Choices Behind the Color: An Analysis of Paint Finish Variations in South Carolina Slave Dwellings

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CHOICES BEHIND THE COLOR: AN ANALYSIS OF PAINT FINISH VARIATIONS IN SOUTH CAROLINA SLAVE DWELLINGS

A Thesis
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
Historic Preservation

by
Lyrik Castro-Bailey
May 2024

Accepted by:
Frances Ford, Committee Chair
Dr. Stéphanie Cretté
Willie Graham
Jobie Hill
Sarah Stroud Clarke
ABSTRACT

This research sought to discover what analytical methods would allow a preservationist to access, analyze, and interpret the agency enslaved people had in selecting the interior finishes of their living quarters. Ten sites ranging in construction from 1712 to 1847 were analyzed including: Lavington Plantation Slave-Quarters, Drayton Hall Cellar, Nathaniel Russell House Kitchen-Quarters, Aiken-Rhett Slave-Quarters, John Fullerton House Kitchen-Quarters, 38 Church Street Kitchen-Quarters, 72 Anson Street Kitchen-Quarters, 54 Hasell Street Kitchen-Quarters, Capers-Motte House Kitchen-Quarters, and the Heyward House Kitchen-Quarters. Photomicrographs collected by the author and conservationist Dr. Susan Buck were organized to examine the layers of pigments. Munsell Colors were assigned to samples taken by the author, with all three sites exhibiting variations of yellow ochre and a neutral cream. Findings suggest that finishes were chosen based on what was accessible and contemporary at the time of construction. However, it can be said that the warm pigments found throughout each site inherently affected the identity of its enslaved inhabitants, suggested by habitus or place identity. It can be concluded that paint analysis of historic interiors, in conjunction with primary sources such as newspapers, historic property research, and an investigation of the lives of the enslaved may lead a preservationist into further study of agency. Data generated in this thesis can be used to provide context to the development of finishes in the eighteenth and nineteenth centuries as well as the enslaved lives in South Carolina.
DEDICATION

To my loving husband Colin. Thank you for being the color in my life.
ACKNOWLEDGMENTS

I would like to extend my sincerest gratitude to the people who have supported me throughout this journey. Thank you to my committee chair, Frances Ford, for your expertise and guidance. You have been a wonderful mentor, and I will always value your advice. Thank you to my committee members Stéphanie Cretté, Willie Graham, Jobie Hill, and Sarah Stroud Clarke. Crafting my thoughts into writing is a challenge that you all graciously helped me with. I have learned so much from all of you.

Thank you, Susan Buck, for allowing me access to your reports. Your work is inspirational, and I am honored to have had the opportunity to build upon it. Thank you to my coworkers at the HCF market shop. I appreciate you all for showing interest in my studies and lifting me up when my spirits were down. I will miss you all.

Thank you to my three classmates, Megan Adornetto, Deryn Candelaria, and Winter Hein. I could not have done this without you all. I love you and I am so grateful to end this chapter of my life with three new best friends. Thank you to my editor-in-chief, Megan Billingham. I can always count on you to improve my writing skills and cheer me on. Thank you to my in-laws. Your kind words and generosity have kept me going through this process. Mom, thank you for supporting me and telling me not to procrastinate. I love you dearly. The most special thank you to my husband, Colin. Your love and encouragement have guided me throughout this journey. I am so grateful to have you at my side always. Now we can live life together!
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CHAPTER ONE

INTRODUCTION

A Gap in Academia

The pedagogical curriculum of slavery in America has inherently been convoluted. It can be a challenge to teach others about an individual’s story, especially when that story is not lighthearted.¹ The uneasiness of discussing slavery could be said to have grown from a lack of supported resources and guidance in academic settings, serving as a challenge for the educator and the student. This information may result in physical and emotional distress for all counterparts. However, transparency and additional research can avoid false narratives by providing academic data on a topic that has been neglected.

Similarly, the understanding of paint finish variations in enslaved spaces has historically lacked discussion. An inadequate number of academic reports have been published regarding this subject with the exception of the paint analysis of Aiken-Rhett’s urban slave dwelling.² Very few writings have touched on decorative paint in enslaved spaces, and yet, there have been mentions that further research should be performed on this topic, suggesting a rise of interest. Slave dwellings, which will include for this thesis sleeping-quarters, laundry-quarters, kitchen-quarters, attics, and cellars occupied by the enslaved, have paint finishes and trends that changed throughout time. Quarters refer to

the function of the room but also indicate that inhabitants slept in these spaces. Quarters will be included in this study because it encompasses mixed-use spaces. This thesis research may be used to further the education of architectural historians, museum professionals, and architects who can provide information to interested preservation-minded individuals.

**Paint Analysis History**

The study of paint within architectural finishes has proven to be useful for discovering the layers of history. Arthur Pillans Laurie pioneered the analyzation of cross-sections of paint in the early 1900s by using science to examine pigments in paintings.\(^3\) This movement grew in the 1960s with the development of organizations such as the National Park Service which “extended the scope of these earlier methods to historic buildings” and later to modern architecture.\(^4\) Historically, paint analysis has been used for decorative fine art and high-style historic structures. Architectural paint analysis has evolved with the preservation of these structures at institutions such as the Colonial Williamsburg Foundation and George Washington’s Mount Vernon. Previously, the use of paint analysis has largely ignored Black spaces, however, more interest in this research has developed since the completion of architectural conservator Dr. Susan Bucks’ 2003 dissertation on the Aiken-Rhett house and its kitchen and laundry-quarters. This research is highly valued by the academic community, however, information from these analyses is not easily accessible or publicized to the general populace.


Paint analysis can tell conservators what color and what type of finish either paint, varnishes, lacquer, wallpaper, or limewash was used. This information can aid in preservation efforts to define the historical color scheme of a house, the date or period of each layer, as well as determine what materials were accessible at that time. Similarly, this research can provide physical information about historically Black spaces, an environment that research has neglected. Analysis methods include a range of scraping and sanding in order to reveal sequential paint layers. Paint analysis typically involves a combination of in situ investigation, microscopic cross-section analysis in reflected light, and the research of historical documents.\(^5\) Color matching using Munsell, a numerical color-order system, or similar swatches is also regularly practiced.\(^6\) Standardization of paint analysis has further been developed with the impact of the *Code of Ethics and Guidelines for Practice*, established by the American Institute for Conservation of Historic and Artistic Works (AIC).\(^7\)

Prior to the twentieth century’s introduction of synthetic resin and acrylic paints, paint was made up of boiled linseed oil, ground pigments, and oftentimes lead. Ground pigments varied in particle size due to the vastness of recipes developed by craftsmen and companies. This became extremely prevalent in the mid to late nineteenth century with

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the introduction of ready-mixed paints.\textsuperscript{8} Before paint became readily available limewash, a basic mixture of lime, water, and sometimes earth-based pigments was used as a finish. Often called whitewash, it has been used since the 1500s due to its cost-effectiveness and cleanliness.\textsuperscript{9} As limewash settles into the structure “it reacts with the carbon dioxide in the air, carbonating and creating a tough finish.”\textsuperscript{10} It was sometimes applied in multiple layers to build up a solid and even finish.

Whitewashing was used as a cleaning detergent in enslaved spaces as it was believed to prevent diseases of the time, such as cholera.\textsuperscript{11} Whitewashing was suggested by the enslaver but possibly executed by the enslaved communities.\textsuperscript{12} Limewashing or whitewashing was purportedly suggested to be conducted annually to ensure a stable finish.\textsuperscript{13} Due to the insufficient amount of limewash layers seen in previous paint analysis reports, this phenomenon has yet to be defended in South Carolina. However, since the enslaved were often perceived as an investment, their health was also taken into consideration to a certain extent. This architectural choice was intended to save as much money as possible while keeping health and aesthetics in mind. Pigmented limewashes

\textsuperscript{13} James O. Breeden, Advice Among Masters: The Ideal in Slave Management in Old South, Westport, CT: Greenwood Press, 1981.
will be considered as paint in this study since a creative decision and effort pertaining to color choice had been made.

**Slavery and the Built Environment**

The social relationship between the person who is enslaved and the enslaver has continuously been analyzed within history and literature. The enslaved built their own homes, made roads, fired bricks, and maintained the land skillfully because it was reflective of power. Rural slave dwellings exhibit architectural variations based on accessible materials and craftsmanship. They are sometimes described as sixteen by eighteen feet, slightly elevated, and whitewashed with a fireplace or stove.\(^\text{14}\) Although this description may fit some slave dwellings, this image of a rural slavery settings often puts other trends of outliers and urban slavery in the shadows.

Throughout history, enslavers have modified their homes to control and monitor their enslaved communities. In Charleston, the enslaved were typically bound to the backlots of the main house, consisting of kitchens, sleeping-quarters, laundry-quarters, and carriage houses, to establish a sense of control over the behavior of the enslaved and the city. Furthermore, it was typical for enslaved people to access the back space from a side entrance, creating further separation from the main house.\(^\text{15}\) Following the failed Denmark Vesey Revolt of 1822, many slaveholders sought additional protection and surveillance throughout public and private property. Enslavers sought to control their

\(^{14}\text{James O. Breeden, Advice Among Masters: The Ideal in Slave Management in Old South, Westport, CT: Greenwood Press, 1981.}\)

property as well as where their food had been prepared. \(^{16}\) While discussing this organization of property, American author Bernard L. Herman “has evocatively observed that urban Charleston slave owners arranged their houses and yards in ways they believed would give them more control than they had. But enslaved people also asserted their own desire for separate spaces and a degree of privacy.” \(^{17}\) As slaveholders increased their control, enslaved communities sought to adopt a creative perspective towards the spaces with agencies such as lock systems and paint, with the anticipation of consequences. \(^{18}\) This thesis will question if data shows there to be a specific meaning behind paint finish variations across different slave dwellings in South Carolina.

**Methodology and Contributions**

The methodology of this thesis will include a study of paint analysis on the rooms of rural and urban slave buildings and spaces in South Carolina, including kitchen-quarters, sleeping-quarters, laundry-quarters, as well as attic and cellars that were occupied by the enslaved. The terms slave dwellings and enslaved spaces will be used interchangeably throughout this thesis. Samples taken by the author and paint conservator Dr. Susan Buck will be used in this study to ensure a consistent data-collecting technique. Previous reports will be used as a guide for the extraction of samples to create a database that can be clearly legible. Paint samples will be analyzed from ten sites creating a sample set of 92 stratigraphy’s. These ten sites include two rural cases: Lavington


\(^{17}\) Ibid.

\(^{18}\) Willie Graham, Conversation with author, 2024.
Plantation Slave-Quarters and Drayton Hall Cellar, as well as eight urban cases:
Nathaniel Russell House Kitchen-Quarters, Aiken-Rhett Slave-Quarters, John Fullerton
House Kitchen-Quarters, 38 Church Street Kitchen-Quarters, 72 Anson Street Kitchen-
Quarters, 54 Hasell Street Kitchen-Quarters, Capers-Motte House Kitchen-Quarters,
Heyward House Kitchen-Quarters. Stratigraphy samples will include substrate
information, characteristics of pre- and post-resin casing, and descriptions of layers.
South Carolina newspaper listings from 1735 to 1794 will also be analyzed.

This thesis will question what analytical methods would allow a preservationist to
access, analyze, and interpret the agency enslaved people had in selecting interior finishes
in their living quarters in the greater Charleston, South Carolina area. Utilizing paint
analysis reports by Dr. Susan Buck, original finishes analysis by this author at selecting
sites, in conjunction with primary source documentation, such as newspapers, will be
used as methods to interpret historic finishes. This research will seek to establish what
finishes existed in enslaved spaces and potentially what a particular finish can indicate. In
addition, this study may help in determining if slave dwellings have paint color variations
that can subjectively provide a sense of identity to the residents, owners, and/or
craftsmen. Paint analysis can provide physical and scientific context through microscopy
for the investigation of historic enslaved communities. This research asks if paint analysis
and primary source documentation can provide information about finishes and colors
from 1712 to 1847 as well as interpretation of their contemporary meanings and
implications for further study ascertaining the agency of enslaved people in South
Carolina.
CHAPTER TWO
LITERATURE REVIEW

Place Identity and Habitus

Historically, interior finishes have been used to communicate the personalities of inhabitants, sometimes referred to as place identity. Often used in behavioral and environmental sciences, place identity refers to the magnitude of one’s self-identity and how it behaves concerning their environment through the “...complex pattern of conscious and unconscious ideas, beliefs, preferences, feelings, values, goals, and behavioral tendencies and skills relevant to this environment.”¹⁹

Inhabitation within a specific place can create personal values, beliefs, and feelings within a person by expression of one’s environment. Similarly, a person's personality or identity can create a physical effect on the space they are inhabiting. Place identity is often associated with the study of habitus, an instrument allowing people to “‘reproduce' the social conditions of our own production, but in a relatively unpredictable way, in such a way that one cannot move simply and mechanically from knowledge of the conditions of production to knowledge of the products.”²⁰ A person’s individual history is a constituent of habitus as well as family and class. This generally means that experiences influence one's living spaces. Habitus is malleable and dependent on what is happening around its vicinity. It is also an exchange between the past and present. The

concept of choice can be limited based on an endless amount of possibilities in conjunction with conceivable ideas. Sociologist Pierre Bourdieu uses the term “habitus” to describe how individuals act in their daily lives both physically and psychologically.

Habitus can be used as a tool to identify theoretical methods that prescribe meaning to paint. Bourdieu uses habitus as a methodological tool to remediate patterns or dualisms that are exhibited between different contexts such as identity and structure. Pierre Bourdieu “continued throughout his career to challenge the view of habitus as a form of determinism, asserting that habitus offers the only durable form of freedom—that given by the master of an art.”

Habitus demonstrates an act of agency that is a response to one’s culture, including attitude, class, and values. Paint colors can be analyzed in an anthropological framework to understand finishes in enslaved spaces. Case studies involving Monticello’s South Pavilion Cellar, the Owens-Thomas Quarters and Carriage House, and the Davenport House Attic-Quarters will be used to examine how paint can be representative of identity within interior finishes.

**Perceiving Color**

Color occurs when visible light made up of wavelengths hits a surface. When struck by light, surfaces take in “the short (violet-blue) and the long (red-orange), but reflects the medium (green-yellow) lengths.” Interior paint finishes, specifically paint color, can provide a visual of the dynamic identity of the structure’s inhabitants.

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Although colors in enslaved spaces have not been thoroughly analyzed, many domestic interior finishes have been studied in exploring interior design trends. These trends typically organize a space for its inhabitants and visitors. Recognizing the organizational spaces of a home may be beneficial to how or why trends, such as paint color, have been utilized. According to anthropologist Irene Cieraad, “the home is an active moment in both time and space in the creation of individual identity, social relations, and collective meaning.”

When choosing interior colors for living spaces, the goal of a designer may be to create a specific mood or feeling for the space. In case study, *Relating material experience to technical parameters: A case study on visual and tactile warmth perception of indoor wall materials* by Lisa Wastiels et al. [Hendrik N.J. Schifferstein, Ann Heylighen, and Ine Wouters], warmth was investigated visually and by touch of interior walls to determine what materials may be the best selection for architects. Participants evaluated building materials visually, by touch, and a combination of the two senses. Materials included plaster samples, blue stone, steel, wood, brickwork, and concrete. Participants explored all samples and filled out a survey to attribute values between cold and warm to the different materials.

Results of this study show that vision largely impacts the perceived assessment of warmth of a material. As participants were able to see the color of the material, their perception of warmth became greater than their reaction to physically touching the

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material. Similarly, the study was able to identify brick-red as the warmest color perceived, followed by the wood-yellow. Apart from steel-gray, all colors “are perceived as warmer than the white-colored plaster sample. Where a white wall can be considered the most neutral wall element in architecture, it also seems to lead to the coldest perception.”24 In an architectural context, the perception of warm colors had a larger impact than touching the materials of the wall systems used for this case study.

A similar case study, *Understanding Responses to Materials and Colors in Interiors*, by Begum Ulusoy and Nilgun Olgunturk, investigates the relationship between materials and color in interior spaces, with findings aimed to benefit product designers, architects, and researchers. Ulusoy and Olgunturk state that characteristics such as material and color “are associated with perceptual, emotional, and cognitive processes. Individuals with full visual ability see materials and colors and define their environments by them.”25 Free association was used as a tool for participants to identify the first word that comes to mind when seeing materials and colors.

Participants verbally described the control colors of red and green, both alone and with another color, which was used to generate an interior design context. Results concluded that participants associated red with warmth and green with calm. Red and green together elicited words such as colorful and contrasting. Also “white, both as a single color and as a part of a pair, was associated with ‘clean,’ showing that adding it to

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any pair also added the association of ‘clean’ to that pair as well.”

Western countries often associate the color white with cleanliness and purity. In 1925, Le Corbusier argued that all interiors should be whitewashed “as a moral and spiritual cleansing for society.” It is evident that colors represent or can be affected by cultural meanings and environmental factors. If certain colors were thought to be warm, information from this study may provide context as to why certain colors were utilized in the enslaved spaces of South Carolina.

**Munsell Book of Colors**

The Munsell Book of Colors is a numerical color-order system used to precisely attribute colors to any surface based on the hue, value, and chroma, or H, V, and C. The system was created in 1905 by Professor Albert H. Munsell who had organized the system by colored chips and a “Munsell Notation” of $H \, V/C$. This system was based on the “…human visual system’s perception of color,” also known as “perceived equidistance.”

Hues are organized in the order of red, yellow, green, blue, and purple. These colors are referred to as “Chromatic Colors”. Value refers to the lightness or darkness of a color, ranging from a 0, pure black, to a 10, pure white. These colors have no hue and are referred to as “Neutral Colors”. In addition, “Chroma is the departure degree of a color from the “Neutral Color” of the same Value. Colors of low Chroma are sometimes called “weak,” while those of high Chroma are said to be “highly saturated,”

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26 Ibid.
30 Ibid.
“strong,” or “vivid”.  

The Munsell color-order system is accepted internationally throughout the fields of art, design, and science. Also, “it is recognized as a standard system of color specification in standard Z138.2 of the American National Standards Institute, Japanese Industrial Standard for Color JIS Z 8721, the German Standard Color System, DIN 6164 and several British national standards.”  

Munsell Notation will be used to determine a value for the first four to five layers closest to the substrate within samples collected throughout South Carolina which can then be recognized internationally.

Monticello Yellow

Color has an important role as a tool to decorate interiors as well as create a specific mood or atmosphere. Colors are effective in evoking feelings and emotions, especially in the context of interior finishes. One location exemplifying this is the South

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Pavilion at Monticello. Construction of the two-story brick building began in 1770 with a living space on the top floor and a cellar on the bottom. Completed in 1809, the cellar was plastered and featured a fireplace, oven, one window, one door, and multiple stew stoves. The cellar was mainly used by those enslaved by Thomas Jefferson, for cooking or other service abilities and was later converted into a smoking closet.

![Image of South Pavilion cellar](image.jpg)

Figure 2.2 Image by Dr. Susan Buck. Southwest corner of South Pavilion cellar.

In 2017, conservator Dr. Susan Buck investigated the paint of the cellar. Originally left unpainted, the cellar started with many layers of soot and was then painted with yellow-pigmented limewashes.

Dr. Susan Buck stated that:

The findings from the 1999 paint study suggested that this cellar space was originally left unpainted, then was coated with multiple yellow-pigmented limewashes.

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limewashes and then eventually with unpigmented limewashes. Limewashes in moist cellar spaces are particularly problematic for paint archaeology as they are vulnerable to flaking and chalking, but an attempt was made to remove samples from areas that might be datable.35

The yellow-pigmented limewash is not reflected in the rooms above the cellar, so it is unclear as to where the pigment came from. The introduction of a pigment may have been included in the space with the addition of the stove since it was added at a later date.

Figure 2.3 Microscopy sample by Susan Buck. Visible light, 100X, earliest layers of southwest corner, west wall.

35 Ibid.
Haint Blue in Savannah, Georgia: The Owens-Thomas House vs The Davenport House

The term Gullah Geechee refers to descendants of enslaved Africans who were brought to the lower Atlantic region to work on plantations. Some believe that haint blue references a Gullah Geechee legend claiming that the color is used to ward off evil spirits while other community members disclaim it. There is also a belief that the color is used to repel insects, however, no case studies have been able to determine this theory. Although haint blue has been used to identify Gullah Geechee culture throughout structures, this theory has also been debunked. Shoshi Parks, anthropologist and writer, argues that not all Gullah Geechee identify with haint blue, however, the culture became distant with time and dispersion. The spiritual meaning behind haint blue may be a cultivated belief, used as a method to answer questions about derivation. Haint blue can be recognized as a modern reflection to connect to the past as a way to address unanswered questions.

The Davenport House in Savannah, Georgia, was originally the home of Isaiah Davenport, a carpenter from New England. Construction of the American Federal-style house began in 1820. The brick structure was built to accommodate the Davenport family with slave-quarters in the attic. Finishes in the attic include wood siding, painted blue,

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38 Ibid.
and fragments of wallpaper. The Historic Savannah Foundation states that people feel connected to the past “when they can see for themselves the layers of history and in that space there are literally layers to see – from the original wood surfaces that surely Davenport’s slaves Ned and Isaiah shaped, to fragments of wallpaper and its muslin backing to paint.”

Through investigation of these layers, architectural conservator George Fore discovered “that the blue is the last layer of paint on the wood surface not the first and that it probably dates from the 1890s or later. So it is not a vestige of enslaved autonomy (painting their living spaces within a master’s household).” Louise Miller Cohen, founder of Hilton Head Island’s Gullah Museum, claims that haint blue was never mentioned in her family history. Cohen states that “people are saying that we paint our houses blue to ward off the evil spirits. If that was true, all the houses on the island would be painted blue.” This statement disputes the theory that haint blue may have been consciously used for spiritual purposes. The Davenport House openly rejects the theory that haint blue is a symbol of the Gullah Geechee culture, used to keep evil spirits away. However, there is no publication stating what the haint blue in the Davenport House signifies or where exactly it came from.

41 Ibid.
42 Ibid.
The Owens-Thomas house was designed by British architect William Jay and completed in 1819.\textsuperscript{43} Originally, the neo-classical style house was built for Richard Richardson, a banker, merchant, and slave trader. Between eight to fourteen slaves were said to have occupied the north wing in a two-story structure with three rooms on each floor.\textsuperscript{44} The house was later purchased by George Welshman Owens in 1830 and is now a house museum open to the public.\textsuperscript{45}

In 1992, a preservation project was initiated to include an adaptive reuse and conservation plan for the original slave-quarters and Carriage House. Further investigation of the site “led the museum to discover the original “haint” blue paint on the


\textsuperscript{44} Ibid.

ceiling—evidence of the site’s original occupants.” Eventually, in 2018 The Owens-Thomas House was awarded a National Endowment for the Humanities Implementation Grant to reinterpret the history of the house and slave-quarters. This grant implemented the project’s goal of exploring the complex relationship between the enslaved and the enslavers in Savannah, Georgia. Using the Owens-Thomas House as a case study, the information found was aimed to provide “audiences with a broader understanding of how slavery impacted urban life both in and beyond the home, and how it affected both young and old, black and white, enslaved and free.”

Blue-pigmented limewashes were found in the bathing room as well as the ceiling and floor joists of the Carriage House.

Dr. Susan Buck’s report on the Cellar and Carriage House from 2020 states:

The current interpretation of the bright blue limewashes on the walls and ceilings of the Owens-Thomas House cellar and carriage house is that they are colored with indigo and that there was buttermilk added into the binder. The source of this interpretation is not known. Indigo is a notably unstable organic pigment which typically produces a rather grayish-blue limewash (quite unlike the brilliant blue washes now visible in the cellar and carriage house). It was more often added to nineteenth century limewashes to produce cooler “bluer” white limewashes.

Buck declares that the brilliant blue limewashes may predate the Civil War as synthetic ultramarine was readily available by that date, after about 1830. The blue limewash on the ceiling of the first floor of the Carriage House was applied before the room partitions were removed. Synthetic ultramarine would have been far more

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46 Ibid.
expensive than indigo, so this pigment required deliberate purchase or use of leftover pigments from elsewhere in the house.\textsuperscript{49}

Figure 2.5 Image by Dr. Susan Buck. Ceiling and west wall of first floor Carriage House with partition ghosts.

**Conclusion**

From *Understanding Responses to Materials and Colors in Interiors* and *Relating Material Experience to Technical Parameters: A case study on visual and tactile warmth perception of indoor wall materials*, it can be determined that visualizing colors generates a psychological response, whether that be warmth, calm, or cleanliness. However, the specific symbolism of colors in traditional spaces for enslaved people has not been able

\textsuperscript{49} Ibid.
to be identified, most likely due to the erasure of their history. Looking at enslaved spaces in Savannah, Georgia, and Virginia can provide context to how paint variations have been briefly acknowledged but lack a deeper understanding of what these colors mean or where they came from. This gap can be seen in South Carolina as well.

Results from the South Pavilion at Monticello, The Owens-Thomas House, and the Davenport House, have concluded that the pigments used in the slave dwellings were not used in the main house or have yet to be identified in other spaces. Nevertheless, the paint colors used in these spaces were chosen and inherently created an effect on the inhabitants. Information from these case studies can be used as a method for subjectively determining how enslaved people of South Carolina were affected by the interior colors of their inhabited spaces and why specific colors could have been chosen.
CHAPTER THREE

METHODOLOGY

Photomicrographs from this study will be used to evaluate a variety of paint colors and finishes in enslaved spaces. The collection of data may also lead to the development of a color palette specific to South Carolina. This chapter discusses the methodology of collecting data including samples of personal selection and from previous conservators’ records. The data analysis methodology will also be discussed through the formatting of charts and existing values such as the Munsell Book of Color, Matte Edition. This research aims to determine what variations of paints exist in enslaved spaces in South Carolina.

Site Selection

Sites were chosen based on the condition of the original fabric of the paint finishes. All sites were required to have documentation denoting a brief history of the site and an existing paint analysis report produced by Dr. Susan Buck. Constraints related to data collection include restricted access to private properties. Therefore, this study was limited to some pre-existing reports for the sites sampled. This methodology relied heavily on the previous work of Dr. Susan Buck. Interior sample locations within the sites were chosen based on visible paint colors and decorative architectural features such as baseboards, window shutters, and chair rails.
Figure 3.1 South Carolina sites marked by author via Google Earth.

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Sample Numbering

A numbering system was developed to manage and organize samples taken from Lavington Plantation Slave-Quarters, Nathaniel Russell House Kitchen-Quarters, and the Aiken-Rhett Slave-Quarters. An example of this will look like NR1SW1 (Nathaniel Russell Kitchen-Quarters, First Floor, South Room, Window, Sample One) or AK2EF1 (Aiken-Rhett Slave-Quarters, Second Floor, East Room, Fireplace, Sample One).

Samples taken from Nathaniel Russell and Aiken-Rhett were labeled with the following descriptors in this order:

Table 3.1 Nathaniel Russell Kitchen-Quarters and the Aiken-Rhett Slave-Quarters Area Code Identifiers.

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>IDENTIFYING NUMBER / LETTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nathaniel Russell Kitchen-Quarters</td>
<td>NR</td>
</tr>
<tr>
<td>Aiken-Rhett Slave-Quarters</td>
<td>AK</td>
</tr>
<tr>
<td>1st Floor</td>
<td>1</td>
</tr>
<tr>
<td>2nd Floor</td>
<td>2</td>
</tr>
<tr>
<td>North Room</td>
<td>N</td>
</tr>
<tr>
<td>South Room</td>
<td>S</td>
</tr>
<tr>
<td>East Room</td>
<td>E</td>
</tr>
<tr>
<td>West Room</td>
<td>W</td>
</tr>
</tbody>
</table>

Table 3.2 Nathaniel Russell Kitchen-Quarters and the Aiken-Rhett Slave-Quarters Feature Code Identifiers.

<table>
<thead>
<tr>
<th>FEATURE</th>
<th>IDENTIFYING NUMBER / LETTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Window</td>
<td>W</td>
</tr>
<tr>
<td>Door</td>
<td>D</td>
</tr>
<tr>
<td>Baseboard</td>
<td>B</td>
</tr>
<tr>
<td>Fireplace</td>
<td>F</td>
</tr>
<tr>
<td>Wall</td>
<td>WA</td>
</tr>
<tr>
<td>Stair hall</td>
<td>ST</td>
</tr>
<tr>
<td>Picture rail</td>
<td>H</td>
</tr>
</tbody>
</table>
For Lavington Plantation had specific areas where samples would be taken, it was decided that the sample codes would first start with the letter “L,” to identify the overall location for the project, followed by room numbers for the three interior rooms, 1 for the room to the east with the chimney, 2 for the room to the west, and 3 for the rear addition. Different components that samples were taken from, such as the walls, windows, shutters, doors, ceilings, and so on, would receive an identifier of a letter. Samples taken from Lavington Plantation Slave-Quarters were labeled with the following descriptors in this order:

Table 3.3 Lavington Plantation Slave-Quarters Area Code Identifiers.

<table>
<thead>
<tr>
<th>ROOM / AREA</th>
<th>IDENTIFYING NUMBER / LETTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lavington</td>
<td>L</td>
</tr>
<tr>
<td>Exterior</td>
<td>X</td>
</tr>
<tr>
<td>East Room</td>
<td>1</td>
</tr>
<tr>
<td>West Room</td>
<td>2</td>
</tr>
<tr>
<td>Addition</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 3.4 Lavington Plantation Slave-Quarters Feature Code Identifiers.

<table>
<thead>
<tr>
<th>FEATURE</th>
<th>IDENTIFYING NUMBER / LETTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wall</td>
<td>S</td>
</tr>
<tr>
<td>Partition</td>
<td>P</td>
</tr>
<tr>
<td>Door</td>
<td>D</td>
</tr>
<tr>
<td>Window</td>
<td>W</td>
</tr>
<tr>
<td>Shutter</td>
<td>H</td>
</tr>
<tr>
<td>Ceiling</td>
<td>C</td>
</tr>
<tr>
<td>Mantel</td>
<td>M</td>
</tr>
</tbody>
</table>
Data Collection Methodology

The act of taking samples started by wearing the proper protective gear, such as latex gloves and eye goggles. The other tools used were small zip-lock bags, a paint analysis kit featuring a micro-scalpel, tweezers, dental tools, and a handheld field DermLite DL100 Pocket Epiluminescence Unit©. After deciding on the sample locations, which were based on the visibility of a paint color, a micro-scalpel was used with a #15 blade to take a small sample from the surface. Before the sample fell off of the surface, a pair of fine tweezers was used to pull the sample and the attached substrate from the structure. The DermLite© was used to verify that the sample captured both the paint as well as a portion of the substrate. The sample was placed in one of the tiny zip-lock bags that were labeled with the associated paint sample number. A picture of the sample area was taken, and notes regarding the sample location were written down in a field notebook. This process was repeated for all samples taken.

Sample Preparation Methodology

By combining a ratio of twenty parts of Bio-Plastic® to eight drops of a catalyst component, a resin mixture was created as the base of the sample cubes. The resin mixture had to sit for 24 hours to solidify and cure.

After the base of the resin cubes had properly cured, it was time to set the samples. A Pilot Ultra Fine marker was used to label resin cubes with paint sample

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51 This tool is an oil-free pocket microscopy used to enhance pigment with illumination.
52 This is a liquid synthetic casting resin, composed of Styrene monomer, that hardens when combined with a catalyst. This chemical is a product of Ward’s Science.
numbers. A grid legend on a piece of paper was used to indicate which grid space was associated with which paint sample using the same sample number identifying key. Samples were taken one at a time and placed on a watch glass. One drop of Cyanoacrylate, commonly known as crazy glue, was used at the bottom center of the resin cubes. Samples were then placed onto the glue to avoid movement while filling the rest of the cube with resin. The samples were placed in a vertical orientation with the modern paint facing down. Once all samples were placed, a ratio of fifteen parts of Bio-Plastic® to five drops of the Catalyst component was combined to make the resin mixture. The resin mixture was then poured on top of the samples and the tray of samples was set inside the vent hood to solidify and cure for 24 hours.

Figure 3.2 Samples from Nathaniel Russell and Aiken-Rhett house set in resin by author.

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53 The catalyst is composed of a methyl ethyl ketone peroxide liquid, manufactured from Ward’s Science.
Once the samples were solidified and cured, the samples were prepared for cutting with the Buehler IsoMet® Low Speed Precision Cutter by sanding down the top edge of the sample with 3M 150 fine-grit aluminum oxide sandpaper. This was to ensure that the top and bottom faces were level and firmly clamped into the IsoMet®. Lines were then drawn on the bottom of the sample using a Pilot Ultra Fine marker to mark the location of where cuts would be created. The sample was then placed in the IsoMet® arm and tightened to make sure that the sample would not move during the cutting process. Once the samples were cut, the cut faces were polished on a Buehler EcoMet® 30 Manual Grinder-Polisher with a Buehler eight-inch microcloth and micropolish II. After the sample was polished, the resin cube was placed onto a microscope slide and held in place with a small amount of removable mounting putty.

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55 This machine is used to ensure that the sample is ground and polished to reduce any physical abrasions. Buehler micropolish II is an aluminum oxide powder, with a 0.05 micron size, used to provide a better finish to the material.
with the cut edge facing up. A level was used to ensure that the cut edge was even and parallel to the slide below.

Data Analysis

The samples were then placed on the stage of the microscope for analysis. One of the two microscopes used for analysis was the Motic Microscope with Jenoptik Gryphax Arktur 4K Ultra HD 8MP camera and the camera program, iSolution Lite x64, which was opened on the computer linked to the microscope. CRAIC Visible Imaging software at 4X or 10X magnification was also utilized when using a Nikon 80i. After finding the sample using the ocular lenses and ensuring the sample was in focus, the view toggle on the microscope was adjusted so the sample could be viewed on the computer screen. The sample would then be placed in focus, and the stage would be manipulated by moving it.
left and right, up, and down, to analyze the sample in its entirety. Once the sample with the most layers or information was located, a photomicrograph was taken using the computer program and saved to be inserted into a stratigraphy sheet created in Microsoft Word. Visual analysis under an ultraviolet filter, in conjunction with Dr. Susan Buck’s *Cross-section Microscopy Reference Charts*, was used to determine if the layer was paint or limewash.56

For sites that have undergone substantial data collection by conservator Dr. Susan Buck gathering of these reports was acquired through email correspondence with Buck and Historic Charleston Foundation. These reports were then compiled together and organized by location.

Stratigraphies were recorded for samples taken from Lavington Plantation Slave-Quarters, Nathaniel Russell House Kitchen-Quarters, and the Aiken-Rhett Slave-Quarters both pre- and post-casting. Each stratigraphy records a sample number, location description, microscope illumination, and magnification. A photomicrograph was used to document each layer, starting from the substrate, with descriptions of color, texture, thickness, and inclusions per finish layer.

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56 Dr. Susan Buck’s *Cross-section Microscopy Reference Charts - Paints, Varnishes, and Glazes* can be found in Appendix C.
Munsell Book of Color, Matte Edition was used as a value for determining colors. Munsell Colors were assigned to sample layers that exhibit pigment based on visual analysis underneath a student microscope. This was performed on samples taken by the author from Nathaniel Russell Kitchen-Quarters, Aiken-Rhett Slave-Quarters, and Lavington Plantation. A palette was then determined based on any similar pigments that were exhibited throughout all sites. South Carolina newspaper listings from 1735 to 1794 will also be collected and analyzed to determine any correlations between what was visible and what was advertised.

CHAPTER FOUR

ANALYSIS

Introduction

This chapter outlines the results of the data collection consisting of pre-cast analysis charts and stratigraphies of 92 samples. The first section describes the analysis of samples taken by the author from Nathaniel Russell Kitchen-Quarters, Aiken-Rhett Slave-Quarters, and Lavington Plantation Slave-Quarters. Results are presented through a chart showing sample number, location, and appearance before casting with resin. The next section includes a photograph of where each sample was taken. A photomicrograph of varying magnifications is exhibited next to the corresponding location photograph. Layers are addressed with numbers to describe the color and material. These captions were identified via visual analysis on the Motic Microscope with Jenoptik Gryphax Arktur 4K Ultra HD 8MP camera and the camera program, iSolution Lite x64. Samples taken by Dr. Susan Buck were labeled with appropriate captions by Buck as well. This section will include summary charts of the Munsell Color Notations found in the samples extracted by the author. A brief history of each site will be introduced to provide context to the analysis of the paint samples. Following this section, an analysis of all sites will be discussed with a review of what finishes currently exist in enslaved spaces and potentially what having a finish can mean. A suggestion of where these paint colors could have originated from will also be addressed to determine the decision-making of the pigments chosen.
**Table 4.1 Nathaniel Russell Kitchen-Quarters Pre-Cast Analysis**

<table>
<thead>
<tr>
<th>SAMPLE #</th>
<th>LOCATION</th>
<th>PRECAST ANALYSIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NR1SW1</td>
<td>1st fl. South window</td>
<td>Does not appear to have any pigment. If any it is very washed out. Sand or dirt appears abrasive</td>
</tr>
<tr>
<td>NR1SD1</td>
<td>1st fl. South door</td>
<td>Most of the layer has detached from the substrate. White and mint layers are visible with green pigments</td>
</tr>
<tr>
<td>NR1EF1</td>
<td>1st fl. East fireplace</td>
<td>Stucco is extremely friable. Layers of cream or gray and yellow is visible with pigments</td>
</tr>
<tr>
<td>NR1NWA1</td>
<td>1st fl. North wall</td>
<td>Stucco is extremely friable. Appears to have one layer of cream or gray. Sand</td>
</tr>
<tr>
<td>NR1EW1</td>
<td>1st fl. East window</td>
<td>Layers of cream, mint, and possibly pink on wood substrate</td>
</tr>
<tr>
<td>NR2EW1</td>
<td>2nd fl. East window</td>
<td>Pink substrate on wood. Little pigment is visible</td>
</tr>
<tr>
<td>NR2WD1</td>
<td>2nd fl. West door</td>
<td>Layers of pink and cream with visible pigments on wood substrate</td>
</tr>
<tr>
<td>NR2SB1</td>
<td>2nd fl. South baseboard</td>
<td>Pink and green layers on wood substrate</td>
</tr>
<tr>
<td>NR2SWA1</td>
<td>2nd fl. South wall</td>
<td>Stucco is extremely friable. Mint green layer also appears to be friable, chipping off of stucco</td>
</tr>
<tr>
<td>NR2SW1</td>
<td>2nd fl. South window</td>
<td>Layers of pink, mint green, and cream on wood substrate.</td>
</tr>
</tbody>
</table>
The Nathaniel Russell House was built in 1808 in the Federal style. The first few layers of Dr. Susan Buck’s samples reflect a translucent whitewash, followed by layers of orange, gray-blues, tan-grays, and black. Samples extracted by the author contained initial layers of mints, dark grey, creams, yellows, and oranges. Variations of these pigments are reflected in the main house, as seen in previous reports by Dr. Susan Buck.

**4.1 NR1SW1- 1st fl. South façade window trim**
Visible Light 10X

**4.2 NR1SD1- 1st fl. South façade door trim**
Visible Light 10X

---

4.3 **NR1EF1** - 1st fl. East façade fireplace
Visible Light 10X

4.4 **NR1NWA1** - 1st fl. North wall
Visible Light 10X

- 4. 2.5Y 7/4
- 3. 5Y 5/2
- 2. 2.5Y 7/4
- 1. 10YR 9/1

4. Yellow cream
3. Debris, possibly soot
2. Yellow cream
1. Cream with jumbled repair material
0. Stucco substrate

0. Stucco substrate with plaster, no layers visible
4.5 **NR1EW1** - 1st fl. East façade window trim
Visible Light 10X

4. Cream  
3. Clear fill material  
2. Modern off-white  
1. Pale mint with dirt  
0. Wood substrate, rough surface potentially caused by paint preparation

4. 10 YR 9/1  
3. Repair material  
2. N 9.5  
1. 2.5BG 8/2

4.6 **NR2EW1** - 2nd fl. East façade window trim
Visible Light 10X

3. N 9.5  
2. Repair material  
1. N 9.5

3. Modern off-white  
2. Clear fill material  
1. Primer  
0. Wood substrate, rough surface potentially caused by paint preparation
**4.7 NR2WD1 - 2nd fl. West façade door trim**
Visible Light 10X

- 10YR 7/6
- 10YR 9/4
- 2.5BG 8/2
- 10YR 9/1
- 5YR 9/4
- 5YR 8/4
- 10YR 9/1

13. Modern white
12. Primer
11. Cream
10. Off-white
9. Pale orange
8. Off-white
7. Orange
6. Yellow
5. Pale mint
4. Yellow cream
3. Pale pink
2. Pale orange
1. Cream with inclusions
0. Wood substrate

**4.8 NR2SB1 - 2nd fl. South façade baseboard**
Visible Light 10X

- 10YR 9/2
- 2.5BG 4/2
- 2.5BG 8/2
- 7.5G 6/2
- 2.5BG 8/2
- 2.5BG 4/2
- 10YR 9/2

12. Modern white
11. Cream
10. White
9. Clear fill material
8. Primer
7. Gray
6. Yellow cream
5. Layers of mint and pale mint
4. Yellow cream
3. Wood substrate fibers
4.9 NR2SWA1 - 2nd fl. South façade wall
Visible Light 10X

1. 10YR 8/2
2. 10YR 9/2
3. 10YR 9/4
4. 10YR 9/2
5. 5GY 8.5/2

0. Stucco
1. 4. Layers of yellow cream with debris
2. Pale mint

4.10 NR2SW1 - 2nd fl. South window
Visible Light 10X

1. Tan
2. Light brown
3. Dark brown
4. 7.5YR 4/6
5. 10YR 9/2

0. Wood substrate
1. Primer
2. Repair fill material
3. Light blue
4. Layers of jumbled yellow cream
5. Pale mint
6. Layers of yellow cream with debris

20. Modern white
19. Cream or topcoat
4.11 Sample 32A- Plaster sample, north opening, east façade of kitchen
Visible Light 125X

7. Remnant of an oil glaze
6. Cream color
3-5. Gray layers
2. Primer
1. Remnant of whitewash
0. Plaster

4.12 Sample 32B- Plaster sample, north opening, east façade of kitchen
Visible Light 125X

4-5. Black layers
2-3. Blue-gray layers
1. Orange paint or whitewash
0. Plaster

4.13 Sample 33- North opening, east façade of kitchen, interior plaster of hyphen
Visible Light 125X

3. Remnants of clear oil glaze
2. Cream colored paint
1. Coarse dark-gray layer
0. Finish plaster
4.14 Sample 34- North opening, paint from jack arch behind kitchen
Visible Light 250X

6. Deep red-brown paint
5. Brown glaze
4. Red glaze
3. Cream colored base coat, possible start to graining sequence
2. Gray-tan layer
1. Gray-blue paint
0. Break

4.15 Sample 35- North opening, inner facing sooty side of kitchen hyphen
Visible Light 125X

Later generations of black and dark gray paint are missing
3-9. Multiple whitewash layers
2. Whitewash with blue pigments
1. Dark gray paint
0. Rough plaster

4.16 Sample 37- East wall kitchen, south opening, exterior face. Solid Portion of jamb at bead.
Visible Light 125X

1-18. At least 18 generations of paint with considerable dirt trapped between the layers
0. A few wood fibers at the bottom of the sample
4.17 Sample 38- East wall kitchen, south opening, exterior face. Transom. Sample taken from across junction between putty and wood. Visible Light 125X

2-17. At least 15 generations of paint above wood substrate
1. Putty
0. Wood fibers

4.18 Sample 40- East wall kitchen, south opening, exterior face. Outermost surviving piece of trim. Door trim covered by Pelzer ceiling c.1927 (2 samples) Visible Light 125X

1-15. These layers are consistent with the uppermost layers in sample 37
Table 4.2 Nathaniel Russell Kitchen-Quarters Sample Analysis

<table>
<thead>
<tr>
<th>SAMPLES</th>
<th>LAYER 1</th>
<th>LAYER 2</th>
<th>LAYER 3</th>
<th>LAYER 4</th>
<th>LAYER 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>NR1SW1</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NR1SD1</td>
<td>Mint</td>
<td>Pale mint</td>
<td>Mint</td>
<td>Pale mint</td>
<td>Mint</td>
</tr>
<tr>
<td>NR1EF1</td>
<td>Cream with fill material</td>
<td>Yellow cream</td>
<td>Debris</td>
<td>Yellow cream</td>
<td></td>
</tr>
<tr>
<td>NR1NWA1</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NR1EW1</td>
<td>Mint</td>
<td>Modern off-white</td>
<td>Fill material</td>
<td>Cream</td>
<td></td>
</tr>
<tr>
<td>NR2EW1</td>
<td>Primer</td>
<td>Fill material</td>
<td>Modern off-white</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NR2WD1</td>
<td>Cream</td>
<td>Pale orange</td>
<td>Pale pink</td>
<td>Yellow cream</td>
<td>Pale mint</td>
</tr>
<tr>
<td>NR2SB1</td>
<td>Yellow cream</td>
<td>Mint</td>
<td>Pale mint</td>
<td>Mint</td>
<td>Pale mint</td>
</tr>
<tr>
<td>NR2SWA1</td>
<td>Yellow cream</td>
<td>Yellow cream</td>
<td>Yellow cream</td>
<td>Pale mint</td>
<td></td>
</tr>
<tr>
<td>NR2SW1</td>
<td>Tan</td>
<td>Light brown</td>
<td>Dark brown</td>
<td>Yellow cream</td>
<td>Yellow cream</td>
</tr>
<tr>
<td>32A</td>
<td>Whitewash</td>
<td>Primer</td>
<td>Gray</td>
<td>Gray</td>
<td>Gray</td>
</tr>
<tr>
<td>32B</td>
<td>Orange paint or whitewash</td>
<td>Blue-gray</td>
<td>Blue-gray</td>
<td>Black</td>
<td>Black</td>
</tr>
<tr>
<td>33</td>
<td>Dark-gray</td>
<td>Cream</td>
<td>Clear oil glaze</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Gray-blue</td>
<td>Gray-tan</td>
<td>Cream basecoat</td>
<td>Red glaze</td>
<td>Brown glaze</td>
</tr>
<tr>
<td>35</td>
<td>Dark gray</td>
<td>Whitewash with blue pigments</td>
<td>Whitewash</td>
<td>Whitewash</td>
<td>Whitewash</td>
</tr>
<tr>
<td>37</td>
<td>Paint with dirt</td>
<td>Paint with dirt</td>
<td>Paint with dirt</td>
<td>Paint with dirt</td>
<td>Paint with dirt</td>
</tr>
<tr>
<td>38</td>
<td>Putty</td>
<td>Paint</td>
<td>Paint</td>
<td>Paint</td>
<td>Paint</td>
</tr>
<tr>
<td>40</td>
<td>Paint</td>
<td>Paint</td>
<td>Paint</td>
<td>Paint</td>
<td>Paint</td>
</tr>
</tbody>
</table>
Table 4.3 Nathaniel Russell Kitchen-Quarters Munsell Notations

<table>
<thead>
<tr>
<th>Notation</th>
<th>NR1SD1</th>
<th>NR1EF1</th>
<th>NR1EW1</th>
<th>NR2EW1</th>
<th>NR2WD1</th>
<th>NR2SB1</th>
<th>NR2SWA1</th>
<th>NR2SW1</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5BG 4/2</td>
<td>3, 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2, 6</td>
</tr>
<tr>
<td>2.5BG 8/2</td>
<td>2, 4</td>
<td>1</td>
<td></td>
<td>5</td>
<td></td>
<td>3, 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.5BG 6/2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.5Y 7/4</td>
<td></td>
<td>2, 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5Y 5/2</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10YR 9/1</td>
<td>1</td>
<td>4</td>
<td>1, 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N 9.5</td>
<td></td>
<td></td>
<td>2</td>
<td>1, 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10YR 7/6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
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### Aiken-Rhett House Slave-Quarters

#### Table 4.4 Aiken-Rhett Slave-Quarters Pre-Cast Analysis

<table>
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<tr>
<th>SAMPLE #</th>
<th>LOCATION</th>
<th>PRECAST ANALYSIS</th>
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<tbody>
<tr>
<td>AK1EWA1</td>
<td>1st fl. East wall</td>
<td>Red, pink, and brown layer on stucco. Stucco is extremely friable.</td>
</tr>
<tr>
<td>AK1NWA1</td>
<td>1st fl. North wall</td>
<td>Yellow layer with pigments on stucco. Stucco is extremely friable</td>
</tr>
<tr>
<td>AK1ED1</td>
<td>1st fl. East door</td>
<td>Deep red on wood. Shiny, possibly varnish</td>
</tr>
<tr>
<td>AK1SH1</td>
<td>1st fl. South picture rail</td>
<td>Pink or cream layer on wood</td>
</tr>
<tr>
<td>AK1SF1</td>
<td>1st fl. South fireplace</td>
<td>Yellow, red, and cream layers on stucco. Stucco is extremely friable</td>
</tr>
<tr>
<td>AK2NWA1</td>
<td>2nd fl. North wall</td>
<td>Mint green and pink layers on friable stucco</td>
</tr>
<tr>
<td>AK2EST1</td>
<td>2nd fl. East stair hall</td>
<td>Tan layer with visible pigments. Layer looks friable with cracks throughout</td>
</tr>
<tr>
<td>AK2EF1</td>
<td>2nd fl. East fireplace</td>
<td>Red layer with visible pigments</td>
</tr>
<tr>
<td>AK2SWA1</td>
<td>2nd fl. South wall</td>
<td>Cream or pink with visible pigments. Stucco is extremely friable</td>
</tr>
<tr>
<td>AK2EWA1</td>
<td>2nd fl. East wall</td>
<td>Yellow and cream layers on extremely friable stucco.</td>
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</tbody>
</table>
Aiken-Rhett Slave-Quarters: Cross-section Photomicrographs & Stratigraphies - Dec. 23

The Aiken-Rhett house was built in 1820, in a Greek-revival style, with renovations in the 1830s and 1850s. This site exhibited the most variety of pigments throughout the earlier layers. Bucks’ samples taken from the quarters include layers of creams, yellows, reds, oranges, browns, and greens. These same pigments were also used in the main house, presuming that the paints used in the quarters were left over from the main house. This was reflected in samples taken by the author as well.

4.19 AKEWA1- 1st fl. East façade wall
Visible Light 10X

3. 2.5YR 3/4
2. 2.5YR 4/8
1. 7.5YR 8/4

3. Dark brown
2. Red above dirt boundary
1. Orange limewash
0. Stucco

---

4.20 AK1NWA1- 1st fl. North façade wall
Visible Light 10X

4. Yellow limewash with visible pigments
3. Unpigmented limewash
2. Unpigmented limewash
1. Repair material
0. Stucco

4.21 AK1ED1- 1st fl. East façade door
Visible Light 10X

2. Green pigment
1. Jumbled dark green with visible pigments sandwiched between dirt
0. Wood substrate

2. 2.5G 7/2
1. 10Y 2.5/1
4.22 AK1SH1- 1st fl. South façade picture rail
Visible Light 10X

4.23 AK1SF1- 1st fl. South façade fireplace
Visible Light 10X

8. 10YR 8/6
5-7. 10YR 9/2
4. 10YR 6/2
3. 10R 7/6
2. 10YR 9/2
1. 7.5YR 8/4

11. Tan
10. Pink limewash
9. Tan
8. Yellow limewash
5-7. layers of cream
4. Tan
3. Pink limewash
2. Cream, uneven, pink seeped from above layer
1. Orange limewash
0. Stucco substrate
4.24 AK2NWA1 - 2nd fl. North façade wall
Visible Light 10X

4.25 AK2EST1 - 2nd fl. East façade stair hall wall
Visible Light 10X
4.26 AK2EF1 - 2nd fl. East façade fireplace
Visible Light 10X

2. Thick red limewash
1. Potentially black pigment or soot
0. Separated from wood substrate

2. 7.5R 5/6
1. Dirt

4.27 AK2SWA1 - 2nd fl. South façade wall
Visible Light 10X

2. Thin white
1. Yellow cream
0. Plaster, top layer has been abraded

2. 10YR 9/1
1. 10YR 9/4
4.28 AK2EWA1- 2nd fl. East façade wall
Visible Light 10X


4.29 K101-II-11. West wall, center window, lower bar across
Visible Light 200X

- 19. Modern red-brown
- 18. Off-white
- 17. Red-brown
- 16. Blackish-green
- 15. Dark resinous green
- 14. Medium green
- 13. Pale gray-green
- 12. Gray
- 11. Brown with resinous coating
- 10. Brown with resinous coating
- 9. Brown resinous coating
- 8. Gray paint
- 7. Brown paint
- 6. Black paint
- 5. Tannish-gray paint
- 4. Tan paint with resinous coating
- 3. Dark green resinous coating
- 2. Dark gray oil paint
- 1. Tan or cream oil in paint
- 0. Shellac in wood
**4.30 K101-II-1.** West wall, south door, original door reveal, left side about 4’ to confirm Period I woodwork chronology

Visible Light 200X

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<tr>
<th>Layer</th>
<th>Description</th>
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<tr>
<td>3</td>
<td>Off-white</td>
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<tr>
<td>4</td>
<td>Brown with resinous coating</td>
</tr>
<tr>
<td>5</td>
<td>Red-brown</td>
</tr>
<tr>
<td>6</td>
<td>Off-white</td>
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<tr>
<td>7</td>
<td>Modern red-brown</td>
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**4.31 K101-II-2.** North wall, south door, later door in Period II partition wall, left side

Visible Light 200X

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<thead>
<tr>
<th>Layer</th>
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<td>Tan paint</td>
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<td>3</td>
<td>Gray paint</td>
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<tr>
<td>4</td>
<td>Off-white</td>
</tr>
<tr>
<td>5</td>
<td>Brown with resinous coating</td>
</tr>
<tr>
<td>6</td>
<td>Pale gray-green</td>
</tr>
<tr>
<td>7</td>
<td>Medium green</td>
</tr>
<tr>
<td>8</td>
<td>Dark resinous green</td>
</tr>
<tr>
<td>9</td>
<td>Blackish-green</td>
</tr>
<tr>
<td>10</td>
<td>Red-brown</td>
</tr>
<tr>
<td>11</td>
<td>Off-white</td>
</tr>
<tr>
<td>12</td>
<td>Modern red-brown</td>
</tr>
<tr>
<td>13</td>
<td>Light gray</td>
</tr>
</tbody>
</table>

1. Tan or cream oil in paint
2. Dark gray oil paint
3. Off-white
4. Brown with resinous coating
5. Red-brown
6. Off-white
7. Modern red-brown
8. Dark resinous green
9. Blackish-green
10. Red-brown
11. Off-white
12. Modern red-brown
13. Light gray
4.32 K101-II-3. West wall, south door, later glazed door, left stile about 4’ up
Visible Light 200X

7. Modern red-brown
6. Off-white
5. Red-brown
4. Dark resinous green
3. Medium green
2. Pale gray-green
1. Brown with resinous coating
0. Primer with white zinc

4.33 K101-II-12. West wall, later window sash
Visible Light 200X

7. Green
6. Light gray
5. Gray
4. Brown with resinous coating
3. Brown resinous coating
2. Cream
1. Cream
4.34 K101-II-5. East wall, plaster above later installations of stew stove, 1858 plaster on circular sawn lath, for comparative dating
Visible Light 100X

4.35 K101-II-7. North wall, wide board about 3’ from northeast corner
Visible Light 200X

10. Pale yellow wash
9. Dark yellow paint
8. Unpigmented limewash
7. Deep orange paint
6. Deep orange wash
5. Unpigmented limewash
4. Tannish wash
3. Unpigmented limewash
2. 1858 Sandy white coat
1. 1858 Brown coat

8. Unpigmented limewash
7. Yellow wash
6. Unpigmented limewash
5. Bright yellow wash
4. Pale orange at wainscot level
3. Pale orange
2. Dark gray at wainscot level
1. Unpigmented/gray wash
0. White coat plaster Period II
4.36 K101-II-16. Board just above pegrail used to support gas pipe and later support water pipe, on south wall just above door
Visible Light 40X

8-9. Opaque off-white paints
7. Pale yellow wash
6. Unpigmented limewash
5. Dark yellow paint
4. Unpigmented limewash
3. Deep orange paint
2. Unpigmented limewash
1. Unpigmented limewash

4.37 K102-II-8. North wall, Period I baseboard, just right of door opening, to identify original paint and for comparison with Period II baseboard
Visible Light 200X

6. Pigmented varnish
5. Green
4. Medium brown
3. Light brown
2. Brown with varnish
1. Light brown on cream-colored primer
4.38 K103-II-2. Staircase, full paint chronology just left of ghost on south side of staircase
Visible Light 200X

4.39 K103-II-6. East wall, riser just below stair landing
Visible Light 200X
4.40 K104-II-3. South wall, southeast corner, at crack about 4’ up
Visible Light 100X

- 10. Dark yellow pigmented limewash
- 9. Dark yellow pigmented limewash
- 8. Orange pigmented limewash
- 7. Unpigmented limewash
- 6. Yellow pigmented limewash
- 5. Yellow pigmented limewash
- 1-4. Unpigmented limewash
- 0. Period II plaster

4.41 K203-II-4. West wall pegrail, lower edge for comparison for paint chronology
Visible Light 200X

- 5. Pink paint remnants
- 4. Black
- 3. Brown (generation 11 in K101
- 2. Shellac
- 1. Red-brown paint on wood
4.42 K203-II-3. West wall, on grayish ghost behind position for former curtain support for comparison
Visible Light 200X

4. Unpigmented limewash
3. Pinkish-orange limewash
2. Yellow pigmented limewash
1. Unpigmented limewash
0. Brown coat of plaster

4.43 K204B-II-4. East wall rob window, upper left corner of window frame (early blue paint is present)
Visible Light 200X

4. Medium blue paint (now degraded to dark blue-black)
3. Gray with zinc white (post-1845)
2. Cream-colored paint
1. Cream-colored paint
**4.44 K204A-II-1.** East wall, near join of Period II building, faux black wainscot can be seen below peeling paint
Visible Light 100X

12. Yellow pigmented limewash
11. Yellow pigmented limewash
10. Unpigmented limewash
9. Yellow pigmented limewash
8. Orange pigmented limewash
6-7. Unpigmented limewash
4-5. Dark gray limewash
3. Unpigmented limewash
2. Dark gray limewash
1. Yellow pigmented limewash
0. Plaster

**4.45 K206-II-1.** South wall pegrail
Visible Light 200X

4. Modern white
3. Light gray paint with varnish (contains zinc white)
2. Brown paint
1. Cream color with varnish (Period II)
4.46 K206-II-2. North wall, inserted window, likely in Period III, reveal on left side, to establish the later paint sequence
Visible Light 200X

4.47 K206-II-3. North wall, inserted window, likely in Period III, red paint on exterior of window frame
Visible Light 200X
4.48 K206-II-4. North wall, inserted window, likely in Period III, green on exterior of underside of Gothic arch, left side
Visible Light 200X

Table 4.5 Aiken-Rhett Slave-Quarters Sample Analysis

<table>
<thead>
<tr>
<th>SAMPLES</th>
<th>LAYER 1</th>
<th>LAYER 2</th>
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<td>Orange limewash</td>
<td>Red</td>
<td>Dark brown</td>
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<td>AK1NWA1</td>
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<td>Unpigmented limewash</td>
<td>Unpigmented limewash</td>
<td>Yellow limewash</td>
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<td>AK1ED1</td>
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<td>AK1SH1</td>
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<td>Orange limewash</td>
<td>Cream</td>
<td>Pink</td>
<td>Tan</td>
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<td>Pale mint limewash</td>
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<td>Ochre</td>
<td>Cream</td>
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2. Modern green on gray primer
1. Red-orange paint on dirty wood substrate
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<th>SAMPLES</th>
<th>LAYER 1</th>
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<th>LAYER 3</th>
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<td>Dark green resinous coating</td>
<td>Tan paint with resinous coating</td>
<td>Tannish-gray paint</td>
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<td>Dark gray oil paint</td>
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<td>Red-brown</td>
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<td>Brown with resinous coating</td>
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<td>K101-II-5</td>
<td>1858 Brown coat</td>
<td>1858 Sandy white coat</td>
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<td>Shellac</td>
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<td>SAMPLES</td>
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<td>Modern green on gray primer</td>
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Table 4.6 Aiken-Rhett Slave-Quarters Munsell Notations

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Heyward Washington House Kitchen-Quarters

Heyward Washington House Kitchen-Quarters by Susan Buck – April 1, 2019 and April 7, 2020

The Heyward Washington house was built in 1772 in a Georgian style, with a 1740s kitchen building. Architectural historian, Willie Graham believes that the site may be more contemporary due to recent investigations. In Sample Two from the third floor, there is a possibility of a faux-painted orange or yellow baseboard or wainscot. The following layers of unpigmented limewashes are reflected in Sample One, which was taken from the same room but at a higher level. Similar pigmented oranges, along with a light pink, are reflected in samples on the second floor. Samples taken from paneled doors include a first layer of gray, followed by browns and dark brown.

61 Willie Graham, conversation with author, February 20, 2024.
4.49 3-1. 3rd fl. south wall, west side of window, accumulation of reds and yellow limewashes below blackened surface.
Visible Light 100X

1. Unpigmented limewash
2-5. Unpigmented limewash layers
6. Orange pigmented limewash
7. Unpigmented limewash
8. Yellow pigmented limewash
9-10. Unpigmented limewash
11. Yellow pigmented limewash
12. Gray pigmented limewash
13. Unpigmented limewash
0. Plaster substrate
4.50 3-2. 3rd fl. south wall, southwest corner, about 1-foot above baseboard level
Visible Light 100X

18-19. Layers of unpigmented limewashes
17. Orange pigmented limewash
13-16. Layers of unpigmented limewashes
12. Yellow pigmented limewash
5-11. Layers of orange pigmented limewashes
3-4. Layers of unpigmented limewashes
1-2. Layers of yellow pigmented limewashes
0. Plaster substrate

4.51 2-3. 2nd fl. East room, north wall above wainscot
Visible Light 100X

8. Unpigmented limewash
7. Orange pigmented limewash
3-6. Unpigmented limewash
2. Unpigmented limewash
1. Pinkish pigmented limewash
0. Plaster substrate with grimy surface
4.52 2-4. 2nd fl. East room, north wall below wainscot
Visible Light 200X

9-14. Unpigmented limewashes
8. Orange pigmented limewash
1-7. Layers of unpigmented limewashes

4.53 2-5. 2nd fl. Door to east room, passage side, upper right corner of middle right panel
Visible Light 200X

4. Chalky Gray
3. Tannish brown
2. Brown with charred surface
1. Gray
0. Wood substrate
4.54 2-6. 2nd fl. Door to east room, room side, upper right corner of middle right panel
Visible Light 200X

9. Gray
8. Dark brown
7. Dark yellow
6. Orange-brown
5. Dark yellow
4. Limewash
3. Dark brown
2. Brown
1. Gray

4.55 K-5. Kitchen, north wall at large hole in brick, west side
Visible Light 100X

4. Blue pigmented limewash
3. Unpigmented limewash
2. Unpigmented limewash
1. Coarse yellow
0. Coarse plaster
4.56 K-1. Kitchen, north wall, early blue paint, center of wall
Visible Light 100X

Visible Light 100X
Visible Light 100X

4. Blue pigmented limewash
3. Unpigmented limewash
2. Dislodged yellow pigmented limewash
1. Remnants yellow limewash
0. Sandy plaster

4.59 K-4. Kitchen, east wall, washes and plaster on filled in door
Visible Light 40X

20. Orange pigmented limewash
19. Unpigmented limewash
18. Orange pigmented limewash
12-17. Layers of unpigmented limewash
11. Soot in limewash
1-10. Layers of yellow and unpigmented limewashes
4.60 K-7. Kitchen, north wall of stair on charred woodwork
Visible Light 200X

1. Charred brown paint
2. Dark yellow paint
0. Wood substrate

4.61 K-6. Kitchen, south wall, top right corner of window jamb (charred)
Visible Light 200X

2. Dark yellow paint
1. Dark brown paint
0. Wood substrate
4.62 L-1. North wall, yellow limewash under blue, east side
Visible Light 100X

11. Yellow pigmented limewash
10. Unpigmented limewash
9. Yellow pigmented
7-8. Unpigmented limewash
6. Soot embedded in limewash
1-5. Layers of unpigmented limewash

4.63 L-2. North wall, plaster and wash on wall of possible missing shelf, west side
Visible Light 100X

9. Unpigmented limewash
8. Soot in embedded limewash
5-7. Yellow pigmented limewash
2-4. Layers of unpigmented limewash
1. Yellow pigmented limewash
Table 4.7 Heyward Washington House Kitchen-Quarters Sample Analysis

<table>
<thead>
<tr>
<th>SAMPLES</th>
<th>LAYER 1</th>
<th>LAYER 2</th>
<th>LAYER 3</th>
<th>LAYER 4</th>
<th>LAYER 5</th>
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<td>3-1</td>
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<td>Unpigmented limewash</td>
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<td>Unpigmented limewash</td>
<td>Orange limewash</td>
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<td>2-3</td>
<td>Pinkish limewash</td>
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<td>2-5</td>
<td>Gray</td>
<td>Brown with charred surface</td>
<td>Tannish brown</td>
<td>Chalky gray</td>
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<tr>
<td>2-6</td>
<td>Gray</td>
<td>Brown</td>
<td>Dark brown</td>
<td>Limewash</td>
<td>Dark yellow</td>
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<td>K-5</td>
<td>Yellow</td>
<td>Unpigmented limewash</td>
<td>Unpigmented limewash</td>
<td>Blue limewash</td>
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<tr>
<td>K-1</td>
<td>Unpigmented limewash</td>
<td>Unpigmented limewash</td>
<td>Blue limewash</td>
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<tr>
<td>K-2</td>
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<td>Unpigmented limewash</td>
<td>Orange limewash</td>
<td>Unpigmented limewash</td>
</tr>
<tr>
<td>K-3</td>
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<td>Yellow limewash</td>
<td>Unpigmented limewash</td>
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<tr>
<td>K-4</td>
<td>Yellow/ unpigmented limewash</td>
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<td>K-7</td>
<td>Charred brown paint</td>
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<tr>
<td>K-6</td>
<td>Dark brown paint</td>
<td>Dark yellow paint</td>
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Capers-Motte House Kitchen-Quarters

Capers-Motte House Kitchen-Quarter by Susan Buck - March 28, 2019

This site was constructed circa 1750 with alterations in the early 19th century and 1971. Most sample surfaces have been cleaned and possibly sanded, removing layers of evidence. The larder door on the first floor was believed to have originally been used as an exterior door. The first layers consist of dark red-browns and yellows. Sample five is a reused board with first layers consisting of 18th and 19th-century oil-based paints. These colors are dark red-brown, dark yellow, and dark red.

4.64 1. West chamber, north wall, pigmented limewashes on fireplace
Visible Light 100X

1. Unpigmented limewash
0. Plaster substrate

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4.65 2. Middle chamber, north wall, pigmented limewashes on plastered fireplace
Visible Light 100X

3. Red-orange pigmented limewash
2. Dull yellow pigmented limewash
1. Reddish-brown pigmented limewash

4.66 3. East chamber, northwest corner, limewash accumulations above fireplace opening
Visible Light 100X

6-8. Layers of unpigmented limewash
5. Soot embedded in limewash
1-4. Layers of unpigmented limewash
4.67 4. Larder door, formerly exterior door, edge of knot about 6-feet up
Visible Light 100X

11. Gray
10. Green
9. Brown
8. Dark yellow with charred surface
5-7. Dark yellow
3-4. Dark red-brown
2. Dark brown with charred surface
1. Dark red-brown

4.68 5. Reused board on shutter, may have been from door, on paint remnants
Visible Light 100X

7. 20th century white and green paints
6. Dark tan
4-5. Tan
3. Dark red
2. Dark yellow
1. Dark red-brown
Table 4.8 Capers-Motte House Kitchen-Quarters Sample Analysis

<table>
<thead>
<tr>
<th>SAMPLES</th>
<th>LAYER 1</th>
<th>LAYER 2</th>
<th>LAYER 3</th>
<th>LAYER 4</th>
<th>LAYER 5</th>
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<tr>
<td>2</td>
<td>Reddish-brown limewash</td>
<td>Dull yellow limewash</td>
<td>Red-orange limewash</td>
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<tr>
<td>3</td>
<td>Unpigmented limewash</td>
<td>Unpigmented limewash</td>
<td>Unpigmented limewash</td>
<td>Unpigmented limewash</td>
<td>Soot in limewash</td>
</tr>
<tr>
<td>4</td>
<td>Dark red-brown</td>
<td>Dark brown with charred</td>
<td>Dark red-brown</td>
<td>Dark red-brown</td>
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<td>5</td>
<td>Dark red-brown</td>
<td>Dark yellow</td>
<td>Dark red</td>
<td>Tan</td>
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38 Church St. Kitchen-Quarters

38 Church St. Kitchen-Quarters by Susan Buck – March 28, 2019

This house was constructed circa 1819 with renovations in 1900 and 1980 which included alterations of the kitchen-quarters.\(^{63}\) Sample One contains a finely ground green paint which is potentially from the 20\(^{th}\) century. This green is consistent with the first layer of Sample Three. Sample Two exhibits initial layers of limewash which is followed by finely ground 20\(^{th}\) century paints.

4.69 1. Front of 2nd fl. board door
Visible Light 100X

3-6. Layers of off-whites
2. Gray with zinc white
1. Green paint
0. Wood substrate

4.70 2. Back of 2nd fl. board door
Visible Light 100X

3-10. Finely ground 20th century paints
1-2. Layers of limewash
4.71 3. Paint trapped in corner of door reveal
Visible Light 200X

Table 4.9 38 Church St. Kitchen-Quarters Sample Analysis

<table>
<thead>
<tr>
<th>SAMPLES</th>
<th>LAYER 1</th>
<th>LAYER 2</th>
<th>LAYER 3</th>
<th>LAYER 4</th>
<th>LAYER 5</th>
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<td>3</td>
<td>Green paint</td>
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<td>Gray with zinc white</td>
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54 Hasell St. Kitchen-Quarters

54 Hasell St. Kitchen-Quarters by Susan Buck – April 4 2019

54 Hasell was constructed between 1712 and 1728. Alterations had occurred in 1800 as well as 1950.64 Sample One exhibits a yellow-pigmented limewash as its first layer, followed by an unpigmented limewash and a blue-pigmented limewash. This blue

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is reflected in Samples Two, Three, and Eight, along with an earlier layer of orange-pigmented limewash. Samples Four through Seven exhibit layers of unpigmented limewash with yellow, orange, and red limewashes throughout. Samples Nine and Ten, extracted from shutters have first layers of cream-colored paints as well as orange and yellow paints.

4.72 1. South room, bluish washes below chair rail, between windows. Paint detached from substrate.
Visible Light 100X

3. Blue pigmented limewash
2. Unpigmented limewash
1. Yellow pigmented limewash
0. Plaster substrate
4.73 2. South room, bluish washes on chair rail, between windows
Visible Light 100X

4.74 3. South room, whitish washes on wall above chair rail, between windows
Visible Light 100X
4.75 4. East wall, yellowish limewashes on wall just right of stairs, about 5-feet up. Paint detached from substrate.
Visible Light 100X

3. Yellow pigmented limewash (similar to sample 5)
2. Yellow pigmented limewash
1. Unpigmented limewash
0. Plaster substrate
4.76 5. North room, north wall, yellowish limewashes on wall, about 5-feet up, second period wall
Visible Light 100X

8. Unpigmented limewash
7. Yellow pigmented limewash
6. Orange pigmented limewash
5-2. Unpigmented limewashes
1. Unpigmented limewash
0. Coarse tan plaster substrate

Visible Light 100X

7. Unpigmented limewash
6. Red paint
5-3. Unpigmented limewashes
1-2. Unpigmented limewashes
0. Coarse tan plaster substrate
4.78 7. North room, east wall, accumulation of colored washes, including early red. Paint detached from substrate.  
Visible Light 100X

4.79 8. North room, north wall, limewashes on wall that was originally a door opening  
Visible Light 100X
4.80 9. Detached louvered shutter, on interior side
Visible Light 100X

4.81 10. Detached louvered shutter, on exterior side, thick accumulations of weathered paints
Visible Light 100X

8. Orange-brown
7. Dull pinkish-yellow
6. Dull pinkish-orange
5. Orange-brown flowed into cracks
4. Dull yellow
3-3. Cream-colored paint
1. Cream-colored paint
0. Wood substrate with dirt

8. Orange-brown
7. Dull pinkish-yellow
6. Dull pinkish-orange
5. Dull yellow
4. Dark yellow
3. Dull yellow
2. Dull orange
1. Light tannish-orange
Table 4.10 54 Hasell St. Kitchen-Quarters Sample Analysis

<table>
<thead>
<tr>
<th>SAMPLES</th>
<th>LAYER 1</th>
<th>LAYER 2</th>
<th>LAYER 3</th>
<th>LAYER 4</th>
<th>LAYER 5</th>
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<tr>
<td>1</td>
<td>Yellow limewash</td>
<td>Unpigmented limewash</td>
<td>Blue limewash</td>
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<tr>
<td>2</td>
<td>Unpigmented limewash</td>
<td>Orange limewash</td>
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<td>Unpigmented limewash</td>
<td>Unpigmented limewash</td>
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<tr>
<td>4</td>
<td>Unpigmented limewash</td>
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<tr>
<td>8</td>
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<td>9</td>
<td>Cream paint</td>
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<td>Dull yellow</td>
<td>Orange-brown</td>
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<tr>
<td>10</td>
<td>Light tannish-orange</td>
<td>Dull orange</td>
<td>Dull yellow</td>
<td>Dark yellow</td>
<td>Dull yellow</td>
</tr>
</tbody>
</table>

**72 Anson St. Kitchen-Quarters**

**72 Anson St. Kitchen-Quarter by Susan Buck – March 29, 2019**

72 Anson St. was constructed between 1846 through 1847 with previous rehabilitation efforts that occurred in 1962 and 1994. Initial layers on top of the plaster are yellow and orange-red pigmented limewashes that are followed by unpigmented limewashes and more yellows. Most of the interior has been stripped. Buck took Sample Two from the exterior for more context. Orange and yellow pigments were also exhibited in this sample although at later layers.

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4.82 1. South wall, interior, left of door, limewashes on plaster trapped behind later plasterboard. Paint detached from substrate.
Visible Light 100X

15. Tan pigmented limewash
14. Unpigmented limewash
11-13. Yellow pigmented limewashes
9-10. Gray pigmented limewashes
8. Yellow pigmented limewash
6-7. Unpigmented limewashes
5. Yellow pigmented limewash
3-4. Unpigmented limewashes
2. Orange-red pigmented limewash
1. Yellow pigmented limewash
0. Plaster with dirty surface
4.83 2. Exterior south wall, limewashes on mortar and brick just to the right of the door, about 5-feet up (yellow washes more recent). Paint detached from substrate.

Visible Light 100X

7. Pinkish pigmented limewash
6. Orange pigmented limewash
5. Yellow pigmented limewash
2-4. Unpigmented limewashes
1. Yellow pigmented limewash
0. Stucco substrate with dirty surface
### John Fullerton House 15 Legare St. Kitchen-Quarters

John Fullerton House 15 Legare St. Kitchen-Quarters by Susan Buck – March 28, 2019

This site was constructed circa 1772 with alterations occurring in 1985, 1990, and 1991.66 Sample One from the mantel exhibits a first layer of cream color that was painted on top of shellac. Red-brown and a matching cream color are following this generation. For Sample Two, the first layer appears to be a degraded plant resin varnish, followed by a black pigmented varnish, an unpigmented limewash, and opaque, finely ground 20th-century paints.

### Table 4.11 72 Anson St. Kitchen-Quarters Sample Analysis

<table>
<thead>
<tr>
<th>SAMPLES</th>
<th>LAYER 1</th>
<th>LAYER 2</th>
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<th>LAYER 4</th>
<th>LAYER 5</th>
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</thead>
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<td>Unpigmented limewash</td>
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<td>Unpigmented limewash</td>
<td>Unpigmented limewash</td>
<td>Yellow limewash</td>
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</tbody>
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4.85 2. 1st fl. laundry room, on edge of lower batten
Visible Light 200X

Table 4.12 John Fullerton House Kitchen-Quarters Sample Analysis

<table>
<thead>
<tr>
<th>SAMPLES</th>
<th>LAYER 1</th>
<th>LAYER 2</th>
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</thead>
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<td></td>
<td></td>
<td>varnish</td>
<td>limewash</td>
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</tbody>
</table>

Drayton Hall Cellar

Drayton Hall Cellar by Susan Buck – June 15, 2013

Drayton Hall construction occurred in circa 1750, in a Georgian-Palladian style architecture.\(^67\) Samples One and Two contain layers of unpigmented, translucent limewashes. A remnant of a deep red paint that is in sample two is also seen in sample three as the first and only layer. Buck states that this red is primarily made of red ochre

with calcium carbonate bound with oil. This pigment would have been inexpensive in the 18th century and was found in earlier exterior coatings.

4.86 R005-2. Northwest room, east wall, centered on wall, below level of dropped ceiling (also has early grayish sooty layers) this could be an early wall. Visible Light 100X

Visible Light 100X

7-8. Unpigmented limewashes
5-6. Unpigmented limewash with sooty surface
4. Gray pigmented limewash
3. Unpigmented limewash with sooty surface
1-2. Unpigmented limewashes

4.87 R005-3. Northwest room, south wall door opening, right side, washes over grayish wood substrate. Visible Light 200X

Visible Light 200X

6-7. Unpigmented limewash
5. Light grayish pigmented limewash
3-4. Unpigmented limewash
2. Deep red paint remnant
1. Off-white paint remnant
0. Wood substrate
4.88 R003-1. West wall, north closet architrave, upper left corner, later limewashes
Visible Light 200X

1. Deep red paint
0. Wood substrate
Table 4.13 Drayton Hall Cellar Sample Analysis

<table>
<thead>
<tr>
<th>SAMPLES</th>
<th>LAYER 1</th>
<th>LAYER 2</th>
<th>LAYER 3</th>
<th>LAYER 4</th>
<th>LAYER 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Unpigmented limewash</td>
<td>Unpigmented limewash</td>
<td>Unpigmented limewash with soot</td>
<td>Gray limewash</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Off-white paint</td>
<td>Deep red paint</td>
<td>Unpigmented limewash</td>
<td>Unpigmented limewash</td>
<td>Light grayish limewash</td>
</tr>
<tr>
<td>3</td>
<td>Deep red paint</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Lavington Plantation Slave-Quarters

Table 4.14 Lavington Plantation Slave-Quarters Pre-Cast Analysis

<table>
<thead>
<tr>
<th>SAMPLE #</th>
<th>LOCATION</th>
<th>PRECAST ANALYSIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1WN3</td>
<td>Northern window surrounds in east room</td>
<td>Paint separation did not occur when the sample was taken. The paint is still intact.</td>
</tr>
<tr>
<td>L1DN1</td>
<td>North door surrounds in east room, main entrance</td>
<td>Paint separation from the substrate did not occur during sample procurement. Paint gives the impression that it is a modern latex paint.</td>
</tr>
<tr>
<td>L1ME2</td>
<td>Fireplace surrounds in east room</td>
<td>Wood substrate with a red paint intact.</td>
</tr>
<tr>
<td>L1ME3</td>
<td>Fireplace mantel in east room</td>
<td>Stucco substrate. Paint is still intact on the mortar and appears jumbled</td>
</tr>
</tbody>
</table>

Lavington Plantation Slave-Quarters - September 2023

Cabins at Lavington Plantation were built circa 1830 with many renovations that had not been documented.68 The cabins are made of reclaimed wood on brick pier foundations. Not a lot of pigment variation was seen in the samples once they were viewed under the microscope. The color most visible was white, however, pigmented

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layers of limewash, teal, and red were also visible. The fireplace mantel appeared to have the most layers with stucco, white, orange, and red.

4.89 L1WN3- Window trim
Reflected Light 4X

4.90 L1DN1- North door jamb
Reflected Light 4X
4.91 L1ME2- Fireplace mantle
Reflected Light 10X

4.92 L1ME3- Fireplace mantel
Reflected Light 10X
Table 4.15 Lavington Plantation Slave-Quarters Sample Analysis

<table>
<thead>
<tr>
<th>SAMPLES</th>
<th>LAYER 1</th>
<th>LAYER 2</th>
<th>LAYER 3</th>
<th>LAYER 4</th>
<th>LAYER 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Teal wash</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Modern white</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Red wash</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>White paint</td>
<td>Orange paint</td>
<td>Red paint</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.16 Lavington Plantation Slave-Quarters Munsell Notations

<table>
<thead>
<tr>
<th>NOTATION</th>
<th>L1WN3</th>
<th>L1DN1</th>
<th>L1ME2</th>
<th>L1ME3</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.5G 3/4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N 9.5</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>10YR 5/6</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>7.5R 3/4</td>
<td></td>
<td></td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>
South Carolina Newspaper Listings: 1735 to 1794

South Carolina newspaper listings from 1735 to 1794 were collected using NewsBank, inc. through Charleston County’s Public Library. Key works such as paint, pigments, and limewash, were used to search relevant advertisements about the pigments that were available during the time of the site’s construction. This data was analyzed to determine any correlations between what was found in the photomicrographs above and what was advertised. Ample mentions of umber, yellow, red, and orange ochre pigments were found in the newspapers as well as the photomicrographs. Blacking, white lead, Prussian blue, and varnish were also mentioned in the newspaper listings below.

South Carolina Gazette and General Advertiser November 8, 1735. No. 93 Pg. 2
“A List of Sundry Goods to be sold by Henning & Shute at their Store, in Elliot’s Street Charlestown… prepared oyl for paint, blacking, white lead ground, find red paint, fine yellow stone oker ground, Prussian blue… and sundry other goods generally imported.”

South Carolina Gazette and General Advertiser November 8, 1735. No. 93 Pg. 3
“Just imported in the Queen Elizabeth from London, and to be sold by Peter Horry… white and red lead, spruce oaker, umber, Prussian blue, lynseed oyl.”

South Carolina Gazette and General Advertiser July 17, 1736. No. 129 Pg. 3
“House, sign, and ship-painting and glazing Work done after the best manner, imitation of Marble, Walnut, Oak, Cedar, &c. at five Shillings a yard, also plain painting, as cheap as any one shall without using of Chalk which is practis’d very much in Carolina, also People to work plain painting by the Day, also Gentlemen in the Country may be furnished with all sorts of Colours ready mixt and directions how to use them by Rich: Marten.”

70 South-Carolina Gazette and General Advertiser (Charleston, South Carolina) no. 93, November 8, 1735: Pg. 2.
71 South-Carolina Gazette and General Advertiser (Charleston, South Carolina) no. 93, November 8, 1735: Pg. 3.
72 South-Carolina Gazette and General Advertiser (Charleston, South Carolina) no. 129, July 17, 1736: Pg. 3.
“Just imported in the Susannah William Gregory from London to be sold by James Reid at his store in Elliot Street...red, white, blue and yellow paints...nails, carpenter’s, cooper’s and joyner’s tools.”

Carne and Wilson advertise their import and sale of “...linseed oil, and paints of all sorts, both dry and in oil; brushes, lampblack, water colours and crayons; gold leaf, varnish, vermillion, Prussian blue, and red lead.”

“Benjamin Hawes, House and Ship Painter, and Glaser, acquaints the publick, That he has moved from the Bay, to the house lately occupied by Mrs. Leah Tobias, in Union Street, where he will sell on the most reasonable terms, in any quantity, choice paints ready prepared, of all colours, nice camels hair pencils and other brushes of all sizes, and excellent sheet crown glass, just imported.”

“Samuel Gordon at the Irish linen warehouse, the corner of bedons alley, in Elliot Street, is now opening, a large and value assortment of goods...looking glasses of different sorts; crown glass, 12 by 10 and 10 by 8....paints. White leads, yellow oaker, spanish brown, deep and pale blue, fine green linseed oil, etc...Ironmongery. A large assortment of nails and brads; crawley’s broad Hoes, sickles, falling axes, locks, and hinges; carpenters tools.”

4.93 South-Carolina Gazette and General Advertiser (Charleston, South Carolina) I, no. 80, November 22, 1783: Supplement 1.
4.94 South-Carolina Gazette and General Advertiser (Charleston, South Carolina) II, no. 118, February 28, 1784: Pg. 2.

4.95 South-Carolina Gazette and General Advertiser (Charleston, South Carolina) II, no. 274, January 14, 1785. Pg. 1.
4.96 South-Carolina Weekly Gazette (Charleston, South Carolina), no. 225, September 13, 1785. Pg. 4.

**Daniel O'Hara, Has for Sale,**
At No. 113, Broad-street,
For Cash or Produce,
EXCELLENT old Madeira Wine,
 Ditto Port ditto (equal to any in this State) by the pipe, quartcask or dozen;
Jamaica and West-India Rum, Brandy, Cherry ditto in bottles, Porter in ditto, white Wine Vinegar, double and single refined Sugar,
Muscovado ditto in hogsheads and barrels,
Hylon, Green and Bohea Tea, Coffee, Chocolate, Pickles in small Casks assorted, Scotch and Kappes Snuff, black Pepper, Spices assorted, Mustard, Shot of different sizes, Bar Lead, Copper Tea Kettles, white Candy, Cayenne Pepper, &c. &c. &c.
An Assortment of Paints, viz.
White Lead, Spanish Brown, Venetian Red, Green, Blue, Black, and Yellow Paints; ground in Oil; Linseed Oil in Jugs, &c. &c.

4.97 Charleston Morning Post (Charleston, South Carolina) V, no. 581, January 24, 1787. Pg. 3.

**Just Imported,**
By William Darby & Co.
In the ship Olive Branch, Capt. Angus, and the London, Capt. Curling, and to be sold wholesale and retail, at their store, No 51, King-street.

W HITE Lead ground in oil, of a superior quality in kegs,
Venetian Red,
Spanish Brown and Yellow Oker in kegs,
Fine green and blue Paint in one pound pots,
Linseed Oil in 2 and 3 gallon jugs,
Spirits of Turpentine in quart bottles,
Paint Brushes and Tools,
Pickles in cases,
Double Gloucester Cheese of an excellent quality,
4.98 City Gazette (Charleston, South Carolina) VI, no. 960, May 31, 1788. Pg. 3.

Lewis Rogers,
No. 121, Broad street,
Begs leave to inform his friends and the public in general, that he has just received by the ship Amelia, Captain Cadelegh, from London, the following Articles, which he will dispose of on reasonable terms, for cash;
A CHOICE of Fillets for ladies & gentlemen's hair

And on Consignment,
A QUANTITY OF PAINTS,
Consisting of white lead, Spanish brown, yellow, blue and green, and a few jugs linseed oil, gun powder and shot, to be sold for cash and charges.
May 31.

4.99 City Gazette (Charleston, South Carolina) XII, no. 2484, May 10, 1794. Pg. 3.

David Sarzedas
Has just received per the Major Pinckney, from London, and now opening at his medicinal store, No. 218, King street, a general assortment of Fresh Drugs & Medicines, which will be disposed of at the most reduced prices for cash.
From the variety of articles, in addition to his former supplies, he flatters himself his assortment at this time is rendered as complete as any in this city.
At the same place may be had, a few colours, as Prussian blue, vermilion, red lead, white do. black paint, blue verditer, patent yellow, verdigrise, ivory black, rose pink, carmine, and liquid blue in small jugs, also a few books of gold leaf.
N. B. All orders for medicines attended to with care and dispatch; a large iron mortar is wanted at the above store, for which cash will be paid.
May 10.
Discussion of Analysis

Common pigments seen in a majority of the sites include creams, yellows, oranges, and reds. The original material of the main houses, with the exception of Aiken-Rhett and Nathaniel Russell, has been stripped before proper documentation of its paint layers was completed. Due to this, comparison between the quarters and main houses was not accessible. Five pigments were consistently visible at Nathaniel Russell, Aiken-Rhett, and Lavington Plantation. These Munsell Notations include 10YR 9/1, N 9.5, 10YR 7/6, 10YR 9/4, 10YR 9/2, which are all variations of yellow ochre and a neutral cream.\(^{77}\) Table 4.17 presents the first layers of each site, except for samples that did not contain any layers.

\[\text{Figure 4.100 Munsell Notation chips. Photo by author.}\]

\(^{77}\) All layers analyzed were attributed a Munsell Notation based on visual examination by the author.

\(^{78}\) For an accurate representation of Munsell pigments it is best to look at *Munsell Book of Color, Matte Edition*. 
Correspondingly, most of the first initial layers that are closer to the substrate are limewashes or varnishes, followed by oil-based and modern paints. This is reflected in the development of paint pigments throughout the twentieth century. Overall, it can be anticipated that these finishes were chosen based on what materials were accessible at the time.

Furthermore, most of the sites researched are addressed as kitchen-quarters, which typically include stoves, fireplaces, and additional rooms attached for sleeping. Although sites for enslaved spaces have been regarded for specific functions, such as laundry or cooking, the enslaved were required to find space for fundamental necessities such as sleeping and eating. Essentially, kitchen-quarters allowed the enslaved to live where they worked without impeding their owners. Due to this overlapping of room use, it cannot be determined if paint colors were chosen as a result of the function of the room.

Pigments seen in the photomicrographs that might have been chosen by the enslaved craftsmen could have been selected as a way to personalize their spaces with what they had seen within the main houses or what was considered prevalent at that time. However, although it has been recorded that the enslaved painted their quarters, it cannot be confirmed that they were also able to choose their color preferences. Painting could have been used as an act of creative expression with what materials were available. According to historic newspapers such as the Carolina Gazette, pigments have been

79 See Literature Review.
imported into the state from overseas. Pigments advertised include blacking, white lead ground, fine red paint, fine yellow stone ochre, Spanish brown, and Prussian blue.\cite{81}

Correspondingly, all sites were constructed between 1712 and 1847, which is roughly the era most acknowledged for Colonial, Georgian, and Federal architecture. The variation of paint finishes may not show agency, but it does show colors stretched throughout this time. Earthy tones that have been found in the enslaved spaces researched are fairly similar to the tones often seen in the interiors and exteriors of Colonial through Federal homes. Spanish brown, made of pigment red iron oxide, was widely used before 1750. Also, yellow pigments with linseed oil and ground white pigments became popular after 1750.\cite{82} In 1827, a newspaper article from The New England Farmer states that “earthy paints are more durable when exposed to the air than the metallic paints. White lead in particular, by a small mixture of yellow ochre, produces a more pleasing as well as lasting colour than white lead alone, which decomposes in a year or two, in the air.”\cite{83}

Common pigments found in the Nathaniel Russell Kitchen-Quarters, Aiken-Rhett Slave-Quarters, and Lavington Plantation Slave-Quarters are variations of yellow ochre and a neutral cream. Generally, pigments found in all sites coincide with typical Colonial, Georgian, and Federal architectural interiors.

The slave dwellings analyzed in this thesis demonstrate an earthy palette of reds, browns, and oranges, as well as pastels. This may be exhibited due to the construction dates of the sites corresponding with the Colonial-Federal era, dating roughly from 1640

\begin{flushleft}
\textsuperscript{81} South-Carolina Gazette and General Advertiser (Charleston, South Carolina) no. 93, November 8, 1735: Pg. 2.
\textsuperscript{83} Nina Fletcher Little, \textit{American Decorative Wall Painting: 1700-1850} (New York: E.P. Dutton., 1989).
\end{flushleft}
to 1840. Pigments found at the researched sites could have been left over from the main houses which were seen in the Aiken-Rhett house and the Nathaniel Russell house. This affirms the concept that paints were considered not only for decoration but also to protect the house due to their suspected durability, similar to whitewash.

A Colonial pattern seen in Williamsburg, Virginia shows that:

In the early or first half of the eighteenth century exteriors typically were painted in medium to dark tones such as reddish browns and grays and that in the second half of the eighteenth century building exteriors very frequently were painted with light colors such as whites, yellowish whites, very light grays, and sometimes pale blues.⁸⁴

While this statement was intended to describe an exterior pattern, it is also seen in the interiors of enslaved spaces in South Carolina.

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1712-1728</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yellow limewash, Ungreened</td>
</tr>
<tr>
<td>1740</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>limewash, Blue</td>
</tr>
<tr>
<td>1750</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>wash, Cream paint,</td>
</tr>
<tr>
<td>1772</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1788</td>
<td>Mint, Cream, Primrose, Yellow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>lime green, Tan</td>
</tr>
<tr>
<td></td>
<td>green, Tan, White</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yellow, Orange, Red</td>
</tr>
<tr>
<td>1819</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>lime wash, Green</td>
</tr>
<tr>
<td>1830</td>
<td>Orange limewash, Dark green,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Olive, Black, Yellow green, Tan,</td>
</tr>
<tr>
<td></td>
<td>Olive, Black, Yellow green, Tan,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cream, Tinted green</td>
</tr>
<tr>
<td>1830</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1846-1847</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yellow limewash</td>
</tr>
</tbody>
</table>

Table 4.17 First Layers of the Enslaved Spaces
CHAPTER FIVE

CONCLUSION

Understanding paint color variations in slave dwellings is subjective due to its difficulty to measure. Each site has a unique set of variables which includes the enslaved, their owners, what materials were available, and an array of construction dates. These variables are not easily identifiable due to their lack of documentation in history, specifically information about the enslaved. The purpose of this study is to discover what analytical methods would allow a preservationist to access, analyze, and interpret the agency enslaved people had in selecting interior finishes in their living quarters in the greater Charleston, South Carolina area. This information can provide additional knowledge to the context of enslavement in South Carolina for conservators and other preservation professionals. Similarly, this research can provide information to the descendants of enslaved communities and the public who desire to learn about it. Conclusions can be utilized in understanding the development of enslaved spaces as well as determining what finishes were accessible at that time.

As mentioned in Chapter Two, red and yellow ochre colors induce a warming feeling for inhabitants. Although it is possible that while these colors were considered common at the time, the colors could have been chosen to create a warming environment. These finishes may have been a coping mechanism for enslavement while using resources that were accessible. However, as the pigments were reused from the enslavers’ residence, there could have been a sentiment of forced conformity brought onto the enslaved.
Comparably, haint blue has not been abundantly exhibited in the photomicrographs collected for this research. A few hues of blue were identified in the Nathaniel Russell Kitchen-Quarters, Aiken-Rhett Slave-Quarters, Heyward Washington House Kitchen-Quarters, and 54 Hasell Kitchen-Quarters. However, the lack of haint blue in the ten sites can potentially mean that the color was not as significant as modern society has thought. As previously discussed in the Literature Review, members of the Gullah Geechee community neither confirm the symbolism of haint blue nor renounce it. The lack of haint blue may be presented due to the enslaved way of being resourceful and using material that is accessible or left over. It is possible that their accessibility was more imperative than the agency of their spirituality. Otherwise, it can be possible that haint blue became a prominent pigment at a later date or post-emancipation.

Although the paint colors may have been chosen based on accessibility, the material still influenced the enslaved who worked and lived in these quarters. Reds, yellows, and orange pigments are often perceived as a way to invoke a warm environment, creating a sense of comfort. While it is unclear as to who chose the paint finishes, the colors exhibited in the photomicrographs can inherently affect the personal values, beliefs, feelings, and overall identity of the enslaved. It is possible that the enslaved or enslavers chose these pigments not to evoke a sense of individuality but to physically lighten the living conditions by creating a brighter environment. Entwined in the duality between the paint finishes and the enslaved are the warming colors juxtaposing a disdainful and punitive environment.

85 See literature review.
Limitations

Limitations most notable to address were the use of pre-existing reports and restricted access to these sites based on their designation as private residences. Only reports completed by Dr. Susan Buck on the kitchen-quarters were able to be analyzed. Many kitchen-quarters in South Carolina no longer exhibit their original finishes. Similarly, many main houses have been prepared for paint, having stripped their original fabric. Paint preparation can be utilized for modern renovations using methods such as sanding, Citristrip®, and paint removal by heat gun.⁸⁶ Comparison between the kitchen-quarters and the main houses was not able to be performed due to these limitations.

Recommendation for Future Research

The goal of this study was to evaluate paint finish variations in South Carolina slave dwellings as well as determine what analytical methods would allow a preservationist to access, analyze, and interpret the agency enslaved people had in selecting their interior finishes. It can be concluded that paint analysis of historic interiors, in conjunction with primary sources such as newspapers, historic property research, and an investigation of the lives of the enslaved may lead a preservationist into further study of agency. Future research on analyzing the interiors compared to the exteriors of the enslaved spaces should be studied. The comparison between interior and exterior finishes could have provided compelling information regarding what pigments were easily accessible or leftover from the main house.

Additional samples taken from the interior of each site are recommended for intensive analysis. Similarly, samples may be taken from additional sites, within a specific construction time frame, to create a bigger and more concise data set. It may also be beneficial to research the lives of the enslaved living at these sites. Finding primary resources and information on the enslaved people may create a significant argument on if and/or how the colors of their living environment affected them. Furthermore, samples may be analyzed using SEM or scanning electron microscope. SEM provides images of electrons that determine the material and composition through energy-dispersive spectroscopy. SEM may be used as a primary source to compare pre- and post-layers of the civil war to determine if there was a dramatic shift of pigments and decisions during and post-reconstruction. This can be beneficial in determining what pigments were available to the enslaved and how preservationists can analyze agency. Overall, these recommendations can be valuable in providing a robust context to the lives of the enslaved in South Carolina.

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Appendix A

Master Sample List

Nathaniel Russell House Kitchen-Quarters- 18 Samples
By Author (10)
NR1SW1
NR1SD1
NR1EF1
NR1NWA1
NR1EW1
NR2EW1
NR2WD1
NR2SB1
NR2SWA1
NR2SW1

By Dr. Susan Buck (8)
32A
32B
33
34
35
37
38
40

Aiken-Rhett Slave-Quarters- 30 Samples
By Author (10)
AK1EWA1
AK1NWA1
AK1ED1
AK1SH1
AK1SF1
AK2NWA1
AK2EST1
AK2EF1
AK2SWA1
AK2EWA1

By Dr. Susan Buck (20)
K101-II-11
K101-II-1
K101-II-2
K101-II-3
K101-II-12
K101-II-5
K101-II-7
K101-II-16
K102-II-8
K103-II-2
K103-II-6
K104-II-3
K203-II-4
K203-II-3
K204B-II-4
K204A-II-1
K206-II-1
K206-II-2
K206-II-3
K206-II-4

Heyward Washington House Kitchen-Quarters - 15 Samples
By Dr. Susan Buck (15)
3-1
3-2
2-3
2-4
2-5
2-6
K-5
K-1
K-2
K-3
K-4
K-7
K-6
L-1
L-2

Capers-Motte House Kitchen-Quarters - 5 Samples
By Dr. Susan Buck (5)
1
2
3
4
5
38 Church St. Kitchen-Quarters - 3 Samples
By Dr. Susan Buck (3)
1
2
3

54 Hasell St. Kitchen-Quarters - 10 Samples
By Dr. Susan Buck (10)
1
2
3
4
5
6
7
8
9
10

72 Anson St. Kitchen-Quarters - 2 Samples
By Dr. Susan Buck (2)
1
2

2-John Fullerton House 15 Legare St. Kitchen-Quarters - 2 Samples
By Dr. Susan Buck (2)
1
2

Drayton Hall Cellar - 3 Samples
By Dr. Susan Buck (3)
R005-2
R005-3
R003-1

Lavington Plantation Slave-Quarters - 4 Samples
By Author (4)
L1WN3
L1DN1
L1ME2
L1ME3
## Appendix B

Cross-section Microscopy Reference Charts - Paints, Varnishes, and Glazes

### Cross-section Microscopy Reference Charts - Paints

<table>
<thead>
<tr>
<th>Paints</th>
<th>Reflected Visible Light</th>
<th>Reflected Ultraviolet Light</th>
<th>Fluorescent Staining Reactions</th>
<th>General Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dinserper</td>
<td>Somewhat amorphous, soft edges, chalky, lightly bound.</td>
<td>May be dark in UV if the paint does not contain lead white</td>
<td>Positive for proteins (tire glue binder)</td>
<td>Tends to appear slightly powdery</td>
</tr>
<tr>
<td>Whitewash/linenwhases</td>
<td>Thin, bright white, slightly translucent, may contain pigments</td>
<td>Bright white autofluorescence</td>
<td>Typically no reactions, although linewashes for outdoor use can contain proteins and carbohydrate additives</td>
<td>Generally translucent, may discolor to translucent yellowish over time</td>
</tr>
<tr>
<td>Traditional lead-based paints</td>
<td>Opaque, wide range of colors, early hard-ground paints have chalky, irregularly dispersed pigments</td>
<td>May fluoresce brightly if there is a high proportion of lead white and/or zinc white</td>
<td>Typically strong reactions for unaltered liquids with DCF. Very aged, weathered paints may not react strongly with KOH</td>
<td>May be coarsely ground and unevenly mixed if hard-ground</td>
</tr>
<tr>
<td>Casein paints</td>
<td>Tend to be opaque and matte. Wide range of colors, early hard-ground paints have chalky, irregularly dispersed pigments</td>
<td>May fluorescence brightly depending on pigment content</td>
<td>Typically reacts positively for proteins and carbohydrates</td>
<td>May be coarsely ground and unevenly mixed if hard-ground</td>
</tr>
<tr>
<td>Tempera paints</td>
<td>Opaque and matte, may be deeply colored depending on the pigments.</td>
<td>May have a bright spiky appearance in reflected ultraviolet light</td>
<td>Positive reaction for proteins (egg tempera) or carbohydrates (natural gum binder)</td>
<td>May be coarsely ground and unevenly mixed if hard-ground</td>
</tr>
<tr>
<td>Emulsion paints</td>
<td>Opaque, smooth, finely ground, even dispersed pigments.</td>
<td>May fluorescence brightly depending on pigment content</td>
<td>Positive reactions for oils, carbohydrates and proteins</td>
<td>Generally evenly mixed, finely ground pigments</td>
</tr>
<tr>
<td>Lacquer (acrylic) paints</td>
<td>Opaque, smooth, finely ground, even dispersed pigments.</td>
<td>Modern paints typically appear dark in reflected ultraviolet light, or with dull fluorescence colors</td>
<td>May be positive reactions for proteins (basic amino compounds) and carbohydrates (stabilizers, fillers, cellulose binding agents)</td>
<td>Evenly mixed, finely ground pigments</td>
</tr>
<tr>
<td>Alkyd resin paints</td>
<td>Opaque, smooth, finely ground, even dispersed pigments.</td>
<td>Modern paints typically appear dark in reflected ultraviolet light, or dull fluorescence colors</td>
<td>Strong positive reactions for oils with Rhodamine B, may also have positive reactions for proteins and carbohydrate additives</td>
<td>Evenly mixed, finely ground pigments</td>
</tr>
</tbody>
</table>

### Cross-section Microscopy Reference Charts - Varnishes and Glazes

<table>
<thead>
<tr>
<th>Paints</th>
<th>Reflected Visible Light</th>
<th>Reflected Ultraviolet Light</th>
<th>Fluorescent Staining Reactions</th>
<th>General Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shellac</td>
<td>Tan, translucent layer</td>
<td>Generally bright orange autofluorescence</td>
<td>May swell or start to dissolve when stearin is applied in ethanol and methanol carriers</td>
<td></td>
</tr>
<tr>
<td>Plant resin varnishes</td>
<td>Tan, translucent layer</td>
<td>Bright white autofluorescence</td>
<td>Oil-resin varnishes will react positively for the presence of oils, but spirit varnishes will not</td>
<td></td>
</tr>
<tr>
<td>Waxes</td>
<td>Amorphous, translucent, whitish layer, sometimes pigmented</td>
<td>Almost not discernible, may be a slightly translucent haze on the surface</td>
<td>No reactions</td>
<td>May dissolve or swell when mineral spirits are applied before overslapping the sample</td>
</tr>
<tr>
<td>Natural gums</td>
<td>Tan, translucent layers</td>
<td>Generally yellow autofluorescence</td>
<td>Positive reactions for carbohydrates</td>
<td>Typically found as a string or paint binder component, not as a clear coating</td>
</tr>
<tr>
<td>Pigmented glasses in plant resin varnish carriers</td>
<td>Tan, translucent layers</td>
<td>Generally bright orange autofluorescence with suspended pigment particles</td>
<td>Oil-resin varnishes will react positively for the presence of oils, but spirit varnishes will not</td>
<td></td>
</tr>
<tr>
<td>Glasses with dyes</td>
<td>Colored, translucent or semi-translucent layer (pigments can be seen suspended in translucent medium)</td>
<td>Generally bright autofluorescent, clear layer, some dyes also autofluoresce brightly</td>
<td>Oil-resin varnishes will react positively for the presence of oils, but spirit varnishes will not</td>
<td></td>
</tr>
<tr>
<td>Copper-oxide-based glaze</td>
<td>Green, dark green or brown (degraded) semi-translucent layer</td>
<td>Dark appearance in UV</td>
<td>Unusual reactions for the presence of oils</td>
<td>Bright green pigments (verdigris) may be within the layer</td>
</tr>
<tr>
<td>Nitrocellulose lacquer</td>
<td>Tan, translucent layer</td>
<td>Often bright white or blue-white autofluorescence</td>
<td>Positive reaction for the presence of carbohydrates</td>
<td></td>
</tr>
<tr>
<td>Acrylic resin varnish</td>
<td>Very thin, inacous layer, almost completely clear</td>
<td>Dark bluish or lavender autofluorescence colors</td>
<td>No reactions</td>
<td>May not be well-adhered to the layer below, particularly if it was a spray-on coating</td>
</tr>
<tr>
<td>Polyurethane varnish</td>
<td>Generally thick, tan, translucent layer</td>
<td>Dark bluish or lavender autofluorescence colors</td>
<td>Spotty positive reaction for the presence of oils</td>
<td></td>
</tr>
<tr>
<td>Alkyd resin varnish</td>
<td>Tan, translucent layer</td>
<td>Dark bluish or bluish white autofluorescence colors</td>
<td>Strong positive reactions for oils with Rhodamine B, may also react for protein and carbohydrate additives</td>
<td></td>
</tr>
</tbody>
</table>

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