



Colonial Williamsburg®

# A Minimally Invasive Treatment on an Églomisé Looking Glass

Caroline Shaver and Chris Swan

The Colonial Williamsburg Foundation

## Introduction and Background



1971-373.2 Before Treatment  
Attribution: Unknown  
Period: ca. 1800  
Origin: England

Neoclassical looking glasses often incorporated églomisé panels, which were painted and gilded on the reverse side of the glass. This pillar looking glass has five églomisé panels and one mirror within a rectangular frame. Two painted and gilded panels on the sides of the mirror feature fluted pillars with alternating leaf and floral vines. The three painted and gilded panels at the top depict the classically garbed allegorical figures of Faith, Hope and Charity, three theological virtues central to Christianity.

Objects that are reverse painted are difficult for conservators to treat for two main reasons. Only the rear most layers can be accessed for treatment, but the layers against the glass are what are seen from the front. Consequently, one must be able to see the front and the rear of the object simultaneously during treatment. This poster demonstrates how conservators in the Wooden Artifacts lab at the Colonial Williamsburg Foundation prepared this looking glass for exhibit using a minimally invasive approach.

## Set up and Consolidation



Custom mount designed to hold the mirror horizontally, rear side up

### SET UP

To prevent the consolidant from flowing into unwanted areas, the mirror needed to be placed horizontally. This custom mount was created with plywood and Volara foam, with consideration of stable touch points on the mirror. The mount was placed between two benches spread roughly 15' apart. This allowed access to the front of the central panel and space for working.



Camera on tripod placed below mirror. Set to "live feed" view, hooked up to a computer monitor



Monitor/camera set up allows view of front and rear simultaneously

### CONSOLIDATION

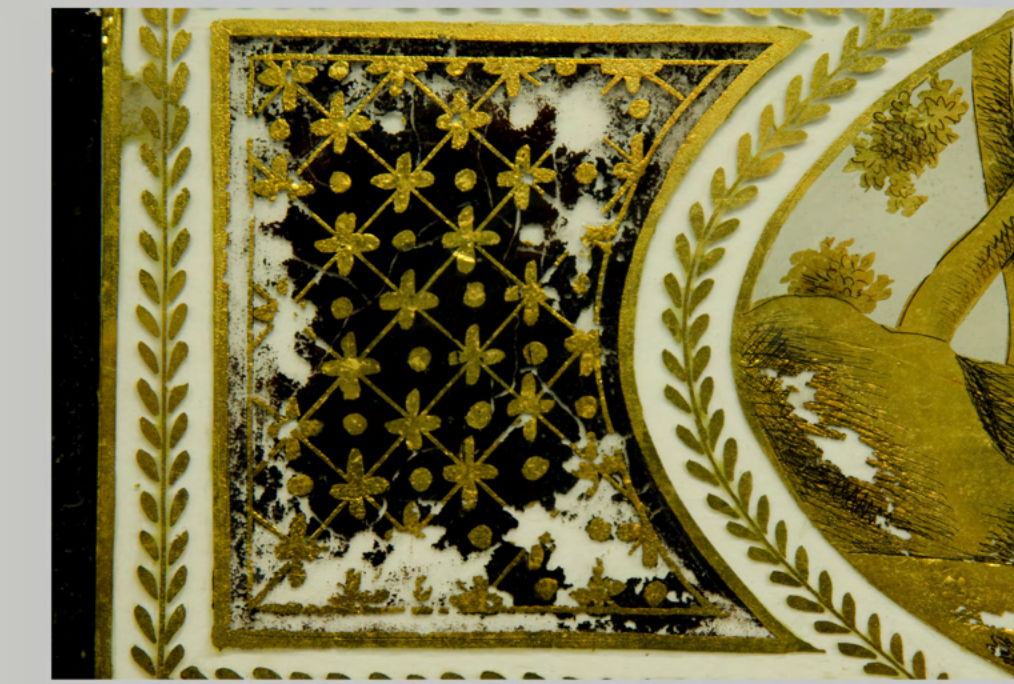
The painted black border was consolidated with 5% Paraloid B-72 in xylenes, applied by brush. A camera hooked up to a computer monitor was set to the "live feed" view to see if the consolidant had completely saturated the paint from the front. Limitations to this set up were: short camera battery life which restricted working time, camera continually refocusing, and slight lag from the physical action to the image on the monitor.



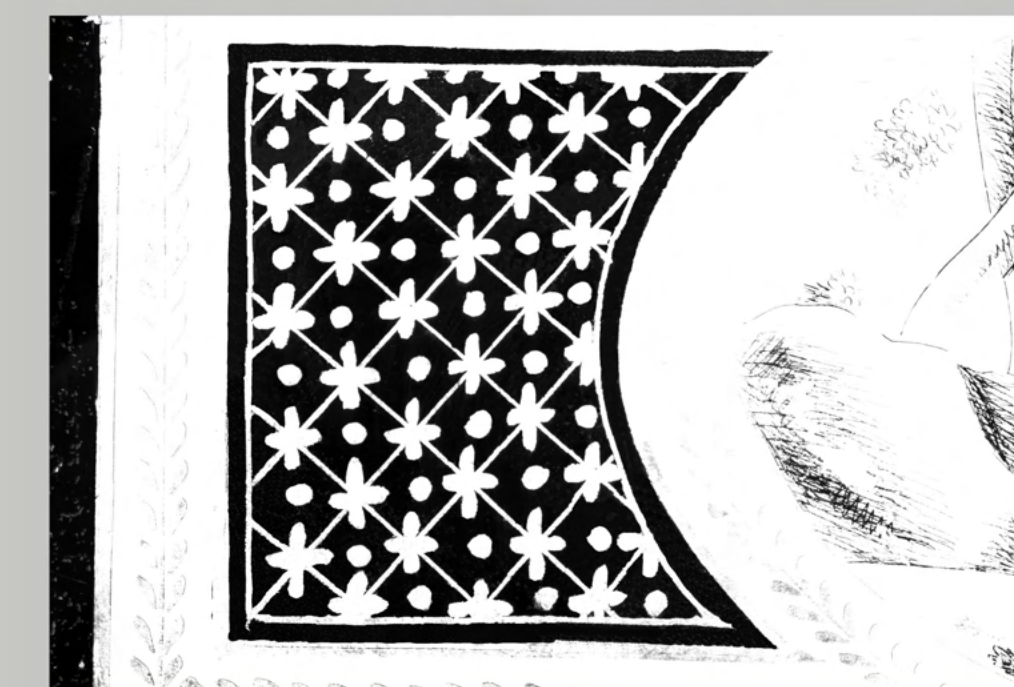
Angled mirror positioned below the central panel

An alternative option was a mirror set up. A mirror held on an angled mount was placed on a taboret underneath the front of the object. This set up was utilized when the camera battery was charging and when accuracy was needed to see what was immediately occurring on the front of the panel. Limitations were: less space for lighting from below and awkward access to the work area (no space for legs when sitting down to work).

## Restoring the Design



Lattice pattern BT



Lattice pattern digitally restored



Gilded Mylar inserts



Layered gilded and painted Mylar inserts

For loss compensation, transparent Mylar was used as a substrate upon which gilding, ink and colored paint was applied. To avoid the toxicity of the orpiment pigment, acrylic paint was substituted.

### DIGITAL RESTORATION

1. The lattice pattern was photographed with a white insert behind the glass for greater contrast.
2. The digital images were manipulated to black and white designs in Adobe Photoshop.
3. Using the Clone Stamp Tool, the pattern was restored by copying pixels in areas of intact design. This was modified as needed so the design elements were not too repetitive.
4. The white background was changed to transparent in Photoshop.
5. The image was placed in a Microsoft Word document to be printed. Test prints were made to ensure the printed image would line up exactly with the design on the looking glass. The images were printed onto Mylar with a Laserjet printer (Inkjet printer also tested, but the ink didn't dry atop the Mylar).

### GILDING AND PAINTING ON MYLAR

The Mylar printout was gilded from behind with 23 carat patent gold. A second Mylar layer was painted with Liquitex brand acrylics.

1. 3% Paraloid B-72 in xylenes was brushed quickly in a thin coat on the rear side of the Mylar printout. Tests with 3% B-72 in xylenes and acetone (1:1) and Plextol B-500 were unsuccessful.
2. The patent leaf was quickly pressed onto the B-72 layer. This was immediately burnished with an agate stone through a Mylar overlay on top of a hot plate. The heat softened the adhesive to better adhere to the gold leaf. The Mylar overlay prevented damage to the gold leaf while burnishing.
3. Once set, the gold was patinated with a thin coat of 11b orange shellac applied by brush directly onto the gold leaf.
4. The same process was used to gild an insert for the missing imagery in the central oval. A dental tool was used to scratch the missing design into the gold layer. Black acrylic paint was painted behind to fill in the transparency.
5. Another insert was carefully cut out to match the missing orpiment painted border. This border was painted with acrylic paints and layered atop the gilded inserts.

## Condition Report



Central églomisé panel depicting Hope. The white areas show where the paint and gilding had detached from the glass

This poster will focus on the conservation of the central églomisé panel. The curator requested consolidation and restoration of the design.

- Gold leaf missing in border, lattice, rock and ground imagery
- Painted border behind gilding had detached almost completely from glass
- Black paint surrounding entire image was actively detaching

### PAINT ANALYSIS

A small fragment of original paint remained in the gilded leaf border. The sample was examined with polarized light microscopy and confirmed to be orpiment pigment (As<sub>2</sub>S<sub>3</sub>). Orpiment is a pigment known for fading with continued exposure to light.\*

\*E. West FitzHugh, "Orpiment and Realgar", *Artists' Pigments*, Volume 3, E. West FitzHugh (ed.), Oxford University Press: Oxford, 1997.

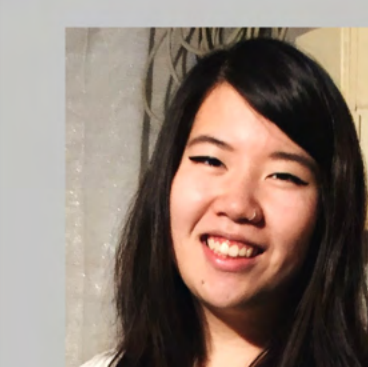
## Conclusion

The Mylar inserts were adhered to a matboard support. Small wooden blocks were glued to the frame with hide glue to hold the matboard support in place against the glass. The insert infilled the missing gilding and painted design. It is easily reversible and can simply be removed if necessary.

Right: Top three panels of looking glass after treatment



## Authors and Acknowledgements



**Caroline Shaver** is a Marshall Steele Pre-Program Intern in the Wooden Artifacts Conservation lab at the Colonial Williamsburg Foundation.



**Chris Swan** is a Senior Conservator of Wooden Artifacts at the Colonial Williamsburg Foundation. Contact: cswan@cwf.org

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