

## President's Letter

**Randy Silverman**

### *WAAC mid-year board meeting*

The board had a rousing meeting in Los Angeles on April 14. The upshot of that gathering is that WAAC remains intellectually engaged, in sound fiscal shape, and firmly committed to making the 2017 annual meeting in Salt Lake City a fantastic event. WAAC's board remains the most wonderfully collaborative group of professionals with whom I have ever worked. The meeting was infused with good humor, and the ongoing dialogue behind the scenes remains an amazingly invigorating experience. If you've not previously had the pleasure, I strongly encourage you to consider standing for election and serving on the board—you will not be disappointed.

### *Call for papers!*

**This the second call for papers for the 2017 Annual Meeting.** Please contact one of our members-at-large—Seth Irwin, Jennifer McGlinchey Sexton, Samantha Springer, Christina O'Connell, or anyone on the board—if you'd like to present a paper at the Salt Lake City meeting. September is still a comfortable way off, and sharing the results of your work—including treatment outcomes, technical research, or progress in the trenches—gives back to the profession and helps advance our ability to preserve cultural patrimony.

Papers already proposed for the 2017 annual meeting include: 1) treatment of an Anthony Van Dyke painting of Saint Sebastian; 2) seismic considerations for the architecture and mounts in a natural history museum; 3) hydroxyl generation to eliminate disaster-related odors; 4) treatment of 19<sup>th</sup>-century photographic crayon enlargements; 5) the application of dry ice misting to clean historic and cultural property (with a live demonstration); and, 6) the conservation treatment of a pair of 19<sup>th</sup>-century celestial and terrestrial globes.

### *The 2017 annual meeting—25-28 September*

Accommodations in Salt Lake City will be affordable and convenient. The weather should be pleasant. An effective light rail system will transport you from the Salt Lake International Airport to the University Guest House where double-occupancy rooms can be reserved for \$109 per night. (The number of rooms is limited, so early registration is recommended. Please call the Guest House at 888-416-4075 and let them know you are with WAAC when you register.)

The pre-conference visit to Brigham Young University's rare book collection (Monday 25 September) boasts both numerous manuscript books and at least 450 European books printed before 1501. This is hands-down the most phenomenal rare book collection between Chicago, Austin, and Los Angeles. The day will encompass the history of bookmaking from manuscript scrolls to the height of chromolithographic printing. The pre-conference is free, but limited due to space to the first 25 registrants.

The conference proper (Tuesday-Thursday 26-28 September) will be hosted by the University of Utah's Marriott Library which is walking distance from the University Guest House. The reception—sponsored by Belfor USA—will be held in the Natural History Museum of Utah and includes a behind-the-scenes tour of the museum's facilities built, in part, with support from a Save America's Treasures grant. Set at the edge of campus in the foothills of the Wasatch Mountains—the museum holds a stunning collection of objects from 3,800 archaeological sites including artifacts from some of North America's most significant dry cave sites and a breathtaking collection of dinosaurs. The museum will be open late to ensure you have a chance to see the remarkable exhibits at a leisurely pace.

### *And then there's, Utah . . .*

The great thing about Salt Lake City, is that it is so close to Utah! Please plan to take some time to see some of the state's unique sights. Utah's five (5) national

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## President's Letter, continued

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parks are less mobbed after Labor Day offering remarkable natural vistas without the crowds. Highlights include sunrise in Arches, sunset at Island in the Sky in Canyonlands, Capitol Reef below the Milky Way, Bryce Canyon's orange hoodoos, and the towering canyons of Zion National Park. Barrier Canyon Style painted pictographs occur almost exclusively in southeastern Utah and date back 1500 to 4000 years. On the northeastern shore of Great Salt Lake, sculptor Robert Smithson's magnum opus earthwork, the Spiral Jetty, is accessible from Salt Lake City. And, if there is interest, we can request a tour of the Price Museum of Speed, a private museum of vintage early race cars including the hand-built 1938 Mormon Meteor III that set 26 land speed records on Utah's Bonneville Salt Flats.

You should be planning your visit to family-friendly Salt Lake City this fall—this is one meeting you won't want to miss.

With warmest regards,  
Randy

## New Early Bird Registration !!!

### Regular Members:

Early bird -- \$105 until July 14th  
Regular -- \$125 July 15th - September 8th  
Late -- \$145 - September 9th

### Students

Early bird -- \$65 until July 14th  
Regular -- \$85 July 15th - September 8th  
Late -- \$105- September 9th

Rooms can now be reserved at the University Guest House double-occupancy for \$109 per night. Call the Guest House (888) 416-4075 and let them know you are with WAAC.

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## Regional News

**Mark MacKenzie**  
*column editor*

### Alaska

**Helen Alten** and staff at the Haines Sheldon Museum have nearly completed an inventory of the three-dimensional collections, creating a list of poor storage, damage, and alterations that have occurred. The collection is in much better shape than staff expected. Next summer the museum will be offering an internship to conservation students to address some of the stored collection needs. Grants from the Alaska State Historical Records Advisory Board and Museums Alaska's Collections Management Fund are paying for a journeyman archivist, **Jessie Hopper**, and an intern, **Regi Johannos**, to process and create finding aids for large archival collections that have been awaiting processing for years.

Helen is working with Juneau engineer **Jim Rehfeldt** to significantly improve the environmental systems in the museum while simultaneously lowering the museum's carbon footprint. Funded by NEH-PAG, Rehfeldt's report should be a blueprint for the museum to seek additional funding for implementation of the plan. Another grant, from the Alaska Historical Commission, is paying for creation of a sesquicentennial exhibit that focuses on 1850-1885 in the area that eventually became Haines. For the first time, the museum is requesting loans from museums outside of Alaska, trying to bring items back to the region that left nearly 100 years ago.

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## Volume 39 Number 1 WAAC Newsletter

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### EDITOR

Carolyn Tallent

### REGIONAL NEWS

Mark MacKenzie

### HEALTH & SAFETY

Chris Stavroudis

### ARTICLES YOU MAY HAVE MISSED

Susanne Friend

**COPY EDITOR** Wendy Partridge

### Photocopying

To make academic course packets that include articles from WAAC Newsletter, contact the authors of the articles directly.

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### Internet

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.conservations-us.org/waac/>.

### Deadline

Contributions for the January Newsletter should be received by the Editor before **April 10, 2017**.

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## Western Association for Art Conservation

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**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.

### **PRESIDENT**

Randy Silverman  
University of Utah Marriott Library.

### **VICE PRESIDENT**

Mark MacKenzie

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General Information  
New Memberships  
Publication Orders  
Denise Migdail

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Payments  
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Change of Address  
Chris Stavroudis

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Donna Williams

Individual Membership in WAAC costs \$40 per year (\$45 Canada, \$50 overseas) and entitles the member to receive the WAAC Newsletter and the annual Membership Directory, attend the Annual Meeting, vote in elections, and stand for office. Institutional Membership costs \$45 per year (\$50 Canada, \$55 overseas) and entitles the institution to receive the WAAC Newsletter and Membership Directory. For membership or subscription, contact: Denise Migdail [secretary@waac-us.org](mailto:secretary@waac-us.org)

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## *silent auction*

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### **Start now.**

Begin to look around the studio, house, garage, attic.... for silent auction items.

Books, tools, things you've made, random odd objects, we like them all.

Put a box or bag in the corner of the studio and toss things in when you come across them. Simplify your environment, so someone else can clutter up theirs.

If you have questions, contact: Carolyn Tallent or Susi Friend.



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### **Regional News, continued**

**Ellen Carrlee** gave a workshop on humidification and reshaping of leather footwear at the Sheldon Jackson Museum in Sitka in February. She also brought paper conservator **Seth Irwin** back to Alaska for three months on a sesquicentennial grant from the Office of History and Archaeology. The project got the state paper conservation lab operational and treated maps and documents from the period of Alaska's purchase from Russia 150 years ago. Ellen coordinated expertise and collections from the State Libraries, Archives, and Museums (now housed in the same building) to design an exhibit opening in the fall, which will include a paper conservation didactic component.

**Scott Carrlee** is now splitting his time between Juneau and Seattle for the foreseeable future. He is still able to provide technical support for Alaskan museums through email and phone conversations in either location. Scott also wrote a winning nomination for a 2017 IMLS National Medal for the Alaska State Museums.

After several months volunteering at the Te Awamutu Museum in New Zealand, **Lisa Imamura** is back at the Alaska State Museum for the summer. She has accepted a fellowship at the Conservation Center for Art and Historical Artifacts (CCAHA) in Philadelphia, starting in the fall.

**Nicole Peters** was recently in Sitka completing a condition assessment for a totem pole at Sitka National Historical Park. Her upcoming projects include returning to the Anchorage Museum to further assist with the expansion projects and gallery renovations, traveling down to Indiana to complete a NEA-funded condition assessment survey at the Eiteljorg Museum of American Indians and Western Art, and completing conservation projects for the Juneau-Douglas City Museum and the Sealaska Heritage Institute in Juneau.

In Anchorage, conservation work continues on the objects and art selected for the museum's two large new exhibition projects. With almost 900 pieces to prepare, many conservators have been assisting with the project. **Nicole Peters** has been stationed in the visible conservation lab since early October, with assistance from **Kim Cullen Cobb** and **Michele Austin-Dennehy** in December. **Hays Shoop** and **Camilla Van Vooren**, with WCCFA, were in Anchorage in November and December to conserve paintings. Conservation technicians **Claire Sumner** and **Elissa Meyers** continue to support all of this work, while **Monica Shah** and **Sarah Owens** have been managing, continuing to plan for, and treating objects for other exhibitions.



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## Regional News, continued

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At the end of November last year Monica and Sarah participated in a community workshop in Metlakatla, as part of the Materials Tradition program on weaving cedar bark. The workshop was organized by the Smithsonian Arctic Studies Center, Anchorage Museum, and the Haayk Foundation, for weavers in Metlakatla to get together for learning and teaching others, including museum staff. Weaving techniques used in Metlakatla were demonstrated and documented.

Recently, Sarah traveled to Kodiak to help the Alutiiq Museum with the installation of the traveling exhibit *Living Alaska*. She also continues to prepare objects for upcoming exhibitions including *Polar Bear Garden: The Place Between Alaska and Russia*.

*Regional Reporter*  
Ellen Carrlee

### Arizona

**Nancy Odegaard, Gina Watkinson, Marilen Pool, Skyler Jenkins, Betsy Burr, and Leah Bright** completed treatments and mounts for a new exhibition hall *Woven Through Time: American Treasures of Native Basketry and Fiber Art*. **Wendy Lindsey** and Nancy Odegaard presented a poster on non-destructive analysis and Nancy with **Elyse Canosa** and Betsy Burr presented a poster on conservation in the repatriation process.

Nancy Odegaard, Gina Watkinson, and Marilen Pool each made presentations to the University of Arizona Museum of Art technical art history symposium on March 23. Marilen Pool, Nancy Odegaard, and **Christina Bisulca** made two presentations at the Society of American Archaeology meetings in Vancouver.

Gina Watkinson collaborated in *The Collective Wisdom: An Exploration of Library, Archives, and Museum Cultures*. Coalition to Advance Learning in Archives, Libraries, and Museums. 2017 project.

Lab members have been extremely busy with numerous outreach activities on campus and in the region including the Science City- Science of Art expo at the Tucson Festival of Books and hosting a conservation lecture series including **Lauren Fair, Rosa Lowenger, Scott and Ellen Carrlee, and Charlie Costain**.

**Mary Vigliotti** (West Dean program) is completing a summer post graduate fellowship in the lab.

Betsy Burr has been awarded an FAIC Take-a-Chance grant to study charred materials.

Leah Bright has accepted a post graduate Mellon Fellowship at the Smithsonian National Museum of the American Indian for September 2017. Skyler Jenkins has been accepted to the UCLA graduate conservation program for 2017.

Marilen Pool has been accepted to the U. of Arizona Arid Lands doctoral program for 2017 and will focus on lac and other adhesive materials in the Southwest region.

The conservation team at the Western Archeological and Conservation Center have had a busy spring. **Amy Molnar** and **Maria Lee** have continued their treatment of the large wood veneer map of the United States from Yellowstone National Park. **Audrey Harrison** has been focusing on stabilization treatments of historic baskets and prehistoric sandals, and **Maggie Hill Kipling** completed treatments stabilizing dolls and toy cradleboards from multiple tribal communities in the Plains areas.

**Dana Senge** had the honor of collaborating with the Navajo on testing items for heavy metals from pesticides and is currently working on several collection condition surveys for parks in the Intermountain Region of the National Park Service.

*Regional Reporter*  
Dana Senge

### Hawaii

**Rie and Larry Pace** have been busy treating items for the Honolulu Museum of Art. Three panel paintings were found to be in the early stages of active infestation by wood boring beetles and possibly termites. The paintings were immediately removed, examined, and given anoxic treatments. **Thor Minnick** was a great help setting up the anoxic treatments thanks to his previous experience with the process.

The Iranian mosaic tile decoration on the façade of the Playhouse at Shangri La was commissioned by Doris Duke in the late 1930s. Situated above a rocky shore with non-stop breaking surf, the mosaic has long been problematic, with flaking glaze and disintegrating ceramic substrates and mortars. It was with great excitement that newly fabricated replacement parts for the most degraded parts of the assemblage, about 25% of the façade, arrived and were installed in January. Conservator **Kent Severson** reported on the project at the Hawaii Museum Association annual meeting in April, and he will now turn to conservation of the remaining mosaics in situ.

*Regional reporter*  
D. Thor Minnick

### Los Angeles

**Tania Collas and Marina Gibbons** welcome summer conservation intern **Gillian Holzer** to the Natural History Museum of Los Angeles County. Gillian is currently pursuing her BA in art conservation at Scripps College and will be assisting the NHM conservators with treatments on a variety of materials.

Tania and Marina recently completed the installation of the traveling exhibition *Extreme Mammals*, open through September 10, 2017. Marina is also preparing to install the coat worn by Jack Lemmon as Professor Fate in *The Great Race* (1965) for temporary display in the museum's *Becoming Los Angeles* exhibit starting late August, 2017.



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## Regional News, continued

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**Joe Fronek** recently restored a new LACMA acquisition, a painting by Gustave Courbet, *The Wave*. The painting dates from about 1869 and comes from a series of seascapes the artist made while in Normandy. **Elma O'Donoghue** is examining a European portrait, thought to be mid-16th c. from the Veneto-Lombard region. It is hoped that technical analysis and restoration will help provide more information about the painting's possible attribution.

**Kamila Korbela** is examining a pair of paintings by Rufino Tamayo, *Catching Butterflies* and *Friend of the Birds*, both dated 1944. The paintings have been varnished, and the varnish has significantly darkened their appearance. Examination will help evaluate when the varnish was put on the paintings and whether it should be removed.

**Amanda Burr**, a recent graduate from the SUNY Buffalo State Art Conservation Department, will join the paper conservation staff at LACMA in July 2017. Her extensive background in book conservation is welcome to address the needs of the Robert Gore Rifkind Center for German Expressionist Studies. It is a research facility devoted to the study of the Expressionist movement that flourished in Germany during the early twentieth century with many rare books and periodicals. Among many other tasks she will be assisting with an upcoming exhibition of 3-D photography that surveys three-dimensional media from Victorian stereoscopy to virtual reality.

Antiquities Conservation at the Getty Villa announced that their colleague and friend, **Eduardo Sánchez** retired on May 19<sup>th</sup>, 2017 after 31 years with the J. Paul Getty Museum. Many of you know Eduardo and his warm and friendly personality. Since 1986, he has been a vital part of the Getty having worked on numerous exhibitions and in-depth collaborative projects, domestic and international. As Associate Conservator of Antiquities, his work has largely focused on the conservation treatment of mosaics, large-scale marble sculptures, frescoes, and, most recently a significant joint conservation project with the

Bibliothèque Nationale de France, researching and conserving 96 Roman silver luxury items. Eduardo will begin a new chapter in his life and will be greatly missed!

Villa reinstallation – the Getty Villa is getting a makeover, and things are very busy, deinstalling/reinstalling and getting objects ready for the redesigned exhibition displays. The galleries will open in phases starting in August, but the complete reopening of the entire Villa will be in the spring of 2018. Numerous loans and other ongoing projects add to the busy pace, and staff have been traveling to locations all over the map.

The Altamura Krater, which is today part of the collection of the Museo Archeologico Nazionale in Naples, is currently at the Getty Villa to be examined and treated by **Erik Risser**.

This past March, **Marie Svoboda** was invited to her alma mater, the Art Conservation Program at Buffalo State, to speak to the next generation of conservation students. She lectured on the 6-year conservation collaboration of 4 Apulian vases from the Antikensammlung in Berlin – a project which culminated in the exhibition *Dangerous Perfection* and its catalogue.

In May, **Susanne Gänsicke** and **Jeff Maish** participated in a meeting of the CAST:ING group (*Copper Alloy Sculpture Techniques and History: an International Interdisciplinary Group*) in Washington D.C. This group is developing an on-line publication focusing on the many features and technologies associated with bronze casting. Jeff also traveled to New York City to de-install objects from the exhibition *Time and Cosmos* at the Institute for the Study of the Ancient World.

The conservation department at the Margaret Herrick Library of the Academy of Motion Picture Arts and Sciences, is welcoming their first pre-program summer intern, **Rio Lopez**. Rio will be joining us part-time for the summer months and working on various treatment

projects at both library locations. **Dawn Jaros**, **Caitlin Jenkins**, and **Courtney Azzara** are thrilled to have her join the department and very much look forward to providing Rio with paper conservation skills at the special collection library. In addition, they commissioned a large press to be built to help flatten one-sheet posters (41" x 27").

**Carolyn Tallent** has in the last few months worked on four early paintings by Frederick Hammersley, stood too near the top of a ladder to inpaint a James Rosenquist, camped out in a conference room at United Talent Agency to clean a piece by Tim Bavington, and bagged a large Lichtenstein for anoxia treatment with the help of **Chris Stavroudis**, amused by the fact that someone recently told her they thought she had retired.

*Regional Reporter*  
Virginia Rasmussen

## New Mexico

At the Museums of New Mexico-Conservation Unit **Maureen Russell**, **Larry Humetewa**, and Buffalo State conservation intern **Sophie Hunter**, completed the conservation of many (too many) intricate and delicate carved wooden and multiple material works of art for the exhibit *No Idle Hands: The Makers and Myths of Tramp Art* curated by **Laura Addison** now open at the Museum of International Folk Art.

Textile conservator **Angela Duckwall** carried out the mounting of a number of textiles for the exhibit *Voices of Counter Culture in the Southwest*, an exhibit soon to open at the New Mexico History Museum. Meanwhile nearly 200 moccasins and beaded garments for the exhibit *Stepping Out* for the Museum of Indian Art and Culture have been surveyed and conserved.

The multi spectral imaging and analysis of the first of the Segesser hide paintings from the Palace of the Governors by **Mark MacKenzie** nears completion. Valuable lessons have been learned about workflow, which became very important

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## Regional News, continued

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when imaging something nearly five feet wide and 18 feet long! Several image processing workstations which are independent of the MSI imaging first stage are being set up. It is expected that this will greatly improve the workflow and allow speedier progress with the project.

The Museums of New Mexico – Conservation Unit has received a Kress Fellowship which will be taken up by the current 3rd year graduate intern, Sophie DuBois Hunter this fall. She will be devoting this fellowship to the study and application of conservation methods for fragile historic Native American basketry.

*Regional Reporter*  
Silvia Marinas-Feliner, M.A.

### Pacific Northwest

**Lisa Duncan Goedecke** has been very busy. She has been working with the Seattle Art Museum on an ongoing Mellon Funded survey and also with the Tacoma Art Museum on several projects including outreach for conservation and a talk for members to drive donations for conservation projects. She has been doing a lot of private work as well.

Thanks to a generous grant from 4Culture, the Seattle Art Museum was able to purchase a new So-Low low temperature chest freezer to complement the quarantine resources at the museum.

**Nicholas Dorman** treated a group of early paintings by Mark Tobey, **Barbara Robertson** reframed them, and **Richard Boerth** constructed a new frame for one of the group. The frame replicates a lost original frame that curator **Patti Junker** discovered in an archive MoMA exhibition image of the painting. This group of early Tobey's will travel to an exhibition at the Peggy Guggenheim Collection in Venice and the Addison Gallery of American Art.

**Elizabeth Brown** continued foundation-funded work to establish a new media lab at SAM, inviting **Maurice Schechter** to examine the collection and advise on equipment and procedures. SAM's team at the Asian Art Museum, including **Marta Pinto Llorca**, **Geneva Griswold**, and **Dorothy Cheng**, continued comprehensive evaluation and preparation of art in storage, in advance of a complete building renovation which will necessitate removal of all the art.

Other major surveys that have completed this quarter include **Peter Malarkey's** survey of western paintings and **Tomokatsu Kawazu** and Lisa Duncan's final leg of their survey of the Japanese paintings, funded by the Andrew W. Mellon Foundation. SAM was also pleased to send an important pair of Edo period screens to Mr. Kawazu for conservation treatment, thanks to a generous grant from the Bank of America conservation project.

At the Olympic Sculpture Park, Liz has been working with Mark di Suvero's studio to prepare for the re-carving of degraded wooden components of the artist's monumental early sculpture, *Bunyon's Chess*, and she is also working with Fabrication Specialty to refabricate components of Roy McMakin's site-specific work *Love & Loss*. Nick was pleased to gain a place on the University of Washington's Nonprofit Executive Leadership Institute, taking part in the intensive week-long program, thanks to a planning grant funded by the Andrew W. Mellon Foundation.

**Corine Landrieu** has been very busy this winter and early spring. She treated an Icelandic dress for the Nordic Heritage Museum, science fiction movie costumes and props for MoPOP, a number of sculptures for private collectors, and assessed and treated a collection of science fiction movie props to ready them for travel and exhibition in Europe.

**Janae Huber** and **Adam Fah** at the Washington State Arts Commission are wrapping up end-of-fiscal-year conservation projects, including the repair of an artist-designed foot-bridge

by Peter Richards. The work connects two parts of South Puget Sound Community College's Olympia campus and traverses a salmon-bearing stream, adding complexity to the allowable treatments. The project scope of work was established by conservator Corine Landrieu.

In June, Janae will also be presenting with colleagues from San Francisco, Los Angeles County, and San Antonio at the Public Art Network's annual pre-conference on data driven advocacy and care for public art collections.

*Regional reporter:*  
Corine Landrieu

### Rocky Mountain Region

Conservation Solutions' current projects include: the treatment and reinstallation of five monumental sheet copper repousse sculptures from atop an Iowa County courthouse; the assessment and treatment of an historic 20' cast iron C. A. Fiske fountain with monumental zinc sculptures, which was shipped from California to their studio for treatment and has since been reinstalled at a private residence in Atherton, CA.; and assessment, planning, and treatment of 1,500 historically significant maritime artifacts. New projects include the treatment of monumental plaster sculptures, assessment of multiple modern art outdoor sculptures, and oversight of the removal of several ornately carved mantels from a world renowned museum in New York City.

**Mark Rabinowitz** and **Elizabeth Beesley** presented "Solid CO2 cleaning and patina preservation: case studies in aluminum and bronze" at AIC's annual meeting in Chicago.

**Jessica Fletcher** and **Julie Parker** are excited to have simultaneous IMLS treatment projects with **Jude Southward** at Denver Museum of Nature and Science. Jessica is working on the American Ethnology Collection

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## Regional News, continued

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Treatment grant and Julie is working on the Plains Nations Clothing and Accessories grant. With the help of volunteers **Jill Mally**, **Kathryn Reusch**, and **Becky Hiett**, these objects are being treated and rehoused in DMNS's newly constructed state-of-the-art Avenir Collections Center storage facility.

**Teresa Knutson** of Rocky Mountain Textile Conservation in Kalispell, Montana has been busy treating a group of World War I uniforms and accessories, including a trench coat, puttees, mitts, and a haversack, for an upcoming exhibit at the Montana Historical Society.

In March, the Denver Art Museum conservation department completed one IMLS grant and began another. Beginning in September 2015, over 600 furniture and decorative arts objects were surveyed and prioritized for treatment; materials analysis was performed on a select number. In addition, several designer interviews were conducted. Many thanks to **Courtney Murray**, **Mark Minor**, and **Julie Parker** for their participation with the grant. **Kate Moomaw** and **Gina Laurin** were key staff members in providing project oversight.

**Eddy Colloton** joined the department in March as assistant conservator for the IMLS grant that is supporting preservation of the museum's electronic media collection. The project will continue to refine cataloguing procedures as well as undertake identification, ingestion, migration, and ongoing storage efforts. It will continue through September, 2018.

The conservation department would like to congratulate **Nicole Feldman** for her acceptance to the Graduate School of Arts and Science at New York University. Nicole has been part of the conservation department since 2015 and has been an integral part of many treatments and exhibition preparations. She will be heading to NYC to begin her professional conservation journey at the end of July.

For the exhibition *Calder: Monumental at the Denver Botanic Gardens*, Kate just completed treatment of the mobile *Snow Flurry, May 14*.

Since the beginning of 2017, Gina has been reviewing, assessing, and treating various ethnographic and archaeological objects from the Asian department for the upcoming exhibition, *Linking Asia: Art, Trade, and Devotion* and its associated catalogue, scheduled to open in December.

**Jennifer Parson** and **Sarah Melching** treated a map of China, which is extraordinary in scale and brilliant coloration. The map was created by a Japanese cartographer in 1681 and will be featured in *Linking Asia: Art, Trade, and Devotion*. Measuring 115 x 142 inches, the map will be displayed with rare earth magnets.

**Allison McCloskey** and **Emma Schmitt** have been preparing a range of textiles and fashion for upcoming exhibits, ranging from 17<sup>th</sup>-century Flemish tapestries to contemporary fashion. Emma has just completed an in-depth treatment of a 19<sup>th</sup>-century Tibetan thangka, and compiled research that will inform the museum's storage and display methodology for other thangkas in the collection.

**Pam Skiles** has recently completed an in-depth treatment of the Kenneth Adams painting, *The Reapers*, 1946, which is now on display at neighboring History Colorado.

In the fall, 2016, the Denver Art Museum was the recipient of a Bank of America art conservation grant for conservation of the Spanish Colonial painting *The Virgin of Valvanera*, attributed to Cristobal de Villalpando, c. 1700. The generous funding is supporting research, analysis, and treatment. Sarah has been coordinating curatorial, interpretive, and conservation efforts. Pam is working on the technical analysis while **Yasuko Ogino** is carrying out the treatment of this large devotional painting.

Pam, Yasuko, Sarah, and other DAM staff members recently returned from a research trip to Mexico City where they researched Mexican baroque painting and the artists who worked in this metropolitan hub.

Pam also continues to work with **James Squires** at the Clyfford Still Museum,

inventorying, unrolling, and stretching the paintings on canvas collection.

*Regional Reporter*  
Julie Parker

## San Francisco Bay Area

The Asian Art Museum Conservation Center welcomed a new full-time conservation technician to the staff in August 2016: **Steven Sciscenti**. Steven came from the Oakland Museum of California, where he worked as a preparator and mountmaker as well as assisting Conservation with special projects.

**Shiho Sasaki** and **Kimi Taira** welcomed **Charlotte Eng**, conservation scientist from LACMA, for a project to identify and study safflower used in colorants in Asian paintings and works on paper. Charlotte also presented recent findings on LED light spectra to the museum services division of the AAM.

In December, **Kathy Z. Gillis** and **Shiho** attended a symposium at the MFA in Boston on preserving oversized Asian paintings, in conjunction with the MFA's project (partially carried out in view of the public) treating a 16-foot tall Japanese hanging scroll, Hanabusa Itchō's iconic masterpiece, *The Death of the Historical Buddha (Nehan zu)*.

Kathy and Shiho also participated in two working sessions at the MFA on conservation activities, struggles, and successes at various Asian studios across the United States to attract emerging conservation professionals in the specialized treatment of traditional Asian materials.

**Sheng Yang**, deputy director of the conservation and scientific departments of Jinsha Site Museum and Chengdu Museum, visited the Asian Art Museum for a three month period to work with various departments at the museum. His primary interest was in environmental and preventive conservation practices



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## Regional News, continued

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in use at AAM and other institutions in the U.S. During the portion of his visit spent with the conservation center, Yang worked with **Mark Fenn** to carry out XRF analysis on a group of Chinese stone sculptures and to assist with collecting samples from Southeast Asian bronzes for ICP analysis. In addition to visiting local conservation labs at the Legion of Honor, the M.H.deYoung Museum, and SFMOMA, Yang also was able to visit colleagues at the Getty Center, LACMA, MFA Boston, Winterthur Museum, and the Smithsonian Institution.

**Denise Migdail** and Kimi Taira attended the WAAC conference in Tucson, AZ in October. Denise gave a tips session on the use of magnets in display, and Kimi gave an update on the work of the Emerging Conservation Professionals Network. They also attended AIC in Chicago. Denise is continuing her work as a member of the board of the North American Textile Conservation Conference and will attend their meeting in Mexico City in November, presenting a paper on the conservation and display of a Burmese court/dance costume.

AAM's tribute to the 50<sup>th</sup> anniversary of the Summer of Love is *Flower Power* (June 24 – October 1). It will highlight significant flowers and their symbolism in Asian images. AAM's fall exhibit, *Couture Korea* (November 3 – February 4) will celebrate the contributions to fashion from historic Korean traditions as well as contemporary Korean designers working today.

**Sarah Gates** and **Anne Getts** continue to be on the exhibition treadmill in the textile conservation lab at the de Young. *Summer of Love* has just been installed with a about 50 costume ensembles that don't have much interest in the way of couture sewing but the embroidery, beading, and crochet are fun. The department is welcoming the museum's Impressionist-era hats back from St Louis to go on display at the Legion of Honor in June. Hopefully never again will some of them be touched without gloves, thanks to Anne's XRF analysis that found both arsenic and mercury.

**Victoria Binder**, paper conservator at the Fine Arts Museums of San Francisco, has continued her research on the making

of the 1960s psychedelic rock posters. She wrote an essay "San Francisco Psychedelic Rock Posters: the Art of Offset Lithography" in the catalogue *Summer of Love: Art, Fashion, and Rock and Roll*. She also organized a gallery highlighting the making of the posters in the de Young's current exhibition *The Summer of Love Experience*.

SF Bay Area conservator **Candis Griggs Hakim** is finishing her fifth expat year as a contract conservator in Qatar for their (not yet opened) National Museum. She has been lucky enough to work on a wide variety of objects all these years- from moldy goatskins to tarnished tiaras - and amongst friendly and fabulous conservators from around the world.

Qatar's capital Doha is a relatively tiny town but is disproportionately full of conservators thanks to its many museums and the royal family's interest in the arts. Despite getting used to the fairly glamorous lifestyle of the Middle East expat, Candis misses the fresh air of the Bay Area and sees a return to blue skies relatively soon.

**Margaret (Meg) Geiss-Mooney** has now returned to the State of California and a state of nirvana from the State of Qatar and a state of disbelief where she recently completed contract work on costumes for the National Museum of Qatar, scheduled to open at the end of 2018. Her intrepidness badge is now elevated to the platinum (with pearl accents) level. She is happy to answer questions about the why, the how, and the what the heck about the experience to those interested once she stops hugging every redwood tree she sees.

At SFO Museum, **Alisa Eagleston-Cieslewicz**, has been working on objects for a variety of exhibits including shows on the development of the typewriter, the history of United Airlines, and architectural souvenirs from the Grand Tour. She is also preparing for the museum's move into its new building, which is scheduled for early 2018.

*Regional Reporter*  
Alisa Eagleston  
Alisa.Eagleston@flysfo.com  
aeagleston@famsf.org

## Texas

**Mark van Gelder** recently treated a Netherlandish oil on panel version of *Saint Jerome In His Study*, attributed to the workshop of Marinus van Reymerswaele (c. 1490 - c. 1546) from the Harry Ransom Humanities Research Center at the University of Texas in Austin. The painting is now on display in the newly reinstalled European paintings galleries at the Jack S. Blanton Museum of Art, also on the UT Austin campus. Mark is currently working on the restoration treatment of a 1933 decorative mural on the 12' x 30' vaulted ceiling in the entrance loggia of the Austin History Center.

*Texas Regional Reporter:*  
Ken Grant

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*Quality . . . you know what it is, yet you don't know what it is.*

*But that's self-contradictory.*

*But some things are better than others, that is, they have more quality.*

*But when you try to say what the quality is, apart from the things that have it, it all goes poof! There's nothing to talk about.*

*But if you can't say what Quality is, how do you know what it is, or how do you know that it even exists? If no one knows what it is, then for all practical purposes it doesn't exist at all. But for all practical purposes it really does exist.*

*from zen and the art of motorcycle maintenance*

*by Robert M. Pirsig*

September 6, 1928 – April 24, 2017

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## WAAC Publications

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### Handling Guide for Anthropology Collections

Straightforward text is paired with humorous illustrations in 41 pages of "do's and don'ts" of collection handling. A Guide to Handling Anthropological Museum Collections was written by Arizona State Museum conservator Nancy Odegaard and illustrated by conservation technician Grace Katterman. This manual was designed to be used by researchers, docents, volunteers, visitors, students, staff or others who have not received formal training in the handling of museum artifacts. Paperbound and printed on acid-free stock.

**Price: \$10.00**

(\$8.00 copy for orders >10 copies)

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### Back Issues of WAAC Newsletter

Back numbers of the *Newsletter* are available. Issues Vol.1 - Vol.14, #3 (Sept. 1992) are \$5/copy. Issues Vol.15 - Vol.29, #3 (Sept. 1997) are \$10/copy. Issues Vol.30 (Jan. 2008) and after are \$15/copy. A 20% discount will be given to libraries seeking to obtain back issues to complete a "run" and for purchases of ten copies or more of an issue.

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**For information please contact the  
WAAC Secretary:**

Denise Migdail

**Send prepaid orders to:**

Donna Williams

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Sandra Lea Troon  
1952- 2017

Sandra Lea Troon loved her family and textiles. As a young girl scout she would spend her allowance on bits of cloth from the fabric store. Her strong morality was in a large part formed through the Girl Scouts and from the rafting trips which were often led by her father Richard Troon and Lucille Brownell and Lette and Steve Counts in Grants Pass. She is missed by her mother, Beverly Troon, and her her sisters, Catie Lambie, Laurie Mintz, Rebecca Troon, and her husband.

She graduated from the University of California in Santa Barbara with a BA in sociology in 1974. She was married to David Simmen in 1975, and they had celebrated 43 years of marriage when she passed. Sandy went to Hampton Court Palace Textile Conservation Centre in London in 1985, where she completed a post graduate internship in 1986. In 1987, she earned a MAIS from Oregon State University in textile history. She worked for the Portland Art Museum in various roles from 1978 to 1988 where she formed a lifelong friendship with Sonja Sopher, Kittu Gates, and Chris Cooksey.

Sandy started the Oregon Textile Workshop in 1986 which was a full textile conservation lab. She was determined to educate others with regard to appropriate conservation practices and accomplished this by reaching out to small historical museums and other institutions in the area providing them with her services and information on the proper handling and display of various artifacts. She gained the respect and admiration of conservation professionals throughout the Northwest. She gave freely of her time to individuals who had treasured textiles.

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## Jobs

**University of Hawaii at Manoa  
Library (Honolulu)**  
Conservator/

The University of Hawaii at Manoa Library is seeking applicants for the position of conservator for the paper based materials from the Library's collections. This is a permanent full-time position. Closing Date: June 16.

Under the direction and supervision of the Head of Preservation, performs a variety of tasks related to the conservation of paper based materials from the Library's collections. Establishes treatment priorities and workflow, and develops treatment strategies and preservation policies. Performs appropriate treatments and housing of library materials and writes reports of these treatments performed. Designs and conducts condition surveys and preservation assessments for digitization, exhibition, and acquisition. Maintains equipment. Orders and maintains conservation supplies. Communicates with other Library staff to monitor treatment progresses and conservation projects. Participates in conservation and preservation outreach activities for University of Hawaii Manoa community and beyond. Applies appropriate treatments to a scope of materials that focuses primarily on unbound documents and secondarily on bound formats. Provides training for Preservation Department staff, and supervision for students, interns, and volunteers. Participates in the Library's collection disaster preparedness training and recovery program.

### Minimum Qualifications

Possession of a baccalaureate degree in art, art history, anthropology, archaeology, architecture, chemistry, or related field and 3 year(s) of progressively responsible professional experience with responsibilities for paper and book conservation; or equivalent education/training or experience. Considerable working knowledge of principles, practices and techniques of paper conservation. Considerable working knowledge and understanding of applicable federal and state laws, rules, regulations and theories and systems associated with maintaining safety in conservation lab. Demonstrated ability to establish and maintain effective working relationships with internal and external organizations, groups, team leaders and members, and individuals. Demonstrated ability to lead subordinates, manage work priorities and projects, and manage employee relations.

For the complete posting with information on how to apply, please see:  
<http://workatuh.hawaii.edu/Jobs/NAadvert/24916/4346077/1/postdate/desc> or call 808-956-7207

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# Lamination Methods and Survey of Collections Containing Lamination

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## Introduction

Cellulose acetate (CA) lamination was a widely applied paper conservation/preservation method within libraries, archives, and museums during the 20<sup>th</sup> century. The two major methods of CA lamination were covered in the previous issue of the *WAAC Newsletter*.<sup>1</sup> Because CA degrades with time, the acidic degradation products can damage both the object as well as further degrade the CA.

As a conservation community, we are well aware of the potential damage of CA to collections. Understanding the influence of this treatment upon US based collections today requires working with multiple institutions around the country. The Heritage Science for Conservation group at Johns Hopkins University set out to answer questions regarding: the age, quantity, and condition of laminated documents currently in collections; the kinds of deacidification that may have been done prior to lamination; the quantity, method, and reasons for delamination; and the use of climate controlled storage for laminated documents in the United States and its territories.<sup>2</sup>

Recently, a report was published detailing the results of the survey. It revealed that at the lowest estimate there are well over 2.9 million documents in collections. There may be more than twice this number, based upon information from earlier sources.<sup>3-9</sup> However, the amount of CA laminated documents currently in collections as well as their current condition was not known prior to this survey.

## Background

Lamination adds physical strength to an object by adhering one material to another stronger material. Lamination has been and is currently used in paper conservation/preservation to support documents using a variety of materials and adhesive technologies. This article summarizes the methods of lamination and where and when these methods originated. It also provides some guidance for identifying methods of lamination. It should be stressed that not all institutions followed the specific guidelines as laid out by the originators of a particular method, hence there are variations for all of these lamination types.

### Ademco (United Kingdom mid-late 1900s)<sup>10-20</sup>

Ademco was a company (originally the Adhesive Dry Mounting Company) located in the UK. It produced multiple materials for paper and photo repair contemporaneously to Barrow and National Bureau of Standards (NBS) lamination. The company produced a CA film backed with a heat and pressure set adhesive,<sup>13,21</sup> dry mounting materials, tissue,<sup>10</sup> heat activated adhesives,<sup>12</sup> heat-set tissues,<sup>19</sup> adhesive tapes, and laminator presses.<sup>15</sup>

While it may not be technically correct to call the use of any of these materials an Ademco method,<sup>14</sup> Darlington lists the use of cellulose acetate with an adhesive applied by heat and pressure to the paper surface as an “Ademco” method in her articles.<sup>13,16,21</sup> Typically the Ademco CA films that were used are thicker than those applied in the Barrow and NBS

laminations. Given the potential variety of material, unless there is documentation of what was used, it is difficult to identify an “Ademco” lamination after the fact. However the presence of adhesives will indicate this is neither the NBS nor the Barrow methods.

### Barrow Lamination (originated in the US, 1937-1990s)<sup>22-24,1</sup>

As discussed in the previous *WAAC Newsletter*, the Barrow lamination method was typically preceded by a two-bath deacidification. This method laminated a document using CA film with an outer layer of semi-transparent tissue. Barrow sold his laminator around the world, but was not the only vendor of laminating presses. The Arbee Company out of New Jersey/New York also sold a laminator and the related film. It is difficult to know whether Arbee employed the NBS or the Barrow method more, but it is likely that one of the two methods was used by anyone with an Arbee laminating press.

The easiest way to identify a likely Barrow lamination is the presence of the outer layer of tissue, a relatively thin overall lamination (the original films were 0.001 inch thick), and the presence of CA. CA can be detected by a vinegar odor, the fact that it has a slight yellow color, or otherwise conducting a chemical test. It should be noted other methods also used either tissue or CA film, but a combination of these factors is a good indication of Barrow lamination.

### Cellulose Nitrate Film – or Coating (aka zapon) (developed in Germany, late 1800s-early 1900s)<sup>25-32</sup>

Cellulose nitrate has multiple tradenames including (but not limited) to pyroxylin, zapon, and celluloid (though the term celluloid was sometimes used for cellulose acetate as well). Cellulose nitrate is dangerous to paper-based collections because it is flammable even when intact, and produces nitric acid, a strong acid, as it degrades. A mixture of cellulose nitrate (with typically camphor, acetone, and amyl acetate) was applied by painting or dipping.

Citations for use of this preservation method largely appear to be from Germany and Belgium where it was called “Zaponing” or “Zaponization.” It should be noted that it was used to treat both paper and vellum documents. This will appear more as a paint film/coating and will have penetrated into the document.

### Cellophane (1930s)<sup>25,33</sup>

Cellophane is reconstituted cellulose made into a transparent sheet. This material is not thermoplastic and has to be applied using adhesives. The use of cellophane as a laminating material, at least in the US, was investigated and dismissed by the NBS. However there is documentation that it was being used in the Reichsarchiv in Germany as late as 1938.

### Dipping/ Spraying CA or Painting CA (early 1900s)<sup>25,33</sup>

These techniques of applying CA to paper were tested by the NBS in the 1930s. The application of CA “dopes” or lacquers to textiles was used in airplane fabrics and was proposed for paper documents. It is possible that this



method may have been applied to paper documents, but there is little or no evidence that it was used as a method of preservation within archives or libraries.

**Goel Process** (aka Hand Lamination) (India, mid 1900s – modern day)<sup>34,35</sup>

The Goel process was developed in India and uses acetone to adhere thin CA films to the surface of the treated document. No heat or substantial pressure was placed on documents thus laminated, which was a major reason it garnered support. The method was developed to circumvent the purchase of expensive laminating machines. CA films thus applied will be potentially less uniform in application across the surface, and the resulting lamination thicker since there was comparatively little pressure used to apply the CA film.

**Mipofolie Process** (Germany, mid 1900s)<sup>35</sup>

Mipofolie used polyvinyl chloride (PVC) films applied with pressure-sensitive adhesives to the surface of a document. PVC has been linked to the release of chlorides and hydrochloric acid, which is dangerous to many collections. This technique can be identified using chemical tests for chlorides (Bielstein test).

**Morane/Ultraphan Process** (Britain, mid 1900s)<sup>35</sup>

This method was invented by the Morane Plastic Co. Ltd, of Ashford, Kent, UK in the mid-20<sup>th</sup> century. They used CA film, either di or tri-acetate (which have different solubilities and stabilities), and applied the film using a heat-sensitive adhesive, typically at about 80°C. This method can be identified by the presence of CA film (typically thicker than those used for Barrow or NBS) and a heat-sensitive adhesive. CA film can be identified chemically and typically is slightly yellow in color.

**National Bureau of Standards Lamination** (1934-1990s)<sup>1,33,36,37</sup>

The National Bureau of Standards Lamination was discussed in more detail in the last *WAAC Newsletter*. The method used CA films and applied them to both sides of a document using a combination of heat and pressure. Typically this is identifiable as a thin film without an outer tissue layer. CA can be identified chemically or by the odor of vinegar, and it tends to have a slight yellow color.

**Postlip Duplex Laminating Tissue** (mid 1900s)<sup>35</sup>

This method used a laminating tissue with a polyvinyl acetate adhesive containing magnesium acetate (a pH neutralizing buffer). This was applied using “moderate pressure” for 60 seconds with 80°C heat. This will appear closest to a standard tissue lining in appearance, but with a different adhesive.

**Polythene or Polyethylene** (started in Europe)<sup>21</sup>

Polyethylene lamination was done typically by using a combination of heat and pressure to apply the polymer to either side of the document. This polymer is not soluble in many organic solvents, has no odor, and may have a semi-transparent quality to the edges of the lamination. The edges often tend to be stiffer than films of other lamination methods, though this is dependent on the type of polyethylene employed.

**Silking** (Europe and US, 1800s to mid-1900s)<sup>32,38</sup>

Silking was done by applying a thin silk, typically with an open weave, to a document using a starch paste adhesive. This was done slightly differently in the US and Europe. Though other woven fabrics have been used, one way to identify silked objects is by the grid pattern of the woven fabric on the surface. Also chemical tests can be done for proteins and sulfur to confirm the presence of silk.

**Sundex** (England, mid-1900s)<sup>21</sup>

Sundexing was invented by Charles Sunderland of Twickenham, England. He used a glazed paper called glassine and applied it with an adhesive (either starch or soluble cellulose derivative) at 70°C. This glassine paper has often not aged well and typically becomes opaque. The surface texture is slick, which helps to identify the material.

**Tissue Lining** (currently in use)<sup>38</sup>

Paper tissue is typically applied with a wheat starch paste, though the exact adhesive used is the choice of the conservator. Typically one can see the difference between this and the Barrow lamination method as a factor of the transparency of the tissue. The object tends to be more compressed in the Barrow lamination method than in the tissue lining method.

## Survey Design/Method

Eighty-nine US libraries, archives, and museums were invited to participate in an online-survey that was open June 27–August 31, 2014 (65 days). Federal, state, county, local, and private institutions of varying sizes were invited to participate, with special care taken to invite institutions from every US state and territory. Fifty-two of the invited institutions submitted complete responses.

There were a total of thirty-nine possible questions, with some questions asked only if the respondent's answers to core questions were affirmative, i.e. if a respondent said that their institution had not delaminated documents, the follow-up questions asking how the delamination was conducted would not appear. Respondents were allowed to skip questions that they could not answer and were asked to respond to questions to the best of their ability. Many questions allowed respondents to choose multiple answers or provide additional detail.

The survey was distributed and collected via the online SurveyMonkey® platform. Being online, respondents read and completed the survey without assistance. All reported data in this article is anonymous. Respondents were allowed to skip questions. Therefore the data below reflects percentages of the total numbers of responding institutions, which may vary question to question.

## Reporting of Results

The results of the survey are summarized on the following pages. The format of these results is: the question (Q) as it was posed to the respondents, followed by the response, in the form of a graph, chart, or table.

## Lamination Methods and Survey of Collections Containing Lamination, continued

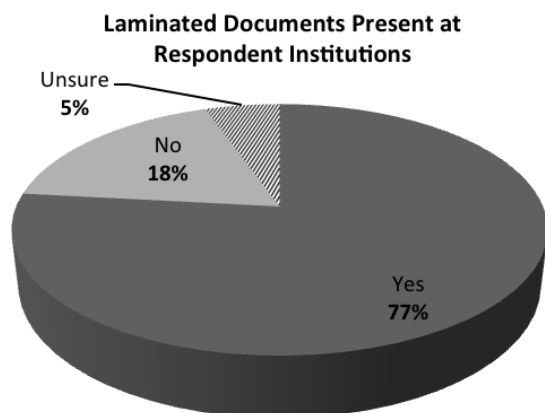
### Quantity and Kind of Laminates

Respondents were asked whether they had laminated documents. They were then asked whether they had CA laminated documents. The number of respondents who had laminated documents was greater than those with CA laminated documents indicating there were other methods of lamination being used besides CA lamination.

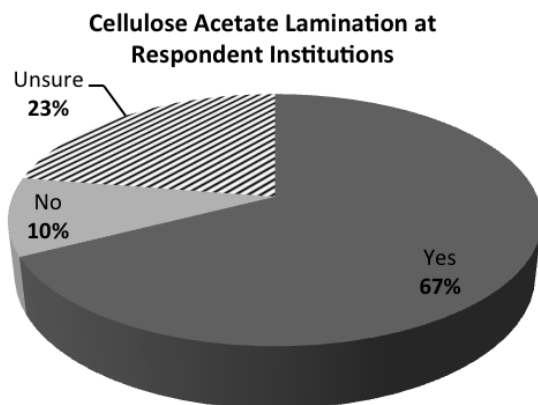
The respondents were then asked whether they could identify the type of lamination that was used. One third said they could, more than a third said they might be able to, and the remaining 28% said they could not identify the type of lamination used. While some of this lack of knowledge could be due to the inheritance of laminated documents from third parties, it also points to a troubling loss of information.

Respondents were asked to identify the method of lamination used at their institution, and suggestions were provided as shown in (Q4). Finally the respondents were asked to estimate the total number of laminated documents at their institution. These responses show that 66% of the respondent institutions have fewer than 10,000 documents that were laminated, with 21% of the respondents having 100 or fewer laminated documents. These numbers, however, are self-reported estimates and should be treated as such.

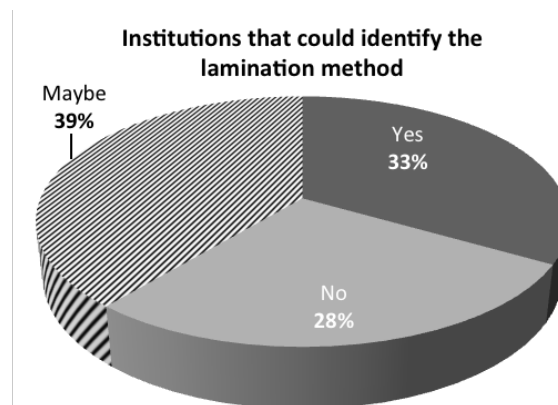
(Q1) Does your institution have laminated documents?



(Q2) Does your institution have CA laminated documents?



(Q3) Can you identify the lamination method that was used?



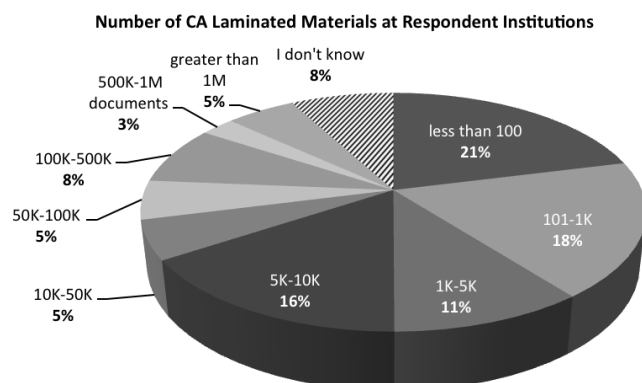
(Q4) What kinds of lamination were conducted? (Note, not all of these methods are cellulose acetate lamination.)

Lamination Type	Percent of Respondents
Not known/not sure	35%
Barrow Lamination Method* – single encapsulation with only cellulose acetate film – heated to 160°C	23%
Barrow Lamination Method – double encapsulation with cellulose acetate film + Japanese tissue heated to 160°C	62%
Cellulose Nitrate	4%
Cellulose Acetate with adhesive backing	8%
Goel Process (cellulose acetate applied using acetone)	0%
MipofolieProcess – polyvinyl chloride film and an adhesive	0%
Morane/Ultraphan Process – cellulose acetate film bonded using a heat-sensitive adhesive heated to 80°C	8%
Mylar-Polyethylene Composites – mylar bonded to the surface using polyethylene	4%
Postlip Duplex Laminating Tissue – tissue paper bonded to document using polyvinyl acetate with magnesium acetate as a deacidifying agent	4%
Polythene – application of polythene at a lower heat to documents	4%
Silking – silk applied to document using an adhesive (often starch paste or dextrin)	42%
Sundex – glassine is applied using starch or some cellulose derivative at 70°C	0%
Other (please specify) – soluble nylon and Barrow Lamination of unknown type	8%

\*This first method is actually better described as the National Bureau of Standards lamination method 1. No tissue paper was used with the lamination.

## Lamination Methods and Survey of Collections Containing Lamination, continued

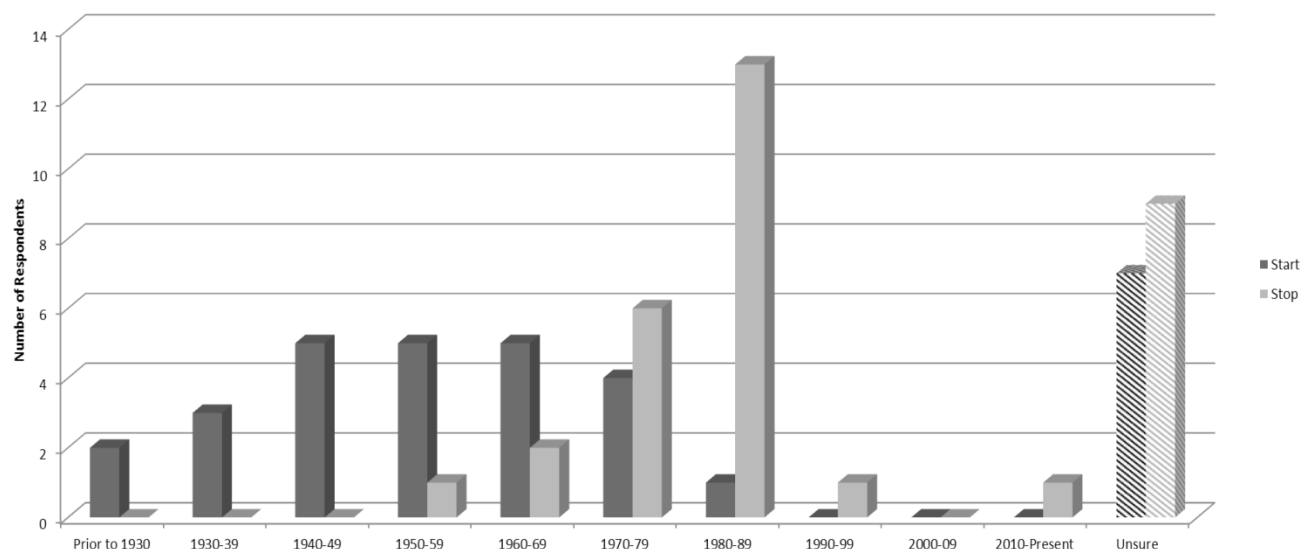
(Q5) What quantity of cellulose acetate laminated materials would you estimate that you have?



### Lamination History at Institutions

Many questions surround how lamination was applied, when it was used, and why certain documents were chosen. Respondents were asked to identify the decades in which their institution began laminating and stopped laminating. For clarity, the chart is plotted in terms of number of respondents answering, rather than percent. As noted below, the earliest laminations were begun prior to 1930, with two respondents checking that box. This predates the NBS recommendation,<sup>33</sup> so may indicate that these institutions were experimenting with lamination early. There is a steady increase in use over the following decades, but most institutions stopped using lamination in the 1980s, likely due to the introduction of encapsulation.<sup>39</sup> The youngest likely age of the lamination treatment on a document is around 25 years old with most being decades older.

(Q6) In which decade did your institution begin using lamination? In which decade did your institution stop using lamination?



Respondents were asked why documents were laminated. They were given the option of choosing reasons that we had found in the literature or by talking with collaborators. They could also fill in their own reasons as seen below. As noted below, there were many reasons that documents were selected for lamination ranging from protection to repair. Also a substantial number of respondents said that documents were laminated solely because it was the standard preservation method.

(Q7) Why were documents laminated to your knowledge?

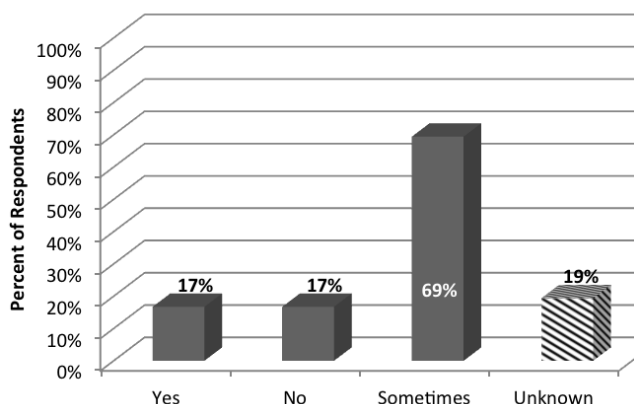
Reason for Lamination	Percent of Respondents
To protect the document from the environment	39%
To allow handling of a document that was too damaged to handle without lamination	61%
To increase the strength of a brittle document	53%
To reconnect pieces of a document	39%
To prevent mold	6%
To prevent damage to the document	56%
It was the standard preservation method	56%
Unsure	22%
Other (in respondents' words)	22%
Best guess is "protection" of valuable records.	
Strengthen documents weakened by mold.	
Institution is located in tropics, protection from climate was main motivation.	
To make the pages more accessible to copying.	
Items were not laminated in-house. Acquired laminated.	
Items were laminated by owner/donor prior to becoming part of permanent collection.	
The lamination of historic documents was undertaken by the county in early 1980s.	



## Lamination Methods and Survey of Collections Containing Lamination, continued

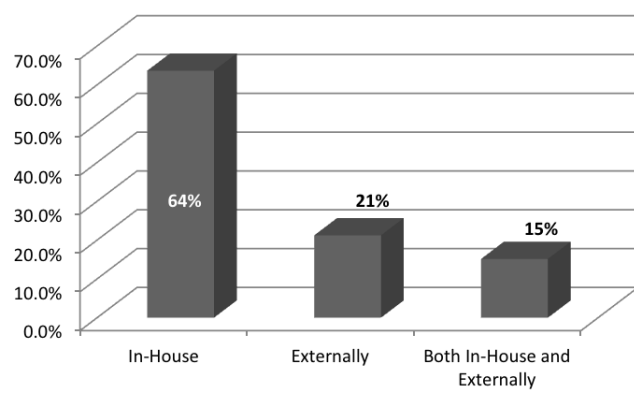
Respondents were asked whether documents were damaged prior to lamination. Most indicated that this was sometimes the case, and some indicated that this was unknown. In many collections it will be difficult to determine whether a laminated document has suffered solely due to lamination as its condition prior to lamination is unknown.

(Q8) Were the documents damaged prior to lamination?



Given the potential for variability in the application for lamination, we wanted to know whether the laminations were done in-house or by specialty vendors. Most respondents answered that the lamination was done in house. An oversight of this question, which was pointed out by a respondent, was the lack of an unknown option. There was a follow up question requesting additional information about where the external lamination was done.

(Q9) Where was the lamination conducted?



The majority of respondents did not know where the external lamination was done. Some external vendors were suggested in (Q10) based either on companies who advertised in the literature like Arbee or Barrow or were suggested by collaborators like Gregory Minnick who took over Barrow's business in the late 1980s.

(Q10) If the lamination was done externally, who conducted the lamination?

### Lamination Agencies

	Percent of Respondents
The William J. Barrow Restoration Shop	29%
The Arbee Company	0%
Gregory Minnick in Ashland, VA	7%
Unknown	79%
Other	21%
Some documents have been acquired in this condition	7%
Gale Fields	7%
Ham Rebinding	7%

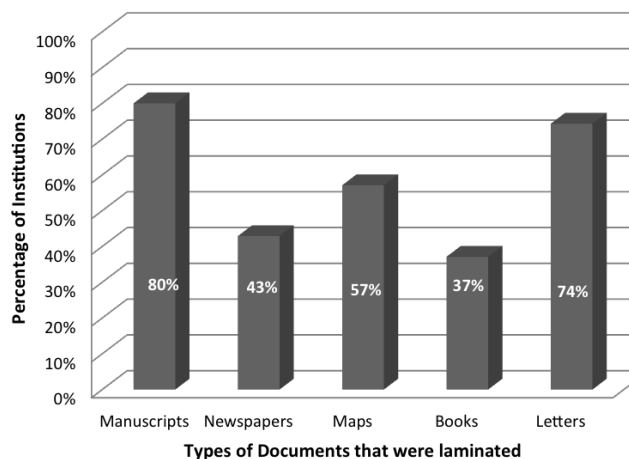
### Characterization of the Documents

Care of laminated documents hinges on many variables. Two major variables are the type of document that was laminated and the media on said document.

The two most common categories of reported laminated documents were manuscripts and letters. Many of these laminated documents are conjugated and/or bound, which adds more complexity to any treatment or future reversal of the lamination.

Interestingly, although CA lamination was originally tested for by the NBS for newspapers, fewer than half of the respondent institutions have laminated newspapers. This may be due to the prevalence of using microfiche or microfilm in preserving this media.

(Q11) What kinds of documents were laminated?

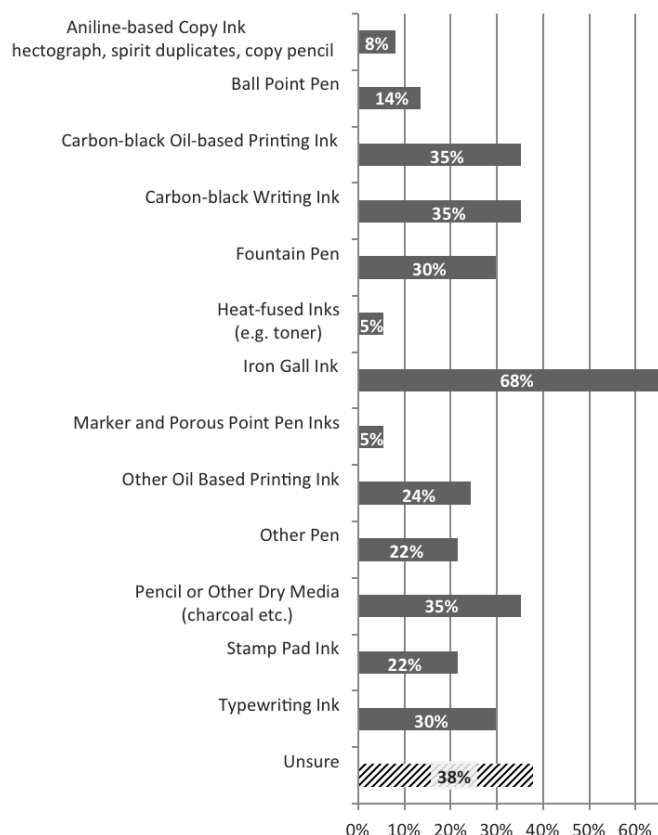


A substantial variety of media was laminated. The goals of this question were to understand the variability of the laminated media, and to determine whether there was any predilection for laminating particular media types.

## Lamination Methods and Survey of Collections Containing Lamination, continued

The single most laminated media type was iron gall ink documents. Over 60% of the respondent institutions have iron gall ink laminated materials. It is unknown at this time whether this is due to the prevalence of iron gall ink media, or if documents were chosen because of prior damage due to paper deterioration caused by iron gall ink. Additionally, two institutions volunteered that they had media containing watercolors that had been laminated.

(Q12) What kinds of media are present in laminated documents?

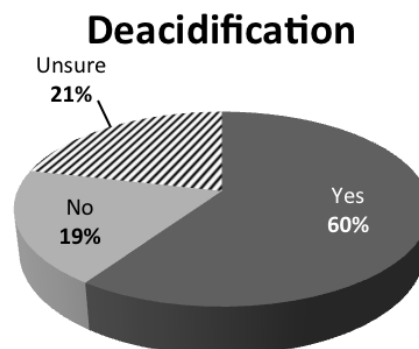


### Deacidification

A major cause of deterioration for cellulose acetate is hydrolysis in the presence of acid. Therefore, if documents were acidic prior to lamination, there is an increased likelihood of deterioration of the laminating film and consequently the laminated document. Thus a major area of concern for us was the pre-treatment of documents by deacidification.

Additionally we were interested in the extent of deacidification being done at institutions around the United States. First in (Q13) we ascertained whether any deacidification had been conducted at the institution. Most of the respondents reported that deacidification had been done on at least one of their materials.

(Q13) Have any of your materials undergone deacidification?



For those institutions where deacidification had been done, we wanted to know whether or not they had done the deacidification in-house. Most of those institutions that had done deacidification, had done the process in-house.

(Q14) Did your institution conduct the deacidification?

Answer	Percent of Respondents
Yes	69%
No	15%
Sometimes	12%
Unsure	4%

We also wanted to know what kind of deacidification was done at the institutions, so (Q15), (Q16), and (Q17) were used to determine what level of confidence the respondents had about their knowledge of what deacidification method had been used, whether deacidification had been done prior to lamination, and the identification of those deacidification methods respectively.

As can be seen in (Q15) most institutions were able to identify the type of deacidification that was done.

(Q15) Can you identify what type(s) of deacidification were done?

Answer	Percent of Respondents
Yes	69%
No	12%
Unsure	23%

The answers to (Q16) were enlightening in terms of what we might expect of laminated documents. While the largest percentage of respondents indicated that they did deacidification prior to lamination, this was not done most of the time. Ignoring the 28% of those who answered the question as not applicable, only half of the remaining respondents always did deacidification prior to lamination. The other half was divided among those who did not deacidify, those that sometimes did, and those that were unsure as to whether it was done.

## Lamination Methods and Survey of Collections Containing Lamination, continued

(Q16) Was deacidification done prior to lamination?

Answer	Percent of Respondents
Yes	36%
No	16%
Sometimes	12%
Unsure	8%
Not Applicable	28%

Many different methods of deacidification were identified as being used prior to lamination. The most common method used for deacidification was Barrow's two bath method with 59% of the respondents choosing that method. This is understandable as many of the respondents used Barrow's lamination method.

(Q17) What deacidification was done before lamination?

Answer	Percent of Respondents
Alkaline gases	12%
Barium hydroxide	12%
Barrow's two bath method: calcium hydroxide (bath 1) + calcium bicarbonate (bath 2)	59%
Battelle or Papersave® process	0%
Bookkeeper ®	6%
Bückeberg conservation procedure, Neschen AG and the C-900	0%
Calcium carbonate	12%
Calcium chloride + ammonium carbonate	0%
Calcium bicarbonate	12%
Calcium hydroxide	6%
Calcium-Magnesium bicarbonate	6%
CSC Booksaver®	6%
Diethyl zinc (DEZ) or Akzo process	0%
Dry Ammonia Ethylene Oxide (DAE) and Book Preservation (BPA) methods	0%
Forced air (Bell) or Libertec®	0%
FMC or Lithco process	0%
Graft polymerization	0%
Magnesium carbonate	0%
Magnesium bicarbonate	18%
Sablé system	0%
Sodium tetraborate	0%
Supercritical carbon dioxide	0%
The Vienna Process	0%
Wei T'o system	41%
Other	30%
Successive baths of calcium enriched deionized water	6%
Answers are best guesses	12%
Not applicable	12%

The deacidification methods were suggested based on a review article about deacidification.<sup>40</sup>

### Condition Today

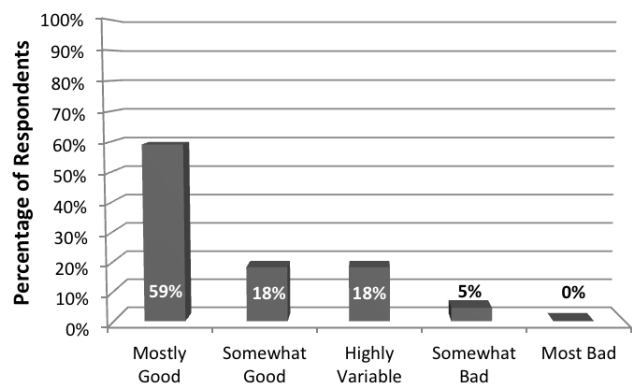
A major reason for this survey was to understand the state of laminated documents in collections today. Thus, respondents were asked whether they could comment on the condition of these laminated documents in (Q18). Most stated that they could comment on the condition of their laminated documents, making their responses in (Q19) stronger.

(Q18) Can you comment on the condition of laminated documents at your institution?

Answer	Percent of Respondents
Yes	78%
No	4%
Unsure	19%

Next they were asked to characterize the condition of their laminated documents. (Q19) provided a Likert scale for the respondents to answer whether their laminated documents (as a whole) were in: Mostly Good, Somewhat Good, Highly Variable, Somewhat Bad, or Mostly Bad condition. Most institutions responded that their laminated documents were either in mostly good or somewhat good condition. However, there were a substantial percentage of the respondents who had laminated documents in either highly variable or somewhat bad condition. It would be advisable to follow this study up in a few years to see if these percentages change.

(Q19) What is the condition of the laminated documents at your institution as a whole?



The chemical deterioration of CA films is sometimes difficult to observe, even though it is occurring. Therefore we wanted to know if respondents had observed any difference in the condition of the documents based on the date of lamination. There was no consensus or trend observed on this question. This may be because the composition of films changed from manufacturer to manufacturer, and may have changed from year to year even when they were purchased from a single manufacturer. Thus, there are likely more variables than simply the age of the lamination contributing to the current condition of the documents.



## Lamination Methods and Survey of Collections Containing Lamination, continued

(Q20) Is there an obvious difference in condition of documents known to have been laminated earlier in the century than those laminated later?

Answer	Percent of Respondents
Yes	24%
No	24%
Unsure	52%

There is no single defining characteristic of deterioration for laminated documents in the literature, so we wanted to know what major types of deterioration were observed in laminated documents. The two most common characteristics were cracking and darkening of the paper, followed by bubbling and delamination of the plastic.

(Q21) What characteristics have you noticed in deteriorating laminated documents?

Answer	Percent of Respondents
Bubbling	44%
Cracking	61%
Shrinking	22%
Breaking	39%
Discoloration of the media on the paper	39%
Darkening of the paper	61%
Formation of holes	0%
Curling or other change in shape of the paper	33%
Delamination of the plastic	44%
Page being pulled (split) by the laminate	6%
Vinegar (acetic acid) smell	28%
Other	24%
Heavy use caused breakage/peeling	6%
Tobacco odor	6%
Good condition-minimal deterioration	6%
Misaligned pages	6%

### Delamination

Delamination is the method of reversal for lamination, and as such is the first logical step in remediating damaged documents. We wanted to know whether institutions had done delamination, how they did it, why they did it, and how often.

We first started by asking if lamination had been removed. Most responding institutions either did not remove lamination or were unsure if it had been done. The remaining 41% said that lamination had been removed from documents belonging to their institution.

(Q22) Has lamination been removed from any documents belonging to your institution?

Answer	Percent of Respondents
Yes	41%
No	44%
Unsure	16%

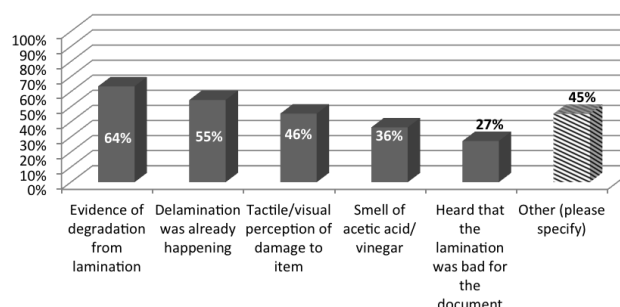
We wanted to know whether the delamination was done in-house. Most of those who had done delamination had done the delamination in-house.

(Q23) Was the removal of lamination done in-house?

Answer	Percent of Respondents
Yes	62%
Sometimes	15%
No	23%
Unsure	0%
Not applicable	0%

Given the often invasive method of delamination a major question for us has been, why do institutions delaminate? We supplied a number of options shown in (Q24). The most common reason was that there was evidence of degradation from the lamination, with the next most common reason being that delamination was already occurring.

(Q24) Why did you delaminate?



We wanted to know who did the lamination removal, with this being an open option for the response. Most of the institutions responded that they did the removal, but a substantial number, 38%, responded that they had an outside conservation company do the work.

(Q25) Who did the lamination removal?

Answer	Percent of Respondents
In-house conservation staff	77%
Outside conservation staff	38%

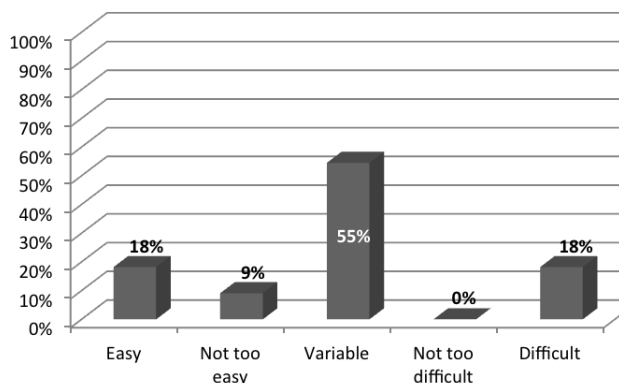
Methods of delaminating are varied, and so we wanted to get an idea of how people were doing the delamination. This was an open answer question, with most respondents stating that the delamination was done in an organic solvent.

(Q26) How was delamination done?

Answer	Percent of Respondents
Organic solvent bath	77%
Mechanical removal	15%
Water bath	8%
Poultice	8%
Unknown	15%

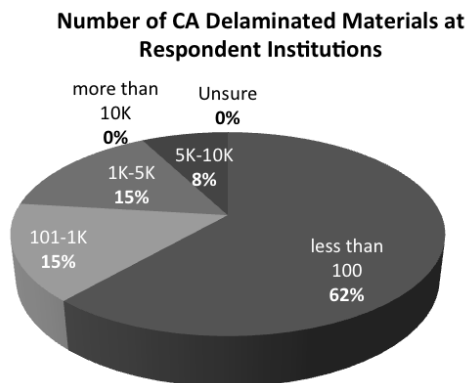
## Lamination Methods and Survey of Collections Containing Lamination, continued

A concern with CA lamination is that as the CA film degrades, it can become less soluble in solvents like acetone. Thus, we wanted to know how difficult delamination was for our respondent institutions. Most institutions stated that the difficulty of delamination was variable.



(Q27) How hard was it to delaminate the documents? Given the complexities associated with delaminating documents, we wanted to get an idea of how many documents had been delaminated. Most responding institutions had delaminated fewer than 100 documents.

(Q28) How many documents would you estimate have been delaminated?



### Storage and Documentation

Given that CA deteriorates by hydrolysis and this is enhanced in humid environments, we wanted to know how the laminated documents were stored by the institutions. Most responded they stored documents in environmentally maintained storage.

(Q29) Are your laminated documents in an environmentally maintained storage?

Answer	Percent of Respondents
Yes	68%
No	4%
Sometimes	0%
Unsure	0%
Not applicable	28%

As most institutions stopped laminating in the 1980s, almost 30 years have passed from the time period when they were laminating. We wanted to know whether documentation from the period of treatment (and also retreatment in the case of delamination) might be in existence at the respondent institutions. Sadly, most often, there is no detailed documentation of these processes.

(Q30) Do you have detailed documentation of conservation at your institution from the period of lamination or delamination?

Answer	Percent of Respondents
Yes	15%
Sometimes	12%
No	42%
Unsure	9%
Not Applicable	21%

### Summary

The survey revealed that institutions across the United States have large quantities of cellulose acetate laminated documents, with only a small number of laminated documents currently in poor condition.

We cannot say, at this time, whether the current good condition of laminated documents observed in collections is truly because the treatment is uniformly successful. We have limited data on retreatment of laminated documents. Thus we may be seeing some amount of survivor bias, i.e., laminated documents are in good condition because they have survived the treatment.

In our interactions with institutions containing laminated documents, we have found instances where the entirety of the collection was in good condition. We have seen others where documents were selected for delamination because the lamination was in bad condition. We had hoped to discover whether we could determine the impacts of deacidification on the survival of lamination. However, the information that institutions provided was not sufficient to assert any conclusions at this time.

The survey depends upon the observation and knowledge of the respondents. Because CA deterioration may happen without visible markers of deterioration, we need to evaluate the chemistry of the laminates analytically, preferably doing a longitudinal study to determine the effects of time on laminate film. This research is currently underway in the HSC laboratory.

Only a small percentage of laminated documents have been delaminated to date. This may be due to the fact that most of the collections appear to be in good condition. It may also be because the removal of lamination is a costly project in terms of time and resources. Given the results of the longitudinal study, we may want to focus more on lamination removal methods.

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## Lamination Methods and Survey of Collections Containing Lamination, continued

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## A Stretcher Cross-Bar Modification

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During a recent treatment it was necessary to gain access to the reverse of a tear hiding behind a cross-bar. In this case the stretcher was keyable but the cross-members were solidly attached to the stretcher rendering it non-expandable.

The process of gaining access to the reverse of the tear led to the method of modifying the cross-bar to make it expandable, as presented in the photos.

The technique will work on any cross-member that can be removed by cutting through the cross-bar. In this case, the cross-bar was held in place with nails “toed” through the cross-bar and into the stretcher. It would also work for cross-members nailed in place through the stretcher/strainer and into the end grain of the cross-bar.

Not shown in the photographs is the initial removal of the cross-bar. Protective material was placed on the reverse of the face-down painting below where the cross-bar was to be cut. A back saw was used to cut through the bar, and the sawdust was vacuumed from the protective material.

The screw securing the cross-members together at the crossing was removed, and the two sections of the cross-bar were removed by working them off of the nails holding them to the stretcher.

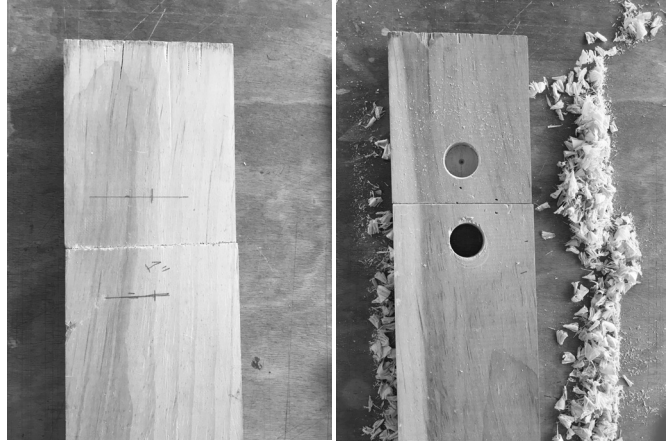
The hardware used for expansion bolt stretchers seemed to be the best system. (Of course, the hardware is not called an “expansion bolt” but rather a “tite joint fastener.” Figuring this out took more time and effort than the actual cross-bar modification.)

Laying out the tite joint fastener across the cut in the cross-bar. Note the 7/8” Forstner drill bit and square to the side. It is worth noting that there is special hardware available – a special drill bit that prevents drilling too deeply and a drill guide that assures perfect alignment of the holes. (See for example: [www.rockler.com/tite-joint-fastener](http://www.rockler.com/tite-joint-fastener).)

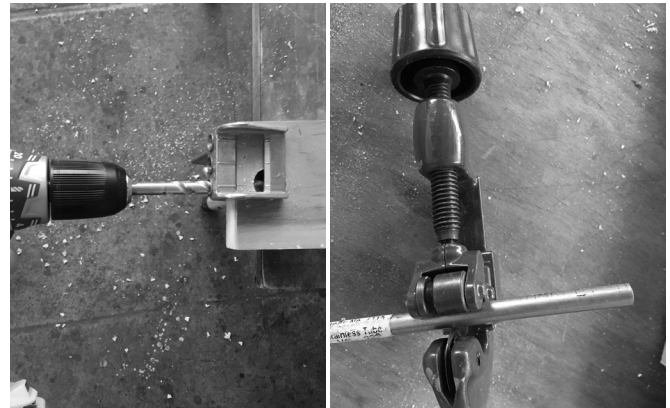
Marking the location of the holes for the tite joint.



Drilling the two vertical holes – note that one went too deep and through the cross-bar.



Drilling the horizontal hole for the tite joint connecting hardware. Two 1/4” holes were also drilled, one on each side of the connecting hardware. These allowed for the insertion of stabilizing pins cut with a pipe cutter from 1/4” stainless steel tubing.

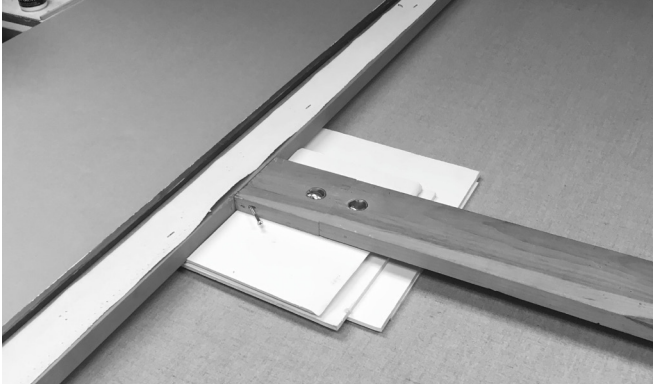


Pilot holes were drilled for #6 2 1/2” long screws to toe into the stretcher when the cross-bar is reinserted.

The finished end of the modified cross-bar.



Installing the now-expandable cross-bar into the stretcher. Shims were used to hold the cross-bar at the correct height while screwing in the toed screws.

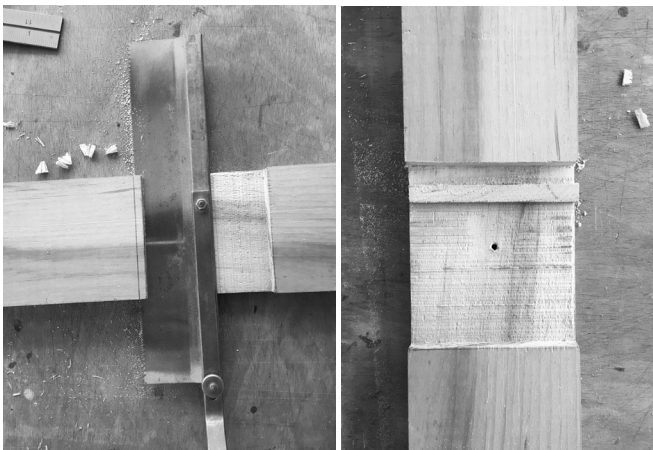


The other end of the cross-bar secured into place.

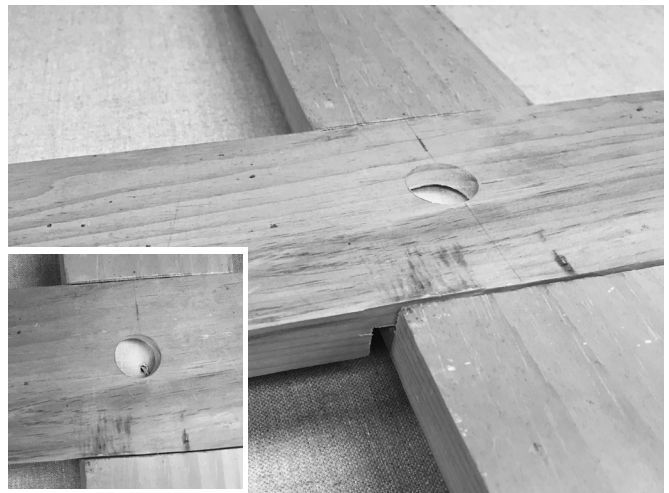
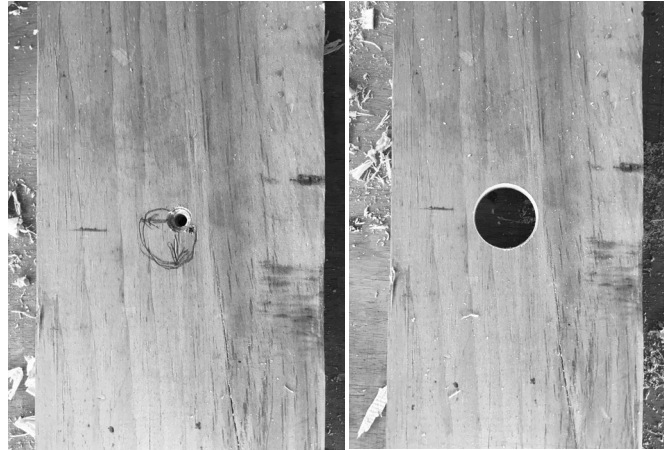
One could also add a second tite joint fastener to the other end of the cross-bar so each side could be expanded independently.

It was also necessary to modify the attachment of the two crossbars, to allow them to move when the painting was keyed out.

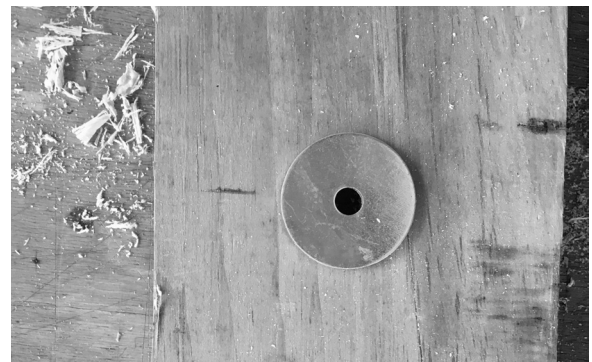
The first step was to widen the half-lap join at the crossing.



Next, the hole where a screw holds the two crossbars together was enlarged, so the two could move independently.



And finally, a large fender washer was placed over the hole. A screw will hold the crossbars together securely, but loosely enough for them to move.



With the wisdom of hindsight: it's worth getting the special drill bit and guide for installing tite joint fasteners.

This technique can, of course, be used to modify both ends of all crossbars on a painting.



## The Modular Cleaning Program: First Impressions from a Four-day Course and Subsequent Implementation

### INTRODUCTION

On September 20-23 2016, the authors participated in The Modular Cleaning Program, a four-day course, presented by private conservators Chris Stavroudis and Nina Roth-Wells, held at the Lunder Conservation Center, Smithsonian American Art Museum, Washington D.C. The course introduced fourteen conservators from different disciplines to the Modular Cleaning Program (MCP) through lectures and practical sessions. All participants left with full sets of freshly made aqueous cleaning solutions to trial further in their own practice.

While the MCP already has a certain following amongst our American colleagues – this course had double the number of applicants to the number of available places – it is not our impression that many British conservators have yet adopted the MCP into their daily practice. This article therefore offers a brief introduction to, and first impressions of, the MCP, and presents two case studies trying out the software and cleaning systems after the course. It also discusses how the authors feel the MCP might supplement our usual conservation practice.<sup>1</sup>

### WHAT EXACTLY IS THE MCP?

The Modular Cleaning Program offers a systematic methodology for the cleaning of painted surfaces, using a range of pre-made, aqueous test solutions, supplemented by database software developed in FileMaker Pro that facilitates the testing process. Moreover, the stock solutions are designed to last for months, even years, so time is not spent mixing test solutions from scratch each time. The methodology is particularly suited to address the issue of surface dirt and grime on modern and contemporary paintings.

Development started in the early 2000s, when Chris Stavroudis, a painting conservator in private practice in California, developed the MCP as a way of systematising the cleaning techniques developed by Richard Wolbers. With input and contributions from Richard Wolbers and

Tiarna Doherty, then a Getty painting conservation intern, the first version of the Modular Cleaning Program (MCP) was introduced at the 2003 Verband der Restauratoren symposium 'Surface Cleaning – Materials and Methods'. Shortly thereafter solvents and solvent gels were added to the MCP.

The latest available version was released in 2009; however, a new version of the software, incorporating emulsions, is due to be released imminently. The MCP software is available to the wider conservation community for free and can be downloaded from the CoOL website.

The Modular Cleaning Program is constantly being augmented to reflect the ongoing research into aqueous cleaning of modern paint films undertaken by Richard Wolbers. The Cleaning of Acrylic Painted Surfaces (CAPS) initiative, sponsored by the Getty Conservation Institute, held its first meeting in 2009, and has since run six workshops in the US, UK, Canada and Australia.

The MCP facilitates the testing of aqueous cleaning systems of increasing potency, in which an aqueous cleaning test can include up to five different components that influence or contribute to the cleaning action. The MCP operates within a pH range of 5.0 to 6.5 for acrylics and 5.5 to 8.5 for traditional paint surfaces, and the solutions are furthermore adjusted to appropriate conductivities. It is thus designed to ensure that minimal swelling of the paint film occurs, while the aqueous system interacts with the unwanted material present on the paint surface.

The full range allows for a logical and surprisingly quick identification of optimal aqueous systems to remove light to heavy soiling of varied composition, which has become bonded to the surface of a painting to a greater or lesser extent. However, the more potent solutions can also be employed to attack aged varnishes, and the gradual adjustments will, in Stavroudis' own experience, frequently make the 'unpacking' of layers possible.

### THE FIVE ORTHOGONAL COMPONENTS OF THE MCP AQUEOUS SYSTEM

A MCP test solution will consist of a 5ml aqueous mixture with up to five different components. In principle, one or more of the five parts can be deionised water, depending on the complexity of the mixture. Crucially, each of the components (except the water) must never exceed one part in five; deionised water is used to make up a deficit, should fewer than five components be used. Thus, the concentration of each component is sufficiently diluted from the stock concentrates to be used on a paint surface. Each type of component of the aqueous cleaning set is introduced here.

#### pH- and conductivity-adjusted water

While the adjusted waters are not one of the five components, they are nevertheless essential. Ammonium hydroxide and acetic acid are employed to make pH-adjusted water, ranging from pH 5.0 to 8.5. Critically, the water as well as the very dilute ammonium hydroxide and acetic acid all evaporate leaving no residue. The adjusted

The *Newsletter* has done a pretty thorough job of covering the development of the Modular Cleaning Program over the years. However, unless I missed one, the last articles on the MCP were: The CAPS 3 London Workshop: A Space-time Continuum of pH and Conductivity by Nicholas Dorman, and More from CAPS3: Surfactants, Silicone-based Solvents, and Microemulsions by Chris Stavroudis, 34/3, Sept. 2012.

This article, which appeared in *The Picture Restorer* (the journal of the British Association of Paintings Conservator-Restorers) No. 50, Spring 2017, contains the basic principles and some new developments, as seen and described by fresh eyes.

The Editor

(For information about *The Picture Restorer* please email: BAPCRsecretary@gmail.com.)



waters are vital as the all-important clearance solutions.

Although the  $\text{NH}_3\text{OH}$  and  $\text{CH}_3\text{COOH}$  mixtures have the ability to buffer in the acidic range (pH 3.8-5.6) and the basic range (pH 8.3-10.1), they do not buffer between the two, i.e. between pH 5.6-8.3. But if used for cleaning in its own right, pH-adjusted water will start buffering if the ionic material picked up during a cleaning procedure changes the pH drastically, thereby inhibiting a radical change of pH in the cleaning solution.

The recipes for making adjusted water provided during the course also aimed to achieve the desired conductivity (either  $1000\mu\text{S}/\text{cm}^3$  or  $6000\mu\text{S}/\text{cm}^3$ ), and if a conductivity meter is available, it can be adjusted very precisely. Stavroudis is, however, more concerned about an incorrect pH than conductivity, and feels that while a pH meter is indispensable, a conductivity meter is not essential.

### **pH buffers**

MCP buffer solutions are the first components added when making up a 5ml test solution. The buffers ensure that although the material lifted into the wet swab from the paint surface adds new ions to the aqueous cleaning system, with the potential of altering the pH, the buffer will keep the

Stavroudis demonstrates the peculiar texture of the deoxycholic acid when insufficient 10% NaOH solution has been added to bring the pH to 8.5



pH stable. This keeps the cleaning solution in your swab stable until removed from the paint surface, thus avoiding a change in cleaning action during the use of a single swab.

The MCP uses acid and amine buffers from the biochemical industry to maintain the desired pH within the 5.0-8.5 range, and they require clearing with the equivalent pH-adjusted water. Into these buffered systems, designed to control swelling of the paint film, chelators and surfactants of increasing potency and affinities can be added.

### **Chelators**

Fundamental to the use of chelators in these systems is the fact that aged dirt is held in place on a surface with metal ions, typically deposited from the surrounding environment, but conceivably also in some cases migrated out of the paint layer.

Two of the three chelators included in the aqueous cleaning set made during the September course were citrate and EDTA (ethylenediaminetetraacetic acid); these are well-known chelators to the authors, though EDTA's strong affinity for metal-ions and ability to sequester them into a water-based cleaning system makes it an agent used with great caution, especially on an unvarnished paint surface. DTPA (diethylenetriaminepentetic acid), a similar, but in theory even more potent chelator than EDTA due to its significantly higher formation constants, was also included on the list of chelators.

A useful point made by Stavroudis, and well worth remembering when using chelators, is how chelation is not just a lifting of dirt in its unaltered state; the chelator forms new complexes with the metal ions it sequesters, which may well have a different colour to the undisturbed dirt. This means that the material picked up on the swab can have a different appearance than you might expect, i.e. it might not look nearly as 'dirty' on the swab as it does on the paint surface.

### **Surfactants**

A wide range of non-ionic and anionic surfactants is utilised in the MCP, employing the principle of 'like dissolves like'. Surface active agents (surfactants) – molecules with both hydrophilic and hydrophobic groups – are useful in encapsulating and removing grease, grime, and even oxidised resin found in surface coatings.

Various factors determine the choice of surfactant in a cleaning system, such as the CMC (critical micelle concentration), solubility in water, sensitivity to pH, and the HLB (hydrophilic-lipophilic balance number): the higher the HLB the better the dispersive action, which is roughly equivalent to surfactant strength; sodium laurel sulphate, for example, has the highest given HLB number of 40, making it a very 'strong' surfactant, used in many readily-available soap and shampoo products (but not in the MCP!).

The MCP guides the user in suitability, quantity and concentration of surfactant, and it is worth keeping in mind that for modern paints, surfactants with HLB numbers around 13 are often employed in the paint formulations themselves.<sup>2</sup>

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## The Modular Cleaning Program: First Impressions from a Four-day Course and Subsequent Implementation, continued

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Certain surfactants are useful in targeting particular materials: Maypon® 4C (HLB unknown) (potassium cocoyl hydrolized collagen) targets collagen, for example, and Brij® S 100 (HLB 18.8) (polyoxyethylene stearyl ether) pulls up fatty material. However, not all of the surfactants included in the range during the SAAM course are currently available in Europe.

A particularly interesting surfactant is the Pluronic® F-127 (HLB 22), also called Poloxamer 407. It is commonly found in mouthwash products and is a block copolymer consisting of a long propoxylate chain between two long ethoxylate chains. It is a very promising surfactant in conservation, because both the ethoxylate and propoxylate chains will break down over time, thus allowing for full volatilization of the surfactant (although if the painting is varnished shortly after cleaning, it is likely that its volatilization is affected).

Interestingly, during tests carried out on the course, addition of a surfactant was sometimes found to reduce the efficacy of a cleaning system, whilst another improved the cleaning effect. Sodium deoxycholate (HLB 17.6) is one choice of surfactant, which is likely to have an effect on an aged resin layer, being used in deoxycholic resin soap formulations that most painting conservators are familiar with already. Like the other resin soap systems, it will only work at a raised pH, which means that in the MCP context, it can only be employed with the pH 8.5 solutions

Surfactants used in cleaning treatments are not materials that the authors are otherwise very familiar with, and the many different parameters mentioned above can make the safe incorporation of them daunting; i.e. what should the concentration be in order to have in excess of the CMC, but not more surfactant than strictly necessary? Which surfactants will work at a given pH? What is their strength and solubility? How do I best clear them?

This is where the MCP software is particularly helpful, because it does the concentration calculations for you and presents the surfactant options available to try with the other components you wish to use. And in all cases (for the aqueous MCP range), you can clear with the pH adjusted waters and trust that the surfactant will in fact be soluble/removable.

### Gelling agents

A final step in the formulation of an aqueous MCP cleaning system is the option of gelling it. Again, several options can be employed within the MCP, including various methyl-cellulose-based thickeners and Carbopols®. In the newer range, Pemulen® TR-2 and xanthan gum (more recently introduced in conservation by Richard Wolbers) have natural emulsifying properties, apart from the ability to suspend the aqueous cleaning systems.

Xanthan gum is a natural polysaccharide with a cellulose backbone chain small enough to allow dissolution in water. It is stable within the relevant MCP pH range, and its thixotropic properties are conducive to making up a stock gel that will mix easily with the cleaning solution without

becoming impractically runny. The cosmetic grade is furthermore a very clear gel with emulsifying properties that allow it to suspend up to 20% of low-polarity material, such as a low-polarity solvent, oily grime and particulate dirt.

On the downside, it is very prone to biological growth, so a preservative should be added (for example, Germaben™ II: a clear, viscous liquid, containing propylene glycol, propylparaben, methylparaben and diazolidinyl urea).<sup>3</sup> Pemulen™ TR-2 is a polyacrylate like most Carbopols®, but modified to have emulsifying properties. It is, however, more pH sensitive than xanthan, and it does not lend itself as well to being made into a stock gel to dilute with the other components in a MCP cleaning system, because it is too rigid to work with at the 5% stock concentration.

### WHAT EQUIPMENT IS ESSENTIAL TO USING THE MCP?

Since achieving a specific pH is all-important within the MCP, a pH meter is an essential instrument for making up stock solutions and the pH adjusted water at the outset.

Some of the chelating solutions made up during the course were certainly tricky to get right, as the desired pH was just at the limits of the solution's buffering capacity, and a few drops too many of sodium hydroxide would greatly raise the pH. pH strips are too inaccurate to replace a pH meter, but Stavroudis recommends buying cheap meters online and replacing them when necessary.

The meters used during the course were the Hanna Instruments HI 98103B Beer pH Tester, which is sold for \$36.95, but even cheaper meters are available from UK websites for around £10.<sup>4</sup> The pH meters should display two decimal points and allow for calibration at at least two standard pHs. Commercial buffer solutions at pH 4, 7 and 10 are employed for calibration of the meters.

While conductivity meters are useful, the recipes for the adjusted water used for clearing will get you close enough to the desired conductivity to make a meter non-essential; however, cheap conductivity meters are available to buy.

For measuring out the various components a two-decimal scale is necessary, and an American Weigh Scale Digital Gram Pocket scale, measuring in the range of 0.01 and 200g, was employed during the course. An equivalent scale can be purchased online for less than £10.

A large number of 125ml bottles with well-sealing lids (Teflon-coated lids were recommended by the course tutors) is necessary for storing the aqueous MCP components. The course participants brought home with them around 40 bottles, clearly labelled with the printable labels that can be printed off from the MCP software.

A range of chemicals in liquid or powder form already mentioned above is required. Some are likely to be part of the range in a painting conservation studio, others not. Some of the surfactants are not easily acquired, or only

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## The Modular Cleaning Program: First Impressions from a Four-day Course and Subsequent Implementation, continued

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available in quantities suited for an industrial purpose. The implementation of them in the MCP is due to the fact that they are recent additions to the materials trialled and found to have promise by Richard Wolbers and, in consequence, some surfactants (Ecosurf® EH-6, Marlupal® 1618/25) and gelling agents (Pemulen® TR2, sold as 'Wetting Agent PM', and Xanthan gum) can now be purchased from Kremer Pigmente. (*Conservation Support Systems now has a Modular Cleaning Workshop Supplies section, listed under Products. Ed.*)

### WHY USE THE MCP?

On the introductory page of the MCP software, Chris Stavroudis answers this question in straight-forward terms: *'This software is intended to fill the conceptual space between the practicing conservator and Richard Wolbers – sort of your own, private chemistry guru. The conservator understands how to control the removal of one component from another. The Modular Cleaning Program was designed to "do the chemistry" for the conservator, making it convenient [...] to try a wider range of cleaning systems than they might normally use.'*

A particularly positive aspect of the Modular Cleaning Course was the fact that both tutors are practising painting conservators working in the private sector. The authors have both been participants in Richard Wolbers' recurring, week-long course on new methods of cleaning painted surfaces. However, we found that, while the principle of conductivity and the making of silicone-based emulsion systems sound both logical and doable, it is nevertheless a challenge to juggle the many new materials and parameters with confidence when back in the studio.

In conversation with other Wolbers course participants, we have heard similar difficulties expressed on several occasions: the course is excellent, but most of us feel a strong need to double-check our facts and cleaning solutions with Richard Wolbers before using them on a sensitive paint surface! An added practical challenge is the need for expensive kit. For example, the HORIBA pH and conductivity meters cost several hundred pounds each, making them quite an investment.

In the MCP course, Chris Stavroudis employs much cheaper meters and scales for weighing out the various components, and the theory on which the MCP hangs is brought into a pragmatic framework that makes it practical and approachable to the course participants.

While measuring the pH and conductivity of actual paint surfaces has been a strong focus in previous CAPS and Wolbers workshops, the cumulative information on pH and conductivity that has been gathered from an increasing number of modern paint films now allows for certain assumptions. While the MCP gives you the option to enter actual pH and conductivity measurements from your specific painting, a standard set of buffers for pH 5-8.5 and 1000S/cm<sup>3</sup> or 6000S/cm<sup>3</sup> conductivity were made up during the course.

With a basic knowledge of swelling ranges for oils/acrylics and their typical surface conductivity, the standard set gives the conservator the possibility of operating within relatively safe, low swelling parameters.

While it should be stressed that the MCP software by no means tells you how to clean your painting, it does allow you to systematically increase the potency of your test solutions according to your own pre-existing knowledge, while maintaining the pH and conductivity you deem least likely to swell your paint surface.

The computer programme allows you to skip the leg-work of doing the actual calculations to find out exact proportions of each component in a successful mixture. It also limits the making up of incompatible solutions by eliminating the additives that would not mix, thus saving you from making 'failed' mixtures.

### WHAT ABOUT CLEARANCE?

The aqueous range of the MCP employs a host of chemical compounds that are not part of the painting conservator's tried and tested standard range. MCP cleaning solutions, depending on their complexity, can contain acids and bases used to buffer the pH and conductivity, chelators, surfactants and gelling agents, all of which need to be cleared. Finding a clearance solution is not a complicated process, however, as all compounds can be cleared with pH-adjusted water at the same pH as the cleaning solution itself.

### CASE STUDIES

#### 1) Early twentieth century (?) unvarnished landscape painting, oil on canvas with an accumulation of surface grime.

The Hamilton Kerr Institute holds a small number of donated, deaccessioned paintings (unattributed) from the nearby Saffron Walden Museum, all of which have a considerable build-up of dirt and finger marks, which makes them ideal candidates for the MCP aqueous cleaning range.

Initial surface cleaning tests with deionised water and saliva were carried out with little effect on the dirt, although saliva worked markedly better than water.

The buffered solutions at pH 5.5 and 7.5, equally had minimal impact on the dirt layer, but the buffered solutions at pH 6.5 and 8.5 both had a moderate to fair cleaning power.<sup>5</sup> Since the lower pH of 6.5 seemed to have as much effect on the dirt layer as pH 8.5, further tests were done at this lower pH since, theoretically, the paint is less likely to swell at a lower pH.

Within the MCP, the logical next step was to add a chelator to the pH 6.5 buffer. Sodium citrate<sup>6</sup>, the mildest chelator in the aqueous range used during this course, was tested first, which further improved the cleaning in removing the majority of the dirt, however with some remaining in the troughs of the paint surface.

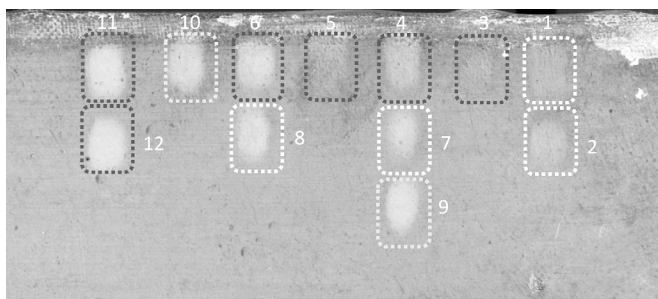


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## The Modular Cleaning Program: First Impressions from a Four-day Course and Subsequent Implementation, continued

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In the solutions set made during the course, the next chelator to try is EDTA, which may not be the next chelator that *every* painting conservator would choose. However, the MCP software will allow you to create your own solutions sets, and based on the components you add to it, the programme will propose options out of your set, in order of increasing potency.



- |                          |                                   |
|--------------------------|-----------------------------------|
| 1 Deionized water        | 7 pH 6.5 buffered (1:4)           |
| 2 Saliva                 | 8 pH 8.5 buffered (1:4)           |
| 3 pH 5.5 buffered (neat) | 9 pH 6.5 buffered, EDTA           |
| 4 pH 6.5 buffered (neat) | 10 pH 6.5 buffered, citric acid   |
| 5 pH 7.5 buffered (neat) | 11 pH 6.5 buffered, EDTA, Maypon  |
| 6 pH 8.5 buffered (neat) | 12 pH 6.5 buffered, EDTA, Ethofat |

In this cleaning test, exchanging citrate for EDTA gave an excellent cleaning result, but for the sake of the experiment, a surfactant was added to the system: a test solution with the addition of Maypon® 4C (potassium cocoyl hydrolyzed collagen) was found to be highly effective at removing dirt, as did a test solution with Ethofat® 242/25, however both seemed to affect the oil paint, leaving it slightly matter than the former tests after clearing. The matting effect could indicate that the surfactants may be affecting the paint film binder, and it was therefore deemed an unnecessary, and potentially damaging, addition to the cleaning solution.

### 2) Interior Scene, Steenwyck (att.), seventeenth century, private collection, oil on panel with aged varnish layer and possibly embedded dirt.

An upper, aged varnish coating was removed easily from this small panel using a standard mixture of free solvents (ethanol in a low polarity hydrocarbon solvent in the proportions 1:3). However, an older, yellowed and poorly saturating coating remained, which was insoluble when attempting to lift it with polar solvents mixtures.

Deoxycholic acid resin soap made with TEA (triethanolamine) at pH 8.5-9 (not an MCP-built system) had very limited effect, lifting some material in a patchy fashion while leaving the surface somewhat blanched – an indication that the aged varnish had likely been affected to some extent. A grey cast indicated the possible presence of

ingrained dirt, and the MCP aqueous range was therefore tested.

As expected, none of the buffered waters at pH 5.5 – 8.5 had an effect on their own, but since the resin soap at the raised pH of 8.5-9 had slightly affected the coating, citric acid – for its chelating properties – was added to the pH 8.5 buffered solution; however, it did not improve the cleaning action.

EDTA, with the pH 8.5 buffer, clearly removed some of the grey material, but the degraded varnish remained. Gelling this solution with xanthan gum to add emulsifying properties to the system did not make a difference.

Back-tracking from the xanthan gum, surfactants at rising HLB numbers were tested next in combination with the pH 8.5 buffered solution with EDTA. Maypon® 4C was tested, in case an animal glue might be present on the surface from a previous consolidation campaign; however, this surfactant had no effect. Pluronic® F-127 was tested next, but again, did not improve the cleaning ability of the solution.

On the assumption that an aged resin with imbibed dirt was still present, sodium deoxycholate was the final component in the surfactant range tested, in the hope that it would supplement the EDTA chelation of the dirt present; the affinity of deoxycholic acid with aged natural resins is well known.

This solution worked extremely well, and dirt and resin were lifted successfully. For the sake of understanding the action further, a solution was made omitting the EDTA, but retaining the sodium deoxycholate. This had no effect, showing that the combined action of the chelator and surfactant was necessary. The cleaning solution was cleared with 8.5 pH adjusted water at 1000 µS/cm.

The advantage of using this cleaning solution, arrived at systematically by working through the gradual addition of MCP components, is the relatively low and consistent pH, and the fact that no solvent swelling action is employed – unlike the resin soap, trialled first with moderate success, which contained TEA; furthermore, clearance of the MCP components was found to be easier than clearing TEA.

### THE MCP EXPANDING: SOLVENTS AND EMULSIONS

Stavroudis also touched on the option of adding a small proportion of a co-solvent (such as n-butanol or benzyl alcohol) to the cleaning system in combination with thickening it with xanthan gum. In this case only a small amount of solvent is added, typically 2%, which is dissolved into the aqueous system. As xanthan and Pemulen TR-2 both have emulsifying properties, it is possible to emulsify a solvent phase *into* the water already present in an aqueous MCP cleaning solution. An MCP oil-in-water macro-emulsion system can still be cleared with the appropriate pH-adjusted water.

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## The Modular Cleaning Program: First Impressions from a Four-day Course and Subsequent Implementation, continued

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As the course outline promised material on cleaning water-sensitive surfaces, Stavroudis also demonstrated the use of silicone-based solvents. This was clearly the area of greatest excitement (and potential) for Stavroudis himself, based on the unique properties of silicone-based solvents: very low polarity, low to no odour, 100% volatile, miscible with polar and non-polar solvents, comparatively safe.

Since they have little or no interaction with most materials, they offer the conservator a hydrophobic barrier through which to deliver a cleaning system to a surface. The silicone effectively floods the surface, protecting it from the aqueous components, though it may also slightly impede cleaning action. Silicones can also be mixed with solvents to 'thin' varnish layers.

The silicone vehicle demonstrated on the course was Velvesil\* Plus – a silicone polyether co-polymer that comes as a very thick paste which can be thinned with cyclomethicone until workable. To this it is possible to add pH-adjusted water, or another aqueous component of the MCP such as a chelator. An even finer emulsion is achieved if the mixture is exuded from a syringe (also good for storage).

Not a great deal of time was spent on the use of silicones on this course, but they will no doubt feature heavily in Stavroudis' continuing research. At this time, he was keen that the course participants should witness the ease with which they can be employed (whilst acknowledging difficulties encountered due to their 'greasy' feel, and tendency to spread indefinitely.)

### CONCLUSION

A five-day MCP course with Chris Stavroudis will be offered through International Academic Projects, London, in 2017 (provisional dates, 9-13 October). We hope this article has wetted your appetite for becoming further acquainted with it.

While the MCP is by no means for the novice, it successfully incorporates a rather complex number of considerations and factors to keep in mind when approaching the cleaning of sensitive, younger paint films, and it can be equally effective on older paint surfaces, as two successful removals of oxidised varnish with imbibed dirt undertaken at the HKI since the course have demonstrated.<sup>7</sup>

Stavroudis stresses the fact that the MCP software does not tell you *how* to clean a painting. But if you tell it *what* you wish to test, it will help you formulate a functional, stable solution, saving you time by making the necessary calculations for you. The methodology also makes fine-tuning easy and straight-forward, and it allows you to gradually increase the potency of your cleaning system, while remaining within the 'safe' pH and conductivity range.

The strength of the MCP is not that it introduces a radically new set of cleaning tools. It does however greatly facilitate the incorporation of the principles and approaches introduced in the CAPS workshops and the research of Richard Wolbers: a complex and rapidly developing body of knowledge that can otherwise be a challenge to take on board in our everyday painting conservation practice.

### ENDNOTES

1. We are grateful to Chris Stavroudis for invaluable input and clarification, to the SAAM Lunder Conservation Center, to Amiel Clarke and Emma Janssen at the Hamilton Kerr Institute.
2. The HLB for Triton X-100 for example, a surfactant that until recently was used in paint formulations as well as in conservation, is 13.4. Stavroudis stresses that the HLB is really an inadequate indication of the 'strength' of a surfactant in a conservation context, but no better measure is available.
3. Germaben® II is not readily available in Europe. As an alternative, the HKI are currently testing Plantaserve® E, a phenoxyethanol and ethylhexylglycerin preservative used in the homemade cosmetics industry.
4. The Hamilton Kerr Institute recently purchased the Selmos High Accuracy Digital pH Meter Pen Water Quality Tester with Large LCD 0-14pH Measurement Range 0.01 Resolution, which comes with two sets of powder calibration pouches at pH4 and pH7 and has performed well, although it consistently read pH about 0.2 – 0.4 higher pH than our Horiba pH meter.
5. Testing the efficacy of water at different pH levels can be done with either the adjusted waters, or with the buffered solutions (diluted from their concentrates with deionized water 1:4 to make the 5ml test solution). However, as we tested with the buffered solutions, clearing with adjusted water is necessary, and it would arguably be faster to do the testing at different pH with the adjusted waters.
6. To make the test solutions for this chelating agent, sodium hydroxide solution is added to the citric acid solution until the desired pH is achieved. Once the pH rises above 7, the solution will contain tri-sodium citrate and excess sodium hydroxide. Below pH 7, the solution will contain mono-, di- and tri-sodium citrate in varying proportion.
7. The first successful cleaning is discussed in case study two. Another seventeenth-century oil on canvas currently in the studios showed a somewhat similar, yellow-grey residue layer, after the successful removal of the upper varnish film with free solvents. At the time of writing, the layer is being removed successfully with an MCP system consisting of buffered water at pH8.5, EDTA and Ecosurf EH-6 surfactant. Again, testing EDTA and surfactant on their own had limited effect, and a deoxycholic resin-soap none.

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## The Modular Cleaning Program: First Impressions from a Four-day Course and Subsequent Implementation, continued

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Wolbers, R.C., 2000. *Cleaning Painted Surfaces: Aqueous Methods*. London: Archetype Publications.

### RECOMMENDED VIEWING

Getty Conservation Institute videos prepared for the Cleaning Acrylic Paint Surfaces (CAPS) workshops.

Calibrating Conventional pH Meters

<https://www.youtube.com/watch?v=9Ktlz0uw6kw>

Calibrating pH and Conductivity: Horiba Meters

[https://www.youtube.com/watch?v=\\_nx3gNnKsUE](https://www.youtube.com/watch?v=_nx3gNnKsUE)

Preparing pH- and Conductivity- Adjusted Water

<https://www.youtube.com/watch?v=hGAUAgNYZjI>

Preparing a Pemulen Gel from MCP and Making an Emulsion

<https://www.youtube.com/watch?v=2O5pYyc45Qo>

Making Agarose Gel and Preparing an Agarose Plug

<https://www.youtube.com/watch?v=SX4n2DO6Lao>

Measuring Surface pH and Conductivity Using Water Drop and Agarose Plug Methods

<https://www.youtube.com/watch?v=bOqZEE7Kb8Y>

Mixing and Using Velvessil Plus

<https://www.youtube.com/watch?v=i6cet8sa-6Y>

Preparing a Dow Mineral Spirits Microemulsion (With Cosurfactants)

<https://www.youtube.com/watch?v=SGkf3i7rnDw>

Preparing a Silicone Microemulsion (With Cosurfactant) – [without cosurfactant]

<https://www.youtube.com/watch?v=xDpwloLqJS4>

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## Membership

**Chris Stavroudis**  
*membership secretary*

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*In theory, there is no difference between theory and practice.  
But in practice, there is.*

Jan van de Snepscheut



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## Membership, continued

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# Speeches You May Have Missed

On May 19, 2017, New Orleans Mayor Mitch Landrieu delivered the following speech about why the city took down four Confederate monuments.

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Thank you for coming.

The soul of our beloved City is deeply rooted in a history that has evolved over thousands of years; rooted in a diverse people who have been here together every step of the way – for both good and for ill.

It is a history that holds in its heart the stories of Native Americans: the Choctaw, Houma Nation, the Chitimacha. Of Hernando de Soto, Robert Cavalier, Sieur de La Salle, the Acadians, the Islenos, the enslaved people from Senegambia, Free People of Color, the Haitians, the Germans, both the empires of France and Spain. The Italians, the Irish, the Cubans, the south and central Americans, the Vietnamese and so many more.

You see: New Orleans is truly a city of many nations, a melting pot, a bubbling cauldron of many cultures. There is no other place quite like it in the world that so eloquently exemplifies the uniquely American motto: *e pluribus unum* — out of many we are one.

But there are also other truths about our city that we must confront. New Orleans was America's largest slave market: a port where hundreds of thousands of souls were brought, sold and shipped up the Mississippi River to lives of forced labor of misery of rape, of torture.

America was the place where nearly 4,000 of our fellow citizens were lynched, 540 alone in Louisiana; where the courts enshrined 'separate but equal'; where Freedom riders coming to New Orleans were beaten to a bloody pulp. So when people say to me that the monuments in question are history, well what I just described is real history as well, and it is the searing truth.

And it immediately begs the questions: why there are no slave ship monuments, no prominent markers on public land to remember the lynchings or the slave blocks; nothing to remember this long chapter of our lives; the pain, the sacrifice, the shame ... all of it happening on the soil of New Orleans.

So for those self-appointed defenders of history and the monuments, they are eerily silent on what amounts to this historical malfeasance, a lie by omission.

There is a difference between remembrance of history and reverence of it. For America and New Orleans, it has been a long, winding road, marked by great tragedy and great triumph. But we cannot be afraid of our truth.

As President George W. Bush said at the dedication ceremony for the National Museum of African American History & Culture, "A great nation does not hide its history. It faces its flaws and corrects them."

So today I want to speak about why we chose to remove these four monuments to the Lost Cause of the Confederacy, but also how and why this process can move us towards healing and understanding of each other.

So, let's start with the facts.

The historic record is clear: the Robert E. Lee, Jefferson Davis, and P.G.T. Beauregard statues were not erected just to honor these men, but as part of the movement which became known as The Cult of the Lost Cause. This 'cult' had one goal — through monuments and through other means — to rewrite history to hide the truth, which is that the Confederacy was on the wrong side of humanity.

First erected over 166 years after the founding of our city and 19 years after the end of the Civil War, the monuments that we took down were meant to rebrand the history of our city and the ideals of a defeated Confederacy.

It is self-evident that these men did not fight for the United States of America, They fought against it. They may have been warriors, but in this cause they were not patriots.

These statues are not just stone and metal. They are not just innocent remembrances of a benign history. These monuments purposefully celebrate a fictional, sanitized Confederacy; ignoring the death, ignoring the enslavement, and the terror that it actually stood for.

After the Civil War, these statues were a part of that terrorism as much as a burning cross on someone's lawn; they were erected purposefully to send a strong message to all who walked in their shadows about who was still in charge in this city.

Should you have further doubt about the true goals of the Confederacy, in the very weeks before the war broke out, the Vice President of the Confederacy, Alexander Stephens, made it clear that the Confederate cause was about maintaining slavery and white supremacy.

He said in his now famous 'Cornerstone speech' that the Confederacy's "cornerstone rests upon the great truth, that the negro is not equal to the white man; that slavery — subordination to the superior race — is his natural and normal condition. This, our new government, is the first, in the history of the world, based upon this great physical, philosophical, and moral truth."

Now, with these shocking words still ringing in your ears, I want to try to gently peel from your hands the grip on a false narrative of our history that I think weakens us and make straight a wrong turn we made many years ago so we can more closely connect with integrity to the founding principles of our nation and forge a clearer and straighter path toward a better city and more perfect union.

Last year, President Barack Obama echoed these sentiments about the need to contextualize and remember all of our history. He recalled a piece of stone, a slave auction block engraved with a marker commemorating a single moment in 1830 when Andrew Jackson and Henry Clay stood and spoke from it.

President Obama said, "Consider what this artifact tells us about history ... on a stone where day after day for

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years, men and women ... bound and bought and sold and bid like cattle on a stone worn down by the tragedy of over a thousand bare feet. For a long time the only thing we considered important, the singular thing we once chose to commemorate as history with a plaque were the unmemorable speeches of two powerful men.”

A piece of stone – one stone. Both stories were history. One story told. One story forgotten or maybe even purposefully ignored.

As clear as it is for me today ... for a long time, even though I grew up in one of New Orleans’ most diverse neighborhoods, even with my family’s long proud history of fighting for civil rights ... I must have passed by those monuments a million times without giving them a second thought.

So I am not judging anybody, I am not judging people. We all take our own journey on race. I just hope people listen like I did when my dear friend Wynton Marsalis helped me see the truth. He asked me to think about all the people who have left New Orleans because of our exclusionary attitudes.

Another friend asked me to consider these four monuments from the perspective of an African American mother or father trying to explain to their fifth grade daughter who Robert E. Lee is and why he stands atop of our beautiful city. Can you do it?

Can you look into that young girl’s eyes and convince her that Robert E. Lee is there to encourage her? Do you think she will feel inspired and hopeful by that story? Do these monuments help her see a future with limitless potential? Have you ever thought that if her potential is limited, yours and mine are too?

We all know the answer to these very simple questions. When you look into this child’s eyes is the moment when the searing truth comes into focus for us. This is the moment when we know what is right and what we must do. We can’t walk away from this truth.

And I knew that taking down the monuments was going to be tough, but you elected me to do the right thing, not the easy thing and this is what that looks like. So relocating these Confederate monuments is not about taking something away from someone else. This is not about politics, this is not about blame or retaliation. This is not a naïve quest to solve all our problems at once.

This is, however, about showing the whole world that we as a city and as a people are able to acknowledge, understand, reconcile and, most importantly, choose a better future for ourselves, making straight what has been crooked and making right what was wrong.

Otherwise, we will continue to pay a price with discord, with division, and yes, with violence.

To literally put the confederacy on a pedestal in our most prominent places of honor is an inaccurate recitation of our full past, it is an affront to our present, and it is a bad prescription for our future.

History cannot be changed. It cannot be moved like a statue. What is done is done. The Civil War is over, and the Confederacy lost and we are better for it. Surely we are far enough removed from this dark time to acknowledge that the cause of the Confederacy was wrong.

And in the second decade of the 21st century, asking African Americans — or anyone else — to drive by property that they own; occupied by reverential statues of men who fought to destroy the country and deny that person’s humanity seems perverse and absurd.

Centuries-old wounds are still raw because they never healed right in the first place.

Here is the essential truth: we are better together than we are apart. Indivisibility is our essence. Isn’t this the gift that the people of New Orleans have given to the world?

We radiate beauty and grace in our food, in our music, in our architecture, in our joy of life, in our celebration of death; in everything that we do. We gave the world this funky thing called jazz; the most uniquely American art form that is developed across the ages from different cultures.

Think about second lines, think about Mardi Gras, think about muffedetta, think about the Saints, gumbo, red beans and rice. By God, just think. All we hold dear is created by throwing everything in the pot; creating, producing something better; everything a product of our historic diversity.

We are proof that out of many we are one — and better for it! Out of many we are one — and we really do love it! And yet, we still seem to find so many excuses for not doing the right thing. Again, remember President Bush’s words, “A great nation does not hide its history. It faces its flaws and corrects them.”

We forget, we deny how much we really depend on each other, how much we need each other. We justify our silence and inaction by manufacturing noble causes that marinate in historical denial. We still find a way to say “wait, not so fast.”

But like Dr. Martin Luther King Jr. said, “wait has almost always meant never.”

We can’t wait any longer. We need to change. And we need to change now. No more waiting. This is not just about statues, this is about our attitudes and behavior as well. If we take these statues down and don’t change to become a more open and inclusive society this would have all been in vain.

While some have driven by these monuments every day and either revered their beauty or failed to see them at all,



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many of our neighbors and fellow Americans see them very clearly. Many are painfully aware of the long shadows their presence casts, not only literally but figuratively. And they clearly receive the message that the Confederacy and the cult of the lost cause intended to deliver.

Earlier this week, as the cult of the lost cause statue of P.G.T. Beauregard came down, world renowned musician Terence Blanchard stood watch, his wife Robin and their two beautiful daughters at their side.

Terence went to a high school on the edge of City Park named after one of America's greatest heroes and patriots, John F. Kennedy. But to get there he had to pass by this monument to a man who fought to deny him his humanity. He said, "I've never looked at them as a source of pride ... it's always made me feel as if they were put there by people who don't respect us. This is something I never thought I'd see in my lifetime. It's a sign that the world is changing."

Yes, Terence, it is, and it is long overdue.

Now is the time to send a new message to the next generation of New Orleanians who can follow in Terence and Robin's remarkable footsteps.

A message about the future, about the next 300 years and beyond; let us not miss this opportunity New Orleans and let us help the rest of the country do the same. Because now is the time for choosing. Now is the time to actually make this the City we always should have been, had we gotten it right in the first place.

We should stop for a moment and ask ourselves — at this point in our history, after Katrina, after Rita, after Ike, after Gustav, after the national recession, after the BP oil catastrophe and after the tornado — if presented with the opportunity to build monuments that told our story or to curate these particular spaces ... would these monuments be what we want the world to see? Is this really our story?

We have not erased history; we are becoming part of the city's history by righting the wrong image these monuments represent and crafting a better, more complete future for all our children and for future generations.

And unlike when these Confederate monuments were first erected as symbols of white supremacy, we now have a chance to create not only new symbols, but to do it together, as one people.

In our blessed land we all come to the table of democracy as equals.

We have to reaffirm our commitment to a future where each citizen is guaranteed the uniquely American gifts of life, liberty and the pursuit of happiness.

That is what really makes America great and today it is more important than ever to hold fast to these values and together say a self-evident truth that out of many we are one. That is why today we reclaim these spaces for the United States of America.

Because we are one nation, not two; indivisible with liberty and justice for all, not some. We all are part of one nation, all pledging allegiance to one flag, the flag of the United States of America. And New Orleanians are in, all of the way.

It is in this union and in this truth that real patriotism is rooted and flourishes.

Instead of revering a 4-year brief historical aberration that was called the Confederacy we can celebrate all 300 years of our rich, diverse history as a place named New Orleans and set the tone for the next 300 years.

After decades of public debate, of anger, of anxiety, of anticipation, of humiliation and of frustration. After public hearings and approvals from three separate community led commissions. After two robust public hearings and a 6-1 vote by the duly elected New Orleans City Council. After review by 13 different federal and state judges. The full weight of the legislative, executive, and judicial branches of government has been brought to bear and the monuments in accordance with the law have been removed.

So now is the time to come together and heal and focus on our larger task. Not only building new symbols, but making this city a beautiful manifestation of what is possible and what we as a people can become.

Let us remember what the once exiled, imprisoned and now universally loved Nelson Mandela and what he said after the fall of apartheid. "If the pain has often been unbearable and the revelations shocking to all of us, it is because they indeed bring us the beginnings of a common understanding of what happened and a steady restoration of the nation's humanity."

So before we part let us again state the truth clearly. The Confederacy was on the wrong side of history and humanity. It sought to tear apart our nation and subjugate our fellow Americans to slavery. This is the history we should never forget and one that we should never again put on a pedestal to be revered.

As a community, we must recognize the significance of removing New Orleans' Confederate monuments. It is our acknowledgment that now is the time to take stock of, and then move past, a painful part of our history. Anything less would render generations of courageous struggle and soul-searching a truly lost cause. Anything less would fall short of the immortal words of our greatest President Abraham Lincoln, who with an open heart and clarity of purpose calls on us today to unite as one people when he said:

"With malice toward none, with charity for all, with firmness in the right as God gives us to see the right, let us strive on to finish the work we are in, to bind up the nation's wounds, to do all which may achieve and cherish: a just and lasting peace among ourselves and with all nations."

Thank you.

## Articles You May Have Missed

**“Famous Sculpture Set for Move, to be Refurbished,”** *Greenfield Daily Reporter*, 12/29/2016

One of the Indianapolis Museum of Art’s most popular attractions will be removed from its familiar spot on the mall in front of the museum for conservation.

“LOVE”, the iconic sculpture by Robert Indiana, has undergone years of weathering that has threatened the long-term lifespan of the piece. When it is stabilized and back in good condition, “LOVE” will take residence in a prime new location indoors to help preserve it for the future. “Leaving it outside, as beautiful as it is, shortens its useful lifetime. We want to protect it and make sure it’s here forever,” says David Miller, chief conservator and senior conservator of paintings at the museum.

The “LOVE” statue has become one of the most enduring and endearing pieces in the pop-art movement of the 1960s and 1970s. Indiana fashioned the sculpture out of Cor-Ten steel, a material that would purposefully rust to form a protective crust. When Indiana created the piece, it was not known how Cor-Ten steel would withstand the outdoors for long periods of time.

Museum conservators have found cracks and holes have formed in places around the sculpture. Uneven drying has resulted in reddish-orange streaks on the surface. Outdoor conservation expert Abigail Mack and Alfred Lippincott, a representative of the company that originally fabricated the piece, gave the museum an assessment of the sculpture. Their opinion was that it was in poor to fair condition. It needed to be removed from outdoors as soon as possible.

On Jan. 9, the sculpture will be disassembled and moved indoors into a specially designed conservation space. The project is not a restoration, Miller said. Rather than making the sculpture look brand new, conservators will work to ensure that it is stabilized and structurally sound while maintaining the original work of art.

**“Forbidden City Opens Relic ‘Hospital,’”** *China Daily*, 12/30/2016

A state-of-the-art conservation center to “treat” ancient cultural relics in disrepair opened at Beijing’s Palace Museum on Thursday. The base, informally called the Relic Hospital,

covers 13,000 square meters and boasts the nation’s most-advanced restoration workshops, said Shan Jixiang, the museum’s director.

The facility has a laser technology lab, a joint venture by China and Greece to share conservation experiences, and features a training center for the International Institute for Conservation of Historic and Artistic Works.

“Traditional craftsmanship will be combined with modern methods, and the lives of cultural relics will be prolonged by the ‘doctors,’” Shan said, referring to experts at the new center, who like medical doctors wear white coats. He added that the base will eventually be opened to tourists, although no time frame has been set.

**“Making a Case for Museums,”** *UDaily*, 01/04/2017

Extremely rare and high-profile objects on display in museums are exhibited in hermetically sealed cases that reduce oxygen levels and protect the items from damaging humidity. Such cases may be state-of-the-art, but they’re also expensive. And they’re almost certainly too costly for small and medium-size museums, which face similar preservation issues for their most valuable collections.

To address that need, a Delaware company that has been developing new technology for display cases turned to University of Delaware students for help in testing and improving its design. A multidisciplinary design team, consisting of students majoring in environmental and chemical engineering and in art conservation, worked with Seaford-based Xergy on the project.

Xergy is a startup working on new technology it hopes will transform the heating, ventilation and air conditioning industry with more environmentally friendly and energy-efficient systems. Five engineering students who formed a team to work on testing Xergy’s display-case technology were joined by Yan Ling Choi, a senior majoring in art conservation who also has a strong background in chemistry.

In the end, the students could use two electrolyzer cells — in which the process of electrolysis converts water into oxygen and vice versa — on a prototype display case to reliably

control humidity and oxygen levels while limiting exposure to contaminants such as ozone.

Kelli Kearns, an environmental engineering student on the team, said working with an art conservation student was a valuable learning experience in addition to the hands-on engineering experience with the project itself.

**“Bethlehem Shrine’s Treasures being Restored,”** *Religion News Service*, 01/12/2017

It is revered by different Christian sects and draws more than a million visitors to the Holy Land every year, making it the biggest tourist attraction in the Palestinian territories. The Church of the Nativity, built by Roman Emperor Constantine in the fourth century, sits in Bethlehem above what’s believed to be the birthplace of Jesus in one of the most politically divisive regions of the world.

The church is administered jointly by Greek Orthodox, Syriac Orthodox, Roman Catholic and Armenian Apostolic authorities, and all have monastic communities there. Since 2013, Italian experts from the art restoration firm Piacenti SpA have been working with the Palestinian government to overcome cultural and religious differences and forge ahead with an ambitious restoration expected to cost \$15 million (14 million euros) when completed.

Experts have cleaned and restored more than a million brilliantly colored tiny mosaic tiles in the Church of the Nativity in Bethlehem over the past three years. Over the years the structure has suffered from degradation and water infiltration. It was declared a U.N. World Heritage site in 2012 in a bid to save it from further decay and it’s also on the World Heritage endangered list.

**“Mud Angels: The Israelis Who Restored a Michelangelo With a Toothbrush,”** *Haaretz*, 01/19/2017

In the days after the huge flood that inundated Florence in November 1966, the city’s streets turned into rushing rivers, cars were washed away like rubber rafts, and ancient churches filled with a mix of water, fuel oil and mud.

Joram Rozov was the dean

of students and taught at the Bezalel Academy of Art and Design in Jerusalem. He organized and led a group of nine art students who flew to Florence to help in the rescue and restoration effort that followed the disaster. They spent 12 days there working from morning until night.

The Israeli delegation concentrated on cleaning statues in the Bargello national museum, moving very large damaged paintings from churches to places where they could be restored, and removing ancient manuscripts from the archives of the Jewish community, which had been flooded with thick sludge.

The volunteers became local heroes, and the Italian press called them “Mud Angels” (Angeli del fango), a term still used to this day. Last Saturday delegation members received recognition and special thanks, including from the present mayor of Florence Dario Nardella, at an evening in Tel Aviv marking the 50th anniversary of the flood.

Many of the works remained in storage for decades because experts had yet to invent the techniques needed to restore them. The last major work to undergo restoration was the very large 16th century painting by Giorgio Vasari called the “Last Supper.” For years it was thought to be irreparable, and it waited 40 years for restoration work done only in the past decade. It has been returned to its original site in Sante Croce, just in time for the 50th anniversary of the flood.

### **“Invisible Hands: Conservators Restore and Maintain Pittsburgh’s Artwork,” *The Pitt News*, 01/23/2017**

Ellen Baxter is the chief conservator at the Carnegie Museum of Art. The conservator’s work is inherently subtle and nearly invisible to the public. Artists typically get all the credit for their work, but in the museum world, the conservator is constantly tinkering behind the scenes to ensure that paintings, sculptures and the like are ready for exhibition.

Baxter’s work uses disparate tools for cleaning — from surgery and dentistry — to remove surface dirt from older paintings. Like Baxter, conservator Ana Alba works primarily with paintings. Alba took her first fellowship following graduation at the National Gallery of Art in Washington, D.C., and now owns a private practice in Pittsburgh — an art

preservation and restoration studio called Alba Art Conservation.

But a conservator’s work does not focus solely on the works of art themselves. The condition of the gallery, especially the Scaife Galleries holding the permanent installations at CMOA, is about as important to preserving artworks as the work done directly to them. Baxter works with the museum’s facilities and collection care committee to maintain the proper environment for the works and to ensure effective pest management.

### **“Downtown’s ‘Pope of Broadway’ Mural Featuring Actor Anthony Quinn Fully Restored by Original Artist,” *Los Angeles Times*, 01/24/2017**

For muralist Eloy Torrez, it was the face that really got to him. His beloved downtown Los Angeles mural, the “Pope of Broadway,” featuring actor Anthony Quinn, had been chipping and fading in the sun for years. But when Quinn’s painted face began to peel off the wall, that’s when the sight of his 1985 painting became truly painful for Torrez.

On Tuesday, Torrez joined art conservationists and city officials beneath the 70-foot-tall artwork on the side of the former Victor Clothing Co. building to celebrate its full restoration, which was completed this month by Torrez himself.

In some ways, the mural is a link between the new and the old. The mural came about after Torrez met Ramiro Salcedo, then-owner of the Victor Clothing Co. at 242 S. Broadway. In 1983, Torrez painted a mural called “Legends of Hollywood” on Hudson Avenue depicting Marilyn Monroe, Humphrey Bogart, Fred Astaire, Bette Davis, James Dean and Clark Gable. Salcedo told Torrez he wanted a mural that would show “a Latino actor who would represent that era of Hollywood.”

The artist immediately thought of Quinn. The mural, which looms over a parking lot, grew cracked and faded over the years. It was defaced with graffiti, and it suffered from moisture damage. L.A. City Councilman Jose Huizar helped secure a donation for \$150,000 to refurbish the mural from Greenland USA, the company behind the downtown hotel and condo complex Metropolis. The restoration was overseen by the Mural Conservancy of Los Angeles.

### **“Vatican Museums Director Visits Art Restoration Project in Quake-Hit Central Italy,” *Vatican Radio*, 01/26/2017**

The Director of the Vatican Museums, Barbara Jatta, on Wednesday visited ongoing art restoration efforts in an earthquake-hit area of central Italy. A communique said the laboratories of the Vatican Museums would restore several works of art salvaged from churches in the Archdiocese of Spoleto-Norcia for free.

Eight works of art were chosen for restoration, which will be featured at an exhibit in Spoleto “after being returned to their original splendor”.

The communique says the exhibition “is an important sign of hope: alongside the people who are gradually returning to a more-or-less normal life, these treasures of the faith ‘are being reborn’”.

Archbishop Renato Boccardo of the Diocese of Spoleto-Norcia thanked Pope Francis and the President of the Governorate of the Vatican City State, Cardinal Giuseppe Bertello, for allowing the Museums to perform “this great work”. He said the eight works of art will be returned to their original churches as soon as the latter are rebuilt and made safe again.

### **“‘All that’s Missing is the Swastika’ Outrage Over Plans to Restore Hitler’s Art Gallery,” *Express*, 01/26/2017**

Jewish groups are up in arms at a British architect’s plans to restore one of Adolf Hitler’s favourite buildings.

Munich’s Haus der Kunst (House of Art) was built at Hitler’s command to show off the best examples of “Germanic” art and still features swastikas inside the portico. Modernist David Chipperfield, who was widely praised for his reconstruction of the Neues Museum in Berlin, has unveiled plans for a £68million refurbishment of the controversial museum.

Critics have denounced the 63-year-old’s project as an attempt to rehabilitate Nazi architecture. One article in the Tagesspiegel ran the headline ‘All that’s missing is the swastika’.

Of particular concern is the plan to remove a line of trees that were planted after the Second World War, expressly to obscure the building.

Jewish organisations have been particularly outraged and spoke out



ahead of Friday's Holocaust Memorial Day. Historian Magnus Brechtken, vice-director of the Munich Institute for Contemporary History, also says it would be 'unacceptable' for the original Neoclassical face of the building, which features swastika motifs on its portico ceiling, to be restored.

The building, which, he says, represents the Nazi 'racial ideology in stone', has evolved since it was built through changes such as replacing the exterior steps and planting the trees, reflecting Germany "coming to terms with the past". Mr. Brechtken said:

"Every architectural answer in 2017 must take fully into account the whole process after 1945 and the wider area around the building. "The answer must reflect the society of 2017, not emulate 1937."

**"Giving Historical Relics a New Lease of Life,"** *China Daily USA*, 02/03/2017

A documentary titled *Masters in the Forbidden City* that was recently screened in China sheds light into the intriguing craft of restoring precious relics in the Imperial Palace. The two-part documentary, comprising a feature film and a 3-episode television series, was listed as one of the top 10 documentaries on Douban.com, a major Chinese arts and culture portal.

The program has also propelled some of the personalities on screen to fame. Wang Jin, of the restoration experts featured in the show, has since the documentary's release been invited to numerous television talk shows.

The restoration skills of the Shanghai Museum's craftsmen are not just coveted in the country. Established museums all over the world, such as the British Museum, the Hermitage Museum in Russia, and the Freer Gallery of Art in the United States, have worked with restoration experts from the Shanghai Museum to rejuvenate their collections of Chinese art.

New craftsmen who join The Shanghai Museum need to undergo eight years of apprenticeship before they can operate independently. In 2015, the Shanghai Museum launched a new conservation center that is equipped with hi-tech equipment, such as the country's largest CT scanner which enables researchers to perform intricate examinations of an artwork.

**"Art Expert to Discuss Fakes in Lecture at PMOA,"** *The Ledger*, 02/02/2017

Author Rustin Levenson, president and founder of Art Care Conservation in New York and Miami, will discuss how to tell authentic art from fakes during a free lecture and book signing Saturday at the Polk Museum of Art.

Levenson co-authored the prize-winning book "Seeing through Paintings," a handbook exploring the examination of easel paintings from medieval times to the present. She will discuss how conservationists use the materials and techniques used in paintings to make art historical assessments and determine authenticity. She also will share some secrets of the conservation studio and the work performed in them.

Levenson received a bachelor's degree from Wellesley College and a diploma in Paintings Conservation from Harvard University. She has worked at the Fogg Museum, the Canadian Conservation Institute, The National Gallery of Canada and The Metropolitan Museum of Art.

**"Italy Restoring Damaged Art from Palmyra,"** *ANSA.it*, 02/07/2017

Two funerary busts from the 2nd-3rd century AD, both icons of the damaged art of the Syrian town of Palmyra that were saved "in extremis" in 2015 from the city's now-destroyed museum, have for the first time left their homes to be temporarily entrusted to Italy for restoration work.

The busts - a male and a female - reached Italy after an adventurous journey across borders and checkpoints, thanks to an agreement between Italy's "Incontro di Civiltà" (Meeting of Civilisations) Association and the Directorate for Antiquities in Damascus.

The male bust has damage to the face from hammer blows inflicted by ISIS, but restorers are preparing a sophisticated 3D print with sintering of nylon powders that will return its delicate aristocratic features. The female bust has been restored fragment by fragment, with a veil that covers the head and jewels that hold a cape on the shoulder.

The busts were on display at an exhibition at the Colosseum titled "Reborn from Destruction: Ebla, Nimrud, Palmyra" and are now in the hands of the High Institute for Conservation and Restoration (ISCR), which will return them to Syria at the end of the month.

**"The Crazy Science of Art Conservation,"** *Houston Chronicle*, 02/16/2017

Many visitors to the Menil Collection will think about the collision of Western and African cultures when they examine the carved figures and masks of the show "ReCollecting Dogon."

Objects conservator Kari Dodson thinks first about cultural issues involving "fatty bloom." "Fatty bloom" is conservator-speak for the chemical reactions that occur in fatty acid esters, or oils, years after artists have applied them.

Curator Paul Davis pulled about 25 objects from the Menil's treasure rooms for "ReCollecting Dogon." These pieces - mostly carved wooden figures and masks made over a wide stretch of time, from the 18th to the early 20th century - originated in Mali's Dogon country.

During her initial inspection, Dodson was taken by the variety of surfaces on the carved pieces. Each piece has an original coating of a vegetable seed-based oil or fat - and good luck identifying them. Mali has five different native oils that are applied to objects for various reasons - sometimes as fumigants or preservatives, but also for aesthetics.

Oils can add texture or lusters that symbolize health and vigor. Over time, the various oils react differently to the museum environment. Dodson didn't try to correct or remove the blooms. Wood is extremely porous, she explained, so she would not have been able to reach esters that had seeped in deep. Plus, the oils were "culturally applied," and altering materials is kind of a no-no. "The best we can do for them is to create a very constant environment for them, to protect them from dust and to minimize the handling," she said.

**"It's about Time: NYU Launches US First Time-Based Media Conservation Graduate Course,"** *The Art Newspaper*, 02/17/2017

The Institute of Fine Arts (IFA) at New York University (NYU) is preparing to launch a four-year graduate course in time-based media conservation. The degree is the first of its kind in the US and reflects the growing need for specialists in the field as the popularity of technology-based works increases.

Thanks to a grant from the Andrew W. Mellon Foundation, classes will start in 2018, with the first graduate students due to matriculate in 2022.

NYU is one of only four graduate-level conservation programs in the US (along with SUNY Buffalo State, Winterthur/University of Delaware and UCLA/Getty), and as of 2018 it will be the only one to offer a time-based media specialisation.

Some European universities, however, have made time-based media conservation a priority for more than two decades. For example, Berlin's Hochschule für Technik und Wirtschaft established media art courses in 1993 and Bern University of the Arts created its modern materials media programme in 1997.

**“An Attempt to Save South Carolina’s Historical Documents is Destroying Them,” *NPR*, 02/21/2017**

Millions of historic documents, from presidential papers to slave journals, are facing an issue apart from age: a preservation method that has backfired.

For 20 years, beginning in the 1950s, the state laminated documents to try to protect them from aging. Archivists no longer use the process after it was realized the laminate material degrades into an acid, doing more damage to the documents. The natural acids from the paper mix with the degrading laminate to create a noxious vinegar. Each passing year will further degrade the document until it's gone.

“You’re effectively forming an envelope where you’re keeping the acids in the paper, not allowing them to migrate out,” says Molly McGath, a researcher at Johns Hopkins University. She says the method was performed around the U.S., and other countries, throughout the 20th century. There are as many as 6 million laminated historical documents.

In Texas, archivists have started scanning their collection, like the 1836 treaty between state commissioners and the Cherokee Indians. In Virginia, the state conservator Leslie Courtois is choosing to remove the lamination. Courtois has spent 20 years delaminating thousands of important, old papers. “It’s tiring, it’s tedious, it’s very laborious, it’s messy,” Courtois says. Plus, it’s expensive and time-consuming. Courtois must place each page of a document in a chemical bath. South Carolina doesn’t

have all the materials or the staff to do this, so it’s seeking \$200,000 to have a private lab take it on.

**“French Art Restorer Devotes Himself to Japanese Project,” *Dawn*, 03/01/2017**

A man recently hired at a long-standing art restoration company in Kyoto has taken his first steps towards becoming an expert in restoring Japanese artwork.

Yoan Rosenzweig, 36, from Nice, France, has devoted himself to improving his skills since he was employed in September last year at Usami Shokakudo company in Kyoto. The company was established in the middle of the Edo period (1603-1867).

After acquiring the skills and techniques to restore Western artworks to their original state at European universities, he came to Japan to learn the restoration of Japanese art, as well as the Japanese language. Currently, 15 employees work at the firm.

As Rosenzweig is new at the company, he is in charge of apprenticeship work, such as restoration for picture mountings and preparing restoration tools for senior workers. “I want to be a qualified restorer by learning from senior restorers,” he said.

**“Conservators resurrect painting of Prometheus during restoration at Chrysler Museum,” *The Virginian-Pilot*, 03/05/2017**

As Julie Ribits brushed varnish onto a small part of the 17th century painting, the eye and beak of an eagle came into view.

The detail could have been easily overlooked, compared to the rest of the painting of Prometheus, painted by Giovanni Battista Langetti in the mid-17th century. Time, dirt and poor previous attempts at restoration had obscured it almost completely. But that’s part of Ribits’ role – finding details like the eagle and bringing them back to life.

She’s the current National Endowment for the Humanities Conservation Fellow at the Chrysler Museum of Art in Norfolk. Another piece, a 400-year-old painting of Saint Sebastian by Flemish artist Anthony van Dyck, is still being worked on after about two years. Mark Lewis, a conservator at the museum, said the team needs to

finish up the frame and then compare it to a similar piece in Munich, Germany.

The latest painting to undergo restoration depicts Prometheus, a figure in Greek mythology who stole fire from the gods. He was a popular subject during the 17th century. For the Chrysler, Lewis said having a funded fellow doubles the size of the art conservation department. The museum never has a shortage of art to be worked on. The Chrysler has 30,000 pieces in its collection, and is frequently loaning pieces out and borrowing others.

**“Hidden Beneath Paint of Catskill Residence, Artist Thomas Cole’s Wall Decorations,” *Daily Freeman News*, 03/09/2017**

Not only did Thomas Cole paint the lush mountain landscapes that inspired the Hudson River School art movement of the 19th century, he also painted on the walls of his home.

Lost beneath layers of paint for more than a century, the patterned borders below the ceilings were rediscovered several years ago and are now revealed in their semi-faded glory. The stylized depictions of drapery and fabric, painstakingly recovered by conservators, will be fully displayed when the Thomas Cole National Historic Site opens for the season in May. While not exactly lost masterworks, they offer new insight into one of America’s most influential painters.

Cole is believed to have painted the borders around the time he moved into the house in 1836 to provide a sort of frame for paintings displayed on the parlor walls. Cole died in 1848 at age 47.

At some point, no one knows exactly why, the border art was covered up by wallpaper and then layers of paint. The lost art was discovered after historic paint expert Matthew J. Mosca in 2014 examined a bit of what looked like exposed wallpaper up high in a pantry. A closer look revealed it was a painted design. The discovery in the parlors followed, and Mosca and art restorer Margaret Saliske began carefully removing decades of wall paint with scalpels and solvent.

The goal is to fully restore three of the four walls in each parlor, giving visitors a sense of both the discovered work and what the walls looked like 180 years ago when Cole gazed at the forested mountains outside his windows.