

be presented and discussed in this report. In some areas multiple samples were taken from similar locations to find the most complete stratigraphies.

After removal all samples were placed in labeled polyester bags for transport to the lab. Before casting, the samples were examined at 30X magnification and portions of each sample were cast into polyester resin cubes for permanent mounting. The cubes were ground and polished for cross-section microscopy analysis and photography. The sample preparation methods and analytical procedures are described in the reference section of this report.

Two different microscopes were employed for this analysis work. The cast samples were initially analyzed and photographed using an Olympus BH-T epi-fluorescence microscope with a polarizing light base using Kodak Portra 160vc print film. Further analysis was conducted with a Nikon Eclipse 80i epi-fluorescence microscope equipped with an EXFO X-Cite 120 Fluorescence Illumination System fiberoptic halogen light source and a polarizing light base using SPOT Advanced software (v. 4.6) for digital image capture and Adobe Photoshop CS for digital image management. Photographs and digital images of the best representative cross-sections are included in this report. Please note that the colors in the photographs may not accurately reflect the actual color of the samples because of the inherent variability of color film and commercial processing. The colors in the digital images are also affected by the variability of color printing.

Paint Analysis Results:

This section of the report will begin with a discussion of the red wash evidence found at Birdwood, followed by comparisons with the samples taken from a remarkably intact area of red wash discovered behind a portion of the north pilaster of the West Portico (a portion of this pilaster was dismantled as it was found to be a later repair). The paint evidence remaining *in situ* on the West Portico (wooden elements related to the central door, the ceiling and interior cornice) will then be presented. This will be followed by a discussion of the wood trim evidence for the doors and windows of the Colonnade. The sample locations are included in the appendix to this report.

Red Washes at Birdwood

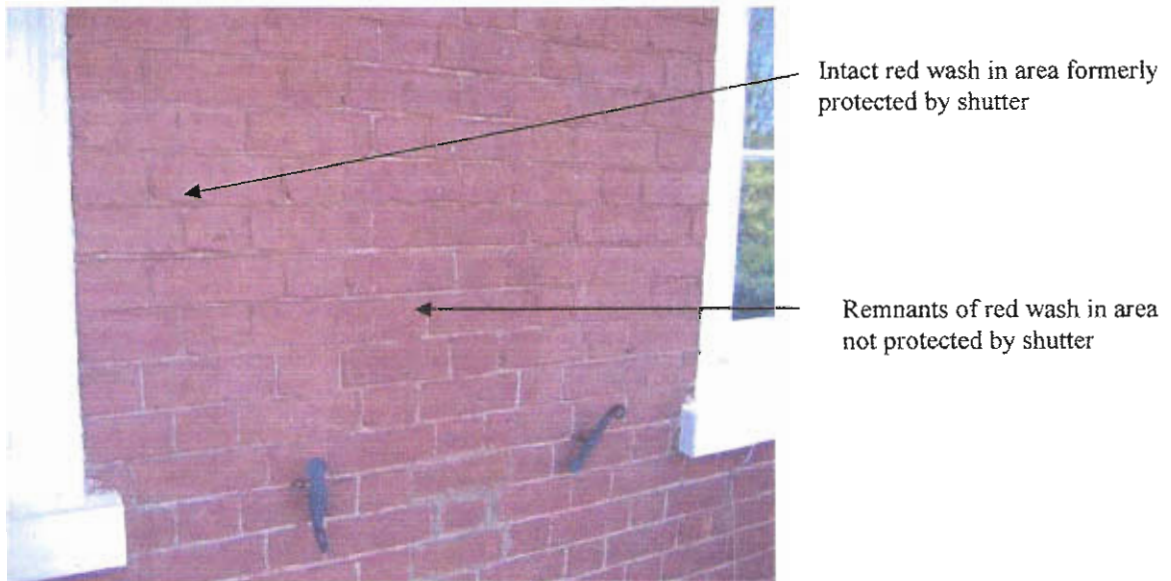
At Mark R. Wenger's request two areas of protected red wash on the north elevation of Birdwood in Charlottesville, Virginia were sampled for comparison with the evidence that has been found and analyzed from the red wash remnants at Montpelier.

The evidence at Birdwood is intriguing because the areas of brick that had been protected by shutters retain a relatively even, deep red, matte, wash layer, while the adjacent areas retain only a haze of red wash. Two samples were taken to determine the nature of the red wash in each area. The cross-section results show that in the protected area there is one distinct, relatively thick, red wash layer that completely covers the brick substrate. The cross-section from the exposed area shows that the same red wash is still present, but it is an uneven, eroded film. This comparative evidence suggests that despite the fact that

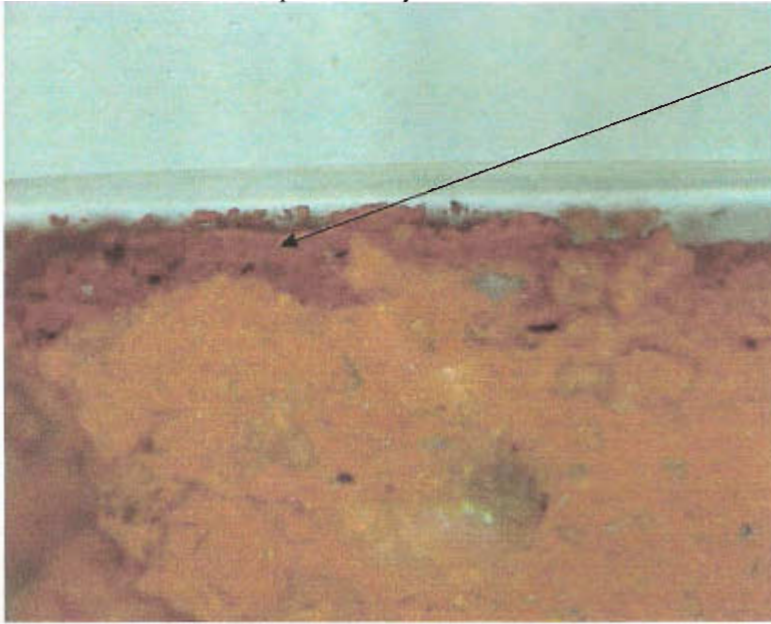
this north elevation is protected by a portico, the red wash has almost completely weathered away from the brick surfaces that were exposed and it is now barely discernible. But, when freshly applied it must have been an even, somewhat opaque layer that partially disguised the mortar joints and created a more uniform overall red appearance.

Pigment identification with polarized light microscopy shows that colorants in the red wash at Birdwood are primarily red ochre with perhaps a few particles of burnt sienna, along with calcium carbonate.

Birdwood, brick wall protected by portico

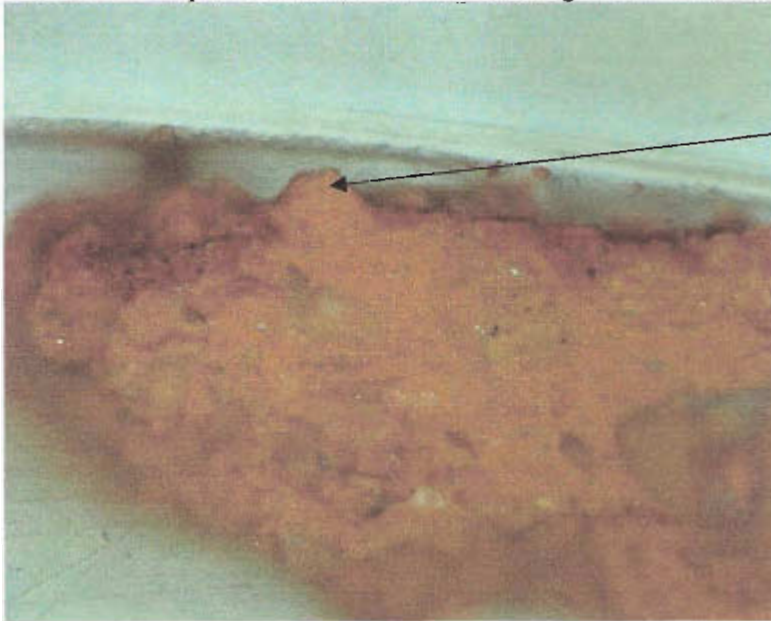


Birdwood 1. Brick area protected by shutter 50X



Thick layer of red wash on brick

Birdwood 2. Exposed brick area where red coating is more weathered 50X



Red wash eroded away from brick surface

Birdwood Sample 1. Red wash pigments
Crossed Polars (darkfield) 400X



Red Ochre Standard
Crossed Polars (darkfield) 400X

