

ASSOCIAZIONE GIOVANNI SECCO SUARDO

Centro studi e progetti per la conservazione e il restauro dei Beni Culturali

Monastery of Gelati- Church of the Nativity of the Virgin

Report on the second mission for the conservation of the paintings



Speaker: Vincenzo Centanni (Centanni Restauri snc - Italy)

Naples, 20 october 2021

Monastery of Gelati- Church of the Nativity of the Virgin

Mission of emergency conservation intervention of the Frescoes

Settembre 16/21

Premise.

As foreseen by the June agreements (after our first mission), the frescoes of the Church of the Nativity were continuously monitored to follow the evolution of the ongoing degradation. During these monitoring, between the end of August and September, subsidence of the temporary containment works were detected (fastening of the layers of detached plaster by means of thin veiling made with small strips of Japanese paper fixed with acrylic resin) carried out by the Georgian restorers in an emergency in the previous March. Unfortunately, these interventions are only useful for a temporary safety of the detachments of decorated plaster but, at the same time, insufficient to guarantee their hold over the average long time and therefore to avoid the collapse of the detached parts. In fact, in the aforementioned period some protective bandages gave way and caused the fall or further detachment of fragments of painted plaster.

As described above, thanks to the personal interest of Minister Madam Tea Tsulukiani, through a contract stipulated by the National Agency for Cultural Heritage Preservation of Georgia with the Study and Projects Center for the Conservation and Restoration of Cultural Heritage Associazione Giovanni Secco Suardo , in the period between September 16th and 21st a new mission was organized in the Church of the Nativity led by the Restorer Vincenzo Centanni together with a group of Georgian Restorer Collaborators directed by the Restorer Merab Buchukvri.

The aims of the mission were the following:

- o Monitoring of the current state of conservation and comparison with what was previously detected in June.
- o Monitoring of the state of conservation of the parts previously subjected to color fixing tests, consolidation of plasters and extraction of soluble salts present on plasters, confirming, over time, what has already been recorded on the validity of the execution techniques and materials used in the speeches of the month of June.
- o Immediate execution of the consolidation of the pictorial film, according to the previously verified methodology, in all the points where a state of conservation is detected (conditions of exfoliation, pulverization) that highlights the danger of imminent fall of portions of the painting.
- o Immediate execution of the consolidation of the layers of plaster, according to the methodology already verified previously, in all the points where a state of conservation is detected (detachment, lifting, disintegration) that allows us to hypothesize a danger of imminent fall of portions of the frescoed plasters.
- o Photographic documentation and technical report of what has been done.

o Implementation of a training course, conducted during the period of presence of the Restorer Vincenzo Centanni at the Gelati Monastery together with the group of Georgian Restorers involved, to deepen and specifically share the techniques and materials used in the conservation interventions, in order to ensure in the immediate future, in any case of need, the continuation of the necessary conservation operations of the Works.

Interventions performed.

The entire vault and the shoulder walls of the west arm of the church (where the scaffolding was present) were monitored and the state of conservation was compared with what was observed and detected in the previous month of June.

From this comparison it emerged mainly:

- o That the saline efflorescences still present persist on the same points detected previously and no new areas affected by this phenomenon have appeared.
- o That the walls were drier than in June (obviously the instrumental measurements that will be carried out in the coming weeks may or may not confirm this data) and the relative humidity measured in the days of the mission did not exceed 68% (during the mission of June had been detected in the maximum value 87.5%).
 - o That the exfoliation of the pictorial film and the detachments of plaster already detected in June appeared more pronounced in several points and in a condition of possible imminent fall (shoulder wall and arched south side, central part of the vault)
 - o That some protective bandages made in previous interventions, in various points, have yielded or lost part of their adherence, as well as some support fillings around portions of decorated plaster, made in past conservation operations, have been partially detached or falls.
- o That the areas previously affected by biological attacks (bacteria, fungi analyzed in June) remained confined to the same areas previously detected.
- o That the fixing samples of the paint film and the plaster consolidation samples, made in June, showed a perfect seal. In the same areas no new exfoliation, no new plaster detachments were detected and no new saline efflorescence appeared on the painted surfaces.

Following the monitoring, a series of interventions were carried out aimed at stabilizing the most degraded parts and in danger of imminent loss, thus ensuring their correct conservation, using the same executive methods and the same materials already tested in the previous mission.

The exfoliation of the pictorial film was consolidated to the underlying layer of plaster by applying on the painted surface a sheet of Japanese paper adhered by the use of deionized water and exerting pressure with soft pads in order to re-stick the portions of the pictorial film lifted up. Subsequently, again through the paper layer (filter), a solution of deionized water and acrylic resin in aqueous emulsion (3%) (Acrill 33 / EA-MMA) was applied.

Pressure was exerted again on the previously treated parts by using soft pads to improve adhesion to the support of the previously raised paint film.

In the case of thicker color exfoliation, always through the Japanese paper filter, under the raised color layer, a solution of the same consolidant with a higher percentage of resin (5/6%) was injected. Before fixing the color, in the areas where there were evident saline efflorescences, the latter were removed with meticulous attention, first dry by using soft bristle brushes and then by compresses of deionized water kept in contact with the surface with a first layer of Japanese paper to which 3 layers of soft absorbent pure cellulose paper have been superimposed.

The gaps present between the various layers of plaster have been consolidated by injections of two types of premixed mortar suitably studied, tested and composed for the targeted and specific use in the conservation and restoration of decorated surfaces of the architecture of historical and artistic value. The injected mortars are mainly based on natural hydrated lime free from efflorescing salts and inert selected also according to the characteristics of use (PLM A - Plaster of masonry / PLM AI - with low specific weight ideal for plaster of vaults or for large detachments thickness).

The portions of plaster to be consolidated that showed very thick detachments were previously coated with a sheet of Japanese paper applied with a 10% resin solution (Methylacrylate-Ethylmethacrylate / Paraloid b72) dissolved in acetone, while the detached edges of the plaster were sealed with a temporary mortar based on slaked lime (natural airborne binder based on lime hydroxide) and siliceous aggregates. The consolidations by means of mortar injections continued until the adhesion between the various layers of plaster and between these and the load-bearing masonry was fully restored.

The plaster areas affected by biological attacks (bacteria, fungi) were treated with a double spray (one day apart) of a solution of 2% quaternary ammonium salts in deionized water. One day after the treatment, the residues of the mushrooms, still present on the masonry, were easily removed with soft bristle brushes, taking care to collect them as you proceeded, thus avoiding their spreading on the surrounding surfaces.

The Georgian restorers participated in the mission:

Merab Buchukvri, Zaza Sumbadze, Nikoloz Kiknadze, Cia Casitashvili.

During the first two days of the mission, the restorer Vincenzo Centanni, together with his Georgian colleagues, conducted a series of demonstration samples aimed at fixing the pictorial film, consolidating the plaster detachments, removing superficial saline efflorescences and treating the affected areas. from a biological attack. In the following days the Georgian restorers carried out independently, under the supervision of Vincenzo Centanni, all the operations previously described. On the last day of the mission Vincenzo Centanni and Merab Buckukvri, by mutual agreement, identified the portions of plaster and color (vault and shoulder wall of the west arm) that still presented such a state of conservation (in danger of collapse) which should have been the subject of interventions (plaster consolidations and color fixings) to be carried out in the following weeks, independently, by the group of Georgian restorers.



Detachment of portions of plaster due to the failure of the protections (tissues and stucco curbs)





Detachment of portions of plaster due to the failure of the protections (stucco curbs)



Detachment of portions of plaster due to the failure of the protections (stucco curbs)





Fixing of the raised paint film





Fixing of the raised paint film with injections





Consolidation of plaster detachments





Fixing of the raised paint film



Fixing of the raised paint film



Fixing of the raised paint film



Fixing of the raised paint film and removal of saline efflorescence





Fixing of the raised paint film and removal of saline efflorescence