

Researching Ungilded Daguerreotype Treatment

The 1830s were a dynamic time in photographic experimentation. On either side of the Atlantic, scientists and amateur hobbyists alike traded techniques and guarded discoveries as they sought to capture the world around them in a still image. The first widely-used method of photography was introduced in Paris in 1839 by a man named Louis Jacques-Mandé Daguerre. The type of photograph he invented bears his name to this day: the daguerreotype.

A daguerreotype is made on a light-sensitive, silver-plated sheet of copper. When this sheet is exposed to a sunlit subject and a discrete amount of mercury vapor, an image is created on top of the mirror-like surface.

The publication of Daguerre's discovery in August 1839 sent a shockwave across the burgeoning photography community. In Philadelphia, a young man named Robert Cornelius began experimenting. Cornelius worked in his family's lamp and chandelier shop and had a keen interest in science. In October 1839, in the backyard behind his family's store, Cornelius took what is today heralded as the first "selfie"—the world's first photographic self-portrait.

(continued on page 4)



WHAT'S INSIDE

page two

Letter from the Executive Director

page five

Preventive Conservation Fellow:
Gillian Marcus

page six

Questions for
Jessica Silverman

page seven

High Watermarks

page eight

Calendar of Events

ABOVE RIGHT / CCAHA Photograph
Conservator Rachel Wetzel poses with
Robert Cornelius daguerreotypes owned
by the American Philosophical Society
and William F. Stapp's book *Robert
Cornelius, Portraits from the Dawn
of Photography*

The Fellowship Year at CCAHA

As this issue of *Art-i-facts* goes to press, CCAHA Fellow Rémy Dreyfuss-Deseigne has just returned to Paris to present the findings of his research project on nanocellulose at an international conference for museum conservators. He is working in a long tradition of utilizing CCAHA's state-of-the-art conservation laboratory to contribute to conservator education and cutting-edge research in the field.

According to CCAHA records, Dreyfuss-Deseigne is the 62nd conservator-in-training to gain hands-on experience in the laboratory since CCAHA's founding in 1977. As the profession has changed, these positions have variously been called apprenticeships, internships, and now fellowships. They provide extensive training for the new conservator, as he or she enters into the field after graduating from

one of the world's top training programs. Fresh from his Masters-level training at the French National Institute for Cultural Heritage, Dreyfuss-Deseigne began his one-year National Endowment for the Arts (NEA) Fellowship at CCAHA in September 2015.

As a key part of their year in the laboratory, CCAHA Fellows are encouraged to dedicate some time to an in-depth research project, taking advantage of the professional staff and resources available at CCAHA. Generous funding from places like NEA, the Andrew W. Mellon Foundation, and the Samuel Kress Foundation allows the Fellows to attend conferences, consult with leading authorities at museums and universities, and closely examine collection items relevant to their study.

(continued on page 3)

LETTER

from the executive director



1 / CCAHA Photograph Conservator Rachel Wetzel removes photographs from a 1918 photo of graduates of Gammon Theological Seminary from the Robert W. Woodruff Library of the Atlanta University Center.

2 / CCAHA Fellow Marianne de Bovis uses a microscope to consolidate flaking media on a medieval Persian manuscript belonging to Bucknell University Special Collections.

Both of these photos are from our Instagram account, @conservationcenter.

Dear Friends,

CCAHA may be described in many ways. It is a cutting-edge conservation facility, a digital imaging lab, and a resource for preservation guidelines, education programming, and grant planning. In this issue of *Art-i-facts*, we discuss another aspect of CCAHA's identity: that of conservation *laboratory*—a place of scientific research and discovery. At CCAHA, seasoned conservators and first-year fellows alike actively contribute to the field of conservation knowledge, writing papers and presenting at conferences.

As leading experts in the field, CCAHA's conservators consult with specialists at other facilities. In *Researching Ungilded Daguerreotype Treatment*, we discuss CCAHA Photograph Conservator Rachel Wetzel's recent collaboration with experts at institutions like the Library of Congress and the Smithsonian's Museum Conservation Institute to develop a method for treating fragile daguerreotypes. This issue's "High Watermarks" includes resources for those interested in learning more about daguerreotypes.

The Fellowship Year at CCAHA highlights CCAHA's legacy of training the next generation of conservators through grant-funded fellowship programs. Fresh from graduate-level conservation programs, fellows embark on new research projects at CCAHA, often presenting their findings at national and even international conferences. "Questions for Jessica" is an interview with our Senior Paper Conservator & Preservation Consultant, who began her career at CCAHA as a graduate fellow eight years ago.

I'm proud to share CCAHA's legacy of contribution to the field of conservation scholarship with you.

Sincerely,

Laura Hartz Stanton
Executive Director

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The Conservation Center for Art & Historic Artifacts (CCAHA) is a nonprofit conservation facility specializing in the treatment of works on paper, photographs, and books through conservation and state-of-the-art digital imaging services. Founded in 1977, CCAHA serves nonprofit cultural institutions, private individuals, and other collecting organizations. CCAHA's preservation services staff present educational programs, conduct preservation assessments, and develop emergency preparedness plans. CCAHA also offers fellowships, fundraising support, and disaster assistance.



1 / CCAHA Kress Fellow Brook Prestowitz uses gellan gel to remove a backing from a photograph. 2 / CCAHA NEA Fellow Rémy Dreyfuss-Deseigne mixes wheat starch paste, a commonly-used material in the lab.

(The Fellowship Year at CCAHA, continued from page 1)

In Dreyfuss-Deseigne's case, he chose to focus on something new in the field of conservation: the use of nanocellulose films as mending materials. His research subject is typical of the tightly focused research projects generally developed by Fellows, who truly receive opportunities to follow their passions. CCAHA Director of Conservation Mary Schobert—who herself served as an apprentice at CCAHA in the mid-1980s—remembers two particular past research projects that both inspired the Fellows and ultimately benefited the field of conservation.

In 2002, NEA Fellow Erin Murphy investigated the odd deterioration patterns visible in a group of 22 Diane Arbus photographs, part of Arbus' *Untitled* series. Murphy's detective work led her both to the Museum of Modern Art for consultation and analysis with their photograph conservator and to the New Jersey State Museum, the owner of the photographs. While her analyses ultimately didn't yield a simple solution for reversing the problem, they provided a needed set of guidelines for long-term preservation of the classic photographs.

As Murphy remembers, "My research project at CCAHA has really been one of the highlights of my career so far... It helped me look and think more critically at preservation problems and keep an open mind." Today, Murphy brings her expertise—partially honed in the CCAHA laboratory—to her job as the Paul M. and Harriet L. Weissman Senior Photograph Conservator at the Weissman Preservation Center at Harvard University.

Schobert is also regularly reminded of the stellar work of 2001 NEA Fellow Maurizio Michellozi. His project involved the assembly of a very practical sampling of ways to mend and insert parchment, demonstrated through the use of expendable parchment pieces. His experimentation with a broad range of techniques—enjoying the freedom to occasionally venture outside the confines of normally approved treatments—proved to be of both immediate and long-term value to CCAHA staff. During a subsequent fellowship at the Cleveland Museum of Art, Michellozi continued his investigations into parchment mending techniques, eventually publishing his findings in *The Paper Conservator*. Today, he works as a conservator in Italy, and is currently involved in a major treatment of Raphael's preparatory cartoon for *The School of Athens* at the Ambrosiana Museum in Milan.

Most Fellows look back on their time at CCAHA as being a critical part of their education in the art and science of conservation. Samantha Sheesley, a 2007 NEA Fellow now serving as the first-ever Paper Conservator at the Virginia Museum of Fine Arts, collaborated with the Smithsonian American Art Museum on preservation guidelines for their collection of mixed-media art by Joseph Cornell. She remembers, "I found that every discovery triggered additional questions and possible research avenues... It was a wonderful feeling to be a part of something so big and so important."

For her research project, Laura Wahl, a 2005 NEA Fellow now serving as Library Conservator at the Hagley Museum and Library, developed a set of foundational recommendations that were subsequently used in establishing CCAHA's digital imaging studio. Wahl pursued her interest in the rapidly-changing field of digital imaging at a transitional time when CCAHA was still using traditional slide images for the "before and after" documentation required for professional conservation treatment. After Wahl's fellowship, CCAHA Photograph Conservator Rachel Wetzel and others built upon her work in realizing her dream of a fully-equipped digital imaging studio at CCAHA working in tandem with the conservation laboratory.

Current work by Brook Prestowitz, the 2015-16 Kress Fellow, and Marianne de Bovis, the 2015-16 Mellon Fellow, may sound extremely technical to the layperson yet is of potentially great importance to the field and the CCAHA lab. Brook is exploring the use of gellan gum gels in paper conservation and Marianne is preparing a set of guidelines based on the latest findings about humidification of iron gall inks. And in Paris, an international cohort of conservators has benefitted from Dreyfuss-Deseigne's findings that link new conservation techniques with the latest research into nanotechnologies. Visionary work like this is solidly in the 39-year tradition of nurturing talent, insight, and creativity in the CCAHA treatment laboratory.

—LEE PRICE

in which a hazy, off-center Cornelius looks down lens. (To view this image, visit www.loc.gov/pictures/item/2004664436/)

Cornelius experimented with scientist Paul Beck Goddard, significantly improving the daguerreotype process. Their discoveries enabled shorter exposure times, which allowed them to use daguerreotypes for portraiture as well as landscape photography. Keeping this development secret, Cornelius quickly set up Philadelphia's first photograph portrait studio. For the next three years, he honed his techniques, emerging as the foremost American daguerreotypist of the time. Daguerre himself sent daguerreotypes from France in exchange for examples of Cornelius' photographs. After this relatively brief period, however, Cornelius returned to the family business, where he worked for the rest of his life.

The daguerreotypes that have survived into the modern era are often plagued with deterioration due to the corrosive nature of silver. Early attempts at cleaning daguerreotypes in the 19th and early 20th centuries involved either cyanide or thiourea (a sulfur-based chemical). While the results seemed effective initially, these early interventions are now known to be very damaging to daguerreotypes, as they leave behind corrosive spots and hazy residues.

When faced with treating a daguerreotype today, photograph conservators must ascertain if the photograph is gilded—taken after 1841 and coated with gold chloride. If so, there are several treatment options.

For example, the University of Louisville recently brought several gilded daguerreotypes to CCAHA for treatment. The photographs had been cleaned with cyanide and showed signs of corrosion. Since they were gilded, CCAHA Photograph Conservator Rachel Wetzel was able to carefully wash the plates to remove the corrosive stains and cyanide residues and ensure the longevity of the daguerreotypes.

When conservators are brought un-gilded daguerreotypes—those made prior to 1841 that have no protective coating—they have few options. Currently, there are no safe methods for reversing damage on un-gilded daguerreotypes.

Therefore, when the American Philosophical Society (APS) brought two un-gilded daguerreotypes taken by Cornelius in 1839 and 1840 to CCAHA, Wetzel had limited options. Both of the daguerreotypes had been thiourea-cleaned in 1978, a treatment that had left white residue and corrosion stains on the plates, obscuring the images.

Conservation is a collaborative field; conservators often consult one another on complex treatments. When considering options for the un-gilded Cornelius daguerreotypes, Wetzel reached out to Adrienne Lundgren, Senior Photograph Conservator at the Library of Congress. Lundgren is experienced with daguerreotype treatment and also has access to the Library's Cornelius daguerreotypes, including the aforementioned "selfie."

Wetzel and Lundgren decided to collaborate to fully explore treatment methods for un-gilded daguerreotypes that have been thiourea- and/or cyanide-treated. They created a research team that includes Edward Vicenzi, Research Scientist at the Smithsonian's Museum Conservation Institute; Mike Robinson, a modern-day daguerreotypist; and William Stapp, former Curator of Photographs at the National Portrait Gallery and author of a book about Cornelius. Wetzel will be presenting the first phase of the research at the International Council of Museums-Committee for Conservation's Photographic Materials Working Group Annual Meeting at the Rijksmuseum in Amsterdam in September 2016.

Until the project is completed and the team can devise a safe treatment method for un-gilded daguerreotypes, Wetzel provided APS with two baseline condition reports of their Cornelius daguerreotypes. These included written documentation of the damage and marks on the plates and photographic documentation, which provided visual confirmation of the daguerreotypes' current state. These reports allow conservators and curators to monitor any changes that may occur to the daguerreotypes over the next few years.



1 + 2 / *Daguerreotype of Paul Beck Goddard taken by Robert Cornelius. The white ring around the image is the result of the cleaning that occurred in 1978 noted on the back of the image. (American Philosophical Society) 3 / CCAHA Photograph Conservator Rachel Wetzel and Bob Cornelius, the great-great-grandson of Robert Cornelius, with the second daguerreotype the photographer made.*

Alongside Wetzel's research into the treatment of these daguerreotypes, she deepened her interest in the life and work of Cornelius himself. "Cornelius worked at a pivotal moment in the history of photography," she says. In the first three years after the process was invented and during which Cornelius ran his portraiture studio, the daguerreotype process changed rapidly. "Since Cornelius was instrumental in many of these changes, you can gain a sense of the development of the daguerreotype through his body of work," Wetzel says.

Records of Cornelius' work are few and far between—there are scant mentions of him in scholarship and literature on the history of photography. He left behind no notebooks of his working methods or client lists. By piecing together the fragmentary allusions, however, Wetzel has been able to locate several undocumented Cornelius daguerreotypes.

One such photograph belongs to a direct descendent of Robert Cornelius. Wetzel reached out to Bob Cornelius, the photographer's great-great-grandson, who came to CCAHA with a family heirloom: the second daguerreotype Cornelius ever made. Wetzel was able to examine the photograph, which provided valuable insight into the workings of Cornelius' early portraiture.

Conservation is often described as a mix—a mix of science and art, a mix of technique and craft. Along with a passion for the scientific aspects of their jobs, conservators love the history and stories behind the objects they treat. It is perhaps no surprise, then, that while Wetzel worked on the daguerreotypes, her interest in Cornelius' life and work was piqued.

Her research from this project has many possible resonances. Wetzel is contributing to the field of conservation science with her research on the treatment of ungolded daguerreotypes. Simultaneously, her work piecing together the timeline of Cornelius' work contributes to the history of photography and of Philadelphia more broadly. Wetzel's work is far from over, however. "We're just getting started," she says, "I can't wait to see what we find next."

—AMY HEUER

PREVENTIVE
CONSERVATION
FELLOW
GILLIAN MARCUS



In 2015, the National Endowment for the Humanities (NEH) approached CCAHA about piloting a new kind of fellowship, one that draws on our strong Preservation Services Office. Therefore, we're proud to announce our innovative new fellowship in preventive conservation.

Gillian Marcus is CCAHA's inaugural Preventive Conservation Fellow. A trained paper conservator with experience working in institutions in the US and the UK, Marcus works with institutions so that they can better protect their collections. She conducts preservation needs and risk assessments, assists with preservation planning, and is updating many of our technical bulletins.



3

Here are some snapshots of the conservators highlighted in this issue.

**FOLLOW CCAHA
ON INSTAGRAM!**

Last summer, we launched an Instagram page. We're eager to share what's new in the lab and feature old favorite projects.



Follow us @conservationcenter or visit online at [instagram.com/conservationcenter](https://www.instagram.com/conservationcenter).



QUESTIONS

for Jessica Silverman

Education: Education: M.S., Winterthur / University of Delaware Program in Art Conservation, Winterthur, DE; B.A., Art History and Chemistry Minor with a certificate in Museum Studies, University of Illinois at Chicago, IL / **Years at CCAHA:** 8

How did you get into conservation?

I was taking a course in Art History for my Associate's degree in Fine Art, and a professor spoke about the conservation of the Sistine Chapel ceiling. I was mesmerized by the combination of fine art, history, science, and ethics.

How did you start at CCAHA? What were some of your first projects?

I started as a post-graduate fellow in 2008. One of my first treatment projects was a William Penn indenture on parchment—an entirely different beast than paper, pun intended! I also worked on a series of Louis Kahn architectural drawings from the University of Pennsylvania, French Nouveau posters belonging to the Virginia Museum of Fine Arts, and fine art from private collections—an Audubon print, a Renoir print, and a 19th-century Micah Williams pastel. Those are just some of the treatments from my first year. I also helped with a condition survey of manuscripts from the Sol Feinstone Collection of the David Library of the American Revolution. My boxes for the survey contained the correspondence of John Adams, including letters to his wife, Abigail. I love how he signed letters to her, "I am with all tenderness yours," ...sigh.

You also serve as a Preservation Consultant. Can you speak a little about that work?

Sure. Partway through my first fellowship year, I did a survey with CCAHA's Preservation Services Office (PSO). We learned about preventive conservation during graduate school but seeing the impact that could be made by consulting with institutions and finding out that I still had much to learn about preservation was eye-opening. When I was hired as a permanent staff member, I was hired with the idea that I'd split my time between PSO and the lab. For many years I was doing both—I wrote some emergency preparedness plans, co-taught workshops, did surveys and consultation as well as paper conservation work.

What are some of your favorite projects from your time at CCAHA?

A 16th-century Persian miniature that I worked on always stands out—the detail on them is amazing. We are working on a large collection of stunning 19th-century watercolors right now for a museum. Through our observations, we're identifying some of the artist's techniques and gathering information about the papers he used through noting watermarks in the papers. We've been sharing what we're finding with the curator and adding to the institution's knowledge of their collection. I've also had the opportunity to work on some beautiful Pennsylvania-German frakturs, works by Andrew Wyeth, a lottery ticket that was signed by George Washington,

even a letter from a young attorney named Thomas Jefferson to a College of William & Mary classmate, talking about girls that he fancied! I have to say some of the consulting work I've done has been the most exciting though. It's hard to beat actually touching Francis Scott Key's "Star-Spangled Banner" manuscript.

What is the most challenging project you've done at CCAHA?

I once did a lead white conversion on a privately-owned gouache painting. This particular pigment, lead carbonate, can turn black when exposed to pollutants in the environment. We can't actually revert the compound back to lead carbonate but we can convert it to another compound, lead sulfate, which also appears white. Finding a method that would deliver the chemical I was using without dissolving the paint was particularly complicated for this piece.

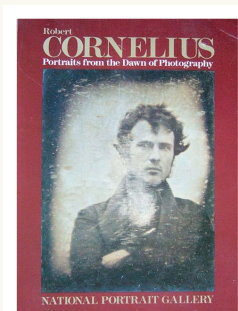
How have your responsibilities changed since becoming the lab's Senior Paper Conservator?

Now that I'm Senior Paper Conservator, I supervise the postgraduate Fellows and help the Director of Conservation keep everything moving in the paper section of the lab. Working with the Fellows is rewarding. They ask such insightful questions and keep us on our toes by bringing new developments in the field into our lab.

—AMY HEUER

HIGH WATERMARKS

In each newsletter, CCAHA highlights several books or websites we think will be of interest to collectors, conservators, and collections managers.

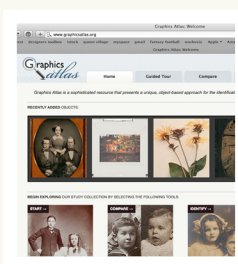


ROBERT CORNELIUS, PORTRAITS FROM THE DAWN OF PHOTOGRAPHY WILLIAM F. STAPP

William Stapp is one of CCAHA Photograph Conservator Rachel Wetzels' collaborators with good reason: his *Robert Cornelius, Portraits from the Dawn of*

Photography is the only biography of Cornelius. At 152 pages, it's a thoughtful, thorough overview of the life and work of the pioneering photographer.

>> [Smithsonian Institution Press | 152 pages](#)



THE IMAGE PERMANENCE INSTITUTE'S "GRAPHICS ATLAS"

The Image Permanence Institute, a nonprofit associated with the Rochester Institute of Technology, has created

"The Graphics Atlas," an online resource/tool for learning about all types of images, from the earliest daguerreotypes to cutting-edge digital imagery. Check out their timeline of photography for an overview of photography through the ages. You can also browse the site by image type.

>> [www.graphicsatlas.org](#)

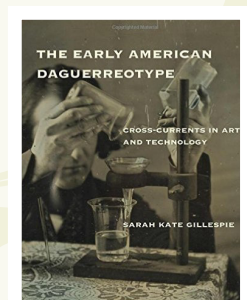


DAGUERREOBASE

Daguerreobase is an online repository for users to upload and catalog images of daguerreotypes. It currently contains images from many major European institutions.

Visitors can browse over 15,000 images organized by keyword.

>> [www.daguerreobase.org](#)



THE EARLY AMERICAN DAGUERREO TYPE: CROSS-CURRENTS IN ART AND TECHNOLOGY SARAH KATE GILLESPIE

A recent publication, Gillespie's *The Early American Daguerreotype* discusses the rise of American daguerreotype.

While there is an entire chapter devoted to Cornelius and the Philadelphia photography scene, much of the book focuses on the New York City photography culture. The cover features a daguerreotype of Cornelius himself mixing chemicals!

>> [MIT Press Books | 213 pages](#)

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CALENDAR

of events

Throughout the year, CCAHA offers a number of programs to provide staff at collecting institutions with the knowledge and skills to support their collections care efforts. To register for any of these programs, please visit our website at www.ccaha.org/education/program-calendar.

OCTOBER

GIVING VOICE:
INTERPRETING
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October 5, 2016
Denver Public Library
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THE NEXT CHAPTER: RARE
BOOKS IN MODERN TIMES

October 19-20, 2016
Newberry Library
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OCTOBER + DECEMBER

DIGITAL PRESERVATION:
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COLLABORATION FOR
SMALLER INSTITUTIONS

October 28 and
December 16, 2016
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NOVEMBER

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November 16, 2016
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Philadelphia, PA

Register online at www.ccaha.org!