

**Historic Paint Finishes Report:**

**Elk Landing: The Hollingsworth House  
Elkton, Maryland**

**The Original Finishes of the First Floor Rooms and the Exterior**

**Conducted at the request of:**

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**Table of Contents**

|   |    |
|---|----|
| Introduction  | 1  |
| Program for Paint Research                              | 1  |
| Color Standards: Sources                                | 3  |
| Color Standards CIE LAB coordinates                     | 3  |
| Note regarding the Interior of the Hollingsworth House  | 4  |
| Examination of the paint samples, with photomicrographs |    |
| The Front Hall  | 5  |
| The Front Parlor  | 10 |
| The Back Parlor   | 12 |
| The Dining Room   | 15 |
| The Back Hall   | 18 |
| Passage, Pantry   | 20 |
| The Kitchen   | 21 |
| The Exterior: The Upper Porch                           | 22 |
| The Exterior: The Lower Porch                           | 24 |

**The Hollingsworth House: Elk Landing  
Elkton, Maryland**

**Historic Paint Finishes Report: A study of the original surviving paint finishes in the rooms  
of the first floor and the Exterior**

**Introduction:**

Samples were collected from the exterior (South façade) and the first floor rooms of Elk Landing, in Elkton, Maryland. As explained by the architect, Mr. James Thomas Wollon, Jr. AIA, the house actually dates to the eighteenth century, but suffered a major fire ca. 1849. The entire house was reconstructed and repaired following the fire. As it exists today, it appears to be a moderate Greek Revival style house. The principal section of the house comprises three rooms that share the best level of finish: the Front Hall, the Front Parlor and the Rear Parlor. There is a wing extending east, and this contained the Dining Room, the Back hall and Staircase, the Pantry room and the Kitchen. A smokehouse extends at the east end of the kitchen. The rooms of the east wing have a lower ceiling and simpler woodwork.

The paint finishes proved to be very interesting in an usual manner. The wall finishes of the Front Parlor, Back Parlor and the Front Hall showed the presence of zinc oxide white in the preparation of the finish paint. This is a datable pigment that was first available commercially in 1850. It was enormously popular, however, the pigment had limited hiding power, and was often used with lead white as the primer.

**Program for Paint Research**

**Note:** The following is the procedure that is generally followed for museum quality paint finish examination. The identification of the pigment components is among the most important parts of the process.

**1. Collection of Materials**

Numerous samples were taken from the subject areas to determine the complete chromochronologies of each surface. The scope of this project is to determine the original finishes, dating to ca. 1850, the physical evidence of the actual paint layers. Collection of paint samples involves the use of scalpels: the paint layers are so deteriorated that most of the paint samples were easily dislodged from the wood substrate.

**2. Exposure of Finishes:**

Cratering exposures and small exposure windows were conducted on specific locations on the interior of the house. The earliest finish included a wood graining: what appears to be an oak graining. The condition of this finish is extremely poor, as it was protected by one very thin layer of a natural varnish. This varnish had worn off or was sanded off by the time of the repainting, making an exposure too dangerous for the surviving finishes.

**3. Stereoscopic and Polarized-light Microscopy, and Microchemistry**

All samples are examined in cross section and obliquely. When required, the sample may be mounted for thin cutting or polishing. These samples are mounted in Bio-plastic polymer resin, in most cases. The samples are ground and polished for examination using top lighting. Each

significant layer, those that comprise the original finishes were examined and matched to a color standard to provide an accurate standard for restoration.

Exposure to full-spectrum or part-spectrum light is used to help reduce the yellowing of oil media. Initial stereomicroscopy is accomplished using a Olympus SZ-1145 microscope. Polarized-light microscopy, when necessary, is also undertaken, using the Olympus BMAX-50 microscope. Polarized-light microscopy identifies pigments and media according to the McCrone Research Institute system of particle identification. Indeed, the most important function of serious paint research is the identification of the actual pigments and media used through optical and chemical testing. Polarized-light microscopy will be conducted on the original finish and on subsequent finishes where identification of pigment material may be an aid in dating, as required by the specific project.

UV exposure was used on some of the paint samples, particularly those of the Front Hall, the Front and Back parlors and the Dining Room. Exposure varied from 24 hours to 72 hours. In addition, polarized light microscopy provided the additional information for color matching.

#### **4. Photomicrographs:**

A very important means of recording chromochronological data is photomicrography: print photographs taken through the microscope of particularly informative samples. This allows for clear indicates of the conditions seen under the microscope, and how the recommendations were achieved. The report includes photomicrographs of the best samples that are annotated with information in the report.

#### **5. Report:**

The report brings together all the aforementioned material in a comprehensible manner and includes color samples, photomicrographs, reconstructed finishes and any additional pertinent information, such as that from known documents. Spectrophotometric readings of color standards are also executed to render all standards into the CIELAB and Munsell System of Color Notation and included in the report.

#### **6. Additional examination**

Other procedures such as Scanning electron microscopy, Gas chromatography, Fluorescent microscopy and FT-IR. (Fourier Transform Infrared Microspectroscopy for media examination) may be warranted at a subsequent stage in the examination of the finishes. Before any of these additional means of examination are undertaken, the process will be discussed with the client to determine if the additional cost is warranted.

Respectfully submitted this date:

Matthew John Mosca  
Historic Paint Research  
Artifex, Ltd.

### **Color Standards: Sources**

The color standard that are referred to in this report are from the following color system and may be obtained directly from the following sources:

Munsell Color System  
Division of Macbeth Corporation  
P.O. Box 230  
Newburgh, New York 12551-0230  
Telephone: 1-800-MACBETH

#### **Plochere Color System**

Plochere Color System  
1818 Hyperion Avenue  
Los Angeles, California 90027  
Telephone: (323) 661-0070 Fax: (323) 661-1490

Special Standards: special standards have been prepared in the laboratory specifically for this project. These standards have been made with stable acrylic paint media.

All samples from the Plochere Color System and all Special Standards have been read by the GretagMacbeth Color Eye 2180 spectrophotometer, using Designated observer 2 degrees and Illuminant C.

### **Color standard CIE LAB coordinates**

CIE is the abbreviation for the *Commission Internationale de l'Eclairage* the French title for the International Commission on Illumination, which devised the CIELAB system in 1931. It is devoted to standardization in illumination and related areas that include color.

The spectrophotometer registers color standards into a system of measuring color devised in 1931 known as CIE LAB (pronounced See-lab). CIE LAB is a uniform (opponent color scale) *color space* in which colors are located within a three-dimensional rectangular coordinate system. The three dimensions are Lightness ( $L^*$ ), redness/greenness ( $a^*$ ) and yellowness/blueness ( $b^*$ ). CIE LAB is part of current CIE recommendations.

All of the Spectrophotometric readings are done with the GretagMacbeth Color Eye 2180, spectrophotometer, Designated observer 2 degrees, Illuminant C. Illuminant C is a mathematical representation of filtered tungsten halogen (daylight). The color temperature is 6770K, simulating CIE average daylight.

### **Note regarding the Interior of the Hollingsworth House**

The examination of the interior finishes of the Hollingsworth House at Elk Landing would suggest that the house was constructed in two phases if examined in a vacuum. In fact, the house was built all at the same time, following a disastrous fire that consumed an earlier house ca. 1849. The west side of the house, including the Front Hall, Front Parlor and Back Parlor show similar woodwork in a characteristic example of Greek Revival style. These rooms all share the same finishes during the first finish period.

The east wing, which is finished with less formality, shows a very different palette of finishes and the remains of some graining. The finishes in the Dining Room, the Back Hall, the Pantry and the Kitchen are all very similar.

## **The Front Hall**

### **Sample Locations:**

**Sample FH-1: Door D-101**

**Sample FH-2: Door D-101, Door frame**

**Sample FH-3: Door D-102**

**Sample FH-4: Door D-102, Door frame**

**Sample FH-5: Door D-107**

**Sample FH-6: Door D-107, Door frame**

### **Staircase:**

**Sample FH-7: Staircase: panel below stair**

**Sample FH-8: Rail, Stile of stair panel**

**Sample FH-9: Riser**

**Sample FH-10: Nosing**

**Sample FH-11: Tread**

**Sample FH-12: Baluster**

**Sample FH-13: Baseboard, molding**

**Sample FH-14: Baseboard, fascia**

**Sample FH-15: Wall plaster**

**Sample FH-16: Ceiling plaster**

Note: The first finish of the woodwork in the stair hall is a fine white finish prepared with three paint layers. The first and second paint layers were made with lead white in a drying oil. This formed a fully opaque coating for the finish layer that was made with zinc oxide white. Zinc oxide white was first commercially available in 1850 when the process for its manufacture was improved sufficiently to make it feasible to use in quantities large enough for house painting. Heretofore it was used exclusively for artist paintings, particularly miniatures.

**Woodwork samples:**

**Sample FH-1: Door D-101**

**Sample FH-2: Door D-101, Door frame**

**Sample FH-3: Door D-102**

**Sample FH-4: Door D-102, Door frame**

**Sample FH-5: Door D-107**

**Sample FH-6: Door D-107, Door frame**

**Sample FH-13: Baseboard, molding**

**Sample FH-14: Baseboard, fascia**

**First finish paint Seriation:**

1. White lead white, small quantity of whiting (Chalk) in drying oil Prime
2. White lead white, small quantity of whiting (Chalk) in drying oil Prime
3. White Special Standard: EL-CW072w zinc oxide white in oil Finish

-surface particulate-

**Staircase:**

**Sample FH-7: Staircase: panel below stair**

**Sample FH-8: Rail, Stile of stair panel**

**First finish paint Seriation:**

1. White lead white, small quantity of whiting (Chalk) in drying oil Prime
2. White lead white, small quantity of whiting (Chalk) in drying oil Prime
3. White Special Standard: EL-CW072w zinc oxide white in oil Finish

-surface particulate-



**Sample FH-9: Riser**  
**Sample FH-10: Nosing**  
**Sample FH-11: Tread**

Note: These samples are very significant because the paint evidence clearly indicates that the staircase had a runner carpet that went up the center of the staircase. The riser, nosing and treads were painted with a six inch wide band that was painted on either side of the staircase, leaving the center of the riser, nosing of tread unpainted. This is a clear indication that the staircase had a carpet runner that ran up the center of the stair. The carpet covered the unpainted center of the stairs. It is somewhat unusual to us that the paint finish color for the riser, nosing and treat was the white finish seen on the other woodwork.

First finish paint Seriation:

1. White lead white, small quantity of whiting (Chalk) in drying oil Prime
2. White lead white, small quantity of whiting (Chalk) in drying oil Prime
3. White Special Standard: EL-CW072w zinc oxide white in oil Finish

-surface particulate-

**Sample FH-12: Baluster**

Note: The balusters were very interesting. The balusters were stripped of the original paint finishes years preceding this study. The balusters are oak. Samples were taken and showed that at first the balusters were finished with a thin natural resin coating. At some indeterminate time but before the interior was redecorated, the balusters were painted the same white as the other woodwork.

Balusters:

Earliest condition: unpainted. Surface of wood given one thin coat of a natural resin varnish.

Second condition: painted: Surface of wood painted with zinc oxide white finish:

1. White lead white, small quantity of whiting (Chalk) in drying oil Prime
2. White lead white, small quantity of whiting (Chalk) in drying oil Prime
3. White Special Standard: EL-CW072w zinc oxide white in oil Finish

-surface particulate-

**Plaster surfaces:**

**Sample FH-15: Wall plaster**  
**Sample FH-16: Ceiling plaster**

Note: the plaster in the Front Hall as in the Front and Back Parlor shows evidence for some wallpaper. These surfaces were expected to have been papered, and there is some evidence for paper, however, it appears to be later in the history of the house. The paper is preceded by a pale

yellow finish paint: this paint would have been known as *straw color* and was very common from 1750 through 1870.

1. White lead white, small quantity of whiting (Chalk) in drying oil Prime
2. White lead white, small quantity of whiting (Chalk) in drying oil Prime
3. Yellowish white Special Standard: EL 8221w/m zinc oxide white in oil Finish

-surface particulate-

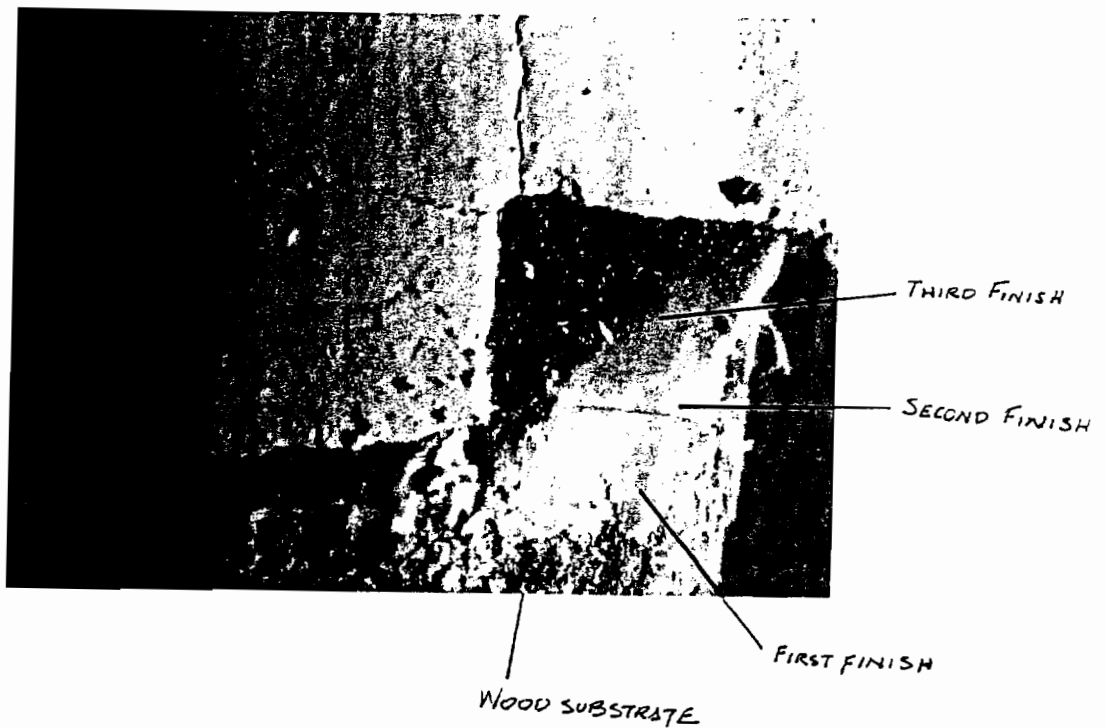
Later finish: Mars violet (manufactured ferric oxide)

Note: the Front Hall would have presented a very characteristic appearance associated with the Greek Revival period. The palette was very pale. The initial examination of the paint from the plaster surfaces suggested that the color would have been a light yellow. In the end, however, some of the yellowishness was caused by discoloration of the oil binder. This was determined by polarized light microscopy, which disclosed zinc oxide white and a minute amount of yellow ochre as the pigments in the finish layer of the plaster surfaces. The second finish on the wall plaster was a Mars violet, a manufactured ferric oxide pigment that was immensely popular in the later nineteenth century. This is a pigment that appears in the Dining room and the east wing during the first finish period. Later in the history of the house, the woodwork of the Front Hall was grained

**Photomicrograph:  
Front Hall: Sample FH-1: Door D-101**

Unmounted Sample: Olympus SZ-1145 stereomicroscope, with Nikon N70 camera body mounted access using the camera port. Dolan Jenner Fiber optics illuminator with color correction for north sky daylight illumination. Fujicolor 200 ASA color print film

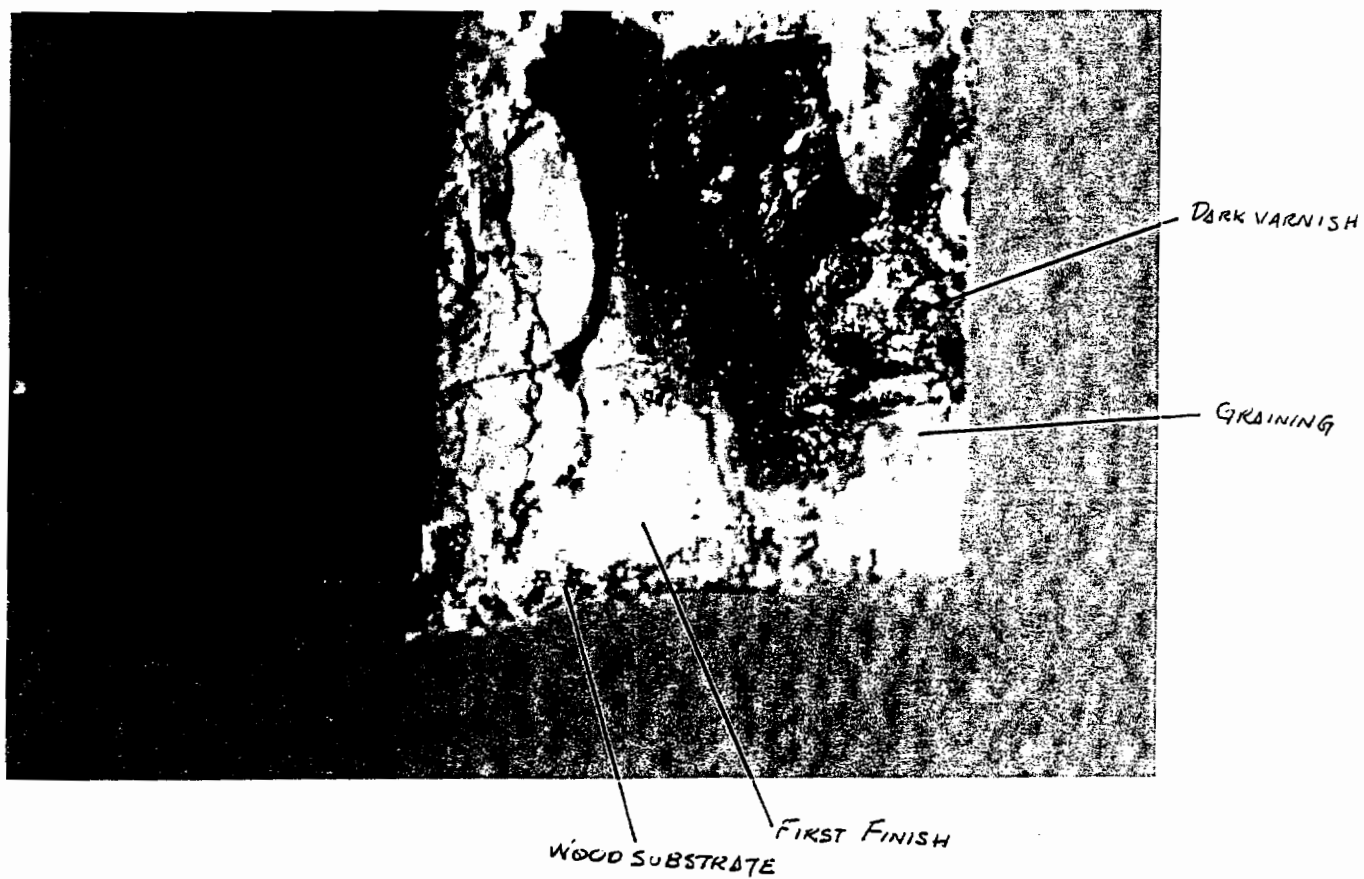
Note: The view of this sample is looking down onto the finish surface. The sample has been cut to expose the earlier paint finishes. The wood substrate is clearly visible, and this supports the initial paint finishes that create the first finish. The second finish, also white is also clearly visible in this view: note the hairline crack on this finish surface. The third finish on this door is a graining finish.



**Photomicrograph:  
Front Hall: Sample FH-11: Tread**

Unmounted Sample: Olympus SZ-1145 stereomicroscope, with Nikon N70 camera body mounted access using the camera port. Dolan Jenner Fiber optics illuminator with color correction for north sky daylight illumination. Fujicolor 200 ASA color print film

Note: the view of this sample is looking down on the finish surface. The wood substrate is visible at the end of the sample. The first finish is clearly seen: the zinc oxide white. This is followed by a series of additional white finishes, possibly due to the wear that this surface would have received. The graining finish, of a considerably later date is also seen, followed by a dark semi-opaque varnish based finish.



## **The Front Parlor**

### **Sample Locations:**

**Sample FP-1: Door D-102**

**Sample FP-2: Door D-102, Door frame**

**Sample FP-3: Door D-103 (right leaf [east])**

**Sample FP-4: Door D-103, Door frame**

**Sample FP-5: Window W-102 Window frame**

**Sample FP-6: Window W-102, Window jamb**

**Sample FP-7: Window W-101, Window sash**

**Sample FP-8: Baseboard, molding**

**Sample FP-9: Baseboard, fascia**

**Sample FP-10: Wall plaster**

**Sample FP-11: Ceiling plaster**

Note: The first finish of the woodwork in the stair hall is a fine white finish prepared with three paint layers. The first and second paint layers were made with lead white in a drying oil. This formed a fully opaque coating for the finish layer that was made with zinc oxide white. Zinc oxide white was first commercially available in 1850 when the process for its manufacture was improved sufficiently to make it feasible to use in quantities large enough for house painting. Heretofore it was used exclusively for artist paintings, particularly miniatures.

**The Front Parlor**  
**Woodwork samples:**

**Sample FP-1: Door D-102**  
**Sample FP-2: Door D-102, Door frame**

**Sample FP-3: Door D-103 (right leaf [east])**  
**Sample FP-4: Door D-103, Door frame**

**Sample FP-5: Window W-102 Window frame**  
**Sample FP-6: Window W-102, Window jamb**  
**Sample FP-7: Window W-101, Window sash**

**Sample FP-8: Baseboard, molding**  
**Sample FP-9: Baseboard, fascia**

First finish paint Seriation:

1. White lead white, small quantity of whiting (Chalk) in drying oil Prime
2. White lead white, small quantity of whiting (Chalk) in drying oil Prime
3. White Special Standard: EL-CW072w zinc oxide white in oil Finish

-surface particulate-

**Plaster samples:**

**Sample FP-10: Wall plaster**  
**Sample FP-11: Ceiling plaster**

Note: the plaster in the Front Hall as in the Front and Back Parlor shows evidence for some wallpaper. These surfaces were expected to have been papered, and there is some evidence for paper, however, it appears to be later in the history of the house. The paper is preceded by a pale yellow finish paint: this paint would have been known as *straw color* and was very common from 1750 through 1870.

1. White lead white, small quantity of whiting (Chalk) in drying oil Prime
2. White lead white, small quantity of whiting (Chalk) in drying oil Prime
3. Yellowish white Special Standard: EL 8221w/m zinc oxide white in oil Finish

-surface particulate-

In the Front Parlor, it appears that the walls and ceiling were at first painted as noted above. This was followed by papering, probably a series of papers; some papers survive in the north east corner of the Back Parlor under the location of a later bookcase. The wallpapers were removed and the wall surfaces overpainted during the twentieth century.

**Photomicrograph:**

**Front Parlor: Sample FP-4: Door D-103, Door frame**

Mounted Sample: Olympus SZ-1145 stereomicroscope, with Nikon N70 camera body mounted access using the camera port. Dolan Jenner Fiber optics illuminator with color correction for north sky daylight illumination. Fujicolor 200 ASA color print film

Note: This sample has been mounted in polymer resin cut and polished for additional examination. The wood substrate is at the base of the sample. Note the first finish is the zinc oxide white finish seen on the majority of the woodwork. There is a graining finish, however it is very much later in the sequence of the painted finishes.





## **The Back Parlor**

### **Sample Locations:**

**Sample BP-1: Door D-104**

**Sample BP-2: Door D-104, Door frame**

**Sample BP-3: Door D-103 (right leaf [east])**

**Sample BP-4: Door D-103, Door frame**

**Sample BP-5: Window W-106 Window frame**

**Sample BP-6: Window W-106, Window jamb**

**Sample BP-7: Window W-106, Window sash**

**Sample BP-8: Baseboard, molding**

**Sample BP-9: Baseboard, fascia**

**Sample BP-10: Wall plaster, with wallpaper retained north east corner**

**Sample BP-11: Ceiling plaster, near south wall**

**Sample BP-12: Ceiling plaster, near east wall**

**The Back Parlor**

**Woodwork samples:**

**Sample BP-1: Door D-104**

**Sample BP-2: Door D-104, Door frame**

**Sample BP-3: Door D-103 (right leaf [east])**

**Sample BP-4: Door D-103, Door frame**

**Sample BP-5: Window W-106 Window frame**

**Sample BP-6: Window W-106, Window jamb**

**Sample BP-7: Window W-106, Window sash**

**Sample BP-8: Baseboard, molding**

**Sample BP-9: Baseboard, fascia**

**First finish paint Seriation:**

1. White lead white, small quantity of whiting (Chalk) in drying oil Prime
2. White lead white, small quantity of whiting (Chalk) in drying oil Prime
3. White Special Standard: EL-CW072w zinc oxide white in oil Finish

-surface particulate-

**Plaster samples:**

**Sample FP-10: Wall plaster**

**Sample FP-11: Ceiling plaster**

Note: the plaster in the Front Hall as in the Front and Back Parlor shows evidence for some wallpaper. These surfaces were expected to have been papered, and there is some evidence for paper, however, it appears to be later in the history of the house. The paper is preceded by a pale yellow finish paint: this paint would have been known as *straw color* and was very common from 1750 through 1870.

1. White lead white, small quantity of whiting (Chalk) in drying oil Prime
2. White lead white, small quantity of whiting (Chalk) in drying oil Prime
3. Yellowish white Special Standard: EL 8221w/m zinc oxide white in oil Finish

-surface particulate-

Note: The Back Parlor retains a large section of wallpaper that was marooned behind a bookcase that was added in the twentieth century. There appear to be a series of papers on the wall. The entire collection of papers should be removed from the wall, separated and retained as part of the archives of the house despite the fact that the paper appears to be later in date.

One interesting condition of the wall and ceiling paint finish may shed light on the papering of not only the Back Parlor, but also the Front Parlor and the Front Hall. In each case, the paint on

Historic Paint Finishes Report: The original finishes of the Hollingsworth House,  
Elk Landing, Elkton, Maryland Matthew J. Mosca, Historic Paint Finishes Consultant

the walls and ceiling, which was made with oil, has far more discolored due to the yellowing of the drying oil more than the paint on the woodwork. Polarized light microscopy was undertaken to identify the pigments of the paint finish found under the surviving wallpaper. This proved to be zinc oxide white with a very small amount of yellow ochre. The distinct yellowing was something of a puzzle.

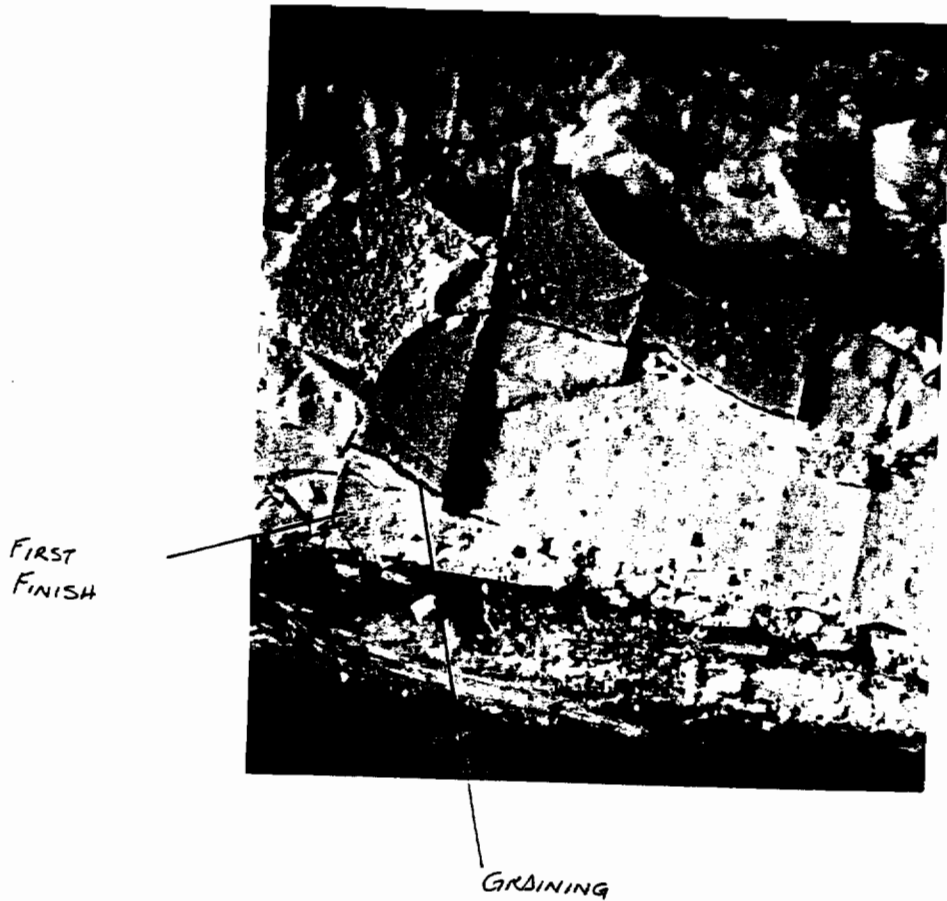
Another point should be made: the plaster walls and ceilings would have had to remain unpainted for at least a year. This is due to the long period of time that it takes for the plaster surfaces to cure. Moisture continues to transpire from the plaster in the form of vapor, thus oil paint coatings cannot be applied, since the moisture build up causes the oil based paint to be lifted from the surface. This means that the white finish on the plaster surfaces would have been applied a year or more after that on the woodwork. The longer a paint finish is exposed to the ultraviolet rays of sunlight, the less yellowing will occur after the finish is overpainted. It may be that the woodwork finish was exposed for a long period of time, but that the finish on the walls and ceilings was superceded by wall and ceiling papers only a few years after having been painted. This scenario would result in the different rates of yellowing that is seen today in these paint finishes.

**Photomicrograph:**

**Back Parlor: Sample BP-3: Door D-103 (right leaf [east])**

Unmounted Sample: Olympus SZ-1145 stereomicroscope, with Nikon N70 camera body mounted access using the camera port. Dolan Jenner Fiber optics illuminator with color correction for north sky daylight illumination. Fujicolor 200 ASA color print film

Note: the view of the sample is looking down onto the finish surface. The sample has been carefully cut and delaminated showing the first finish, the zinc oxide white finish. Note the later graining showing as a dark line in the paint seriation.

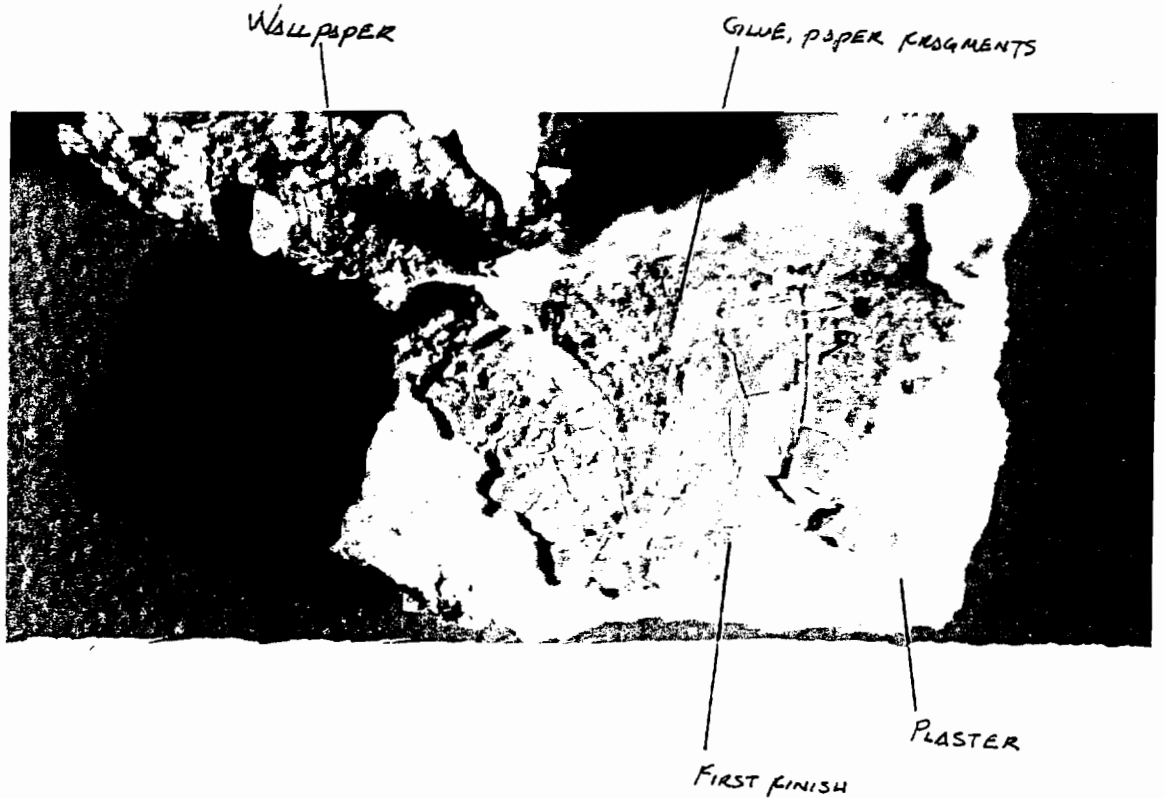


**Photomicrograph:**

**Back Parlor: Sample FP-10: Wall plaster, under wallpaper**

Unmounted Sample: Olympus SZ-1145 stereomicroscope, with Nikon N70 camera body mounted access using the camera port. Dolan Jenner Fiber optics illuminator with color correction for north sky daylight illumination. Fujicolor 200 ASA color print film

Note: The view of this sample is looking down onto the finish surface of the sample. The plaster surface is clearly visible. There is a very thin layer of glue size on the plaster. The finish, a very pale yellow, is seen on the surface; however, the paste used for the wallpaper obscures the surface. Note the surviving paper has been peeled back to permit this view.

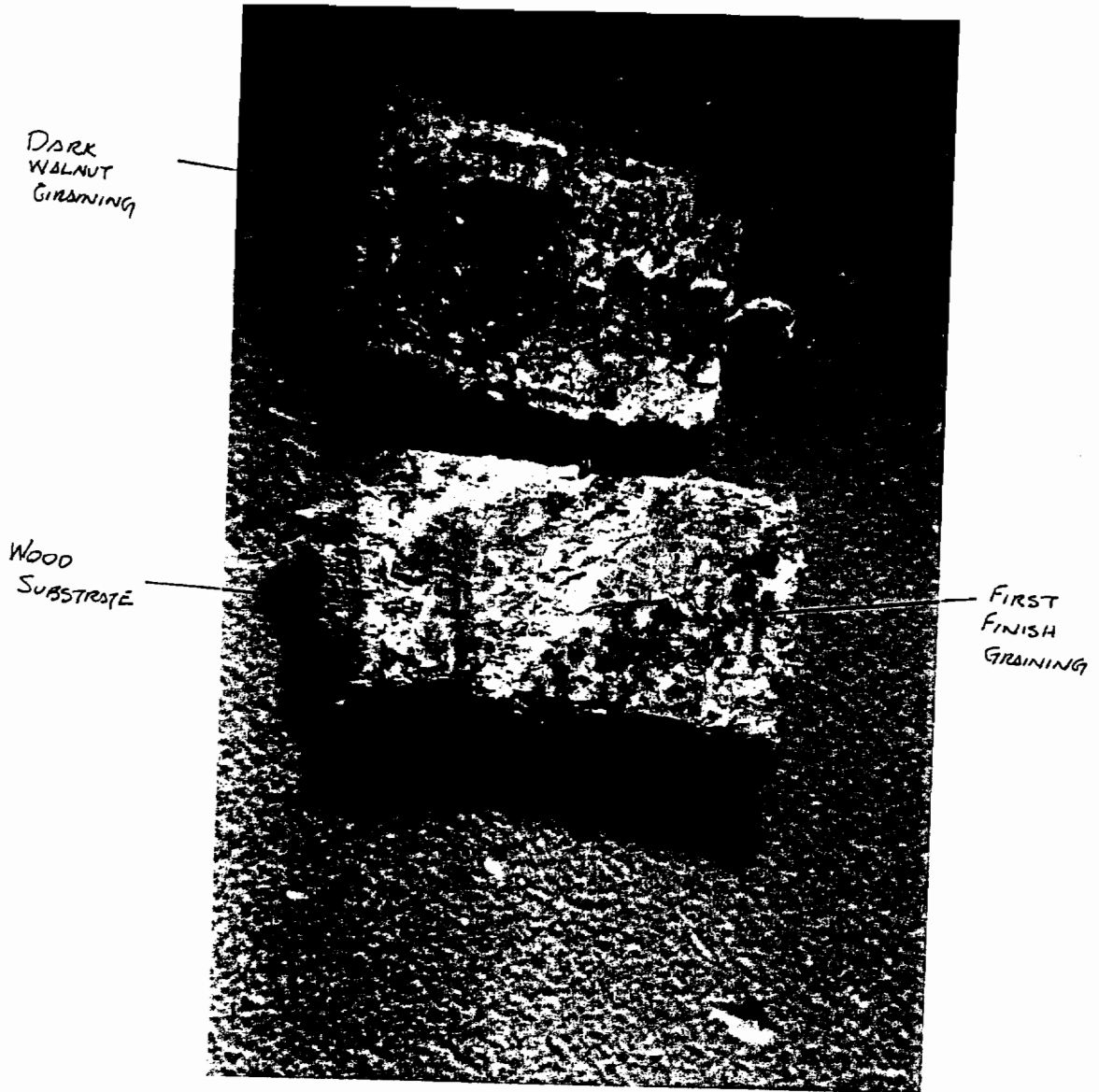


**Photomicrograph:**

**Dining Room: Sample DR-13: Closet Door, D-110 (left, south leaf)**

Unmounted Sample: Olympus SZ-1145 stereomicroscope, with Nikon N70 camera body mounted access using the camera port. Dolan Jenner Fiber optics illuminator with color correction for north sky daylight illumination. Fujicolor 200 ASA color print film

Note: the view of this sample is looking down onto the finish surface of the sample. The wood substrate is clearly seen. This supports the original finish made with a lead white and natural ochre primer/ground coat. This is then coated with the graining layer, which has raw umber and raw sienna as components; it is assumed that this was done to suggest oak wood. The later dark walnut graining is also visible.

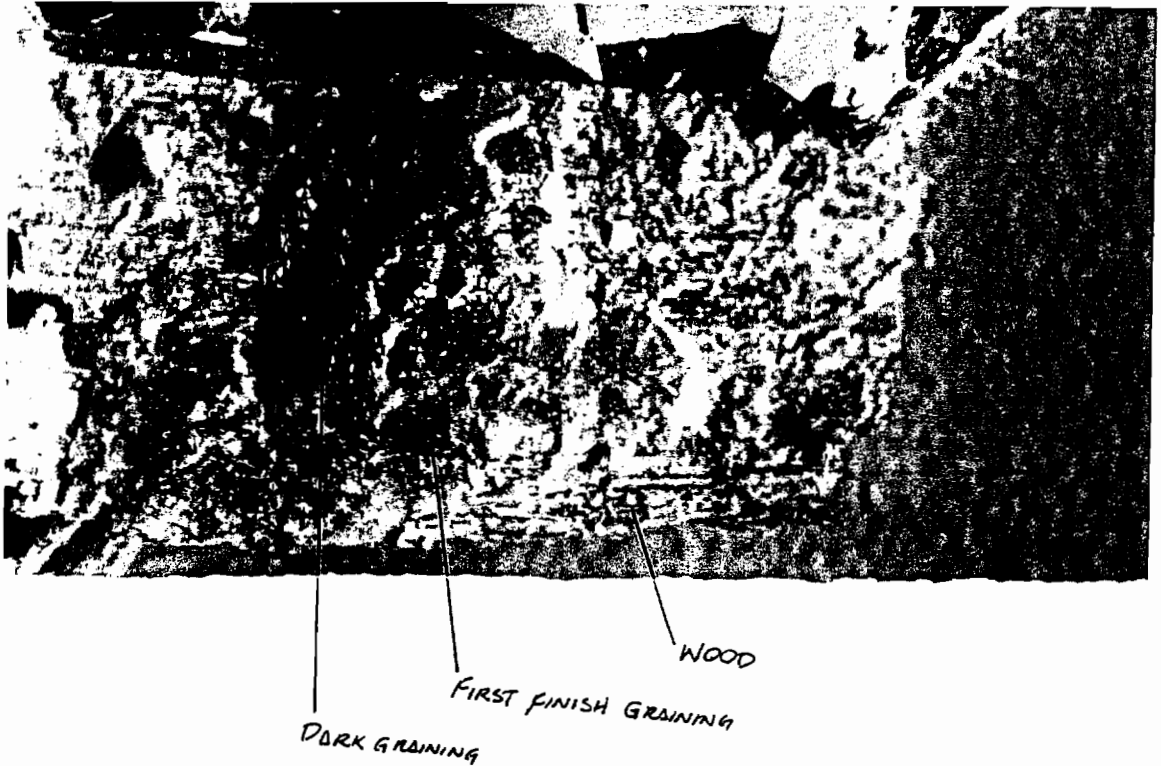


**Photomicrograph:**

**Dining Room: Sample DR-1: Door D-107**

Unmounted Sample: Olympus SZ-1145 stereomicroscope, with Nikon N70 camera body mounted access using the camera port. Dolan Jenner Fiber optics illuminator with color correction for north sky daylight illumination. Fujicolor 200 ASA color print film

Note: the view of this sample is looking down onto the finish surface. The wood substrate is visible at the edge of the sample. Note the original oak type graining finish, (F-1). This would have been exposed for a long period of time, as the finish is cracked; there is a second graining finish, as seen in the On-site photographs of a dark graining finish.



**Photomicrograph:**

**Dining Room: Sample DR-15: Mantel**

Unmounted Sample: Olympus SZ-1145 stereomicroscope, with Nikon N70 camera body mounted access using the camera port. Dolan Jenner Fiber optics illuminator with color correction for north sky daylight illumination. Fujicolor 200 ASA color print film

Note: the view of this sample is looking down onto the finish surface. The sample shows the wood substrate, supporting a thin white primer and a very glossy black finish. This brittle finish has cracked somewhat, but retains the high gloss finish. This type of finish is very typical of mantels during this period, in view of the many black marble mantels that were being used in grand houses of the period.



*BLACK ENAMEL FINISH*



**The Back Hall, Passage and Pantry (now toilet room)**

**Sample Locations**

**Sample BH-1: Stair riser**

**Sample BH-2: Door D-112**

**Sample BH-3: Door D-112, Door frame**

**Sample BH-4: Door D-113**

**Sample BH-5: Door D-115**

**Sample BH-6: Wall plaster**

**Sample BH-7: Ceiling plaster**

**Passage:**

**Sample Passage-1: Door D-115**

**Pantry:**

**Sample Pantry-1: Window W-108, Window frame**

## The Back Hall

### Woodwork Samples:

Sample BH-1: Stair riser

Sample BH-3: Door D-112, Door frame

Sample BH-4: Door D-113

Sample BH-5: Door D-115

Note: The finish on these various elements show different aspects of discoloration and wear. The door to the exterior, Door D-113 showed distinct accumulation of surface particulate and discoloration.

First finish:

- |                           |                 |                                       |        |     |
|---------------------------|-----------------|---------------------------------------|--------|-----|
| 1. White                  | Munsell 5Y9/0.5 | thin coating                          | Prime  |     |
| 2. Moderate pinkish brown | Plochere 276    | lead white, Mars ferric oxide pigment | Finish | F-1 |

Sample BH-2: Door D-112

Note: Unlike the other woodwork of the Back Hall, the door to the Dining Room was grained in simulation of oak, to match the doors in the Dining Room.

- |  |                 |              |          |     |
|--|-----------------|--------------|----------|-----|
| 1. White   | Munsell 5Y9/0.5 | thin coating | Prime    |     |
| 2. Light brownish yellow   | Plochere 232    |              | Ground   |     |
| 3. Light yellowish brown: natural earth pigments: oak simulation |                 |              | Graining |     |
| 4. Clear coating: one thin layer of varnish                      |                 |              | Finish   | F-1 |

-surface particulate accumulation-

Sample BH-6: Wall plaster

Note: The plaster substrate was characteristic of the period: a sandy brown coat followed by a very thin white lime plaster finish coat. The surface of the plaster was probably exposed for a period of time, however, there is one lime whitewash layer and the remains of a light brownish grey finish that was painted with a water-borne distemper finish.

First finish:

- |                   |                  |  |        |     |
|-------------------|------------------|--|--------|-----|
| 1. Lime whitewash | Munsell 5PB9/0.5 |  | Finish | F-1 |
|-------------------|------------------|--|--------|-----|

Later finish:

- |                        |               |                         |        |  |
|------------------------|---------------|-------------------------|--------|--|
| 2. Light brownish grey | Plochere G 71 | water soluble distemper | Finish |  |
|------------------------|---------------|-------------------------|--------|--|

Sample BH-7: Ceiling plaster

- |                          |                 |            |        |     |
|--------------------------|-----------------|------------|--------|-----|
| 1. White                 | Munsell 5Y9/0.5 | lead white | Primer |     |
| 2. Pinkish grayish white | Plochere 192    |            | Finish | F-1 |

Historic Paint Finishes Report: The original finishes of the Hollingsworth House,  
Elk Landing, Elkton, Maryland Matthew J. Mosca, Historic Paint Finishes Consultant

**Passage:**

**Sample Passage-1: Door D-115**

- |                           |                 |                                       |        |     |
|---------------------------|-----------------|---------------------------------------|--------|-----|
| 1. White                  | Munsell 5Y9/0.5 | thin coating                          | Prime  |     |
| 2. Moderate pinkish brown | Plochere 276    | lead white, Mars ferric oxide pigment | Finish | F-1 |

Note: The Door D-115, was painted on both sides with the same finish paint. The other surfaces of woodwork in the Passage were painted with a lighter version of this paint, as seen in the Pantry Sample. The paint was made by adding more white to the finish paint.

**Passage, other woodwork:**

**Pantry:**

**Sample Pantry-1: Window W-108, Window frame**

- |                        |                               |                                       |                          |  |
|------------------------|-------------------------------|---------------------------------------|--------------------------|--|
| 1. White               | Munsell 5Y9/0.5               | thin coating                          | Prime                    |  |
| 2. Light pinkish brown | Special Standard: EL-D8753M/m | lead white, Mars ferric oxide pigment | Finish F <sup>a</sup> -1 |  |

Note: The Door D-115, was painted on both sides with the same finish paint. The other surfaces of woodwork in the Passage were painted with a lighter version of this paint, as seen in the Pantry Sample. The paint was made by adding more white to the finish paint.

**On- site photograph  
Back Hall: Stair case**

Note: The treads of the stair case have been replaced, however, the risers appear to have the moderate pinkish brown finish color that is seen on the other woodwork.

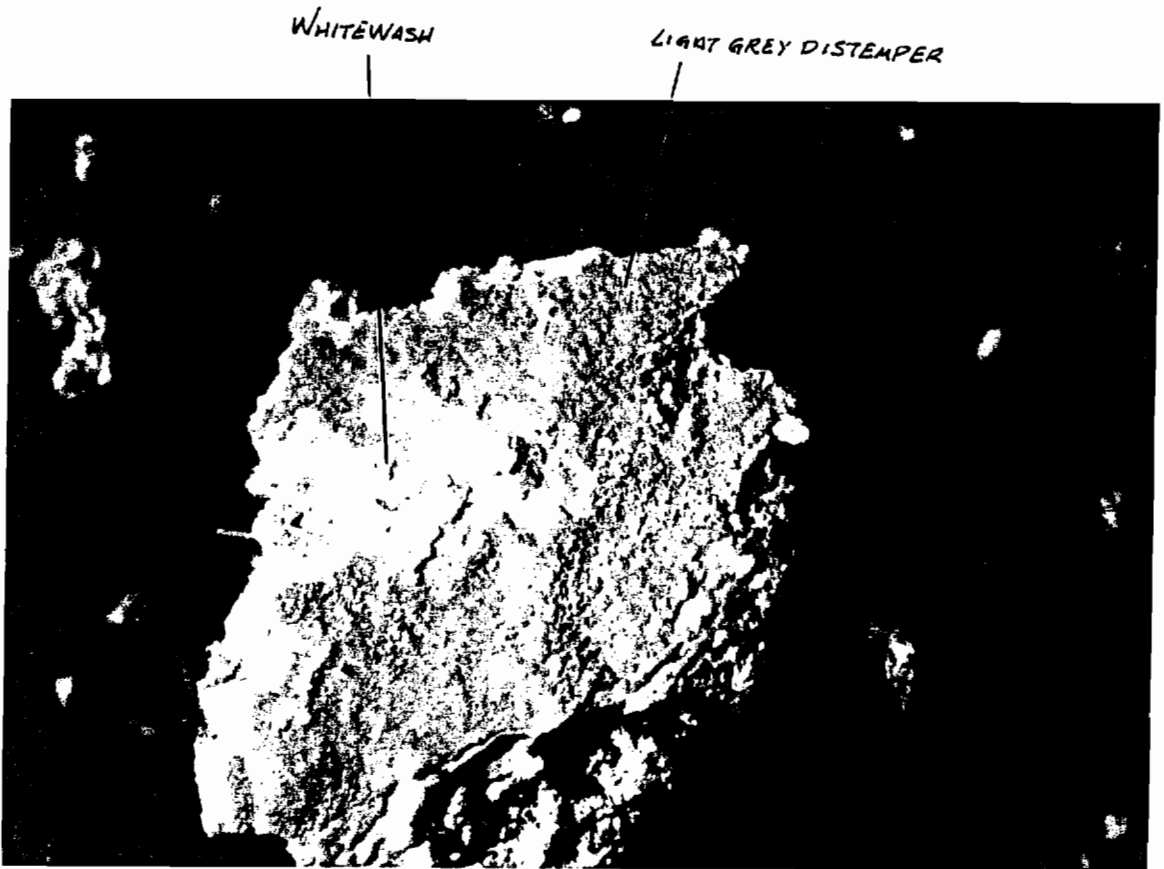


**Photomicrograph:**

**Back Hall: Sample BH-6: Wall plaster**

Unmounted Sample: Olympus SZ-1145 stereomicroscope, with Nikon N70 camera body mounted access using the camera port. Dolan Jenner Fiber optics illuminator with color correction for north sky daylight illumination. Fujicolor 200 ASA color print film

Note: The view of the sample is looking down onto the finish surface. The plaster substrate is clearly seen, supporting a lime whitewash finish, and a later light grey distemper finish.



## The Kitchen

### Sample Locations:

- Sample K-1: Door D-117, Door to lower Porch
- Sample K-2: Door D-117, Door frame
- Sample K-3: Window W-112, Window frame
- Sample K-4: Cabinetry, (south of fireplace)
- Sample K-5: Door, D-118, Door to service stair
- Sample K-6: Wall plaster, west wall
- Sample K-7: Ceiling plaster

### Sample K-1: Door D-117, Door to lower Porch

- |  |                 |              |          |     |
|--|-----------------|--------------|----------|-----|
| 1. White   | Munsell 5Y9/0.5 | thin coating | Prime    |     |
| 2. Light brownish yellow   | Plochere 232    |              | Ground   |     |
| 3. Light yellowish brown: natural earth pigments: oak simulation |                 |              | Graining |     |
| 4. Clear coating: one thin layer of varnish                      |                 |              | Finish   | F-1 |

-surface particulate accumulation-

### Sample K-2: Door D-117, Door frame

- Sample K-3: Window W-112, Window frame
- Sample K-4: Cabinetry, (south of fireplace)
- Sample K-5: Door, D-118, Door to service stair

Note: The finish on the majority of the woodwork in the Kitchen is very typical of painting where graining is used on only *some* of the woodwork. In this Kitchen, the ground color of the graining was used as the finish color for most of the woodwork. The presence of surface particulate and discoloration of the paint film indicates that the light brownish yellow was used as the finish for the woodwork in the Kitchen, except for the grained door, D-117.

- |                          |                 |              |        |
|--------------------------|-----------------|--------------|--------|
| 1. White                 | Munsell 5Y9/0.5 | thin coating | Prime  |
| 2. Light brownish yellow | Plochere 232    |              | Finish |

-surface particulate accumulation-

Later finish:

- 3. Greyish green

### Sample K-6: Wall plaster, west wall

### Sample K-7: Ceiling plaster

Note: The surface of the wall and ceiling plaster showed a series of lime whitewashes, followed by twentieth century oil based and acrylic finishes. The modern yellow acrylic enamel has followed through cracks in the accumulated paint layering and has flowed down to the substrate. In some parts of the collected samples, the twentieth century yellow latex acrylic enamel would appear as the "first" finish!

White wash: repeated applications    Lime whitewash: Munsell 5PB9/0.5

Historic Paint Finishes Report: The original finishes of the Hollingsworth House,  
Elk Landing, Elkton, Maryland    Matthew J. Mosca, Historic Paint Finishes Consultant

**On- site photograph**

**Kitchen: Door to the exterior and Doors, north of fireplace**

Note: The door to the lower porch shows remains of an oak graining similar to that seen in the Dining Room. The doors north of the fireplace have been stripped but were not grained.



| Standard                     | Illum  | L*     | a*      | b*     | Min    | Max   | Min    | Max   | Min    | Max   | Max   |
|------------------------------|--------|--------|---------|--------|--------|-------|--------|-------|--------|-------|-------|
|                              | C      |        |         |        | -1.100 | 1.100 | -1.100 | 1.100 | -1.100 | 1.100 | 1.100 |
|                              | A      |        |         |        | -1.100 | 1.100 | -1.100 | 1.100 | -1.100 | 1.100 | 1.100 |
|                              | CWF(2) |        |         |        | -1.100 | 1.100 | -1.100 | 1.100 | -1.100 | 1.100 | 1.100 |
| Trial                        | Illum  | L*     | a*      | b*     | DL*    | Da*   | Db*    | DE*   |        |       |       |
| Special Standard EL-CW072w   | C      | 90.922 | -1.056  | 3.689  |        |       |        |       |        |       |       |
|                              | A      | 91.052 | 0.028   | 3.531  |        |       |        |       |        |       |       |
|                              | CWF(2) | 91.089 | -0.723  | 4.191  |        |       |        |       |        |       |       |
| Special Standard EL 8221w/m  | C      | 85.315 | -0.201  | 8.738  |        |       |        |       |        |       |       |
|                              | A      | 85.834 | 2.085   | 9.024  |        |       |        |       |        |       |       |
|                              | CWF(2) | 85.825 | 0.044   | 9.938  |        |       |        |       |        |       |       |
| Special Standard D-8705/m    | C      | 65.542 | 5.229   | 10.379 |        |       |        |       |        |       |       |
|                              | A      | 66.673 | 7.891   | 11.868 |        |       |        |       |        |       |       |
|                              | CWF(2) | 66.323 | 4.461   | 11.943 |        |       |        |       |        |       |       |
| Special Standard EL-D8753M/m | C      | 70.809 | 2.427   | 7.262  |        |       |        |       |        |       |       |
|                              | A      | 71.492 | 4.472   | 8.030  |        |       |        |       |        |       |       |
|                              | CWF(2) | 71.303 | 2.126   | 8.333  |        |       |        |       |        |       |       |
| Plochere 192                 | C      | 82.814 | 0.484   | 10.791 |        |       |        |       |        |       |       |
|                              | A      | 83.519 | 3.146   | 11.404 |        |       |        |       |        |       |       |
|                              | CWF(2) | 83.496 | 0.374   | 12.226 |        |       |        |       |        |       |       |
| Plochere 232                 | C      | 84.690 | 2.391   | 13.627 |        |       |        |       |        |       |       |
|                              | A      | 85.737 | 5.738   | 14.838 |        |       |        |       |        |       |       |
|                              | CWF(2) | 85.558 | 2.070   | 15.263 |        |       |        |       |        |       |       |
| Plochere 276                 | C      | 60.372 | 9.683   | 13.656 |        |       |        |       |        |       |       |
|                              | A      | 62.112 | 12.547  | 16.546 |        |       |        |       |        |       |       |
|                              | CWF(2) | 61.499 | 8.209   | 15.408 |        |       |        |       |        |       |       |
| Plochere 911                 | C      | 78.521 | -6.982  | -0.124 |        |       |        |       |        |       |       |
|                              | A      | 77.834 | -7.448  | -1.801 |        |       |        |       |        |       |       |
|                              | CWF(2) | 78.318 | -5.448  | -0.114 |        |       |        |       |        |       |       |
| Plochere 1026                | C      | 42.213 | -25.110 | 8.482  |        |       |        |       |        |       |       |
|                              | A      | 40.438 | -22.950 | 3.631  |        |       |        |       |        |       |       |
|                              | CWF(2) | 41.024 | -18.887 | 6.893  |        |       |        |       |        |       |       |
| Plochere G 63                | C      | 77.215 | 2.089   | 4.654  |        |       |        |       |        |       |       |
|                              | A      | 77.713 | 3.279   | 5.397  |        |       |        |       |        |       |       |
|                              | CWF(2) | 77.592 | 1.887   | 5.277  |        |       |        |       |        |       |       |
| Plochere G 71                | C      | 76.627 | 1.225   | 3.284  |        |       |        |       |        |       |       |
|                              | A      | 76.956 | 2.099   | 3.689  |        |       |        |       |        |       |       |
|                              | CWF(2) | 76.899 | 1.082   | 3.808  |        |       |        |       |        |       |       |
| Plochere G 109               | C      | 62.378 | -1.674  | -2.436 |        |       |        |       |        |       |       |
|                              | A      | 62.051 | -2.355  | -2.998 |        |       |        |       |        |       |       |
|                              | CWF(2) | 62.132 | -1.341  | -2.848 |        |       |        |       |        |       |       |



### **Color Standards:**

Special Standards: special standards have been prepared in the laboratory specifically for this project. These standards have been made with stable acrylic paint media.

All samples from the Plochere Color System and all Special Standards have been read by the GretagMacbeth Color Eye 2180 spectrophotometer, using Designated observer 2 degrees and Illuminant C.

### **Color standard CIE LAB coordinates**

CIE is the abbreviation for the *Commission Internationale de l'Eclairage* the French title for the International Commission on Illumination, which devised the CIELAB system in 1931. It is devoted to standardization in illumination and related areas that include color.

The spectrophotometer registers color standards into a system of measuring color devised in 1931 known as CIE LAB (pronounced See-lab). CIE LAB is a uniform (opponent color scale) *color space* in which colors are located within a three-dimensional rectangular coordinate system. The three dimensions are Lightness (L\*), redness/greenness (a\*) and yellowness/blueness (b\*). CIE LAB is part of current CIE recommendations.

All of the Spectrophotometric readings are done with the GretagMacbeth Color Eye 2180, spectrophotometer, Designated observer 2 degrees, Illuminant C. Illuminant C is a mathematical representation of filtered tungsten halogen (daylight). The color temperature is 6770K, simulating CIE average daylight.

**The Exterior: The Lower Porch**

**Sample LP-1: Ceiling:**

Suggested finish based on upper porch

Light greyish green Plochere 911 Gloss level: modern semi-gloss finish  
Suggested finish paint, acrylic latex

**All trim, window sash**

White Munsell 5Y9/0.5 Gloss level: modern semi-gloss finish  
Suggested finish paint, acrylic latex

**All Window shutters**

Moderate green: Plochere 1026 Gloss level: modern high gloss, if possible

**Door to Back Hall, D-113**

**Door to Kitchen, D-117**

**Door to Smokehouse, D-120**

White Munsell 5Y9/0.5 Gloss level: modern semi-gloss finish  
Suggested finish paint, acrylic latex

The doors may also be grained, however, exterior graining may be a maintenance problem. The exterior graining may date to the second finish period in the Dining Room where later graining was also found.

## **The Exterior: The Upper Porch**

### **Sample Locations:**

#### **Upper Porch Ceiling**

Light greyish green Plochere 911 Gloss level: modern semi-gloss finish  
Suggested finish paint, acrylic latex

#### **All wood trim and window sash**

White Munsell 5Y9/0.5 Gloss level: modern semi-gloss finish  
Suggested finish paint, acrylic latex

#### **Front Door, D-101**

White Munsell 5Y9/0.5 Gloss level: modern semi-gloss finish  
Suggested finish paint, acrylic latex

#### **Front Door, Louvers**

#### **All Window shutters**

Moderate green: Plochere 1026 Gloss level: modern high gloss, if possible

## **The Kitchen**

### **Door D-117, Door to lower Porch**

#### **First finish:**

Oak straight grain, as per exposure on Door D-110

Ground color: match Plochere 232 Gloss level not to exceed modern eggshell finish

Graining to receive a minimum of two layers of high gloss varnish coating

### **All other woodwork**

#### **First Finish:**

Light brownish yellow Plochere 232 Gloss level: modern semi-gloss finish

Suggested finish paint, acrylic latex

### **Sample K-6: Wall plaster, west wall**

### **Sample K-7: Ceiling plaster**

Lime whitewash: Munsell 5PB9/0.5 Gloss level: modern flat finish

**The Back Hall, Passage and Pantry (now toilet room)**

**Woodwork Samples:**

**Sample BH-1: Stair riser**

**Sample BH-3: Door D-112, Door frame**

**Sample BH-4: Door D-113**

**Sample BH-5: Door D-115**

First finish:

Moderate pinkish brown Plochere 276 Gloss level: modern semi-gloss finish

Suggested finish paint, acrylic latex

**Sample BH-2: Door D-112**

First finish:

Oak straight grain, as per exposure on Door D-110

Ground color: match Plochere 232 Gloss level not to exceed modern eggshell finish

Graining to receive a minimum of two layers of high gloss varnish coating

**Wall plaster:**

Note: There are two possible finishes, the initial whitewash and a light brownish grey distemper finish. Either finish may be appropriate; it is likely that the pinkish greyish white finish of the ceiling is contemporary with the light brownish grey of the wall finish.

First finish:

Lime whitewash: Munsell 5PB9/0.5 Gloss level: modern flat finish

Or

Light brownish grey Plochere G 71 Gloss level: modern flat finish

**Ceiling plaster:**

Pinkish grayish white Plochere 192 Gloss level: modern flat finish

**Passage:**

**Passage side of the Door D-115**

First finish:

Moderate pinkish brown Plochere 276 Gloss level: modern semi-gloss finish

Suggested finish paint, acrylic latex

**All other woodwork in Passage and Pantry:**

First finish:

Light pinkish brown Special Standard: EL-D8753M/m Gloss level: modern semi-gloss finish

Suggested finish paint, acrylic latex

## **The Dining Room**

### **Woodwork Samples:**

#### **Group 1: Doors**

**Sample DR-1: Door D-107**

**Sample DR-3: Cabinet Door D-109**

**Sample DR-13: Closet Door, D-110 (left, south leaf)**

#### **First finish:**

Oak straight grain, as per exposure on Door D-110

Ground color: match Plochere 232 Gloss level not to exceed modern eggshell finish

Graining to receive a minimum of two layers of high gloss varnish coating

#### **Group 2: Baseboards, door and window frames, sash**

**Sample DR-2: Door D-107, Door frame**

**Sample DR-4: Cabinet Door D-109, Door frame**

**Sample DR-5: Window W-114 Window frame**

**Sample DR-6: Window W-114, Window jamb**

**Sample DR-7: Window W-114, Window sash**

**Sample DR-8: Baseboard, molding**

**Sample DR-9: Baseboard, fascia**

**Sample DR-14: Closet Door, D-110 Door frame**

#### **First Finish:**

Light Mars violet-brown Special Standard: D-8705/m

Suggested finish paint, acrylic latex

#### **Mantel;**

**Sample DR-15: Mantel**

**Sample DR-16: Mantel shelf**

#### **First Finish:**

Black Munsell N 1.5 Gloss level: high gloss finish if available, semi-gloss minimum gloss level

Suggested finish paint, alkyd enamel

#### **Plaster surfaces:**

##### **Wall Surface:**

Light brownish grey: Plochere G 63 Gloss level:

Suggested finish paint, acrylic latex

##### **Ceiling:**

Pinkish grayish white Plochere 192 Gloss level: modern flat finish

Suggested finish paint, acrylic latex

**The Back Parlor**  
**Woodwork samples:**

**Sample BP-1: Door D-104**

**Sample BP-2: Door D-104, Door frame**

**Sample BP-3: Door D-103 (right leaf [east])**

**Sample BP-4: Door D-103, Door frame**

**Sample BP-5: Window W-106 Window frame**

**Sample BP-6: Window W-106, Window jamb**

**Sample BP-7: Window W-106, Window sash**

**Sample BP-8: Baseboard, molding**

**Sample BP-9: Baseboard, fascia**

First Finish:

White Special Standard: EL-CW072w Gloss level: modern semi-gloss

Suggested finish paint, acrylic latex

**Plaster samples:**

**Sample FP-10: Wall plaster**

**Sample FP-11: Ceiling plaster**

First Finish:

Yellowish white: Special Standard: EL 8221w/m Gloss level: modern flat finish

Suggested finish paint, acrylic latex

**The Front Parlor**

**Woodwork samples:**

**Sample FP-1: Door D-102**

**Sample FP-2: Door D-102, Door frame**

**Sample FP-3: Door D-103 (right leaf [east])**

**Sample FP-4: Door D-103, Door frame**

**Sample FP-5: Window W-102 Window frame**

**Sample FP-6: Window W-102, Window jamb**

**Sample FP-7: Window W-101, Window sash**

**Sample FP-8: Baseboard, molding**

**Sample FP-9: Baseboard, fascia**

First Finish:

White Special Standard: EL-CW072w Gloss level: modern semi-gloss

Suggested finish paint, acrylic latex

**Plaster samples:**

**Sample FP-10: Wall plaster**

**Sample FP-11: Ceiling plaster**

First Finish:

Yellowish white: Special Standard: EL 8221w/m Gloss level: modern flat finish

Suggested finish paint, acrylic latex



**Sample FH-12: Baluster**

Balusters:

Earliest condition: unpainted. Surface of wood given one thin coat of a natural resin varnish.

Second condition: painted: Surface of wood painted with zinc oxide white finish:

White Special Standard: EL-CW072w Gloss level: modern semi-gloss  
Suggested finish paint, acrylic latex

**Plaster surfaces:**

**Sample FH-15: Wall plaster**

**Sample FH-16: Ceiling plaster**

First Finish:

Yellowish white: Special Standard: EL 8221w/m Gloss level: modern flat finish  
Suggested finish paint, acrylic latex

**The Hollingsworth House: Elk Landing  
Elkton, Maryland**

**The Front Hall**

**Woodwork samples:**

**Sample FH-1: Door D-101**

**Sample FH-2: Door D-101, Door frame**

**Sample FH-3: Door D-102**

**Sample FH-4: Door D-102, Door frame**

**Sample FH-5: Door D-107**

**Sample FH-6: Door D-107, Door frame**

**Sample FH-13: Baseboard, molding**

**Sample FH-14: Baseboard, fascia**

**First Finish:**

White Special Standard: EL-CW072w Gloss level: modern semi-gloss

Suggested finish paint, acrylic latex

**Staircase:**

**Sample FH-7: Staircase: panel below stair**

**Sample FH-8: Rail, Stile of stair panel**

**First Finish:**

White Special Standard: EL-CW072w Gloss level: modern semi-gloss

Suggested finish paint, acrylic latex

**Sample FH-9: Riser**

**Sample FH-10: Nosing**

**Sample FH-11: Tread**

Note: These samples are very significant because the paint evidence clearly indicates that the staircase had a runner carpet that went up the center of the staircase. The riser, nosing and treads were painted with a six inch wide band that was painted on either side of the staircase, leaving the center of the riser, nosing of tread unpainted. This is a clear indication that the staircase had a carpet runner that ran up the center of the stair. The carpet covered the unpainted center of the stairs.

**First Finish:**

White Special Standard: EL-CW072w Gloss level: modern semi-gloss

Suggested finish paint, acrylic latex

### **Conclusion: The first finishes**

The interior and the exterior of the Hollingsworth House are certainly characteristic of finishes of this period. The west end of the house has fine woodwork finished with the newest white pigment available: zinc oxide white. The plaster walls and ceiling were finished with a very pale yellow, that would have been known at the time as *straw color*. It is also possible that the rooms might have been papered within a ten year period, perhaps prior to overpainting the woodwork.

The Mantels of the Front and Back Parlors have been removed, however, in view of the black enamel found on the Dining Room mantel, it is certainly very possible that the Mantels in the Front and Back Parlors would also have been finished with a black enamel paint. The mantels may have been marble or marbled slate, which could account for their having been removed from the house.

The Dining Room shows a very different palette using graining, a light Mars violet-brown finish with an oak graining on the doors, the black enamel painted mantel, and neutral colors on the walls and ceiling. These colors would become much more popular in the next twenty years.

It is likely that the west end rooms would have had colorful patterned wall to wall carpet, with a less expensive version of a similar carpet in the Dining Room.

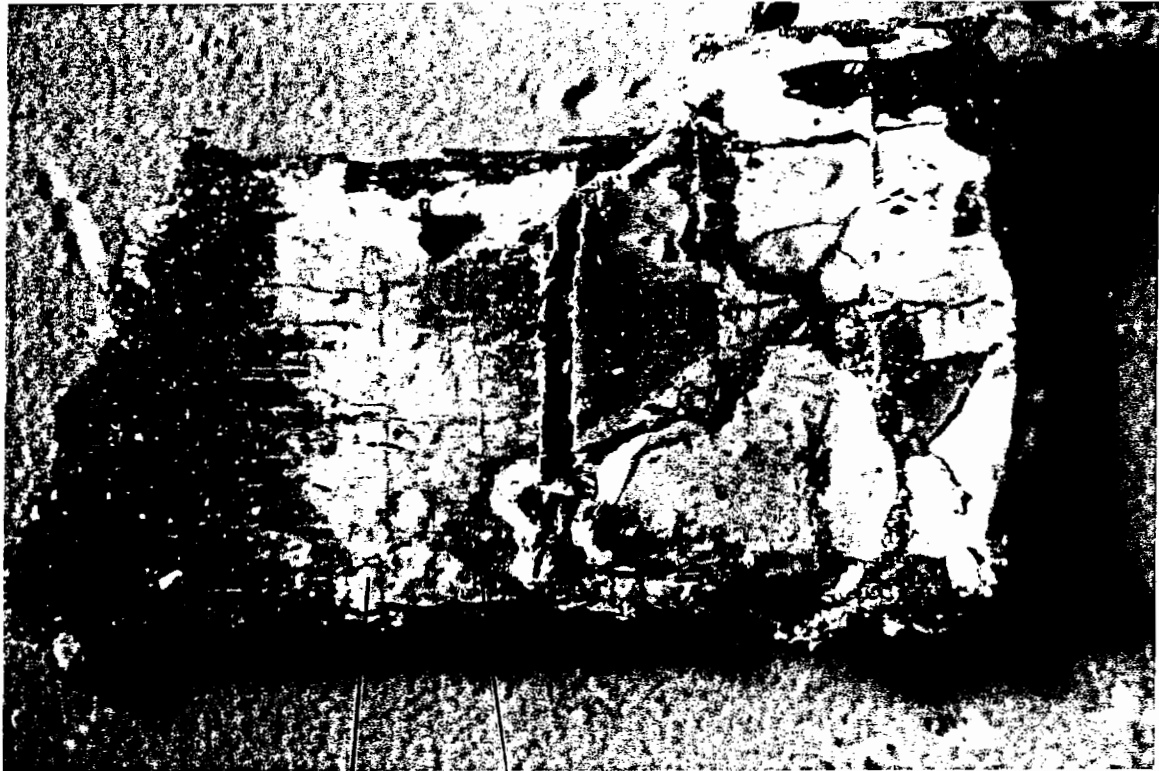
The finishes of the Hollingsworth House will prove to be very characteristic and illuminating for the restoration of the house.

**Photomicrograph:**

**Exterior: Upper Porch Sample UP-3: Front Door, D-101**

Unmounted Sample: Olympus SZ-1145 stereomicroscope, with Nikon N70 camera body mounted access using the camera port. Dolan Jenner Fiber optics illuminator with color correction for north sky daylight illumination. Fujicolor 200 ASA color print film

Note: The view of the sample is looking down onto the finish surface. The sample has been shaved to expose the early finishes. The wood substrate is clearly visible on the left of the sample. This supports the original finish, prepared with lead white paint. The second finish, a dark black walnut finish is clearly visible. Later finishes are seen on the right of the sample.



FIRST FINISH

BLACK WALNUT GRAINING.

**Sample UP-6: Porch Post, (north side, protected upper surface)**

Note: The porch post was painted the principal white color as seen on the other woodwork surfaces. Some of the later finishes have also been listed as they are seen on a number of other exterior paint samples.

|          |                 |            |      |        |
|----------|-----------------|------------|------|--------|
| 1. White | Munsell 5Y9/0.5 | lead white | thin | Prime  |
| 2. White | Munsell 5Y9/0.5 | lead white |      | Finish |

Later finishes:

Second finish: White

Third Finish: Moderate brown (Mars Brown)

Fourth Finish: Light grey

**Sample UP-7: Front Door, Louvers**

**Sample UP-8: Window W-102, Window shutters**

Note: The samples from the Front Door Louvers were not in the best condition, however, they appear to retain fragments of the same early finish as seen on the window shutters.

|                   |                 |                          |      |               |
|-------------------|-----------------|--------------------------|------|---------------|
| 1. White          | Munsell 5Y9/0.5 | lead white               | thin | Prime         |
| 2. Light grey     | Plochere G 109  | lead white, carbon black |      | Undercoat     |
| 3. Moderate green | Plochere 1026   | chrome green             |      | Finish<br>F-1 |

Note: The green finish is extremely worn, suggesting that the surface was exposed for a long period of time.

## The Exterior: The Upper Porch

### Sample Locations:

**Sample UP-1: Ceiling**

**Sample UP-2: Window W-102, Window frame**

**Sample UP-3: Front Door, D-101**

**Sample UP-4: Front Door, D-101 Door jamb**

**Sample UP-5: Front Door, D-101 Door Frame**

**Sample UP-6: Porch Post, (north side, protected upper surface)**

**Sample UP-7: Front Door, Louvers**

**Sample UP-8: Window W-102, Window shutters**

### Sample UP-1: Ceiling

Note: The original finish on the ceiling is an example the characteristic porch ceiling color, in this case quite a green example, that was done to suggest the sky color.

|                        |                 |                                      |      |               |
|------------------------|-----------------|--------------------------------------|------|---------------|
| 1. White               | Munsell 5Y9/0.5 | lead white                           | thin | Prime         |
| 2. Light greyish green | Plochere 911    | lead white, chrome green, lamp black |      | Finish<br>F-1 |

**Sample UP-2: Window W-102, Window frame**

**Sample UP-4: Front Door, D-101 Door jamb**

**Sample UP-5: Front Door, D-101 Door Frame**

Note: All of the woodwork samples noted above showed the same use of lead white paint for the prime and finish of these exterior surfaces. The body of the building was finished in roughcast stucco.

|          |                 |            |      |               |
|----------|-----------------|------------|------|---------------|
| 1. White | Munsell 5Y9/0.5 | lead white | thin | Prime         |
| 2. White | Munsell 5Y9/0.5 | lead white |      | Finish<br>F-1 |

### Sample UP-3: Front Door, D-101

Note: The door was originally painted white, but later was grained.

|          |                 |            |      |               |
|----------|-----------------|------------|------|---------------|
| 1. White | Munsell 5Y9/0.5 | lead white | thin | Prime         |
| 2. White | Munsell 5Y9/0.5 | lead white |      | Finish<br>F-1 |

Later finish:

Graining: emulation of Black walnut

**On- site photograph and Photomicrograph: Sample K-1: Door D-117, Door to lower Porch**

Note: The photograph shows the remains of the graining that may be seen on the panel molding. The photomicrograph (Unmounted Sample: Olympus SZ-1145 stereomicroscope, with Nikon N70 camera body mounted access using the camera port. Dolan Jenner Fiber optics illuminator with color correction for north sky daylight illumination. Fujicolor 200 ASA color print film) clearly shows the straight graining pattern.



GRAINING  
FRAGMENTS

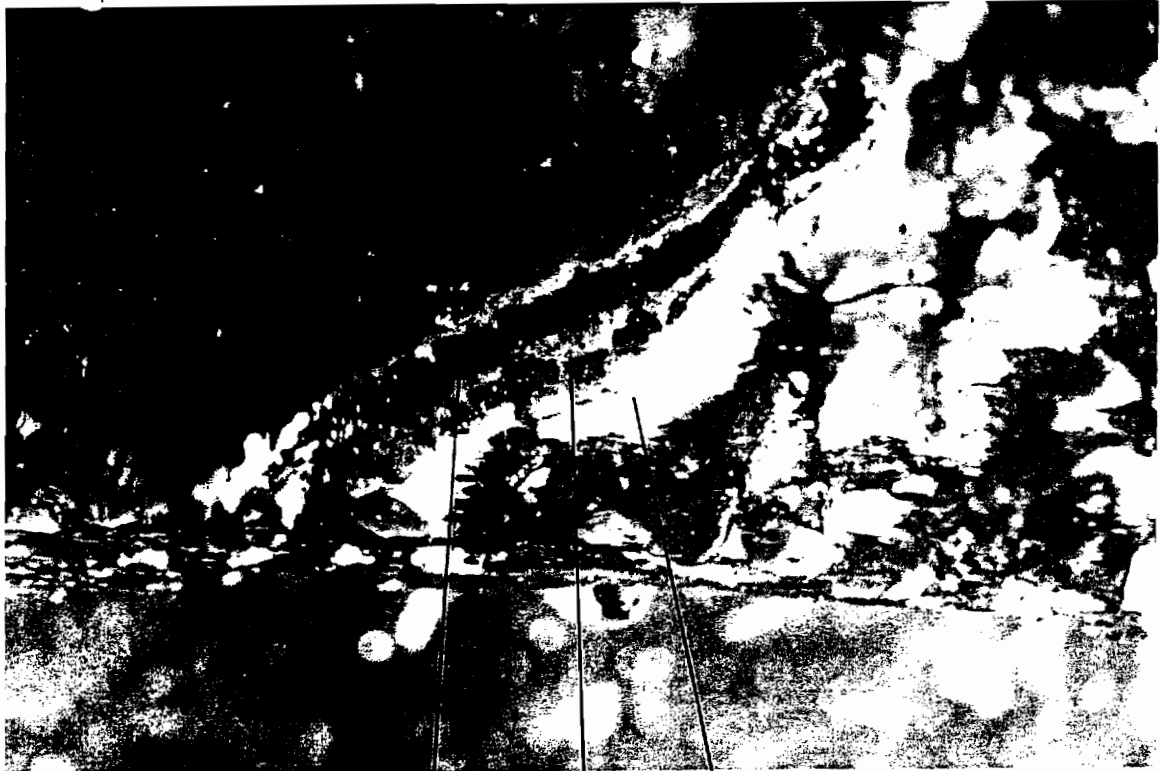


**Photomicrograph:**

**Exterior: The Lower Porch, Sample LP-4: Door to Back Hall, D-113**

Unmounted Sample: Olympus SZ-1145 stereomicroscope, with Nikon N70 camera body mounted access using the camera port. Dolan Jenner Fiber optics illuminator with color correction for north sky daylight illumination. Fujicolor 200 ASA color print film

Note: The view of this sample is looking down onto the finish surface. The wood substrate is clearly visible. The first white finish is seen, followed by two graining finishes. The lighter finish may have been done shortly after the first finish. There is a dark walnut graining that is also seen; later finishes are also visible.



WALNUT GRAINING  
GRAINING (OAK)  
WHITE

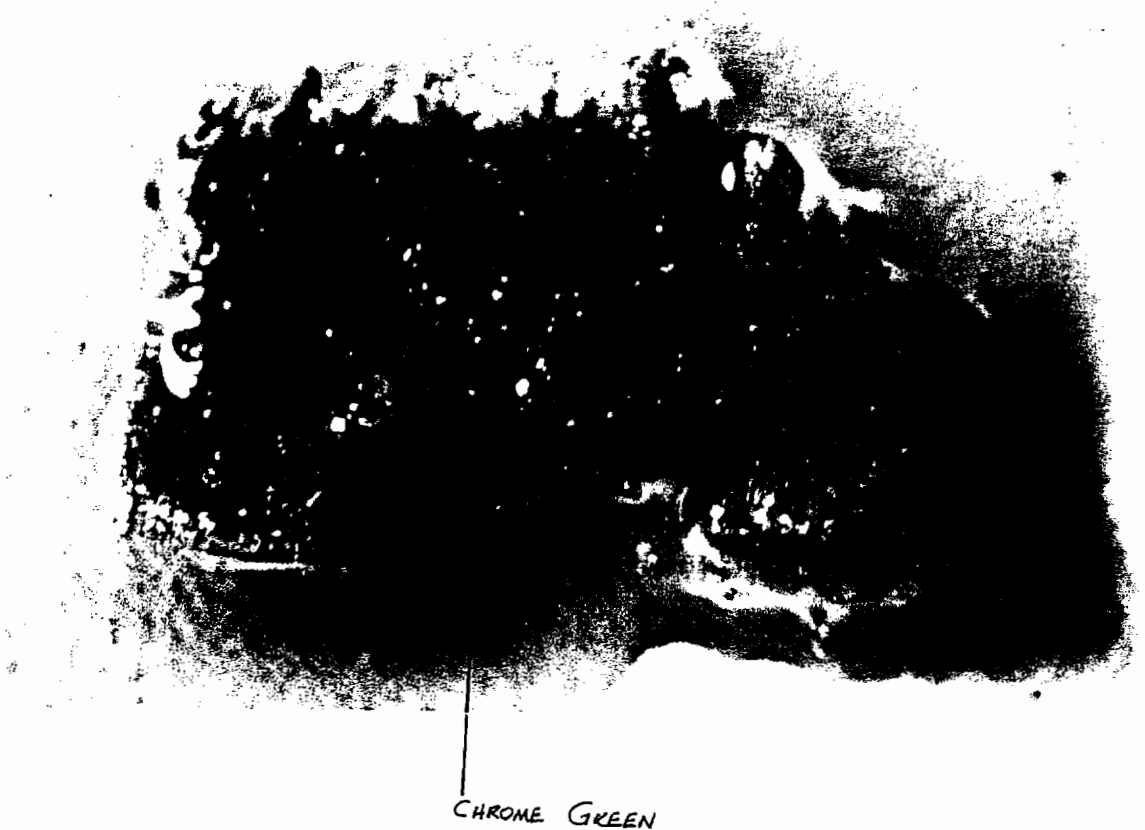


**Photomicrograph:**

**Exterior: The Lower Porch, Sample LP-3: Shutter, Window W-114**

Unmounted Sample: Olympus SZ-1145 stereomicroscope, with Nikon N70 camera body mounted access using the camera port. Dolan Jenner Fiber optics illuminator with color correction for north sky daylight illumination. Fujicolor 200 ASA color print film

Note: The view of this sample is looking down onto the finish surface. The wood substrate is clearly visible. The grey primer, well worked into the wood, is also seen. The chrome green finish remains, however, the entire sample shows evidence of wear due to exposure of these paint coatings.

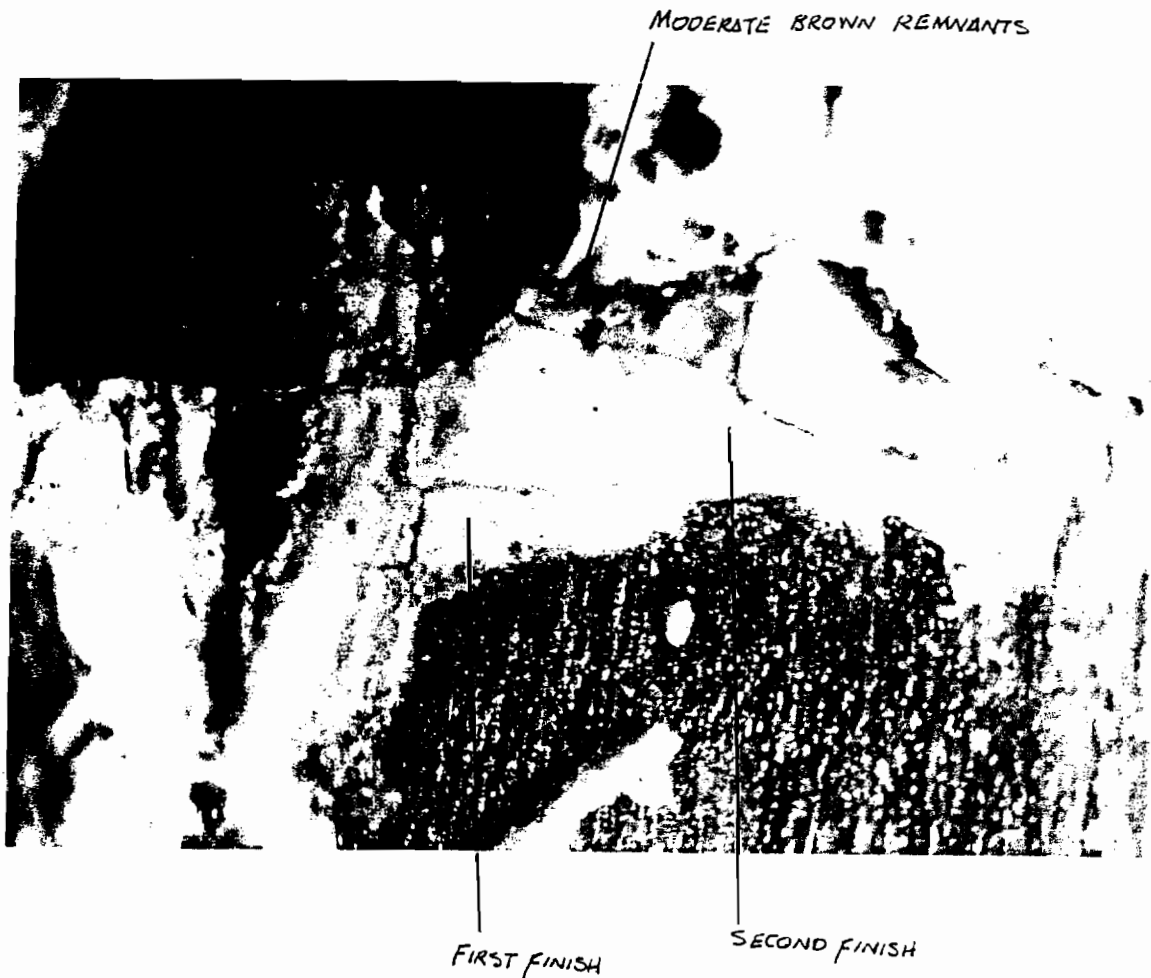


**Photomicrograph:**

**Exterior: The Lower Porch, Sample LP-2: Window W-114, Window frame**

Unmounted Sample: Olympus SZ-1145 stereomicroscope, with Nikon N70 camera body mounted access using the camera port. Dolan Jenner Fiber optics illuminator with color correction for north sky daylight illumination. Fujicolor 200 ASA color print film

Note: The view of this sample is looking down onto the finish surface. The wood substrate is clearly seen, which supports the first white paint finish. There is a second white finish; the brown finish is very worn on this sample, possibly due to chalking of the paint.



**Sample LP-4: Door to Back Hall, D-113**

**Sample LP-5: Door to Kitchen, D-117**

|  |                 |            |     |
|--|-----------------|------------|-----|
| 1. White   | Munsell 5Y9/0.5 | Prime      |     |
| 2. White   | Munsell 5Y9/0.5 | Finish (?) |     |
| 2. Light brownish yellow   | Plochere 232    | Ground     |     |
| 3. Light yellowish brown: natural earth pigments: oak simulation |                 | Graining   |     |
| 4. Clear coating: one thin layer of varnish                      |                 | Finish     | F-1 |

-surface particulate accumulation-

Note: The doors appear to have been painted white at first, however, the exterior faces of these doors were grained –probably at the same time as the graining on the interior face of the doors.

**Sample LP-7: Door to Smokehouse, D-120**

Note: The door to the Smokehouse was assumed to predate the 1849 and was identified as an eighteenth century door. The paint finishes do not show any finishes that predate the doors that do date to 1849. The door might have been unpainted, and then re-hung reversing the exterior face of the door. The paint samples did not suggest that the present exterior face of the door was unpainted. This door remains something of a question, as a result.

**The Exterior: The Lower Porch**

**Sample Locations:**

- Sample LP-1: Ceiling**
- Sample LP-2: Window W-114, Window frame**
- Sample LP-3: Shutter, Window W-114**
- Sample LP-4: Door to Back Hall, D-113**
- Sample LP-5: Door to Kitchen, D-117**
- Sample LP-6: Door to Kitchen D-117, Door frame**

**Sample LP-7: Door to Smokehouse, D-120**

**Sample LP-1: Ceiling:**

Note: The ceiling appears to be new: no early paint finishes were found.

- Sample LP-2: Window W-114, Window frame**
- Sample LP-6: Door to Kitchen D-117, Door frame**

|          |                 |            |      |        |
|----------|-----------------|------------|------|--------|
| 1. White | Munsell 5Y9/0.5 | lead white | thin | Prime  |
| 2. White | Munsell 5Y9/0.5 | lead white |      | Finish |

Later finishes:

Second finish: White

Third Finish: Moderate brown (Mars Brown)

**Sample LP-3: Shutter, Window W-114**

|                   |                |                          |               |
|-------------------|----------------|--------------------------|---------------|
| 1. Light grey     | Plochere G 109 | lead white, carbon black | Undercoat     |
| 2. Moderate green | Plochere 1026  | chrome green             | Finish<br>F-1 |

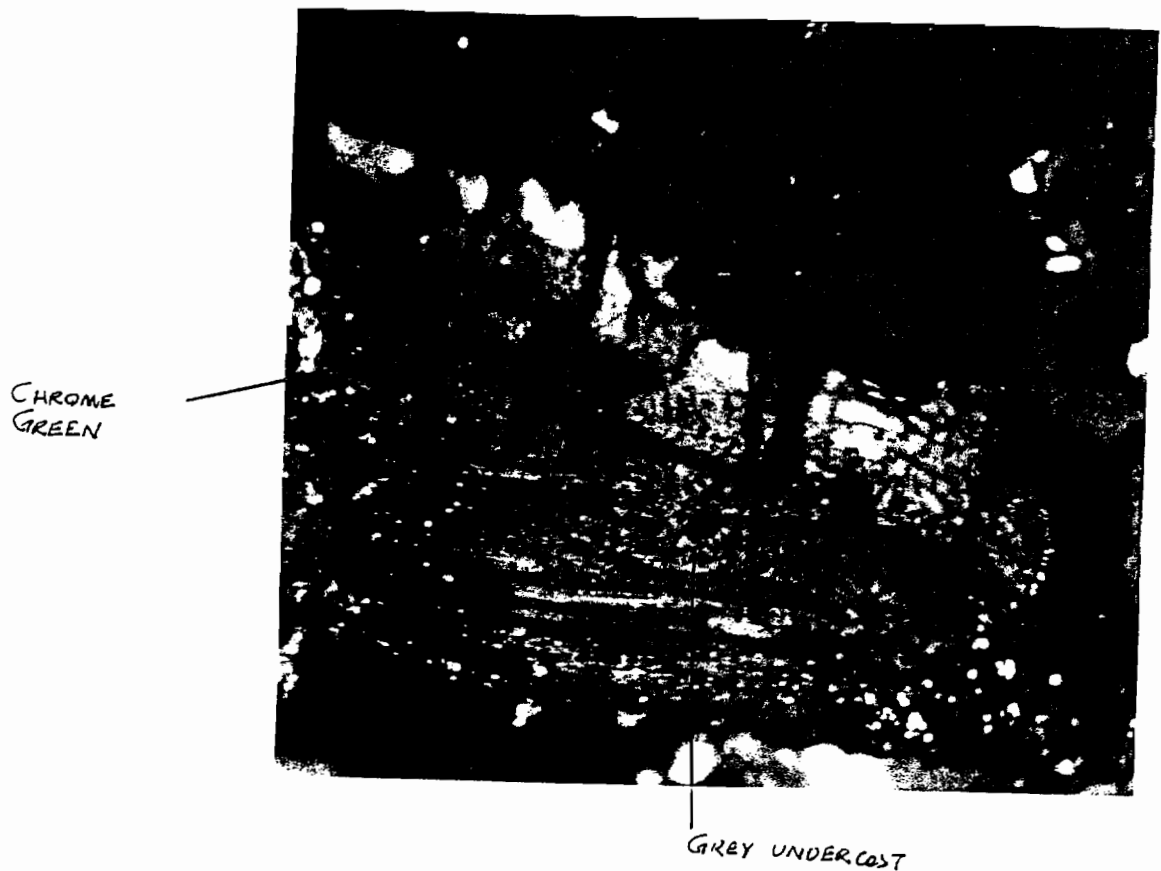
Note: The green finish is extremely worn, suggesting that the surface was exposed for a long period of time; this is the same first finish as seen on the Upper porch.

**Photomicrograph:**

**Exterior: Upper Porch Sample UP-8: Window W-102, Window shutters**

Unmounted Sample: Olympus SZ-1145 stereomicroscope, with Nikon N70 camera body mounted access using the camera port. Dolan Jenner Fiber optics illuminator with color correction for north sky daylight illumination. Fujicolor 200 ASA color print film

Note: The view of this sample is looking down onto the finish surface. The sample has been cut to permit this view of the paint finishes; the sample has been resaturated with a droplet of immersion oil. The light grey undercoat is clearly visible, and this supports the first chrome green finish, which is very severely worn: only fragments of the green finish survives. Later finishes, including and interesting light brown (third finish period) that may date to the ca. 1880's is clearly seen. The sample shows extensive under flow of later paint finishes through fissures in the paint layers.



**Photomicrograph:**

**Exterior: Upper Porch Sample UP-6: Porch Post, (north side, protected upper surface)**

Unmounted Sample: Olympus SZ-1145 stereomicroscope, with Nikon N70 camera body mounted access using the camera port. Dolan Jenner Fiber optics illuminator with color correction for north sky daylight illumination. Fujicolor 200 ASA color print film

Note: The view of this sample is from the underside. The paint accumulation has been delaminated from the wood substrate and turned over, thus the earliest paint layer, with minute fragments of wood still adhering to it, is clearly visible. The second finish is actually a second white finish, which was exposed for a considerable period of time: note the cracks in that paint layer through which the later moderate brown finish penetrated.

