5-2024

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

Lyrik Castro-Bailey
lyrikc@g.clemson.edu

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

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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

[1] Susan Eva O'Donovan, "Foreword: Teaching Slavery in Today's Classroom," *OAH Magazine of History* 23, no. 2 (2009): 7–10, http://www.jstor.org/stable/40505982.
[2] Susan L. Buck, "Paint Discoveries in the Aiken-Rhett House Kitchen and Slave Quarters," *Perspectives in Vernacular Architecture* 10 (2005): 185–98, http://www.jstor.org/stable/3514348.

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.

[3] Joyce Plesters, "Cross-Sections and Chemical Analysis of Paint Samples," *Studies in Conservation* 2, no. 3 (1956): 110–57, https://doi.org/10.2307/1505000.
[4] Dorothy S. Krotzer, "Architectural Finishes: Research and Analysis," APT Bulletin: The Journal of Preservation Technology 39, no. 2/3 (2008): 1–6, http://www.jstor.org/stable/25433950.

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

[5] Emily MacDonald-Korth, "Investigations of Historic Finishes: Finding the Earliest Extant Color and More," *APT Bulletin: The Journal of Preservation Technology* 53, no. 2/3 (2022): 23–28, https://www.jstor.org/stable/48711067.
[6] Line Bregnhoi and Susan L. Buck, Essay in *Paint Research in Building Conservation*, 71–82, London: Archetype in association with the National Museum of Denmark, 2006.
[7] "Our Code of Ethics," Code of Ethics and Guidelines for Practice, accessed March 5, 2024, https://www.culturalheritage.org/about-conservation/code-of-ethics.

the introduction of ready-mixed paints.[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.[9] As limewash settles into the structure "it reacts with the carbon dioxide in the air, carbonating and creating a tough finish."[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.[11] Whitewashing was suggested by the enslaver but possibly executed by the enslaved communities.[12] Limewashing or whitewashing was purportedly suggested to be conducted annually to ensure a stable finish.[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

[8] Harriet A. L. Standeven, 2011, *House Paints, 1900-1960: History and Use*, Los Angeles: Getty Conservation Institute.
[9] Karen Fang, "Whitewashing," The Engines of Our Ingenuity, Accessed January 15, 2024, https://engines.egr.uh.edu/episode/3238.
[10] Sarah Marie Jackson, Tye Botting, and Mary Striegel, "Durability of Traditional and Modified Limewashes," *APT Bulletin: The Journal of Preservation Technology* 38, no. 2/3 (2007): 19–28, http://www.jstor.org/stable/40004715.
[11] Kassia St. Clair, "The Secret Lives of Color," Penguin Publishing Group, 2017.
[12] John Michael Vlach, "'Snug Li'l House with Flue and Oven': Nineteenth-Century Reforms in Plantation Slave Housing," *Perspectives in Vernacular Architecture* 5 (1995): 118, https://doi.org/10.2307/3514250.
[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.[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.[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] James O. Breeden, Advice Among Masters: The Ideal in Slave Management in Old South, Westport, CT: Greenwood Press, 1981.
[15] Gina Haney, Clifton Ellis, and Rebecca Ginsburg, "Understanding Antebellum Charleston's Backlots Through Light, Sound, and Action," essay in *Slavery in the City: Architecture and Landscapes of Urban Slavery in North America*, Charlottesville: University of Virginia Press, 2017, 96.

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

[16] Edward A. Chappell, Clifton Ellis, and Rebecca Ginsburg, "Architecture of Urban Domestic Slavery in the Chesapeake and Jamaica," essay in *Slavery in the City: Architecture and Landscapes of Urban Slavery in North America,* Charlottesville: University of Virginia Press, 2017, 34.
[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

[19] Harold M. Proshansky, 1978, The City and Self-Identity, *Environment and Behavior* 10, (2) (Jun 01): 147, http://libproxy.clemson.edu/login?url=https://www.proquest.com/scholarly-journals/city-self-identity/docview/1292640377/se-2 (Accessed September 24, 2023).
[20] P. Bourdieu, (1970), The Berber house or the world reversed, Social Science Information, 9(2), 151-170. https://doi.org/10.1177/053901847000900213

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."[21] 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."[22] Interior paint finishes, specifically paint color, can provide a visual of the dynamic identity of the structure's inhabitants.

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[21] Diane Reay, "'It's All Becoming a Habitus': Beyond the Habitual Use of Habitus in Educational Research," *British Journal of Sociology of Education* 25, no. 4 (2004): 431–44, http://www.jstor.org/stable/4128669.

[22] Barbara L. Miller, "'He' Had Me at Blue: Color Theory and Visual Art," *Leonardo* 47, no. 5 (2014): 460–65, http://www.jstor.org/stable/43832955.

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."[23]

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

[23] Irene Cieraad, At Home an Anthropology of Domestic Space, 1st ed, Syracuse: Syracuse University Press, 1999.

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 perceptional, 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

[24] Lisa Wastiels, Hendrik N.J. Schifferstein, Ann Heylighen, Ine Wouters,
Relating material experience to technical parameters: A case study on visual and tactile warmth perception of indoor wall materials, Building and Environment, Volume 49, 2012, Pages 359-367, ISSN 0360-1323, https://doi.org/10.1016/j.buildenv.2011.08.009.
[25] Begüm Ulusoy and Nilgün Olguntürk, "Understanding Responses to Materials and Colors in Interiors," Color Research & Application 42, no. 2 (April 2017): 261–72, doi:10.1002/col.22072.

any pair also added the association of 'clean' to that pair as well."[26] 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."[27] 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.[28] This system was based on the "…human visual system's perception of color," also known as "perceived equidistance."[29] 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.[30] 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,"

[26] Ibid.
[27] Kassia St. Clair, *The Secret Lives of Color*, Penguin Publishing Group, 2017.
[28] *Munsell Book of Color, Matte Edition*, Baltimore, MD: Munsell Color, n.d.
[29] "Munsell Color Theory & Albert H. Munsell Fundamentals of Color," Munsell Color System; Color Matching from Munsell Color Company, June 3, 2014, https://munsell.com/about-munsell-color/.
[30] Ibid.

"strong," or "vivid".[31] 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."[32] 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.

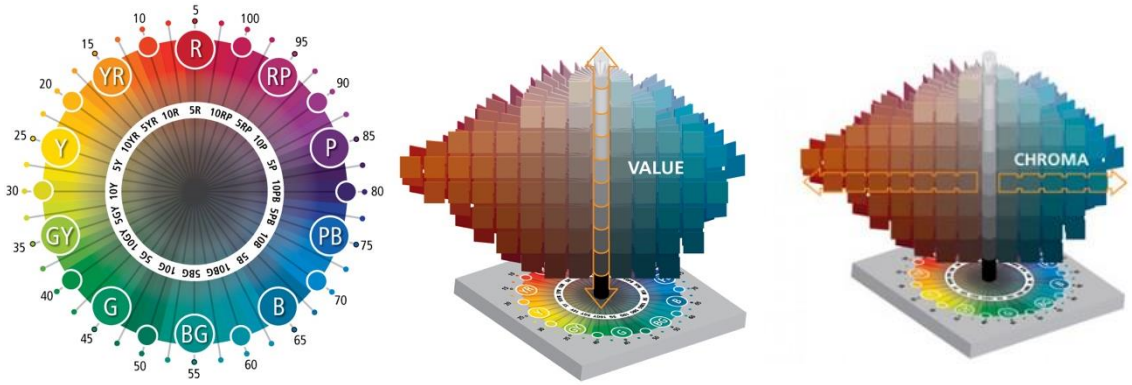

Figure 2.1 H,V,C Munsell Charts from Munsell Book of Color, Matte Edition. Baltimore, MD: Munsell Color, n.d.

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

[31] *Munsell Book of Color, Matte Edition*. Baltimore, MD: Munsell Color, n.d.
[32] "Development of the Munsell Color Order System," Munsell Color System; Color Matching from Munsell Color Company, June 12, 2012, https://munsell.com/about-munsell-color/development-of-the-munsell-color-order-system/.

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.[33] 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.[34]

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

[33] "1770 South Pavilion and Martha Wayles Jefferson," Monticello, Accessed January 14, 2024, https://www.monticello.org/exhibits-events/exhibits-at-the-house/south-wing-exhibits/1770-south-pavilion-and-martha-jefferson/.
[34] Susan Buck, "Cross-section Paint Microscopy Report, Monticello South Pavilion Paint Investigation," Unpublished Report, 2017.

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.

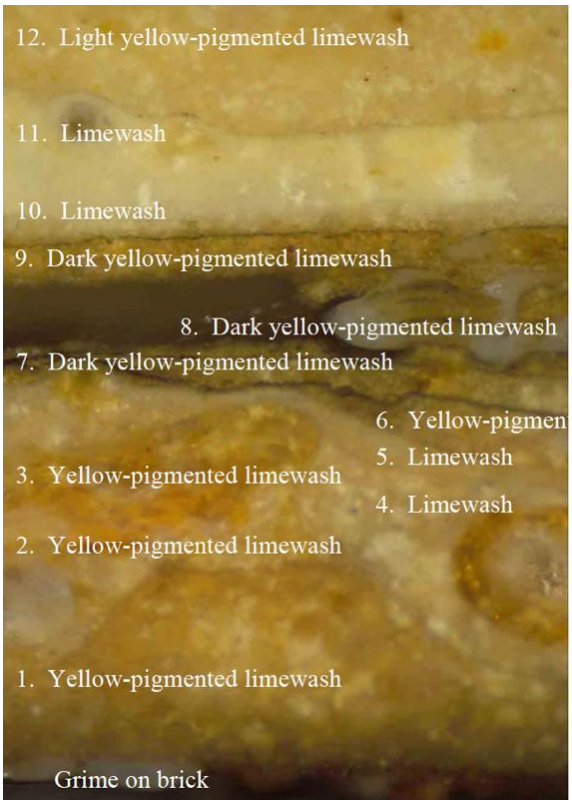

Figure 2.3 Microscopy sample by Susan Buck. Visible light, 100X, earliest layers of southwest corner, west wall.

[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.[36] 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.[37] 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.[38] 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.[39] 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,

[36] "The Gullah Geechee - Gullah Geechee Cultural Heritage Corridor," Gullah Geechee Cultural Heritage Corridor - Where Gullah Geechee Culture Lives, August 5, 2019, https://gullahgeecheecorridor.org/thegullahgeechee/.
[37] Jamie Credle, 2020, "Our Haint Blue...Ain't," Historic Savannah Foundation, https://www.myhsf.org/our-haint-blue-aint/.
[38] Ibid.
[39] "Slavery in Savannah — Davenport House Museum," n.d, Davenport House Museum, Accessed October 16, 2023, https://davenporthousemuseum.org/slavery-in-savannah.

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."[40]

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)."[41] 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."[42] 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.

[40] Jamie Credle, 2020, "Our Haint Blue...Ain't," Historic Savannah Foundation, https://www.myhsf.org/our-haint-blue-aint/.
[41] Ibid.
[42] Ibid.

Figure 2.4 The Davenport House attic, image courtesy of the Historic Savannah Foundation.

The Owens-Thomas house was designed by British architect William Jay and completed in 1819.[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.[44] The house was later purchased by George Welshman Owens in 1830 and is now a house museum open to the public.[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

[43] "Visit the Owens-Thomas House & Slave Quarters " Telfair Museums," Telfair Museums, January 10, 2024, https://www.telfair.org/visit/owens-thomas/#house.
[44] Ibid.
[45] "Telfair Museums' Owens-Thomas House & Slave Quarters: Telling the Untold Story » Telfair Museums," 2018, Telfair Museums, https://www.telfair.org/news/telfair-museums-owens-thomas-house-slave-quarters-telling-the-untold-story/.

ceiling—evidence of the site's original occupants."[46] 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."[47]

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.[48]

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.
[47] "Sample of a Successful Implementation Application: The Owens-Thomas House: Interpreting the Dynamics of Urban Slavery in the South," National Endowment for the Humanities Division of Public Projects.
[48] Susan Buck, "Owens-Thomas House Cellar and Carriage House Limewashes Analysis," Unpublished Report, 2020.

expensive than indigo, so this pigment required deliberate purchase or use of leftover pigments from elsewhere in the house.[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

[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.

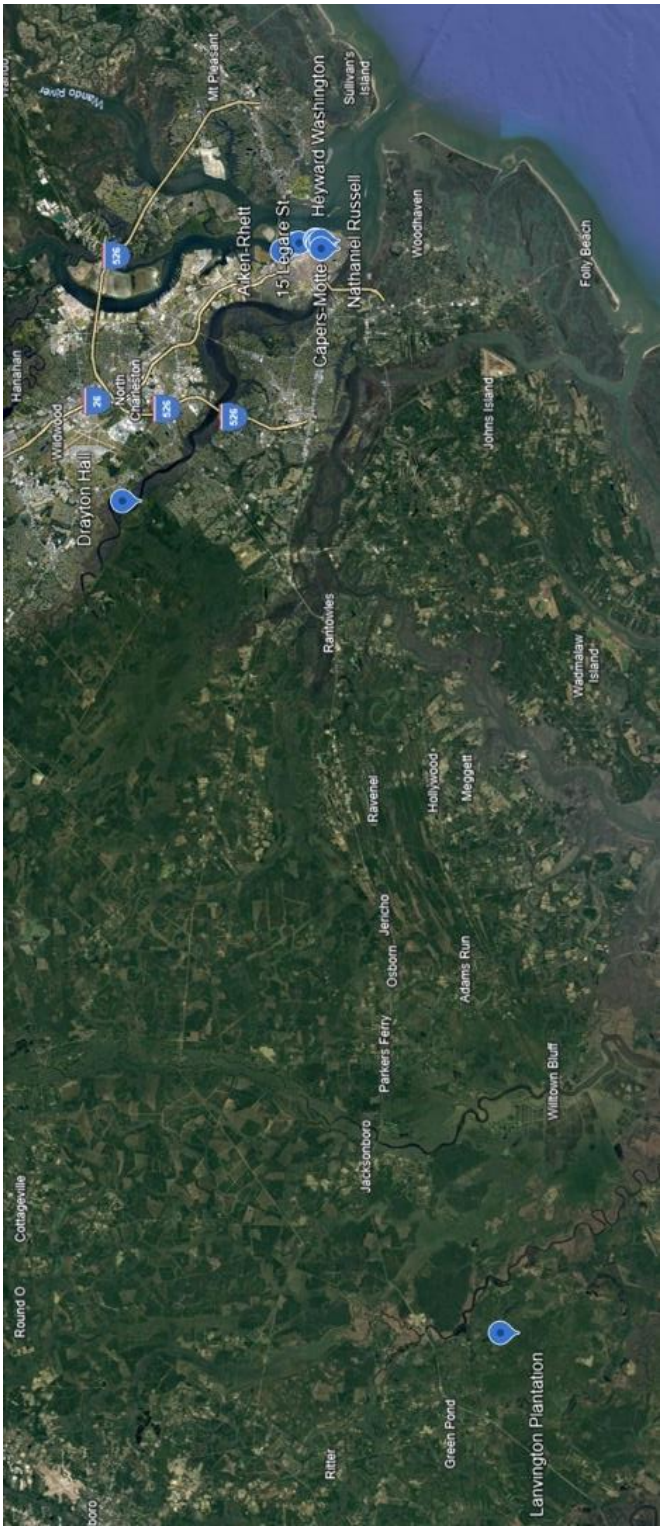


Figure 3.1 South Carolina sites marked by author via Google. Earth.

[50] Google earth, Accessed March 3, 2024, https://earth.google.com/web.

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.

LOCATION	IDENTIFYING NUMBER / LETTER
Nathaniel Russell Kitchen-Quarters	NR
Aiken-Rhett Slave-Quarters	AK
1st Floor	1
2nd Floor	2
North Room	N
South Room	S
East Room	E
West Room	W

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

FEATURE	IDENTIFYING NUMBER / LETTER
Window	W
Door	D
Baseboard	B
Fireplace	F
Wall	WA
Stair hall	ST
Picture rail	H

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.

ROOM / AREA	IDENTIFYING NUMBER / LETTER
Lavington	L
Exterior	X
East Room	1
West Room	2
Addition	3

Table 3.4 Lavington Plantation Slave-Quarters Feature Code Identifiers.

FEATURE	IDENTIFYING NUMBER / LETTER
Wall	S
Partition	P
Door	D
Window	W
Shutter	H
Ceiling	C
Mantel	M

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©.[51] 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.[52] 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

[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.[53] 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.

[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. [54] 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.[55] 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,

[54] "The IsoMet Low Speed precision cutter is a compact gravity-fed precision saw, 5in [127mm] tabletop machine that delivers the gentlest cut… Pair with Buehler's diamond / CBN blades and IsoCut coolant for a comprehensive solution with the highest level of quality." "IsoMet Low Speed Precision Cutter - Buehler - Metallography Equipment & Supplies for Sample Preparation," Buehler, December 18, 2023, https://www.buehler.com/products/sectioning/precision-cutters/isomet-low-speed-precision-cutter/.
[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.

Figure 3.3 Buehler IsoMet® Low Speed Precision Cutter, image by author.

Figure 3.4 Buehler EcoMet® 30 Manual Grinder-Polisher, image by author.

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.

[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.[57] 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.

[57] The Munsell Color Standard is used to attribute a numerical notation for a color based on its hue, value, and chroma. "Munsell Color Notation & Color Test; Dimensions of Color," Munsell Color System; Color Matching from Munsell Color Company, December 19, 2012, https://munsell.com/about-munsell-color/how-color-notation-works/.

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.

Nathaniel Russell House Kitchen-Quarters

Table 4.1 Nathaniel Russell Kitchen-Quarters Pre-Cast Analysis

SAMPLE #	LOCATION	PRECAST ANALYSIS
NR1SW1	1st fl. South window	Does not appear to have any pigment. If any it is very washed out. Sand or dirt appears abrasive
NR1SD1	1st fl. South door	Most of the layer has detached from the substrate. White and mint layers are visible with green pigments
NR1EF1	1st fl. East fireplace	Stucco is extremely friable. Layers of cream or gray and yellow is visible with pigments
NR1NWA1	1st fl. North wall	Stucco is extremely friable. Appears to have one layer of cream or gray. Sand
NR1EW1	1st fl. East window	Layers of cream, mint, and possibly pink on wood substrate
NR2EW1	2nd fl. East window	Pink substrate on wood. Little pigment is visible
NR2WD1	2nd fl. West door	Layers of pink and cream with visible pigments on wood substrate
NR2SB1	2nd fl. South baseboard	Pink and green layers on wood substrate
NR2SWA1	2nd fl. South wall	Stucco is extremely friable. Mint green layer also appears to be friable, chipping off of stucco
NR2SW1	2nd fl. South window	Layers of pink, mint green, and cream on wood substrate.

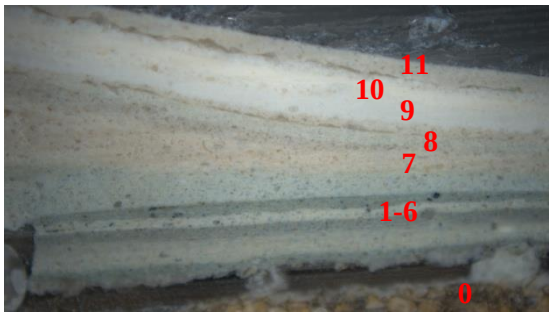
Nathaniel Russell Kitchen-Quarters: Cross-section Photomicrographs & Stratigraphies - Dec. 2023

The Nathaniel Russell House was built in 1808 in the Federal style.[58] 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

0. Nothing visible on wood

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



5. 2.5BG 4/2
4. 2.5BG 8/2
3. 2.5BG 4/2
2. 2.5BG 8/2
1. 2.5BG 6/2

11. Off-white
10. Cream color
9. White
8. Off-white
7. Tan cream
1-6. Layers of mint and pale mint
0. Wood substrate

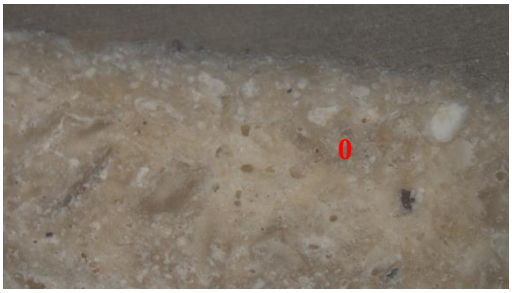
[58] "Nathaniel-Russell House Museum Tours & Tickets: Charleston, SC." Nathaniel-Russell House Museum Tours & Tickets | Charleston, SC. Accessed February 10, 2024. https://www.historiccharleston.org/house-museums/nathaniel-russell-house/.

4.3 NR1EF1- 1st fl. East façade fireplace
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

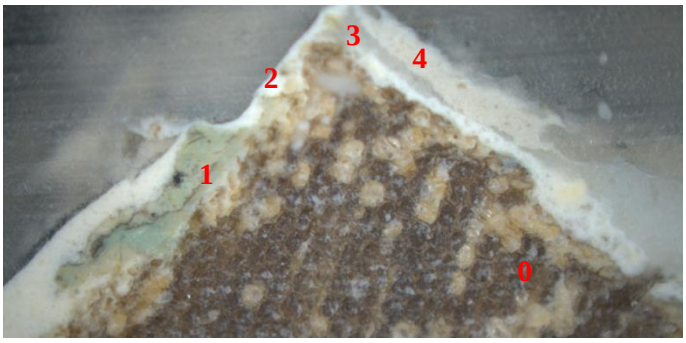
4.4 NR1NWA1- 1st fl. North wall
Visible Light 10X



0. Stucco substrate with plaster, no layers visible

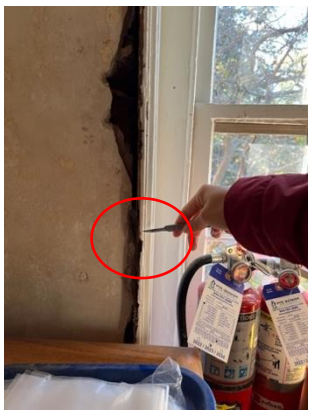
4.5 NR1EW1- 1st fl. East façade window trim
Visible Light 10X

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

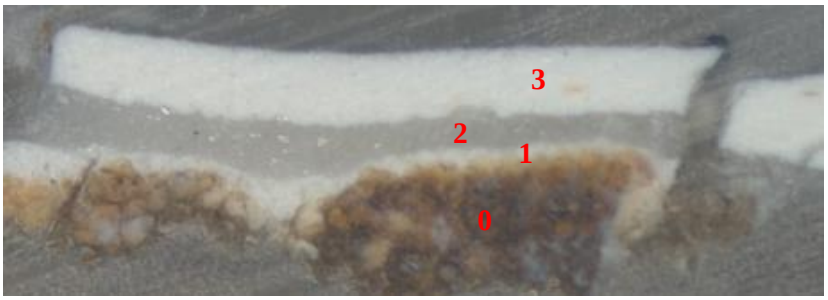


4. Cream
3. Clear fill material
2. Modern off-white
1. Pale mint with dirt
0. Wood substrate, rough surface potentially caused by paint preparation

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



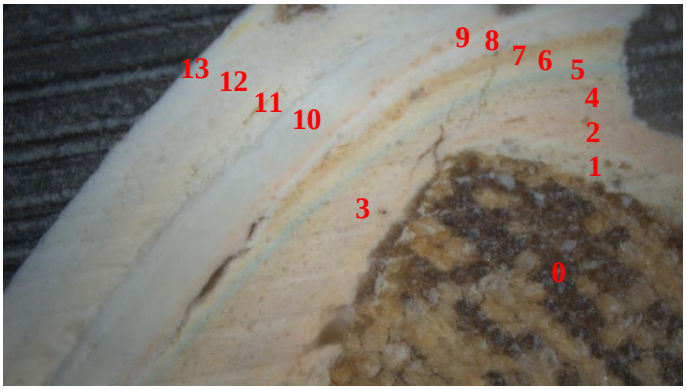
3. N 9.5
2. Repair material
1. N 9.5



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

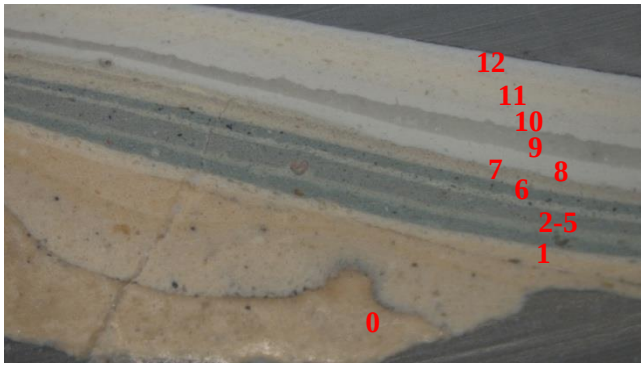
7. 10YR 7/6
6. 10YR 9/4
5. 2.5BG 8/2
4. 10YR 9/1
3. 5YR 9/4
2. 5YR 8/4
1. 10YR 9/1



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

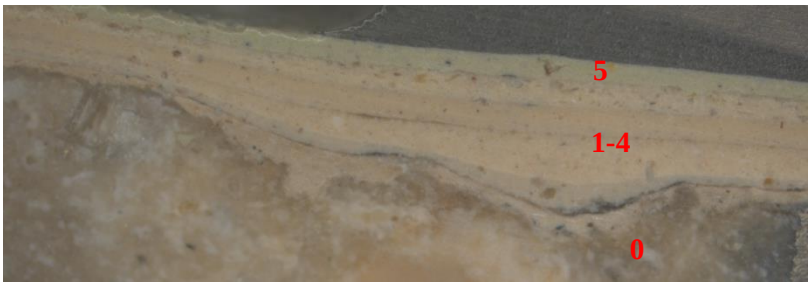
4.8 NR2SB1- 2nd fl. South façade baseboard
Visible Light 10X

7. 10YR 9/2
6. 2.5BG 4/2
5. 2.5BG 8/2
4. 7.5G 6/2
3. 2.5BG 8/2
2. 2.5BG 4/2
1. 10YR 9/2



12. Modern white
11. Cream
10. White
9. Clear fill material
8. Primer
7. Gray
6. Yellow cream
2-5. Layers of mint and pale mint
1. Yellow cream
0. Wood substrate fibers

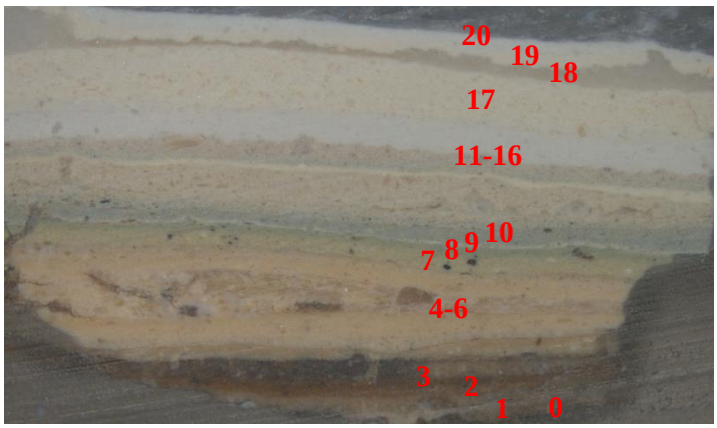
4.9 NR2SWA1- 2nd fl. South façade wall
Visible Light 10X



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

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

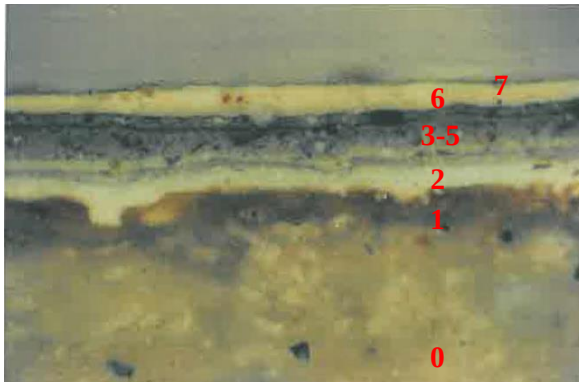
4.10 NR2SW1- 2nd fl. South window
Visible Light 10X



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

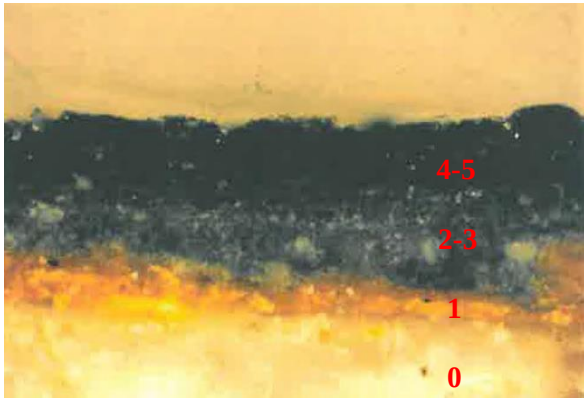
20. Modern white
19. Cream or topcoat
18. Repair fill material
17.Primer
11-16. Layer of cream with white in-between
10. Light blue
9. Cream
8. Light blue
7. Pale mint
4-6. Layers of jumbled yellow cream
3. Dark brown
2. Light brown
1. Tan
0. Wood substrate

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



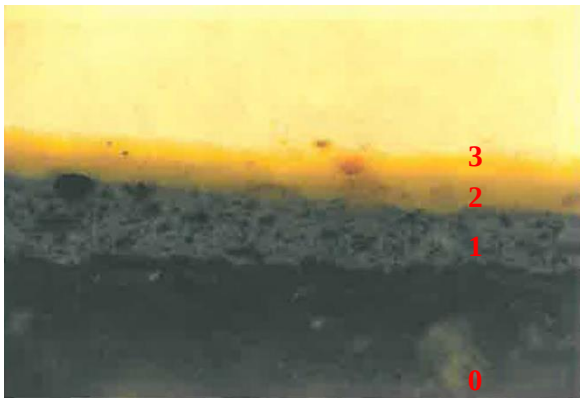
7. Remnant of an oil glaze
6. Cream color
3-5. Gray layers
2. Primer
1. Remnant of whitewash
0.Plaster

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



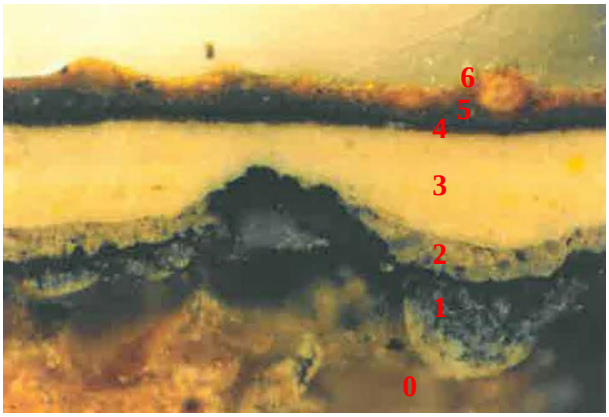
4-5. Black layers
2-3. Blue-gray layers
1. Orange paint or whitewash
0. Plaster

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



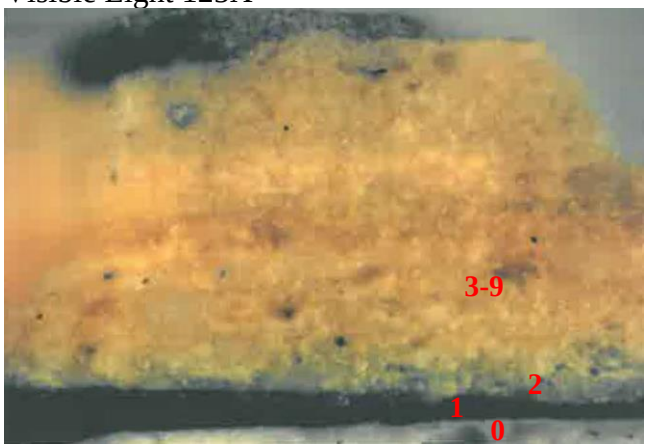
3. Remnants of clear oil glaze
2. Cream colored paint
1. Coarse dark-gray layer
0. Finish plaster

4. 14 Sample 34- North opening, paint from jack arch behind kitchen
Visible Light 250X



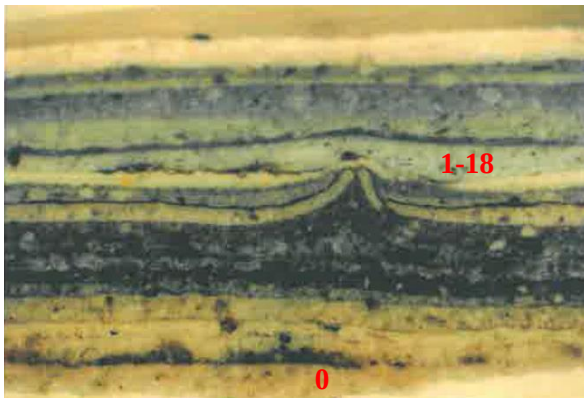
6. Deep red-brown paint
5. Brown glaze
4. Red glaze
3. Cream colored base coat, possible start to graining sequence
2. Gray-tan layer
1. Gray-blue paint
0. Break

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



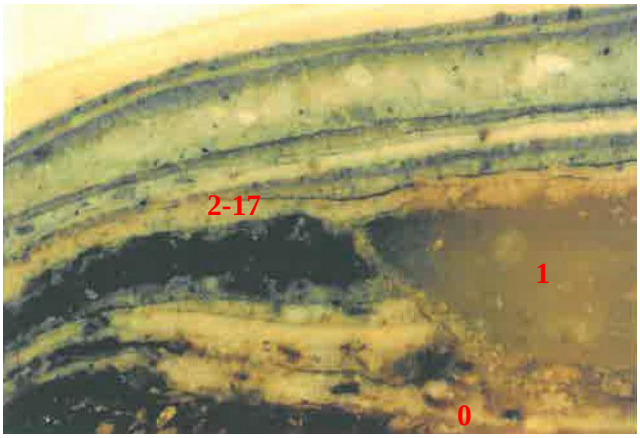
Later generations of black and dark gray paint are missing
3-9. Multiple whitewash layers
2. Whitewash with blue pigments
1. Dark gray paint
0. Rough plaster

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



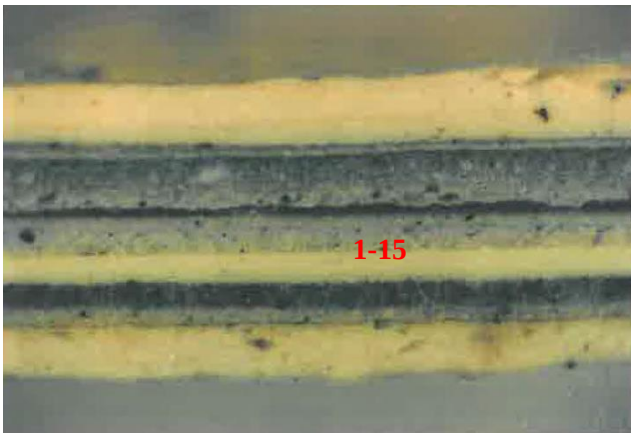
1-18. At least 18 generations of paint with considerable dirt trapped between the layers
0. A few wood fibers at the bottom of the sample

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

SAMPLES	LAYER 1	LAYER 2	LAYER 3	LAYER 4	LAYER 5
NR1SW1	N/A				
NR1SD1	Mint	Pale mint	Mint	Pale mint	Mint
NR1EF1	Cream with fill material	Yellow cream	Debris	Yellow cream	
NR1NWA1	N/A				
NR1EW1	Mint	Modern off-white	Fill material	Cream	
NR2EW1	Primer	Fill material	Modern off-white		
NR2WD1	Cream	Pale orange	Pale pink	Yellow cream	Pale mint
NR2SB1	Yellow cream	Mint	Pale mint	Mint	Pale mint
NR2SWA1	Yellow cream	Yellow cream	Yellow cream	Yellow cream	Pale mint
NR2SW1	Tan	Light brown	Dark brown	Yellow cream	Yellow cream
32A	Whitewash	Primer	Gray	Gray	Gray
32B	Orange paint or whitewash	Blue-gray	Blue-gray	Black	Black
33	Dark-gray	Cream	Clear oil glaze		
34	Gray-blue	Gray-tan	Cream base-coat	Red glaze	Brown glaze
35	Dark gray	Whitewash with blue pigments	Whitewash	Whitewash	Whitewash
37	Paint with dirt	Paint with dirt	Paint with dirt	Paint with dirt	Paint with dirt
38	Putty	Paint	Paint	Paint	Paint
40	Paint	Paint	Paint	Paint	Paint

Table 4.3 Nathaniel Russell Kitchen-Quarters Munsell Notations

Notation	NR1SD1	NR1EF1	NR1EW1	NR2EW1	NR2WD1	NR2SB1	NR2SWA1	NR2SW1
2.5BG 4/2	3, 5					2, 6		
2.5BG 8/2	2, 4		1		5	3, 5		
2.5BG 6/2	1							
2.5Y 7/4		2, 4						
5Y 5/2		3						
10YR 9/1		1	4		1, 4			
N 9.5			2	1, 3				
10YR 7/6					7			
10YR 9/4					6		3	4
5YR 9/4					3			
5YR 8/4					2			
10YR 9/2						1, 7	2, 4	5
7.5G 6/2						4		
5GY 8.5/2							5	
10YR 8/2							1	
10YR 3/2								3

Aiken-Rhett House Slave-Quarters

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

SAMPLE #	LOCATION	PRECAST ANALYSIS
AK1EWA1	1st fl. East wall	Red, pink, and brown layer on stucco. Stucco is extremely friable.
AK1NWA1	1st fl. North wall	Yellow layer with pigments on stucco. Stucco is extremely friable
AK1ED1	1st fl. East door	Deep red on wood. Shiny, possibly varnish
AK1SH1	1st fl. South picture rail	Pink or cream layer on wood
AK1SF1	1st fl. South fireplace	Yellow, red, and cream layers on stucco. Stucco is extremely friable
AK2NWA1	2nd fl. North wall	Mint green and pink layers on friable stucco
AK2EST1	2nd fl. East stair hall	Tan layer with visible pigments. Layer looks friable with cracks throughout
AK2EF1	2nd fl. East fireplace	Red layer with visible pigments
AK2SWA1	2nd fl. South wall	Cream or pink with visible pigments. Stucco is extremely friable
AK2EWA1	2nd fl. East wall	Yellow and cream layers on extremely friable stucco.

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.[59] 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.

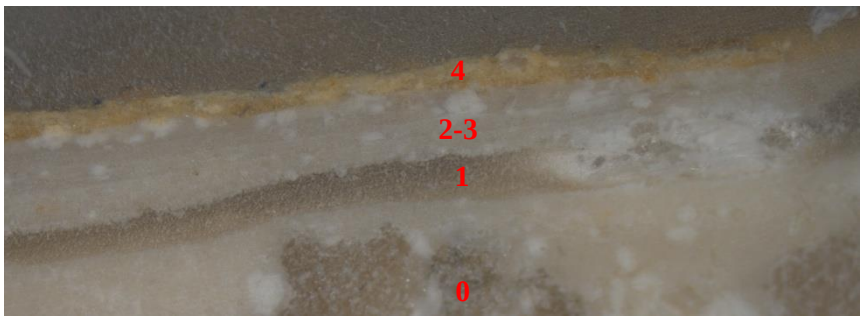
4.19 AK1EWA1- 1st fl. East façade wall
Visible Light 10X

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

[59] "If These Walls Could Talk," Aiken-Rhett House Museum Tours, Hours & Tickets | Charleston, SC, Accessed February 10, 2024, https://www.historiccharleston.org/house-museums/aiken-rhett-house/#:~:text=Built%20in%201820%20by%20merchant,townhouse%20complexes%20in%20the%20nation.

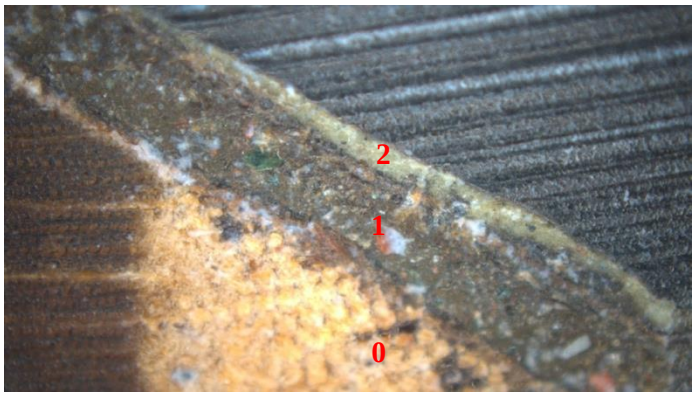
4.20 AK1NWA1- 1st fl. North façade wall
Visible Light 10X



4. 2.5Y 8/4
3. Unpigmented limewash
2. Unpigmented limewash
1. Repair material

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

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



2. 2.5G 7/2
1. 10Y 2.5/1

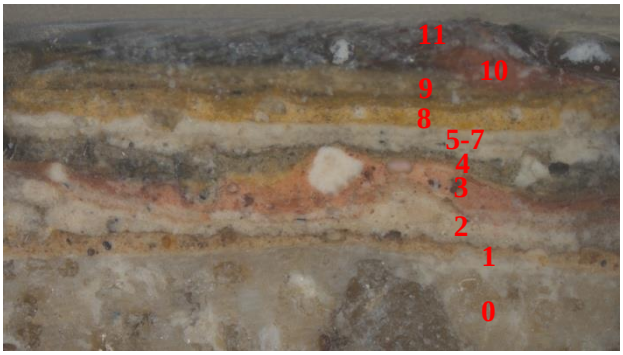
2. Green pigment
1. Jumbled dark green with visible pigments sandwiched between dirt
0. Wood substrate

4.22 AK1SH1- 1st fl. South façade picture rail
Visible Light 10X

0. No visible layers

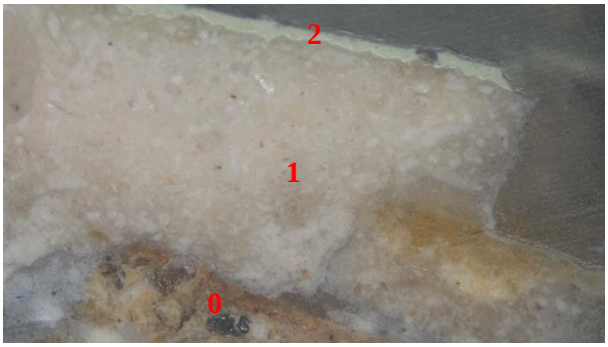
4.23 AK1SF1- 1st fl. South façade fireplace
Visible Light 10X

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

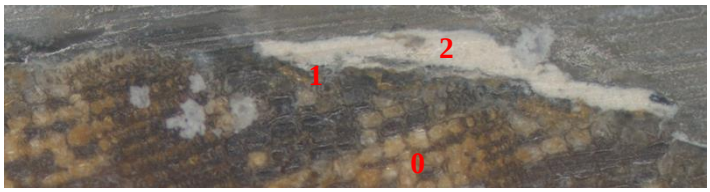
4.24 AK2NWA1- 2nd fl. North façade wall
Visible Light 10X



2. 7.5GY 9/2
1. Stucco

2. Pale mint limewash
1. Stucco with separation
0. Wood substrate

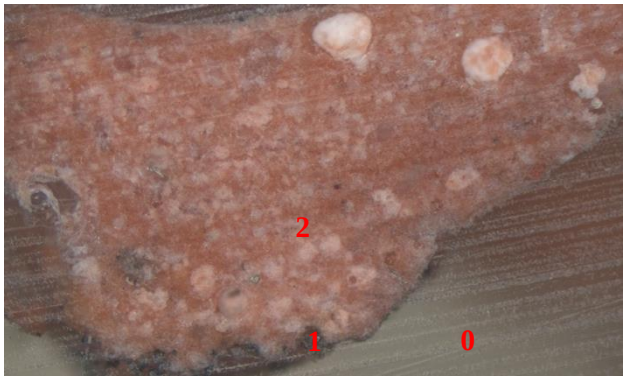
4.25 AK2EST1- 2nd fl. East façade stair hall wall
Visible Light 10X



2. 10YR 9/2
1. 10YR 9/4

2. Cream
1. Remnants or fragments of ochre layer
0. Wood substrate, potential paint prep

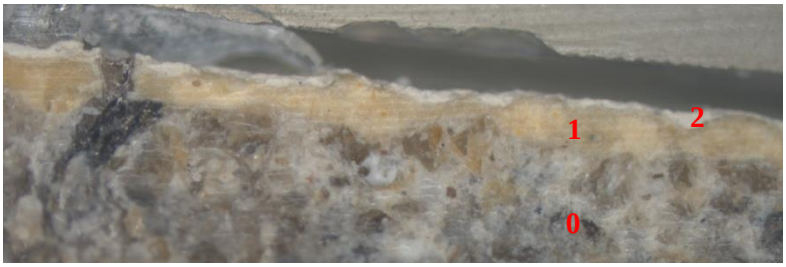
4.26 AK2EF1- 2nd fl. East façade fireplace
Visible Light 10X



2. 7.5R 5/6
1. Dirt

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

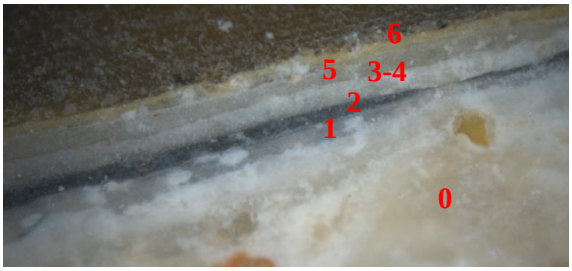
4.27 AK2SWA1- 2nd fl. South façade wall
Visible Light 10X



2. 10YR 9/1
1. 10YR 9/4

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

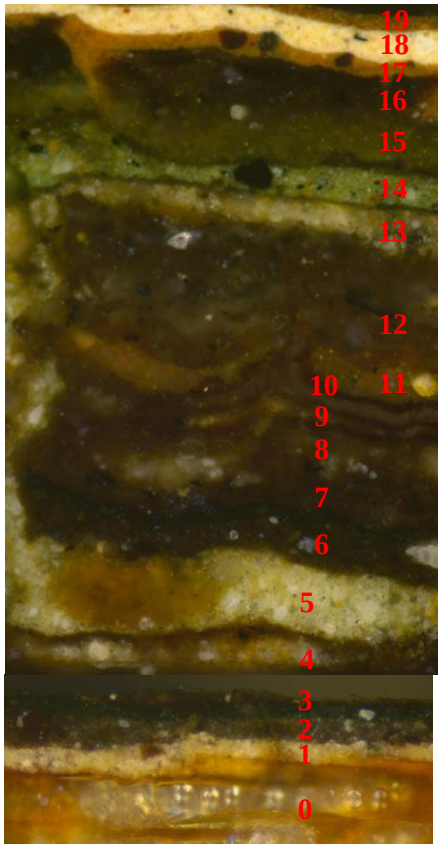
4.28 AK2EWA1- 2nd fl. East façade wall
Visible Light 10X



6. 2.5Y 8/4
5. 10YR 9/1
3-4. Repair
2. N 2.25
1. Repair

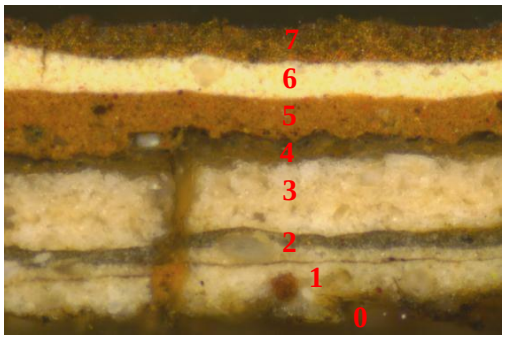
6. Yellow
5. Thin white
3-4. Clear fill layers
2. Black, uniform
1. Clear, uniform
0. Stucco substrate

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



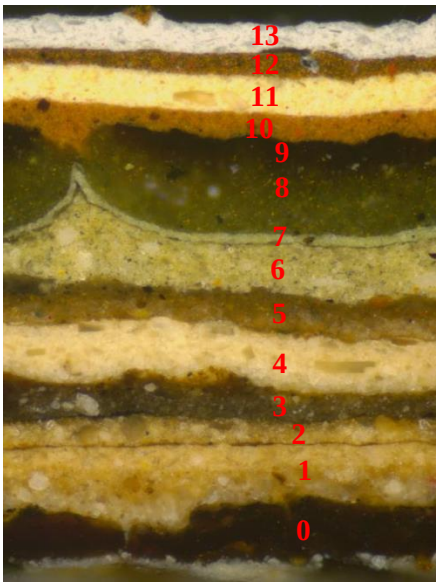
19. Modern red-brown
18. Off-white
17. Red-brown
16. Blackish-green
15. Dark resinous green
14. Medium green
13. Pale gray-green
12. Gray
11. Brown with resinous coating
10. Brown with resinous coating
9. Brown resinous coating
8. Gray paint
7. Brown paint
6. Black paint
5. Tannish-gray paint
4. Tan 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



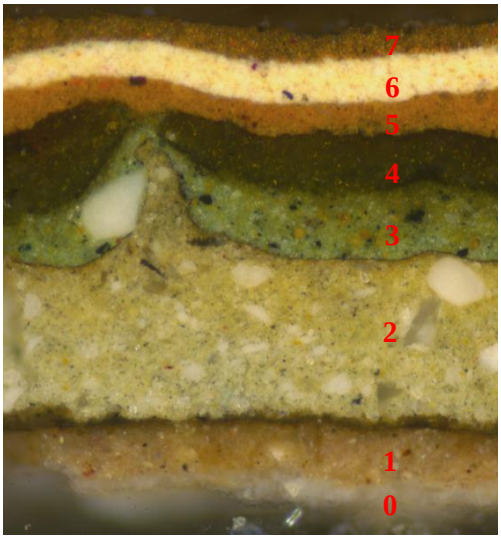
7. Modern red-brown
6. Off-white
5. Red-brown
4. Brown with resinous coating
3. Off-white
2. Dark gray oil paint
1. Tan or cream oil in paint
0. Wood substrate

4.31 K101-II-2. North wall, south door, later door in Period II partition wall, left side
Visible Light 200X



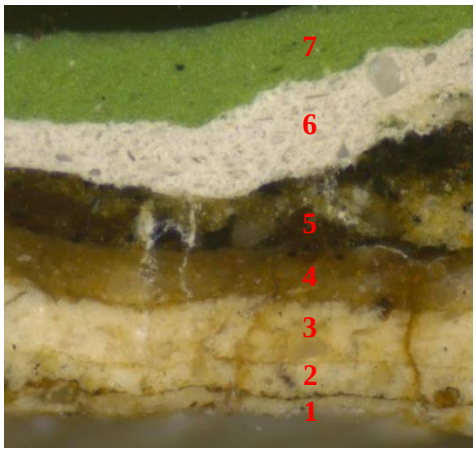
13. Light gray
12. Modern red-brown
11. Off-white
10. Red-brown
9. Blackish-green
8. Dark resinous green
7. Medium green
6. Pale gray-green
5. Brown with resinous coating
4. Off-white
3. Gray paint
2. Tan paint
1. Tannish-gray paint
0. Pigmented varnish

4.32 K101-II-3. West wall, south door, later glazed door, left stile about 4’ up
Visible Light 200X



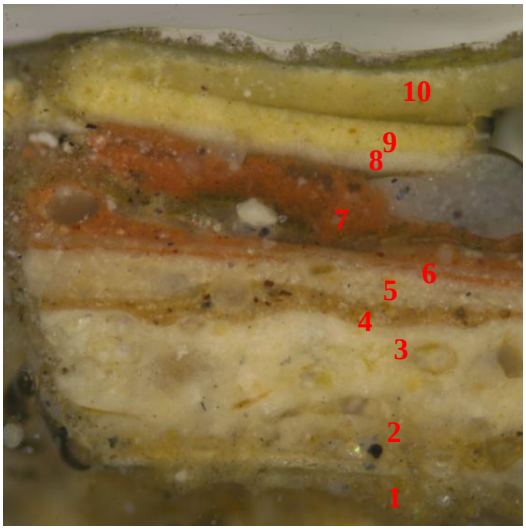
7. Modern red-brown
6. Off-white
5. Red-brown
4. Dark resinous green
3. Medium green
2. Pale gray-green
1. Brown with resinous coating
0. Primer with white zinc

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



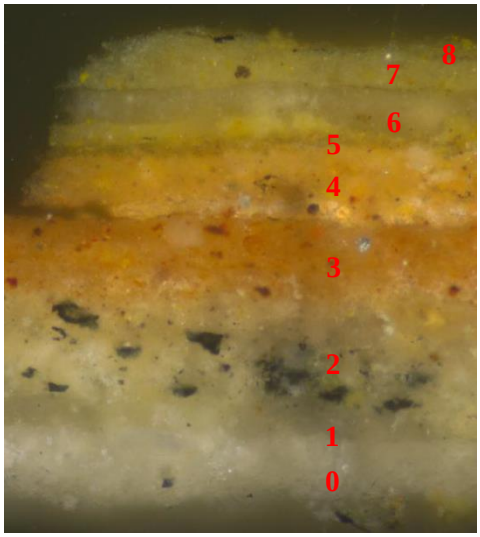
7. Green
6. Light gray
5. Gray
4. Brown with resinous coating
3. Brown resinous coating
2. Cream
1. Cream

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



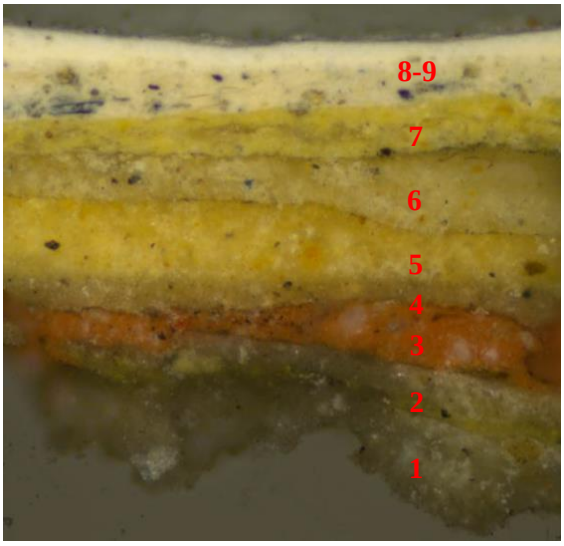
10. Pale yellow wash
9. Dark yellow paint
8.Unpigmented limewash
7. Deep orange paint
6. Deep orange wash
5. Unpigmented limewash
4. Tannish wash
3. Unpigmented limewash
2. 1858 Sandy white coat
1. 1858 Brown coat

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



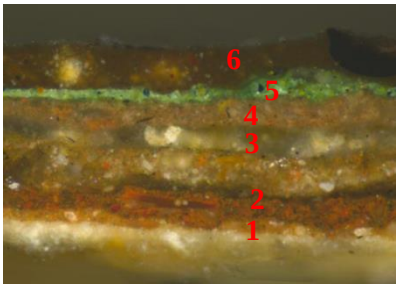
8. Unpigmented limewash
7. Yellow wash
6. Unpigmented limewash
5. Bright yellow wash
4. Pale orange at wainscot level
3. Pale orange
2. Dark gray at wainscot level
1. Unpigmented/ gray wash
0. White coat plaster Period II

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



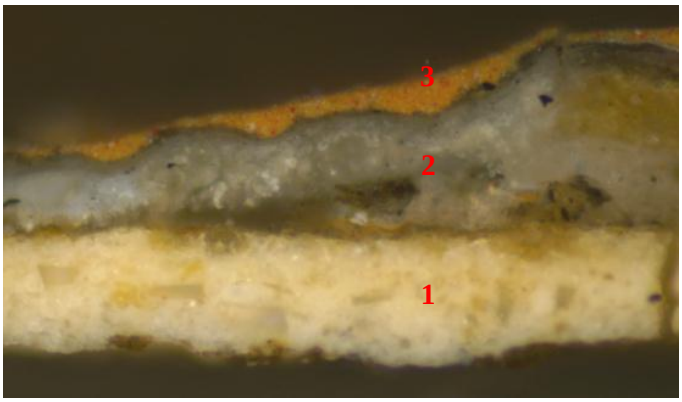
8-9. Opaque off-white paints
7. Pale yellow wash
6. Unpigmented limewash
5. Dark yellow paint
4. Unpigmented limewash
3. Deep orange paint
2. Unpigmented limewash
1. Unpigmented limewash

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



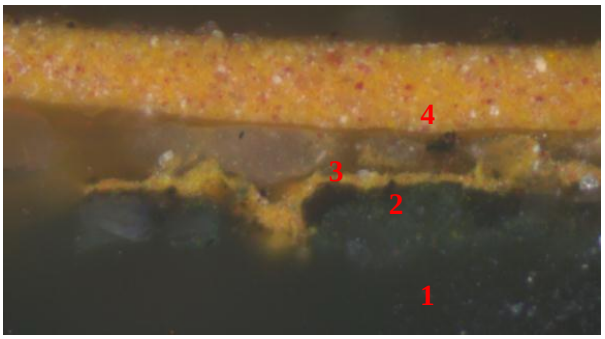
6. Pigmented varnish
5. Green
4. Medium brown
3. Light brown
2. Brown with varnish
1. Light brown on cream-colored primer

4.38 K103-II-2. Staircase, full paint chronology just left of ghost on south side of staircase
Visible Light 200X



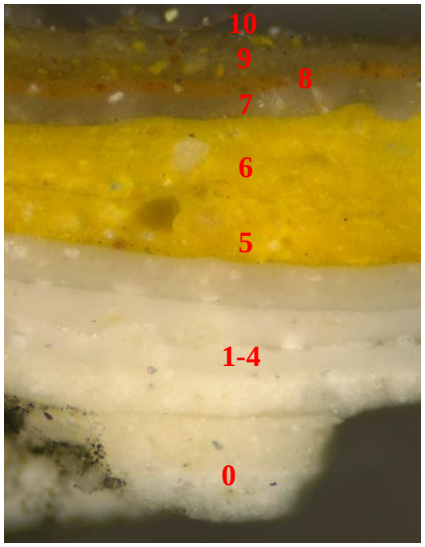
3. Red brown
2. Translucent gray
1. Cream colored paint

4.39 K103-II-6. East wall, riser just below stair landing
Visible Light 200X



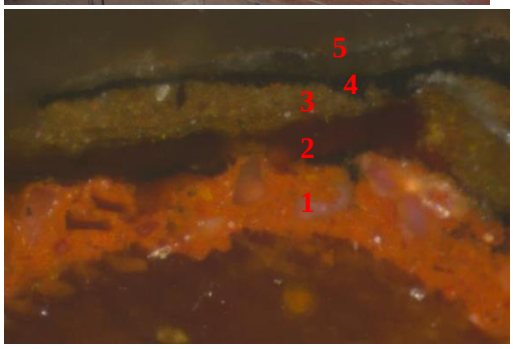
4. Red-brown
3. Varnish
2. Red-brown
1. Black

4.40 K104-II-3. South wall, southeast corner, at crack about 4’ up
Visible Light 100X



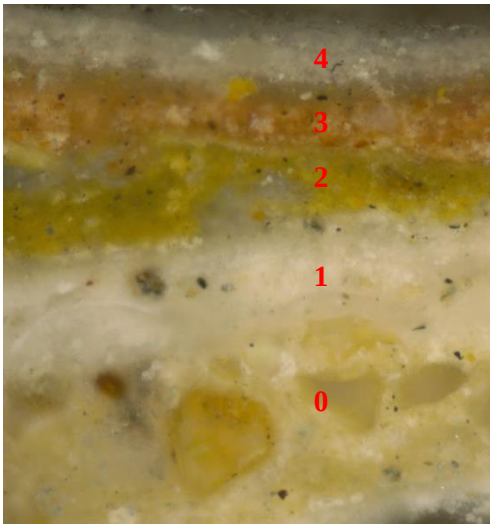
10. Dark yellow pigmented limewash
9. Dark yellow pigmented limewash
8. Orange pigmented limewash
7. Unpigmented limewash
6. Yellow pigmented limewash
5. Yellow pigmented limewash
1-4. Unpigmented limewash
0. Period II plaster

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



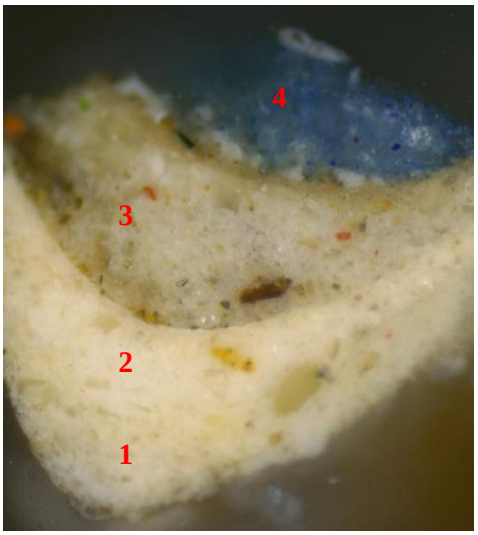
5. Pink paint remnants
4. Black
3. Brown (generation 11 in K101
2. Shellac
1. Red-brown paint on wood

4.42 K203-II-3. West wall, on grayish ghost behind position for former curtain support for comparison
Visible Light 200X



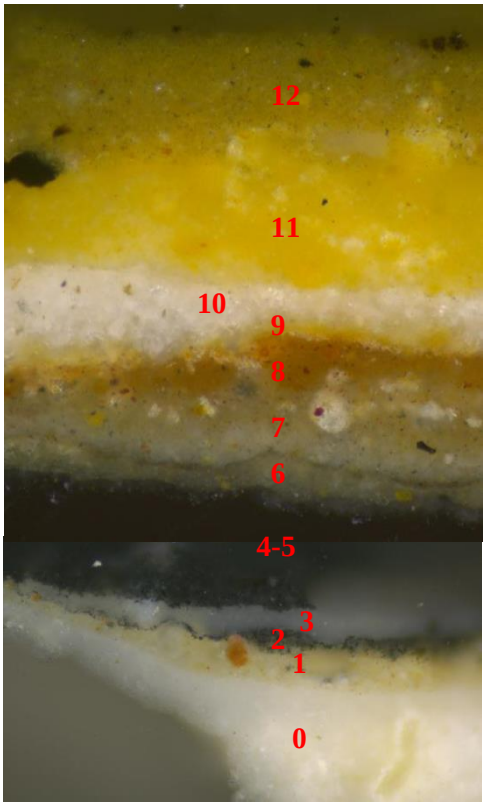
4. Unpigmented limewash
3. Pinkish-orange limewash
2. Yellow pigmented limewash
1. Unpigmented limewash
0. Brown coat of plaster

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



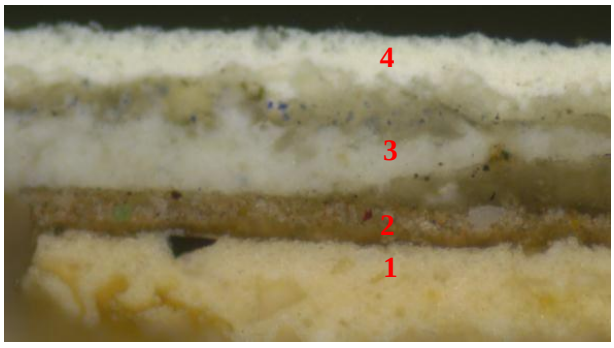
4. Medium blue paint (now degraded to dark blue-black)
3. Gray with zinc white (post-1845)
2. Cream-colored paint
1. Cream-colored paint

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



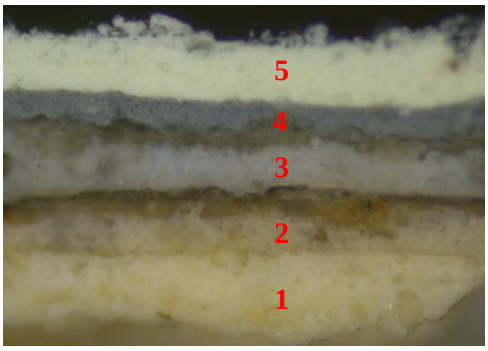
12. Yellow pigmented limewash
11. Yellow pigmented limewash
10. Unpigmented limewash
9. Yellow pigmented limewash
8. Orange pigmented limewash
6-7. Unpigmented limewash
4-5. Dark gray limewash
3. Unpigmented limewash
2. Dark gray limewash
1. Yellow pigmented limewash
0. Plaster

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



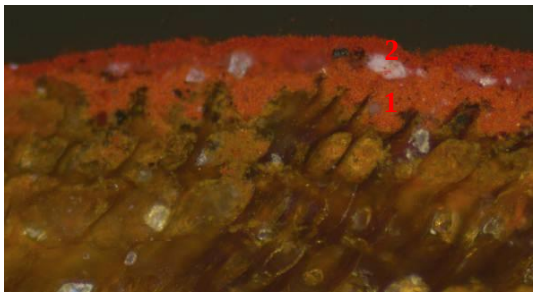
4. Modern white
3. Light gray paint with varnish (contains zinc white)
2. Brown paint
1. Cream color with varnish (Period II)

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



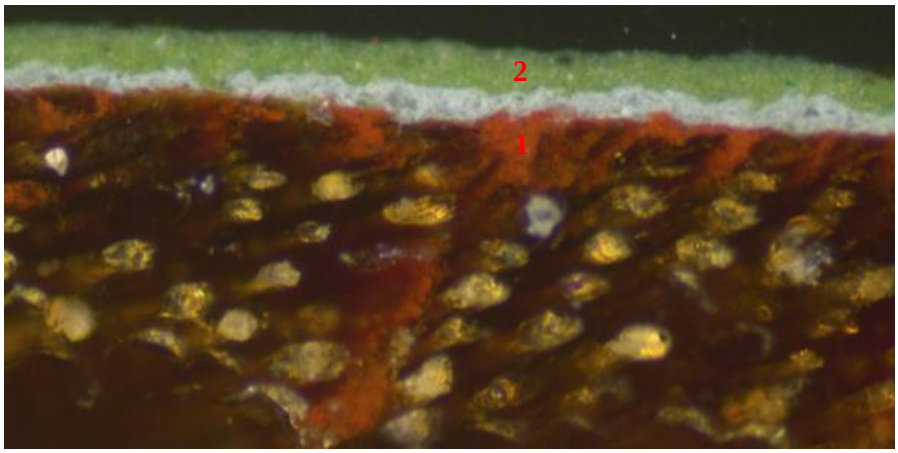
5. Modern white
4. Dark gray
3. Light gray paint with varnish (contains zinc white)
2. Gray paint with zinc white
1. Cream color with varnish (Period II)

4.47 K206-II-3. North wall, inserted window, likely in Period III, red paint on exterior of window frame
Visible Light 200X



2. Modern red paint
1. Red-orange paint on dirty wood substrate

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



2. Modern green on gray primer
1. Red-orange paint on dirty wood substrate

Table 4.5 Aiken-Rhett Slave-Quarters Sample Analysis

SAMPLES	LAYER 1	LAYER 2	LAYER 3	LAYER 4	LAYER 5
AK1EWA1	Orange limewash	Red	Dark brown		
AK1NWA1	Repair material	Unpigmented limewash	Unpigmented limewash	Yellow limewash	
AK1ED1	Dark green	Green pigment			
AK1SH1	N/A				
AK1SF1	Orange limewash	Cream	Pink	Tan	Cream
AK2NWA1	Stucco	Pale mint limewash			
AK2EST1	Ochre	Cream			

SAMPLES	LAYER 1	LAYER 2	LAYER 3	LAYER 4	LAYER 5
AK2EF1	Black	Red limewash			
AK2SWA1	Yellow cream	White			
AK2EWA1	Fill	Black	Fill	Fill	White
K101-II-11	Tan or cream oil in paint	Dark gray oil paint	Dark green resinous coating	Tan paint with resinous coating	Tannish-gray paint
K101-II-1	Tan or cream oil in paint	Dark gray oil paint	Off-white	Brown with resinous coating	Red-brown
K101-II-2	Tannish-gray paint	Tan paint	Gray paint	Off-white	Brown with resinous coating
K101-II-3	Brown with resinous coating	Pale gray-green	Medium green	Dark resinous green	Red-brown
K101-II-12	Cream	Cream	Brown resinous coating	Brown with resinous coating	Gray
K101-II-5	1858 Brown coat	1858 Sandy white coat	Unpigmented limewash	Tannish wash	Unpigmented limewash
K101-II-7	Unpigmented/ gray wash	Dark gray	Pale orange	Pale orange	Yellow wash
K101-II-16	Unpigmented limewash	Unpigmented limewash	Deep orange paint	Unpigmented limewash	Dark yellow paint
K102-II-8	Light brown on cream primer	Brown with varnish	Light brown	Medium brown	Green
K103-II-2	Cream paint	Translucent gray	Red-brown		
K103-II-6	Black	Red-brown	Varnish	Red-brown	
K104-II-3	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Yellow limewash
K203-II-4	Red-brown paint	Shellac	Brown	Black	Pink
K203-II-3	Unpigmented limewash	Yellow limewash	Pinkish-orange limewash	Unpigmented limewash	
K204B-II-4	Cream paint	Cream paint	Gray with zinc white	Medium blue paint	
K204A-II-1	Yellow limewash	Dark gray limewash	Unpigmented limewash	Dark gray limewash	Dark gray limewash
K206-II-1	Cream color with varnish	Brown paint	Light gray paint with varnish	Modern white	

SAMPLES	LAYER 1	LAYER 2	LAYER 3	LAYER 4	LAYER 5
K206-II-2	Cream color with varnish	Gray paint	Light gray paint with varnish	Dark gray	Modern white
K206-II-3	Red-orange paint	Modern red paint			
K206-II-4	Red-orange paint	Modern green on gray primer			

Table 4.6 Aiken-Rhett Slave-Quarters Munsell Notations

NOTATIONS	AK1E WA1	AK1N WA1	AK1E D1	AK1S F1	AK2N WA1	AK2ES T1	AK2E F1	AK2S WA1	AK2E WA1
7.5YR 8/4	1			1					
2.5YR 4/8	2								
2.5YR 3/4	3								
2.5Y 8/4		4							6
2.5G 7/2			2						
10Y 2.5/1			1						
10YR 9/2				2, 5-7		2			
10YR 8/6				8					
10YR 6/2				4					
10R 7/6				3					
7.5GY 9/2					2				
10YR 9/4						1		1	
7.5R 5/6							2		
10YR 9/1								2	5
N 2.25									2

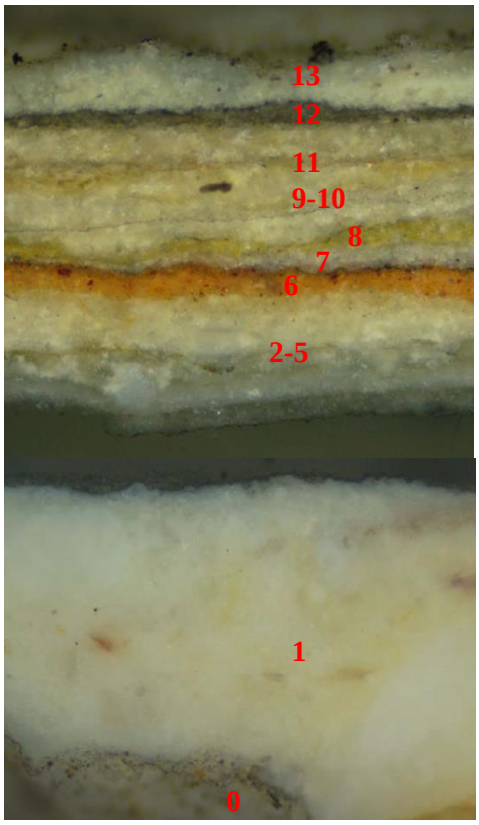
Heyward Washington House Kitchen-Quarters

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.[60] Architectural historian, Willie Graham believes that the site may be more contemporary due to recent investigations.[61] 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.

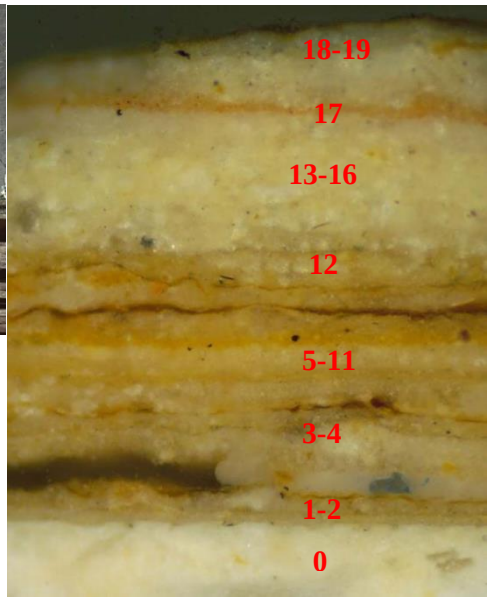
[60] "Historic Houses," Charleston Museum, Heyward Washington House, Accessed February 10, 2024, https://www.charlestonmuseum.org/historic-houses/heyward-washington-house/.
[61] Willie Graham, conversation with author, February 20, 2024.

4.49 3-1. 3rd fl. south wall, west side of window, accumulation of reds and yellow limewashes below blackened surface.
Visible Light 100X



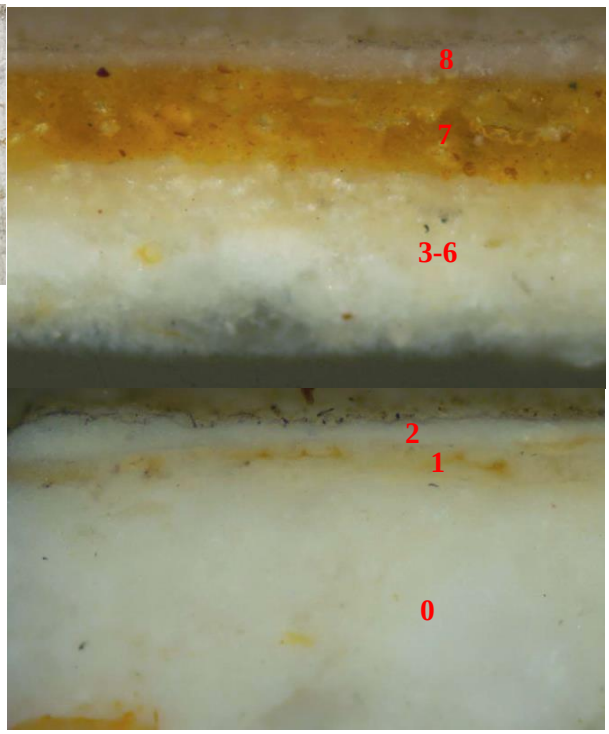
13. Unpigmented limewash
12. Gray pigmented limewash
11. Yellow pigmented limewash
9-10. Unpigmented limewash
8. Yellow pigmented limewash
7. Unpigmented limewash
6. Orange pigmented limewash
2-5. Unpigmented limewash layers
1. Unpigmented limewash
0. Plaster substrate

4.50 3-2. 3rd fl. south wall, southwest corner, about 1-foot above baseboard level
Visible Light 100X



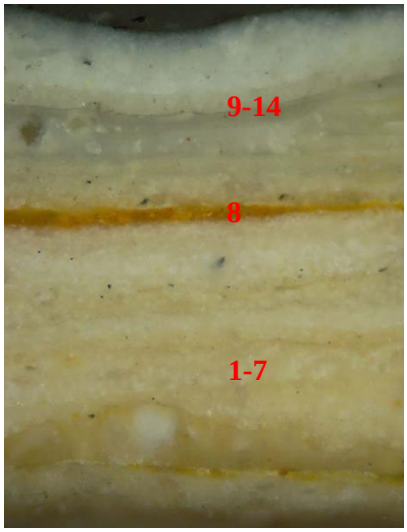
18-19. Layers of unpigmented limewashes
17. Orange pigmented limewash
13-16. Layers of unpigmented limewashes
12. Yellow pigmented limewash
5-11. Layers of orange pigmented limewashes
3-4. Layers of unpigmented limewashes
1-2. Layers of yellow pigmented limewashes
0. Plaster substrate

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



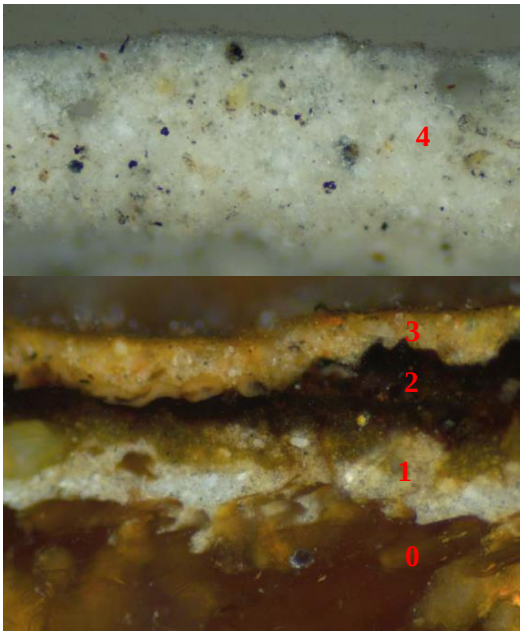
8. Unpigmented limewash
7. Orange pigmented limewash
3-6. Unpigmented limewash
2. Unpigmented limewash
1. Pinkish pigmented limewash
0. Plaster substrate with grimy surface

4.52 2-4. 2nd fl. East room, north wall below wainscot
Visible Light 200X



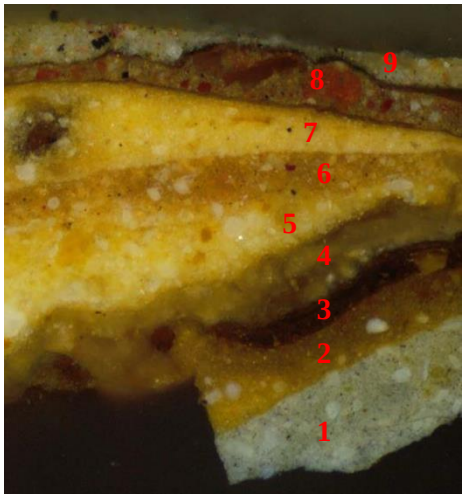
9-14. Unpigmented limewashes
8. Orange pigmented limewash
1-7. Layers of unpigmented limewashes

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



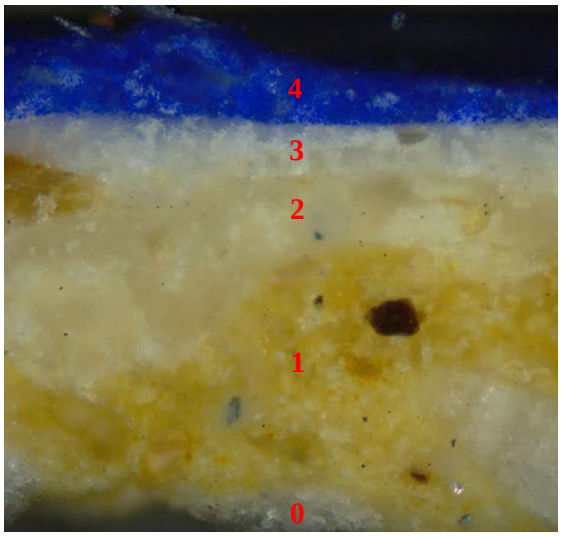
4. Chalky Gray
3. Tannish brown
2. Brown with charred surface
1. Gray
0. Wood substrate

4.54 2-6. 2nd fl. Door to east room, room side, upper right corner of middle right panel
Visible Light 200X



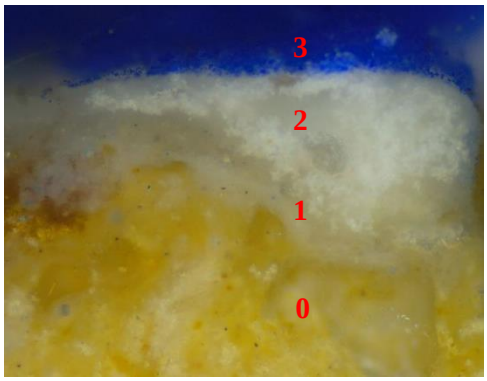
9. Gray
8. Dark brown
7. Dark yellow
6. Orange-brown
5. Dark yellow
4. Limewash
3. Dark brown
2. Brown
1. Gray

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



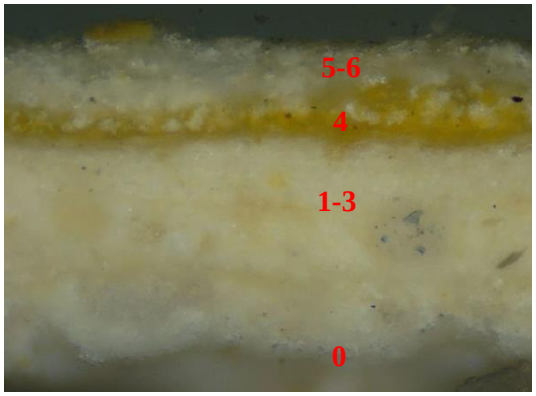
4. Blue pigmented limewash
3. Unpigmented limewash
2. Unpigmented limewash
1. Coarse yellow
0. Coarse plaster

4.56 K-1. Kitchen, north wall, early blue paint, center of wall
Visible Light 100X



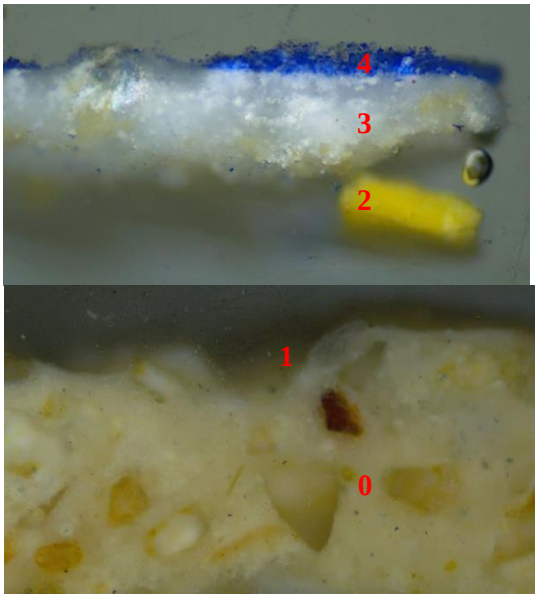
3. Blue pigmented limewash
2. Unpigmented limewash
1. Unpigmented limewash
0. Coarse plaster

4.57 K-2. Kitchen, north wall, second generation of plaster near K-1. Later generation of plaster, starting at layer 23
Visible Light 100X



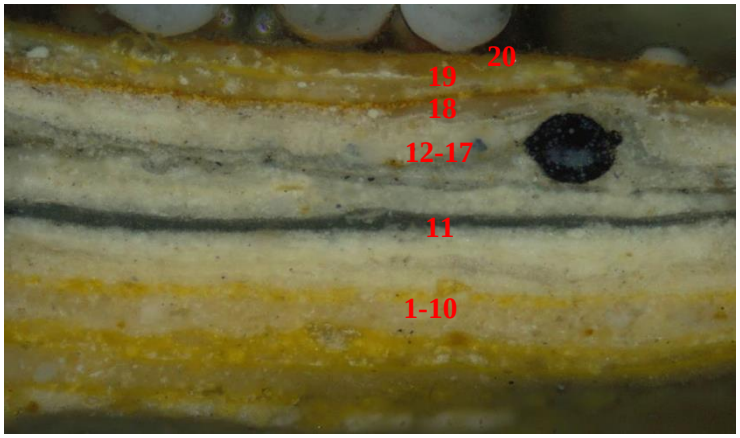
5-6. Layers of unpigmented limewash
4. Orange pigmented limewash
1-3. Unpigmented limewash
0. Plaster

4.58 K-3. Kitchen, north wall on shelf ghost. Detached paint flake from substrate
Visible Light 100X



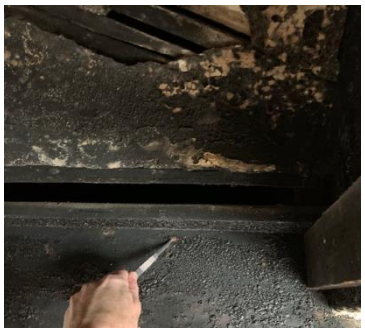
4. Blue pigmented limewash
3. Unpigmented limewash
2. Dislodged yellow pigmented limewash
1. Remnants yellow limewash
0. Sandy plaster

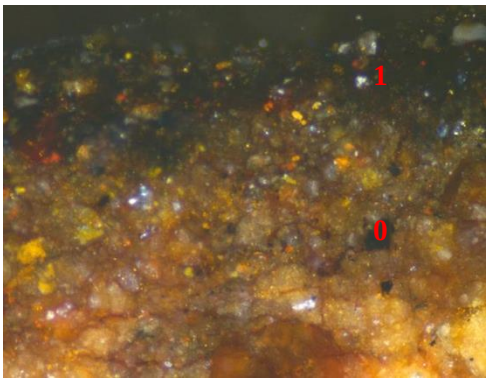
4.59 K-4. Kitchen, east wall, washes and plaster on filled in door
Visible Light 40X



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

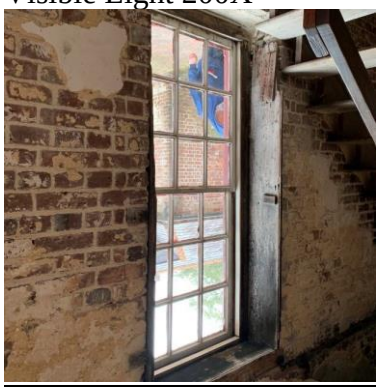
4.60 K-7. Kitchen, north wall of stair on charred woodwork
Visible Light 200X

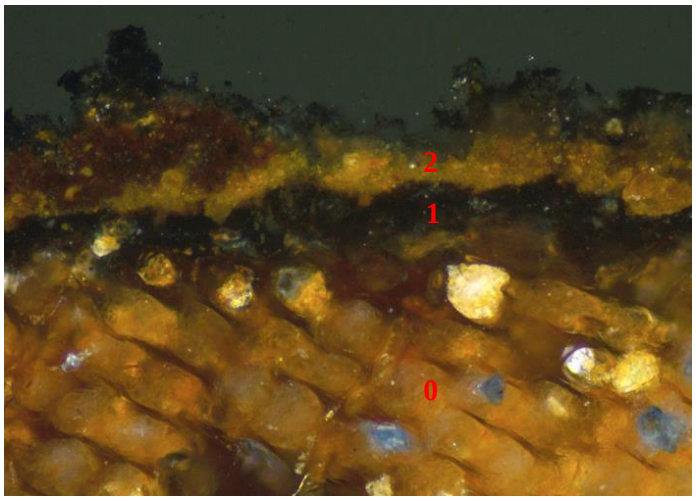




1. Charred brown paint
0. Wood substrate

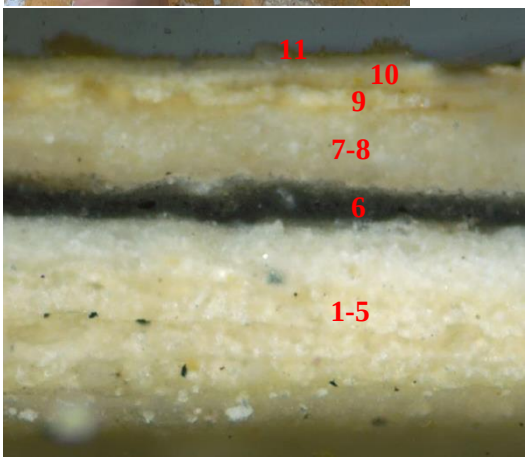
4.61 K-6. Kitchen, south wall, top right corner of window jamb (charred)
Visible Light 200X





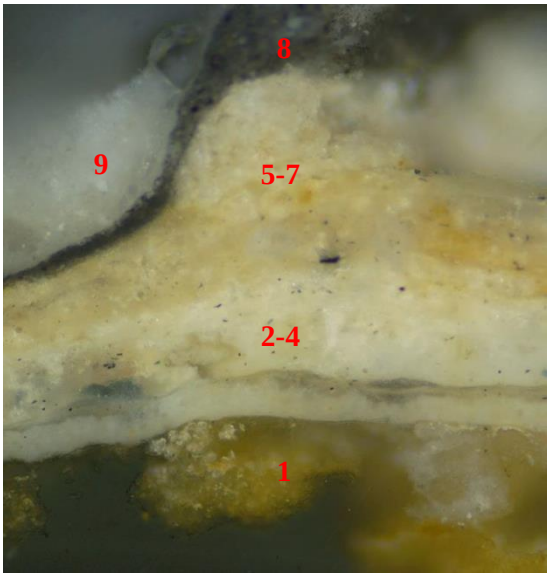
2. Dark yellow paint
1. Dark brown paint
0. Wood substrate

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

SAMPLES	LAYER 1	LAYER 2	LAYER 3	LAYER 4	LAYER 5
3-1	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash
3-2	Yellow limewash	Yellow limewash	Unpigmented limewash	Unpigmented limewash	Orange limewash
2-3	Pinkish limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash
2-4	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash
2-5	Gray	Brown with charred surface	Tannish brown	Chalky gray	
2-6	Gray	Brown	Dark brown	Limewash	Dark yellow
K-5	Yellow	Unpigmented limewash	Unpigmented limewash	Blue limewash	
K-1	Unpigmented limewash	Unpigmented limewash	Blue limewash		
K-2	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Orange limewash	Unpigmented limewash
K-3	Yellow limewash	Yellow limewash	Unpigmented limewash	Blue limewash	
K-4	Yellow/ unpigmented limewash	Yellow/ unpigmented limewash	Yellow/ unpigmented limewash	Yellow/ unpigmented limewash	Yellow/ unpigmented limewash
K-7	Charred brown paint				
K-6	Dark brown paint	Dark yellow paint			
L-1	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash
L-2	Yellow limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Yellow limewash

Capers-Motte House Kitchen-Quarters

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

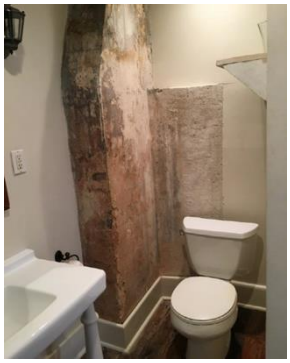
This site was constructed circa 1750 with alterations in the early 19th century and 1971.[62] Most sample surfaces have been cleaned and possibly sanded, removing layers of evidence. The larder door on the first floor was believed to have originally been used as an exterior door. The first layers consist 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.

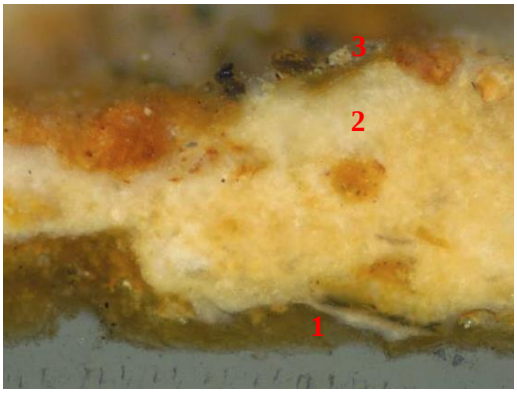
4.64 1. West chamber, north wall, pigmented limewashes on fireplace
Visible Light 100X

1. Unpigmented limewash
0. Plaster substrate

[62] "Archive Record," Property File - 69 Church Street (Capers-Motte House) | Historic Charleston Foundation, Accessed February 10, 2024, https://charleston.pastperfectonline.com/Archive/334D6FFA-C3B7-4465-9432-303654152049.

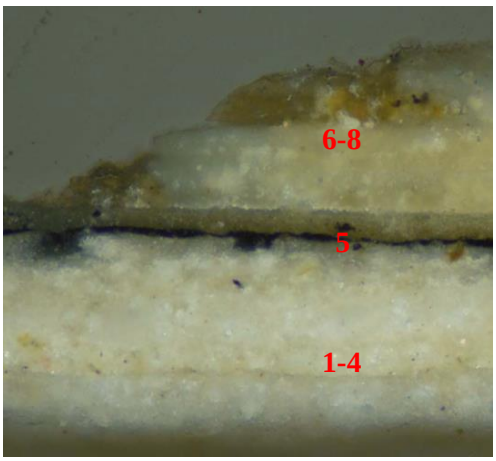
4.65 2. Middle chamber, north wall, pigmented limewashes on plastered fireplace
Visible Light 100X





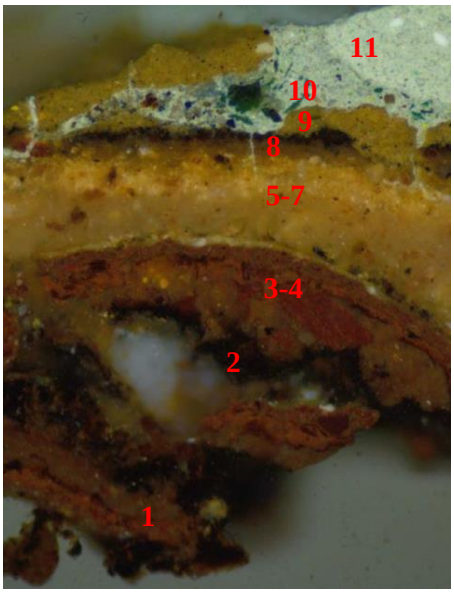
3. Red-orange pigmented limewash
2. Dull yellow pigmented limewash
1. Reddish-brown pigmented limewash

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



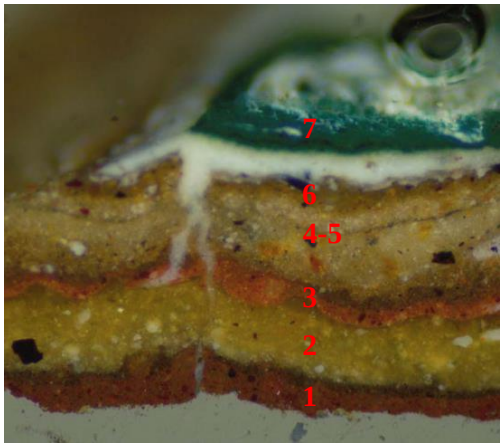
6-8. Layers of unpigmented limewash
5. Soot embedded in limewash
1-4. Layers of unpigmented limewash

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

SAMPLES	LAYER 1	LAYER 2	LAYER 3	LAYER 4	LAYER 5
1	Unpigmented limewash				
2	Reddish-brown limewash	Dull yellow limewash	Red-orange limewash		
3	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Soot in limewash
4	Dark red-brown	Dark brown with charred surface	Dark red-brown	Dark red-brown	Dark yellow
5	Dark red-brown	Dark yellow	Dark red	Tan	Tan

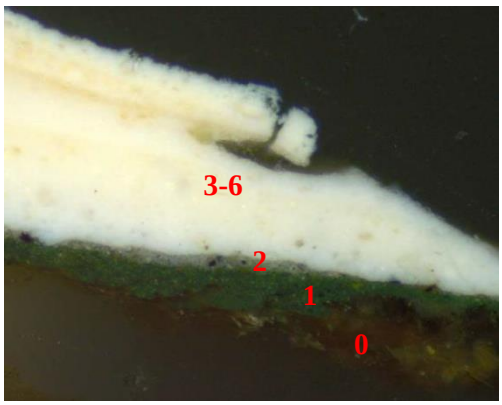
38 Church St. Kitchen-Quarters

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 20th 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 20th century paints.

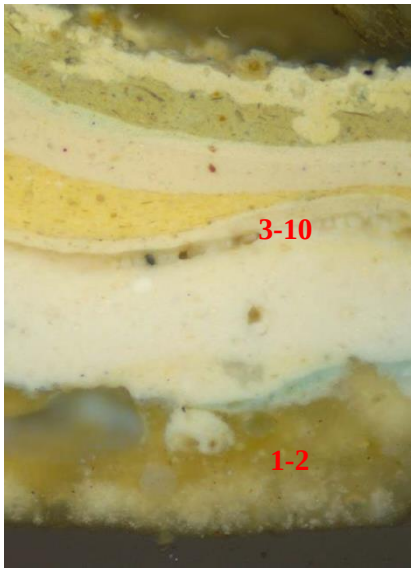
[63] "Archive Record," Property File - 38 Church Street (Dr. Vincent Le Seigneur House a/k/a George Keenan House) | Historic Charleston Foundation, Accessed February 10, 2024, https://charleston.pastperfectonline.com/archive/FBE34E8D-2A50-45C7-B215-520712767260.

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



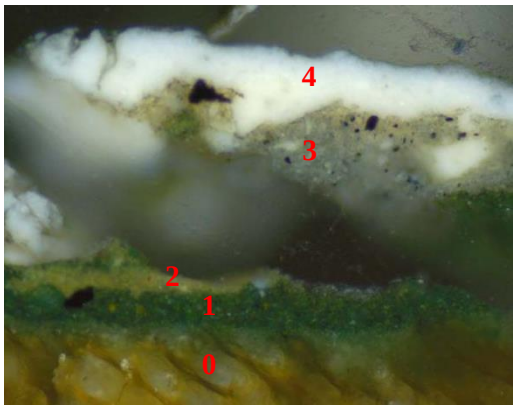
3-6. Layers of off-whites
2. Gray with zinc white
1. Green paint
0. Wood substrate

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



4. Finely ground white
3. Gray with zinc white
2. Dark yellow paint
1. Green paint
0. Wood substrate

Table 4.9 38 Church St. Kitchen-Quarters Sample Analysis

SAMPLES	LAYER 1	LAYER 2	LAYER 3	LAYER 4	LAYER 5
1	Green paint	Gray with zinc white	Off-white	Off-white	Off-white
2	Unpigmented limewash	Unpigmented limewash	20th century paint	20th century paint	20th century paint
3	Green paint	Dark yellow paint	Gray with zinc white	White	

54 Hasell St. Kitchen-Quarters

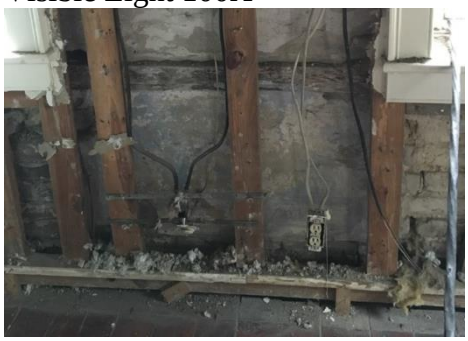
54 Hasell St. Kitchen-Quarter by Susan Buck – April 4 2019

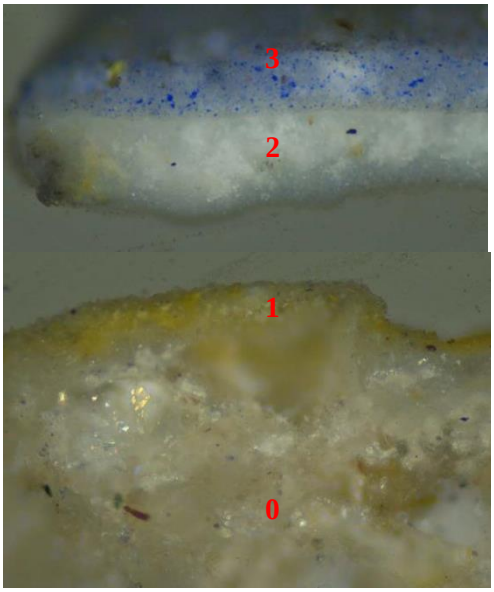
54 Hasell was constructed between 1712 and 1728. Alterations had occurred in 1800 as well as 1950.[64] Sample One exhibits a yellow-pigmented limewash as its first layer, followed by an unpigmented limewash and a blue-pigmented limewash. This blue

[64] "Archive Record," Property File - 54 Hasell Street (Col. William Rhett House) | Historic Charleston Foundation, Accessed February 10, 2024, https://charleston.pastperfectonline.com/archive/CFB71404-D45C-4152-81EF-281042594903.

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.

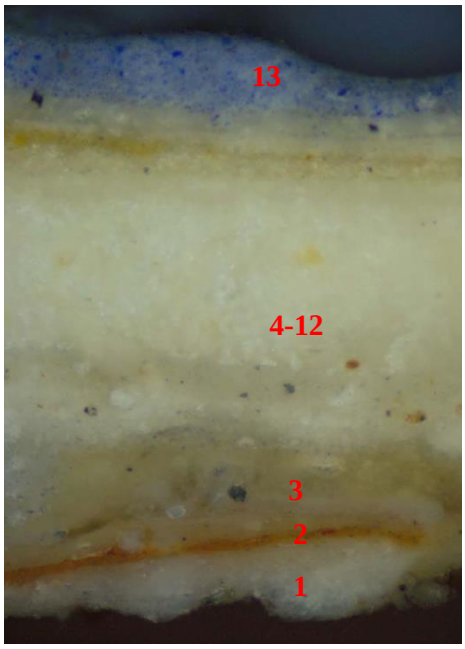
4.72 1. South room, bluish washes below chair rail, between windows. Paint detached from substrate.
Visible Light 100X





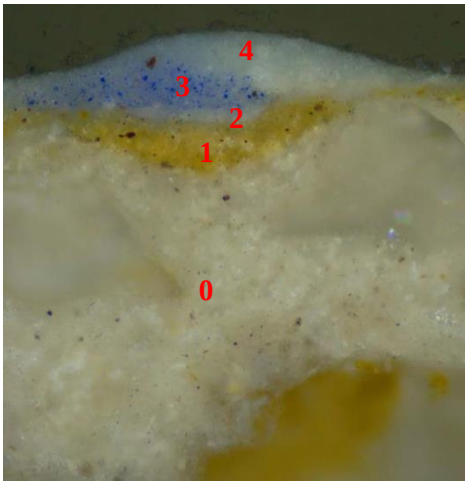
3. Blue pigmented limewash
2. Unpigmented limewash
1. Yellow pigmented limewash
0. Plaster substrate

4.73 2. South room, bluish washes on chair rail, between windows
Visible Light 100X



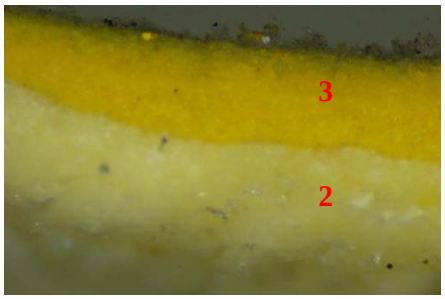
13. Blue-pigmented limewash
4-12. Unpigmented limewash
3. Unpigmented limewash
2. Orange pigmented limewash
1. Unpigmented limewash

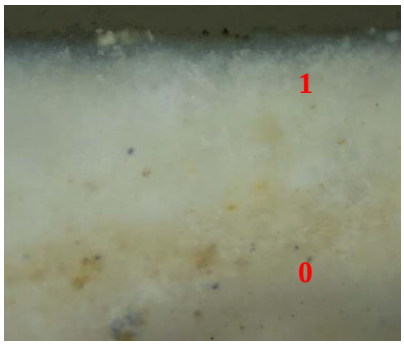
4.74 3. South room, whitish washes on wall above chair rail, between windows
Visible Light 100X



4. Unpigmented limewash
3. Blue-pigmented limewash
2. Unpigmented limewash
1. Yellow pigmented limewash
0. Coarse plaster

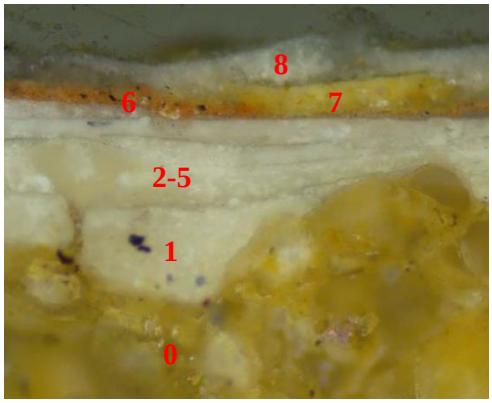
4.75 4. East wall, yellowish limewashes on wall just right of stairs, about 5-feet up. Paint detached from substrate.
Visible Light 100X





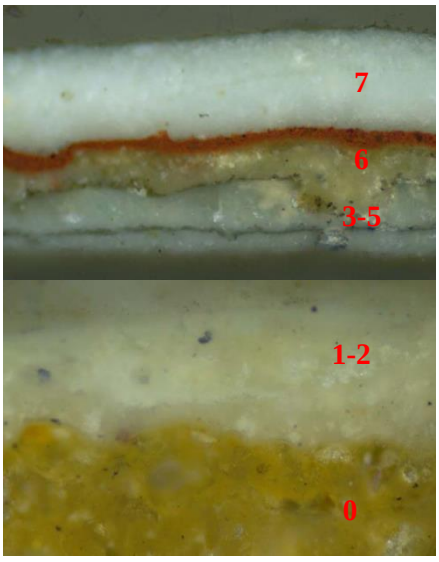
3. Yellow pigmented limewash (similar to sample 5)
2. Yellow pigmented limewash
1. Unpigmented limewash
0. Plaster substrate

4.76 5. North room, north wall, yellowish limewashes on wall, about 5-feet up, second period wall
Visible Light 100X



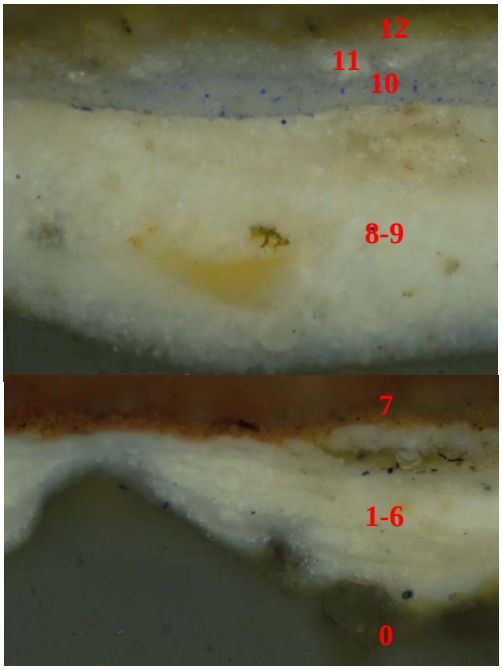
8. Unpigmented limewash
7. Yellow pigmented limewash
6. Orange pigmented limewash
2-5. Unpigmented limewashes
1. Unpigmented limewash
0. Coarse tan plaster substrate

4.77 6. East wall, just left of ghost for partition, traces of early dark red paint. Paint detached from substrate.
Visible Light 100X



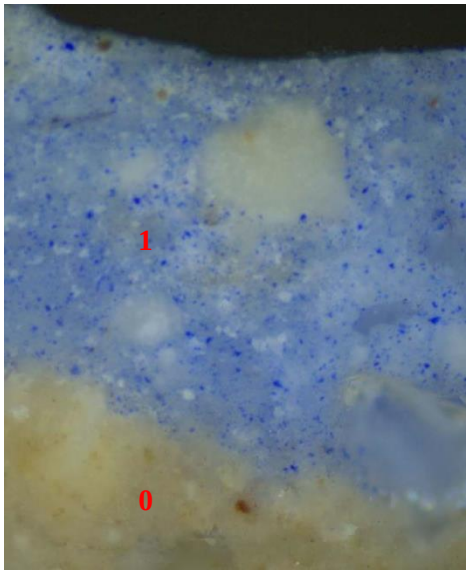
7. Unpigmented limewash
6. Red paint
3-5. Unpigmented limewashes
1-2. Unpigmented limewashes
0. Coarse tan plaster substrate

4.78 7. North room, east wall, accumulation of colored washes, including early red. Paint detached from substrate.
Visible Light 100X



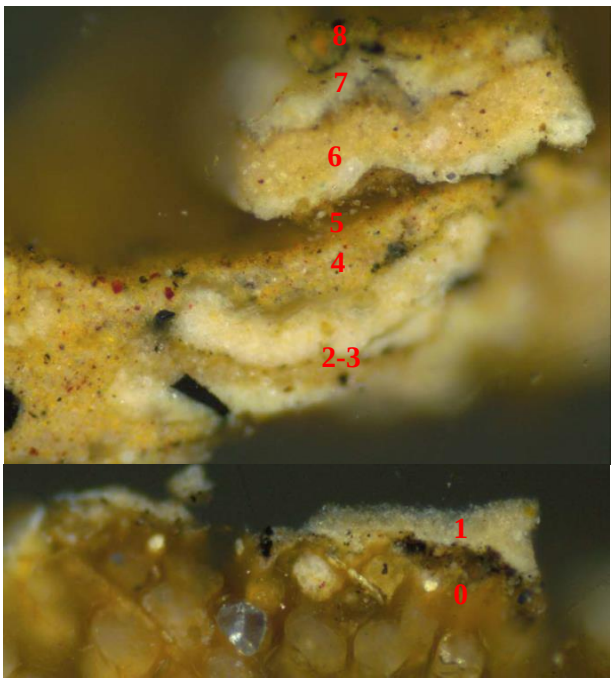
12. Yellow pigmented limewash
11. Unpigmented limewash
10. Blue pigmented limewash
8-9. Unpigmented limewash
7. Dull red limewash
1-6. Unpigmented limewashes
0. Plaster substrate

4.79 8. North room, north wall, limewashes on wall that was originally a door opening
Visible Light 100X



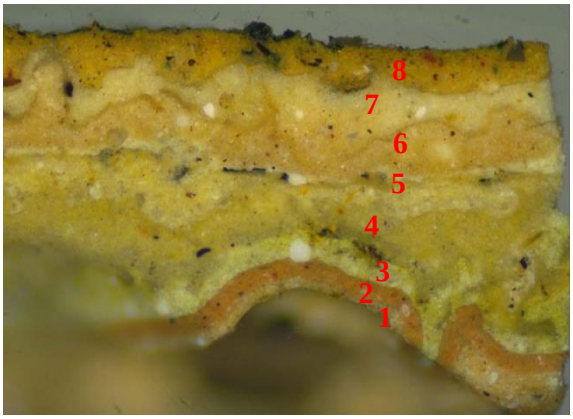
1. Blue pigmented limewash
0. Plaster substrate

4.80 9. Detached louvered shutter, on interior side
Visible Light 100X



8. Orange-brown
7. Dull pinkish-yellow
6. Dull pinkish-orange
5. Orange-brown flowed into cracks
4. Dull yellow
2-3. Cream-colored paint
1. Cream-colored paint
0. Wood substrate with dirt

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. 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

SAMPLES	LAYER 1	LAYER 2	LAYER 3	LAYER 4	LAYER 5
1	Yellow limewash	Unpigmented limewash	Blue limewash		
2	Unpigmented limewash	Orange limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash
3	Yellow limewash	Unpigmented limewash	Blue limewash	Unpigmented limewash	
4	Unpigmented limewash	Yellow limewash	Yellow limewash		
5	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash
6	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash
7	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash
8	Blue wash				
9	Cream paint	Cream paint	Cream paint	Dull yellow	Orange-brown
10	Light tannish-orange	Dull orange	Dull yellow	Dark yellow	Dull yellow

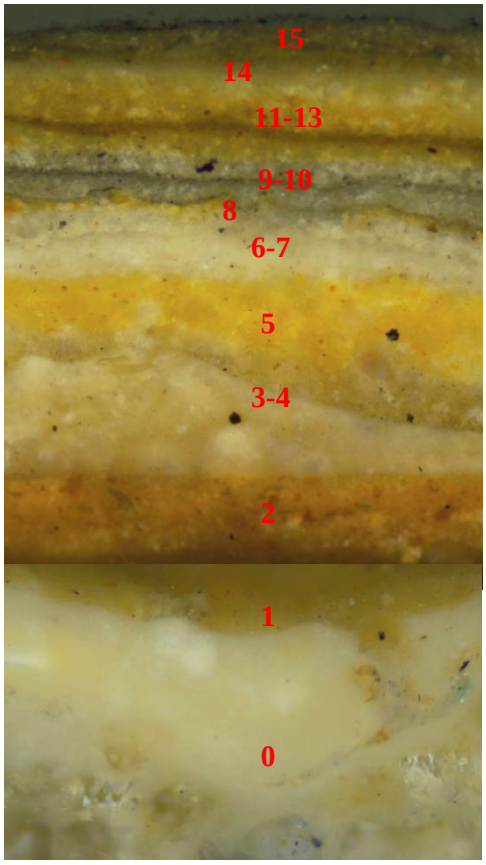
72 Anson St. Kitchen-Quarters

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.[65] 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.

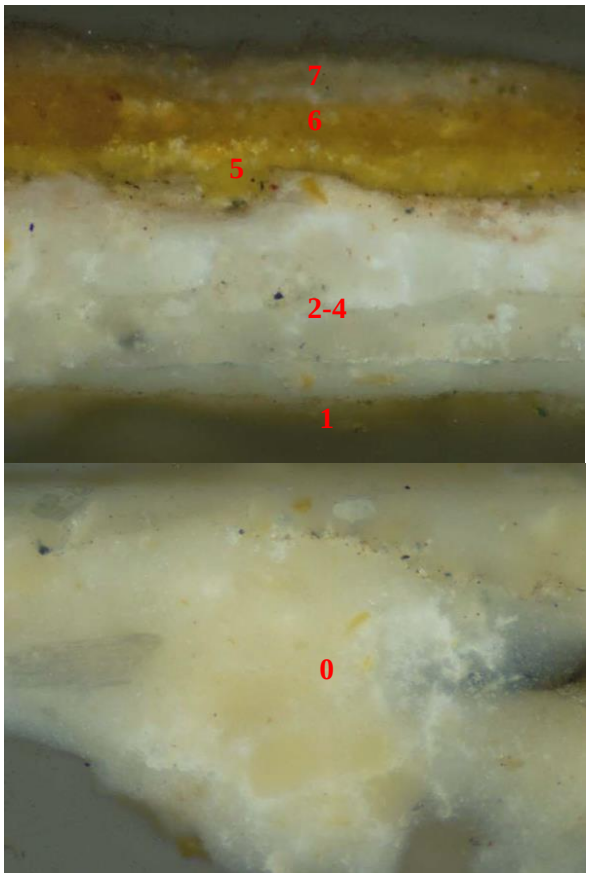
[65] "Archive Record," Property File - 72 Anson Street (Kohne-Leslie House) | Historic Charleston Foundation, Accessed February 10, 2024, https://charleston.pastperfectonline.com/archive/005DE5E5-5124-4EDC-81DD-308042986844.

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

Table 4.11 72 Anson St. Kitchen-Quarters Sample Analysis

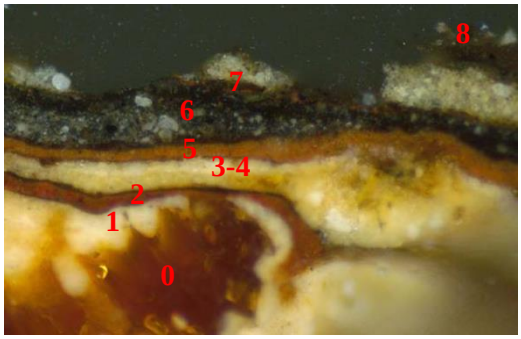
SAMPLES	LAYER 1	LAYER 2	LAYER 3	LAYER 4	LAYER 5
1	Yellow limewash	Orange-red limewash	Unpigmented limewash	Unpigmented limewash	Yellow limewash
2	Yellow limewash	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash	Yellow limewash

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.

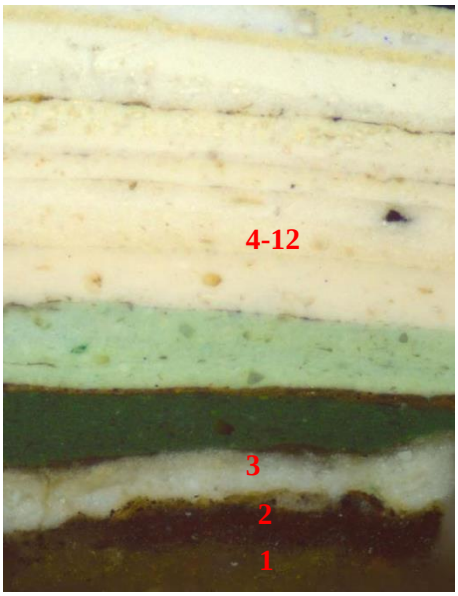
4.84 1. 2nd fl. east room, corner of mantel trapped in closet
Visible Light 200X



8. Varnish
7. Light gray
6. Dark gray
5. Red-brown
3-4. Cream color
2. Red-brown
1. Cream color
0. Wood substrate

[66] "Archive Record," Property File - 15 Legare Street (John Fullerton House) | Historic Charleston Foundation, Accessed February 10, 2024, https://charleston.pastperfectonline.com/archive/FBA3B920-ABEB-4F90-B0C8-412773500280.

4.85 2. 1st fl. laundry room, on edge of lower batten
Visible Light 200X



4-12. Finely ground 20th century paints
3. Unpigmented limewash
2. Black pigmented varnish
1. Varnish

Table 4.12 John Fullerton House Kitchen-Quarters Sample Analysis

SAMPLES	LAYER 1	LAYER 2	LAYER 3	LAYER4	LAYER 5
1	Cream	Red-brown	Cream	Cream	Red-brown
2	Varnish	Black varnish	Unpigmented limewash	20th century paint	20th century paint

Drayton Hall Cellar

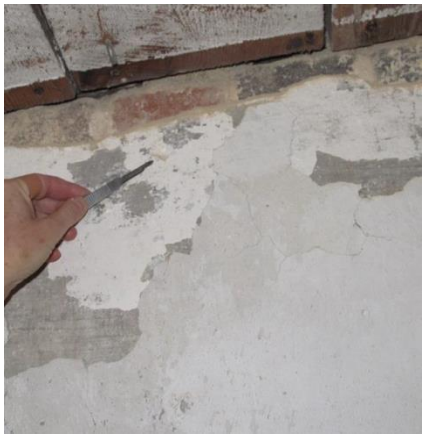
Drayton Hall Cellar by Susan Buck – June 15, 2013

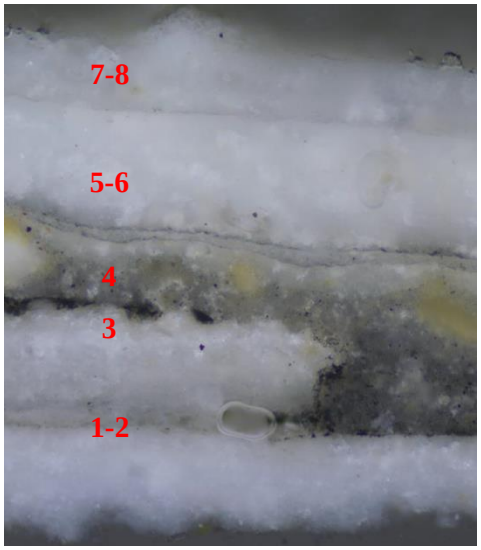
Drayton Hall construction occurred in circa 1750, in a Georgian-Palladian style architecture.[67] Samples One and Two contain layers of unpigmented, translucent limewashes. A remnant of a deep red paint that is in sample two is also seen in sample three as the first and only layer. Buck states that this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

[67] "Archive Record," Documents - Drayton Hall | Historic Charleston Foundation, Accessed February 10, 2024, https://charleston.pastperfectonline.com/archive/2F34590A-F42F-446C-BA52-434915991526.

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

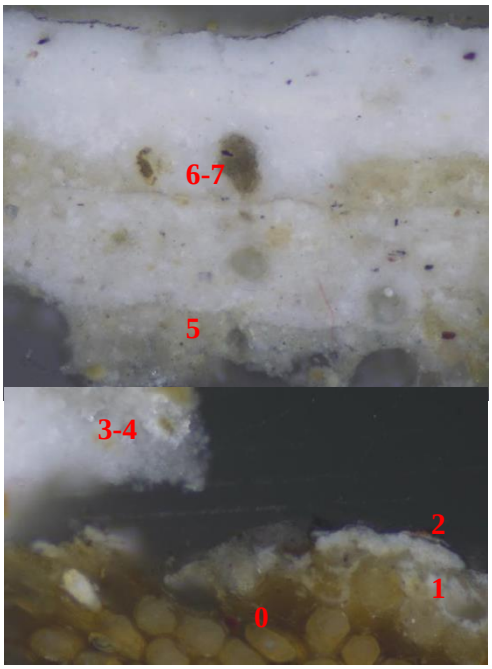
4.86 R005-2. Northwest room, east wall, centered on wall, below level of dropped ceiling (also has early grayish sooty layers) this could be an early wall.
Visible Light 100X





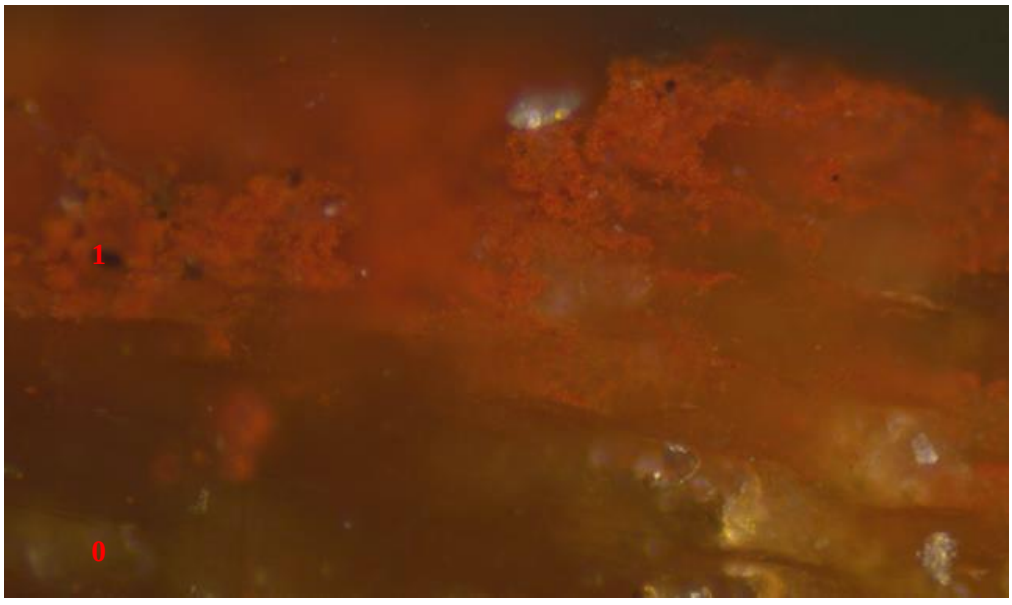
7-8. Unpigmented limewashes
5-6. Unpigmented limewash with sooty surface
4. Gray pigmented limewash
3. Unpigmented limewash with sooty surface
1-2. Unpigmented limewashes

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



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

SAMPLES	LAYER 1	LAYER 2	LAYER 3	LAYER 4	LAYER 5
1	Unpigmented limewash	Unpigmented limewash	Unpigmented limewash with soot	Gray limewash	
2	Off-white paint	Deep red paint	Unpigmented limewash	Unpigmented limewash	Light grayish limewash
3	Deep red paint				

Lavington Plantation Slave-Quarters

Table 4.14 Lavington Plantation Slave-Quarters Pre-Cast Analysis

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

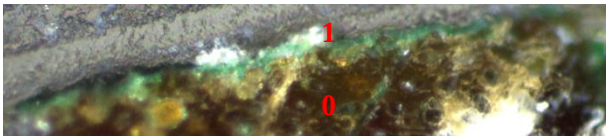
Lavington Plantation Slave-Quarters - September 2023

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

[68] William C. Davis, "We Are Something of Lucifers (1840-1843)," *Rhett: The Turbulent Life and Times of a Fire-Eater* (Columbia: University of South Carolina Press, 2001), 149–50.

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

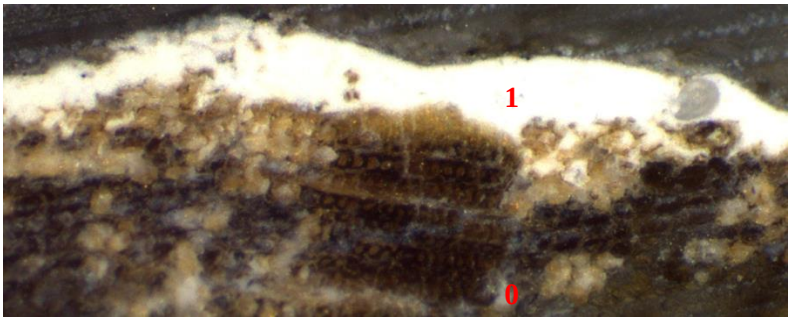
4.89 L1WN3- Window trim
Reflected Light 4X



1. 7.5G 3/4

1. Teal wash
0. Wood substrate

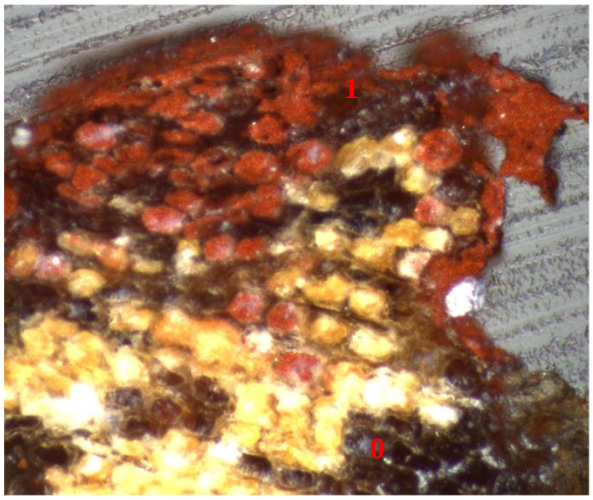
4.90 L1DN1- North door jamb
Reflected Light 4X



1. N 9.5

1. Modern white
0. Wood substrate

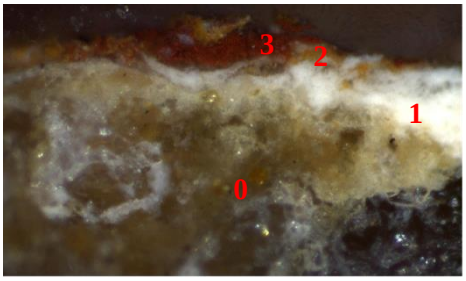
4.91 L1ME2- Fireplace mantle
Reflected Light 10X



1. 7.5R 3/4

1. Red wash
0. Wood substrate

4.92 L1ME3- Fireplace mantel
Reflected Light 10X



3. 7.5R 3/4
2. 10YR 5/6
1. N 9.5

3. Red paint
2. Orange paint
1. White paint
0. Stucco substrate

Table 4.15 Lavington Plantation Slave-Quarters Sample Analysis

SAMPLES	LAYER 1	LAYER 2	LAYER 3	LAYER 4	LAYER 5
1	Teal wash				
2	Modern white				
3	Red wash				
4	White paint	Orange paint	Red paint		

Table 4.16 Lavington Plantation Slave-Quarters Munsell Notations

NOTATION	L1WN3	L1DN1	L1ME2	L1ME3
7.5G 3/4	1			
N 9.5		1		1
10YR 5/6				2
7.5R 3/4			1	3

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.[69] 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."[70]

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."[71]

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."[72]

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[69] "NewsBank, Inc. Charleston Current and Historical," CCPL DatabaseAccess, accessed April 9, 2024, https://infoweb-newsbank-com.ccpl.idm.oclc.org/apps/news/browse-multi?p=WORLDNEWS&t=favorite%3ACharlestonHistorical%21Charleston+Current+and+Historical.
[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.

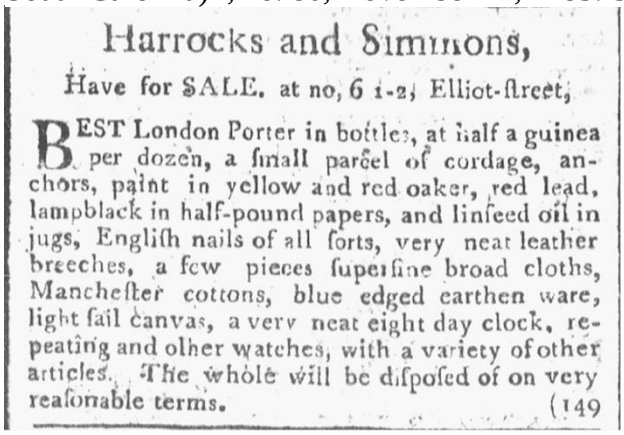
South Carolina Gazette and General Advertiser January 5, 1740, Pg. 3
"Just imported in the Susannah William Gregory from London to be sold by James Reid at his store in Elliot Street…red, white, blue and yellow paints…nails, carpenter's, cooper's and joyner's tools."[73]

South Carolina Gazette and General Advertiser October 6, 1758, Pg. 3
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."[74]

South Carolina Gazette and General Advertiser August 7, 1762. Pg. 4
"Benjamin Hawes, House and Ship Painter, and Glaser, aquaints 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."[75]

South Carolina Gazette and General Advertiser November 5, 1762. Pg. 3
"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."[76]

4.93 South-Carolina Gazette and General Advertiser (Charleston, South Carolina) I, no. 80, November 22, 1783: Supplement 1.



Harrocks and Simmons,

Have for SALE, at no, 6 1-2, Elliot-ſtreet,

BEST London Porter in bottles, at half a guinea per dozen, a ſmall parcel of cordage, anchors, paint in yellow and red oaker, red lead, lampblack in half-pound papers, and linſeed oil in jugs, Engliſh nails of all ſorts, very neat leather breeches, a few pieces ſuperfine broad cloths, Manchester cottons, blue edged earthen ware, light ſail canvas, a very neat eight day clock, repeating and other watches, with a variety of other articles. The whole will be diſpoſed of on very reaſonable terms. (149

[73] South-Carolina Gazette and General Advertiser (Charleston, South Carolina) January 5, 1740: Pg. 3.
[74] South-Carolina Gazette and General Advertiser (Charleston, South Carolina) October 6, 1758: Pg. 3.
[75] South-Carolina Gazette and General Advertiser (Charleston, South Carolina) August 7, 1762: Pg. 4.
[76] South-Carolina Gazette and General Advertiser (Charleston, South Carolina) November 5, 1762: Pg. 3.

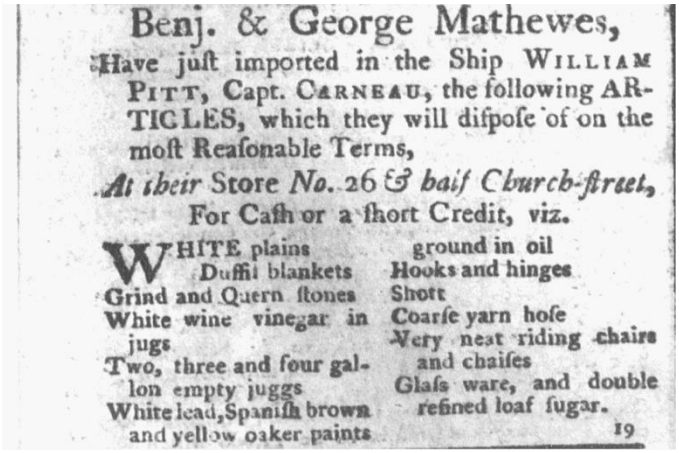
4.94 South-Carolina Gazette and General Advertiser (Charleston, South Carolina) II, no. 118, February 28, 1784: Pg. 2.

Juſt imported in the Brig. Apollo, Captain Jan Haak, from Amſterdam, and to be Sold for caſh, produce, or ſhort credit, by Henry Stuerman, and H. M. Stromer, No. 36, on the Bay, the following Goods, viz.

BROAD cloth
Calicoes
Dutch corduroy
Holland linen
Lover ditto
Sheeting ditto
Arabian ditto
Silk handkerchiefs
Barcelona ditto
Cotton ditto
Check ditto
Silk ſtockings
Thread ditto
Damask table cloths
Bed ticks
Princes ſtuff
Callimancoes
Silk twiſt, and mohair buttons
Nankeens
Mens jacket patterns
Silk ditto
Umbrellas
Tape
Sealing wax
Mens Shoes
Oſnaburghs
Sail cloth
Ruſſia drab
Bath coatings
Negro blankets
An aſſortment of ſmall looking-glaſſes
Knives and forks
Loaf ſugar
Green tea
Bohea ditto
Woollen caps
Cotton ditto
Gin in caſes
Ditto in jugs
Brandy
Sweet oil
Linſeed ditto
Barley in jugs
Caſteel ſoap
Coffee-mills
Nutmegs
Cinnamon
Glaſs ware
Queen's ditto
An aſſortment of china
Grind ſtones
Paint of different colours
Empty jugs
Cordage
Anchors
A quantity of iron ware, &c. &c. with many other articles

(Six

4.95 South-Carolina Gazette and General Advertiser (Charleston, South Carolina) II, no. 274, January 14, 1785. Pg. 1.



Benj. & George Mathewes,

Have juſt imported in the Ship WILLIAM PITT, Capt. CARNEAU, the following ARTICLES, which they will diſpoſe of on the moſt Reaſonable Terms,

At their Store *No.* 26 *& half Church-ſtreet,*

For Caſh or a ſhort Credit, viz.

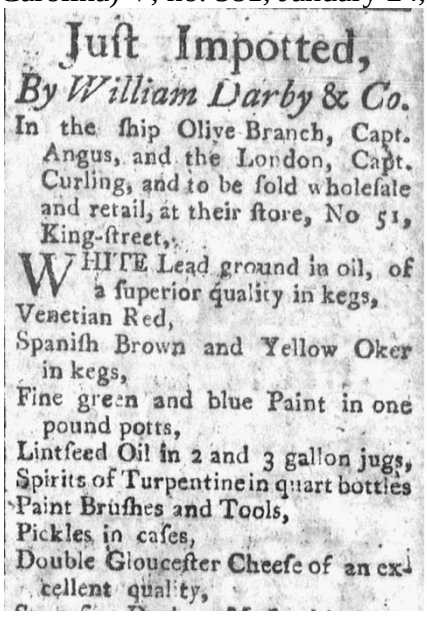
WHITE plains
Duffil blankets
Grind and Quern ſtones
White wine vinegar in jugs
Two, three and four gallon empty juggs
White lead, Spaniſh brown and yellow oaker paints ground in oil
Hooks and hinges
Shott
Coarſe yarn hoſe
Very neat riding chairs and chaiſes
Glaſs ware, and double refined loaf ſugar.

19

4.96 South-Carolina Weekly Gazette (Charleston, South Carolina), no. 225, September 13, 1785. Pg. 4.

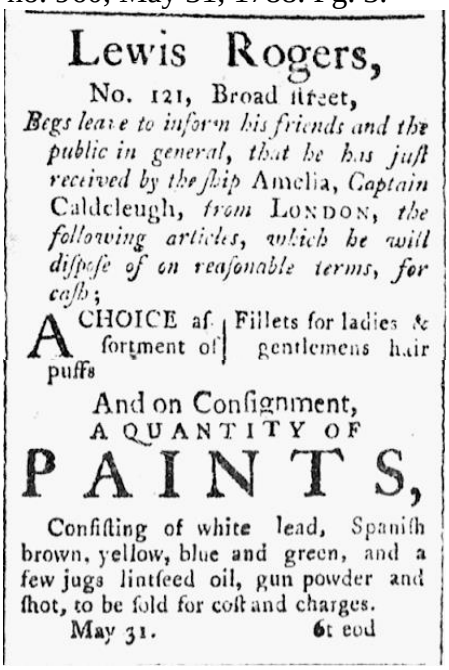
DANIEL O'HARA,
HAS FOR SALE,
At No. 113, Broad-ſtreet,
For CASH or PRODUCE,
EXCELLENT old Madeira Wine, ditto Port ditto (equal to any in this State) by the pipe, quartercaſk or dozen; Jamaica and Weſt-India Rum, Brandy, Cherry ditto in bottles, Porter in ditto, white Wine Vinegar, double and ſingle refined Sugar, Muſcovado ditto in hogſheads and barrels, Hyſon, Green and Bohea Tea, Coffee, Chocolate, Pickles in ſmall Caſes aſſorted, Scotch and Rappee 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; Lintſeed Oil in Jugs, &c. &c.

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



Juſt Impotted,
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,
WHITE 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 potts,
Lintſeed 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* Caldcleugh, *from* LONDON, *the following articles, which he will diſpoſe of on reaſonable terms, for caſh;*

A CHOICE aſſortment of Fillets for ladies & gentlemens hair puffs

And on Conſignment,

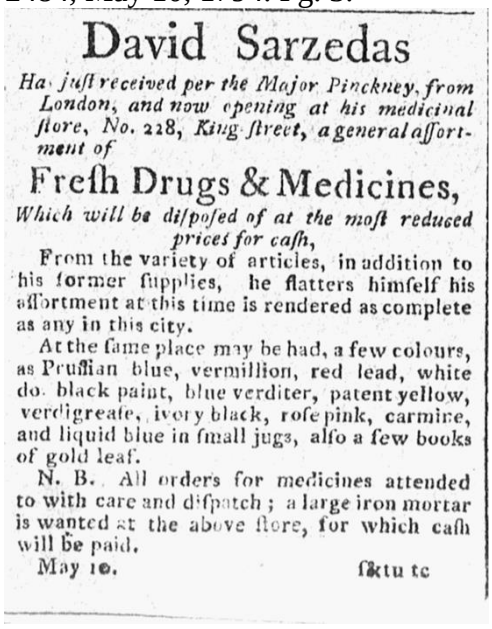
A QUANTITY OF

PAINTS,

Conſiſting of white lead, Spaniſh brown, yellow, blue and green, and a few jugs lintſeed oil, gun powder and ſhot, to be ſold for coſt and charges.

May 31. 6t eod

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. 228, 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.

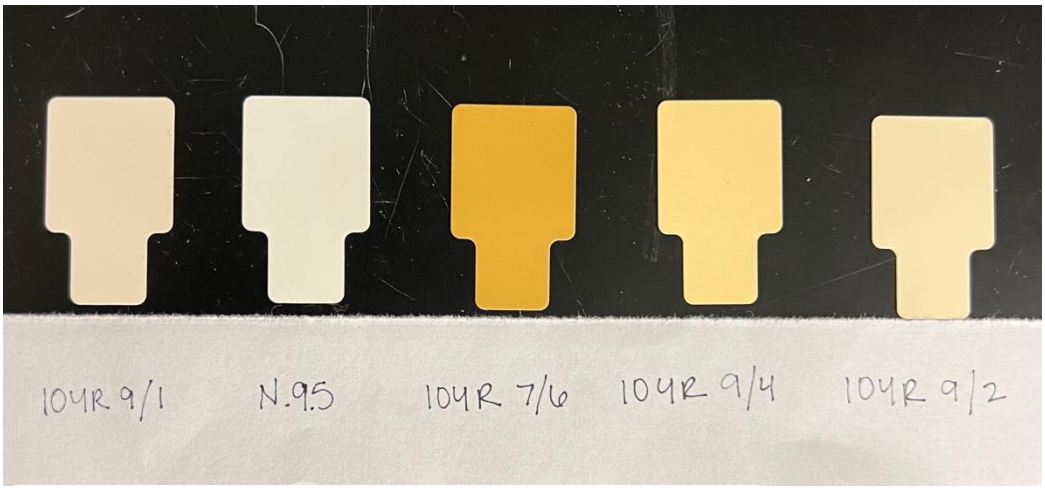
At the ſame place may be had, a few colours, as Pruſſian blue, vermillion, red lead, white do. black paint, blue verditer, patent yellow, verdigreaſe, ivory black, roſe pink, carmine, and liquid blue in ſmall jugs, alſo a few books of gold leaf.

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. ſ&tu tc

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.



[78]

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.[79] 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.[80] 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.
[80] "Slave Quarters," Greenwich Historical Society, June 2, 2022, https://greenwichhistory.org/slave-quarters/.

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.[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.[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."[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

[81] South-Carolina Gazette and General Advertiser (Charleston, South Carolina) no. 93, November 8, 1735: Pg. 2.
[82] Roger W. Moss, *Paint in America: The Colors of Historic Buildings* (New York: J. Wiley, 1996).
[83] Nina Fletcher Little, *American Decorative Wall Painting: 1700-1850* (New York: E.P. Dutton., 1989).

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.

[84] Roger W. Moss, *Paint in America: The Colors of Historic Buildings* (New York: J. Wiley, 1996).

Table 4.17 First Layers of the Enslaved Spaces

Dates	Nathaniel Russell Kitchen Quarters	Aiken-Rhett Slave-Quarters	Heyward-Washington House Kitchen-Quarters	Capers-Motte House Kitchen-Quarters	38 Church St. Kitchen-Quarters	54 Hasell St. Kitchen-Quarters	72 Anson St. Kitchen-Quarters	John Fullerton House Kitchen-Quarters	Drayton Hall Cellar	Lavington Plantation Slave-Quarters
1712-1728						Yellow limewash, Unpigmented limewash, Blue wash, Cream paint,				
1740			Unpigmented limewash, Yellow limewash, Pinkish limewash, Gray, Charred brown paint, Dark brown paint							
1750				Unpigmented limewash, Reddish-brown limewash, Dark-red brown					Unpigmented limewash, Off-white paint, Deep red paint	
1772								Cream, Varnish		
1808	Mint, Cream, Primer, Yellow cream, Tan, Whitewash, Orange									
1819					Unpigmented limewash, Green					
1820		Orange limewash, Dark green, Ochre, Black, Yellow cream, Tan, Cream, Tannish gray								
1830										Teal wash, Modern white, Red wash, White paint
1846-1847							Yellow limewash			

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.[85] 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.

[86] "Home Page," Citristrip, July 1, 2021, https://citristrip.com/.

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.[87] 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.

[87] "Scanning Electron Microscope," Scanning Electron Microscope - Environmental Health and Safety - Purdue University, accessed April 4, 2024, https://www.purdue.edu/ehps/rem/laboratory/equipment%20safety/Research%20Equipment/sem.html#:~:text=SEM%20stands%20for%20scanning%20electron,medical%20and%20physical%20science%20communities.

APPENDICES

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

[88]

Paints	Reflected Visible Light	Reflected Ultraviolet Light	Fluorescent Staining Reactions	General Observations
Distemper	Somewhat amorphous, soft edges, chalky, leanly bound. May be slightly translucent depending on the pigments	May be dark in UV if the paint does not contain lead white	Positive for proteins (hide glue binder)	Tends to appear slightly powdery
Whitewashes/limewashes	Thin, bright white, slightly translucent, may contain pigments	Bright white autofluorescence	Typically no reactions, although limewashes for outdoor use can contain protein and carbohydrate additives	Generally translucent, may discolor to translucent yellowish over time
Traditional linseed oil-based paint	Opaque, wide range of colors, early hand-ground paints have chunky, irregularly dispersed pigments	May fluoresce brightly if there is a high proportion of lead white and/or zinc white	Typically strong reactions for unsaturated lipids with DCF. Very aged, weathered paints may not react strongly with RHOB.	May be coarsely ground and unevenly mixed if hand-ground
Casein paints	Tend to be opaque and matte. Wide range of colors, early hand-ground paints have chunky, irregularly dispersed pigments.	May fluoresce brightly depending on pigment content	Typically reacts positively for proteins and carbohydrates	May be coarsely ground and unevenly mixed if hand-ground
Tempera paints	Opaque and matte, may be deeply colored depending on the pigments.	May have a bright sparkly appearance in reflected ultraviolet light	Positive reaction for proteins (egg tempera) or carbohydrates (natural gum binder)	May be coarsely ground and unevenly mixed if hand-ground
Emulsion paints	Opaque, smooth, finely ground, even dispersed pigments.	May fluoresce brightly depending on pigment content	Positive reactions for oils, carbohydrates and proteins	Generally evenly mixed, finely ground pigments
Latex (acrylic) paints	Opaque, smooth, finely ground, even dispersed pigments	Modern paints typically appear dark in reflected ultraviolet light, or have dull fluorescence colors	May be positive reactions for proteins (from cationic surfactants) and carbohydrates (stabilizers, fillers, cellulosic bulking agents)	Evenly mixed, finely ground pigments
Alkyd resin paints	Opaque, smooth, finely ground, even dispersed pigments.	Modern paints typically appear dark in reflected ultraviolet light, or dull fluorescence colors	Strong positive reactions for oils with Rhodamine B, may also have positive reactions for proteins and carbohydrate additives	Evenly mixed, finely ground pigments

Cross-section Microscopy Reference Charts – Varnishes and Glazes

Paints	Reflected Visible Light	Reflected Ultraviolet Light	Fluorescent Staining Reactions	General Observations
Shellac	Tan, translucent layer	Generally bright orange autofluorescence. Oxidized surfaces may have paler autofluorescence color	Typically no reactions	May swell or start to dissolve when stains ar applied in ethanol and methanol carriers
Plant resin varnishes	Tan, translucent layer	Bright white autofluorescence	Oil-resin varnishes will react positively for the presence of oils, but spirit varnishes will not	
Waxes	Amorphous, translucent, whitish layer, sometimes pigmented	Almost not discernible, may be a slight translucent haze on the surface	No reactions	May dissolve or swell when mineral spirits applied before coverslipping the sample
Natural gums	Tan, translucent layers	Generally yellow autofluorescence	Positive reactions for carbohydrates	Typically found as a sizing or paint binder component, not as a clear coating
Pigmented glazes in plant resin varnish carriers	Tan, translucent layers	Generally brightly autofluorescent with suspended pigment particles	Oil-resin varnishes will react positively for the presence of oils, but spirit varnishes will not	
Glazes with dyes	Colored, translucent or semi-translucent layer (pigments can be seen suspended in translucent medium)	Generally bright autofluorescent, clear layer, some dyes also autofluoresce brightly	Oil-resin varnishes will react positively for the presence of oils, but spirit varnishes will not	
Copper resinate-based glaze	Green, dark green or brown (degraded) semi-translucent layer	Dark appearance in UV	Uneven reactions for the presence of oils	Bright green pigments (verdigris) may be s within the layer
Nitrocellulose lacquer	Tan, translucent layer	Often bright white or blue-white autofluorescence	Positive reaction for the presence of carbohydrates	
Acrylic resin varnish	Very thin, sinuous layer, almost completely clear	Dull bluish or lavender autofluorescence colors	No reactions	May not be well-adhered to the layer below particularly if it was a sprayed-on coating
Polyurethane varnish	Generally thick, tan, translucent layer	Dull bluish or lavender autofluorescence colors	Spotty positive reaction for the presence of oils	
Alkyd resin varnish	Tan, translucent layer	Dull white or bluish white autofluorescence colors	Strong positive reactions for oils with Rhodamine B, may also react for protein and carbohydrate additives	

[88] Susan Buck, Cross-section Microscopy Reference Charts -Paints, Varnishes, and Glazes, June 2007.

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