A Conservation Study of the Decorative Paintings at Whitney Plantation, St. John the Baptist Parish, Louisiana

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A CONSERVATION STUDY OF THE DECORATIVE PAINTINGS AT WHITNEY PLANTATION, ST. JOHN THE BAPTIST PARISH, LOUISIANA

Thaddeus Roger Kilpatrick, III

A THESIS

in

The Graduate Program in Historic Preservation

Presented to the Faculties of the University of Pennsylvania in Partial Fulfillment of the Requirements for the Degree of

MASTER OF SCIENCE

1992

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1.0 Introduction

The preservation of a historic site or structure is quite often a difficult, lengthy, and complicated task. Tastes, tempers, and egos all come into play in most preservation undertakings and inevitably lead to disagreement or confusion. But none would argue that any preservation activity must include an accurate and complete recording and documentation of all existing corporeal fabric and all intervention, be it projected or consummated. The exigency for proper and thorough documentation is not new. Out of nineteenth century concern came twentieth century legislation that includes a documentation ethos, such as The International Charter for the Conservation and Restoration of Monuments and Sites (The Venice Charter) of 1966. The Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (The Burra Charter) of 1979, revised 1988, carefully addresses the issue:

Work on a place must be preceded by professionally prepared studies of the physical, documentary and other evidence, and the existing fabric recorded before any intervention in the place.

This conservation study of the decorative paintings at Whitney Plantation was executed as a thesis in The Graduate Program in Historic Preservation and presented to the faculties of the University of Pennsylvania in partial fulfillment for the degree of Master of Science. It is adjunct to a larger study of the plantation site conducted in 1991 by a preservation team assembled by Louisiana
State University under the direction of Jay Edwards of the Department of Geography and Anthropology.

By completing this detailed examination and analysis, it is the intention of the author to provide a base document for future conservators, art historians, and interested persons, against which comparisons may be drawn, thus allowing for a fresh point of view. The integration of information found in this study has aided in the synthesis of facts and theories concerning the evolution and history of the structure, including its material pathologies, as well as the work of Domenico Canova. It uncovers a curious and complex story of the building and its cultural context since its beginnings.
2.0 Significance and History

Many references to the decorative painting at Whitney refer to it as fresco painting. While the term “fresco” evolved in the nineteenth century to be defined as decorative painting on walls and ceilings, it can be easily confused with the true definition for *buon fresco*: paintings executed on fresh plaster to allow pigment fixation through carbonization of the lime. To avoid any misunderstanding, this study will use the term decorative painting. To gain a better understanding of the decorative paintings and their cultural context, the history of the house and site was studied. Establishing the significance allows for placing the site and its decorative painting program in a proper context and reason for study.

2.1 Significance

Whitney Plantation is located along Louisiana State Highway 18, near Wallace, St. John the Baptist Parish, Louisiana. Situated on the west bank of the Mississippi River near Fifty Mile Point, Whitney Plantation remains one of the least altered historic structures in the southeast Louisiana region. Continuously inhabited since its construction, Whitney Plantation consists of a French Colonial house and many significant outbuildings, including the only known Creole style barn left in existence. Given that many of these plantations have been tragically lost to fire, neglect, and intentional destruction, it is of great importance to pursue all proper methods to document this site entirely.
The purpose of this study is to examine, investigate, and document the decorative paintings found on the second floor of building one, known as the big house.\textsuperscript{1} Based on these observations, conclusions and recommendations may be made regarding possible treatments and care of the decorative paintings. The decorative paintings are located on the exterior walls of the loggia (203), bath (210), and gallery (201), as well as the doors and ceiling of the parlor (202). These decorative paintings are of a high quality and possibly one of the few works remaining by Domenico Canova, the suspected artist. Because these paintings exist in both interior and exterior applications, they place Whitney in a category by itself in Louisiana and the South. No other application of exterior decorative painting is known to survive or even have existed in Louisiana.

2.2 History of the House

It is estimated that Jean Jacques Haydel, Sr. constructed the big house in the late eighteenth or early nineteenth century.\textsuperscript{2} In early 1820, his son, Marcellin Haydel, received one-third ownership of the plantation. The property consisted of 580 arpents\textsuperscript{3} of cultivated land, along with eighty-three slaves, twenty-five horses, twenty pairs of oxen, two master's dwellings (one being two stories).

\textsuperscript{1}Historic American Building Survey, National Park Service, William R. Brockway, 1991. All references to buildings and rooms correspond to those found in this survey document.

\textsuperscript{2}Brenda Barger Rykels, "Our River Road Heritage . . . The Politics of Land Use" (Preservation Study for Whitney Plantation, Department of Landscape Architecture, Louisiana State University, Baton Rouge, 1991), 4. Rykels estimates the construction to be 1790. Historic American Building Survey, (Sheet One) gives 1804 as the estimated construction date.

\textsuperscript{3}An old French unit of measure, approximately equal to an acre.
sugar house, rice and maize mills and other assorted outbuildings. His brother Jean Jacques Haydel, Jr. received the remaining two-thirds interest in the plantation.4

About 1830, Marcellin Haydel became sole owner of the plantation. Prospering from the sugar and maize crops, Marcellin expanded his holdings in 1835 by purchasing a nearby plantation.5

Following the death of Marcellin Haydel in 1839, his widow began managing the plantation with great success. Continuing prosperity enabled Azelie Haydel to expand the land holdings in 1852 and 1853.6 After her death in 1861?, her heirs held the plantation until after the Civil War, selling it in 1866 to the Bradish Johnson Company of Long Island, New York.

A wealthy New Yorker, Bradish Johnson had been a large slaveholder and staunch opponent of secession prior to the war. When the war ended, Johnson divided his time between New Orleans and New York, just as he had done prior to the conflict.7 It is believed that the plantation received the name Whitney, honoring Johnson's grandson Harry Payne Whitney, while under ownership of the Johnson Company.8 After a disastrous sugar house fire in 1879, Johnson no longer had any use for the property and decided to sell it.

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4Conveyance Records, St. John the Baptist Parish, Book C: 120, 1-17-1820.
6Ibid. 280.
In 1880, Peter Edward St. Martin and Theophile Perret purchased the plantation for the purpose of growing rice. Successful in their endeavor, the partners purchased an adjacent tract of 260 acres in 1919.

In 1938, the plantation was transferred to George and Mathilde Tassin, Mathilde being a daughter of Theophile Perret. They occupied the property until 1946, when Alfred M. Barnes, a New Orleans resident, purchased the property. Barnes and his family continued to reside in New Orleans, using Whitney mainly as a weekend retreat. Maurice Tassin, grandson of George and Mathilde Tassin, was retained as an overseer until 1975.

In 1990, the heirs of Alfred M. Barnes sold the plantation to Formosa Plastics Corporation. It is the intention of Formosa Plastics Corporation to construct a rayon manufacturing facility on the property. Formosa Plastics is generously supporting the proper documentation and study of the site, with a further interest in appropriate preservation.

2.3 Search for the Artist

Concerning the decorative paintings, the most significant of Whitney's owners is Marcellin Haydel, for his initials appear in the large blue crests found in the parlor (202). Were the decorative paintings commissioned by Haydel, or were they commissioned by his widow following his death in 1839? One assertion is that the urn, found on the loggia (203) wall, may serve as a symbol of death in
memoriam to Marcellin Haydel. Another possibility is that Haydel commissioned the work and died while it was in progress. Although archival searches have not provided any definitive answers, they have yielded many helpful clues as to when the paintings were executed and by whom. In addition, analytical study and analysis of the decorative paintings, to be covered in a subsequent chapter, will possibly aid in yielding answers to such questions.

Examination of the historical data has provided some insight as to the identity of the artist. While several decorative painters worked in Louisiana during the nineteenth century, only Domenico Canova seems to have had the skills required to execute the high quality of work found at Whitney. Canova’s frescoes are of a fine quality and have been compared to Constantino Brumidi, who painted at the Capitol in Washington, D. C. Because there is no extant physical evidence linking Canova to Whitney, such as a receipt, diary, or account book, it cannot be said with absolute certainty that he executed the paintings. But based on oral tradition, remaining examples of his work and contemporary assessments of his skills, it can be inferred with a very high degree of probability that Canova was the artist responsible for the paintings.

2.3.1 Biography of Domenico Canova

10Joan Garcia Caldwell, “Italianate Domestic Architecture in New Orleans 1850-1880” (Ph.D. diss., Tulane University, 1975), 232. She finds, “In fresco painting, one major master, Domenico Canova, was outstanding in New Orleans.”
11Ibid. 207.
The biography of Domenico Canova is a bit disconcerting. His given name has been listed as Dominique, Dominic, Dominici, Dominico, and Domenico; while his surname is given as Canova. Born in 1800, he was the son of a Supreme Court judge in Milan.\textsuperscript{12} Allegations are also varied as to his relation to the famed sculptor Antonio Canova. While one source simply refers to him as a younger relative\textsuperscript{13}, Domenico Canova has been variously described as a nephew\textsuperscript{14}, a cousin\textsuperscript{15}, and a distant cousin of Antonio Canova\textsuperscript{16}. One source even mentions the possibility that the artist changed his surname from Casanova “to Canova in order to capitalize on the sculptor’s fame.”\textsuperscript{17}

Canova began his artistic training in Italy and married Luisa Stocla of Milan.\textsuperscript{18} It is alleged that she bore him a daughter, Corrine Ann Canova, who later married Jean Magendie of New Orleans.\textsuperscript{19} At twenty-two years of age, Canova moved to Paris, and prior to 1825


\textsuperscript{13}Prescott N. Dunbar, \textit{The New Orleans Museum of Art: The First Seventy-Five Years} (Baton Rouge: Louisiana State University Press, 1990), xi.


\textsuperscript{15}Caldwell, “Italianate Domestic Architecture in New Orleans 1850-1880,” 207.


\textsuperscript{19}Donaldson, “Dominique Canova,” 42.
he married Countess Olympe de Bougerelle. The fate of Luisa Stocla is unknown. In 1825, Canova is known to have been living in New York and working for lithographer Anthony Imbert, creating four plates in Cadwallader Colder’s Erie Canal celebration remembrance entitled Memoirs Prepared at the Request of the Committee of the Common Council of the City of New York. It is probable that while under the employ of Imbert, Canova also executed a lithograph entitled Shade of Tecumseh. At this point it is interesting to note that Donaldson claims that Corrine was the child of Canova and Luisa Stocla. Given that Corrine Canova Magendie died on July 28, 1926, at the age of seventy-eight, it is difficult to believe that she was the product of Canova’s marriage to Luisa. Supporting this conclusion is Corrine’s memory of assisting Canova during his painting of the French Opera House in 1859. Corrine claims she was eleven years old at this time, thereby making her birth about 1848, nearly twenty-five years after his second marriage had taken place. In further support of this conclusion, the 1840 census lists Canova as living alone.

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20 Donaldson, “Dominique Canova,” 42. It should be noted that Caldwell lists her name as simply being Olyme Bougerelle.
22 Mary Bartlett Cowdrey 19th Century American Artists File, American Archives of Art, Smithsonian Institution.
24 Ibid.
25 United States Census, 1840, New Orleans, first municipality.
Canova's life is somewhat of a mystery from 1825 to 1837, and it is suspected that he painted the Alsop and Town houses in Connecticut during these years. The most important of the two houses is the Alsop House, built 1838-1840 by Richard Alsop IV for his mother in Middletown, Connecticut. The Paintings in the Alsop House are believed to have been executed about 1840. The artist remains unidentified, though some speculate he was German due to similarities with the Landhaus in Potsdam, designed by Ludwig Persius. Other sources incorrectly associate Constantino Brumidi with the decorative paintings. Newton points out the problem with crediting Brumidi with the Town and Alsop paintings. He notes that Brumidi did not arrive in the United States until 1845, a year after the death of Town and several years after the completion of the Town paintings. If both houses, as Newton suggests, were painted by

26Roger H. Newton, *Town & Davis, Architects.* (New York: Columbia University Press, 1942), 253-255. Newton suggests that the painted frieze-motif on the exterior of the Alsop House (c.1838-1840) could also be found in the library of the New Haven villa (c.1832) of the famed architect Ithiel Town. He believes this to be the work of same painter. See also Architects' Emergency Committee, *Great Georgian Houses of America.* (New York: Dover Publications, 1937) 2:196-198. The frieze-motif can be seen along with excellent pre-restoration photographs.

27Laura M. Edmiston, “The Davison Art Center and Alsop House” (Student paper on the Davison Art Center, Wesleyan University, 23 May 1991), 1. The Alsop House became property of Wesleyan University in 1948, and has served as the Davison Art Center since its restoration in 1952.

28Ibid. 2.

29Ibid. 1-3. Edmiston notes that the paintings were restored over a two year period by Thaddeus Beck and Allyn Cox, under the direction of Richard Buck, Head of the Conservation Department of the Fogg Museum of Art at Harvard University.

the same artist, it is impossible for Brumidi to have painted the Alsop House because he did not paint the Town House. Newton does point out that several Italian artists in New York were known to have been available, including Canova.31 He also describes the decorative style as being "... far more Italian than French, belonging entirely to the Pompeiian Cinquecento-Neo-Roman type ... "32 Edmiston agrees, noting that the decoration resembles the Empire Style with a Pompeian mode.33 Some of the decoration may be based on patterns found in the Manuel de Peintures, published in Paris by A. Morel.34 If Canova did indeed execute the paintings at the Alsop House, it is most likely that he did so about 1842-1844.35 Supporting this assertion is the fact that the decorative paintings were not executed until after the furniture was placed in the house.36 It is interesting to note that the decorative paintings found in the Alsop House bear a strong similarity to the paintings found at Whitney and San Francisco Plantations. Thus, "The clarity of every element in the large design [of San Francisco's ante-room] bears comparison with the morning room of the Alsop House..."37

31Newton, Town & Davis, Architects, 253-255.
32Ibid. 255-256.
33Edmiston, "The Davison Art Center and Alsop House," 2.
35During this period, Canova is listed only in the 1842 New Orleans City Directory. No evidence exists linking him to other commissions or teaching duties from 1842 to 1844, thus allowing him time to paint the Alsop House.
36Allen, Early American Wall Paintings, 1710-1850, 101.
Canova arrived in Louisiana about 1837 to teach art at Jefferson College. It is uncertain how much time, if any, Canova spent in New Orleans before beginning his teaching duties. Founded in St. James Parish on February 21, 1831, Jefferson College was located just a short distance upriver from Whitney. A prospering institution, Jefferson College offered many electives, including drawing. Parents of the students contracted directly with the instructors of these electives, for these teachers received no salary, only housing from the college. Jefferson College also had a policy requiring the faculty and students to speak French and English on alternating days. Thus, all faculty members, regardless of their academic fields, were required to be fluent in both languages. Given his years in Paris, Canova would have had no difficulty meeting this requirement. Considering the forementioned lack of wages from the institution, it is highly probable that Canova supplemented his income by painting portraits for wealthy local planters, as well as decorative paintings in their homes and churches.

39 Alcée Fortier, Louisiana (Century Publishing Association, 1914), 579-582. It is important to note that Jefferson College was located about sixty miles upriver from New Orleans, in what is presently the town of Convent. Currently, it serves as a Catholic retreat known as Manresa.
The first documented appearance of Canova in New Orleans is found in a local newspaper dated December 19, 1838. It is in the form of an advertisement, where he, as painter and professor of drawing at Jefferson College, thanks the parents of his pupils and offers to execute portraits in oil or lead pencil while spending the holidays in town. The advertisement lists 80 Royal Street as his address. He returned for another year of teaching at Jefferson College, but relocated permanently to this address in December 1839.

About 1838, Canova received a commission to paint the rotunda of the St. Louis Hotel, also known as the Bourse St. Louis. With the assistance of an artist named Pinoli, Canova finished the rotunda in July of 1841.

From December 1839 until March 1840, Canova periodically advertised the opening of a drawing school, obviously attempting to supplement the income he received as a decorative painter. He must have worked on his commissions during the day, for he listed evening class times for Mondays, Wednesdays, and Fridays. Classes were held in the afternoon on Tuesdays, Thursdays, and Saturdays.

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43New Orleans Bee, 19 December 1838.
44New Orleans Bee, 19 December 1839. New Orleans City Directory, 1841. United States Census, 1840, New Orleans, first municipality. This census shows Canova being between the ages of thirty and forty.
45Works Progress Administration, “Artists in New Orleans 1840-1880,” 2. This translation by Howard of an article in Revues Louisianaise, 2 August 1848, states that “The frescoes of the ‘Bourse St. Louis’ are drawn with ease and are so well modelled that they could be taken for low reliefs.”
46New Orleans Daily Picayune, 20 July 1841.
47New Orleans Bee, 19 December 1839. He ran the same advertisement in the Bee on 8 January 1840, 18 January 1840, 22 January 1840, and 4 March 1840.
In the first of such advertisements, he listed a handful of prominent men as references, including the governor of Louisiana, the president of Jefferson College, and the mayor of New Orleans.\textsuperscript{48} Despite his offering a “short and simple method” for drawing based on his “long experience,” the drawing school was short-lived. Perhaps the drawing school failed to be profitable, however, it is also likely that the rotunda of the St. Louis Hotel pressed him for more of his time.

Canova moved to a new address at the corner of St. Phillip and Marais in 1842.\textsuperscript{49} In July 1844, his name appears as a drawing instructor at the recently opened Louisiana College.\textsuperscript{50} In September and October of that same year, he was advertised as Professor of Drawing at the Classical and Commercial School,\textsuperscript{51} also known as Deviller’s Lyceum.\textsuperscript{52} He returned to Deviller’s Lyceum for another term in January of 1845.\textsuperscript{53} For the Fall of 1846, Canova is listed as a Professor of Drawing and Painting at Franklin High School.\textsuperscript{54} By November of 1848, Canova and his partner, Jules Lion, had opened the Academy of Drawing and Painting.\textsuperscript{55} Lion was an accomplished painter of landscapes, portraits, miniatures, and city views. But overall, Lion was best known in New Orleans for his fine lithographs and for introducing daguerreotype photography to the city in the late

\textsuperscript{48}New Orleans \textit{Bee}, 19 December 1839.
\textsuperscript{49}New Orleans City Directory, 1842.
\textsuperscript{50}\textit{Le Courrier}, 12 July 1844.
\textsuperscript{51}New Orleans \textit{Bee}, 28 September 1844.
\textsuperscript{52}New Orleans \textit{Bee}, 24 October 1844.
\textsuperscript{53}\textit{Tropic}, 6 January 1845.
\textsuperscript{54}\textit{Le Courrier}, 26 September 1846. New Orleans \textit{Bee}, 13 October 1846.
Based on their association and Canova's experience, it is not surprising that Canova created the New Orleans lithographs entitled *McDonough on His Last Trip, and Saving His Last Penny for the Poor.*

It was in 1849 that Canova changed his address to 8 Annette Street. Canova's partnership with Lion was apparently not a lengthy one. For in the Fall of 1850 Canova returned to Franklin High School for two years, serving as a Drawing Master, Professor of Drawing and Perspective, and Professor of Drawing and Painting.

The 1850 census shows Canova as being fifty-two years of age and listing his occupation as an ornamental painter and a native of Italy. In 1851, he moved to 6 Annette Street.

Canova was advertised as the teacher of drawing and painting classes at Mlle. S. S. Hull's Institution for Young Ladies in August of 1852. In 1854, he received a major commission for one of his finest works, the octagon room of the James Robb House. Also in 1854, Canova changed his residence to 243 Canal Street.

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57New Orleans *Bee*, 31 October 1850. This lithograph was created before 1850.

58New Orleans City Directories, 1849, 1850.


60United States Census, 1850, New Orleans, third municipality.

61New Orleans City Directories, 1851, 1852, 1853.


64New Orleans City Directories, 1854, 1855, 1856.
About 1856, Canova received his next major commission, the decorative painting of San Francisco Plantation.\textsuperscript{65} A major undertaking. Canova would work several years to finish the elaborate decorations. Perhaps this explains why he is not listed in the New Orleans City Directories in 1857 and 1858.

By 1859, he moved back to New Orleans and living at the corner of Derbigny and Bayou Road.\textsuperscript{66} That same year, he is credited with painting the \textit{Aurora} on the proscenium arch of the French Opera House, as well as its green drop curtain.\textsuperscript{67} In early 1860, Canova was involved with the site selection for a monument to Henry Clay.\textsuperscript{68} He moved to 3 Lapeyrouse Street near Claiborne Avenue in 1861.\textsuperscript{69}

During the later years of his life, Canova painted several canvases. These included \textit{Battle of New Orleans} (1860), \textit{Madonna and Child} (1865)\textsuperscript{70}, \textit{The Sacrifice} (1866, 1868), and \textit{Mother Louisiana} (n.d.)\textsuperscript{71} Though the Robb House and San Francisco commissions must have been generous, Canova's change in medium was probably due to the economic uncertainty of the war years. Few homeowners

\textsuperscript{65}Poesch, \textit{The Art of the Old South: Painting, Sculpture, Architecture, and the Products of Craftsmen 1560-1860}, 256. Poesch targets the date at 1856. Caldwell dates this work between 1849-1852.
\textsuperscript{66}New Orleans City Directories, 1859, 1860.
\textsuperscript{68}\textit{Daily Picayune}, 12 February 1860.
\textsuperscript{69}New Orleans City Directories, 1861, 1866.
\textsuperscript{70}Prescott N. Dunbar, \textit{The New Orleans Museum of Art: The First Seventy-Five Years}. (Baton Rouge: Louisiana State University Press, 1990), 95-96. This work is also referred to as \textit{The Holy Family}.
were willing to spend large amounts of money to lavishly decorate their residences.

About 1864, Canova painted the interior of the Robinson-Jordan House. “The richness and variety of his designs, their relatively miniature scale, and the sureness of touch show no falling off of Canova’s powers.”

During 1866-68, Canova and fellow artists Rossi and Perachi, were commissioned to create three frescoes on the ceiling of St. Alphonsus Church. These frescoes depicted the Ascension, the Assumption, and the Apotheosis of St. Anthony. Perhaps due to his age or frailty of health, Canova did little of the actual painting at St. Alphonsus.

At four o'clock in the afternoon on April 7, 1868, Domenico Canova, native of Milan, Lombardy, Italy died at his Lapeyrouse Street residence. Following an afternoon funeral at his residence, Canova was interred at St. Louis Cemetery Number 2, vault four, Italian Perseverance Tomb.

Domenico Canova is alleged to have been responsible for many other decorative paintings in New Orleans. Among these are: the Pierre Soulé House (1833-39), the Citizen’s Bank (1836-1838),

73New Orleans Times, 9 September 1866. Caldwell points out that the poor quality of the painting in the Assumption suggests that Canova probably only designed the works, and painted very little if any.
74Death Record Book 42: 170, Orleans Parish, Louisiana.
75Daily Picayune, 8 April 1868. New Orleans Bee, 8 April 1868.
76Artist File, Historic New Orleans Collection.
77Ibid.
the Verandah Hotel (1836-1838)\(^8\), an Italian decoration (1846)\(^79\), the Bishop’s Church (1846-51)\(^80\), the John Watt House (n.d.)\(^81\), the Wigwam House (1860s)\(^82\) in Natchez, an altar piece and a fresco for the St. Louis Cathedral (1851)\(^83\), and the W. G. Robinson House (1864-1868)\(^84\). Obviously, some of these works may very well be from the hand of Canova, while in the case of several others, it is rather doubtful. Considering the reputation of Canova, it is easy to understand how many unidentified works have been associated with his name.

2.3.2 Establishing Canova at Whitney

Various sources link Domenico Canova to Whitney Plantation. An oral legend holds that Mrs. Azelie Haydel, mistress of the plantation, aided a wounded or captured Union soldier during the Civil War. Another legend contends that she cared for an ailing

\(^79\)Artist File on Canova, Historic New Orleans Collection.
\(^83\)Seebold, *Old Louisiana Plantation Homes and Family Trees*, 1: 22. Helen Pitkin Schertz, *New Orleans Life*, February 1927, 19. Works Progress Administration, “Artists in New Orleans 1840-1880,” 2. This translation by Howard of an article in *Revues Louisianaise*, 2 August 1848, states that Canova was engaged in “the decoration of the Episcopal Church (St. Louis Cathedral).” Howard incorrectly identified the Episcopal Church as being the St. Louis Cathedral. It was probably Bishop’s Church, also called Our Lady of Victory Church, which Canova was reported to be working on about this time. Current opinion holds that Canova probably had nothing to do with the St. Louis Cathedral.
\(^84\)Artist File on Canova, Historic New Orleans Collection.
Canova, who was painting a nearby church. Both legends assert that in return for Mrs. Haydel’s healing powers, the grateful man painted the decorative work.85 Another legend holds that a young French painter visited the plantation in 1820 and became sick with yellow fever. During his lengthy recuperation, the artist painted the decorative work.86 Regardless of the legends, Donaldson firmly asserts that Canova was responsible for the paintings.87 Caldwell concurs, stating that Canova might have painted Whitney Plantation during the 1840s.88

Given the size and complexity of the decorative paintings at Whitney, it is safe to assume that the commission required a substantial amount of time to complete. Marcellin Haydel’s initials in the blue crests of the parlor (202) ceiling indicate that the paintings were executed while the plantation was under the ownership of the Haydel family. Information on the Haydel family is rather sparse, although Marcellin Haydel is known to have gained control of the entire plantation about 1830.89 With the success of his agricultural operation, he expanded his plantation in 1835.90 Thus, it seems

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85Edwards, “The Preservation and Restoration of the Whitney Plantation, St. John the Baptist Parish, Louisiana,” 1:36-37. Edwards clearly points out the improbability of such circumstances, given that similar legends exist for similar paintings at the Wigwam House. Also, it is reported that Mrs. Haydel died in 1861, thus making the soldier story impossible because New Orleans did not fall to Union forces until April of 1862.
86Diane Williams and George Wilson, “Whitney Plantation” (undergraduate paper, Tulane University, April 1975), 3-4. Based on information supplied by Mrs. Walter Barnes.
87Donaldson, “Dominique Canova,” 42.
reasonable to assert that Marcellin Haydel desired to reflect his prosperity with a strong architectural statement.

How Canova secured the Haydel commission must be considered. As noted earlier, Domenico Canova was definitely in the area, residing at nearby Jefferson College, from 1837 to 1839, and he had economic incentive to market his decorative talents. It is possible that Haydel discovered Canova painting a local church or house and approached the artist about painting his plantation house. Perhaps the wealthy Haydel was generous in supporting the college and took an active interest in its faculty and their teachings. Further research into the Haydel family history is necessary to confirm these speculations. Unfortunately, Canova’s account books and diaries, if any exist, are yet to be uncovered, and Jefferson College records are virtually nonexistent. However, considering the family wealth and the talent of the nearby Canova, it is most likely that the artist commissioned by Marcellin Haydel to decorate Whitney from 1837 to 1839 was indeed Domenico Canova. The elaborate ornamentation conveyed to all visitors at Whitney the high level of economic success and cultural sophistication the Haydels had attained.

It should also be noted that the Haydels were closely related to the Marmillions of San Francisco Plantation. Given this kinship and the proximity of the two plantations, it is not improbable that Canova

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91 Fortier, *Louisiana*, 579-582. Fortier notes that Jefferson College suffered many setbacks during its history, including a disastrous fire on March 6, 1842. After rebuilding, it would be closed in 1855 and 1859 due to debt problems.
also painted San Francisco. However, San Francisco was not painted until much later, probably about 1856. Bumper sugar crops and the death of Edmond Bozonier Marmillion allowed his son Antoine Valsin Marmillion the luxury of lavishly decorating the house that he had inherited.

One house that Canova is known with certainty to have painted was the James Robb House in New Orleans. It is interesting to note that while Whitney Plantation and the James Robb House share few decorative details, San Francisco and the James Robb House share many. Based on this observation, it may be concluded that Canova painted San Francisco. Much of the decorative design at Whitney and San Francisco can be traced to the same pattern book, Manuel de Peintures. Since Whitney and San Francisco share several decorative details as well, it is reasonable to assume that the artist who painted San Francisco also painted Whitney. These observations lend support to the argument that Canova painted Whitney.

When comparing San Francisco and Whitney Plantations, it is clearly evident that the amount of interior decoration found at San Francisco far exceeds that found at Whitney. Caldwell notes that “Every room on the main floor except one bedroom is frescoed.” It is probable that Canova’s work at Whitney was prematurely halted with the death of Marcellin Haydel in 1839. Given that the urn, like

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94 Morel, A., ed. Manuel de Peintures. See plates XI, XVIII, XLIV, and L.
the other decorations, was a common detail of the period, it is highly unlikely that it symbolizes Haydel's death. The untimely demise of Haydel left the artist without a patron, thus Canova completed his teaching duties at Jefferson College and hastily relocated to New Orleans in search of new commissions. This conclusion is supported in old photographs by the presence of decorative chair rails, fine wallpaper, and marbleized baseboards and mantles in the sitting rooms (204 & 207) and the parlor (202). However, only the parlor sides of the two doors connecting the sitting rooms (204 & 207) with the parlor (202) are decorated with floral ornament, and the ceilings of the sitting rooms (204 & 207) lack any decorative painting. This contrasts with the elaborate decorative paintings found on the parlor (202) ceiling. It is reasonable to assume that decorative paintings of a similar style were to be executed on the ceilings of the sitting rooms (204 & 207), given the other decorative elements found in these rooms and their continuity with the parlor. Most of the main rooms at San Francisco are highly decorated, including ceiling paintings. In comparison, Whitney has only one room with a decoratively painted ceiling. It is most unlikely that Marcellin Haydel would go to great expense to decorate and furnish the sitting rooms (204 & 207), only to leave the ceiling and doors stark white. It was probably his intention to decorate these surfaces as he had the parlor.

In establishing the significance of Whitney, it was noted that no other plantation in Louisiana or the South had been known to have decorative paintings applied to the exterior. But this does raise the
question of a possible connection to Cuba where such practices were common. For plantation houses in central and western Cuba, it was standard practice in the nineteenth century to commission Italian painters to decorate the interiors and exteriors with colorful decorations. This decorative tradition has been documented for dwellings in urban areas of the region since the seventeenth century. Given that Havana and New Orleans were the two most significant ports on the Gulf of Mexico, a Cuban influence is worthy of consideration. A more detailed study is merited, but such is not the scope of this study.

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96 Alberto A. Tagle, conversation with author, Philadelphia, Pa., February 1992. A conservation chemist from Havana, Dr. Tagle has worked on numerous studies of decorative paintings in Cuba.
3.0 Documentation and Examination

In order to properly execute a conservation study of the decorative painting at Whitney, it is important to examine it in situ, with unaided vision or under low magnification. This allows for basic observations to be made concerning the condition as well as the execution of the decorative paintings. By making an accurate record of these findings, an irreplaceable resource is created for understanding the historical evolution and current condition of these architectural surfaces.

3.1 Documentation

One of the most important steps in studying any work of art is to completely document the features visible. This recording must be completed before any destructive and non-destructive techniques can be considered. It was determined that the best method of achieving good graphic documentation of the decorative painted surfaces was by an annotated 35 mm photographic montage on mylar. By using clear polyester inking film overlays on these base mylars, current conditions, loss of material, and other problems were recorded by visual survey. This system ensures archival stability, thus allowing future conservators to determine any changes in the surface subsequent to this documentation.

To initiate the selected documentation process in the loggia (203) and bath (210), the walls were divided into sections and subdivided into segments by the creation of a grid. The size of the
grid was determined by the maximum focal length achievable along each wall segment. Thus the focal length dictated the maximum area that could be captured in each 35 mm photograph. Plumb lines were dropped from the ceiling along the wall surface to define vertical boundaries for the segments, which number sequentially from left to right. Vertical boundaries, too, were based on the maximum area allowed by focal length, with definitions of boundaries being in board widths, based on the average one foot board width. Vertical boundaries were lettered sequentially from bottom to top. Segment designations were written on masking tape and placed at the top right corner of each segment, except those partial segments found along the right side of each wall section. These partial segments are a part of the survey, only they have no tape. The selection of this grid system brings accuracy to the documentation process by allowing the conservator to record findings with precision. Again, it must be stated that the sizes of the individual grid segments were not based upon a set linear measurement, but upon optimal photographic quality and strict limitations imposed by the structure itself, i.e., demolishing the bath (210) walls or dismantling railings were not possible. These limitations also prevented the photographic documentation of the west wall of the bath (210).

Upon determining the various sizes of the grid system, photography was initiated. The range of sizes in the grid dictated the selection of versatile equipment. The film used was Kodak Plus-X black & white, in a Nikon FE 35 mm camera with a 50 mm lens and Haze-1 filter, mounted on a Bogen 3020 tripod. Lighting was
accomplished through two 10" reflector lamps mounted on tripods using General Electric 300 watt EBV bulbs, with extension cords bringing power from a portable generator. This lighting system was positioned to provide strong, warm light from forty-five degree angles to the surface, thus eliminating the aggravation of backflash associated with camera-mounted lighting systems. These strong lights also provided the intensity necessary for viewing the surfaces of the paintings in strong raking light.

With the grid systems and necessary equipment in place, the photographic documentation was started. By centering the camera on each of the segments, distortion of the image was kept to a minimum. Care also was taken to ensure that the focal plane was parallel to the wall surface, and to maintain the prescribed focal length. Rectified or large format photography was not possible on the limited budget. Due to the exacting nature of the photography, outside light was blocked by hanging light packing quilts over the window jalousies. One photograph was taken of each segment of every section of the loggia (203) and bath (210) walls.

The exposed film was processed and printed on three-by-five inch glossy photographic paper. In order to create a photographic montage, prints were arranged by wall section and mounted on a cardboard backing by using double-sided masking tape. These photographic montages were commercially processed and screened sepia mylars with seven-hole punch were created. The aforementioned focal lengths caused the sizes and scales of the photographic montages to vary. Each photographic montage was
reduced by the necessary percentage, thus allowing the images on all of the mylars to be on an architectural scale of one foot equal to one and a half inches. Mylars were not created for the decorative paintings found in the parlor (202) because they showed no obvious signs of deterioration.

With the photographic mylars completed, full size black-line reproductions were made and taken to the site for the conditions survey. Varying conditions and notations were recorded using colored pencils, thus creating field sketches. In the studio, this graphic survey method was transferred to a overlay sheet of clear polyester inking film that was attached to the mylar original. Thus, a master copy of the conditions survey graphic was created. For reproduction purposes, a monochromic scheme was developed and applied to the mylars.

The purpose of the conditions survey was not to note every minute detail of loss or damage. The photographic documentation served that purpose. Rather, it was the purpose of the survey to establish zones of damage, deterioration, and alteration. Everything judged to be essential or even significant with regard to the historical, archaeological and technological features of the work were noted as data relative to the diagnosis of the causes of deterioration and the selection of methods for treatment. Upon observation of the various zones, many conclusions were drawn and are addressed in the subsequent chapter on diagnosis and assessment.

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1 Paolo Mora, Laura Mora, and Paul Philippot, Conservation of Wall Paintings (Boston: Butterworths, 1984), 25.
3.2 Description

Examination in situ yields a general description of the construction of the painting, including alterations. These findings provide information which subsequent laboratory examination will expand. While the bath (210) is historically a part of the loggia (203) and not contemporary with the original construction of the house, it will be considered in this study as a separate room, as it is also delineated in the Historic American Buildings Survey of the site. This also allows for consideration of the problems unique to the bath (210).

3.2.1 Interior Painting

In the parlor (202), the support of the decorative painting on the French doors is the wood, believed to be cypress, of which they are constructed. There are four sets of these French doors, with two sets each on opposite sides of the room and leading to the gallery (201) and the loggia (203). It should be noted that two decoratively painted interior doors leading to sitting rooms are missing due to theft, one being taken as late as May of 1991. On the ceiling of the parlor (202), support consists of wood boards running east to west, eight inches wide and flush along the joints.

The preparatory layer consists of several coatings applied to the support, upon which the design layer is placed. Sometimes, this is also called the ground or size. Under low magnification, the preparatory layers appear to be several coats of white paint in the parlor (202).
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The design layer is comprised of applied paints, carefully arranged and installed to yield the desired decoration. At Whitney, the decorative painting utilizes motifs associated with an Italianate influence. But given the recent emigration of Canova, it is quite possible that these decorative paintings are very early examples of a stylistic revival. Some of these motifs are clearly taken from the *Manuel de Peintures.* Thus, Canova was probably working from a book on decoration, copying the designs in the desired size onto large sheets of paper. The paper was punched with small holes by using a needle or a tracing wheel. Using a pounce of charcoal, the image was then be transferred to the prepared surface, leaving an outline of the intended design. The design was painted as desired. The large marbleized panels were laid out with straight edges, T-square, plumb bob, and chalk lines.

Concerning interior spaces, the parlor (202), the design layer is found on the forementioned French doors and the ceiling. On the French doors, an arabesque employing rinceau vines, flowers, ivy, Acanthus foliage, and laurel branches may be found on the lower panel of each of the doors. According to old photographs of the missing doors to the sitting rooms (204 & 207), similar but slightly enhanced arabesques are executed on both upper and lower panels of the doors, depicting a basket of flowers suspended from festoons by a ribbon.

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3 Lyle Saxon, "Last of Canovas." *Times Picayune,* 15 August 1926. Corinne Canova Magendie remembered helping the artist by "perforating the lines in the original painting."
The text on this page is not visible due to the black background.
On the parlor (202) ceiling, a floral motif, being composed primarily of peonies and roses, may be found between interlacement banding running continuously near the walls so as to frame the ceiling, with elliptical jewel details in the banding. These elliptical jewel details are also found at each corner, and an escutcheon is centered in each span of the banding. In each escutcheon is the superimposed initials “MH”. This banding is a slight modification of a design found in Manuel de Peintures. Just inside the interlacement banding is another continuous vertebrate band of ivy, linked together at the corners with coiled rinceau vines. The centerpiece of the ceiling is an acanthus foliage rosette, of eight divisions and very much in the Italian tradition. The rosette is enclosed with a floral band and centered in a large, round escutcheon. This escutcheon is quartered with elliptic jewel motifs tied to a tripartite cluster of acanthus foliage, and encircled with a band of ivy running between the acanthus. Bisecting each band of ivy is a small rosette of four divisions. Sprouting from each of the acanthus clusters are sprigs of rinceau vines. It should be noted that gold colored gilding is found on the denticulated crown molding, the overmantel, chair rails, architraves, and door panel surrounds. The beaded baseboards and the lower portion of the mantelpiece are marbleized.

4Morel, A., ed. Manuel de Peintures, pl. XLIV. Floral motifs are inserted in the banding, but escutcheons and elliptic jewel details are exactly the same as those found in this plate. This interlacement banding is invariably similar to that found along the frieze of the upriver drawing room at San Francisco Plantation.
3.2.2 Exterior Painting

On the gallery (201), loggia (203), and bath (210), the support of the decorative painting of the exterior is tongue-and-groove cypress wood boards with a preparatory fill of plaster-like material in the joints between the boards. The joints are about one-half inch in width. These boards are approximately one foot wide in various lengths, and are horizontally attached with nails to the brick-between-posts wall.

Under low magnification, the preparatory layer appears to be of several coats of white paint. This holds true for all considered decorative surfaces in the gallery (201), loggia (203), and bath (210).

Undoubtedly, the most unusual feature of Whitney Plantation is the extensive amount of exterior decorative painting. On the gallery (201), the design layer consists of large rectangular shaped, panels of simulated stone, extending from floor to ceiling and located between the bays. Visually, the simulated stone appears to be red or reddish brown in color with patterning resembling Antico rosso or a brecciated marble.\(^6\) Along the walls of the loggia (203) and bath (210), there are large simulated stone panels like those found on the gallery (201). Flanking these panels are thin, vertical panels of simulated stone, with blue diamond-shaped panels centered in each, quite typical of the subdivision of the oblong.\(^7\) The simulated stone differs in texture from that found in the larger panels, having

\(^6\)Simulated breccia is also found at San Francisco Plantation.
\(^7\)Ibid., 22, fig. 2.
smaller divisions and possibly resembling a red porphyry. Similar geometric designs of simulated stone may be found in *Manuel de Peintures.* Centered between the middle bays (i.e. the doors leading to the parlor) of the north wall is a large bronze urn topped with a putto holding a palm frond, placed in an arched marble niche flanked by pilasters, accented with spandrels, and extending from floor to ceiling in its entirety. This is an exact copy of a design found in *Manuel de Peintures.* Along the frieze, there is an alternating motif of small, rectangular panels; diamond-shaped panels, shaded to simulate a jewel; and hexagonal panels, formed by applying a set length from the ends of two diameters at right angles to each other. Red, green, and blue are the colors employed exclusively in these frieze details.

### 3.2.4 Alterations

Alterations to the decorative paintings are few for both the interior and exterior. On the parlor (202) doors and ceiling, there is evidence of a thick, yellow varnish layer. Being an interior surface, it is not as dirty as the loggia (203) surfaces. Another alteration was found in the sitting rooms (204 & 207). The transoms above the French doors were made operable at a later date. Hinges and devices on the wall to hold the transoms open were added at this time. This is evident in the photographs taken in 1936. Supporting this is the

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8 Morel, A., ed. *Manuel de Peintures*, pl. XI.
9 Ibid., pl. XVIII.
fact that similar transoms in the parlor (202) are nailed shut, a trait that is shared with all but one of the transoms at San Francisco.\(^\text{10}\)

On the gallery (201), there are several layers of white paint over the entire surface. These coats of overpainting are currently failing under a condition known as visible checking\(^\text{11}\), with detachment occurring mostly at the interface with the original design layer. Where the overpainting has been detached, the red design layer may be seen. If detachment was occurring at any other interface, the design layer could not be seen.

Examining the loggia (203) and bath (210) walls, there is a thick, yellow varnish layer entirely covering the surfaces. For the purposes of this study, this protective coating will be referred to as a varnish layer. In certain zones on the loggia (203), the varnish layer is experiencing checking. Along the north and east walls there are ghosts of removed electrical maids. These ghosts suggest the possibility of more than one varnish layer, due to the fact that they are a lighter yellow than the surrounding wall. On the east wall, an electrical line currently covers part of this ghost. Because the house is currently unoccupied, there is little maintenance and no regular cleaning schedule. Thus, there is a large amount of dust and dirt on the loggia (203) walls, but comparatively little on the bath (210).


Another alteration that is of considerable importance is graffiti. Graffiti at Whitney is found on the loggia (203) and bath (210) walls. It varies from illegible scribble to perspicuous dates and names. It appears that these dates and names served the purpose of recording measurements of personal height during the latter part of the nineteenth century. The artist’s chalk line has been recorded to distinguish it from nearby graffiti. This graffiti appears to be under the varnish layer. A schedule of the graffiti was established and the locations recorded on the conditions survey mylars.

<table>
<thead>
<tr>
<th>Graffiti Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1  “H. Tassin 10 DEC 1897”</td>
</tr>
<tr>
<td>G2  artist's chalk line</td>
</tr>
<tr>
<td>G3  “189”</td>
</tr>
<tr>
<td>G4  “1889”</td>
</tr>
<tr>
<td>G5  illegible</td>
</tr>
<tr>
<td>G6  “10 Lillian Tassin”</td>
</tr>
<tr>
<td>G7  “2355”</td>
</tr>
</tbody>
</table>
4.0 Analysis of Painting Materials and Substrates

The purpose of analysis of the painting materials and substrates is to provide information regarding the artist’s materials and techniques, current condition, and possible treatment. This was achieved by physical examination and microchemical testing of samples. Proper sampling and analysis allows for comparison with current conservation technology for interpretive purposes.

4.1 Sampling

When the documentation process was completed, a sampling program was devised for the decorative wall paintings. While sampling is necessary, it is a destructive technique requiring caution and contrivance. To successfully sample the gallery (201), loggia (203), and bath (210) walls, small pieces of the surface, about 0.5cm², were removed down to the wood substrate by using an art knife. Care was taken to remove these samples from damaged or unobtrusive areas of the decorative surface, so as not to cause any noticeable voids. Each color was sampled and placed in an envelope, carefully marked with specific notation as to the type and precise grid location of the sample. Given that the parlor (202) surfaces were in very stable condition, it was decided that no samples would be taken there in order to concentrate efforts on the exterior decorative painting.

When the sampling was complete, the samples were taken to the Architectural Conservation Laboratory at the University of
Pennsylvania for examination and analysis. Under a low-power stereomicroscope, samples were viewed, with determinations made as to which samples were to be prepared. The selected samples were then imbedded in polyester resin. Upon hardening, the samples were appropriately labeled and loaded on an Isomet low-speed saw. Using this saw, two thin sections were cut from each sample and mounted upon standard glass microscopy slides, fixed side-by-side with either paraffin wax or a thermoplastic acrylic mounting medium. The mounted samples were then polished using extra fine grit wet sandpaper and metallographic polishing cloths.

4.2 Physical examination

Physical examination of the prepared samples was performed on a high-power stage microscope, specially equipped for microscopy in polarized light, ultraviolet fluorescence, and with both transmitted and reflected quartz-halogen illumination. The slide preparation method allowed for the samples to be observed in cross-section. Based on these observations, documentation of the paint stratigraphies was performed, and determinations were made as to further testing procedures for each sample.

4.2.1 Paint Stratigraphies

Examination of paint stratigraphies allows the conservator to determine and record the structure of the painting from the top

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layer to the substrate, including all alterations. Stratigraphies of all samples taken are recorded on data sheets, along with corresponding photomicrographs.

Of samples taken on the gallery (201), the basic configuration of the decorative paint is a design layer on three preparatory layers of white paint applied to a wood substrate. Excellent penetration of the substrate was achieved by the primer coat, with each of the two subsequent coatings probably applied while the preceding layers were still wet. On top of the design layer are three layers of modern white paint, probably applied sometime after 1936 to hide the decorative painting. There is no evidence of a varnish coating on the gallery (201).

Of samples taken on the loggia (203) and bath (210), the basic configuration of the decorative painting is a design layer on two or three layers of white paint applied to a wood substrate and a plaster fill found between the boards. Excellent penetration of the substrate was achieved by the primer coat, with each of the two subsequent coatings probably applied while the preceding layers were still wet. On top of the design layers are two layers of varnish or a similar coating, with a layer of dirt between the two varnish layers. This suggests two distinct varnish applications over time.

4.2.2 Substrates

The two types of substrate found are wood boards and plaster fill. The wood boards appear to be cypress. The plaster fill has an yellowed-white appearance with many large white particles
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appearing throughout it. Microscopic examination revealed no early paint layers prior to the decorative painting, thus the painting scheme is probably an afterthought to construction. Because there is also no dirt layer on the surface of the boards, the boards must have been left exposed and Canova painted them shortly thereafter. Otherwise, the boards were washed prior to painting. If the decorative painting had been considered during construction, it is most likely that flush boards would have been used in order to achieve a flat surface.

In comparing the samples, fine shrinkage cracking was found in all samples containing the plaster fill substrate. This shrinkage cracking is not evident in samples containing the wood substrate. Shrinkage cracking is a condition caused by the shrinkage associated with the curing of the plaster substrate. Being very porous, the fill absorbed much of the vehicle in the decorative paint layers, thereby leading to accelerated curing of those layers. This cracking and absorption are not unusual occurrences.

Evidence of continued fine cracking during the painting process was seen in the cross-sections, where subsequent paint layers entered the fine cracks. Thus, as the plaster continued to cure after the paintings were finished, these small fine cracks continued to occur, running from the design layer to deep into the substrate. Later, the fine cracks were filled through by dirt and varnish when the first varnish layer was applied. While


\(^3\)Ibid. Maire notes, "They run in all directions and seem to absorb oil 'ad libitum' nor to seem to know when they have enough of it."
arresting the deterioration, this first varnish application most certainly yielded a dramatic visual improvement. It is possible that the second varnish layer was later applied in an attempt to give the decorative paintings a freshened appearance. Thus the first varnish application can be seen as a conservation treatment, with the second varnish application being applied at a later time for aesthetic reasons. It should be noted that the fill contains no shrinkage control additives, such as animal or vegetal fibers.

4.3 Microchemical Analysis

Microchemical testing was performed to determine the composition of the paint pigments and binding media.

4.3.1 Pigment Analysis

From the original layers of a sample, a small fraction of the paint layer was carefully removed with a tungsten needle and transferred to a clean slide. A cover slip was placed on the particles, they were crushed and microscopically examined under high magnification with transmitted, reflected, and polarized light. Thus, the probable pigments were determined and followed with confirmatory microchemical testing.

From the design layers of samples P1, P2 and B3, the samples were examined at 400x, revealing small, round particles that were bright red in color. They were finely divided, opaque, and homogeneous. At first, each sample was resistant to diluted nitric acid and hydrochloric acid, but was dissolved by heating in aqua
regia. Suspecting iron oxide red, a test for ferric content with potassium ferrocyanide reagent proved this to be correct. Given its warm red tone, the pigment is probably of the hydrous form of iron oxide red. Light stable and resistant to alkalies, this pigment has been used extensively since prehistoric times. Thus, the same iron oxide red pigment used on the red frieze details of the loggia (203) and bath (210) was used in simulating stone in the large panels of the gallery (201).

From the design layer in sample P3, a piece was examined at 400x, and it was composed of small and homogeneous particles that were bright green in color. Tests for copper content were negative, thus chrome green was suspected. Microchemical testing with diluted sodium hydroxide reagent confirmed this suspicion. Chrome green is a combination of chrome yellow and Prussian blue pigments. It is not stable in light and is highly affected by acids and alkalies. The first date of manufacture is unknown, but must have been after the manufacture of chrome yellow in 1818.

In sample P4, the pigment was thought to be ultramarine blue. At 400x, microscopic examination showed small, rounded, and homogeneous particles that were isotropic, opaque, and deep blue in color, thus indicating synthetic ultramarine. There was no evidence of iron pyrite particles or doubly refracting calcite crystals usually associated with natural ultramarine. This was checked against

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5Ibid., 105-107.
known samples and photomicrographs. Microchemical testing with
diluted hydrochloric acid yielded a positive result for ultramarine.
Stable in light and unchanged by alkalies, synthetic ultramarine was
first manufactured in France about 1830. Such a pigment would be
known and available to European artists in America, such as Canova.

In sample P6, Paris green was the suspected pigment.
Microchemical testing for copper with potassium ferrocyanide
yielded a positive result. Upon warming, the sample turned orange-
brown indicating Paris green. Paris green, also known as
Schweinfurt green or emerald green, was first produced in Germany
in 1814. A highly poisonous copper aceto-arsenite, it is a brilliant
pigment that was used as an insecticide, and selected as a paint for
its biocidal qualities. Susceptible to acids and warm alkalies, it is
fairly stable in an oil or varnish medium. This explains the
presence of a varnish layer over the Paris green layer.

Testing of the layers of white in the preparatory layer was
necessary. By microchemically testing the individual layers in
sample P2 with potassium iodide reagent for the presence of lead, it
was determined that the suspected preparatory layer was indeed
multiple layers of white lead paint. This confirms the documentation
observation of several coats of white paint. White lead was, without
a doubt, the most popular white pigment ever used in house painting
and in fine arts, for it makes an excellent surface for repainting. It

\[^7\]Gettens and Stout, Painting Materials: a Short Encyclopaedia, 163.
\[^8\]Ibid., 113.
was one of the first artificial pigments ever produced, and was selected for its durable and non-porous surface qualities. Because it tends to deteriorate by chalking upon weathering, this explains the "aged" condition seen in the 1936 photographs of the gallery (201). In these photographs, the gallery (201) paintings, about one hundred years old, appear to have been in good condition, given their protected exterior exposure. This also explains why the modern overpaint layers on the decorative paintings of the gallery (201) are currently detaching along the design layer as they fail.

In sample P10, it was noticed that the green pigment was not as bright as the chrome green in sample P10. It had a rather dull and soft appearance at 100x, with cloudy, rounded particles. Microchemical testing with diluted hydrochloric acid failed to dissolve the sampled pieces. Testing for copper content with potassium ferrocyanide failed to yield the desired pink envelope. Instead, the sampled pieces turned blue, indicating a presence of iron, thus the pigment is probably green earth, also known as terre verte. Produced from natural clay deposits, this pigment has been used for hundreds of years, as it has been found in wall paintings at Pompeii.

After removing part of the plaster fill material from sample P9, microchemical testing was performed. Placed in nitric acid, the

9 Ibid., 175.
11 Gettens and Stout, Painting Materials: a Short Encyclopaedia, 163.
sample partially dissolved and slightly effervesced, thus proving the presence of a carbonate, and left some yellow residue. This residue is probably varnish that was absorbed during the varnish applications. A drop of diluted hydrochloric acid was added. After a brief drying time, sheaves of hydrated calcium sulphate crystals were evident while viewing at 100x. This confirmed the presence of gypsum. A test for lead with potassium iodide yielded a slight positive. This was expected, for the white lead primer layer had entered the fine cracks in the fill. Thus it appears that the fill was composed of gypsum and lime. Raw gypsum is inert and requires a binder to set. When mixed with a binder, usually glue but in this case lime, it becomes gesso. Being the Italian word for gypsum, gesso has long been used to prepare wood panels for painting.\(^{12}\) This fill may be considered the *gesso grosso*, an Italian term for the thick undercoating of a panel.\(^{13}\) It was applied to fill the board joints and even the surface upon which the preparatory layers would be applied.

### 4.3.2 Media Analysis

Media analysis was executed by first utilizing staining techniques that test for presence of protein or lipids. Suspecting the design and preparatory layers to have been executed in oils, an oil red lysochrome staining test was performed on the cross sections. Surprisingly, it yielded a negative result for all but the modern layers, thus a protein test for tempera media was selected. Testing

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\(^{12}\)Ibid., 115, 117-118.

\(^{13}\)Ibid., 115.
for protein with amido black (AB3) stain yielded a negative result. A test for a starch medium with sodium azide iodine reagent proved negative. Necessary equipment and fluorescent stains used to test for gums were not available. Given that neither oil nor protein are present, the chance of gums being the media is increased.

Lime was the next media suspected, thus a test for calcium carbonate was selected. By carefully removing very small samples from each layer, a test for carbonate presence was performed. The sample was placed in nitric acid and examined for effervescence. The primer layer, having tested positive for white lead, effervesced slightly, indicating a carbonate, but did not dissolve. After adding a drop of hydrochloric acid and a brief drying time, sheaves of hydrated calcium sulphate crystals were evident while viewing at 100x, confirming the presence of gypsum. Thus the media of primer coat appears to be white lead in a mixture of lime and gypsum. Mixing pigment with gypsum provides greater bulking and hiding power.14 This first layer of the overall preparatory layer can be considered a gesso sottile, a thin coating containing fine gypsum and a binder that was applied over the gesso grosso. Other layers in the preparatory layer, having a more homogeneous appearance under microscopic examination, tested positive for a carbonate, dissolving completely in hydrochloric acid with rapid effervescence. Having also tested positive for lead with potassium iodide, these preparatory layers are white lead with whiting or finely divided calcium carbonate. Design layers also dissolved with rapid effervescence.

14Ibid., 232.
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leaving only pigment particles, thus indicating a lime medium. Because lime is rarely found alone as a medium, it is important to remember the possibility of gums being present.

4.4 Fourier Transform Infrared (FTIR) Analysis

Under high magnification with ultraviolet fluorescence illumination, there appeared to be two varnish layers with particulate dirt between them on top of the design layer. There was no dirt found on the design layer, suggesting that possibly the first coat was original. This is unlikely, however, because no varnish layer is found on the gallery (201), and ghosts of electrical maids in the loggia (203) have only one layer of varnish. The layers of varnish had severely yellowed and were suspected to be shellac. In order to gain a better understanding of the varnish layers, a sample was sent to the Conservation Department of the Philadelphia Museum of Art for FTIR analysis. A sample was found to contain two components: one being an exudate with characteristics similar to shellac, and the second appearing to have characteristics similar to a gum. The conservation chemist pointed out that because the varnish layers were not separated, there is the possibility of the layers being a shellac and a gum, or a mix of the two. There is also the possibility of gum being used as media in the design layer, particles of which were present in the sample tested, thus supporting the earlier suggestion of gums being a media in the paint layers. Due to time constraints of the conservation staff, a more detailed analysis was not possible. A more detailed description of the FTIR analysis may be found in the appendices.
Conservation Study of the Decorative Paintings
Whitney Plantation
Finishes Analysis: Examination Phase

Mylar Sample#: P1  Mounted Sample#: A2  Illumination: quartz-halogen

Sample Location: Loggia (203), north wall, segment C18  Film: Kodak Ektar 25

Possibly relevant facts or dates regarding structure or sample location:

Sample taken from a red marbleized panel in the frieze.

Removed by: T. Kilpatrick  Date: 1-3-92  Magnification: 50x

Examined by: T. Kilpatrick  Date: 4-12-92  Substrate: plaster fill

<table>
<thead>
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<th>comments</th>
<th>stratigraphy</th>
<th>comments</th>
</tr>
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<tbody>
<tr>
<td>1. varnish</td>
<td>gum/shellac</td>
<td>6. cream white</td>
<td>white lead, P</td>
</tr>
<tr>
<td>2. dark layer</td>
<td>dirt</td>
<td>7. substrate</td>
<td></td>
</tr>
<tr>
<td>3. varnish</td>
<td>gum/shellac</td>
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<td></td>
</tr>
<tr>
<td>4. bright red</td>
<td>iron oxide red, F</td>
<td>9.</td>
<td></td>
</tr>
<tr>
<td>5. white</td>
<td>white lead, I</td>
<td>10.</td>
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</table>

Key: F = finish layer  P = primer  I = intermediate layer  + = thick  - = thin  O = overpaint

Summary: The original painting technique consisted of a primer (6), followed by an intermediate or background finish (5), and red marbling (4). The first varnish layer is probably not original.
**Conservation Study of the Decorative Paintings**

**Whitney Plantation**

**Finishes**

**Analysis:** Examination Phase

---

**Mylar Sample #:** P2  **Mounted Sample #:** B2  **Illumination:** quartz-halogen

**Sample Location:** Loggia (203), west wall, near attic stair  **Film:** Kodak Ektar 25

**Possibly relevant facts or dates regarding structure or sample location:**

Sample taken from a red marbleized panel in the frieze.

**Removed by:** T. Kilpatrick  **Date:** 1-3-92  **Magnification:** 50x

**Examined by:** T. Kilpatrick  **Date:** 4-12-92  **Substrate:** wood

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<td>gum/shellac, +</td>
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<tr>
<td>2. dark layer</td>
<td>dirt</td>
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<td>3. varnish</td>
<td>gum/shellac</td>
</tr>
<tr>
<td>4. bright red</td>
<td>iron oxide red, F</td>
</tr>
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<td>5. white</td>
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<tbody>
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<td>white lead, P</td>
</tr>
<tr>
<td>8. substrate</td>
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<td>9.</td>
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</table>

**Key:** F=finish layer  P=primer layer  I=intermediate layer  + =thick  - =thin  O=overpaint

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**Summary:** The original painting technique consisted of a primer (7), followed by an intermediate or background finish (5 & 6), and red marbling(4). The first varnish layer is probably not original.
**Summary:** The original painting technique consisted of a primer (6 & 7), followed by an intermediate or background finish (5), and green (4). The first varnish layer is probably not original.
**Conservation Study of the Decorative Paintings Whitney Plantation**

**Finishes Analysis: Examination Phase**

*Mylar Sample #:* P4  *Mounted Sample #:* D2  *Illumination:* quartz-halogen

*Sample Location:* Loggia (203), east wall, segment 12  *Film:* Kodak Ektar 25

Possibly relevant facts or dates regarding structure or sample location:

Sample taken from a blue panel in the frieze.

*Removed by:* T. Kilpatrick  *Date:* 1-3-92  *Magnification:* 50x

*Examined by:* T. Kilpatrick  *Date:* 4-12-92  *Substrate:* plaster fill

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<td>1. varnish</td>
<td>gum/shellac</td>
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<tr>
<td>2. dark layer</td>
<td>dirt</td>
</tr>
<tr>
<td>3. varnish</td>
<td>gum/shellac</td>
</tr>
<tr>
<td>4. blue</td>
<td>ultramarine, F</td>
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<td>5. white</td>
<td>white lead, L</td>
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<tbody>
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<td>white lead, P</td>
</tr>
<tr>
<td>7. substrate</td>
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<td>9.</td>
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<td>10.</td>
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</table>

*Key:* F=finish layer  P=primer layer  I=intermediate layer  + =thick  - =thin  O=overpaint

**Summary:** The original painting technique consisted of a primer (6), followed by an intermediate or background finish (5), and blue (4). The first varnish layer is probably not original.
Summary: The original painting technique consisted of a primer (6), followed by an intermediate or background finish (5), and brown "pencilling" of the panel frame (4). The first varnish layer is probably not original.
Conservation Study of the Decorative Paintings
Whitney Plantation
Finishes Analysis: Examination Phase

Mylar Sample#: P6 Mounted Sample#: F1 Illumination: quartz-halogen

Sample Location: Loggia (203), east wall, segment E2 Film: Kodak Ektar 25

Possibly relevant facts or dates regarding structure or sample location:

Sample taken from near the edge on the door.

Removed by: T. Kilpatrick Date: 1-3-92 Magnification: 50x

Examined by: T. Kilpatrick Date: 4-12-92 Substrate: wood

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<td>1. white</td>
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<td>2. cream</td>
<td>oil, O</td>
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<tr>
<td>3. white</td>
<td>O</td>
</tr>
<tr>
<td>4. varnish</td>
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<td>5. green</td>
<td>Paris green</td>
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<tbody>
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<td>6. white</td>
<td>white lead, P</td>
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<tr>
<td>7. substrate</td>
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<td>9.</td>
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</table>

Key: F=finish layer P=primer layer I=intermediate layer + =thick - =thin O=overpaint

Summary: The original painting technique consisted of a primer (6), followed by a green original finish (5). Because this door may be recycled, the white (3) may be the original finish, but without certainty.
Conservation Study of the Decorative Paintings
Whitney Plantation

Mylar Sample#: P7  Mounted Sample#: F2  Illumination: quartz-halogen

Sample Location: Loggia (203), north wall, segment A8  Film: Kodak Ektar 25

Possibly relevant facts or dates regarding structure or sample location:
Sample taken from the door jamb, just below handle level.

Removed by: T. Kilpatrick  Date: 1-3-92  Magnification: 50x
Examined by: T. Kilpatrick  Date: 4-12-92  Substrate: wood

<table>
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<tr>
<td>1. white</td>
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<tr>
<td>2. white</td>
<td>oil, O</td>
</tr>
<tr>
<td>3. dark layer</td>
<td>dirt</td>
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<tr>
<td>4. cream white</td>
<td>white lead, P</td>
</tr>
<tr>
<td>5. substrate</td>
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</tbody>
</table>

Key: F=finish layer  P=primer layer  l=intermediate layer  *=thick  -=thin  O=overpaint

Summary: Excellent penetration into the substrate by the very thick layer of cream white (4). It is possibly two layers applied wet, the dirt layer suggesting it as the original finish layer.
Conservation Study of the Decorative Paintings
Whitney Plantation
Finishes Analysis: Examination Phase

Mylar Sample#: P8  Mounted Sample#: A1  Illumination: quartz-halogen

Sample Location: Bath (210), north wall, segment B15  Film: Kodak Ektar 25

Possibly relevant facts or dates regarding structure or sample location:
Sample taken from graffiti location.

Removed by: T. Kilpatrick  Date: 1-3-92  Magnification: 50x
Examined by: T. Kilpatrick  Date: 4-12-92  Substrate: wood

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<td>gum/shellac</td>
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<tr>
<td>2. dark layer</td>
<td>dirt</td>
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<tr>
<td>3. varnish</td>
<td>gum/shellac</td>
</tr>
<tr>
<td>4. white</td>
<td>white lead, I</td>
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<tr>
<td>5. white</td>
<td>white lead, I</td>
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<thead>
<tr>
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<th>comments</th>
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<tbody>
<tr>
<td>6. cream</td>
<td>white lead, P</td>
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<tr>
<td>7. substrate</td>
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Key: F=finish layer  P=primer layer  I=intermediate layer  -=thick  -=thin  O=overpaint

Summary: This sample is of a rather poor quality. The original painting technique consisted of a primer (6), followed by an intermediate or background finish (4 & 5). The first varnish layer is probably not original.
Conservation Study of the Decorative Paintings
Whitney Plantation
Finishes Analysis: Examination Phase

Mylar Sample#: P9  Mounted Sample#: B1  Illumination: quartz-halogen

Sample Location: Loggia (203), north wall, segment B15  Film: Kodak Ektar 25

Possibly relevant facts or dates regarding structure or sample location:

Sample taken from a white marbleized panel.

Removed by: T. Kilpatrick  Date: 1-3-92  Magnification: 50x

Examined by: T. Kilpatrick  Date: 4-12-92  Substrate: plaster fill

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<td>2. dark layer</td>
<td>dirt</td>
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<tr>
<td>3. varnish</td>
<td>gum/shellac</td>
</tr>
<tr>
<td>4. white</td>
<td>white lead, I</td>
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<td>5. white</td>
<td>white lead, P</td>
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Key: F=finish layer  P=primer layer  l=intermediate layer  + =thick  - =thin  O=overpaint

Summary: The original painting technique consisted of a primer (5), followed by an intermediate or background finish (4). The first varnish layer is probably not original.
Conservation Study of the Decorative Paintings
Whitney Plantation

Finishes Analysis: Examination Phase

Mylar Sample#: P10 Mounted Sample#: C1 Illumination: quartz-halogen

Sample Location: Loggia (203), north wall, segment B6 Film: Kodak Ektar 25

Possibly relevant facts or dates regarding structure or sample location:
Sample taken from damaged area on urn handle.

Removed by: T. Kilpatrick Date: 1-3-92 Magnification: 50x
Examined by: T. Kilpatrick Date: 4-12-92 Substrate: wood

<table>
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<tr>
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<tr>
<td>1. varnish</td>
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<td>2. dark layer</td>
<td>dirt</td>
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<td>3. varnish</td>
<td>gum/shellac</td>
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<td>4. dark green</td>
<td>green earth, F</td>
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<td>5. white</td>
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<tr>
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<tbody>
<tr>
<td>6. white</td>
<td>white lead, l</td>
</tr>
<tr>
<td>7. cream white</td>
<td>white lead, P</td>
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<tr>
<td>8. substrate</td>
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<td>9.</td>
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<td>10.</td>
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</table>

Key: F=finish layer P=primer layer I=intermediate layer *=thick -=thin O=overpaint

Summary: The original painting technique consisted of a primer (7), followed by an intermediate or background finish (5 & 6), and green (4). The first varnish layer is probably not original.
null
Conservation Study of the Decorative Paintings
Whitney Plantation
Finishes Analysis: Examination Phase

Mylar Sample#: P12 Mounted Sample#: C3 Illumination: quartz-halogen
Sample Location: Loggia (203), east wall, segment A1 Film: Kodak Ektar 25

Possibly relevant facts or dates regarding structure or sample location:
Sample taken from a bottom board.

Removed by: T. Kilpatrick Date: 1-3-92 Magnification: 50x
Examined by: T. Kilpatrick Date: 4-12-92 Substrate: wood

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<td>white lead, P</td>
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<tr>
<td>2. dark layer</td>
<td>dirt</td>
<td>7. substrate</td>
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<tr>
<td>3. varnish</td>
<td>gum/shellac</td>
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<td>4. light brown</td>
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<td>5. cream white</td>
<td>white lead, l</td>
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Key: F=finish layer P=primer layer I=intermediate layer + =thick - =thin O=overpaint

Summary: The original painting technique consisted of a primer (6), followed by an intermediate or background finish (5), and red particles in the light brown layer (4), probably part of the marbleizing. The first varnish layer is probably not original.
Conservation Study of the Decorative Paintings
Whitney Plantation
Finishes Analysis: Examination Phase

Mylar Sample#: n.a. Mounted Sample#: A3 Illumination: quartz-halogen
Sample Location: Gallery (201) Film: Kodak Ektar 25

Possibly relevant facts or dates regarding structure or sample location:

Sample taken from fifth board from floor, near third door from east.

Removed by: T. Kilpatrick Date: 1-3-92 Magnification: 50x
Examined by: T. Kilpatrick Date: 4-12-92 Substrate: wood

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<td>2. rust-white</td>
<td>w. lead, iron red</td>
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<td>3. white</td>
<td>white lead, l</td>
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<td>4. white</td>
<td>white lead, P</td>
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Key: F=finish layer P=primer layer t=intermediate layer + = thick - = thin O=overpaint

Summary: The original painting technique consisted of a primer (4), followed by an intermediate or background finish (3), and bicolor marbleizing (1 & 2). Lack of a varnish layer suggests that varnish layers are not original in the rest of the house.
Conservation Study of the Decorative Paintings
Whitney Plantation
Finishes Analysis: Examination Phase

Mylar Sample#: n.a. Mounted Sample#: B3 Illumination: quartz-halogen
Sample Location: Gallery (201) Film: Kodak Ektar 25

Possibly relevant facts or dates regarding structure or sample location:
Sample taken from 5th board from floor, between 1st and 2d doors from west.

Removed by: T. Kilpatrick Date: 1-3-92 Magnification: 50x
Examined by: T. Kilpatrick Date: 4-12-92 Substrate: missing

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<tr>
<td>2. white</td>
<td>modern oil, O</td>
</tr>
<tr>
<td>3. white</td>
<td>modern oil, O</td>
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<tr>
<td>4. red</td>
<td>iron oxide red, F</td>
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<td>5. white</td>
<td>white lead, I</td>
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<td>white lead, l</td>
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<td>7. cream white</td>
<td>white lead, P</td>
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Key: F=finish layer P=primer layer I=intermediate layer + = thick - = thin O=overpaint

Summary: The original painting technique consisted of a primer (7), followed by an intermediate or background finish (6), and bicolor marbleizing (4 & 5). Lack of a varnish layer suggests that varnish layers are not original in the rest of the house.
Conservation Study of the Decorative Paintings
Whitney Plantation
Finishes Analysis: Examination Phase

Mylar Sample#: n.a. Mounted Sample#: D3 Illumination: quartz-halogen
Sample Location: Gallery (201) Film: Kodak Ektar 25

Possibly relevant facts or dates regarding structure or sample location:
Sample taken from bottom board.

Removed by: T. Kilpatrick Date: 1-3-92 Magnification: 50x
Examined by: T. Kilpatrick Date: 4-12-92 Substrate: missing

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<tbody>
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<td>modern oil, O</td>
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<tr>
<td>2. white</td>
<td>modern oil, O</td>
</tr>
<tr>
<td>3. white</td>
<td>modern oil, O</td>
</tr>
<tr>
<td>4. dark layer</td>
<td>dirt</td>
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<td>5. cream white</td>
<td>white lead, F</td>
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<td>6. black</td>
<td></td>
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<tr>
<td>7. cream white</td>
<td>white lead, P</td>
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<tr>
<td>8. off white</td>
<td>white lead, P</td>
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<td>9.</td>
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Key: F=finish layer P=primer layer I=intermediate layer -=thick -=thin O=overpaint

Summary: The original painting technique consisted of a primer (8), followed by an intermediate or background finish (7), and cream white over a black layer (5 & 6), possibly creating a baseboard. Lack of a varnish layer suggests that they are not original in the house.
Conservation Study of the Decorative Paintings
Whitney Plantation

Finishes Analysis: Examination Phase

Mylar Sample#: n.a. Mounted Sample#: E3 Illumination: quartz-halogen

Sample Location: Gallery (201), random sample Film: Kodak Ektar 25

Possibly relevant facts or dates regarding structure or sample location:

Sample taken from a marbleized panel.

Removed by: T. Kilpatrick Date: 1-3-92 Magnification: 50x

Examined by: T. Kilpatrick Date: 4-12-92 Substrate: missing

<table>
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<td>modern oil, O</td>
</tr>
<tr>
<td>3. white</td>
<td>modern oil, O</td>
</tr>
<tr>
<td>4. cream white</td>
<td>w. lead, red part.</td>
</tr>
<tr>
<td>5. off white</td>
<td>white lead</td>
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</table>

Key: F=finish layer P=primer layer l=intermediate layer + =thick - =thin O=overpaint

Summary: The intermediate or background finish is found in layer (5). The original white finish layer (4) contains some red particles, and is followed by a thin layer of veining.
5.0 Diagnosis and Assessment

By considering all information gathered in this study, certain determinations may be made regarding the cause of deterioration.

5.1 Interior Painting

In the parlor (202), the support of the decorative painting on the French doors is sound, except for a few locations of impact damage. On the ceiling, the support consists of cypress wood boards running east to west, eight inches wide and flush along the joints. Other than small separations along the joints between the boards, there appears to be no damage to the support in this room.

The preparatory layers showed no problems in the parlor (202).

The design layer of the interior painting appears to be in excellent condition, with the only alteration being later varnish applications. The varnish layers on the ceiling and doors of the parlor (202) has yellowed considerably. It is most likely a part of a renovation campaign, further explanation of which may be found later in this chapter.

5.2 Exterior Painting

The boards found on the gallery (201), loggia (203), and bath (210) appear to be very sound, with no detachment from the wall. There is no indication of rot or insect related damage to any of the boards, although it is interesting to note the presence of termite
damage to the modern stud walls in the bath (210). Cracking and loss is evident in the fills between the joints of the boards and is probably due to the expansion and contraction of the boards. Such movement appears to be the result of several factors. While the loggia (203) is a protected space at the rear of the house, it is still an exterior space as is the gallery (201). The high amount of relative humidity in southern Louisiana can cause swelling in the wood, which is most severe across the width of the boards. Also, because elevated humidity is always associated with bathrooms, the wood support in the bath (210) appears to have suffered additional distress since the installation of the facility sometime during the twentieth century. Another factor in the expansion and contraction of the wooden support is temperature change. Temperature change in the wooden boards is due not only to atmospheric temperature, but also to heat associated with direct sunlight, which strikes certain portions of the loggia (203) and gallery (201) walls. Other damage to the support is due to impact, most likely the result of the numerous kicks, bumps, and scrapes associated with children playing, chairs being moved, and other accidental contact. This impact damage is very prevalent and is most often found in the lower third of all vertical decorative surfaces being considered.

There appears to be no alterations to the preparatory layers. As stated above, impact damage has caused a loss of the painting on the lower third of all considered vertical surfaces. Regarding the gallery (201), loggia (203), and bath (210), corrosion of the nail heads in several locations has caused damage and loss of the paints.
This appears to be the result of corrosion of the iron nails in the high humidity of south Louisiana. Such damage is limited to the immediate area atop the nail head. It should be noted that the only evidence of iron staining is found near the top of the urn in section C-6 of the north wall. This iron stain is about one square inch, indicating that the corrosion has advanced. Since the severity of the corrosion ranges from no damage to cracking to total loss, it is possible that this is an active problem.

There is much evidence of loss of the painting prior to the application of a protective varnish coating. Oddly enough, this loss is a distinct detachment from the board support, and never a problem of adhesion between preparatory and design layers. It occurs randomly over much of the entire area, apparently related to the expansion and contraction of the boards due to the various aforementioned causes. Because such loss occurs in horizontal patterns near the ceiling, it is suspected that moisture in the upper boards due to roofing failure is the cause of the deterioration. In the bath (210), this loss of painting prior to varnish application is even more prevalent, as it is found over most of the surface. The most severe areas of loss tend to be on the upper half of the wall, probably due to condensation associated with bathrooms.

Two very small areas of active deterioration appear on the north wall of the loggia (203). They appear to be a detachment between the preparatory layers, and not a problem between the support and the preparatory layers. This may possibly be related to humidity or thermal expansion, which is addressed below. They are
quite small and deserve further monitoring to pinpoint the cause and rate of deterioration.

Upon visual inspection, the design layer on all exterior surfaces appear to be quite stable, with all loss due to the problems associated with the underlying preparatory layers and support.

Alterations to the design layer are few, although very noticeable. On the gallery (201), there are several layers of white overpainting that were applied sometime after 1936, for the large marbleized dado panels appear in photographs taken at that time by Richard Koch. Clearly it was the intention of the owner to conceal the decorative painting with this coating. This white overpainting is failing over the entire gallery (201) wall from visible checking. Though this is a rather common condition for paint layers that have been exposed to exterior weathering, checking is related to the pigment to vehicle ratio of the paint.\(^1\) The outermost layer is also suffering from chalking, which is related to many factors, including pigment selection.\(^2\) White lead paints often do not suffer this from checking\(^3\), and microchemical analysis confirmed that the outermost layer of modern paint was not lead, but previous modern paint layers were lead. Given that titanium dioxide is a pigment conducive to chalking\(^4\), it is most likely the pigment to be found in the outermost layer. All layers of modern paint, being of an oil media.

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\(^2\) Ibid.

\(^3\) Gettens and Stout, *Painting Materials: a Short Encyclopaedia*, 175.

\(^4\) E. C. Eberman, "Industrial Finishes," 351.
are adhering to one another, with detachment occurring at the interface with the original decorative painting beneath the modern overpainting. This is not unusual, given the incompatibility of the materials, i.e., the modern overpainting having an oil medium and the decorative painting having a non-oil medium. It should be noted that the detachment of the modern layers, though occurring along the interface with the design layer, is causing a partial loss of the design layer due to the adhesion of some particles in the design layer.

Elsewhere, there is no evidence of “touching up” of the decorative painting by overpainting, there is evidence of a varnish coating on the walls of the bath (210) and loggia (203). This coating was probably to protect and rejuvenate the appearance of the surfaces, being a part of a larger renovation program. There is some validity to this position, supported by the fact that no varnish layer appears on the gallery (201). Thus it can be suggested that the gallery (201) received a fresh coat of white paint at about the same time the said surfaces in the loggia (203), bath (210), and parlor (202) were coated with varnish. Further supporting this argument are photographs from the late 1940s showing the gallery (201) freshly painted in white and having new light fixtures.\footnote{F. H. Boatner, \textit{Louisiana Plantation Homes}, 5:2, Boatner Collection, Howard-Tilton Library, Tulane University.} This application of white overpainting to the gallery was probably due to the contemporary fashion (i.e. plantations were big white houses) and the lack of skilled artists capable of reproducing the decorative
finish. Thus it is most probable that such alterations occurred after 1946 under the direction of the new owner A. M. Barnes, who sought to improve the property. Strengthening this argument is the fact that a privy was on the site until the 1930s, thus the bath (210), ultimately responsible for heightened paint layer loss, was probably installed during Barnes' renovation program. The electrical maids, present in the 1936 photographs, have left ghosts showing one layer of varnish. The first layer was probably applied sometime after the house was electrified, with a second layer being applied after the electrical maids were removed. Regardless of the reason, certainly the varnish appears to have arrested detachment and provide protection. Unfortunately, it has also greatly darkened, thus obscuring the design below.

Another problem occurring on the loggia (203) is the loss of varnish layer. This condition is an active problem and is associated with thermal expansion. Due to the state of disrepair of the window jalousies, sunlight enters and strikes the decorative painting, thereby causing brittleness and checking of the varnish layer as the design layer and design layer expand and contract with the temperature fluctuation. This thermal expansion is directly related to the color of the design layer beneath the varnish layer. The darker colors absorb more heat, thus expanding more than lighter colors. Due to the differing rates of elasticity between the varnish and design layers, the varnish layer suffers checking. The checking layers of varnish

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are detaching from the surface, taking adhering design layer particles with them. More than any other factor, the severity of the problem is related to the amount of exposure. Those zones experiencing longer periods of exposure to direct sunlight are suffering the most.

There may be some speculation that the loss of paint prior to the varnish application might have been caused by thermal expansion due to exposure to sunlight. This is rather improbable, for the loss occurs over the entire surface, much of which receives no direct sunlight exposure. The current sunlight related problems occur at the interface between the varnish and design layers, not at the substrate level.
6.0 Proposed Conservation Treatments

In the overall plan to restore Whitney Plantation, conservation of the decorative paintings must be included. Any and every conservation treatment proposed or executed must attempt to be reversible and in keeping with the standards set forth by the American Institute of Conservation (AIC). All such work should be performed by qualified personnel who are experienced in paintings conservation. All work proposed or executed should be discussed with the restoration architect and the property owner. Comprehensive documentation must be performed to record all work, proposed or executed.

The conservation of the paintings should proceed in a phased campaign: i.e., the project should be divided into three separate tasks: the gallery (201), the parlor (202), and the loggia (203) and bath (210). Work on each phase must be completed before commencement of the next. A phased campaign is necessary for the three spaces due to the different needs and conditions of each. A phased campaign also allows for adequate consideration and input by all parties involved. In situations where budget is limited, a phased campaign allows the most pressing concerns to be addressed first, with subsequent treatments performed when monies become available.

6.1 Interior Treatments
The suggested steps in 6.1.1 and 6.1.2 are not the responsibility of the paintings conservator. Nevertheless, they are extremely important to the overall restoration effort for Whitney Plantation and should be aggressively pursued.

6.1.1 Reinstallation of Wallpaper

In the interpretation of the interior spaces, it is necessary to reinstall reproduction wallpaper based on the evidence found in the historical photographs and oral accounts.¹ The wallpaper is highly significant to the perception of the interior spaces in relation to the decorative painting or lack thereof. It is outside the scope of this study to research historical wallpapers, but there are several references concerning the matter.² Reinstallation of the wallpaper is necessary for the restoration of the interior spaces, and should be executed regardless of any work performed on the interior painting.

6.1.2 Recovery of Stolen Parlor (202) Doors

The missing parlor (202) doors that lead to the sitting rooms (204 & 207) must be recovered. Reconstructions of these doors with applied decorative painting is not acceptable. If it is determined that the doors are missing due to theft, appropriate law enforcement

¹Williams, Diane, and George Wilson, “Whitney Plantation,” 3-4. According to an interview with Mrs. Walter Barnes, the original wallpaper was blue and white striped with a border along the moulding.
²It is suggested that wallpaper research begin by consulting Catherine Lynn’s book entitled Wallpapers in Historic Preservation. Institutions supporting wallpaper research include: the Cooper-Hewitt Museum, Smithsonian Institution, 9 East 90th Street, New York, NY 10028, and the Musée des Arts Decoratifs, Palais du Louvre, 107 rue de Rivoli, 75001 Paris, France.
agencies should be notified of the crime involving the missing historic and artistic artifacts.

6.1.3 Removal of Varnish Layer in Parlor (202)

The varnish layers on the parlor (202) surfaces should be considered as a separate campaign. Because no samples were taken, it is believed that the varnish layers are similar to that found on the loggia (203) and bath (210) walls. The paintings conservator must first sample the surfaces and analyze them. Upon determining the material to be removed, appropriate measures may be selected. Before full-scale work may begin, cleaning tests must be performed to evaluate the effectiveness of the selected cleaning agents and techniques.

6.2 Exterior Treatments

The suggested steps in 6.2.1 and 6.2.2 are not the responsibility of the paintings conservator. Nevertheless, they are extremely important to the overall restoration effort for Whitney Plantation and should be aggressively pursued.

6.2.1 Repair of Window Jalousies on the Loggia (203)

Qualified personnel must repair the window jalousies on the loggia (202). Exposure to sunlight has caused damage to the varnish layer and decorative painting underneath. This problem is currently active. Failure to repair the jalousies will contribute to the deterioration of the painting. If permanent repair is not readily possible, temporary repair is possible by hanging a sheet of thick
cloth or black plastic over the problem windows. Immediate steps to protect the painting must be taken. Observation during dawn and dusk will enable the person making the temporary repair to achieve proper placement of the sheet.

6.2.2 Removal of Bath (210)

Removal of the modern stud walls and bathroom fixtures should be performed by a skilled carpentry crew. Every member of the carpentry crew must be made to understand the importance of the decorative painting and implored to use extreme caution in order to avoid damage to the painting. The painted surfaces should be temporarily protected before demolition.

6.2.3 Removal of Varnish Layer on the Loggia (203)

The varnish layers on the loggia (203) surfaces should be considered as a separate campaign. Many samples were taken and analyzed, with the results listed in a previous chapter. The paintings conservator should take suitable samples of the varnish layer and further analyze them to determine the exact composition of the varnish. Upon determining the material to be removed, appropriate measures may be selected. Before full-scale work may begin, cleaning tests must be performed to evaluate the effectiveness of the selected cleaning agents and techniques.

6.2.4 Removal of Modern Overpaint on Gallery (201)

The layers of modern overpaint on the gallery (201) surfaces should be considered as a separate campaign. The problems to be
addressed are very different to the other spaces considered in this study. The paintings conservator must first sample the surfaces and analyze them. Upon determining the extent of the original decorative painting and the amount of material to be removed, appropriate measures may be selected. Due to the nature of the deterioration of the surface, a mechanical cleaning method should be considered as an option to a chemical method. This decision is to be made solely by the paintings conservator involved with this phase of the project. Should the original painting be too fragmented, replication may be necessary based upon exposure of the evidence.

6.3 Aesthetics: Principles in Presentation

Because traditional retouching has often led to overpainting in the past, steps must be taken to guarantee proper restoration of the decorative painting. This mistake “is derived from the naïve conviction that a work of art must be complete to be properly appreciated and that it can be remade so at will by a craftsman.”\(^3\) Reconstruction is acceptable only if the goal is to improve the overall visual unity of the whole. While being a part of this whole, any reconstruction must also be easily distinguishable from the original. Any retouching of the design layer should be reversible and compatible both visually and chemically with the original. It will be the responsibility of the paintings conservator to employ *tratteggio* (a system of hatchings) or alternate reconstructive techniques.

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\(^{3}\)Paolo Mora, Laura Mora, and Paul Philippot, *Conservation of Wall Paintings*, 301.
Replacement of the fill and preparatory layer should be done with compatible and stable, yet distinguishable materials.

Because it is highly significant to the historical evolution of the structure, all graffiti should be retained. Besides providing insight into the cultural and historical aspects of the site, it also provides important information about alterations to the decorative painting.

After removal of the varnish layer, any reapplication of a protective coating should be considered. Such measures should be taken to protect the surface and achieve an appearance that is as close to the original as possible. This should not be based on a desire to make the decorative painting "look good."

6.4 Cyclical Monitoring and Maintenance

A close visual inspection of the decorative paintings should be performed at least yearly, and preferably biannually. Observations should be made in comparison to the conditions survey performed with this study, a copy of which will remain in permanent possession of the Division of Historic Preservation, Department of Culture, Recreation and Tourism, State of Louisiana. All changes, deterioration, or alterations should be carefully recorded in both written and graphic form. Copies of this record should be sent to the Division of Historic Preservation or appropriate public archive. Any significant changes in the condition of the decorative painting will warrant the consultation of a qualified paintings conservator.

Prior to removal of the varnish layer in the parlor (202), loggia (203), and bath (210) by a paintings conservator, the surfaces in the loggia
may be wiped clean by using light hand pressure and a soft cloth. Care should be taken near areas where the varnish layer is damaged. Cracks, corners, and hard to reach areas may be cleaned with a soft bristle brush. The use of excessive hand pressure and any liquid or cleaning agent is strictly prohibited. Touching or any other contact should also be forbidden.
April 30, 1992

Thad Kilpatrick
Historic Preservation Program
University of Pennsylvannia

Dear Thad,

A sample of the surface coating from the Whitney Plantation was analyzed by FT-IR. An initial and crude separation of the surface coating from the residual ground/paint layer was performed with a scalpel. The surface coating was mounted in a diamond cell holder to flatten it for transmittance. The preliminary FT-IR analysis appeared to reveal a resinous component (a plant or insect exudate, possibly a shellac) and a gum-like component. Gums have many OH groups giving rise to a large broad band at 3300, a strong band at 1080 due to the C-O-H group, and a medium band at around 1620 partially due to intramolecularly bound water and partially due to a carboxyl group. Some gums also have a weak band at 1735 due to the ester structure. Also the C-H stretches tend to be weak around 2900. All of this appears to be true in your sample. Tree resins have strong CH2 stretching vibrations at 2930-2958 and 2865-2875, and a strong band at 1695-1715 due to C=O. Insect resins have C-H stretching bands at 2920-2934 and 2857, and a doublet for fresh shellac at 1735 (ester) and 1715 (acid), C-O bands are present at 1240, 1163 and 1040. Your sample has the CH2 stretching vibrations similar to the insect resin but does not have a doublet for the C-O band and furthermore it appears at 1730. This is not characteristic of a tree resin. This spectrum of the resinous component would be better resolved if the residual inorganic matter was separated from the organic surface coating by an extraction (which can often carried out directly on a microscope slide by dropping solvent onto the sample and analyzing the resultant tide lines, avoiding any of the inorganic matter on the slide) or by micromoting the sample to generate a thin section (5-15 microns) to analyze each of the two surface coating layers separately (I believe it is your understanding that there may be two). Additionally, it would be advisable to further verify the presence of these two components by analysis of another sample(s) from the group to ensure that this one sample was not an anomaly.

To summarize, there appears to be a resinous component and a gum like substance present in the sample analyzed. Due to time constraints, it was not determined: whether or not the gum or for that matter the resin, is present on most or all of the samples, whether the resin and gum were applied as a mixture or were
separate surface coatings, or whether the gum was mixed in with the pigment as part of a binder for the paint layer and adhered to the surface scrapings and was therefore present during the FT-IR analysis. Finally, it was not determined if the resin is specifically a shellac.

Should you wish to continue this analysis, I would have more time available after September 1992. I hope that this very cursory look at the sample will be of some help to you. Please call me if you have any questions.

Sincerely,

Beth Price
Chemist
PHILADELPHIA MUSEUM OF ART CONSERVATION DEPARTMENT

WHITNEY PLANTATION SCRAPINGS FROM SURFACE COATING ON WALL MURAL (TOP) OVERLAID OLD SHELLAC STANDARD FROM GETTENS COLLECTION A43 (BOTTOM)
PHILADELPHIA MUSEUM OF ART CONSERVATION DEPARTMENT

WHITNEY PLANTATION SCRAPINGS FROM SURFACE COATING ON WALL MURAL (RESULT) OVERLAID OLD SHELLAC STANDARD FROM GETTENS COLLECTION A43 (REFERENCE)
PHILADELPHIA MUSEUM OF ART CONSERVATION DEPARTMENT

WHITNEY PLANTATION WALL MURAL SURFACE COATING SCRAPINGS (TOP SPECTRUM) OVERLAID GUM ARABIC STANDARD FROM GETTENS COLLECTION B06 (BOTTOM SPECTRUM)
PHILADELPHIA MUSEUM OF ART CONSERVATION DEPARTMENT

WHITNEY PLANTATION MALL MURAL SURFACE COATING SCRAPINGS (RESULT) OVERLAID GUM ARABIC STANDARD FROM GETTENS COLLECTION 606 (REFERENCE)
Glossary of Conditions

Loss of Varnish Layer - those areas where layers of the outer protective coating is missing but the paint layers remain intact.

Loss of Paint Layer Prior to Varnish Application - those areas of paint loss prior to varnish layer application.
Impact Damage - Those areas where substrate, paint layers and/or varnish layers are missing or damaged due to impact.

Loss of Fill Material Between Boards - those areas along the board joints where the original board fill is missing.
Loss of Paint Layer Due to Nail Corrosion - those areas where paint and varnish layers are missing due to nail head corrosion.

Loss of Paint Layer Subsequent to Varnish Application - those areas where paint and varnish layers both are missing.
Graffiti - intentional markings, inscriptions, or drawings found on the surface.
Fig. 7.4.1 - Front view of the house shows large marbleized panels between the bays on the second floor gallery (201). Richard Koch, HABS Collection, 1936.
Fig. 7.4.2 - Front view of the house shows detail of French doors and large marbleized panel on the second floor gallery (201). Richard Koch, HABS Collection, 1936.
Fig. 7.4.3 - Front view of the house shows the second floor gallery (201) showing large marbleized panels between the bays and small pulleys on the ceiling, presumably for adjustable blinds. Richard Koch, HABS Collection, 1936.
Fig. 7.4.4 - View of west wall of the parlor (202) showing decorative painting on the ceiling, carved and gilded mantelpiece, and wallpaper. Richard Koch, HABS Collection, 1936.
Fig. 7.4.5 - Detail of escutcheon bearing the initials "MH" on the parlor ceiling. Richard Koch, HABS Collection, 1936.
Fig. 7.4.6 - Detail of decorative painting on parlor (202) door leading to sitting room (204). There is no decorative painting on the other side of the door. Richard Koch, HABS Collection, 1936.
Fig. 7.4.7 - Detail of decorative painting on parlor (202) door leading to sitting room (207). There was no decorative painting on the other side of the door. Note the difference in door knobs compared to Fig. 7.4.6. Richard Koch, HABS Collection, 1936.
Fig. 7.4.8 - View of sitting room (207) showing wallpaper and carved mantel. Note the lack of decorative painting on the board ceiling. Richard Koch, HABS Collection, 1936.
Fig. 7.4.9 - View of sitting room (204) showing wallpaper and carved mantel. Note the lack of decorative painting on the board ceiling and door. Richard Koch, HABS Collection, 1936.
Fig. 7.4.10 - View of loggia (203) showing window jalousies and decorative painting on the west wall. Richard Koch, HABS Collection, 1936.
Fig. 7.4.11 - View of loggia (203) showing window jalousies, and decorative painting on the east wall. Note the two electrical lines above the door. Richard Koch, HABS Collection, 1936.
Fig. 7.4.12 - Detail of urn on pedestal in niche between the central bays of the loggia. Note the slightly different hinges on the French doors than on gallery (201) in fig. 7.4.2. Richard Koch, HABS Collection, 1936.
Fig. 7.4.13 - View of east wall showing decorative painting and stairway to attic. Note the ghost of a strap hinge below the door knob, which itself differs from the door knob in fig. 7.4.11. This suggests a recycling or an alteration. Richard Koch, HABS Collection, 1936.
Fig. 7.4.14 - Manuel de Peintures, pl. XI.
Fig. 7.4.15 - Manuel de Peintures, pl. XVIII.
Fig. 7.4.16 - Manuel de Peintures, detail of pl. XVIII.
Fig. 7.4.17 - Manuel de Peintures, pl. L.
Fig. 7.4.18 - Manuel de Peintures, detail of pl. L.
Fig. 7.4.19 - Manuel de Peintures, pl. XLIV.
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