**When Life Gives you Velvet...**

**Preservation Considerations in the Making of a Period Shadowbox Frame**

**Introduction**

Photographs of William Merritt Chase in his studio show us that the artist displayed some of his paintings within shadowboxes. As a senior preparator at the Baltimore Museum of Art, I was asked to prepare a shadowbox for After the Rain—very old paintings—on panel from 1912, in the upcoming American Wing Reinstallation at The Museum, scheduled for 2015. It will be displayed in its original gilded frame inside a Victorian-era period shadowbox lined with red velvet and enclosed behind plexiglass. After aesthetic deliberation, and with the desired product in mind, we discussed potential problems and ways that could provide us with more information before deciding on an end result.

**The Velvet: Considerations, Testing, and Preparation**

A velvet lining in an enclosed environment presents the possibility of off-gassing that may be harmful to the artwork. So fabrics were investigated. The final choice of fabric was determined by two major factors: the curator’s preference, and its ability to maintain color and pile after washing. In order to remove any fire retardants or chemicals that may have been applied to the fabric during manufacture, we devised eight different washing methods and then conducted (Fig. 6) to help determine the most effective cleaning method. Preparations involved various detergents, water temperatures and solvent times.

The parameters of this project did not allow for the kind of testing that would produce more conclusive scientific results. We completed this process using all of the resources available with the end goal of creating the most stable environment for the painting. Only test results for the washed fabric samples were in fact inconclusive. Metal coupons in the control group (without sample fabric) showed changes in appearance. X-ray fluorescence spectrometry was used to detect elements present in the painting. During our review of the XRF spectra and ODy test results, the detected elements copper, lead, iron and zinc were kept in mind.

The second washing method with an additional acetone rinse as seen in Figure 2, produced the least change in the control overall. The large panels of velvet that were to be used in the actual construction of the shadowboxes were prepared in this manner. The acetone rinse was devised to remove any chemicals that were not water-soluble (possible fire retardants or stain resistant treatments). Information regarding chemical treatments on the fabric could not be obtained from the manufacturer. After washing the fabric in acetone we discovered a precipitant left behind in the solvent and on the fabric (figs. 6 & 7). This discovery required us to wash the fabric a second time.

**The Micro-environment and Necessary Modifications**

The period shadowbox frame was purchased for the painting, and its interior was outfitted with purpose-built baffle rails, spacer, and platform constructed of plywood to hold the original gilded frame and to provide a cushion for the silk velvet lining. The successful washing preparation of this silk velvet was a crucial first step, one that would be taken in any case preparation containing artifacts. Aubusson velvet, the old gilded frame in its new shadowbox case, a plan was devised to allow for air exchange within the frame. The hinged slant and supporting panel were designed to be inserted into the frame to hold the original gilded frame and to prevent any off-gassing (fig. 8).

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**Conclusion**

The William Merritt Chase shadowbox project required us to apply practical conservation knowledge to a unique and esoteric framing design. We had to think carefully about meeting the proposed aesthetic requirements while maintaining preservation standards for the panel painting and its original frame. Although we found that absolute control over the materials was probably impossible, we were able to design a safe environment that would be a best-case scenario, and could be monitored for change and altered in the future if necessary.

**Selected References**


**Acknowledgements**

The authors would like to thank Baltimore Museum of Art staff: Dr. David Park Curry, Senior Curator of Decorative Arts and American Painting, and Executive Director, Michael Chow, Senior Preparator; Yuki Kodai, Graphics Manager; Dana Krause, Consultant; Aimee Vokes, Manager of Rights and Reproductions; Miriam House, Senior Photographer; James Burden, James K. Barter Period Framing, Franklin, Maine. Reproductions; Mitro Hood, Senior Photographer.

**Fig. 1** Preparing coupons **Fig. 2** Table of washing techniques **Fig. 3** XRF Spectrum of sample location # 2 **Fig. 4** Elements detected in XRF sample sites **Fig. 5** XRF Spectrum of sample location # 1 **Fig. 6** Precipitant left behind after acetone bath **Fig. 7** Precipitant left behind after acetone bath **Fig. 8** Frame described in summary chart, before testing **Fig. 9** Frame described, after washing with MarvelSeal® before final drying **Fig. 10** Diagram of the Chase Shadowbox **Fig. 11** Stencil on velvet after gilding **Fig. 12** The Velvet: Considerations, Testing and Preparation **Fig. 13** Diagram of the Chase Shadowbox **Fig. 14** Frame described, after washing with MarvelSeal® before final drying **Fig. 15** Frame described, after washing with MarvelSeal® before final drying **Fig. 16** Frame described, after washing with MarvelSeal® before final drying **Fig. 17** Frame described, after washing with MarvelSeal® before final drying **Fig. 18** Frame described, after washing with MarvelSeal® before final drying **Fig. 19** Frame described, after washing with MarvelSeal® before final drying

**Fabric Specifications**

- **Velvet:** Polyester, NC192. This was selected to attach the velvet to the surfaces. This was in part to eliminate extra bulk because of the close fit in the frame. But also to reduce standing of the velvet during the process of printing. The glowing, chosen for the case frame was not a traditional glow, but instead a non-reflective Toa Vant OptixMaster® acrylic. The low reflection and static properties combined with UV protectors were a desirable combination of qualities. The red velvet fabric requires the use of UV-filtering glazing and low light levels to reduce fading.

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