

WATER-BASED ADHESIVES IN CANVAS PAINTINGS' STRUCTURAL CONSERVATION

INITIATIVE TYPE: CONSERVING CANVAS

SELECTED CATEGORY: workshop

PROJECT DESCRIPTION

INTRODUCTION, GOALS, OBJECTIVES AND EVALUATION

The Gallerie Nazionali di Arte Antica, one of Italy's leading cultural institutions, is located at two different sites, Palazzo Barberini and Galleria Corsini, both of them in Rome (see attachment "7_Gallerie Nazionali – images", fig. 1). These two galleries between them own more than 5000 works of art including paintings, sculptures and examples of the decorative arts.

The original core of the Gallerie Nazionali collection was formed when the Corsini collection was donated to the state in 1883. In the course of the 20th century, the collection started to grow thanks to new acquisitions from other Roman families such as the Chigi, the Torlonia, the Mattei, the Odescalchi and the Sciarra.

In 1949, the Italian government acquired Palazzo Barberini where the new section of the Gallerie Nazionali opened in 1953. Today it displays a collection of works ranging from the 13th to the 18th century, including such masterpieces as Filippino Lippi's *Annunciation* (c. 1440-50), Raphael's *Fornarina* (1518-20) and Caravaggio's *Judith and Holofernes* (c. 1599.), set in one of the most celebrated buildings in Rome.

Palazzo Barberini encapsulates the very quintessence of Roman Baroque. Commissioned by Pope Urban VIII (1623-44), construction on it began in 1625 under the guiding hand of Italy's leading 17th century architects Carlo Maderno, Gian Lorenzo Bernini and Francesco Borromini. It was decorated by artists such as Andrea Sacchi and Pietro da Cortona, who frescoed the superb ceiling with the *Triumph of the Divine Providence* (1633-9) (fig. 2) in the great hall.

The southern wing of the building comprised the so-called "New Apartment", intended for the family's cardinals and thus also known as the "Apartment of His Eminence". The spaces were divided into two separate apartments: the summer apartment facing east towards the garden, known as "de' damaschi cremesini" on account of the Venetian crimson damask tapestries lining the rooms; and the winter apartment which was more favorably exposed to the west, towards Via delle Quattro Fontane. The two quarters were separated by a vast antechamber now known as the Throne Room, majestically characterized not only by an imposing glass chandelier but also by three enormous paintings: "the largest in Rome" as the nineteenth-century city guides were fond of pointing out (figg. 3, 4).

In 2023 the museum plans to celebrate the four hundredth anniversary of Urban VIII Barberini's election to the papacy with a variety of exhibitions and other cultural events, and The Throne Room with its three grandiose paintings from the Barberini collections will be one of the centres of the exhibition. The paintings in question are a picture by Carlo Viva (known as Carluccio Napoletano) commissioned in 1666 by the Barberini as a copy of the celebrated Vatican fresco by Giulio Romano depicting the *Battle of Constantine and Maxentius* (inv. 2242, oil on canvas, 295 x 565 cm., fig. 5); and two monumental works painted by Giuseppe Belloni between 1664 and 1673, *The Marriage of Peleus and Thetis* (inv. 2244, oil on canvas, 315 x 715 cm., fig. 6) and *Bacchus and Ariadne* (inv. 2243, oil on canvas, 315 x 725 cm., fig. 7), commissioned by Cardinal Francesco Barberini to replace the originals commissioned from Giovan Francesco Romanelli (1610-62) but despatched to England as a diplomatic gift from the Barberini family to King Charles II.

The paintings were restored in 1964 when the museum first opened but they now require conservation treatment.

Indeed, the three paintings' condition appears precarious in many respects, all of which point to the urgency of structural intervention.

All three canvases reveal accentuated defective adhesion highlighted by numerous paint drops. In particular, the *Marriage of Peleus and Thetis* shows widespread, stiff *craquelure* and paint drops with flaking, frayed and fragile edges; while in the *Bacchus and Ariadne*, numerous small paint drops suggest an earlier biological attack.

In structural terms, the three canvases show severe signs of failure, due both to lack of adhesion to the lining canvas, and to strong plastic warping of the support caused by defective tension. All three paintings show loosening in the lower part, associated with the warping of the stretcher, with paint drops that can be associated with that phenomenon; *Bacchus and Ariadne* shows typical plastic buckling starting in the upper corners; while the *Marriage of Peleus and Thetis* shows a deep slaking of the canvas from the stretcher in the upper part impacting half the length of the painting itself (figg. 5a, 6a, 7a).

These paintings have a heavy glue paste lining whose weight increases the serious, rigid warping. For numerous reasons we have decided to reline the paintings using water-based adhesives rather than other methods, principally due to their reduced impact in terms of toxicity and reversibility.

In fact, we believe it is important to adopt a new and more scientific approach, turning to methods that offer dual tracks of unquestionable validity: on the one hand, a history going back centuries, of which the Gallery itself still offers functional examples; and on the other, evidence of effective reversibility, also exemplified in the Gallery, as well as absolute compatibility with ecological and non-toxic requirements for the technician and the environment in order to ensure that the system is both safe and effective.

The proposed initiative would be hosted in the Throne Room and in the Conservation Laboratory on the top floor of the Palazzo. Chiara Merucci, Head of the Laboratory, coordinates the activity of other professionals who also work for other public

institutions and for the Soprintendenza per i Beni Artistici di Rome. The Laboratory has a long history, having restored such masterpieces as the Caravaggio paintings in the Cerasi Chapel in S. Maria del Popolo, the Domenichino pendentives in S. Andrea della Valle, the imposing ceiling with Pietro da Cortona's *The Triumph of Divine Providence* in the great hall of Palazzo Barberini, and many other masterpieces, over its more than century-long history. Since the reorganization of the Italian Ministry of Culture, the Laboratory has focused its activities on caring for collections, studying preventive conservation, and restoring paintings from the Barberini and Corsini collections. The most recent examples of its work include an investigation of the technique adopted by Raphael in his *Fornarina* and of Bronzino's technique in the *Portrait of Stefano Colonna*, and the restoration of Murillo's *Nursing Madonna*. (See attachment "7_Gallerie Nazionali - images - appendix 1" for further information on the Laboratory).

The initiative as outlined above would make the structural conservation of the paintings a perfect choice for support from the Getty Foundation Conserving Canvas Project on structural treatment, adding an initiative focused on water-based adhesives and their use in the history of conservation.

Traditional water-based adhesives have been used for many centuries in lining practice all over Europe and they are still widely considered a valid method by many conservators and liners in different countries. At the same time, over the past 40 years, glue paste linings have come under fire mainly on the grounds that they are too invasive and easily subject to biological deterioration, and so they are slowly disappearing from training programs. The result is that there is a serious risk that the attendant know-how and skills may be lost, resulting in a limited capacity to assess the disadvantages but also the many advantages of glue paste linings, in particular the fact that they are non-toxic, environmentally friendly and totally reversible.

A large majority of paintings in many European collections has been lined with natural materials, animal glues, cereals flours and starches, and for preventive care a good understanding of the properties of these materials is essential in order to design optimal specific strategies to minimize the typical problems caused by high relative humidity and lack of regular monitoring.

The chief goal of this initiative is to modify typical attitudes and assessments of these methods in order to build a more open approach to their evaluation. With the support of the Conserving Canvas project it would be possible, for the first time on an international stage, to construct a solid foundation for a rational scientific approach to glue paste methods, enabling stringent and detailed study of the complex interactions between its mechanical, chemical and biological aspects.

For while the bibliography and scientific research in the field is still somewhat limited, the major obstacle to progress consists of the cultural mindsets that prompt communities to defend or promote specific methods without creating the conditions to permit stringent scientific comparison and accurate knowledge of the materials used or their properties and their mechanical behaviour.

The concept of the workshop proposed here, devoted to glue paste water-based linings, is designed to forge a closer relationship between scientific investigation and research, decision-making processes and practice. Due to the pandemic and in line with previous CC projects (at La Venaria Reale), the initiative will, in this occasion, close with an on-line meeting collecting case studies, descriptions of different methods and scientific studies on chemical, biological and mechanical properties.

A key part of the project will be the treatment of the three large format paintings in the Throne Room in Palazzo Barberini. Participants will be dealing with a broad range of problems regarding old glue paste removal, consolidation and the lining of large formats, but in particular they will be involved in brainstorming the process and in addressing a real and complex treatment procedure to be performed within a strict timeframe. This will be possible thanks to the participation of the gallery's Conservation Laboratories, where it will be possible to work on smaller mock-ups, design specific validity tests, prepare participants in the various steps of the treatments, receive guest lecturers, and examine and assess old linings in the Collection. After that, participants will work directly on the paintings under the guidance of Matteo Rossi Doria and Chiara Merucci, who will be leading the project and facilitating training. Here participants will have the opportunity to directly address the problems experienced during the preparatory phases and to relate them to oversize paintings. We believe putting the participants directly to work on the paintings is an especially important aspect of this initiative. They will be working with in-house restorers from the museum and the CBC, and it will also serve to enhance the passing of the baton between generations.

Participants will also be immersed in an intensive "museum experience", interacting with museum conservators, addressing issues and needs, and discussing preventive care strategies, minimalism and protection, thus offering them an excellent opportunity to understand the Italian professional context.

The project will also include the production of media content (photos, videos, interviews) for use on social and other media. The decision to set up an open restoration workshop as part of visitors' tour of the museum and to develop a communication plan involving all the media and bringing together the museum's different skills and areas of professional expertise, aims to reach out to a wider audience and to extend the sharing experience both on site and on line. And at the same time, it will also allow a new approach to aqueous systems to be shared in a broader discussion with colleagues working in different contexts.

The process of **EVALUATING** the initiative in order to assess its effectiveness will be divided between the program's two main sessions. The first, after the Expert Meeting, will collect comments from participants and a form filled in by them. The second will involve both participants and contributors. An outside mid-career conservator will be brought in to work on this data and on the data from the number and localization and comments from museum visitors and staff.

In a nutshell, the project sets out specifically to facilitate relationships between young conservators, with special emphasis on involving them in all aspects of the team's work.

The entire procedure and related activities will be included in a final report with the documentation of each aspect of the project used in the training programs, all of which will be disseminated to the conservation community. All the material produced for communication will be available on a special page in the museum's website.

To guarantee the handling of all practical problems related to the conservation treatment (organization, respecting the treatment schedule, need for additional staff, etc) the Gallerie Nazionali Barberini Corsini will involve C.B.C. Conservazione Beni Culturali, a well-established private company located in Rome, which has extensive experience in large-format paintings but which is also able to provide support to the museum in many other non-technical aspects of the project (see attachment "7_Gallerie Nazionali - images - appendix 2" for further information on CBC).

The agreement with CBC will simplify many of the project's procedures (see Narrative budget file -Appendix 1). Matteo Rossi Doria, one of twenty members of the company, will be a lead coordinator for many aspects of the project (organization, scientific program, national and international relations, worksite, restoration of the three paintings etc). Two young, mid-career conservators (Alice Tognoni, Giulia Mercuri) from CBC will work on the paintings, support coordinators in their activities, be part of the workshop staff and help to produce documentation for use in a Final Digital Paper for communication (social media, dissemination, education). In this part of the program, participants will assist and work with de-lining the paintings, making local fills and repairs, and stabilizing the canvas. They will be exposed to the complexity of the structural conservation of oversized paintings, and they will build up critical knowledge regarding the technique of paste lining. Additional staff consisting of other experienced CBC conservators will be brought in for the two most intense working days (the actual lining process). That way, a single contract with CBC will cover multiple tasks, simplifying timeframes, sub-contracting and insurance coverage.

Finally, this project will also be valuable in terms of the impact it will have on the Italian cultural heritage conservation community: for the very first time a key international partner and CH supporter will be joining with a major Italian museum to cooperate on designing a project linking conservation requirements with the requirements of the public sector.

GOALS

- To demonstrate a safe and effective lining technique
- To promote a new attitude entailing a clear, honest and transparent scientific and methodological assessment of traditional water-based linings and adhesives
- To establish positive interaction between material science, conservation needs and museum curators in order to reinforce preventive conservation strategies

- To design specific training contents which are easy to teach and transmit to younger conservators as yet unfamiliar with these methods
- To reconsider and reassess the Italian lining tradition, reinforcing its role in the international context
- To underscore the need for sustainability in decision-making processes
- To produce an innovative documentation of historical data, of the changes which have taken place over the last 50 years and of the different methods that can be used by training programs to improve understanding of this complex reality
- To disseminate the contents to the worldwide conservation community and specifically to Italian professionals to encourage closer interaction with the international debate
- To promote awareness of new technical and scientific content coming from other fields of research such as food technology science.

PARTICIPANTS

One of the first steps in this project will be an open international call for participants in order to select nine mid-career conservators interested in an intense two-week stint working on the three paintings. To ensure that the call reaches the largest number of candidates possible, all web-based social media will be involved in disseminating the contents of this initiative, as well as adopting other ploys such as pursuing close interaction with national and international training institutions.

Selection criteria will take into consideration experience in the structural conservation of canvas paintings, a strong interest in the use of water-based adhesives – which are also widely used by paper conservators – an open-minded approach, and a capacity for hard work. The two coordinators (Merucci, Rossi Doria), with the support of additional staff and advice and recommendations from Getty CC staff, will select the participants paying special attention to relational skills and to the flexibility to adapt to different scenarios.

The pandemic situation suggests that the number of participants should be restricted to three per workshop, thus nine in all, due both to the logistic difficulties involved in guaranteeing safe accommodation not too far from Palazzo Barberini, and to the difficulties involved in working together on the same painting despite its considerable size and the large amount of space available. At the same time, the project aspires to be open to applicants from all over the world and from any professional context, on condition that they have a particular interest in the specific theme proposed.

As mentioned, the initiative will be divided into two sections. The first section is an intensive workshop comprising numerous activities involving the participants, most importantly working with museum and CBC staff on the structural treatment of the three large paintings. However, as mentioned above, over the two-week period the participants will also work on mock-ups, design specific validity tests (for adhesive composition, methods of application, warping treatment, gels, etc), receive visits from other specialists, build up familiarity with the different ways water-based adhesives can be used, and trained to play an active role in the lining process.

The schedule is designed to integrate the different stages of the treatment on the three paintings with the other related activities described.

In this regard, we plan to give each participant bibliographical supports and references along with samples of the experiments carried out. This small collection could be a valuable tool for future evaluation in the context of their work.

The second section will consist of an on-line Expert Meeting to document different methodologies traditionally used by European conservators, case studies and interviews to acquaint the younger generation with the complexity and richness of the topic. The meeting will also aim to sketch out the main issues requiring scientific study by offering a preliminary analysis of the materials involved, their mechanical properties, reactivity and requirements for preventive care. With the support of experts in the field, we aim to set up an innovative open-minded evaluation scenario together with transparent decision-making processes linking the past and the future.

PARTICIPANTS' TRAVEL & ACCOMMODATION

Travel agencies will provide plane or train tickets and accommodation in apartments with safety measures against Covid-19 and situated close to Metro subway stations, to facilitate travel to and from Palazzo Barberini.

Basic reimbursement should be included for food and local transportation.

PROJECT TEAM

The project coordinator will be Dr. Chiara Merucci, current Head of the Conservation Laboratory. Dr. Merucci will coordinate the two sections of the project (on-line meeting and workshops) and direct the restoration work together with Matteo Rossi Doria.

Matteo Rossi Doria, a restorer with CBC, will coordinate the project together with Dr. Merucci and will be in charge, in particular, of organizing the workshops, the scientific program, national and international relations, and the restoration of the works.

Dr. Claudia Sarpi, the Director's Assistant, will handle the technical secretariat and liaise with the Getty Foundation. She will coordinate the work of the museum offices in implementing the project (contracts, reports...).

Dr. Paola Guarnera, head of the Communications office, will handle the project's communication plan, in collaboration with the project manager and with the communications office (website, social media manager, press office). She will also be involved in managing and designing the media content related to the project.

Arch. Dario Aureli, head of the Technical Office, will be responsible for designing the layout of the restoration laboratory for public viewing and attendant safety procedures.

Dr. Alessandro Cosma, Art historian, Curator, and Head of the Digital Department, will be responsible for managing digital events, publishing results, and coordinating historical studies regarding the paintings.

Two young, mid-career conservators (Alice Tognoni, Giulia Mercuri) from CBC will work on the paintings, support coordinators in their activities, be part of the workshop staff and help to produce final documentation for communication (social media, dissemination, education).

An administrative employee will be hired (8 months) to report, to file documents, and to assist the secretariat.

A restorer (Elena Ciliberto), specializing in museum communication and teaching, will be involved in organizing guided tours and educational events during the workshops' opening hours.

COVID-19:

The Gallerie Nazionali di Arte Antica will follow Italian Health Ministry recommendations that actually don't requires any restrictions, but these positive conditions can soon change. We recommend anyway to keep face protection on during the stay in the museum facilities.

THE SITE: PALAZZO BARBERINI



Fig. 1 - Barberini Palace, Rome, facade

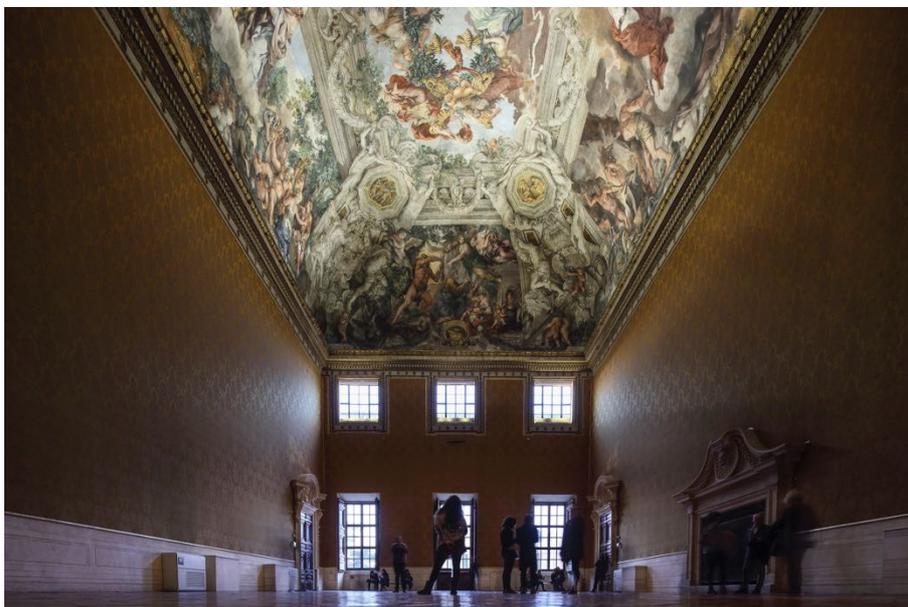


Fig. 2 - Barberini Palace, Salone Pietro da Cortona (with the fresco by Pietro da Cortona: *The Triumph of Divine Providence and the Fulfilment of its Purposes under Pope Urban VIII, 1632-1639*)

Gallerie Nazionali
di Arte Antica di Roma

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THE ROOM: SALA DEL TRONO



Fig. 3 - Barberini Palace, Throne Room



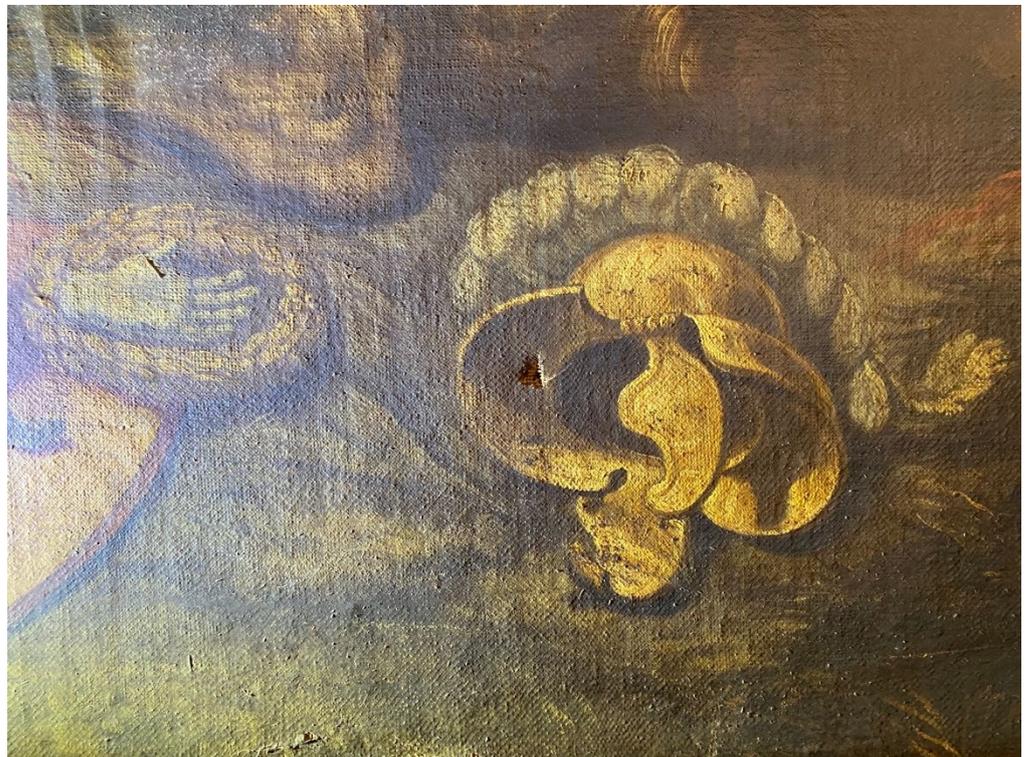
Fig. 4 - Barberini Palace, Throne Room

THE PAINTINGS:

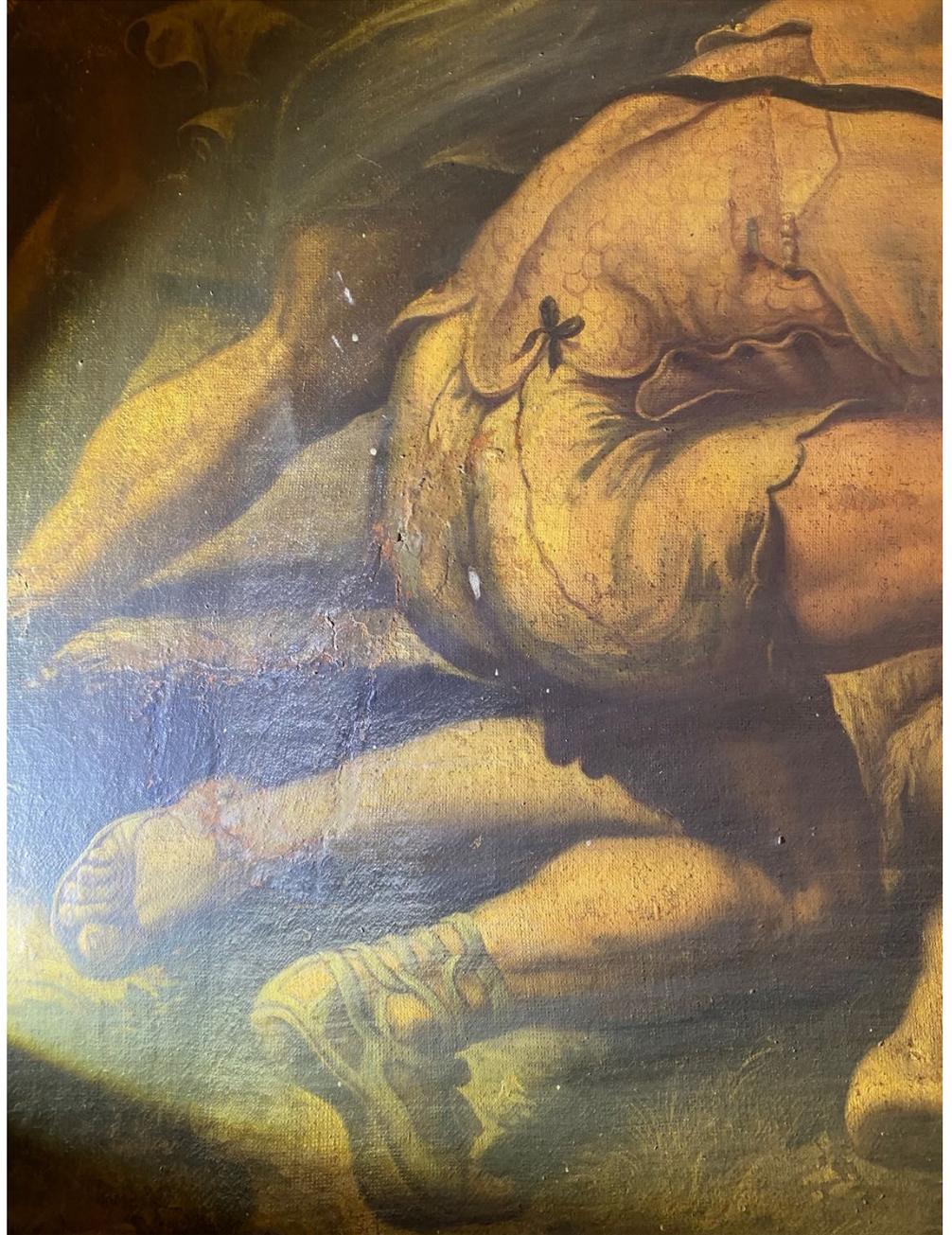


Fig. 5 - Carlo Viva (known as Carluccio Napoletano, 17th c.), *Battle of Constantine and Massenzio* (from Raphael), oil on canvas, cm. 295 x 565, inv. 2242

Fig. 5a - STATE OF PRESERVATION - DETAILS



BARBERINI
GALLERIE
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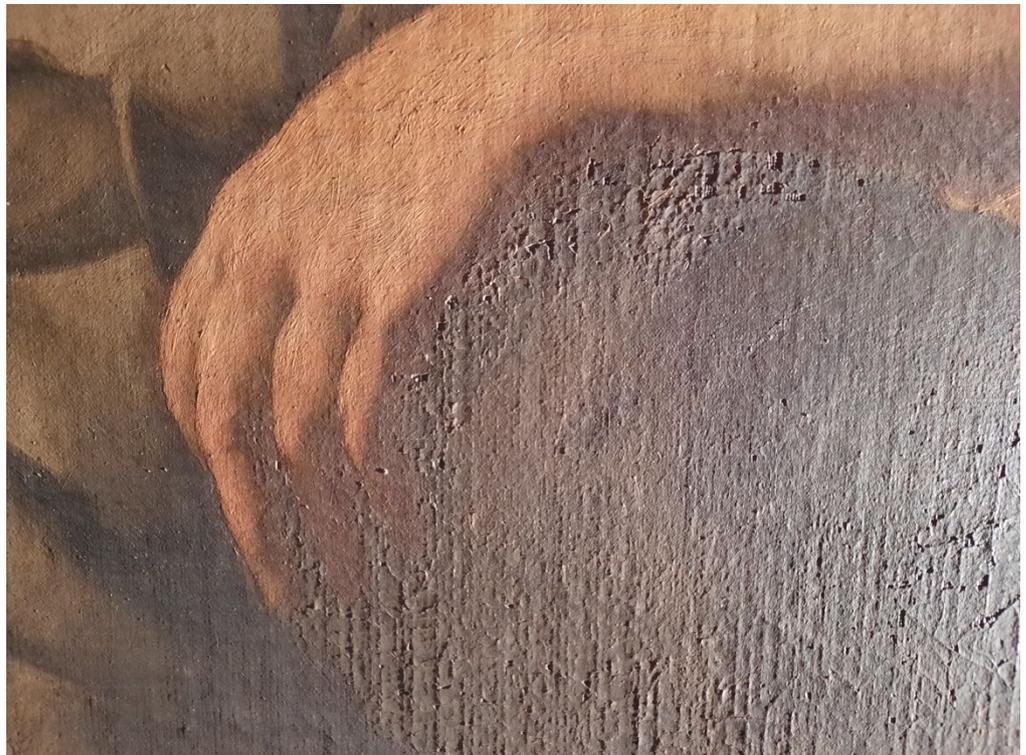
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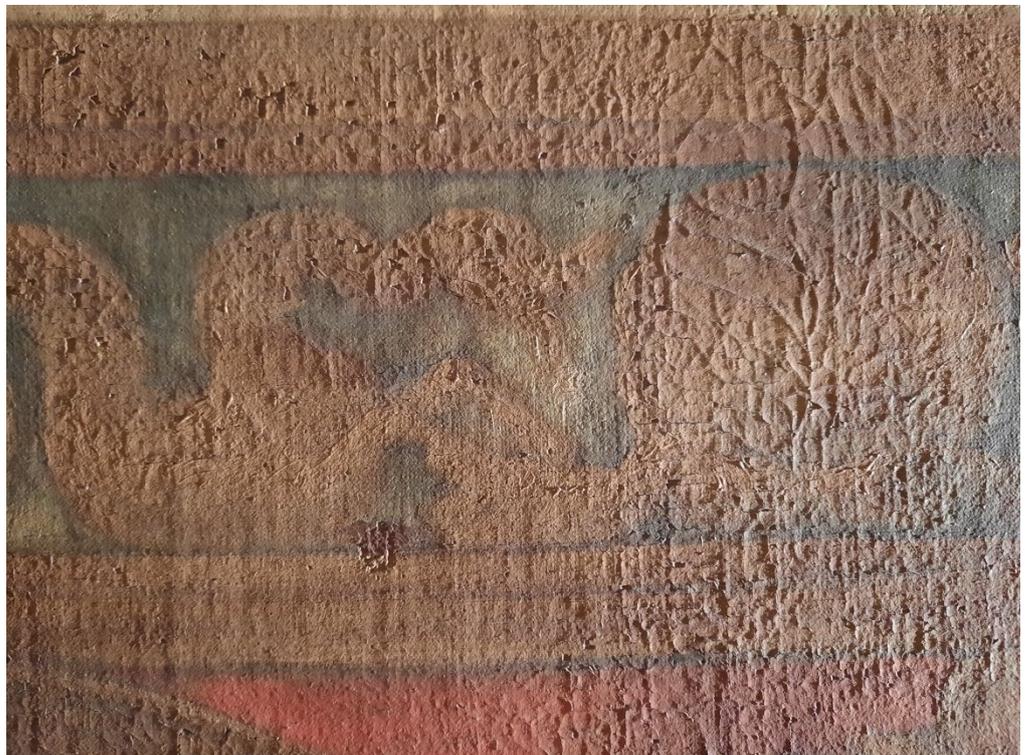


Fig. 6 - Giuseppe Belloni, *The marriage of Peleus and Thetis*, 1673, oil on canvas, cm. 315 x 715, inv. 2244

Fig. 6a - STATE OF PRESERVATION - DETAILS



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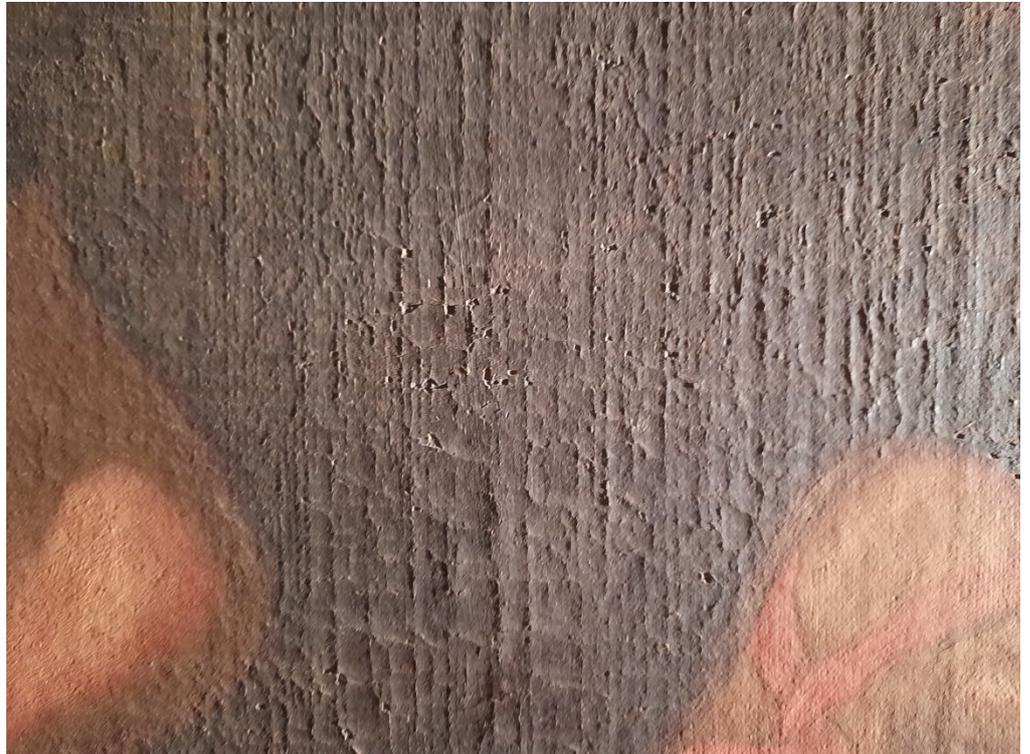
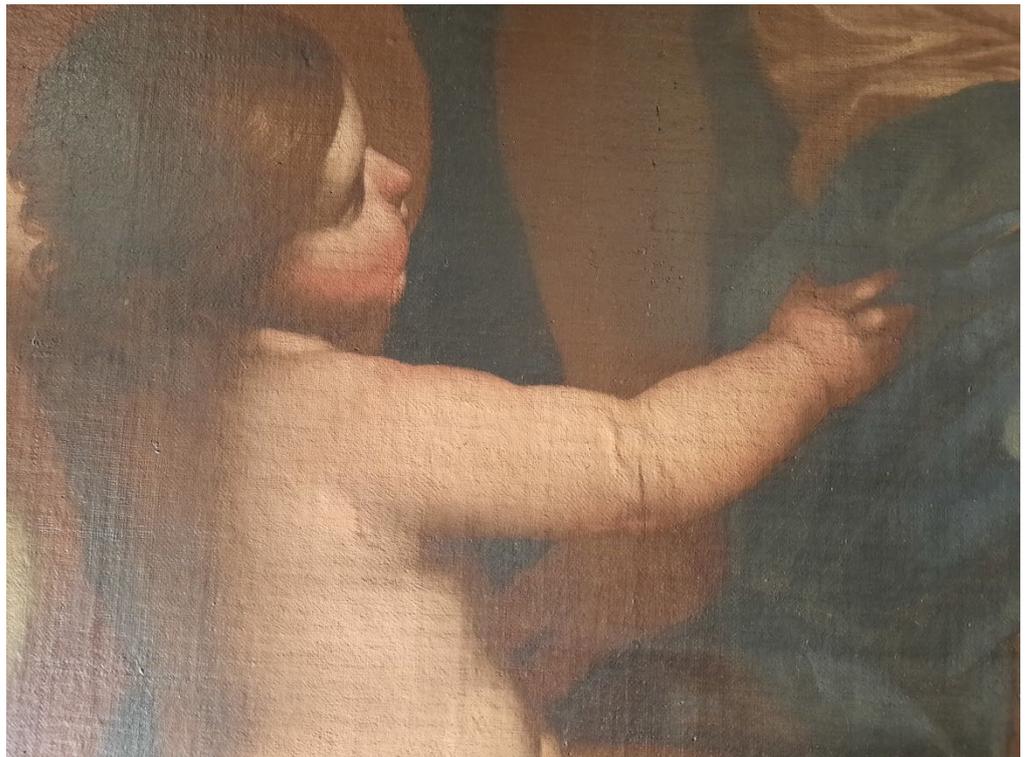




Fig. 7 - Giuseppe Belloni, *Bacchus and Ariadne*, 1664-1665, oil on canvas, cm. 315 x 725, inv. 2243

Fig. 7a - STATE OF PRESERVATION - DETAILS



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THE CONSERVATION LABORATORY:



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