over a period of several days letting each coat thoroughly dry between applications. The third and final coating rendered the east facing side of the stone slightly glossy. This was reduced by rinsing with cold water. A total of 150 liters of PSS-20 was used to coat the stone.

Field and laboratory evaluation

Due to the lack of time, natural and accelerated weathering tests could not be performed prior to the application of PSS-20 to the boulder. However, it was possible to apply graffiti periodically to discrete, inconspicuous areas of the boulder to test its removal using localized treatment with hot water. This was performed every 3 months for a year using the same graffiti markers mentioned above and in each case the graffiti was easily removed.

Graffiti resistance of coatings was also determined after laboratory accelerated ageing before marking with graffiti. Coated rock samples were exposed to ultraviolet light in a UV fluorescence cabinet (Spectroline Model CL-150) and aged to an equivalent of one and two years (Suryawashi 2012). In each case graffiti applied to the laboratory aged coatings was easily removed with hot water. PSS-20 is easily susceptible to photo-chemical degradation. Glass slides coated with PSS-20 and subjected to accelerated aging using UV irradiance visibly yellowed after an equivalent exposure of only 1 week.

Conclusions

To date, the use of KEIM's PSS-20 has proved to be an effective sacrificial coating against graffiti for the protection of Michael Heizer's monumental sculpture, *Levitated Mass*. Its use under these conditions is not typical of most applications and is admittedly unique in the sense that yellowing of the coating and the concerns over the use of high pressure water systems that have been found to damage weathered stone are not an issue.



Further testing however is needed to determine the reversibility and protective properties of the anti-graffiti coating over time and after repeated applications.

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Treatment of Native American Ethnographic Objects – The Use of Traditional Techniques and Materials for Modern Conservation

The conservation of Native American ethnographic objects sometimes requires carefully considered loss compensation so that damaged objects may be safely stored, handled, or displayed. Modern conservation materials can be useful for loss compensation treatments but they do not always easily blend with the traditional materials and esthetic value of such objects, and in some cases their use may be unacceptable to the objects' owner or custodian.

Loss compensation becomes an important consideration when the private individuals or cultural groups holding the objects have certain requirements for the appearance or durability of the objects in their care. Such standards often cannot be met by simply stabilizing an object so it can be safely displayed or stored. Making repairs that are both durable and true to the artist's original intent for the object can be important when cultural groups wish to put their objects back into use in a traditional context.

It can often be in the best interest of the objects themselves to undertake some type of loss compensation. If a treatment solution is not acceptable to a private owner, the owner may simply take the object elsewhere to be repaired by someone perhaps not well qualified to properly treat the object. Even in museum situations it may be desirable or even necessary to bring an object back to its original appearance so that it may be displayed in the best possible condition.

This article examines how traditional materials may be used in combination with modern conservation methods to produce effective preservation treatments which remain true to the artist's intent while maintaining the high standards of good conservation practice. Techniques for loss compensation of Native American ethnographic materials using porcupine quills, custom-tanned leathers, tanning methods, and beadwork are discussed.

Porcupine Quillwork

Porcupine quill decoration on Native American clothing and articles is by nature extremely fragile. It is one of the most difficult art forms to try to repair using synthetic materials because the appearance and properties of the porcupine quills are so unique. Conservators have employed various materials for repairing porcupine quillwork, including Tyvek, Reemay, raffia straw, plastics, and Japanese papers.

The use of synthetic materials for loss compensation may be acceptable for some applications where objects will be on displayed in exhibit cases, in low lighting, or at such a distance from the viewer that the repairs are not noticeable. However, in situations where the quilled object is intended to be viewed at very close range or even handled, such repairs can be visually distracting and therefore unacceptable. One of the best solutions for loss compensation in porcupine quillwork is simply to use actual porcupine quills that are dyed to match the original work and that are attached and marked in such a way as to render all repairs completely reversible and identifiable. Two examples of how this type of loss compensation for quillwork using porcupine quills and traditional quillwork embroidery techniques follow. The first example involves the repair of the plaited quill strips on a mid-19th-century Upper Missouri man's buckskin shirt. The shirt was purchased at auction by a private individual who wished to display the object in his home gallery, thus requiring that all repairs be made with original materials and undetectable upon close inspection.

The images below show how new porcupine quills were woven into the original plaited work to complete the quilled design without interfering with any of the original materials. All original stitching and remaining quill fragments were left intact under the new repairs. Stitches holding the replacement quillwork were simply laid down immediately adjacent to the original construction threads.



Detail of woven quillwork panel before treatment

Weaving new quills into the original quillwork. This type of multiquill plaiting is done using eight quills and four threads simultaneously.





Repairs complete

by Nancy Fonicello

The felt-like quality of the brain-tanned leather, (sometimes referred to as "native-tanned" to distinguish the material from commercially produced leathers), on which almost all historic porcupine quillwork was made allows for repair stitches to be sewn into the uppermost surface of the leather without damaging the structure of the leather itself or leaving any new marks or holes.

Making repairs that are undetectable on close inspection also make it difficult to easily identify the newly added materials. To solve the problem, the replacement quills are labeled using a solvent-based felt tip ultraviolet marker pen. The quills are marked on the upper surfaces after the repairs are completed in order to ensure that marker residues do not bleed or rub off on adjacent materials during treatment. The ultraviolet labeling is invisible under normal lighting conditions but fluoresces readily under short wave UV (254 nm).

Experiments with long-term durability of such markers is ongoing, but one test object in the conservator's studio still fluoresces brilliantly after 10 years of exposure to ambient light and fluctuating environmental conditions. Careful consideration must be used when choosing fluorescent markers, as some early twentieth-century quill dyes naturally fluoresce under ultraviolet light.



Quillwork repairs labeled with ultraviolet marker, shown under ambient light and 254 nm UV

When large areas of quillwork are damaged, or where the degradation of the underlying materials prevents the introduction of new stitches, it may be possible to fabricate an entirely new quilled panel which can be then be laid down directly over the damaged area. Such a repair restores the intended appearance of the object while leaving all of the original material intact beneath the repair.

This method was employed on a pair of child's moccasins where only fragments of the original quillwork survived. Enough of the sinew stitching and quill fragments remained in the damaged area on the moccasin to make it possible to determine the exact size, color, and stitch technique used for the original quilled panel. A new quilled panel was then fabricated using brain-tanned leather and porcupine quills dyed to match the color of the quill fragments. This new quillwork was then attached to the moccasin toe by sewing the panel down along its outside edges only. Polyester thread was chosen for this application in order to facilitate easy identification and removal of the panel if desired. An insulating sheet of soft Tyvek was placed between the new panel and the moccasin body in order to protect the old sinew threads and quill fragments from abrasion.



Moccasins with badly damaged quillwork on the toes



Fabrication of a new quilled panel using a pattern from the moccasins, matching the dyes, quill sizes, and sewing techniques with the original embroidery



Moccasins with new quilled panel in place

Treatment of Native American Ethnographic Objects - The Use of Traditional Techniques and Materials for Modern Conservation, continued

This repair method effectively allowed the moccasins to be displayed as they may have once appeared without changing or damaging the original materials in any way.

Leather Repair

The use of traditional materials in combination with contemporary conservation techniques can also be effective when working with leather and beaded items. Both materials are very common on Native American ethnographic objects, and it is not unusual to encounter pieces with beads and leather that are extremely fragile and require some type of stabilization and/or loss compensation so that they can be safely handled or displayed.

The following example illustrates the treatment of a fully-beaded Lakota dress cape where natural materials were used in conjunction with synthetic fabrics and conservation adhesives to stabilize the object and improve its appearance for a museum exhibit. The cape had extensive damage and loss to the beaded areas as well as to the underlying leather on which the beads were sewn. Because of the weight of the beadwork, the object could not sustain handling without further tearing of the fragile leather and the continual shedding of loose beads. Some type of loss compensation treatment was deemed necessary not only for esthetic reasons, but in order to give structural stability to the object for exhibit purposes.

The beaded dress cape was made of thick brain-tanned deer hide upon which many parallel rows of applique beadwork had been sewn with sinew thread. Because the losses in the leather were considerable, especially in the critical shoulder and neck areas, patching or filling the voids was necessary before any replacement beadwork could be applied.

The thick leather and the fragile structure of the surrounding original materials mandated finding a fill material which could match the properties and dimensions of the old leather. The material also had to be easy to work with so that the process of applying new beadwork to fill out the design would not cause undue stress on the surrounding materials. Brain-tanned deer hide was chosen for the fills because it met all these criteria.

Brain-tan leather, as discussed above, has unique feltlike properties which allow for a thread and needle to pass through easily without binding. Hides tanned with animal brains, which are rich in phospholipids and fatty acids, have properties similar to oil-tanned hides but are generally thicker and softer and the fibers are more open than commercially available oil-tan leather. Brain-tanned hides are produced by only a handful of home tanners and are not available commercially. In addition, recent changes in the meat processing practices in the United States have limited the availability of animal brains and, thus, of brain-tanned hides. Another way of producing brain-tan-like leather which would meet conservation standards was sought.

Liquid soy lecithin, available in grocery and health food stores, contains phospholipids similar to those found



Detail of the neck area, showing leather and beadwork losses



Repair in progress. Patches fabricated from custom tanned leather over a Beva flocked tissue backing.



Replacement beadwork sewn over patched areas

in animal brains. The polar component of the soy lecithin was extracted using 91% isopropyl alcohol. The resulting solution was diluted with warm water and used to tan a deer hide using traditional methods.

Treatment of Native American Ethnographic Objects - The Use of Traditional Techniques and Materials for Modern Conservation, continued

The resulting leather was surprisingly light and open with a high loft and soft hand similar to good quality braintan. In addition, the lecithin tanning produced a pure white leather that was pH neutral, which made it quite suitable for conservation applications. The new material was affectionately dubbed "conservation brain-tan" and used to fabricate the leather fills for the dress cape.

In order to make a reversible repair, pieces of the new hide were cut to fit the loss areas and laid in place. A backing layer of Beva-flocked tissue was secured behind the edges of the original leather and the new fills and tacked in place with a warm iron from the front to insure the alignment of the beaded rows across the voids. The tissue backing was then secured more firmly from the back using low heat to activate the Beva adhesive. No adhesive was applied directly to the interface between the old and new leathers to avoid contamination of the original leather and ensure future reversibility if desired.

Once the fills were in place, the new, white leather was colored to match existing leather using dry pigments. Pigmenting the white leather was particularly important because the fill leather would be exposed along the open neck line of the dress.

Replacement beads were sewn in place to complete the original design, bridging the old and new leathers and using the original sewing holes in old leather where possible. The threads holding the replacement beadwork were knotted at the back of the work to allow the newly beaded areas to be easily identified and/or removed if desired.

The loss compensation treatment made the dress structurally stable and allowed the object to withstand handling and mounting for the museum exhibit, in addition to improving its appearance.

Recovering Damaged Leather

The lecithin/alcohol solution used to prepare the replacement leather in the previous example has additional applications for conservation treatment of objects made of brain-tanned leather.

A pair of badly degraded Kiowa girl's moccasins was treated with the lecithin solution as an experiment. Before treatment the moccasins were very stiff, with deep creases in the leather and large areas of dark staining and discoloration throughout. The extremely brittle nature of the damaged leather, particularly in the stained areas made it impossible to display the moccasins in their original shape. The foot and ankle areas were deeply folded and wrinkled, obscuring the beaded embroidery, and the top-most edges of the uppers could not be folded over at the knee as they were intended to be worn.

By first introducing the lecithin solution into a hydration chamber, using a Gore-Tex barrier between the solution and the object, then gently working and flexing the leather in the hands as it dried, the original softness and loft of the material was almost entirely recovered. Even after the object was completely dry, the leather maintained its flexibility and much of the staining was mitigated as well, allowing the moccasins to be displayed in their original shape and form.



Kiowa moccasins: degraded leather recovered by treatment with lecithin solution

Conclusion

The techniques discussed here are just a few examples of conservation treatments which involved loss compensation using a combination of modern and traditional materials and methods.

In each case the treatment was successful in that it met the needs of the owner or custodian while maintaining the ethical standards of good conservation practice. In all cases particular attention was paid to the need to make all repairs completely reversible and easily identifiable, while remaining faithful to the artist's original intent for the object. This unique approach to loss compensation treatments allows for repairs that might otherwise not be possible and which serve the ultimate goal of the long-term preservation of the historic objects in our care.

An Alternative to Velcro? Upper Edge Hanging Methods Using Rare Earth Magnets

Introduction

Large textiles have been hung using Velcro since the 1970s, with little change of technique (Textile Museum; Smithsonian Institution 1977). The looped side of the Velcro is machine stitched to fabric, typically wide twill tape, and the fabric is then hand-stitched to the reverse side of the upper edge of a textile; the hooked side is attached to the wall or cleat. Some systems retain the cotton webbing with a sleeve, while others do not.

Over the years disadvantages of Velcro have come to light (Gates 1993; Gilberg 1994; Leath 1998; Gardner 2010). Concern with the use of Velcro began in the 1990s when discoloration of the product began to be noticed. Several conservators became concerned and suspected that product alterations were resulting in color change (Gates 1993). [Velcro was invented in 1941 by George de Mestral, a Swiss engineer; his patent expired in 1978 (Leath 1998).]

Furthrmore, the loop-side of the Velcro sewn to the webbing and then hand stitched is quite bulky, and this presents difficulty with storage, whether rolled or boxed. Moreover, due to the need of stitching this approach is not a solution for all textiles. This led conservators to investigate several methods using magents as alternatives, and these form the basis for this article.

Magnet system

The philosophy and design principles for hanging large textiles with magnets remains the same as for Velcro. A rule of thumb for Velcro is that it can support about 100 lbs per square inch. Finding a magnetic system that equals this is not straightforward. When using and selecting magnets of any type, there are three key components that are in play (Spicer 2013 & 2014).

- 1. The strength of the magnet
- 2. The ability of the ferromagnetic metal behind it to be magnetized
- 3. The gap between the magnet and the receiving metallic side

Each is significant in how the magnet behaves or is able to perform the task (Feynman 1964; Livingston 1996; Magnet Story 1998). Proper balance of these three considerations is necessary in designing a successful system for any particular situation.

Complications arrise from the wide variety of needs and requirements of each artifact. The system developed must be strong enough to support the artifact but not so strong as to create damage. Only by understanding the parts and their interactions can a system be created for a specific task. Each component is described below along with alternatives. The solutions provided here are to be adapted to fit the needs of the artifacts at hand (Spicer 2014).

The selected magnet strength is only reached if the ferromagnetic metal support used is sufficiently thick. For a steel plate, the minimum is 24-gauge steel before any coating such as galvanization or powder is applied. Recall that as the metal's thickness increases, the gauge decreases.

Magnetic solutions for mounting are used in two main categories, local spot fastener or a large area pressure. The local spot fastener is the easiest to use. A large area pressure fastener incorporates additional elements to provide more continuous pressure. Conservators have used both methods successfully. Below are examples of the successful use of each method, as well as ideas that have not been tested. They are divided into two groups; ones that use an attached sleeve and those without.

Use with a sleeve

The benefit of a sleeve when using a magnet is that there is no concern with compression of the artifact, since all of the system's elements are behind the artifact. As it is the sleeve that creates the gap between the magnet and the metal, cotton twill tape (TestFabrics tape 6) and a narrower type (Tape 5) or a thinner fabric tape can be used to reduce the gap.

The attached sleeve can be utilized either with a long metal strip inserted in the sleeve or with individual magnets fitted into pockets (Spicer 2010).

Large area pressure

Using a metal strip assists in keeping the upper section of the artifact both level and flat, preventing the scalloping effect that can occur with a point fastening method or the bending or flexing of the upper edge that frequently happens with Velcro. The upper edge can be easily raised and lowered as well.

The steel sheet is sufficiently thin to greatly reduce the profile of the mounting system. If there are openings at various intervals along the sleeve, then shorter steel strips can be inserted locally. This is particularly useful for very wide textiles, or in tight or awkward locations.

A method used at the National Museum of the American Indian uses two 24-gauge steel plates, one plate attached to a honeycomb aluminum slant board covered with 200-weight Polyester Polarfleece (Polartec), and the other 24 gauge plate (1" wide strip) within a sleeve stitched to the reverse side of the artifact (Heald 2012).



by Gwen Spicer

Magnets are placed onto the slant board and the artifact with the sleeve is positioned onto them (Fig. 1). Magnets used were N42 grade and were $\frac{1}{2}$ " and $\frac{3}{4}$ " disc that were either $\frac{1}{8}$ " or $\frac{1}{16}$ " thick. The selection of the actual size would be determined by the weight of the artifact.

The slant board is positioned between 5 degrees (very steep) and 45 degrees (not so steep) off the vertical angle, depending on the condition of the textile. The nap of the fleece covering helps to support the weight of the textile and allows for lower gauss strength magnets.

Unlike paper artifacts, textiles can be quite heavy, creating a concern with downward pull of the artifact or shear stress of the system. One solution to this problem is to attach the magnets (Grade N42, measuring ³/₄" dia. X 1/8", with counter sunk holes) at 6" intervals along an aluminum strip with a small lower lip (L-shaped in cross-section.)

A 22-gauge steel plate is held into a stitched sleeve along the upper edge of the artifact (Wood 2013; Spicer 2013). In this solution the lower lip actually holds the weight of the artifact, but it is the magnets that ensure that the steel piece is held back and onto the aluminum horizontal element. (Fig. 2). The secured magnets can be adjusted closer or further away from the aluminum, depending on the specific situation.



Local spot fasteners

Individual magnet cups can be used as the ferromagnetic material and have several advantages, such as variations in spacing (Fig. 3). The cups also provide a fastening fixture to secure the magnet.

However, some planning is necessary. The cups greatly increase the strength of an individual magnet beacause the sides of the cups focus the magnetic field force more densely. The strength of a magnet can easily be beyond the adhesive strength of any glue used for fastening (Wood 2012). Magnet cups are best used if embedded into the mount or wall in order to create a smooth surface (Figs. 3a and b).Cups can be used with magnets installed or empty (Figs. 3b and 3c).





The use of a webbing sleeve allows for this variation as small pockets can be stitched into the webbing layers to hold the magnets. Several stitch patterns can be used (Fig. 4). A zigzag-stitch pattern that extends from the upper to lower edges of the webbing is an option (Spicer 2014). If cups are to be used with the magnet in the sleeve, care is needed to insure that a magnet does not fall out of its assigned pocket.



Figure 4. Several sewing patterns can be used to hold the magnets. Here are two, one a simple box pattern and the other a zigzag. Each create repeating pockets between the layers to hold magnet discs. The openings of the pockets need to be along the lower edge.

An Alternative to Velcro? Upper Edge Hanging Methods Using Rare Earth Magnets, continued

Whatever the pattern, the opening needs to be along the lower edge. Cups embedded into the wall support with the magnets placed into pockets creates a smooth surface at the face of the webbing, where the artifact would be.

Once the magnet is inside the cup, it is difficult to remove. A notch can be cut into the sidewall of the cup before use to allow for prying out the magnet with a tool.

Use without a sleeve

For many textiles or other textile-like artifacts, sewing a sleeve is not possible or not desired and compression of the artifact becomes a consideration. Balancing the various parts of a magnetic system needs to be considered and appropriate adjustments made.

One way to manipulate the system is to adjust the field force of the magnet by choosing magnets of different thicknesses. Thin magnets have tighter field forces allowing them to be placed closer together (Jordan 2011), and more magnets can be used across an area. They provide the same total pull force as would fewer thicker magnets that would have a stronger force in one spot.

A range of sizes might be used to support one artifact depending on the material and construction. Manipulating the actual size and shape of a given magnet is necessary in order to find equivalent pull forces. When selecting the grade of magnets, note that the higher the grade, the more brittle the magnet. Magnet N52, for example, desirable because of its strength, easily breaks when less than 1/8" thick (Spicer 2014).

Choice of barrier material is also important. Using barrier materials that have a nap can assist with the strength of the system by creating grab between the artifact's surface and the magnet. Mylar may have an opposite effect, unless there has been some roughening of the surface.

Large area pressure

Large area pressure can be achieved over the surface of the artifact in several ways. Flexible magnets are the most obvious large area approach to supporting fine and lightweight artifacts. These ferric bonded magnets are weak, but they provide gentle pressure evenly dispersed over the entire surface (Heer 2012; Migdail 2012).

One can increase the strength somewhat by using both the thicker flexible magnets and a heavier gauge of support metal (Table 1). Suppliers of flexible magnets sell a convenient foil tape. However, a thicker ferromagnetic material does improve the strength of even weak ferric magnet (Spicer and Owens 2013 & Spicer 2014).

Table 1

| Gauge / Flexible Magnet Thickness | .06 | .25 |
|-----------------------------------|----------|----------|
| .001 Foil tape | 6.5 oz | 4.33oz |
| .01 | 2lbs | 2 lbs |
| .025 (24 guage) | 1.25 lbs | 2.16 lbs |

Embedding magnets into a stiff material like mat board is another approach (Holbrow and Taira 2011). Block-shape magnets are ideal for this method. The magnets are spaced apart, just outside the magnetic field force along the center of a wider width of mat board. The magnet and the mat board are selected to be the same thickness. Japanese paper placed as the lower layer provides a thin gap with some texture (F ig. 5). At the Asian Art Museum they create borders that surround a vertically-mounted textile. A similar style of magnet embedded mat board strip is used to mount Thangkas for display.





A similar method was used to support a large flag at the National Museum of Taiwan, displayed at a 45-degree angle (Ku and Chen 2013). Placing two magnets into 8" long sections of board-sandwich that were butted against each other, allowed them to smooth out the flag and make adjustments during mounting, started in the center (Fig. 6). This is especially useful for large textiles. Holes for the disc-shape magnets were cut with a drill bit. They were positioned evenly both along the board section and the adjacent one.



figure 6. Detail of the flag's mount (Ku and Chen 2013). Holes for the embeded disc magnets are cut out with a drill. The thin 1/16" magnets are doubled to increase the pull force and protected from breakage in the mat board.

An Alternative to Velcro? Upper Edge Hanging Methods Using Rare Earth Magnets, continued

The top surface of both of these solutions can be easily disguised to blend with the artifact, either covered with fabric, or a digitally printed photograph.

Local spot fasteners

Individual magnets have been used to display a Tapa Cloth. This system used a steel strip that was powder coated and attached to the wall with screws, (gauge is not known). N42 Neodymium (1" x 1/16") disc magnets were used on the surface of the Tapa cloth (Peranteau 2012). The 1/16" thick magnets allowed the individual magnet to be placed fairly closed to one another. The number of magnets needed was assisted by earlier research that found Tapa weighted 140 grams per sq. meter (Dean-Jones, n.d.). One advantage of Tapa compared to most textiles is that it is inherently a stiffer material that is less likely to scallop along the upper edge. This is a consideration when spacing the magnets horizontally. Pigmented Japanese paper was used to cover the magnets.

Conclusion

The replacement of Velcro with magnets is not straightforward, however the method offers many benefits.

One of the critical problems is the issue of shear stress, which dictates that the weight of the artifacts being mounted needs to be carefully considered when adapting the systems. Two solutions described here, increasing the angle of a mount and the use of a lower lip of the aluminum member, are both useful.

In this article I have described a few systems that have been used successfully to mount textiles along their upper edges (Table 2). Information has been provided so that that they can be duplicated and adapted to other situations. The systems described provide several options to select from, with and without a stitched sleeve.

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| | | | Magnet | tic prope | rties | | Ferromagnetic material | | Gap | | |
|------------------------------|-------------------|--|------------------------------------|---------------|-----------------------|--------------------|---------------------------|-------------------|------------------|--|-------------------|
| authors | artifact | grade | size | gauss (g)* | pull force (lb) | polar direction | gauge | coating | sleeve / none | gap layers ■ magnet ● mount | angle of mount |
| Heald 2012 | Navajo blaket | N42 | 1/2" x 1/16" disc | 1,601 | 3.1 | axial | 24 | powder- coated | S | ■● Polarfleece, sleeve, artifact | 5°- 45° |
| Wood 2012 | quilt, weaving | N42 | 3/4" x 1/8" disc | 2,087 | 9.76 | axial | 22 | powder- coated | S | ■● sleeve, artifact | vertical |
| Holbrow and Tiara 2011 | thangka | N40 | 3/8" x 3" x 1/8" block | 2,436 | 14.82 | diaxial | 26 | galvanized | Ν | ■ 2 ply board artifact,display fabric ● | vertical |
| Holbrow and Tiara 2011 | paper | N40 | 3/4" x 3/8" x 1/16" block | 1,480 | 3.67 | axial | 26 | galvanized | Ν | ■ 2 ply board, artifact,display fabric ● | vertical |
| Ku and Chen 2013 | flag | N35 | 1" x 1/8" disc | 1,467 | 10.5 | axial | 19 (1.2mm) | galvanized | Ν | ■ 2 ply board, artifact,display fabric, muslin, folderstock ● | 45° |
| Peranteau 2012 | tapa | N42 | 1" x 1/16" | 816 | 6.8 | axial | ? | powder- coated | Ν | ■ paper, artifact Mylar ● | vertical |
| | | * based on direct contact with a steel plate | | | | | | | | | |

Table 2

An Alternative to Velcro? Upper Edge Hanging Methods Using Rare Earth Magnets, continued

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Book Review

Historical Perspectives on Preventive Conservation Edited by Sarah Staniforth

456 pages, 7 x 10 in paperback, 10 color and 12 b/w illustrations. ISBN 978-1-60606-142-8. \$70 from Getty Publications

In May 2013, Getty Publications issued *Historical Perspectives on Preventive Conservation*, as part of their *Readings in Conservation* series. As the press release notes, "the volume is divided into nine parts ... Each reading is introduced by short prefatory remarks explaining the rationale for its selection and the principal matters covered." The nine sections are:

- Philosophies of Preventive Conservation (1849-2002)
- Keeping Things (1 B.C.E.-2001)
- Early Years of Conservation in Museums (1850-1912)
- Relative Humidity and Temperature (1844-2007)
- Light (1964-1986)
- Pests (1762-1998)
- Pollution (1661-1899)
- The Museum Environment & Risk Management (1971-2002)
- Future Trends (1986-2010)

An extensive bibliography for further reading is also included and where conservators will find references helpful with more contemporary work issues. Articles specifically on building preservation were omitted to limit the focus of the book, yet many inclusions involve preservation issues involving building systems and buildings as the protective environment.

Cultures and societies worldwide approach the concept of preservation of materiality through different philosophical lenses and cultural memes. For British editor, Sarah Staniforth and her international advisory group, the aim of the book was to provide classic, important, and difficult-to-find articles for a wide audience. As contemporary notions of preventive conservation were cultivated primarily within western cultures, expectedly the scholarship presented is primarily western in origin; predominantly British, British Commonwealth, and European Economic Union articles are represented.

Two exceptions are among the 66 readings. One is Teiji Itoh's article on *Kuras*, traditional Japanese storehouses (1973). The other non-western content is O. P. Agrawal's descriptions on using traditional Indian knowledge for protecting museum collections (1981) (noting that the nation of India remains within the British Commonwealth system). Cultural traditions of oral practices, especially within nonwestern societies, may explain the limited written resources from which to draw readings for inclusion in this book, as Staniforth cites in her preface.

In addition, the writings read very much as common sense for the era represented. Anyone can argue for or against the inclusion of any number of articles. Yet, many concepts

by Stephanie Watkins

as well as specific articles and authors represented will be familiar to established conservation professionals from their own studies and experience within the field. 45% of the readings included were written within the last 40 years; 53% within the last 50 years, as indicative of the rise of technology and evolution of the philosophies surrounding preventive conservation. Many of the articles represented reference each other, also.

While the book does offer the reader the notion of progression in thought as the articles are arranged within topic, then chronologically, it is not a particularly interesting journey to take unless the reader is unfamiliar with the topic and discovering it for the first time. The history and reasoning for inclusion provided in the prefaces to each reading were often more interesting than the entries themselves. Staniforth's editorial preface also reads well. Selections with the most engaging parts for this reviewer were:

- O. P. Agrawal's (1981) descriptions of the uses of traditional Indian natural remedies, for example the use of peacock feathers to prevent bookworm infestations (Reading 9),

- William Blade's (1881) passionate descriptions of the life and damage wrought by "bookeWorms" (Reading 15) that loses no humor or horror with passing time,

- Max von Pellenkofere's (1902) application of scientific process to determine the effects of temperature and humidity fluctuations in the UK's National Gallery, especially his calculations of air consumption and humidity expulsion from humans versus paintings (Reading 24),

- Martin Davies and Ian Rawlins, on their efforts to save the UK's National Gallery's contents during WWII era (Reading 27),

- Elisabeth Strömberg's (1950 s) "Dyes and Light" focused on textiles (Reading 35),

- Norman Brommelle's (1964) familiar work on fading of watercolors (Reading 33), and

- Part 3 of John Evelyn's (1661) proposal for a large number of various scented flowering plants to be planted in and around London, to improve the "aer" [... from ...] "those black and smutty Atomes" caused by the burning of coal (Reading 45).

Also, anyone who has encountered cultures other than their own will recognize the philosophical dilemnas presented by Miriam Clavir (2002) regarding working with artifacts from Canada's first nations people (Reading 6).

Many of the readings are incomplete reproductions of original articles. When dealing with the verbose-prose writing styles common between the 16th to 19th centuries, such editorial decisions are welcome. However, two extreme examples, the inclusion of a paragraph on housekeeping from an 1853 novel (Reading 12), and four lines from an 1825 servant's manual (Reading 40) seem overly limited as readings to include.

In the instance of J. MacIntyre on "Air Conditioning for Mantenga's Cartoon at Hampton Court Palace" (1934)

Articles You May Have Missed

Susanne Friend column editor

"Piazza, Mosaici "Macchiati": ma non ci sono Restauratori, (Piazza, mosaics "stained: but there are no restorers)" *Giornale di Sicilia*, 02/26/2013

The mosaics at the 4th century Villa Romana del Casale, just outside Piazza Armerina, Sicily, are once again being threatened by the rise of salts, with the first white patches visible to tourists. Funds are lacking for daily maintenance of the mosaics and millions of Euros spent on conservation in the last five years could be compromised.

Desalination is needed and should be done as routine maintenance. The site is in a state of good preservation after the 18 million euro restoration campaign but daily rising salts, dried leaves, and pigeon droppings need to be removed on a weekly basis. Training workshops for students from undergraduate courses in restoration in Italian universities are being considered.

"Berlin Wall's Most Iconic Paintings under Threat from Property Developers," *The Guardian*, 02/27/2013

The painted mural of former Soviet and East German leaders Leonid Brezhnev and Eric Honecker in a passionate clinch is one of the star attractions of the East Side Gallery, the longest-remaining stretch of Berlin Wall and the second-most visited site in Berlin.

But the 1.3km-long outdoor gallery, which is covered in paintings by artists from around the world, is now threatened by the city's strident advance of gentrification, with a significant section of it due to be dismantled soon to make way for a luxury block of flats.

What guide books describe as an unbroken length of wall already has a gaping hole after a 50-metre section was removed some years ago to provide access to a boat landing stage and an open view on the river for the 02 World arena. The latest threat is from Living Levels, a 63-metre-high tower of 36 flats and offices. Opponents said it would destroy the

(Reading 26), the exclusion of the second half on "the use of hygroscopic material as a buffer in a picture frames and display cases," is unfortunate, as the missing information is also relevant in a compendium of this sort. Likewise, translated snippets of Günter S. Hilbert's *Collections in Safety* (2002) may have been more illuminating than the prefaces to various editions of his books represented in this collection. Staniforth wrote that articles without charts and graphs were preferred, yet thankfully some pertinent charts, graphs, and flow charts were retained in some of the readings.

The compilation remains a kind of cultural anthropological "Cliff Notes" assembled for an academic seminar on preventive conservation. The book is a quick read or one that can be read in short spurts, intermittently as needed. Agreeing with the Getty's publication announcement release, the book is best recommended for the general public, novices, or students new to preventive conservation who will benefit from the historical perspective of the information presented. Access to primary sources is always desirable when researching or learning a new topic.

aesthetics of the gallery, which is visited by an estimated 800,000 visitors a year, as well as insulting the memory of those who were killed on the former death strip.

Kani Alavi, head of the artists' initiative East Side Gallery, who led a €2.5m (£2m) restoration project of the wall four years ago, and was one of the original artists to paint on the wall, said the whole of the structure was now under threat.

"Museo Egizio: Presentato il Restauro del Papiro," (Restoration of the Papyrus presented at the Egyptian Museum) *Cultura*, 03/01/2013

The restoration of the papyrus "Book of the Dead of Tasnakht" was presented at the Museum of Egyptian Antiquities in Turin, made possible by the Fondazione Citta'Italia.

The restoration was entrusted to a team of restorers specialized in papyri and involved conservation treatment as well as remounting. For some hundred years the Papyrus Tasnakht had been displayed in a single 18 meter frame with five other papyri and the mounting presented major problems, including direct contact with the glass, the presence of a significantly deteriorated cardboard backing and the incompatibility of materials used with the fragility of papyrus.

Only by dismantling was it possible to determine the true condition of the papyrus, characterized by light color and medium thickness. Some losses were found on the top and bottom edges – these had been likely filled in the nineteenth century with new papyrus that was slightly thicker than the original.

Following the practice of earlier times to stretch and reinforce the papyrus, sheets of paper had been adhered to the back with animal glue. Both the ligninrich paper and the glue showed obvious oxidation and subsequent browning of the papyrus on the front, especially along the joins. Losses caused by wood-eating insects had been retouched with tempera. A significant accumulation of dust was found on both sides of the papyrus.

"Balance Restored, Shard by Shard," *The New York Times*, 03/27/2013

The art collector Albert C. Barnes had no compunction about letting people know precisely how much he wanted things his way. So just imagine how unhappy Barnes would have been about the state of a small gallery on the second floor of his foundation, whose collection was transplanted intact last year from the suburb of Merion to a sleek new home downtown.

Like many of the institution's galleries, this one united a handful of lovely Matisses and Klees with rather odd roommates, like works by unknown folk artists depicting birds. And Barnes crowned the whole conglomeration with a glass cabinet in the middle of the room displaying one of the best Greek vessels he ever bought, an Attic pyxis, or lidded round box, from 750 B.C., topped with four expressive horses.

But shortly after Barnes's death in 1951, while employees were documenting the collection, the earthenware pyxis shattered. The vessel, along with the case and all the other objects in it, were taken off view. Now, more than half a century later, they are about to reemerge from historical oblivion to bring the gallery, still called Room 17, back to its eccentric Barnesian counterpoise.

A new, large, windowed conservation lab headed by chief conservator Barbara Buckley, has become the locus of the first comprehensive efforts by the Barnes to take a hard look at its 2,500-object collection and assess what needs cleaning, stabilizing, conserving or even full-fledged restoration.

Margaret A. Little, senior conservator of objects, has been studying and working on the pyxis, removing weak adhesives and pieces of filler material used by earlier restorers. Judith F. Dolkart, the Barnes's chief curator, said the return of the sculptural elements to Gallery 17 — expected to happen by summer — would not only bring the small gallery back to its intended state but would also re-establish a kind of balance on the foundation's second floor.

"L'Aquila Staggers Towards Recovery on Fourth Anniversary of Quake," *The Art Newspaper*, 04/01/2013

As the fourth anniversary of the earthquake that devastated L'Aquila comes up on 6 April, the Italian town's fate finally seems to be improving. Some restoration projects are already under way, although locals are still holding protests and art historians are up in arms over proposed plans to build a shopping mall and car park beneath the main square.

Hardly any restoration work was carried out on L'Aquila's ravaged centre for three years and it remained a ghost town, while 13 controversially expensive "new towns" were built on the outskirts for the 73,000 homeless residents. These were built without any kind of tendering process, sparking several allegations of government corruption.

The first round of overdue restoration projects, funded by the Italian government, is now under way, just months after power was handed back to the local authorities. Notably, the government will spend an initial €14m to restore the 15th-century Spanish castle, which houses the Museo Nazionale d'Abruzzo, and €10m will be spent on the 18th-century Duomo in L'Aquila's main square.

Foreign governments have also pitched in to help. The amount of damage to the town's historic centre and the surrounding area is so vast that works are expected to carry on at least until 2021. Restoration will involve around 485 separate sites and will cost an estimated \notin 525m.

How Many Light Bulbs Does It Take to Discolor a van Gogh?, ArtNews, 04/03/13

Last year, conservators at the Van Gogh Museum in Amsterdam noticed that areas of bright yellow paint in many of the artist's works, such as Sunflowers, were turning shades of green and brown.

To find out why, they teamed up with scientists at the University of Antwerp in Belgium. Online news reports claimed that the scientists found prolonged exposure to LED lights to be the cause of the darkening. That conclusion, however, is inaccurate. "This was not a study into the effects of LED lighting," says Ella Hendriks, a senior conservator at the Van Gogh Museum. "It was a study on the aging process of the yellow pigment."

Lead by Koen Janssens, the Antwerp researchers tested samples of the browning paint and identified it as chrome yellow. Janssens and his team then found that exposure to light caused samples of chrome yellow to darken. Lighter shades of the pigment, he explained, darkened quickly because they contain a high amount of sulfur, which

makes them more susceptible to chemical reactions. Dark shades of chrome yellow contain little sulfur, and were less affected by light.

The darkening of the paint is permanent, says Janssens, and "to reverse this chemical reaction would likely cause more damage to the paintings." But the study did not isolate which band of light caused the browning or attribute it solely to LED bulbs.

This information is still of use to museums. As institutions phase out halogen and incandescent lighting in favor of energy-efficient alternatives like LED bulbs, they need to understand the possible effects these lights will have on artworks.

"To Salvage and Sell?," *The Art Newspaper*, 04/04/2013

After Superstorm Sandy hit New York City last October, conservator Gloria Velandia's studio was littered with hundreds of damaged works of art. But whether she repaired a work depended not so much on the extent of the damage, but on whether or not she received approval to proceed from the insurance company paying the bill.

The insurance adjusters might decide it's cheaper instead to declare a work "a total loss" and pay out its insured value. But paying out a total loss isn't the end of the story.

"There is a group of collectors who say: 'Let us know if you have damaged work," says Christiane Fischer, the president and chief executive of AXAArt Insurance Americas. This is the littleknown world of "salvage art", which raises a host of questions about valuation, the art market, and its integrity.

When the damage to a work is deemed a "partial loss", the insurer pays the cost of repair and also compensates the owner for any loss in value. But when an insurance company declares an existing work of art a total loss, the insurer compensates the owner the full, insured amount—and then it owns the work.

"Art that is a 'total loss' can still have value. If there's not an agreement that we shouldn't resell, the insurance company can do whatever it wants," says Fischer.

The salvage art market's size is difficult to estimate, because the major insurance players do not reveal figures.

However, the world of salvage art is full of paradoxes and ethical quandaries.

Work that is only slightly damaged, if at all, may still be declared a total loss by an insurance company. Work that is severely damaged may be repaired by the insurer and then reappear on the market, with potential buyers none the wiser. There can be a "corruption of morals on every side of the table", says Renée Vara, an independent appraiser, a board member at the Appraisers Association of America, and a former national fine art specialist at Chubb.

To the outsider, total loss can seem arbitrary. Clearer reasons for total loss are destruction by catastrophe. Art may also be declared a total loss for economic reasons. "If the conservation cost plus loss in value is higher than a total loss [payment], then it's a total loss," says AXA's Fischer.

Valuation can be especially sticky. Do clients lie? "Absolutely," says Straus. Then there are conflicts of interest, such as when an auction house gives a valuation for a damaged work it may later sell. The insurers are quick to state that when they sell salvage art, they disclose everything. Whether that information reaches the ultimate purchaser is another question.

At auction, the insurer is not identified as the consignor, which would immediately raise condition questions. All insurers contacted agree on one point—if an artist does not want the work repaired or renounces the work after it is conserved, it is a total loss. Artists can also disclaim work under the Visual Artists Rights Act.

"Art Restoration Project at WIU," Western Illinois University, 04/05/2013

The Western Illinois University collection of Federal Art Project works will be included in the exhibition "A New Deal for Illinois: The Federal Art Project of Western Illinois University," which will be shown at the Figge Art Museum in Davenport, IA.

WIU's Federal Art Project collection was formed in the 1930s when University officials commissioned works through the Public Works of Art Project, and later through the Federal Art Project of the Works Progress Administration (FAP/WPA). WIU Art Gallery Director Ann Marie Hayes-Hawkinson said Macomb is fortunate to have this collection.

Commissioned works were used to decorate classrooms, hallways and other public spaces on campus. The WIU Art Gallery is now home for these works. Some of the works in the collection are in need of conservation. The exhibition and the conservation initiative represent Western's dedicated efforts to preserve and promote knowledge of the important legacy of New Deal art.

Sponsored works will be sent to The Conservation Center in Chicago before the exhibition travels to the Quad Cities. To help visitors to the exhibition understand what art restoration entails, Hayes-Hawkinson and a University Television crew will visit Chicago to interview conservators.

"Queen Mary Restoration Efforts Continue as Ship Marks 20th Anniversary of Historic Designation," Long Beach Business Journal, 04/10/2013

While the Queen Mary will mark its 20th year as a registered national historic place on April 15, efforts over the past five years have taken shape in the form of a conservation management plan to guide restoration and preservation of the ship as an art piece and tourist destination.

One of the crown jewels of Long Beach since 1967, the Queen Mary ship underwent a substantial conversion from the point it permanently docked in Long Beach's harbor to 1971. Part of that conversion was to redesign the ship as a destination with a hotel, event space and attractions on board.

John Thomas, the ship's historic consultant, said, "Today we are working with the city to take more of a focus of the ship being a historical art piece as well as a destination." Thomas said he and his conservation team work with City of Long Beach Asset Management Bureau Manager Victor Grgas and his bureau to come up with the most appropriate protocols and treatments for the ship.

There is still a large quantity of furniture, artwork and other items in storage aboard the ship to be explored and used in restoring the ship in the adaptive reuse process. Approximately 70 percent of the conservation management plan is research, 20 percent is actions to be taken and 10 percent is evaluation of what has been done. The ship's desig-

nation as a national historic landmark "enables us to be more critical" in the conservation process, said Thomas.

"Mosque Conversion Raises Alarm," *The Art Newspaper*, 04/11/2013

One of the most important monuments of late Byzantium, the 13th-century Church of Hagia Sophia in the Black Sea city of Trabzon, which is now a museum, will be converted into a mosque, after a legal battle that has dramatic implications for other major historical sites in Turkey.

For around 50 years, responsibility for the Church of Hagia Sophia in Trabzon has rested with Turkey's Ministry of Culture and Tourism. The courts now accept the claim made by the General Directorate of Pious Foundations, the government body responsible for most of the country's historical mosques, that this has been an "illegal occupation".

The court has ruled that Hagia Sophia is an inalienable part of the foundation of Sultan Mehmed II who first turned the church into a mosque after his conquest of the Empire of Trebizond in 1462. The head of the directorate declined to speculate on whether this would mean covering up nearly half the wall space taken up with figurative Christian art, including the dome depicting a dynamic Christ Pantocrator.

Concern for the building is prompted by the fate of Istanbul's Arab Mosque—originally a 14th-century Dominican church—also administered by the directorate. An earthquake in 1999 shook loose plaster from the vaults revealing frescoes and mosaics. The conservation of these paintings was finished last year but they were immediately recovered.

Like its namesake in Trabzon, Hagia Sophia in Istanbul was also turned into a mosque, after Mehmed II's conquest of the city in 1453. It was famously made into a museum in 1935 by cabinet decree—unlike the informal arrangement in Trabzon.

The re-conversion of Istanbul's Hagia Sophia into a mosque has long been the "golden apple" sought by Turkey's religious right. Recent experience suggests that the directorate reconstructs mosques without regard for the millennia of history they contain.

"Over U.S. Objections, Hopi Tribal Masks Sold in France," The Los Angeles Times, 04/12/2013

Dozens of Native American masks were sold at auction in Paris despite objections by the Hopi tribe, which considers the items sacred, and the U.S. government.

The 70 masks sold for a total of about \$1.2 million after a French court approved the auction, rejecting arguments by the Hopi tribe and its supporters that the items should not be up for sale because they are "sacred figures" of their ancestors, not art.

The items, mainly Hopi tribal artifacts dating to the 19th and early 20th centuries, went on display at the Drouot auction house before the sale. The masks, made from wood, leather, horse hair and feathers and painted in vivid red, blue, yellow and orange, are thought to have been removed from a northern Arizona reservation in the 1930s and '40s.

The Hopi tribe, which now numbers fewer than 14,000 people, keeps its masks, called Kachina and believed to be actual spirits, out of public view and considers it sacrilegious even for pictures of the objects to be shown. The masks are referred to as "qwatsi" – friends – and are worn during ceremonial dances to represent deities, but also mythical ancestors.

"Conservators Told to Follow Star Trek Captain's Orders," *The Art Newspaper*, 04/12/2013

"Take every opportunity to tell people what you do," said Fiona Hyslop, the Scottish government's Cabinet Secretary for Culture and External Affairs at opening of "Positive Futures in an Uncertain World," Icon's triennial conference at the University of Glasgow, on Thursday 11 April.

"The sector needs to get smarter about shouting about culture." Hyslop's message was repeated by other speakers at the conference, including the chancellor of the university, Kenneth Calman, urging the assembled crowd of conservators to talk to politicians, captains of industry and the public about the importance of heritage preservation.

"The excellence of our profession often remains a longstanding secret," said David Leigh, a conservator and Icon's representative on the National Trust Council's art panel, alluding to the fact that the job of a conservator has been traditionally a backroom activity.

In the current economic climate, however, where resources are limited and cutbacks in staff and budgets have become a fact of life, one of the best ways to make a case for heritage preservation is to engage with the public.

Calman ended his plea for conservators to become more involved with the public by instructing the audience to follow two commands from a captain—not a captain of industry, but a captain nonetheless—Jean-Luc Picard from the USS Enterprise: "engage" and "make it so."

"Early Images of American Indians Found in a Vatican Fresco," *The New York Times*, 05/06/2013

Vatican officials say they have found what could be the first European images of American Indians in a fresco painted within two years of Christopher Columbus's first voyage to the so-called New World.

The lightly sketched group of men — nude save for what appear to be feathered headdresses and posed as if dancing — emerged during the restoration of a fresco of the "Resurrection of Christ" by the Renaissance artist Pinturicchio, painted in one of several rooms he decorated for Pope Alexander VI between 1492 and 1494.

The figures' appearance in the fresco is in keeping with a practice common during the Renaissance of introducing contemporary elements into historical or sacred scenes, said Franco Ivan Nucciarelli, a Pinturicchio scholar who teaches at the University of Perugia.

The figures emerged from under layers of soot and overpainting during a 2006 restoration of the space called Room of the Mysteries, which includes "Resurrection of Christ," but Vatican experts took a cautious approach to their findings. "We didn't publicize them because we wanted to carry out further verifications," said Maria Pustka, who is responsible for restoring the rooms once inhabited by Alexander VI.

Pinturicchio lightly sketched the figures in black and white paint directly onto the dried fresco, an unusual "and interesting" technique, she said, and they were painted over in successive restorations. When wet, the figures disappear altogether, she said.

"Art Doctors: Midwest Art Conservation Center Keep Paintings Healthy," *Star Tribune*, 05/05/2013

One of only four nonprofit conservation labs in the country, the Midwest Art Conservation Center (MACC), located in a remote corner of the Minneapolis Institute of Arts, cleans and restores art of all kinds along with frames, documents, textiles and other objects. Its nine staff members also advise museums about the care and preservation of their collections, and work with first responders in disasters.

More laboratory than art studio, their offices are equipped with huge tables, elaborate air-filtration systems, sinks with ionized water, freezers, microscopes, and trays of solvents and brushes. They even make their own wooden-stemmed cotton swabs for removing grime from paintings. Cleaning art is MACC's bread-and-butter work.

Founded in 1977, it earns about two-thirds of its \$1 million annual budget restoring art for public institutions and private collectors, and gets the remainder from grants and donations. Over the past year, it freshened up about 24 pictures for the Minneapolis Institute of Arts, which has launched an Adopt-a-Painting program for fans to pay for cleanings (typical cost: \$1,400 to \$7,000).

Assistant curator Erika Holmquist-Wall prepared a "look book" that allowed enthusiasts to shop for projects. Supporters get to visit the conservation lab and observe the work, plus they have their names attached to the picture for five years.

"The Art of Asian Lacquer Draws Hundreds to Western New York," The Buffalo News, 05/16/2013

Dozens of artists and scholars from around the world converged on SUNY Buffalo State for a four-day symposium dedicated to the ancient art of Asian lacquer. To accompany the conference, the Burchfield Penney Art Center hosted "Asian Lacquer International," an exhibition that explores artists' diverse uses of lacquer in decoration, painting and sculpture.

Patrick Ravines, the director of Buffalo State's recently expanded art conservation department and an associate professor there, described lacquer as "a dying art" and the conference as an attempt to bring together artists and scholars whose paths might not otherwise cross.

The conference featured more than 25 speakers, including three artists working in the traditional mode of "Urushi," or Japanese lacquer: Kazumi Murose, Fumio Mae and Kunihiro Komori. It also featured talks by Metropolitan Museum of Art curator Barbara Brennan Ford, as well as panels moderated by Ravines and Buffalo State College design professor and lacquer expert Sunhwa Kim.

The breadth and ambition of this first-of-its-kind symposium, Ravines said, is extensive. "We've brought in art historians," he said. "We've brought in lacquer artists, craftspeople, conservators, restorers, scientists and museum people, and basically anybody who has touched or is touching lacquer and hasn't gotten a rash will be coming to talk to about it."

"Cedar Rapids Shows Off Conservation Work in Progress," KCRG.com, 05/21/2013

Another bit of "Depression-era" art hidden away for decades will soon go on display again inside the council chambers at Cedar Rapids' city hall.

The Law and Culture mural on display in the old federal courthouse in Cedar Rapids was painted over for the final time nearly 50 years ago. But when the city of Cedar Rapids converted the old courtroom to a council chambers, the idea was to uncover all the hidden artwork.

Conservationists began work on uncovering the second hidden mural recently. The unveiling is set for June 1st. Scott Haskins, chief mural conservator for Fine Arts Conservation Laboratories, said uncovering artwork is not the same as stripping paint off a wall at home.

There are four murals in the city's council chambers. Fundraising to uncover the remain two is currently underway. The city is paying Fine Arts Conservation Laboratories \$87,940 for the work. The murals were created in 1937 and are approximately five feet tall and run for a total of 48 feet in length. The art depicts various scenes of industrial and social progress.

"Digital Reincarnation for Dunhuang's Buddhist Art," Dawn.com, 05/24/2013

From the fourth century onwards the 492 largely hand-dug caves near Dunhuang acted as a depository for Buddhist art for around a millennium. Unesco describes the World Heritage Site as "the largest, most richly endowed, and longest used treasure house of Buddhist art in the world".

But their unique appeal is the very thing that is putting them under threat, with every visitor's entrance, body and breathing altering the delicate environmental balance inside the chambers. The remote site in Gansu province saw 800,000 visitors in 2012, up 20 per cent in a year. The recommended daily maximum is 3,000, but as many as 18,000 arrived on one public holiday last October.

Authorities must strike a difficult balance between limiting access to visitors and avoiding alienating them, particularly the hundreds of thousands of primarily Chinese tourists whose numbers are steadily rising. The digitisation project - which has been running for decades - is part of the solution, a grand project to transform the way visitors are received and cut the time they spend inside.

It is an immense task. The paintings cover 485,000 square feet. Thousands of images are taken of each chamber, using specialised lights to avoid damage, and then laboriously computerprocessed to create a precise cyber replica. "We have six working teams here on a very intense schedule. Each team must digitise three to four caves a year," said Wang Xudong, director general of the Dunhuang Academy.

Once the new system goes into effect next year visitors will be overseen as soon as they reach the airport and have to stick to a tightly controlled sightseeing circuit. In a domed theatre currently under construction they will view highdefinition images of the inside of the chambers, before taking a glimpse inside the real thing - but only for a limited time. "The typical tour might be 10 caves, and of those 10 caves there would be two or three of these so-called must-see caves," says Neville Agnew, a project specialist at the Getty Conservation Institute who has worked with the academy for 25 years.

"Pacific Northwest Artists Restore Stanford Totem Poles to Their Original Grandeur," Stanford News, 05/30/2013

The first totem pole installed on the Stanford campus rests close to the Oval, tucked into a nearby grove of trees. Art Thompson finished the Nuuchah-nulth style pole, titled Boo-Qwilla, in 1995. The second pole, The Stanford Legacy by Don Yeomans, sits adjacent to the Law School's Crown Quad and was completed in 2002. Carved in the traditional Haida style, Yeomans' pole rises 40 feet in the air.

Over the years, the totem poles' paint had noticeably faded. In order to restore their vibrancy, artists John Livingston and his wife, Maxine Matilpi, traveled from Victoria, British Columbia, to help with the restoration. To uphold the integrity and appearance of the totem poles, it was important to match the original hues. "The colors are very traditional," Livingston said. "These are the same colors and tones that have been used for hundreds of years."

The estates of Don Yeomans and Art Thompson approved the paint selection. The work on the poles isn't strictly cosmetic. Elizabeth Saetta, an outdoor sculpture technician for the Cantor Arts Center, thoroughly cleaned the poles, treated them for insects and, after the painting was finished, applied a topcoat specifically designed for totem poles.

"The most important thing, especially with exterior pieces, is preventive maintenance," she said. "You are trying to keep water and insects out, and do it in a way that doesn't visually change the pole."

"Bank of America Merrill Lynch Helps Conserve Three Tudor Portraits at the National Portrait Gallery in London", *Here is the City*, 06/2013

Bank of America Merrill Lynch has announced that the National Portrait Gallery in London will receive funding to conserve three Tudor Portraits through the company's global Art Conservation Project. This is one of 24 projects in 16 countries around the world that has been selected for grant funding in 2013.

The three portraits being renovated include one of Queen Elizabeth I in her early 40's, which is thought to be one of only two surviving large portraits associated with Nicolas Hillard. Yellowing varnish on the work has distorted the appearance of the original colour scheme but once properly conserved, the painting will clearly display the skill of Tudor artists.

Also being restored is a portrait of Edward VI by an unknown artist after Hans Holbein the Younger. During the conservation treatment, experts will examine the level of overpaint used particularly in the background of the painting.

The third piece being restored is a portrait of Edward VI and the Pope by an unknown artist. Created during the reign of Elizabeth I, it depicts Henry VIII on his deathbed, pointing towards his successor Edward VI.

During the restoration process, technical analysis will be undertaken in order to contextualise the production of a fourth painting, a version of the 'Armada Portrait' of Elizabeth I.

The Bank of America Merrill Lynch Art Conservation Project was introduced in 2010 in Europe, the Middle East and Africa and expanded to the Americas, Asia and Australia in 2012. To date, it has funded the conservation of more than 57 projects in 25 countries around the world.

"International Art Conservation Project to Help Preserve the Watts Towers," *Market Watch* 06/10/2013

Bank of America announced that it has provided funding to assist with the restoration of Simon Rodia's Watts Towers in Los Angeles through its 2013 Art Conservation Project, a global effort that will conserve 24 projects in 16 countries around the world, including eight in the United States.

The funding has been used to help Los Angeles County Museum of Art (LACMA) provide staff time and expertise to identify repairs to the Watts Towers, provide day-to-day maintenance and long-term care of the Towers, and increase awareness of the landmark. The project was selected because the Watts Towers, constructed between 1921 and 1954 by Simon Rodia, are an iconic part of Los Angeles and due to wear and tear are in need of necessary restoration efforts.

Art conservation project recipients were unveiled today at an event at LACMA, including notable projects such as "Number 1A," "One," and "Echo" by Jackson Pollock at the Museum of Modern Art; 13 mural drawings by Diego Rivera at the Detroit Institute of Arts; four Tudor paintings at National Portrait Gallery in London, England; "Scholar in His Study" by Rembrandt at the National Gallery in Prague, Czech Republic; and a Frida Kahlo photography collection at La Casa Azul in Mexico City, Mexico.

"Artist Restoring Tourtellotte Memorial Room's Aging Paintings," The Bulletin, 06/11/2013

For the last several weeks, Rhode Island-based artist Roy Collins has been cleaning, re-guilding and refurbishing several historic paintings that have been gathering dust and dirt for decades inside the Tourtellotte Memorial Room in North Grosvenordale, Connecticut.

In the Memorial Room, in the heart of Tourtellotte Memorial High School, 89 paintings of varying size hang on the space's recently repainted walls, rising up to the room's vaulted ceiling. "This museum and school is one of the oldest of its kind," curator Joe Lindley said. But time took a toll of the paintings, dulling their frames with dirt and causing paint to flake and crumble.

Lindley hired Collins to restore the museum's paintings to their original luster. "We're looking to do eight paintings a year, depending on the size of the piece," Lindley said. "We've planned to spend roughly \$3,000 each year on the restoration and, in some years, that could mean one large painting gets done."

The paintings, most dating from the late 1800s, include towering portraits, still lifes and landscapes, most bracketed in 22-carat gold-leaf frames. Collins, an art dealer who rehabilitates paintings for several auction houses, said restoring the paintings means removing accumulated grime from crevices in the frames and applying tissue-paper-thin swatches of gold leaf onto the dulled portions.

In some cases, sections are sanded or repainted. The painting's surfaces are given a light going-over with a "secret recipe" of cleaners and, if necessary, touched up.

"Conserving Works made with Synthetic paints," *The Art Newspaper*, 06/13/2013

The American Abstract Expres-

sionist Clyfford Still is one of the latest artists to be put under the Getty Conservation Institute's (GCI's) microscope. As part of its Modern Paints project, the institute teamed up with the artist's estate, the Hirshhorn Museum in Washington, DC, and the Artex Conservation Laboratory to analyse several key works representative of Still's oeuvre.

Although the artist is known to have used traditional paints, especially oils, scholars have long wondered whether he added the oils to hand-ground pigments (these types of pigments were found in his studio after his death) or to tube paints. The findings are due to be published in mid-2014 in the GCI's series "The Artist's Materials."

Still joins good company as other artists in the series includes Willem de Kooning and Lucio Fontana. One of Jackson Pollock's largest paintings, One: Number 31, 1950, is now back on display at New York's Museum of Modern Art after a nine-month project to clean and examine the work "inch by inch".

The museum's chief conservator, James Coddington, kept the public abreast of the project in posts on MoMA's Inside/Out blog. The drip patterns of this 9ft x 17ft painting show that Pollock applied paint while the canvas was on the floor as well as when it was popped up. The examination also revealed that some paint had been applied after the artist's death in 1956—possibly during a mid-1960s restoration.

This was removed during the cleaning process. Conservators will soon begin work on another painting by Pollock, Number 1A, 1948. The project is being sponsored by Bank of America Merrill Lynch as part of its art conservation grant programme.

To a Summer's Day, 1980, an acrylic on linen work by the British artist Bridget Riley is currently in the Tate's conservation studio. The composition consists of a series of undulating wave patterns in pink, lilac, blue and ochre yellow stripes set on a white background. Conservators expect to use a dry cleaning process to remove the thin veil of dirt that has accumulated on the painting's surface in recent months. Although this will be a minimal treatment, cleaning is required as the work's optical illusion depends upon the stark contrast between the white and the coloured stripes.

"Artist Feels Sacred Duty In His Restoration Work," Columbus Dispatch, 06/14/2013

The statue of Jesus needed a few touch ups after being repositioned in an alcove overlooking the sanctuary of Sacred Heart Church in Italian Village. So Todd Brausch got to work, quickly mixing paint to match Jesus' brown hair and climbing up scaffolding to fill in his eyebrows and beard and make other small fixes.

Few details are lost on Brausch, who specializes in restoration, refinishing and fine art. Raised a Roman Catholic, he has found a niche for his craft in Catholic churches. Brausch recently completed work to refinish the Sacred Heart of Jesus statue, as well as a companion Sacred Heart of Mary statue for a chapel.

The work capped a restoration project that included repainting walls, marbleizing columns, and restoring the altars and lectern at the Tudor Gothicstyle church that seats about 800 and was dedicated in 1923. The altars required sanding, smoothing and resculpting before spray-painting to avoid brush strokes. Pieces then were glazed for an aging effect, and 23-karat gold leaf was applied to accent carvings of angels and doves.

Brausch, who studied at the Columbus College of Art and Design and in Ortisei, Italy, started his business, T. Brausch Studio in Lithopolis, in 1999. He started work on Catholic churches shortly thereafter.

"Rare Drawings by George Bridgman, Inspiration to Norman Rockwell, Return Following Yearlong Conservation," *Art Daily.org*, 06/19/2013

The Norman Rockwell Museum announces the conservation and return to its American Illustration Collection of 28 rare drawings on paper by anatomy and figure-drawing teacher and illustrator George Bridgman (1864-1943).

The damaged drawings were taken to Williamstown Art Conservation Center (WACC) in nearby Williamstown, MA, where they received treatment in 2012 and 2013 under a grant from the federal Institute of Museum and Library Services (IMLS). The 28 drawings are part of a larger gift of more than 100 Bridgman study drawings that had been donated to the Museum in 2010.

Bridgman's influence on 20th century American art is deep. He is best known for his popular life drawing and anatomy books that are still used today. Bridgman established a unique technique for capturing human anatomy, gesture, and details by representing parts of the body as geometric forms.

As an instructor at the Art Students League in New York for 45 years, he taught nearly 70,000 students, among them sculptor Paul Manship, abstractionist Arshile Gorky, abstract expressionist Jackson Pollack, Peter Max, and Norman Rockwell. Bridgman was an inspiring presence for the young Rockwell, who spoke highly of him in his 1960 autobiography, "My Adventures as an Illustrator."

The Bridgman drawings had not been easily accessible to researchers for decades, nor have they been presented in public exhibitions. The treated drawings – along with the entire Bridgman collection – provide scholars and curators with an unparalleled resource on how Bridgman constructed his lessons and taught figure drawing in the classroom and through his books.

"Philadelphia Museum of Art's Sculpture Diana by Augustus Saint-Gaudens to be Regilded," artdaily.org, 06/25/2013

The Philadelphia Museum of Art will undertake a major project to regild Diana, the thirteen-foot-tall sculpture of the Roman goddess by Augustus Saint-Gaudens that commands the Museum's Great Stair Hall and was once mounted atop the tower of Madison Square Garden.

Made possible by a grant from Bank of America, this work will be undertaken by the Museum's Conservation Department in consultation with its department of American Art and is expected to last approximately four months.

"Most people do not realize that the sculpture's gray-green surfaces once gleamed in gold," said Timothy Rub, the George D. Widener Director and CEO.

The treatment plan will consist of corrosion removal, surface preparation for the application of gold size, and the laying of 180 square feet of gold leaf. This regilding project involves several

phases of preparation: research on the manufacture and appearance of the sculpture in the 1890s, and an assessment and documentation of the current structural condition of its sheet copper and armature, including the rotating mechanism of the weather vane.

Andrew Lins, The Neubauer Family Chair of Conservation and Senior Conservator of Decorative Arts and Sculpture at the Philadelphia Museum of Art, noted that the treatment plan of corrosion removal and the laying of leaf will be followed by any adjustments necessary to improve the appearance and lighting of the sculpture.

"During the years that it served as a weather vane at Madison Square Garden, its gilding apparently was significantly eroded, and the cleaning and repairing of the sculpture before it was installed in 1932 at the Philadelphia Museum of Art further altered the original surface," he said.

"200-year-old Painting Resurfaces at Mission San Juan Capistrano," Los Angeles Times, 07/08/2013

When Father Vincent Lloyd Russell looked upon the paintings depicting Jesus' suffering and death, he didn't like what he saw. Dirty from generations of neglect, colors faded, canvases torn. It was the early 1970s, and Russell reached out to a man who played the church organ on Sundays.

William Maldonado was also a gifted, self-taught artist who could copy virtually anything. Russell enlisted Maldonado to spruce up the 12 paintings that make up the Stations of the Cross. The first 11 were no problem. No. 12 was another story. Nearly 12 feet tall and 6 1/2 feet wide, "The Crucifixion," painted in 1800 by a Spanish colonial artist named Jose Francisco Zervas, was in such terrible shape that Russell decided that rather than try to restore it, he would simply cover it up with a reproduction by his talented church organist.

After Maldonado worked off and on for a year in a rented warehouse, his copy was placed over the original without fanfare. Entombed behind its impostor, the painting from the mission's early years effectively disappeared.

"The community lost its collective memory of it," said Mechelle Lawrence Adams, the mission's current executive director. When the Serra Chapel underwent a major restoration a few years ago, the Stations of the Cross underwent a professional restoration.

Again, No. 12 was another story. It clearly was a modern painting. But upon close examination, one could see that it stuck out from its frame a quarter-inch. Last month, as several dozen people looked on, an art conservator hired by the mission carefully removed nine narrow nails and slowly removed Maldonado's piece from 1973, revealing the 213-year-old painting.

Unseen for 40 years, the work is indeed a mess. Its canvas is saggy, pockmarked, torn and tarnished. Up close, it's hard to make out most images. It will take time — and tens of thousands of dollars that the mission intends to raise — to restore the original 1800 painting.

But Maldonado's piece isn't leaving the mission. It will be hung someplace else. "It's a part of the mission's history too," Lawrence Adams said.

"New Attempt to Identify Techniques Used by Antonio Stradivari," Sci-News.com, 07/08/2013

Dr. Marco Malagodi from the Università degli Studi di Pavia in Italy and his colleagues have used innovative methods to identify the techniques used by Antonio Stradivari, the celebrated Italian violin maker whose craftsmanship to this day baffles scientists.

The importance of Stradivari's work lies in his craftsmanship, the quality of the materials used and the finishes on the instruments' surfaces. Dr. Malagodi's team used different diagnostic techniques to identify the characteristics and composition of the materials in an original Stradivari violin top plate.

They also studied surface coatings and decorations. The findings appear in the journal Applied Physics A – Materials Science & Processing. Their analyses revealed the absence of varnish layers on the surface of the top plate as a result of extended and excessive restoring.

The scientists also identified the dye used for the black layers of the purflings – three strips of wood, glued together and set in as a decorative detail, encircling the outline of the violin, just inside the edge, and the characteristics of the black and white elements of the decorations, which confirmed that Stradivari used ancient techniques of wood coloring.

They then copied the top plate based on their discoveries, using materials similar to those identified on the original Stradivari, and carried out the same detailed analyses for comparison.

"These findings represent an important step in the study of the materials used by violin makers during the second half of the 17th century in Northern Italy," Dr. Malagodi and colleagues said.

"Palace Hotel Announces Return of Pied Piper painting," SFGate, 08/07/2013

After a boisterous outcry from the public following its removal, the Pied Piper of Hamlin will be returning to the Palace Hotel.

The painting by Maxfield Parrish, valued by the hotel at somewhere between \$3 million and \$5 million, had hung in the Pied Piper bar at the hotel almost continuously since it was commissioned in 1909. Despite the fact that the painting is considered by many to be a cultural treasure, the hotel took it down in April and shipped it off to New York where it was slated to be auctioned off to the highest bidder.

"It is no longer practical for the hotel to display an original work of this value and cultural significance in a public area," the hotel's owners, Kyo-ya Hotels and Resorts, said in an April statement. But San Franciscans were having none of that. After a call from the mayor, criticism from art historians and a petition that garnered more than 1,200 signatures, the hotel has changed its tune.

"The response from the public was influential in the decision to keep the painting at the Palace Hotel," said Christophe Thomas, General Manager of the Palace Hotel. "We are thrilled to announce the return of the beloved Pied Piper to its historic home."

The Pied Piper spent its downtime in New York receiving an extensive restoration, removing what conservators called a "thick layer of superficial grime," which accumulated on the painting after hanging in a smoky bar for more than 100 years.