

REPORT ON TEST CLEANING
(November 19, 2005 – November 24, 2005)

“Test Cleanings of Roman Wall Paintings in Luxor Temple”

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The cleaning test campaign regarding the wall paintings in the Imperial Chamber of the Temple of Luxor (19th – 24th November 2005) concerned the area to the left of the central niche, south wall.

The conservators who participated in the campaign were Luigi De Cesaris, Alberto Sucato and Maria Cristina Tomassetti, with Michael Jones as Project Director¹.

The campaign had the following research objectives:

- Establishment and comments on the state of conservation of the paintings.
- Knowledge of the execution technique and of the succession of the different layers of rendering.
- Cleaning tests to determine the type of conservation intervention to carry out in the future.

For this purpose, 3 sample cleaning areas measuring approximately 50x40 cm were created on the south wall, plus a small window on the east wall (Figure 1).



Figure 1

the decorations in white on the shoulders of the figures) is preserved; lastly, some areas have been subject to considerable abrasion and have almost disappeared, so much as to expose the preparatory drawing, as is the case on the face of the figure in the central area.

The widespread gaps in the painted film also include various circumscribed areas of lifting.

The current state of deterioration of the paintings is due, in addition to the interventions linked to uncovering of the surfaces, to environmental factors that have a considerable influence on their conservation, given their exposure to environmental agents: sunlight,

STATE OF CONSERVATION

The rendering is in a general state of detachment, particularly in the lower part of the walls, along a horizontal strip to a height of about 2 m. Further detachment, between the stone and the two layers of rendering, can be found in the upper areas, and is distributed in an heterogeneous manner.

The surface of the rendering lacks cohesion in various areas, with the presence of numerous abrasions and scratches, some of which quite deep.

The state of conservation of the paint layer is rather heterogeneous: some areas show considerable gaps in which the painted layer has been lost almost completely, whereas other areas are better preserved, such as the upper part, where even the most detailed finishing of the decorative elements (such as

¹ We would like to thank Dr. Raymond Johnson for his assistance in decision-making and his exquisite availability and hospitality.

which varies in intensity and localization according to the season, changes in temperature, wind, atmospheric pollution, guano deposits and human damage.

In the upper area, beyond the painted plaster, a layer of slightly ochre coloured wash is visible, covering and partially dulling the hieroglyphic reliefs. Presumably this layer in ancient times covered part or all of the paintings under discussion (Figure 2). Actually some fragments of this “yellow wash” have been found in the area where the test cleaning was done. Also, in the upper right hand corner of the east wall, in correspondence with the blue shield, the surface is still partially covered with this yellow wash.



One can conjecture that, at times that cannot yet be chronologically fixed, large parts of this wash were removed mechanically, partly causing the present state of conservation of the painted layer.

Furthermore, a substance that probably was supposed to revive and consolidate the layer was found on the surface; presumably this was a proteic substance with a base of vegetable oils.

Figure 2

Figure 3



EXECUTION TECHNIQUE

1st layer of rendering:

The first layer of rendering, of variable thickness, was applied to level both the reliefs of the decorative system and hieroglyphics and the gaps in the stone; actually this rendering was applied on the surface when the wall was already in a state of partial deterioration. It can be assumed that the mortar was made up of a considerable quantity of straw, a fine filler, and a binder (lime). On top of this rendering, which was intentionally coarser so as to level the surface, a second layer about 3-4 mm thick was spread, with no straw and a finer grain.

This finish seems to have been applied when the first layer of rendering was still damp.

The surface of this rendering, now visible because the covering rendering has fallen off, appears to have been “pocked” (Figure 3). At a time when the rendering must already have been dry, it was prepared to facilitate adhesion of a second layer of rendering. In the present state it is impossible to evaluate how much time passed between the first and second layers of rendering, but it is interesting to stress that, on observing the more recent gaps in the second layer, there is no evidence of a heavy deposit of particulate and dirt between the two layers.

2nd layer of rendering:

This has a relatively regular thickness varying from 6-7 mm to 11-12 mm (Figure 4). The mortar is presumably made up of a filler (marble dust and quartzite elements) and lime.

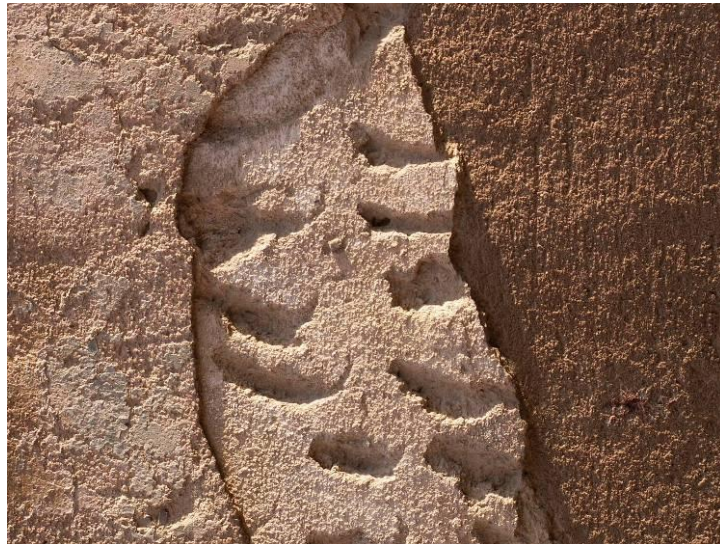


Figure 4

Its characteristics bring to mind those of the traditional Roman fresco technique.

Application of the rendering:

It was noted that the rendering was spread downwards, in vast *pontate* (sections). One of these is clearly recognizable on both the east and south walls, about 2 m from the ground.

Preparatory drawing:

The architectural divisions were roughed out by dividing the horizontal bands that frame the paintings using the *battitura dei fili* technique (Figure 5).



The same pigment used to create the lines was also used to form the square modules of the opus sectile and to sketch in the drawings of the figures (Figure 6).

Paint layer:

The painting is done in vast, rapid areas of color, revived by quick, impressionistic brush strokes rich with color; the finishing elements are also very dense, such as the small pearls

Figure 5

(Figure 7) decorating the garments of the imperial dignitaries.

It would be interesting in the future to study and compare the characteristics of the extraordinary blue of the shield ground (east wall), with the Egyptian frit still present on the small wall in the Pharaonic reliefs.



Figure 6



Figure 7

OPERATIONS PERFORMED:

The first step was to identify significant areas to test the surface in its various states of conservation and evaluate the feasibility of intervention.

After lightly dusting with soft brushes and consolidating some portions of the painted layer, by infiltrating with an acrylic resin emulsion (*Acryl 33*), where there was an adhesion problem, various solvents and solutions were tested and a cleaning system was finalized.

A sheet of Japan paper (9 g/m²) was made to adhere to the surface using distilled water, and a compress was then applied, comprising a solution of ammonium carbonate (50 g/l) supported by paper pulp (cellulose fiber) with the addition of a water retainer to minimize the release of solution into the rendering and the support (*Thylose*). Subsequently the surface was rinsed with distilled water using a soft brush and any excess water was absorbed using Japan paper.

Where there was any lack of cohesion on the surface, consolidation was carried out by brushing on an acrylic resin solution (2% *Paraloid B72* in nitrous thinner).

Aesthetic presentation was carried out using a brush and a mixture of water and Winsor & Newton's ivory black watercolor, applied only where the gaps were so clear that they disturbed visual understanding of the painting. The aim was to reproduce the general tone of the patina deposited naturally on the surface over time, but in a slightly lighter shade.

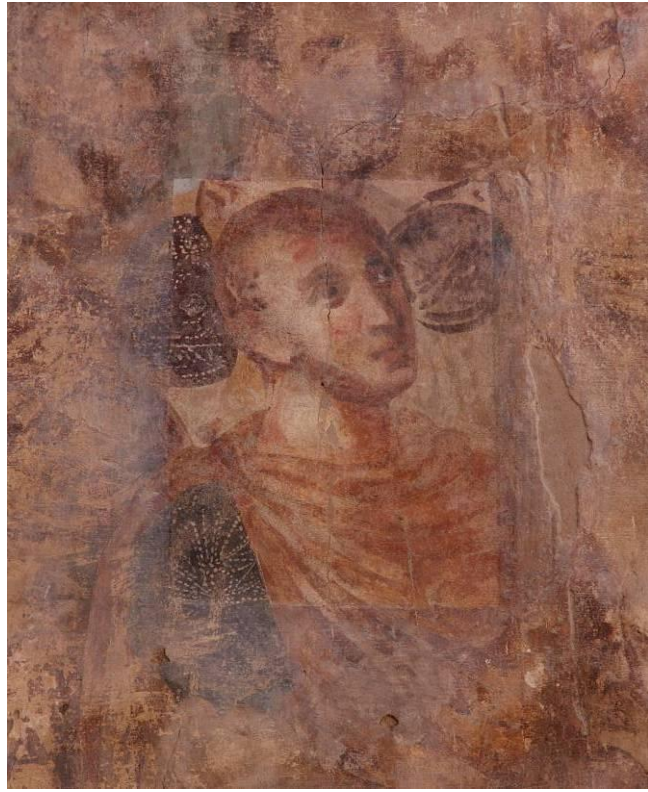


Figure 8

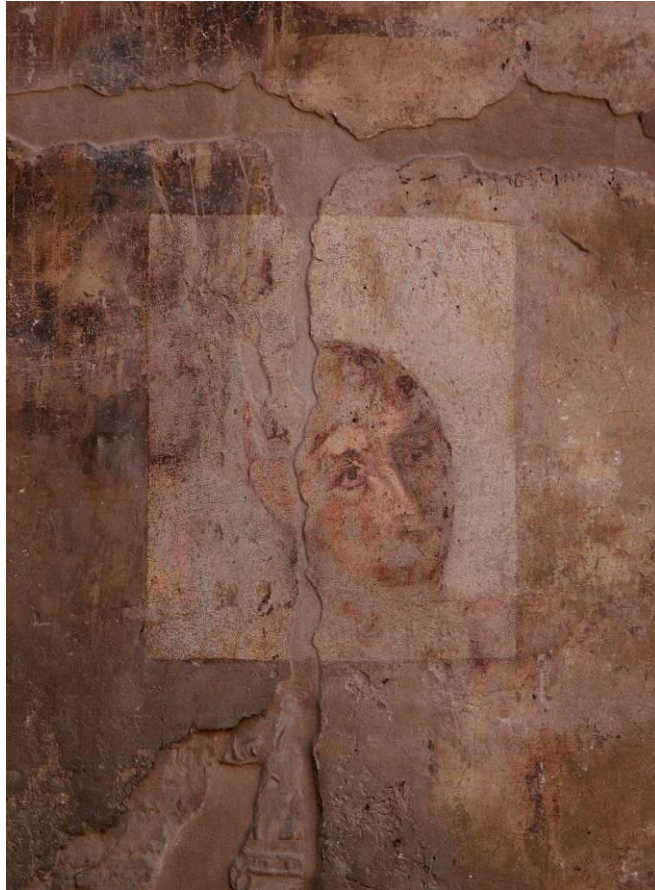


Figure 9



Figure 10

TEMPLE OF LUXOR
THE WALL PAINTINGS OF THE IMPERIAL CHAMBER

RECOMMENDATIONS

19th– 24th November 2005

Thanks to substantial documentation consisting of descriptions, drawings (Wilkinson), and photography (collected from the first photographic campaigns of the early XX century to present day) we have evidence of how the Roman wall paintings of the imperial chamber in the Temple of Luxor have undergone a slow yet unrelenting process of deterioration that began in ancient times and continues uninterruptedly today.

Most of the painted surface is now lost, the first cause certainly to be sought in the static/architectonic problems of the building: it is evident that when the ceiling of the room was damaged, part of the masonry probably also collapsed, and the painted decoration with it. Where the masonry is still intact, few portions of rendering have been saved.

Concerning the state of conservation of the painted layer, exposure to neglect, old interventions and the atmospheric agents make the few remaining portions quite difficult to interpret.

In the light of today's conservation methods for wall paintings, one hopes to carry out the conservation work on site. This is preferable especially because of the historical importance and uniqueness of these paintings, which can be related to the various transformations and uses to which the building that contains them has been subjected.

Any detachment of the rendering to place it elsewhere would, from a philological and historical point of view, harm and take out of context these works of such distinctive origin and history. We, therefore, strongly suggest that intervention on the rendering take place on site.

Conservation work should be carried out using scaffolding so as to begin operations in the highest areas. During operations the scaffolding must be protected from direct light and from wind. This can be done by fastened non woven cloth to the outside of the scaffolding.

Since the work is outdoors, from the beginning one must bear in mind to account for periodic maintenance to remove atmospheric particulate and to check on the effectiveness of the surface consolidation and protection.

Open roofing must be built to cover the entire environment or at least part of it.

The covering must have the following characteristics:

- Partially open in the areas where it rests on the walls, so as to allow the air to circulate, while blocking a good part of the wind and particulate deposits.
- The environment must not be closed. This would cause an abrupt change in the levels of heat and humidity. A rapid change in the equilibrium of the materials forming the work would, over a long period of time, seriously harm the work.
- The covering material must allow partial passage of light and therefore accessibility of the work, but if transparent material is used, it must not trigger a "lens effect" and must have UV (ultraviolet) ray filters.
- The open areas must have protection nets against birds. Their excrement is a cause of serious deterioration for the paintings.

If the decision is reached to detach the paintings, it must necessarily be linked to the preparation of a suitable display area. Then it is necessary, from a technical point of view, to first attempt to detach a surface of approximately two square meters. It is important to bear in mind, however, that this operation would not guarantee the saving of the first layer of rendering -the one in contact with the stone ashlar.