



## MACC CONSERVATORS RESTORE WPA ERA MURALS

During the first weeks of April, MACC conservators Joan Gorman, Elizabeth Buschor and David Marquis worked on-site in Faribault, Minnesota conserving and restoring a pair of WPA era murals.

The murals, located in the auditorium of Noyes Hall on the campus of the Minnesota State Academy for the Deaf, were first examined by Joan Gorman in November of 2004. The Minnesota State Arts Board helped fund the project this year after visiting the murals and reviewing the research of Ms. Gorman.

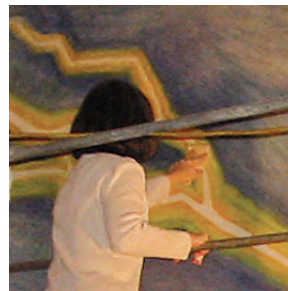
The murals flank the stage of the auditorium, approximately 15 feet above the floor. The well-maintained building is impressive with a curved balcony and a large domed ceiling. The K-12 grade State Academy for the Deaf has been in operation since the late-19th century and for almost 70 years these murals have been an important visual inspiration for each of the thousands of graduating students.

Executed in 1938, artist Andre Boratko's *Truth, Development, and the Pictorial Arts* (East Panel), and *Man Harnesses Nature through Intellect* (West Panel) depict large, powerful hands placed in landscapes which evoke 20th century surrealist painting motifs and compositions. The artist incorporated this

imagery in keeping with the historic philosophy of the academy and its strong emphasis on and commitment to communication for the deaf via American Sign Language.

Each panel, executed in oil paint and a modified encaustic technique on plaster, are approximately 13 feet by 13 feet in size and their elevated location within the auditorium necessitated an extensive scaffolding arrangement. MACC conservators climbed to work each day - at first, stabilizing delaminated and lifted plaster and large areas of cleavage. Once stable, the many years of accumulated dirt, grime, and dust were removed. Losses in the paint layers as well as in the underlying plaster were filled and inpainted using stable, reversible materials.

Bringing these important works back to their original beauty was difficult but satisfying work. "It is good knowing that future graduates of the Academy will have the same powerful and inspiring images that generations of their predecessors have enjoyed," said Joan Gorman, Senior Paintings Conservator.



SUMMER 2006  
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## NICOLE GRABOW JOINS MACC AS OBJECTS CONSERVATOR

The newest member of the MACC staff is Nicole Grabow, Associate Objects Conservator. Ms. Grabow comes to MACC from the Smithsonian Center for Materials Research and Education and the new National Museum of the American Indian in Washington, D.C. She is a past graduate of the Winterthur/University of Delaware Program in Art Conservation.

Her background also includes being an Owen W. Maloney Chemistry Scholar at the University of Kansas and an art history student at Oxford University in England.

Ms. Grabow brings excellent experience in treating works of contemporary art and Native American ethnographic pieces, along with a strong materials research background.



Nicole Grabow treating a 14th century carved limestone statue.

Ms. Grabow works closely with MACC's Senior Objects Conservator, Donna Haberman on the great variety of works that enter the objects lab.

### OUR STAFF

Elizabeth Buschor,  
Senior Paper Conservator

Donna Haberman,  
Senior Objects  
Conservator

Nicole Grabow,  
Associate Objects  
Conservator

Joan Gorman,  
Senior Paintings  
Conservator

David Marquis,  
Senior Paintings  
Conservator

Beth McLaughlin,  
Senior Textile  
Conservator

Neil Cockerline,  
Director of Preservation  
Services

Elisa Redman,  
Assistant Director of  
Preservation Services

Melinda Markell,  
Preservation Services  
Coordinator

Colin Turner,  
Executive Director

Jonathan Erickson,  
Business Manager

## MACC ANNUAL MEMBERS MEETING

**FRIDAY, OCTOBER 27TH, 2006**

**9:30 AM – 11:30 AM**

At Midwest Art Conservation Center  
(located in the Minneapolis Institute of Arts)  
2400 Third Avenue South, Minneapolis,  
Minnesota 55404. All member organizations in  
good standing (annual dues paid in full) are  
invited to attend; view conservators'  
presentations; meet fellow members, Board of  
Trustees, and MACC staff.  
r.s.v.p. by October 11th, 2006

## UPCOMING WORKSHOPS

**SAFETY & HEALTH IN CULTURAL**

**INSTITUTIONS • October, 2006**

Frederick R. Weisman Museum, Minneapolis

**WRITING & UPDATING DISASTER**

**PREPAREDNESS & EMERGENCY RESPONSE**

**PLANS FOR CULTURAL COLLECTIONS •**

October 6th, 2006

**SOUTH DAKOTA MUSEUMS ASSOCIATION**

**CONFERENCE • October 27th, 2006**

North Dakota Governor's Conference

**ADDITIONAL WORKSHOPS: PRESERVEART.ORG**

## CLEANING GLASS PLATE NEGATIVES

Cleaning glass plate negatives is not a straightforward process. As with most any artifact, it is impossible to suggest a generalized cleaning procedure that will be appropriate for every glass plate negative in your collection. Chances are you may have different types of glass plate negatives, and they may be in very different states of condition. The first question you must be able to answer before attempting any cleaning process is: what kind of glass plate negative do you have?

There are two general types of glass plate negatives, and aside from the fact that both use glass plates as a substrate (the base material that holds the image), the materials and structure of each are quite different. The first type is a wet-collodion negative. These were first introduced in the 1850's, and used liquid collodion (a solution of nitrocellulose and solvent) as the binding agent for the light sensitive chemicals. The earliest wet-collodion negatives were made on glass plates of differing sizes and variable thickness. These were placed into the camera while still damp to make an image. Because of this, it was up to the photographer to apply the chemicals immediately before taking the photograph. It was a difficult procedure but when done properly, many paper prints could be produced from a single negative. In the 1880's, a second type of glass plate negative was developed. This type is a dry-plate glass negative. Dry-plate glass negatives have a silver image carried in a layer of dried gelatin on a sheet of glass. These negatives, produced in standard sizes, pre-coated and pre-sensitized at the factory, could be stored for long periods of time.

There are several clues to determining the different types of glass plate negatives, but even experts can have difficulty in differentiating between the two types. First, the date of the negative is very important. If you can determine that the image of a glass plate negative was made before 1881, then it was done as a wet-collodion negative. In the early 1880's, the dry-plate glass negative quickly replaced the wet-collodion glass negative, but some photographers continued producing and using the wet-collodion process as late as 1908, usually for copy work or as lantern slides or other types of positive images.

Other clues for identifying the different types of glass plate negatives include differences in physical characteristics. The glass of wet-collodion negatives is usually thicker and found in varying sizes compared to dry-plate glass negatives. Also, because wet-collodion plates were made by the photographer, the collodion surface of the glass plate shows patterns from the swirling of the collodion, and the coating itself may be uneven with uncovered corners and thicker areas of collodion deposits. The collodion image may appear light tan or gray in color with a medium density when viewed by reflected light, although it is possible to intensify collodion plates so that they appear more neutral in color. The image can appear slightly matte, without high gloss or sheen, unless a layer of varnish was applied to protect the surface. This was commonly done to wet-plate collodion negatives, as the silver of the image lies on top of the collodion and even a slight scratch could go through the image leaving a permanent

BY NEIL COCKERLINE, DIRECTOR OF PRESERVATION SERVICES AT MIDWEST ART CONSERVATION CENTER with assistance from Lee Ann Daffner, Conservator of Photographs at the Museum of Modern Art in New York; Deborah Hess Norris, Conservator of Photographs and Director of the Art Conservation Graduate Program at the University of Delaware; Doug Nishimura of the Image Permanence Institute at the Rochester Institute of Technology and Heida Shoemaker, Conservator of Paper and Photographs in private practice, Berkeley, California.



## CLEANING GLASS PLATE NEGATIVES (continued)

mark. If the image side has been varnished, it may appear glossy and look like the glass side of the negative. Great care should be taken in determining which side is glass and which side holds the collodion image. On the clear glass side, everything will read positive, such as any printing or text. From the collodion side, everything will be reversed.

Dry-plate glass negatives can be readily distinguished from earlier wet-collodion glass plate negatives. Dry-plate glass is thinner, comes in more uniform sizes, and since they were mass-produced in factories, the edges are evenly cut. The gelatin coating is smooth and uniform. The emulsion or gelatin side of a dry-plate glass negative will appear dark gray to black in color in reflected light, and gradations in tone will range from clear glass to black. The gelatin side of the dry-plate will appear matte unless it has been varnished, while the glass side appears shiny. Dry-plate glass negatives were often varnished, but not as frequently as collodion plates.

You should always handle glass plate negatives very carefully because the glass is usually quite brittle and very susceptible to breakage. Handle glass plate negatives by wearing clean cotton gloves after washing your hands. You want to avoid adding fingerprints or oils to either the glass or the emulsion side of the glass plate negative. Before cleaning any glass plate negative, you must carefully inspect the emulsion side of the negative to determine whether it is collodion or gelatin. If the emulsion is separating or flaking anywhere, do

not attempt to clean the negative. You risk removing part of the image emulsion, and restoring lost image area is extremely difficult. If you encounter a glass plate negative with any separation of the emulsion from the glass, bubbling or flaking, set it aside and consult with a professional photographic conservator.

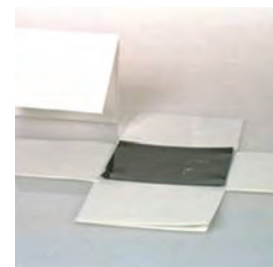
Once you have inspected the glass plate negative carefully and are assured the emulsion is firmly attached, you still should be extremely careful during cleaning. Never attempt to use any liquid cleaners on either the glass side or the emulsion side. Especially avoid any commercial glass cleaners, and do not attempt to use commercial negative cleaners either. Do not attempt to use any type of solvent cleaner. Any type of cleaning procedure requiring the use of liquids is best left to an experienced photographic conservator who knows the solubility characteristics of both gelatin and collodion, and who knows how these materials may react when in contact with liquids. Keep in mind that gelatin can dissolve in water and aqueous cleaning agents, and that the gelatin emulsion on a dry-plate negative can be irreparably damaged or lost if contact with water occurs.

Again, once you have inspected the glass plate negative carefully and are assured the emulsion is firmly attached, the first approach to cleaning is to use an air bulb to blow off loose dust and particulate matter. An air bulb is readily available in a photography supply store, and is used for cleaning negatives before printing in an enlarger. By

MicroChamber and MicroChamber/Silversafe negative enclosures are available through Conservation Resources International, LLC, 8000-H Forbes Place, Springfield, VA 22151. Telephone: (800) 634-6932. For more information: [www.conservationresources.com](http://www.conservationresources.com)



Glass plate photography field kit



Four flap storage enclosure



Self-applied liquid collodion



Traveling glass plate photography equipment

squeezing the bulb, a small burst of air is used to blow loose dust and debris away. This cleaning method can be used for both the emulsion side and the glass side of the negative.

In the past, soft camel hair brushes have been suggested for use in cleaning glass plate negatives. You should never use a brush for cleaning by dragging it over the surface of the emulsion side of a glass plate negative. The emulsion, especially on dry-plate glass negatives, can easily be scratched, and once a scratch occurs, it is almost impossible to restore it. Instead of a flat camel hair brush, choose a very soft round natural hair make-up brush. Again, do not drag it over the surface of the emulsion, but instead use it to dab and trap debris and particulate matter in the fibers to remove them. You may use a flat soft camel hair brush on the glass side of the negative and then carefully drag it across the glass surface, but never on the emulsion side. If these gentle cleaning methods do not work to your satisfaction, then bring in a photographic conservator to assist you.

The best way to avoid having to clean glass plate negatives is to properly store them. Four flap negative enclosures are recommended for storage of glass plate negatives. Four flap enclosures are commercially available from a number of conservation material suppliers. These enclosures should be made from acid-free, lignin-free, non-buffered paper board (avoid chemically buffered paperboards) of a neutral pH that meets ISO (International Organization for Standardization) Standards and ANSI (American National Standards Institute) Standards. They MUST also pass the P.A.T. or Photographic Activity Test, which is a series of exhaustive industry tests that assess the

possibility for staining or fading caused by contaminants from surrounding materials. MicroChamber and MicroChamber/Silversafe are relatively new enclosures that utilize new molecular trapping technology to protect negatives by capturing and neutralizing ambient moisture, acids and pollutants, such as sulfur compounds which can cause silver to discolor. Also, avoid using paperboards with watermarks. Current research has shown that silver mirroring of the watermark may develop on the emulsion of some types of negatives. Lastly, glassine has commonly been used to store glass and other types of negatives. This practice is now discouraged due to the identification of a similar type of silver mirroring caused by rippling of the glassine.

Once glass plate negatives are placed in enclosures, they should be stored upright in appropriate archival boxes. Glass plate negatives should never be placed flat or stacked on top of each other as the weight can cause breakage of brittle glass. Odd-sized negatives should be stored individually or separately, as should those that are broken or cracked. Those with emulsions that are flaking, bubbling, or separating from the glass plate should not be compressed in any way or stored with structurally sound glass plate negatives. Once stored, appropriate environmental conditions for glass plate negatives must be maintained. Suggested temperatures for storage are 65–68°F and a suggested relative humidity (RH) range is 35–40%. RH below 30% can result in separation or cleavage of the emulsion from the glass plate, and elevated RH (above 50–55%) can result in softening of emulsion layers and adhesion of paper enclosures.

The definitive technical standards for enclosures for glass plate negatives are now available through the International Organization for Standardization (ISO) based in Switzerland. The ISO Standard 18918:2000 *Imaging Materials-Processed Photographic Plates Storage Practices* and ISO Standard 18902:2000 *Imaging Materials-Processed Photographic Plates Standard for Enclosures* are available through the Internet at [www.iso.ch](http://www.iso.ch) or [www.ansi.org](http://www.ansi.org).

# FUNDING

## FUNDING OPPORTUNITIES

**OCTOBER 1, 2006**

### CONSERVATION PROJECT SUPPORT

Funds help museums identify conservation needs and priorities for collections to ensure their safekeeping. Collections may be in one of four categories: nonliving, natural history, living plants, or living animals. Projects funded are available in five categories: surveys, training, research, treatment, and environmental improvements. Up to \$150,000 for up to two years, match required.

#### CONTACT

Institute for Museum and Library Services  
Office of Museum Services  
1800 M Street NW 9th Floor  
Washington, DC 20005  
Steven Shwartzman (202) 653-4641  
sshwartzman@imls.gov  
Application available at:  
<http://www.imls.gov/grants/appl/index.htm>

**OCTOBER 2, 2006**

### PRESERVATION AND ACCESS GRANTS FOR STABILIZATION OF HUMANITIES COLLECTIONS

Funds for improved housing and storage, environmental conditions, security, lighting, and fire protection. Awards \$30,000 to \$700,000 with a match depending on available funding or at applicant's request.

#### CONTACT

Grants for Stabilizing Humanities Collections  
Div. of Preservation and Access • Room 411  
National Endowment for the Humanities

1100 Pennsylvania Avenue, NW

Washington, D.C. 20506

Ph: (202) 606-8570

[info@neh.gov](mailto:info@neh.gov)

More information available at:

<http://www.neh.gov/grants/guidelines/stabilization.html>

**NOVEMBER 1, 2006**

### CHALLENGE GRANTS

Funds used to augment or establish endowments that support humanities activities. Institutions may use the income from invested funds to meet ongoing humanities-related costs such as preservation and/or conservation programs. A match of three to one is required.

#### CONTACT

Office of Challenge Grants  
National Endowment for the Humanities  
Room 420 • 1100 Pennsylvania Avenue N.W.  
Washington, DC 20506  
Phone: 202-606-8309  
[challenge@neh.gov](mailto:challenge@neh.gov) • [www.neh.gov](http://www.neh.gov)

**DECEMBER 1, 2006**

### CONSERVATION ASSESSMENT PROGRAM

Program supports a two-day visit by a conservator to perform a general assessment of collections and where they are housed. This visit results in a report giving an overall review of facilities and is useful for preservation planning and further grant applications.

#### MEMBERS!

Contact MACC to receive help with funding your next conservation project.

#### We can:

- Locate conservation funding sources
- Answer grant related questions
- Assist with preparation of budgets and narratives
- Review draft grant proposals

And more!

## CONTACT

Kate Marks  
 1012 14th Street, NW, Suite 1200  
 Washington, DC 20005  
 Ph: (202) 233-0800  
[kmarks@heritagepreservation.org](mailto:kmarks@heritagepreservation.org)  
[www.neh.gov](http://www.neh.gov)

**DECEMBER 1, 2006**

## THE NATIONAL CENTER FOR PRESERVATION TECHNOLOGY AND TRAINING

The Preservation Technology and Training (PTT) Grants Program supports research, training, meetings, conferences and publications that further the Center's mission. NCPTT will give preference to research and training proposals that: protect cultural resources against vandalism, looting, terrorism, and natural disasters or conserve architectural materials of the "recent past," among others. Grants are awarded competitively with the maximum award of \$40,000.

## CONTACT

NCPTT  
 645 College Avenue  
 Natchitoches, LA 71457  
 Ph: (318) 356-7444  
 Fax: (318) 356-9119  
[ncptt@nps.gov](mailto:ncptt@nps.gov)  
<http://www.ncptt.nps.gov/ptt2006/>

## ONGOING: SURVEY GRANTS

Support for surveys to analyze and assess conservation requirements of permanent art collections and to formulate plans for their appropriate care and preservation. Submit inquiry letter with an estimate of the financial support needed for the project.

## CONTACT

Conservation Survey Grants  
 The Getty Foundation  
 1200 Getty Center Drive, Suite 800  
 Los Angeles, CA 90049-1685  
 (310) 440-7320 • [researchgrants@getty.edu](mailto:researchgrants@getty.edu)  
<http://www.getty.edu/grants/conservation/>

## ONGOING: TREATMENT GRANTS

Supports the conservation treatment of works of art of outstanding artistic significance that are part of a museum's permanent collection. Projects will only be eligible and competitive if they extend beyond the proposed treatment to include a significant interdisciplinary research component. Submit inquiry letter with an estimate of the financial support needed for the project.

## CONTACT

Conservation Survey Grants  
 The Getty Foundation  
 1200 Getty Center Drive, Suite 800  
 Los Angeles, CA 90049-1685  
 (310) 440-7320 • [researchgrants@getty.edu](mailto:researchgrants@getty.edu)  
<http://www.getty.edu/grants/conservation/>

Please note, applications sent via the U.S. postal service to locations within Washington D. C. will be irradiated. This will mean substantial delays in mail delivery. Irradiation can cause damage to photographs and magnetic media. Locations within Washington, DC are requesting that application materials be sent via Fed Ex or UPS.

MIDWEST  
ART  
CONSERVATION  
CENTER



MACC  
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Minneapolis, MN 55404

The Midwest Art Conservation Center is a non-profit regional center dedicated to the preservation and conservation of art and artifacts. We provide treatment, education and training for museums, historical societies, libraries and other cultural institutions.

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