

Conservation ID: CL4.1993.1.1-57

Object ID: 1993.1.1-57

Object Synopsis: facade | palace | Section of Palace Facade | Islamic | Pakistan | wood | metal | c. 1835 | TL-13359

Overview/Purpose Tab

Date of Initiation: 3/22/2021

Primary Conservator: Emily Brzezinski

Purpose: Assessment and treatment for installation

Type of Record: Treatment

Due Date: 3/26/2021

Other staff: Anna Piowar

Other staff: Gina Laurin

Examination Tab

Exam Date	Conservator
3/22/2021	Emily Brzezinski

Conservation Medium:

Object Description:

Condition Description: The façade is structurally stable. However, there are scattered areas of degraded wood exhibiting cracking, splintering, and minor checking. These areas are located at the verso, corners, and edges of the sections where they would connect to the larger façade.

Many sections exhibit an unknown bloom that appears white, thin, and has a slightly slick or waxy feel. It occurs on the carved face of the sections, more commonly in the carved recesses and darker, more saturated areas. It is generally minimal and irregularly distributed but appears heavily on several sections (noted in the attached treatment document), most notably the interior edge of the door.

The surface exhibits dust and dirt overall, heavy and ingrained on the verso.

Proposal Tab

Proposal Date:

Conservator:

Proposal:

Est. Hours:

Approved By:

Approved Date:

Approved Notes:

Treatment Tab

Start Date: 3/22/2021

Done Date: 3/25/2021

Conservator: Emily Brzezinski

Treatment Report: All sections received the following cleaning, and approximately half received the described stabilization. Details are given in the table in the attached document.

1. Cleaning:

- Each section was vacuumed with a natural fiber bristle brush to reduce surface grim and the unknown bloom.

- Areas of heavy bloom were cleaned a second time with a worn toothbrush and vacuum until the bloom was removed.

2. Stabilizing cracks and breaks

- Approximately half the second exhibited minor cracks, areas of checking wood, or small loose splinters. These areas were stabilized to prevent further damage during installation or when the sections are assembled, and the degraded wood supports weight.
 - Some areas were stabilized with high tack fish glue and weighted or clamped in place. This method was used for areas that would be visible during exhibition, such as the carved face, or areas that needed to support addition weight or abrasion, such as tenon joins or edges of beams.
 - Some areas were stabilized with 50% Paraloid B72 in acetone bulked with micro balloons. The solution was not toned to match the wood. This method was used for checked or worn wood or loose sections that could not be stably adhered with high tack fish glue. It was primarily used on the back of the piece or areas that would not be visible during exhibition.
 - Two sections required more involved stabilization, including repair to the mortis and tenon join of 1993.1.5, and shims to stabilize the cross member of 1993.1.22. Details are given in the attached document.
3. Given the size and volume of the objects, this treatment did not involve before and after photography for every section. Only a few sections had heavy enough bloom to appear visibly different after treatment .

Summary: Surface dusting and minor stabilization

Hours: 32.00

Bibliography Tab

Bibliography: ,,,,

Pages:

Notes:

Used As:

Image Tab

Image Type:

Source:

Captured by:

Capture Date:

Web Ready?

Publication Ready?

Party Tab

Party:

Party Role:

Begin Date:

End Date:

Individual:

Full Address:

Title:

Phone Number:

Notes:

Sample/Analysis Tab

Sample/Test Areas

Number: Sample 1 and 2
Date: 4/2/2021 12:00:00AM
Description: Two samples were taken of the unknown white bloom from the interior and exterior of the door (1993.1.14b) to identify the unknown compound.

Samples analyzed by the Winterthur Garden and Library Scientific Research and Analytical Laboratory (SRAL) by Dr. Rosie Grayburn. Credit required upon publication -- see attachment.

Location: Sample 1: Exterior edge of the door
Sample 2: Interior edge of the door

Specific location given in the attached request for analysis

Analysis

Date: 4/14/2021 12:00:00AM
Type of Analysis: Fourier Transform Infrared Spectroscopy (FTIR) X-Ray Diffraction (XRD)
Sample Used: Sample 2
Results/Notes: FTIR identified a good match with palmitic acid, a common saturated fatty acid found in plants, animals, and microorganisms. It is the major ingredient in palm oil.

XRD determined that there were no salts present in the sample, but no other results. Since the sample was organic, XRD would not have been able to provide additional information.

Budget Estimate

Contractor/Item	Hours/Quantity	Rate/Price per Item (\$)	Subtotal (\$)
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TOTAL

Actual Costs

Contractor/Item	Hours/Quantity	Rate/Price per Item (\$)	Subtotal (\$)
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TOTAL

preventive protocols, and anticipate when the material may reoccur on the surface.

Analysis requested:

X-Ray Diffraction (XRD): XRD will show the molecular structure of the sample, characterizing the material. If the material is a salt efflorescence, XRD could provide detailed information on the composition or crystalline structure.

Fourier-Transform Infrared Spectroscopy (FTIR): FTIR could additionally characterize the molecular make up of the material and provide additional details of the material is an organic, fatty bloom.

Samples:

Sample 1: (Fig 1-2) thin, white, waxy bloom present over much of the surface, taken from the front interior edge of the proper right door (1993.1.14b), sent in vial

Sample 2: (Fig 3), thicker, white, fluffy rather than waxy bloom, taken from the back of the proper right door's interior edge. Had a different consistency than bloom on the rest of the surface, but possibly just a heavier area and same material as Sample 1. Sent in slides.

USE OF INFORMATION:

Is publication or other sharing of this information outside of Winterthur Museum (exhibits, catalogs, etc) possible or anticipated? If so, where or with whom?

The project will be shared in the Denver Art Museum's (DAM) online blog series after September/October 2021, as part of an outreach campaign for the opening of the Martin building that houses the DAM's permanent collection. The blog is available on the museum's public website: <https://www.denverartmuseum.org/blogs>.

If so, please note that Analytical staff must be *properly acknowledged and permission to publish analytical data must be obtained* from the Director of Conservation.

A photograph or clearly drawn diagrams of object with sample locations marked must be submitted with this



Fig 1: Overall view of the façade installed, Fig 2 (below, with sample 1 area) shown in yellow square

request.



Fig 2: Detail of proper right door 1993.1.14b. Location of Sample 1 shown in yellow arrow



Fig. 3 Underside of proper right door 1993.1.14b. Location of Sample 2 shown with skewer

