

RESTORATION TREATMENT REPORT

THE STORY OF MOSES KAREL JOSEF MORAVINI

wall painting in the interior of chamber in a ground floor of southwest part of castle Kácov
1730s
private owner



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Studio of Restoration of Painted Artworks and Polychrome Sculpture
akademic years 2022/2023 - 2022/2024

avu

author:	Karel Josef Moravini
title:	The story of Moses
date:	1730s
technique:	wall painting in secco technique on lime whitewash coating
dimensions:	height 350 cm width 325 cm
location of treated part:	north part of south wall
owner:	private owner: Ing. Jaroslav Kubiček
provenience:	middle Europe
previous restoration treatments:	no
term of the beginning of the treatment:	June 2023
term of the end of the treatment:	
institution:	Akademie výtvarných umění v Praze Ateliér restaurování výtvarných děl malířských a polychromované plastiky
studio leader:	doc MgA. Adam Pokorný Ph.D.
supervisors:	MgA. David Hrabálek akad. mal. Markéta Pavlíková Pn.D.
laboratory examination:	Ing. Lenka Zamrazilová
treatment done by:	Alžběta Mirjam Procházková

CASTLE KÁCOV

DESCRIPTION OF THE OBJECT

In the mid-17th century, the castle was built upon the foundation of a medieval fortress, which was likely established in the mid-15th century. Originally, the castle was designed as a single-storey early baroque structure. A significant reconstruction took place between 1727 and 1733, giving the castle its current appearance. At that time, the owner was Anna Marie Toskánská, who commissioned architect Václav Špaček to transform the castle into a North Italian-style residence.

The castle is a rectangular building with three storeys topped by a skylight penetrating through the mass of the building. The west and east sides are closed by buttresses. All the floors have a similar floor plan with a distinctive central corridor. The main representative rooms were concentrated in the southern part of the ground floor, the western part is placed the chateau chapel, which, together with the so-called Blue Room, is the most valuable part of the interior. These rooms obtain the most complete uncovered original Baroque painting and stucco decoration.

The baroque style of the castle is prominently evident in the elaborate decorative embellishments found both on the exterior and interior. The exterior decorations were created by František Cízar, who, between 1727 and 1731, adorned the façade with stucco decorations and illusionistic windows depicting ladies and gentlemen observing the surrounding nature. Inside the castle, the extensive painted decoration was executed by Prague artist Karel Josef Moravini. He worked on the interior from 1727 to 1729, creating extensive wall paintings throughout the castle chambers. The most well-preserved wall paintings can be found in the chateau's chapel and the so-called Blue Room.

Throughout the 19th and 20th centuries, the interior was continuously modified, adapting the original layout of the baroque rooms to accommodation and working purposes. These alterations significantly reduced the extent of the intact masonry, stucco, and painted decorations. Additionally, the original fabions were bricked up and leveled with the ceilings. According to the technological building survey, the height of the rooms was lowered by approximately half a metre, as evidenced by the preserved fabion ceilings in the rooms on the north elevation.

The castle is currently held by a private owner who is undertaking a comprehensive reconstruction of the building. The approach is to restore its baroque, North Italian appearance, both in the exterior and interior of the castle.

TECHNOLOGICAL EXAMINATION

The wall painting is located in a room with a north-facing entrance that connects to the central wing of the elevated hall. On the opposite south wall there are two mullioned windows. Red framing runs around the outer edge of the window panes, while the inner part of the panes has been decorated with ornamental motifs. The two longitudinal walls have entrances to adjacent rooms.

The entire chamber is currently undergoing restoration treatment by students from the restoration studio at the Academy of Fine Arts in Prague. Each student is responsible for restoring a specific section of the wall painting.

The wall painting is probably depicting The Story of Moses from The Old Testament. The concept of the painting is characterized by elements of early Rococo. The particular section of the wall painting depicts a woman holding a basket with a baby in front of a river. A man stands behind her. The background features a desert landscape with palm trees, a blue horizon that merges into a blue sky with ochre-pink clouds. Up to a height of 70 cm from the ground, the view is framed by a decorative plinth with ornamental motifs. This decorative strip continues around the entire scene.

CONDITION OF THE WALL PAINTING BEFORE TREATMENT

The wall painting is significantly disrupted by a dense network of chips and pecks, affecting the structure of the substrate. As a result, the paint layer is locally detached from the stucco substrate. Additionally, there is a layer of dirt and lime scale on the surface of the painting. The central part of the wall is disturbed by a secondary inserted door, which was later walled up with bricks and sealed by a metal traverse, leading to a complete loss of the wall painting in that area. The door led probably to a technical room inserted to the disposition of this chamber, entering from the side room. The dimensions of this inserted room could be recognised by the ochre coloured painting of the wall ending in the area where the construction partition was built up following by white coloured wall. The original layout of the electrical wiring remains embedded in the masonry as part of the building's electrification. The electrical cables run diagonally and vertically through the wall, fixed in place with cement mortar. In the left part of the wall, a deep static crack extends from the upper edge of the room, covered by cement mortar. Cement patches are also present within the plaster mass in the right middle part of the wall.

Extensive probe survey, carried out as part of earlier construction works, partially uncovered the original painting in continuous horizontal and vertical strips. A follow-up survey was carried out by a comprehensive stratigraphic method. The compactness and stability of the upper layers of the masonry were determined, and the extent of secondary construction and interventions was also defined. The optical survey also included existing plaster structure intersections below the level of the paint due to pecking.

A subtle layer of stucco was applied to the core plaster. Another layer of stucco was applied to the levelling base layer. This is a fine mortar containing gypsum, sand and lime. The lime stucco was applied several millimetres thick. The grain size of the surface, structured with quartz grains from the sand filler, was reduced by the application of lime paint. On the substrate the wall painting was applied. This is followed by eight layers of secondary clay and whitewash coatings.

METHODS OF THE PRELIMINARY EXAMINATION AND THEIR EVALUATION

Primarily non-invasive optical-physical methods were used in the initial survey of the restored work.

- Visual survey in diffused daylight and raking light
- Ultraviolet spectrum luminescence imaging

Primarily non-invasive optical-physical methods were used in the initial survey of the restored work. The restored section was documented in detail in visible light. The images were taken in the lateral illumination, taken during the exposure of the secondary layers, documented both the relief and condition of the painting and the execution of the top paint layer, including details of pasty deposits or the character of the strokes. The texture and local degradation of the plaster layer is documented using contrasting highlights. Photographs captured in UV luminescence, produced by the excitation of secondary radiation after illumination of the work under ultraviolet light, did not demonstrate in the presence of secondary interventions in the paint layer, but detected the presence of zinc white in the upper layers of the secondary coatings.

TREATMENT PROPOSAL

1. Preliminary examination, including non-invasive optical-physical methods.
2. Examination of the strata of the layers of plaster by stratigraphic probes.
3. Mechanical removal of the non-original upper plaster layers on the second oldest one by restoration's hammers and scalpels.
4. Continuous consolidation of the disattached and flaking original plaster layer.
5. Mechanical removal of the second oldest plaster layer on the original layer which is going to be presented by scalpels and ultrasonic scalpels.
6. Continuous consolidation within the reinforcement of the core plaster.
7. Application of the facings around the defected areas caused by secondary inserted electricity cables and walled door. Consolidation and reinforcement of the plaster layers around these areas.
8. Mechanical removal of the non-original plaster within the electricity cables and plaster covering defects around the secondary inserted and lately walled door.
9. Removal of the disattached bricks around the walled door and plaster covering the bricks of the walled door.
10. Removal of the disattached door traverse.
11. Brickworking of the defected areas within the reinforcement of the masonry in the hole caused by removal of the traverse.
12. Surface cleaning of the exposed wall painting.
13. Filling of defects and application of a new plaster over the walled door.
14. Inpainting of the defects and fillers.

MATERIALS USED FOR THE RESTORATION TREATMENT

facing: 4% tylose in distilled water applied on japanies paper on areas where the original plaster was covered with the second oldest plaster layer

solution of Cyclododecan in White spirit applied on japanies paper in several layers for short-term facing before the removal of the plaster patches for the areas around the defects caused by inserting of electricity cables

preprepared japanies paper facing with 5% Aquazol in distilled water with little amount of ethanol, reactivated by spraying of distilled water - applied on loosened plaster with exposed original painting

consolidation of the loosened original plaster layer and infilling the cavities in the wall:

increasment of penetration of the adhesive by ethanol water: distilled water with ethanol 2:1

solution of injection mortar Ledan in distilled water (the proportion of Ledan depended on the desired consistency)

reinfortment of the original plaster and core plaster layers: 1% solution of Sebosil (organic silicone oxide) in Ethanol

PHOTOGRAPHIC DOCUMENTATION

preliminary examination before the restoration treatment

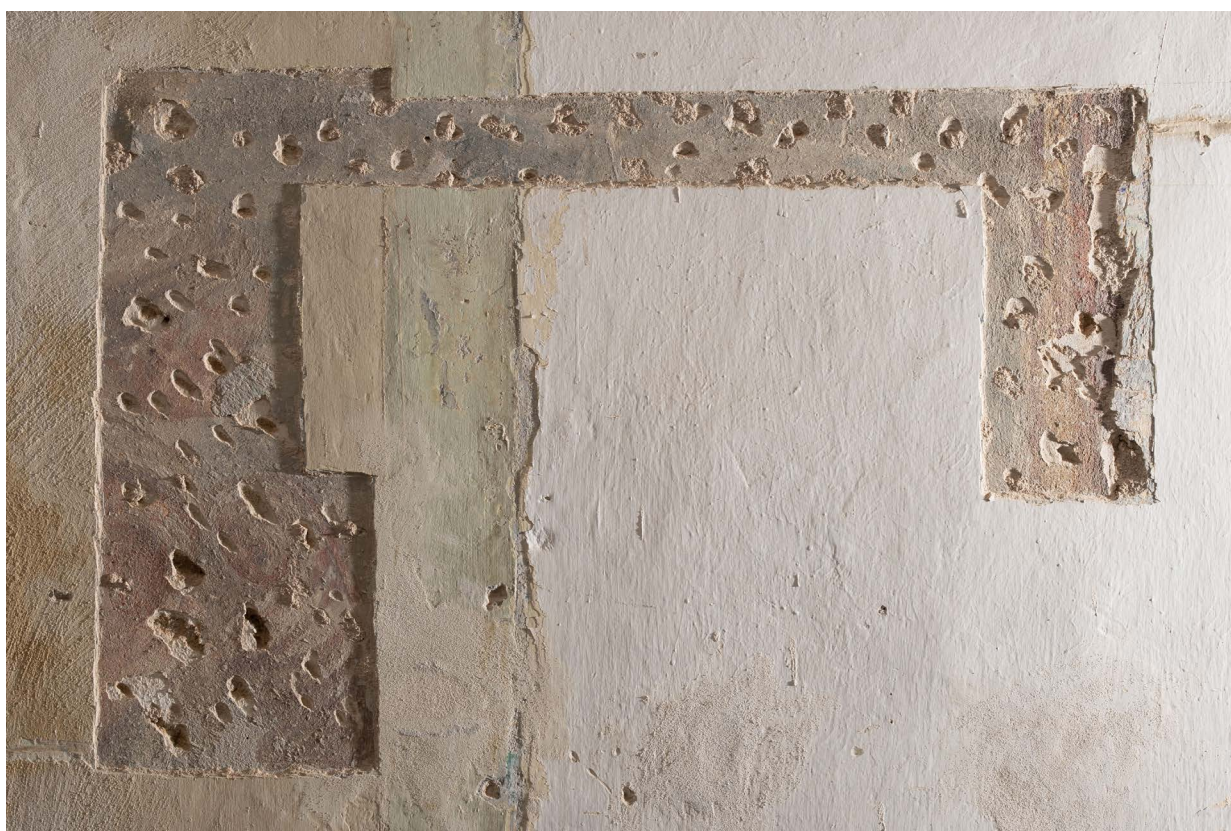
CASTLE KÁCOV



restorated section, north part of south wall of the chamber
photography in daylight



restorated section, north part of south wall of the chamber
photography in raking light



detail of the probe exposing the original painted plaster layer made during technological building survey by different restorer
photographs in day and raking light



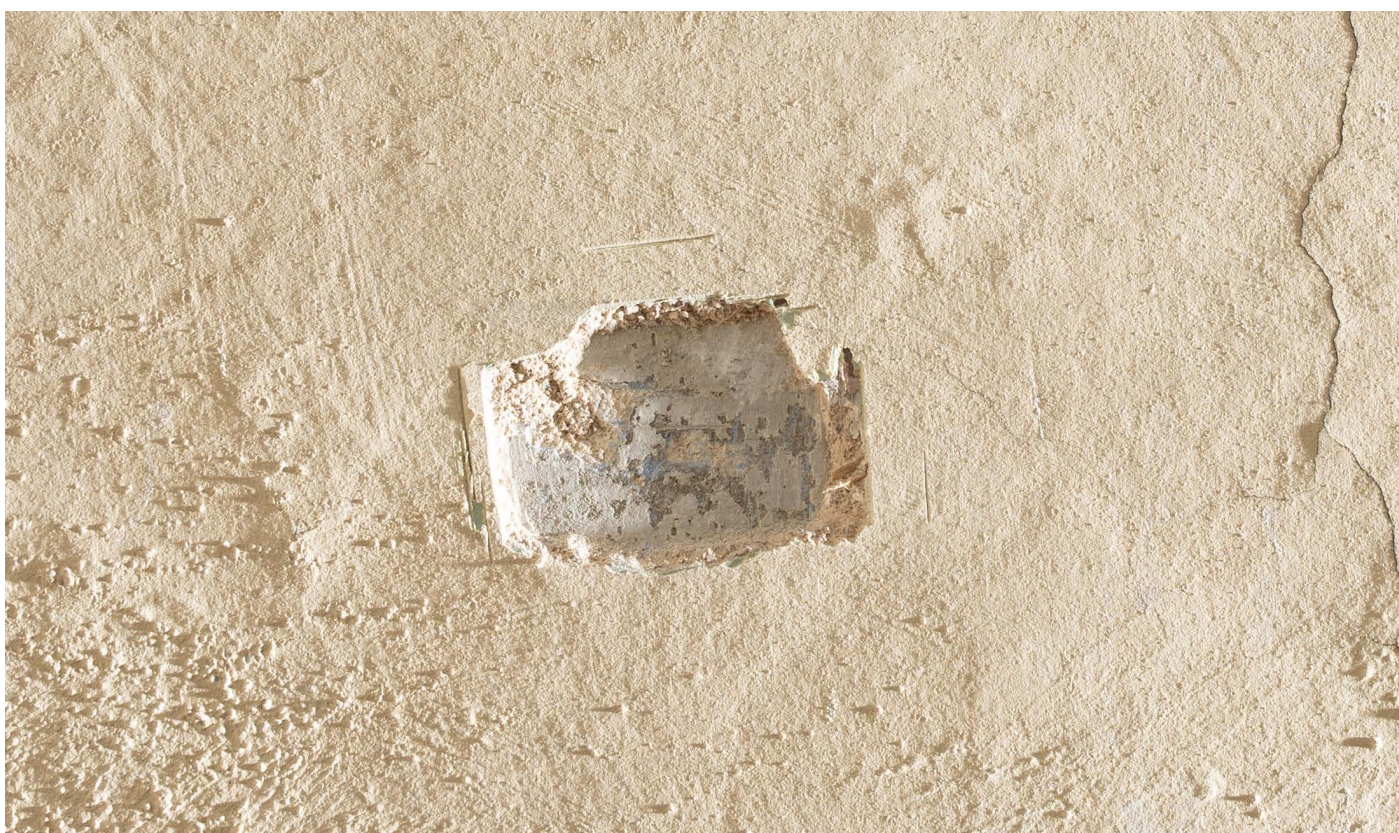
detail of the original painting inside the probe made during technological building survey by different restorer
macrophotographs in day and raking light



detail of the original loosened painting inside the probe made during technological building survey by different restorer
macrophotographs in day and raking light



details of probes exposing the original painted plaster layer partially covered by the second oldest layer made during technological building survey by different restorer
photographs in day and raking light



details of probe exposing the original painted plaster layer partially covered by the second oldest layer made during technological building survey by different restorer
macrophotographs in day and raking light



detail of the probe exposing the original painted plaster layer made during technological building survey by different restorer
macrophotographs in day and raking light

CASTLE KÁCOV



detail of the modern clay plaster layers
macrophotographs in day and raking light

PHOTOGRAPHIC DOCUMENTATION
OF THE RESTORATION TREATMENT



condition after examination of the strato of plasters on the wall within the stratigrafic and strip probes
photography in day light



condition after examination of the strato of plasters on the wall within the stratigrafic and strip probes
photography in UV luminescence



stratigraphic probe exposing all layers of plaster on the particular part of the wall
macrophotography in day light



stratigraphic probe exposing all layers of plaster on the particular part of the wall
macrophotography in raking light



stratigraphic probe exposing all layers of plaster on the particular part of the wall
macrophotography in UV luminescence



strip probe exposing the original painted plaster layer partially covered by second oldest plaster layer indicating the dimensions of the walled door
macrophotographs in day and raking light and in UV luminescence

CASTLE KÁCOV



strip probe exposing the original painted plaster layer partially covered by second oldest plaster layer indicating the dimensions of the walled door
macrophotographs in day and raking light and in UV luminescence



strip probe exposing the original painted plaster layer partially covered by second oldest plaster layer indicating the dimensions of the walled door
macrophotographs in day and raking light and in UV luminescence



condition during the removal of the modern plaster layers on the second oldest plaster layer
photography in day light, detail



condition during the removal of the modern plaster layers on the second oldest plaster layer
photography in raking light, detail



condition during the removal of the modern plaster layers on the second oldest plaster layer
photography in day light



condition during the removal of the modern plaster layers on the second oldest plaster layer
photography in raking light



condition after the removal of the modern plaster layers on the second oldest plaster layer
photography in day light



condition after the removal of the modern plaster layers on the second oldest plaster layer
photography in raking light

CASTLE KÁCOV



condition after the removal of the modern plaster layers on the second oldest plaster layer
photography in day light, detail



condition after the removal of the modern plaster layers on the second oldest plaster layer
photography in raking light, detail



condition after the removal of the modern plaster layers on the second oldest plaster layer
photography in day light, detail

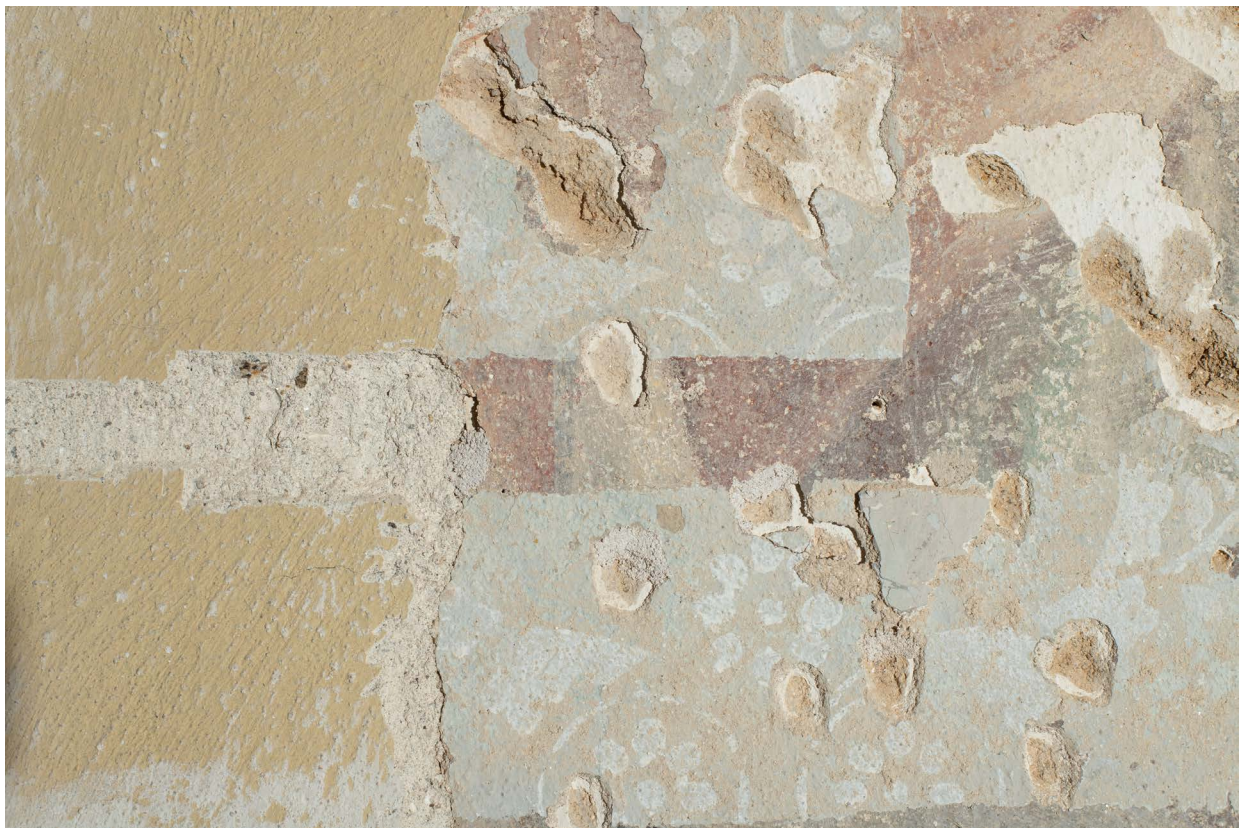


condition after the removal of the modern plaster layers on the second oldest plaster layer
photography in raking light, detail

CASTLE KÁCOV



condition after the removal of the modern plaster layers on the second oldest plaster layer, partially exposing the original painted plaster layer
photographs in day and raking light, detail



condition after the removal of the modern plaster layers on the second oldest plaster layer, partially exposing the original painted plaster layer
photographs in day and raking light, detail

CASTLE KÁCOV



condition after the removal of the modern plaster layers on the second oldest plaster layer, partially exposing the original painted plaster layer
details of defects and loosened plaster layers
photographs in day and raking light, detail



condition after the removal of the modern plaster layers on the second oldest plaster layer, partially exposing the original painted plaster layer
details of defects and loosened plaster layers
photographs in day and raking light, detail



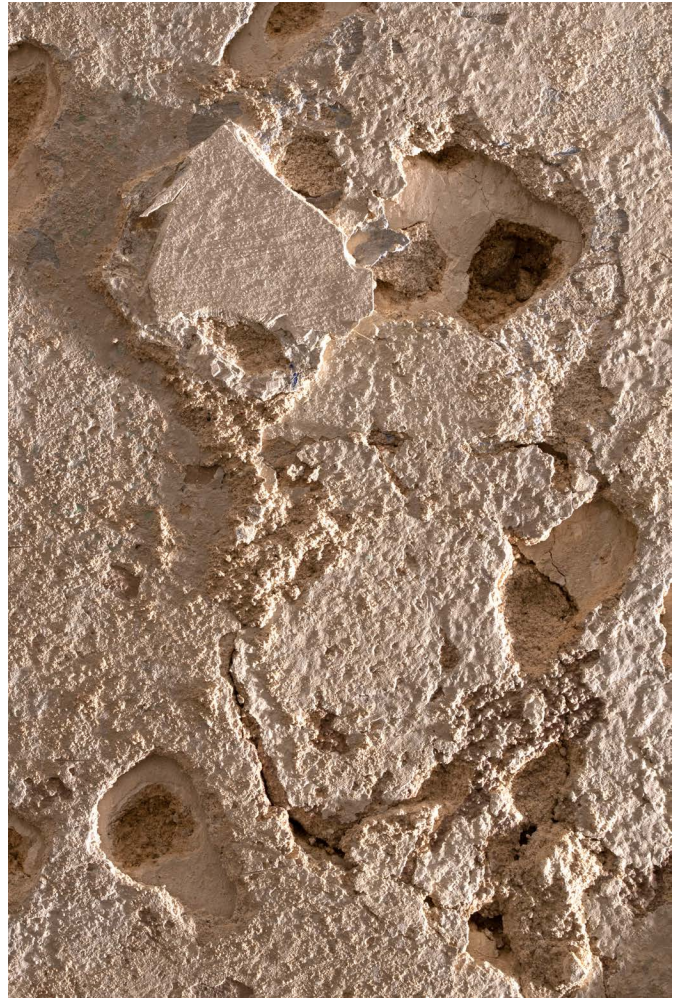
condition after the removal of the modern plaster layers on the second oldest plaster layer
details of defects and loosened plaster layers around the pecks and electricity cables covered by plaster
photographs in day and raking light, detail



condition after the removal of the modern plaster layers on the second oldest plaster layer, partially exposing the original painted plaster layer
details of defects and loosened plaster layers around the pecks and electricity cables covered by plaster
photographs in day and raking light, detail



condition after the removal of the modern plaster layers on the second oldest plaster layer, partially exposing the original painted plaster layer
details of defects and loosened plaster layers around the traverse
photographs in day and raking light, detail



condition after the removal of the modern plaster layers on the second oldest plaster layer, partially exposing the original painted plaster layer
details of defects and loosened plaster layers around the pecks
photographs in day and raking light, detail

CASTLE KÁCOV



condition after the removal of the modern plaster layers on the second oldest plaster layer, partially exposing the original painted plaster layer
detail of Aquazol's japanes paper facing applied on defected and loosened area
photographs in day light, details



condition after the removal of the modern plaster layers on the second oldest plaster layer, partially exposing the original painted plaster layer
detail of Cyclododecan's japanies paper facing applied on defected areas around the electricity cables and traverse
photographs in day light, details

CASTLE KÁCOV



progress of consolidation by Ledan solution
details of defected area before the consolidation and during the removal of dust and disattached plaster particles
macrophotographs in day light



progress of consolidation by Ledan solution
details of defected area after the removal of dust and disattached plaster particles and during the injection of ethanol water for better penetration of the adhesive
macrophotographs in day light



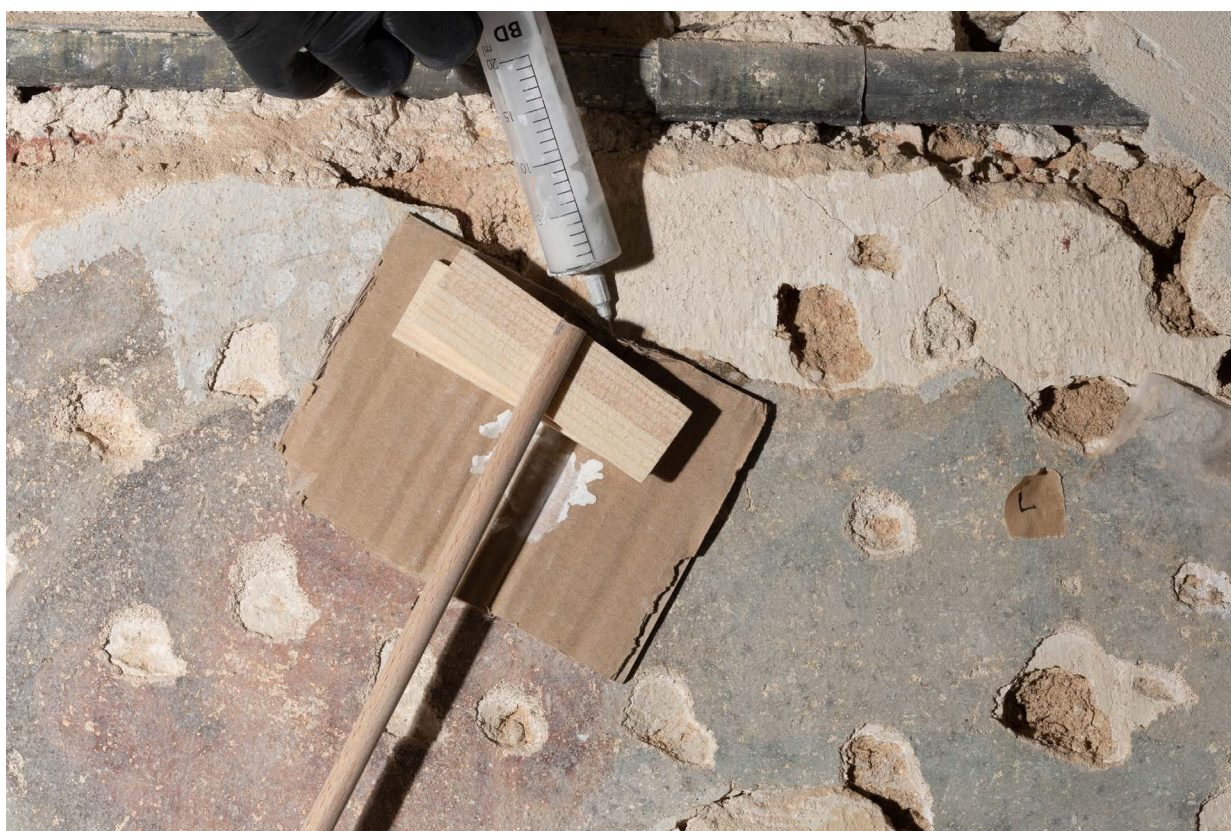
progress of consolidation by Ledan solution
details of defected area after the injection of ethanol water for better penetration of the adhesive and during the injection of liquid Ledan solution
macrophotographs in day light



progress of consolidation by Ledan solution
details of defected area during the injection of liquid Ledan solution and after fixation of the loosened plaster to the wall by a moderate pressure system
macrophotographs in day light



progress of consolidation by Ledan solution
details of defected area before the consolidation and after injection of ethanol water solution to increase the penetration of the Ledan solution and fixation of cotton swabs to reduce the pouring out the adhesive solution
macrophotographs in day light



progress of consolidation by Ledan solution
details of defected area during injection of ethanol water solution to increase the penetration and during the injection of the Ledan solution, both applied after fixation of the loosened plaster layer by the moderate pressure system
macrophotographs in day light



progress of consolidation by Ledan solution
detail of fixation of the loosened plaster layers by moderate pressure system
macrophotography in day light



progress of consolidation by Ledan solution
detail of fixation of the loosened plaster layers by moderate pressure systems
photography in day light



progress of the removal of modern plaster around the walled door
photography in day light, detail



progress of the removal of modern plaster around the walled door
detail of the tylose facing for protection of the original painted plaster
photography in day light



progress of the removal of modern plaster around the walled door
detail of the range of defects and loosened original painted plaster
photography in day light



progress of the removal of modern plaster around the walled door
detail of the tylose facing for portecion of the original painted plaster
photography in day light

CASTLE KÁCOV



progress of the removal of modern plaster around the walled door
detail of the tylose facing for portection of the original painted plaster
photography in day light



progress of the removal of modern plaster around the walled door
detail of the consolidation with Ledan solution of the original painted plaster before the removal of the plaster around the walled door
photography in day light



progress of the removal of modern plaster around the walled door
detail of the tylose facing for portection of the original painted plaster around the defected areas caused by insertion of door and electricity cables
photography in day light



progress of the removal of modern plaster around the walled door
detail of the tylose facing for portecion of the original painted plaster around the traverse extending beyond the level of the original painted plaster layer
photography in day light



progress of the removal of modern plaster around the walled door
detail of probe on the brick of the walled door exhibiting the thickness of the plaster layer
macrophotography in day light



condition after the removal of modern plaster around the walled door
photography in day light

CASTLE KÁCOV



condition after the removal of modern plaster around the walled door
detail of range of structural defects in wall and lost of original painted plaster layer around the traverse and electricity cables
photographs in day light



condition after the removal of modern plaster around the walled door
detail of range of defects in wall and lost of original painted plaster layer around the traverse and electricity cables and fixation of the plaster with original wall painting in the position by wooden pins
photographs in day light



condition after the removal of modern plaster around the walled door

detail of range of defects in wall and lost of original painted plaster layer around the traverse and electricity cables and fixation of the plaster with original wall painting in the position by wooden pins

photographs in day light

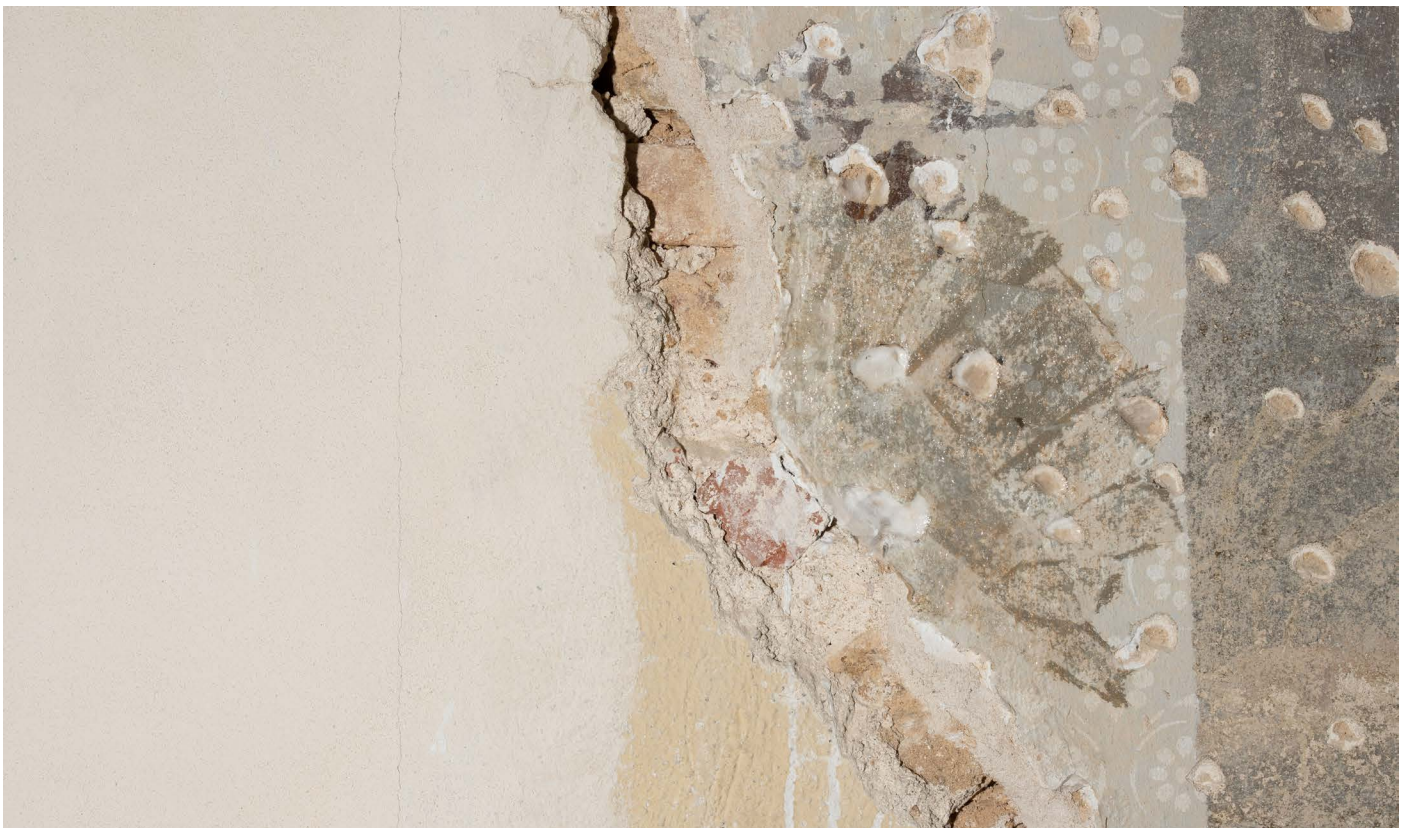
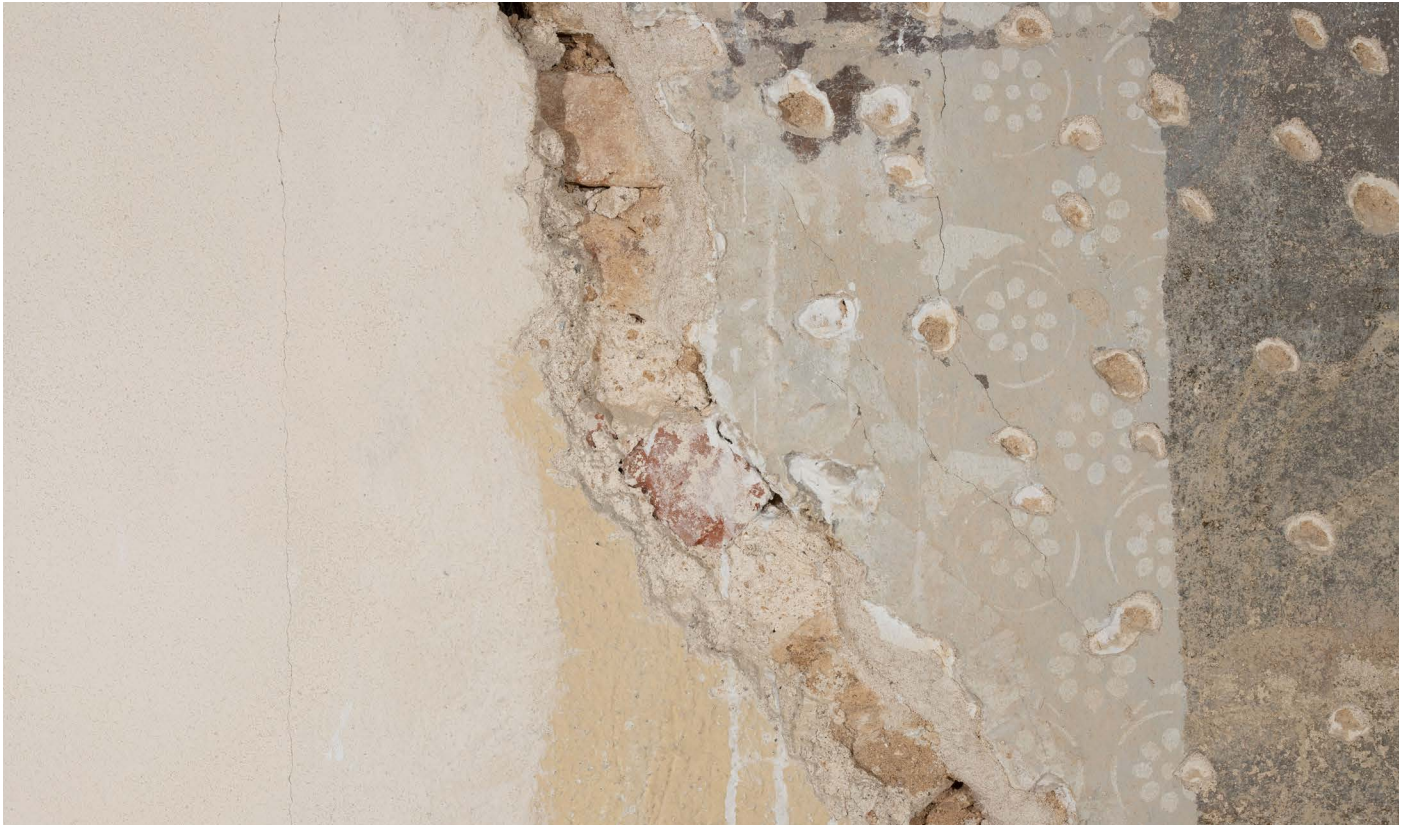


condition after the removal of modern plaster around the walled door
detail of range of defects and lost of original painted plaster layer around the walled door
photographs in day light

CASTLE KÁCOV



condition after the removal of modern plaster around the walled door
detail of range of defects and lost of original painted plaster layer around the walled door
photographs in day light



condition after the removal of modern plaster around the walled door
progress of fixation and application of facing on the area with deep cavity
photographs in day light



condition after the removal of modern plaster around the walled door
detail of range of defects and lost of original painted plaster layer around the walled door
photography in day light



condition after the removal of modern plaster around the walled door
detail of range of defects and lost of original painted plaster layer around the walled door
photography in day light



condition during the removal of modern plaster covering the walled door
photography in day light



condition during the removal of modern plaster covering the walled door
photography in day light, detail



condition during the removal of modern plaster covering the walled door
photography in day light, detail



condition during the removal of modern plaster covering the walled door
photographs in day light, details

CASTLE KÁCOV



condition after the removal of modern plaster covering the walled door and traverse
details of the deepness of the hole between the walled door and original plaster
photographs in day light



condition after the removal of modern plaster covering the walled door and traverse
details of the deepness of the hole between the walled door and original plaster
photographs in day light

CASTLE KÁCOV



condition after the removal of traverse
details of the deepness of the hole between the walled door and original plaster and picture of materials inserted to hole within the metal traverse
photographs in day light



condition during and after the brickworking and reinforcement of the masonry of the wall
photographs in day light

CASTLE KÁCOV



condition before the brickworking and reinforcement of the masonry of the wall
details of the deepness of the defect
photographs in day light



condition after the brickworking and reinforcement of the masonry of the wall
photographs in day light, detail



condition of a segment of the restored section after removal of the second oldest plaster layer by ultrasonic scalpels on the original plaster layer exposing the wall painting
photography in day light

