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Textiles Working Group Newsletter

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Coptic textile from the Nationalmuseum collection, photo by Sarah Benson copyright Nationalmuseum. Sweden

From the Coordinator

Sarah Benson

Dear Textiles Working Group Members,

I am pleased to share with you our first Newsletter of the ICOM-CC 2023-2026 triennial. I am honoured to serve all of you for one more term as Textiles Working Group Coordinator and I look forward to sharing events, developments and discussions throughout the triennial. The last term ended with the amazing conference in València, Spain where we all finally got to meet again in person and share so many discussions on conservation and to catch up with old colleagues and friends (see the review of the Textiles Working Group session p 15). This current triennial will end in 2026 in Oslo, Norway and we look forward to meeting again there!

As we start this new triennial, the Textiles Working Group has an exciting agenda planned for the upcoming years (read the full triennial programme on p. 6) and have also started in on our schedule of events with having just completed our first Informal Zoom meeting. This meeting was spear-headed by our second-term Assistant Coordinator Deepshikha Kalsi and focused on Sustainability with the use of saponin soaps to wet clean textiles. Read more in her review on page 7.

Our Newsletters have definitely grown throughout my time as coordinator and this edition is by far the largest. I would like to thank all who were keen to contribute and make these Newsletters a resource that can help everyone who is working or studying in textile conservation.

For this edition we have a brand new section headed by one of our new Assistant Coordinators, Rosie Chamberlin with interviews of textile conservators in different periods of their careers. We hope this gives us all a closer and more personal idea of the work we do and the people that are behind this creative and rather rare profession. I am not personally used to being interviewed, but she was quite positive that she would like to start by getting to know me a bit better so I agreed to starting it off. We are fortunate to have a second interview this round with an emerging professional who gives her insight into her experience of starting out in this very tight-knit profession.

But first, we would like to introduce the new Assistant Coordinator team. I am so thankful to them for their enthusiasm and willingness to join the group and to thank those Assistants that have fullfilled past terms.

We are carrying on with our previous sections of Treatments in Focus, of which we normally encourage emerging professionals to contribute to. This time we have an insight from a recent graduate in preventive conservation who got to work with me as an intern during this past year and got to test out a lot of methods for the textile storage at the National Museum in Sweden. We also have a contribution for a PhD in progress that shares on her current research into synthetic lamé textiles.

We have our review section of which there are several amazing books that were recently published and are on my wishlist to purchase.

In the final sections we have kept with a reference list of new publications relevant to textile conservation and of course the last but not in any way the least section of recently published thesis abstracts. This final section has indeed grown the most, and I am so pleased at how many students and teachers who are keen to publish their dissertations with us for everyone to see. Many of them have the full versions avaialble on-line and for the others, one can always contact the University department to receive a copy of the full thesis. There is so much amazing research happening in our field and I hope you all enjoy reading up on what is happening around the world as much as I have!

Please do get in touch with us with any comments, feedback, or questions you may have and do follow us on our Facebook page!

As with all ICOM-CC publications, this Newsletter is open-access and available to anyone. However, if you are not currently a member of the Textiles Working Group, we encourage you to join via our weblink below to receive the more current updates to the events that are happening within our group

https://www.facebook.com/icomcctextiles

https://www.icom-cc.org/en/working-groups/textiles

I hope you enjoy reading our Newsletter and I look forward to sharing this coming triennial with you all!

Sarah Benson

-ICOM-CC Textiles Working Group Coordinator-

Committee News

Outgoing Assistant Coordinators

Sarah Scaturro, Sarah Benson and Ali Nasir at the closing ceremony of the 2023 ICOM-CC Triennial conference in València

Thank you to Sarah Scaturro and Ali Nasir, former Assistant Coordinators for the Textiles Working Group! Sarah and Ali became Assistant Coordinators in the 2017-2020 triennial and served 6 years. They were a pleasure to work with and contributed to a variety of tasks that were undertaken by the working group over the years. I am so grateful for Ali's help setting up and growing the Textile Working Group's first Facebook page and Sarah's contributions in the organising team for the extremely successful joint interim meeting 'Semi-Synthetic and Synthetic Textile Materials in Fashion, Design and Art'. It was such a help to have Assistant Coordinators that had been in the team before I came in and to help me get into the swing of things.

They started as Assistants under the previous coordinator Deborah Trupin helping with tasks during the triennial conferences and throughout the pandemic. I wish you both all the best and hopefully we meet again soon through ICOM-CC events!

Sarah Benson, ICOM-CC Textiles Working Group Coordinator

Continuing Assistant Coordinators

Bronwyn Cosgrove is the Senior Conservator with the Australian Performing Arts Collection. Prior to joining Arts Centre Melbourne, she has worked at the Los Angeles County Museum of Art, the National Gallery of Australia, the Australian War Memorial, Australian National Maritime Museum and as the Senior Textile Conservator at the National Gallery of Victoria. Bronwyn has a particular interest in the conservation of costumes and materials analysis and is currently undertaking her PhD research on the preservation of plastics in textile collections. Now in her second term as Assistant Coordinator, she enjoys collaborating with colleagues around the world. She was a key contributor in the previous triennial to the joint interim meeting: 'Semi-Synthetic and Synthetic Textile Materials in Fashion, Design and Art' and to the layout and editing of the Newsletters which she is graciously continuing.

Incoming Assistant Coordinators

Deepshikha Kalsi, founder of the Textile Conservation Studio, New Delhi, is an independent art conservator in private practice. Trained in textile conservation at the Victoria and Albert Museum, London, the Abegg Stiftung, Bern, and Cieta, Lyon, she is currently in her second term as Assistant Coordinator of the ICOM-CC Textiles Working Group. Deepshikha serves as visiting faculty at the National Museum Institute, New Delhi, and has worked for over two decades to tailor conservation solutions for museums, private collections, and institutions, including the National Museum, New Delhi, the Mehrangarh Museum, Jodhpur, the Indian Museum, Kolkata, the Indian National Trust for Art and Cultural Heritage, New Delhi and the Victoria and Albert Museum, London. Deepshikha has an upcoming volume on the study of Ancient Textile Fragments from the Stein Collection, co-authored with Rahul Jain and Vinay Singh, to be published by the National Museum, New Delhi, and has contributed to Handbook of Museum Textiles and the journals: North American Textile Conservation Conference and Indian Association for the Study of Conservation of Cultural Property. Her research and work has been supported by the Charles Wallace India Trust, the Simon Digby Trust, and the Bonita Trust. As an Assistant Coordinator she is in charge of Sustainability and helping the group move towards sustainable textile conservation internationally.

HM Queen Elizabeth II's baby dress undergoes conservation.© Historic Royal Palaces

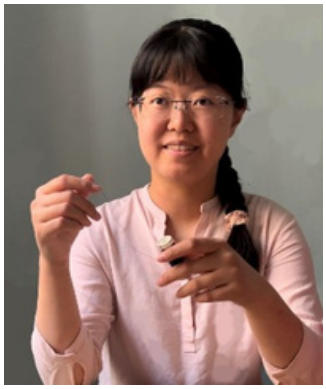
Rosie Chamberlin began work in the cultural heritage sector in 2010, discovering conservation through various roles including Collections Team Assistant and Technician at the Victoria and Albert Museum. Working across the fields of mount making, packing, storage and display she completed various practical and theoretical studies at the V&A, including an NVQ in heritage care, which provided a foundation of knowledge for embarking upon her formal conservation training. She holds an MPhil in Textile Conservation from the University of Glasgow (2014) and a Master's degree in the Conservation of Historic Objects from the University of Lincoln (2018). Following her textile conservation studies she worked as the sole Textile Conservator at Plowden and Smith Ltd before being employed by Historic Royal Palaces as a Textile Treatment Conservator in 2016, where she currently works across the Tapestry, Furnishings and Costume and General Textiles teams.

Her research interests in magnetic display and tin-weighted silk costume led her to engage with the ICOM-CC Textiles Working Group, participating in various conferences. Rosie is passionate about sharing knowledge to better care for historic textile collections, a commitment she continues in her role as Assistant Coordinator for the Textiles Working Group.

Paula Nabais is a heritage scientist with expertise in studying organic colourants in cultural heritage, particularly textiles. Her interdisciplinary background unites the arts, history, and sciences to discover historical formulations that can be (re)invented in modern applications. She has consistently studied historical recipes, which are an essential source of information for better interpreting the analytical results acquired from historical textiles. She has studied a variety of artworks, from archaeological textiles from 1341 BC – c. 1323 to dresses from the 18th century. She won a Junior Researcher contract in the highly competitive 2021 Call to Scientific Employment Stimulus at the Associated Laboratory for Green Chemistry, NOVA School for Science and Technology, Portugal. Finally, she is the principal investigator of R&D project REVIVE: The Threads of the Past Weaving the Future: The Colors from the Royal Textile Factory of Covilhã, 1764-1850 (2023-2026). In this project, historical recipes are to be optimized in partnership with the Portuguese textile industry. Her main objective in joining the ICOM-CC Textile Working Group was to collaborate with specialists and discuss the conservation of textiles and natural dyes. She has also taken on social media for the Working Group and will be a valued contributed from the scientific perspective when reviewing submissions.

Maria Lourdes Po is a conservator at the Museo ng Arkidiyosesis ng Maynila of the Roman Catholic Archbishop of Manila where she is responsible for the conservation of the ecclesiastical museum collection, conservation projects and research initiatives. She received her Master in Cultural Heritage Studies and Bachelor of Science in Microbiology degrees from the University of Santo Tomas. She has undergone formal conservation training, given workshops and participated in several international textile conservation courses such as the International Course on Conservation of Japanese Textiles from the Tokyo National Research Institute for Cultural Properties and the National Taiwan Normal University Research Center for Conservation of Cultural Relics (2017 and 2018); and the IIC-ITCC Scientific Approaches to Preventive Conservation course by the International Institute for Conservation of Historic and Artistic Works and The Palace Museum Beijing (2015), among others. Her current research interests include preventive conservation in hot and humid climates and sustainability in conservation.

As an Assistant Coordinator, she hopes to contribute to the Textile Working Group's various projects and initiatives. She also hopes that the role will enable her to network among international colleagues and assist in the development of textile conservation in the Southeast Asian region where tangible cultural heritage conservation is still considered as an emerging field in some areas and where access to conservation materials and technical expertise are limited and not without challenges.



Mengying Zhang currently has a contract working as associate textile conservator at Heritage Malta (Kalkara, Malta). She received a master's degree in textile conservation from the University of Amsterdam (the Netherlands) in September 2023. As part of the programme, she conducted internships at the textile conservation department at foundation Abegg-Stiftung

(Riggisberg, Switzerland) and the Rijksmuseum, Amsterdam. Mengying Zhang aims to learn from and contribute to the international community in conservation practice. She has been an ICOM member since 2015 and has attended conferences since 2020. In September 2023, she presented a poster at the ICOM-CC conference in Valencia. Mengying Zhang has a background in the History of Art and Museum Studies, which she acquired at Leiden University (the Netherlands). She also volunteered at Textile Research Centre Leiden and joined courses in sewing and pattern making. She is now an energetic member of the Assistant Coordinator team and will help bring the voice of Emerging Professionals into the working group's activities and the triennial.

Textiles Working Group Triennial Programme 2023-2026

Themes for investigation:

- Analytical and documentation techniques for textile conservation: evaluating past techniques and discussing new techniques and approaches.
- Evaluation of techniques, materials, and approaches (past and present): how are we becoming more sustainable and efficient within our profession?
- Textile conservation internationally: techniques, materials, struggles, and solutions found by textile conservators working around the globe.
- Cross-discipline techniques: adapting techniques from other conservation disciplines to textile conservation and textile conservation techniques to other disciplines, potential joint informal Zoom meeting with the ICOM-CC Paintings Working Group.

Projects:

- Publications: continue to gather copyright information to publish Textile Working Group past interim meetings on the Online Publications Platform
- Complete and publish the Postprints of the most recent interim meeting (2023): "Semi-synthetic and Synthetic Textile Materials in Fashion, Design and Art" held virtually in February 2023.
- Contribute as a Working Group to the ICOM-CC task force for solving the sharing and archiving of digital video content from ICOM-CC activities.
- The Working Group will be actively involved in the grading and editing of the Textiles Working Group papers and posters submitted to the ICOM-CC Triennial Conference in Oslo 2026.
- Continue to develop our Working Group's social media presence and expand the capabilities of the Working Group's page on the ICOM-CC website to allow more interaction and networking amongst the members.

Proposed activities:

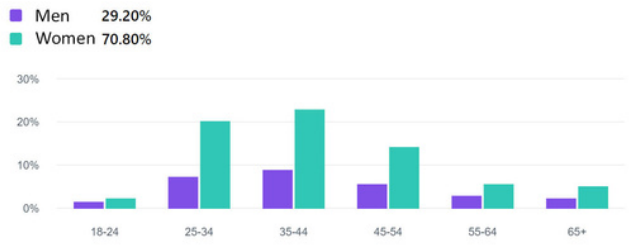
- The Working Group will organise regular virtual Zoom meetings (approximately once per year) on specific themes that provide sharing and question sessions.
- Virtual Round Table Discussion on sharing experiences within textile conservation. Critically evaluating our past treatments and discussing current or future treatments, sharing from emerging professionals to experienced conservators.

https://www.icom-cc.org/en/working-groups/textiles/textiles-working-group-triennial-programme-2023-2026

Social Media

For the last month, around 371 members are seeing the publications posted on the Facebook page, the average of interactions is around 62 per post, and we've got 46 new followers and have reached over 1,200 followers!

Generally speaking, we post on Facebook at least once a week, sometimes twice. The post with the highest reach (c. 3,827) was on the 13th of June, regarding our first Sustainability Informal Zoom meeting. Here's a graph of our followers:



Follow us!

Paula Nabais
ICOM-CC Textiles Working Group
Assistant Coordinator

Sustainability

Textiles Working Group Informal Zoom Meeting FOCUS ON SUSTAINABILITY: Discussion on wet cleaning with saponins in textile conservation

The world today is urging us to be conscious of our carbon footprints, thus it becomes our responsibility to practice with awareness and mindfulness. Although as conservators, quantitatively we work with minuscule amount of chemicals, yet that does not obliterate us from our responsibility towards the planet and the future generations. It is with this intention the ICOM-CC Textiles Working Group organised its first informal Zoom event of the 2023-2026 triennial: FOCUS ON SUSTAINABILITY: Discussion on wet cleaning with saponins in textile conservation.

Saponins derived from the bark, roots and fruit have been commonly used over the centuries in different cultures. Saponin has come up in recent discussions as a green alternative to chemically made surfactants in textile conservation. We had on our panel, **Petra Czerwinske**, who has worked for over two decades as a textile conservator at the Rautenstrauch Joest Museum in Cologne, Germany, and internationally. She introduced the audience to world of saponins through her extensive research on the structure and use of saponins through her presentation 'Saponin: Structure, cleaning-specific properties, and the use of the natural surfactant in textile conservation'. She's the author of publication 'Saponin Reingungsspezifische Eigenschaften und Einsatzmöglichkeiten eines Naturstoffes'. This was published in German in 2008 and she graciously shared her research in English with us despite it not being her first language. Our next speaker was **Caterina Celada Prior**, a recent graduate from the University of Glasgow, in 2020 with an MPhil in textile conservation. Caterina was motivated by the growing awareness within the textile conservation profession about the environmental impact of current practices and the need for more sustainable alternatives, as well as a particular interest in traditional conservation practices. Her presentation 'Saponins: A review of natural plant-based surfactants and their potential for use in textile conservation' raised some very pertinent questions reflecting upon the discipline of sustainability itself. Having gained experience in Spain, the UK, and Switzerland, she currently serves as a textile conservator at the Museum of London, in the UK. **Rini Hazel Templeton** was next on the panel. Rini has a PhD in Textile Conservation from the National Museum Institute, New Delhi, and a Master's in Preservation, Conservation, and

Heritage Management from the Delhi Institute of Heritage and Management. With over a decade of experience, she is the Project Associate at the Department of Conservation, Indira Gandhi National Centre for The Arts, New Delhi. She shared her research titled 'Natural Surfactants: A sustainable alternative for washing historic textiles' which investigated the effectiveness of these surfactants compared to non-sustainable surfactants used in textile conservation.

We next had the privilege to hear **Bappaditya Biswas**, a Textile Artist and founder of Bailou. An expert in masterly weaves, Bappaditya has been awarded the UNESCO Seal of Excellence for his work. His work as a textile artist is highly appreciated and sought after. He generously shared his indigenous knowledge of using soap nuts for washing his mordant and dye painted textiles through his presentation 'Didda & Reetha'(Grandma & SoapNuts). A tradition he had learned from his grandmother! It was the first time we heard of soap nuts being roasted before being used to extract the surfactant.

Then we took a trip to the Vatican Museums! **Viola Seppetelli and Laura Pace Morino**, Senior Textile Conservators, from the Tapestries and Textiles Restoration Laboratory. They presented a case study titled 'Saponin in Vatican Museums' of wet cleaning a Raphael's tapestry using saponins. They shared their painstaking approach to test the fibres before washing and how they handled the fugitive dyes through an engaging video of the whole process. Viola Seppetelli studied in Fano, she's won the public competition at the OPD in Florence, Institute of Advanced professional training and has obtained a degree in Art Restoration of Tapestries. She has been working as senior textile conservator in the Vatican Museums since 2011. Laura Pace Morino studied in Rome, she has won the public competition at ISCR, Institute of Advanced professional training and obtained a degree in Art Restoration of Ancient Textiles. She has been working as senior textile conservator in the Vatican Museums since 2006.

Our last speaker was **Jasmine Sartor**. She studied Conservation of Cultural Heritage in Florence, at Opificio delle Pietre Dure Institute, with the specialisation in textile and leathers artefacts. During her career, she collaborated with several textile conservators and worked for many museums in Italy. In 2020 she moved to Milan and joined the Moshe Tabibnia Gallery as a textile conservator. Here she's gaining experience and knowledge about ancient carpets, an area which she is very passionate about and conserving historical textiles, especially rugs and carpets. She presented a case study 'The wet cleaning of the Compressed Medallion Ushak carpet, 16th century, Western Anatolia, from the Casa Museo Pogliaghi, Varese'. Her meticulous study helped clarify many doubts.

The conference thus integrated the transdisciplinary approach, introducing the audience to the scientific structure and analysis of saponins and questioning how and when an approach is sustainable along with the practical experience of using saponins traditionally and consciously in the museum laboratory.

The audience actively engaged in addressing and deliberating on the complex issues that challenge researchers and practitioners alike. There is a need for an integrated approach, acknowledging interdependencies, to bridge the gap in conserving our heritage scientifically and the wisdom of indigenous knowledge.

The session was moderated by the Textiles Working Group Coordinator Sarah Benson from the National Museum of Sweden and Assistant Coordinator Deepshikha Kalsi from The Textile Conservation Studio in New Delhi, India.

Deepshikha Kalsi
ICOM-CC Textiles Working Group
Assistant Coordinator

Interviews

Behind the Seams with Sarah Benson

Interview by Rosie Chamberlin

As we head into the next triennial, we're excited to introduce our new "Behind the Seams" feature! With each edition of the Newsletter, we'll be getting to know each other a little better through Q&A profiles with different members of our community—and who better to kick things off than Textiles Working Group Coordinator, Sarah Benson!

Sarah, who describes herself as a 'solid mid-career' textile conservator, is currently employed at the National Museum of Sweden in Stockholm where she has been for the past 2.5 years. Over a career that has spanned more than 10 years, Sarah has worked across seven different countries, experience that has equipped her well for her role as coordinator of our international committee.

So Sarah, why textile conservation?

I've always been passionate about haute couture and dreamt of joining the Parisian fashion scene. I studied Fashion and Textiles at the University of Washington, where I grew up. After graduating, I moved to Palm Springs to work for Claire Shaffer, an author of how-to-sew books who had greatly inspired me during my undergraduate studies.

While collaborating with Claire, I contributed to books, such as "Couture Sewing Techniques 2nd edition" and helped facilitate workshops on topics such as 'how to tell copies from original couture' and 'patternmaking from historical costumes'. It was at one of these workshops that I met Tim Long, then curator of costumes at the Chicago History Museum and now a director with Hindman Auctions, who introduced me to the idea of textile conservation and recommended the Textile Conservation Centre in Glasgow as the best place to study.

Housekeeping and doing emergency repairs at a castle. Copyright Nationalmuseum Sweden

Can you describe your career path in textile conservation leading up to your current role?

On Tim's recommendation, I moved to Glasgow to embark upon my MPhil in Textile Conservation. Whilst writing my dissertation 'Like-with-like: A comparison of natural and synthetic stitching threads used in textile conservation', I worked in private practice with textile conservator Sophie Younger in Scotland.

During my studies I had a dream internship opportunity in Paris at the Le Musée Galliera de la Mode de la Ville de Paris with haute couture costumes which led to a short-term contract offer.

Unfortunately, this opportunity did not happen due to visa issues—a recurring challenge in my career that I have had to become adept at navigating.

After Paris, I served as an Assistant Textile Conservator at the Heritage Conservation Centre in Singapore for two years. There I worked on many different textiles mostly from Southeast Asia and observed for example how many adhesives taught in Western curricula fail in more humid climates. I was left largely to my own devices in Singapore and learnt a lot through discussion with other expat conservators from across different disciplines.

From Singapore, I moved to Laos where I volunteered for a repacking project with traditional Lao textiles owned by Ock Pop Tok in Luang Prabang for a couple of months whilst waiting to start a year-long contract in Qatar.

In Qatar, I worked on condition assessing and treating sports textiles for the Qatar Sports and Olympics Museum. After the museum would be established, they had no plan to keep a textile conservator, so I applied for a permanent position in Norway in search of a more stable position.

I spent over four years in Norway at the Museumssenteret i Hordaland in Bergen, which included interventive work on ecclesiastical textiles and union banners for private clients among preventive tasks. During this time COVID hit and I also became coordinator of ICOM-CC Textiles Working Group (2020-2023 was my first triennial).

So, why the move to Sweden?

I moved to my current role in Sweden in 2022, drawn by both professional and personal reasons. I missed the pace of working in a museum environment where I could ensure ongoing care for the objects I treated. Additionally, having some old family ties in Sweden and connections in the field—like Johanna Nilsson, whose research influenced my dissertation and with whom I later co-authored 'Conservation methods for costumes: Choices, decisions and solutions'—deepened my affinity for the country.

Reflecting on your career so far, can you describe a memorable high and a challenging low point?

My career has been a roller coaster with highs and lows. A highlight was my internship in Paris, where I worked with the haute couture pieces I had always dreamed of. However, having to leave Paris was a low point, as clinging to that ideal made it hard to see other opportunities which led to unhappiness.

I also faced challenges and successes in Singapore, Qatar, and during the tough times in Norway amid the pandemic.

What does a typical day look like for you where you currently work?

My work involves a lot of meetings and preventive aspects such as cleaning tasks in various castles—we have objects across multiple castles in Sweden. My current treatment project is a tapestry, the first since I worked with Sophie Younger after Glasgow, so I have been seeking advice from the tapestry oracle and my old supervisor, Frances Lennard and my previous colleague Philippa Moxon.

Before I arrived, the National Museum of Sweden had never had a textile conservator on permanent employment, so I'm focussing on gradually building up the studio and storages. Currently, I'm prioritising the acquisition of essential equipment; for instance, I urgently needed a large table to work on as the collection here is made up of predominantly large flat textiles. I am also planning to replace our problematic dye bath that trips the electricity whenever it reaches temperature; a beaker dyeing apparatus is on the long-term wish list.

Our studio handles a variety of textiles, including tapestries and woven textiles, which reflect Sweden's tradition in textile art. While I manage most projects solo, we do host interns and occasionally engage in skill exchanges with other institutions.

Assessing and taking samples on a 16th century Swedish tapestry with Philippa Moxon, inventory number NMK 124/1892. Copyright Nationalmuseum Sweden

What do you like to do outside of work? Do you have any particular hobbies or interests?
I try to stay active to keep up with the physical demands of textile conservation. — Cleaning castles, is truly 'body shattering' work and I'm not sure how I'll manage it in 20 years' time. To stay fit, I do a lot of yoga and climbing. There's a climbing gym five-minute's walk from our studio, so me and a colleague go there after work to build the strength we need to lift heavy furniture and tapestries.

Looking forward, what are some ambitions or goals you have for the future?
Have a better work life balance.

If you could choose any project or object to work on, what would be your dream assignment?
I would have to say still costume. The challenge of the three-dimensional nature of costume, particularly when working with materials like shattered silk, is something that really appeals to me. I'd love to delve deeper into how these materials can best be treated and displayed.

As for a dream research project, I'm intrigued by the potential of revisiting synthetic textiles. I have considered pursuing a PhD but it would really depend on finding the perfect project that I simply couldn't resist.

Closing Comments

I first met Sarah when we were studying on the Textile Conservation course in Glasgow and every time we meet, I learn something new. At the Textile Working Group Interim meeting in Switzerland, I learnt how to block out fabric using Melinex to create the perfect patch, – a tip that Sarah picked up during her internship in Paris. Through this interview, I learned how adhesives commonly used in the West could fail under different climatic conditions.

— I hope you found this interview as inspiring to read as I did conducting it.

Behind the Seams with Rachele Di Gioia

Interview by Rosie Chamberlin

Rachele Di Gioia is an emerging professional who graduated in July 2020 with top marks from the University of Turin in partnership with the "La Venaria Reale" Conservation and Restoration Centre. Her thesis project focused on the conservation of an Anatolian carpet from the Pogliaghi Collection in Varese, northern Italy.

Rachele, who describes herself as a 'wandering emerging professional,' is currently employed as a Textile Conservation Intern at Historic Royal Palaces, funded by The Clothworkers' Company and Buccleuch Living Heritage Trust. She is based at Hampton Court Palace outside of London, working across the fields of tapestry, furnishings, costume, and general textiles.

Before moving to London, Rachele worked for three years, first as an intern and then as a textile conservator, at the "La Venaria Reale" conservation studio. Between these contracts, she collaborated with textile conservator Irene Caputo, setting up the exhibition 'I nodi dei Giardini del Paradiso,' curated by the Fondazione Tassara, Brescia Musei and the city of Brescia.

So Rachele, why textile conservation?

This is a very tricky question. I have always been passionate about textiles, without even knowing it. There is a kind of affinity with the material, something that has gradually emerged and been brought to light thanks to people I have met along the way. The ancient principle of weaving somehow reassures me; it fascinates me to think that from the simple interweaving of warp and weft can come such complex works of art. I have found in conservation a point of connection between my more methodical and scientific side, the part of me that is curious about the history of human made objects and the possibility of working with my hands. Since I was a child, I

During the conservation treatment of the Ushak 'Lotto' carpet inv.447
Image ©CCR La Venaria Reale and Lodovico Pogliaghi Museum, Sacro Monte di Varese

have always had a passion for carpets. I can't explain why, but I know that when I look at a carpet I feel at home. Studying conservation has made this possible, allowing a privileged point of view, which I am so grateful for.

Can you describe your career path in textile conservation leading up to your current role?

I moved to Venaria Reale, not too far from my hometown Pinerolo, to embark upon my five-year Master Degree in Textile Conservation. During my studies, I completed summer placements in two different textile conservation studios in Florence and Lucca to get an idea of the reality of working outside of university.

After my thesis dissertation, I pursued an internship followed by a short contract working with an incredible team (Roberta Genta, Chiara Tricerri and Francesca Colman) at CCR La Venaria Reale textile studio, where I had the opportunity to undertake various conservation treatments, both preventive and remedial, at the main Piedmontese museum sites and the cultural sites of the Fondo Ambiente Italiano (FAI). This included working with different types of artefacts such as ethnographic material, carpets, tapestries, leather wall hangings, uniforms and carriages. After completing my degree, I sent out many applications to gain museum experience abroad,

with a focus on the theme of carpets. Unfortunately, none of them were successful. I tried the Museum of Islamic Art in Berlin, the Benaki Museum in Athens, the Gulbenkian Foundation in Lisbon, the Museum of Applied Arts in Budapest, and the TIEM in Istanbul. After other interviews with the National Museums of Ireland and the Philadelphia Museum of Art, I was delighted to secure a position as Textile Conservation Intern at Hampton Court Palace in London. I am now in the midst of this adventure, and I can already anticipate that it is proving to be a wonderful opportunity for deepening and consolidating my conservation practices, as well as personal and linguistic growth.

Reflecting on your career so far, can you describe a memorable high and a challenging low point?
Reflecting on the journey I've taken so far, I believe that my challenging low points are always accompanied by great satisfactions in the end. Moving to London was the biggest challenge I've ever faced, with everything it entails. An unforgettable moment was receiving the notification of my acceptance from Historic Royal Palaces.

Another significant moment in my journey was collaborating with textile conservator Irene Caputo on the carpet exhibition at the Grande Miglio of Brescia Castle. There were times when I doubted I could complete the work on time. Yet, it's precisely in these moments that we manage to find the necessary resources. It was immensely satisfying to successfully complete the work together.

What does a typical day look like for you at the Palace?
Every day is quite variable, depending on the studio's schedule. There can be very calm days, for example, when working on a tapestry or writing a report, and other days can be more frenetic. For instance, during installations or deinstallations, or during audits or on-site cleaning on scaffolding.

What do you like to do outside of work? Do you have any particular hobbies or interests?
I love reading, walking, drawing, and dancing. I see strong connections between weaving and dance; I view them as meditations, prayers in motion. For me, they are a link to the earth and our ancestors.

During the conservation treatment of the Ushak Medallion carpet inv.T11

Looking forward, what are some ambitions or goals you have for the future?

I would like to continue doing this work, with all the sacrifices and satisfactions it entails. I feel like a wanderer without a destination for now, absorbing everything I experience like a sponge. I hope to find a balance between relationships, family, work, and greater stability in the future. I would like to explore a path that allows me to research deeper into carpet conservation, which is often scarcely considered. It's both exciting and frightening not to know what will happen next.

If you could choose any project or object to work on, what would be your dream assignment?

I might sound repetitive, but I always come back to carpets. Reading a carpet, getting close to this precious space, means diverting our eyes and thoughts from human proportions to undergo a visual process. It's a language whose alphabet is formed by the combination of shapes and colours in space. My dream would be to work in a museum that has a carpet collection, contributing to their fruition and enhancement. Being surrounded by shapes and colours.

If readers have any questions they'd like to be asked in future interviews, or know someone who would make a great interviewee, please don't hesitate to contact us. Your input is invaluable in creating a dynamic community dialogue in our newsletter.

During the condition checking of the reverse of the Circumcision of Isaac tapestry Image ©HistoricRoyalPalaces

Reviews

ICOM-CC Valencia 2023: Working Towards a Sustainable Past

Review by Rosie Chamberlin and Mengying Zhang

Rosie at the opening ceremony and Mengying in front of her poster for the Textiles Working Group session

In September 2023, Mengying and I were fortunate to be able to attend the much-anticipated 20th ICOM-CC Triennial Conference set over five days in sunny Spain. The event did not disappoint, bringing together conservators from across the globe and providing the platform to present and discuss the latest in research and practices from across conservation specialisms.

The conference opened at the architecturally stunning Palau de les Arts, a complex of buildings devoted to the arts and sciences, setting the stage for a week of engaging discussions, held at the Technical University of Valencia.

The Textiles Working Group sessions at the host university's campus were well-attended and highlighted some significant new research in our field. This review will summarise the papers presented, supporting our collective pursuit of working towards a more sustainable past.

Our first presentation was given by **Laura Garcia-Vedrenne** from the Fine Arts Museum of San Francisco. She presented the research results on the sustainability of indigo carmine dyes, namely, their wash- and light-fastness. Historic recipes for dyeing woollen materials were targeted in this research, because they were the most common. Repetitive wet cleaning and drying cycles were applied to embroidered samples, artificially aged (photodegradation) samples and two historic samplers (dated 1783 and 1808).

Test results confirmed the relatively weak wash- and light-fastness of indigo carmine dyes, while the dye solubilisation differed per drying method. This reflected the importance of controlled drying process after wet cleaning treatments. Artificially aged samples showed weaker wash- and light-fastness than the unaged ones. But these aged samples behaved differently from the historic samplers. This indicated that photodegradation was not the only factor that further weakens the wash- and light-fastness of indigo carmine dyes. The speaker therefore recommended further studying of the chemical reactions involved in the degradation and solubilisation of the dyes.

Rini Hazel Templeton from Indira Gandhi National Center for the Arts presented the research results on the potentials of indigenous natural surfactants. The interest in this subject was triggered, as indigenous natural surfactants may possess higher environmental sustainability and higher accessibility than synthetic surfactants, especially in their region of origin.

The research focussed on two indigenous natural surfactants from tropical Asia – *reetha* (Hindi), soap nuts obtained from *sapindus* species, and *shikakai* (Hindi), soap pods obtained from *Acacia* species. They are widely known as ingredients for traditional shampoo and detergents in India. The speaker gave an overview of the wet cleaning tests, which were performed with solutions of

reetha and *shikakai* respectively. The results showed that both surfactants were effective in cleaning cotton and silk samples soiled with dust and sebum. The soiling of the samples represented commonly appearing material compositions in polluted historic textiles. The results indicated potentials of reetha and shikakai in textile conservation. The speaker recommended future studies, so as to further determine their suitability. For example, samples of coloured textiles can be involved in future tests, and the treated samples can be investigated for the presence of detergent residue.

Annabelle Camp, a student at the Winterthur/University of Delaware Program in Art Conservation, discussed the integration of paintings and textile conservation techniques in the treatment of a silk work picture. The artwork featured silk floss embroidery on a silk ground, supported by a cotton backing. The cotton backing was yellow and brittle, with corrosion staining from nails around the edge, while the silk ground exhibited tidelines of staining and structural damage, especially in the stained areas.
Camp highlighted several innovative techniques used in her treatment of the piece. Bathophenanthroline indicator papers were used before and after cleaning to determine the nature and removal of iron-containing stains. Additionally, two techniques borrowed from paintings conservation were employed: Micropillar dusters were used to remove particulate soiling without disturbing the fragile fibers of the silk ground, and Nanorestore Dry hydrogels, which release and diffuse water more slowly than agarose, were applied to soften the harsh edges of the tidelines.
The term "Nanorestore" emerged as a buzzword throughout the conference, highlighting the growing interest in and application of these materials in our work. Not only were these materials mentioned in papers across conservation disciplines, but the manufacturers, CSGI, also occupied a trade fair stand at the conference where they offered samples of Nanorestore products to conservators for further experimentation.

Awyn Rileybird, also from the University of Delaware, presented the aptly titled paper "A Vacuum of Research? Examining Textile Vacuuming Techniques." This insightful paper explored under-researched vacuuming techniques commonly used in textile conservation. The study evaluated the efficacy of various vacuuming methods, including screen overlays, brush-aided techniques, and a novel air-blowing tool—the rocket air blaster—on naturally aged plain weave linen fabric soiled with different particulate media.
Cleaning efficacy was assessed using digital microscopy, micro-X-ray fluorescence (micro-XRF) mapping, and photography under visible and ultraviolet radiation. The results indicated that while brushing into a vacuum with a soft-bristled brush tended to drive soiling media deeper into the fabric, using a rocket air blaster to blow the soiling into the vacuum proved to be the most effective and least damaging method. However, the author noted that the rocket air blaster tool might be ‘ergonomically challenging to use over large areas’ and encouraged further exploration of air-blowing options. This research initiated a discussion on the potential re-evaluation of well-established practices in textile conservation.

Shujuan Wang from the China National Silk Museum provided comprehensive insight into the research team’s approach to the conservation and restoration of incomplete archaeological costumes. She presented three projects featuring a pair of silk pants (4 – 5 CE), a red twill damask robe (13 – 14 CE), and a cotton robe (15 – 16 CE). The speaker focused on the research methods, which were used to investigate the original patterns of the costume. The research started with thorough investigation of the fragments, the shape and structure of which provided evidence on the original pattern of the costume. However, some components of the costumes – for instance, collar, sleeves and bottom of pants – were missing completely. In such cases, literature research was conducted, and costumes dated from a similar period were studied. With the help of these methods, the pattern of the missing

parts of the objects were implied. In the end, fragments were consolidated with the help of support fabrics, which were dyed into a similar colour as the fragments. The support fabrics were shaped and assembled according to the reconstructed pattern. In the resulting museum display, all missing parts were compensated, and the appearance of a complete costume was created. The interpretation and presentation of the missing components attracted attention and interest from the audience.

Hana Luesova from the University Museum of Bergen, Norway presented on the studying of the conservation history of archaeological textile fragments. The fragments are part of the Oseberg find, a Viking Age ship burial excavated in Eastern Norway in 1904. The study revealed that the fragments had intensive conservation history after excavation, including drying, cleaning, humidification, consolidating and mounting. The uncovered information was considered important, as it explained the current state of the objects. It also informed the chemical substances that have been applied. The authors believed that the information will not only aid the assessment of the sustainability of the past interventions, but also benefit the design of future preservation measurements and conservation treatments. Their research methods were described including observing the current state of the object, interviewing current and former staff, archival research, and studying historic visual materials of the objects. The research results were synthesized in a hypothesis of the conservation history, which was then tested with the help of analytical technology. This workflow may be applicable for the investigation of other objects as well.

In the last session, the multi-disciplinary team project for a new display case for the Bayeux Tapestry was introduced. The presenter was **Cécilia Gauvin**, a team member from innovative start-up Science and Mechanics in Conservation of Cultural Heritage (S-MA-C-H). The Bayeux tapestry is an 11th-centry wool-on-linen embroidery with multiple linings. It has been displayed vertically in a case in the Bayeux Museum (Bayeux, France) since 1982. Structural damages were identified on the tapestry recently, which raised concerns for the sustainability of the present case. The speaker introduced key dilemmas in the design of the new case. In-situ monitoring was conducted on the Bayeux Tapestry, in order to define the climate in the new case. The data showed that the tapestry demonstrated acceptable vertical and horizontal strains, when the relative humidity and temperature in the display case changed gradually with low variation. This finding allows controlled flexibility of the climate in the new case, namely, it can adapt gradually to the external seasonal climate change. This strategy will contribute to the financial sustainability of the new case. Laboratory tests were performed to determine the best position and material of the display surface. The results suggested a surface with a 45° slanted angle for the best support. And the surface should be covered with microfibre (100% polyester canvas), as this material provided superior stability, grip and easy application. The design of the new case tackled sustainability in multiple dimensions. The achievements of this project can be inspiring for similar projects.

Alongside insightful papers and posters, delegates' experiences of the conference were further enriched by technical visits, including tours of the Valencia Silk Museum and the Technical University of Valencia’s conservation workshops. These activities helped to facilitate networking and equipped us with further new techniques and broader perspectives for application in our own work.

The wide range of topics, from traditional methods to advanced materials like Nanorestore, broadened our understanding and prompted a re-evaluation of established practices. Inspired by this conference, Mengying and I were motivated to take active roles within the ICOM-CC Textiles Working Group and contribute to this vibrant community.

For those interested in a deeper exploration of the papers discussed, please visit the ICOM-CC Publications Platform: https://www.icom-cc-publications-online.org/

What's in a name
The Conservator-Restorer: A definition

Review by Helen Hughes
Conservator, Textiles
Glasgow Life/Glasgow Museums

This was a one-day conference organised by the Fédération Française des Conservateurs-Restaureurs, FFC-R[1] and ICOM-CC[2] to mark the 40th anniversary of ICOM's adoption of the definition of the term Conservator-Restorer. The conference was in four parts: the first a historical overview, the second on the legal and legislative in France to protect the term Conservator-Restorer, the third was composed of three round table discussions on future needs for the profession and the final presentation of work by CHARTER(3) and their Erasmus(4) funded project to establish international standards for the training and skills required by those working in the cultural sector.

The conference was held at Musée du Quai Branly Jacques Chirac, an ethnographic museum which rather unusually for France where much conservation is contracted out, has a large in-house conservation team, making it an appropriate venue for the conference. It could be attended in person or viewed on You-Tube live and now recorded. It was conducted in both French and English with simultaneous translation. Only those attending in person could ask questions with time for this at the end of each session.

The first session began with Pierre Leveau, chercheur associé au Centre Granger, Université Aix-Marselle, and was on the history starting just over a century ago in the 1920's and the desire for there to be conservator-restorers, these early initiatives on defining the profession came from outside of conservation by people who wanted conservation to come into being.

It wasn't until ICOM-CC was formed in 1967 that conservator-restorers began to take control of their terminology. Janet Bridgeland, ICOM-CC, took up the story between 1978 and 1984 with an account of the process for establishing the definition of Conservator-restorer. Gaël de Guichen, ICCROM(5) spoke about the recent work leading to a definition of conservation that has been accepted by ICOM-CC and ICOM.

The second session focused on work underway in France to establish a legal framework to protect the role and training of Conservator-Restorers. Vincent Negri6, ISN, ENS Paris-Saclay – CNRS Paris talked about the framework and steps needed to set up and standardise a profession and warned that there are consequences for having a legal definition. Raphaël Gérard, deputy in the French Assembly spoke of his work on the bill he is taking to the French Assembly/parliament to amend existing legislation. The bill has two articles 1) protecting the legal definition of the profession and 2) recognising work experience acquired in the field including craft industries. The recognition of experience will count towards part of formal education. He wants this to be a cross party bill and is having to navigate the concerns of trade unions and curators who in France are called conservators.

The three round table panels in the afternoon had members from many countries and at different stages in their careers. They were asked a variety of preset and audience questions that illuminated the wide range of conservation training and practise that is happening. Touching on the limits of what is possible within the time constraints of any course, differing focuses on materiality and intangible contexts despite a great amount of cultural heritage to be cared for with very few people to do this.

The final presentation by Susan Corr from Charter was on the work being done to promote the cultural sector to Government, making it clear that the biggest problems are that the small size of the sector makes it difficult for its voice to be heard and that cultural heritage is seen as a cost to Government, that doesn't bring in clear economic benefits. Within the cultural sector, conservation is an even tinier voice. Corr focused how the project is examining cultural jobs and their required training, how it can be described to fit the NACE(7) model so that cultural jobs can be recognised and understood throughout the EU. While this work is a European project it will have a much wider impact.

The questions and answers after each session were all very lively and showed the interest, expertise and passion of those attending. The day was intense, informative and uplifting talking about what has happened, what is happening in France, and what conservator-restorers are doing for the future in many countries. It showed that establishing a profession is not easy, but conservator-restorers have come a long way on that path since 1984.

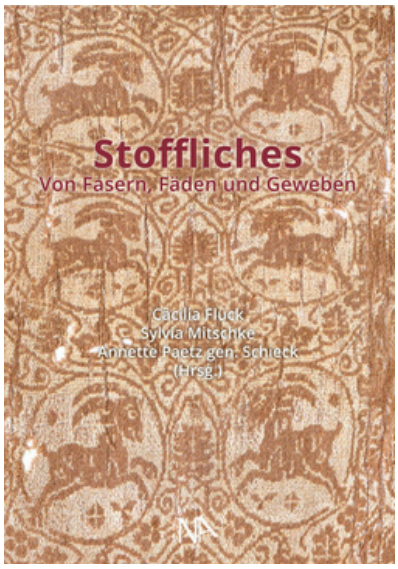
Recordings of the day in both French an English can be accessed on You-Tube at the link below. The presentations and discussions are intense, but can be listened to in a similar way to a pod cast while working on an object.

Recording available at:
https://www.youtube.com/@quaibranly/streams

1. *FFC-R Federation Française des Professionels de la Conservation-Restauration*
2. *ICOM-CC is the Committee for Conservation of the International Council of Museums*
3. *CHARTER is the European Cultural Heritage Skills Alliance*
4. *Erasmus is the EU, European Union, fund for education, youth, training and sport.*
5. *ICCROM is the International Centre for the Study of the Preservation and Restoration of Cultural Property.*
6. *ISN, ENS Paris-Saclay – CNRS Paris Institute des Sciences sociales du Politique ISN, École Normale Supérieure, ENS Paris-Saclay – French Centre for Scientific Research CNRS*
7. *NACE stand for Nomenclature of Economic Activities which is a classification of economic activities developed by the European Union. The NACE is used to identify and group economic activities in order to facilitate statistical analysis.*

Textiles: Of fibres, threads and fabrics

Texta notabilia. Studies in honour of Annemarie Stauffer



Book review by Tabby Gibbs
Textile Conservators
Zenzie Tinker Conservation, Brighton, UKs

This publication marks the retirement in 2021 of Annemarie Stauffer, formerly Professor of Textile Conservation and Textile History at the Cologne University of Applied Sciences. Fittingly for a leading researcher and conservator who worked on numerous textiles throughout her career, the volume brings together analyses on European and Mediterranean textiles ranging from antiquity to the recent past, with a particular focus on the patterns and iconography of late antique and medieval textiles which was a theme at the heart of Stauffer's work.

Contributions have been offered by Stauffer's colleagues, friends and former students and the volume was edited by Cäcilia Flack (Bode Museum, Berlin), Sylvia Mitschke (Reiss-Engelhorn Museum, Mannheim) and Annette Paetz gen. Schieck (German Textile Museum, Krefeld). The beautifully illustrated book features 28 articles from 32 authors from all over Europe and the Middle East.

The articles are arranged chronologically, based on the age of the featured textile objects and they address a variety of themes such as the valuable information textiles can reveal about contemporary tastes, trade practices, the challenges that come with researching and conserving archaeological textiles due to the small size of preserved fragments, and historic excavations of objects by those without modern specialist knowledge. While it is impossible to summarise all the varied contributions in the space of this review, below I describe several articles in three themes to provide a flavour of the whole book.

Archaeology

Some of the articles take an archaeological approach such as Kregeloh and Wagner's discussion of a huge collection of 7000 textile fragments from 16th century Bremen or Niepold's work on medieval gold textiles, which is particularly interesting for her explanation of the analytical methods used. Granger-Taylor provides a novel interpretation of six fragments of late antique silk and wool textiles, found in Egypt and now located at the Dallas Museum of Art and the Abegg-Stiftung. Ræder Knudsen offers an interpretation of tablet-woven boards of garments from tombs in Veruccio, Italy dating from 700 BC. Her detailed technical analysis reveals the intricate single-coloured textiles whose hidden pattern is created by different spin and twist patterns. al As'ad describes the joint archaeological mission between Syrian-German/Austrian teams in Palmyra between 1989 and 2010, in which Stauffer directed the textile section. The article accounts how over 2000 textiles were excavated from tombs, which were preserved due the dry desert climate in which they were discovered. The research highlights Palmyra's role as a trade mediator between Chinese silks and Mediterranean cotton, linen and wools. Sadly, many of the textiles which were kept at Palmyra Museum and Damascus National Museum have since been destroyed, which makes this research record even more valuable.

An article by Mannering highlights incredibly rare silk from prehistoric Denmark. She describes how silk was particularly exclusive and a marker of prestige during this period and could even act as a currency, meaning that discoveries of these only occur in graves of the wealthiest individuals. She further touches on the challenges of analysing archaeological textiles that were excavated in the 19th century, due to the lack of contextual information recorded.

Art History

Other articles take an art historical approach, frequently exploring what the depiction of garments can tell us about historic usage.

For example, Schmidt-Colinet reconstructs how the depiction of dress on Palmyran Tombstones, found in South Shields, Northern England, demonstrates multicultural coexistence in the northern border of the Roman Empire. Similarly, Wittekind investigates how 12th Century Catalonian decorative art pieces depict head coverings, Urbanek shows how the depiction of silks worn by 14th century reliquary busts from Cologne signify the ranks of the female figures and Mitschke investigates the iconography of a striking late gothic tapestry.

Conservation

A further set of articles are specifically concerned with conservation. These include discussions of treatments by Mälck on woven shepherd scenes from late antique Egypt, Herrklotsch on a late antique tunic, and Piecuch on a series of late medieval Flemish tapestries. The conservation, storage and display of a concentration camp prisoner dress, and the difficult ethical considerations that accompany this, is well described by Schumann. The final two papers touch on the challenges modern materials present textile conservation practice, describing how plasticisers from thermoplastic fixing inserts caused white stains on a 1990s Yves Saint Laurent tuxedo dress at the Museum of Applied Arts in Cologne and the challenges of characterising man-made fibres in modern textiles, a topic with which many conservators are presently grappling.

Unseen Textile Watercolour

A standout article by Paetz gen. Schieck features a previously unpublished watercolour of a wonderful late antique woven textile (location of origin uncertain) by Paul Schulze, discovered in an attic of the German Textile Museum in Krefeld in 2017. Schulze, a previous director of the museum, painted the watercolour in 1893 directly from the original textile. The detail is incredible: painted shadows give the appearance of the weave and protruding threads and at first glance the image of the watercolour looks like a photograph of the textile itself.

However, it is interesting that Schulze did not document the signs of wear on the original textile, only showing damage in the form of two large holes, thus producing a stylised version of the textile. It is a fascinating example of nineteenth century textile documentation.

Conclusion

"Stoffliches" is a fitting homage to Stauffer's many years of dedication to the research of textiles and the wide range of the contributors, representing archaeological textile specialists across the world, and demonstrates the importance of her work within the community.

There is a large concentration of articles featuring late antique textiles, but this is to be expected given Stauffer's expertise in this area. If you can read German, you would get the most out of this volume, however if you do not, I would still recommend engaging with the four English texts, and enjoying the full colour images, and in particular the Schulze watercolour, in this high-quality, well produced volume.

**Please note, that the author of this review assisted in copy-editing the English texts of this book but was not involved in their selection or the production of the book.*

https://www.na-verlag.de/programm/a/af/afw/stoffliches/

Treatment in Focus

Repacking Coptic textiles: From the perspective of a preventive conservator intern

by Iona Greil

Master in preventive conservation at Panthéon-Sorbonne in Paris,
Intern at the Nationalmuseum, Sweden

Introduction and objectives

Currently on a final study internship at the Nationalmuseum in Sweden, one of my tasks was to repack 68 Coptic textiles dating from 300 AD to the Renaissance. The oldest of these textiles has been in the Nationalmuseum's collections since 1932, while the most recent one was acquired in 1989. In the 1930s, they were each sandwiched between two glass plates joined by adhesive tape.

When the museum started to move to its new storage in 2013, some of the textiles were repacked in acid-free silk paper and boxes. The others, comprising of extremely fragile and incomplete textiles, were until recently still stored under glass plates. In consultation with Sarah Benson, textile conservator at the Nationalmuseum, we decided to remove the glass plates, which were detrimental to the conservation of the textiles. In addition to breaking the fibres due to the pressure of the glass plates when they were installed several decades ago, the textiles have chemically degraded by reacting with the glass and by the creation of a microclimate, as we can see from the white marks left on the glass (see figure 1).

Figure 1. White deposits resulting from the chemical reaction between the textile and the glass and the creation of a microclimate

Following this observation, we had to determine the new packaging with several objectives in mind:

Concerning the packaging materials:

- Ensure the chemical neutrality of the materials.
- Ensure chemical inertness over time (non-absorbent).
- Avoid the presence of microclimates by choosing non-hermetic packaging.

Handling:

- Make the textiles accessible in the future, whether from the front or the back.
- Ensure that packaging limits any movement/handling of the textile as much as possible to avoid any mechanical damage.
- Minimise fibre loss when changing packaging.

The entire project aim was to make a suitable packing that could be carried out solely by a preventive conservator or collections manager.

Methodologies

Based on these objectives, we have identified and implemented three different packing methods. These three methods can be used, each with its advantages and disadvantages, depending on the materials and time available.

Method 1:
Firstly, we tested the use of a neutral cardboard backing covered in linen, on which we placed the Coptic textile. Then we covered it with Melinex and a Platazote assembly with a window corresponding to the size of the textile to hold it in place as much as possible. The linen made it easier to place the fabric during assembly, while the Melinex ensured a direct view of the front in the future while avoiding fibre loss. The Melinex and linen were secured at all four corners with neutral paper and gummed Kraft adhesive tape. This adhesive tape, which is usually used in the graphic arts, poses no risk to textiles if it is not in direct contact, and provides a stronger hold over time than Tyvek adhesive tape (see figure 2). The backing and mounting are connected by a cotton tie with three knots so that the packaging can be opened like a wallet and the textile accessed, if necessary, in the future. The inventory number can be marked under the window in white pencil or on a cotton tie embedded in the foam (see figure 3).

Figure 3. Final Packing with Plastazote showing the inventory numbers

- Advantage: Plastazote is easy to cut.
- Disadvantage: The Plastazote can deform under the pressure of the cotton ties over time and does not always conform perfectly to the shape of the neutral cardboard to hold the textile in place as well as possible.

Method 2:
We then tested the exact same process, replacing the Plastazote with neutral cardboard (see figure 4). Using cardboard rather than Plastazote is more time-consuming but provides a better hold for the textiles.

Figure 2. Packing in progress, before adding the window

Figure 4. Final packing with cardboard

Figure 5. Packing Melinex-cardboard on the bottom mount before removal of the window

Figure 6. Final packing two windows (Melinex-cardboard)

Figure 7. Removal of original mounting adhesive

Method 3:
We noticed that for the most fragmentary textiles, the linen could adhere to the textile. Laying textiles that were too fragmentary on linen would make access to the back impossible in the future, and this would be irreversible as removal would result in unacceptable fibre loss. We came up with a new approach: two sheets of neutral cardboard with windows each covered in Melinex. The Melinex was attached to the cardboard with gummed kraft adhesive tape (see figure 5). The different layers of Melinex and neutral cardboard were bound together with several cotton ties (see figure 6). Note that Melinex is electrostatic. For one of the extremely powdery textiles, we used silicone-coated Melinex, which is not electrostatic. This solution ensures reversibility and access to the front and back.

- Advantage: Reversibility and accessibility.
- Disadvantage: Longer cutting time. Textiles are slightly less secured and need to be handled carefully to prevent them slipping on the Melinex. Because it is electrostatic, the Melinex needs to be thoroughly cleaned several times before being positioned.

Difficulties

When dismantling the glass panels, we were faced with several challenges.
Removing and cutting the adhesive tape left fragments of dried degraded adhesive on the textiles and the glass. Before moving the textile, it was necessary to remove all the adhesive fragments to avoid transferring them. When they were on the textile, we used a slightly moistened cotton swab.

Several of the textiles were glued with a natural adhesive directly onto the glass, sometimes on both sides and in several places. With the help of Sarah Benson, we removed these textiles with a spatula or scalpel, compress and water dampened blotting paper (see figure 7).

Some glasses were broken, and when they were opened, fragments of, sometimes extremely small, glass could fall near or onto the textiles. We had to clean frequently and meticulously to avoid glass fragments being transferred to the new packaging.

Finally, some textiles had also been sewn onto a fabric that was placed onto the glass backing for additional support. This probably dates from the same period as the glass mountings themselves. This thin fabric was sometimes stuck around the glass, which made dismantling more difficult. We have decided to leave these textiles on the acidic fabric for the time being, as they will require further intervention by a textile conservator.

Conclusion

This project was an opportunity to experiment with different packing methodologies for small fragmentary 2D textiles. I am very grateful to have had the opportunity to work on a research project like this with so much freedom and autonomy (see figure 8). I hope that this experience will be useful to other preventive conservators/technicians of conservation in the future.

All photos by Iona Greil, copyright Nationalmuseum, Sweden.

Figure 8. Author Iona Greil placing the cotton ties

Research in Progress

Preparing a guideline strategy for long-term preservation of lamé fabric by artificial aging and scientific examination

by Eszter Lencz

Textile Conservator,
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PhD student, University of Óbuda,
Doctoral School of Materials Sciences & Technologies
ÚNKP scholarship holder
Due to be completed in 2026

The collection-care in museums is a fundamental task and is now a strategic goal as well. In the museum, our mission is to ensure access to the memories of the past and to the information about artifacts belonging to the cultural heritage because we believe that they are irreplaceable sources of knowledge of our past and present, the inseparable components of the national and universal cultural heritage.

More synthetic fabrics are present in collections than ever for several reasons. The introduction of mass production ensured low prices so that more people could afford more clothes. During the last century, dresses made of synthetic materials were widely worn worldwide by all levels of society as ready-to-wear garments. As one of the main aims of museum collections is to show the social and economic values and significant changes of the past, it is unavoidable that there is an increase in synthetic materials entering museum collections. Only think of the everyday garment and unique, exotic, and couture clothing; nevertheless, modern contemporary artworks are composed of synthetic fabric.

Most clothing is no longer made from pure fibers, but from blended threads: natural-, modified natural- and unnatural or synthetic threads. Modified cellulose fibers, such as rayon or viscose and cellulose acetate, are the most common. Moreover, there are a variety of synthesizing methods, procedures using complicated and aggressive manufacturing techniques and finishes, and there is the question of anti-static agents and different dyeing methods. All these processes raise challenging questions for conservators in the long term.

The twentieth-century objects are often said to be "time bombs" waiting to explode in museum collections. The different materials behave in various ways and respond to the environment differently. The structure of the materials is often unstable in the long term. Synthetic textile fibers have characteristics that differ from those of natural fibers and must be understood and distinguished from each other to care for them.

It is becoming evident that these modern materials show signs of breakdown, sometimes dramatically and rapidly. This is a very present issue for conservation. Generally speaking, textiles are influenced by various factors such as light, atmospheric pollution, relative humidity, and temperature, which can individually or synergistically cause significant loss of their integrity and, finally, their destruction. The degradation level depends on the environment of the textiles. It is an excellent challenge for textile conservators as it is not always possible to recognize the known deterioration patterns, as with natural textile fibers. At the same time, slowing down the degradation reactions is a critical element of all conservation processes, especially in the case of the twentieth-century synthetic time bomb.

Since our experience is minimal in synthetic fibers, considering that only 100 and some years have passed, research should be carried out about their stability, deterioration quality and rate. If the composition of the piece to be exhibited is known, the humidity, temperature, and amount of light control must be considered. Modeling is needed to establish their limits. To predetermine the behavior and degradation tendency of artifacts, a complex set of information based on large-scale instrumental studies is required in different stages of aging. Artificial aging tests should be performed on textile samples of various raw materials, placing them in increased light conditions at increasing time intervals.

The research aim

During my research, I plan to perform artificial aging tests on synthetic lamé textile samples, placing them in systematically controlled light conditions for ever-increasing time intervals. My doctoral research aims to write a technical summary that virtualizes, organizes, and summarizes the experiences and information gained during aging tests of 3 types of polyester-based unique synthetic fiber material (pure polyester, aluminum lamé, and hologram lamé). I will also attempt to preserve these materials by applying Plexisol P550 (an acrylic resin emulsion based on butyl methacrylate) as a conserving coating onto the surface after which the specimens will be subjected to further artificial aging. In the course of my research, six different coatings were tested, two water-based natural (Chitosan and Poligen) and four synthetic (Paraloids). The latter was dissolved in polar and apolar solvents. After the coatings had completely dried, the surfaces were examined with stereomicroscopes, a colorimeter, and gloss meter. Plexisol P550 proved to have the best results dissolved in white spirit, and to reduce the evaporation rate, hexane was added in a 1:1 solution.

This solution, when applied to the surface, did not cause any changes in either the synthetic base fabric or in their metallic component.

Based on the experiences, observations, and measurement results, a guideline strategy will be prepared, which helps the restorers' and conservators' work in the most efficient possible handling and longest-term preservation of the artifacts made up of lamé.

The research plan

Artificially aged samples of different ages (25-50-75-100-125-150) are produced with Xenotest XLS+ equipment, which can control the amount of light and heat. This device continuously detects changes in these parameters and the relative amount of moisture. Regarding the required number of pieces, 36 samples will be needed, some of which will have the conserving coating (named above). Thus, depending on time, there will be at least four samples of each type, from which a diagram can be edited, and conclusions can be drawn regarding the aging indicators of the materials by comparing them with each other and with the unaged control samples. When examining the samples, I try to create a comprehensive picture of the results from as wide a range of chemical, physical, and mechanical tests as possible.

Investigations carried out so far

X-ray fluorescence spectrometry was carried out on the lamé samples for the first run to prove the aluminum-based material composition assumed based on the literature research. The advantage of the method is that it is a non-destructive process. The examination was carried out with the portable XRF device by Viktória Mozgai, a staff member of the Institute of Geology and Geochemistry, Astronomy and Earth Science Research Center of the Hungarian Academy of Science.

Infrared spectroscopy was also carried out on the unaged samples. With this method, the quality and quantity of the molecules in the examined substance can be deduced, i.e. their properties and the effect of chemical treatments.

Modifications, such as the degree of degradation, can also be monitored, which will be necessary during my research. Kornél Fél, an employee of the HUN REN Energy Science Research Center, helped me carry out the measurements. After measuring the background, we recorded the spectra in the form of transmittance on the unaged samples.

Tensile tests are one of the basic procedures for determining the physical properties of materials. When tension is applied, the textile material stretches, and tension arises in its internal structural elements. I will investigate the relationship between tensile stress, elongation, and time, as well as what physical deformations and differences in aesthetic appearance are associated with these in the case of uncoated and coated samples aged to different levels. We started determining the parameters of the cyclic tensile, tensile, and creep tests at the RKK faculty of the Óbuda University with the help of my supervisor, Dr. Marianna Halász, and Zsolt Borka (professor at the university).

Further planned examinations

Differential scanning calorimetry (DSC OIT) testing is planned to expand the range of chemical tests, where we can monitor material properties such as the evolution of the (coating's) glass transition as a function of temperature. This is important in determining the optimal storage and exhibition temperature of the artifacts made of lamé. Binding examination, color measuring tests, brightness tests (the ones sponsored by ÚNKP, Hungary), size changes, thickness changes, and measuring and determining areal density are planned to expand the series of physical tests. In addition, mechanical data can be obtained with the ball pressure test regarding the deformation and load-bearing capacity of the fabric, which gives valuable information for the proper storage and exhibition of lamé fabric.

Conclusions

A significant part of our material heritage is the culture of dressing and decoration, which includes the lamé fabric. Preserving these types of materials for as long as possible is always the goal. The case studies mentioned above, the synchronization of the collected data and test results of the research will converge specific and essential information that leads towards long-term preservation and the potential for appropriate conservation methods. Through them, conservation specialists and restorers can prepare for future difficulties, since they can act in the present as a preventing method of conservation with the information discovered in the research.

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Új Nemzeti Kiválóság Program

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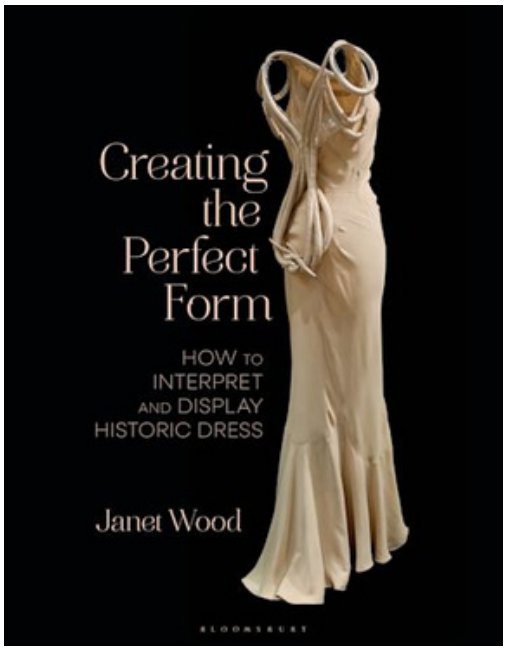
New Books



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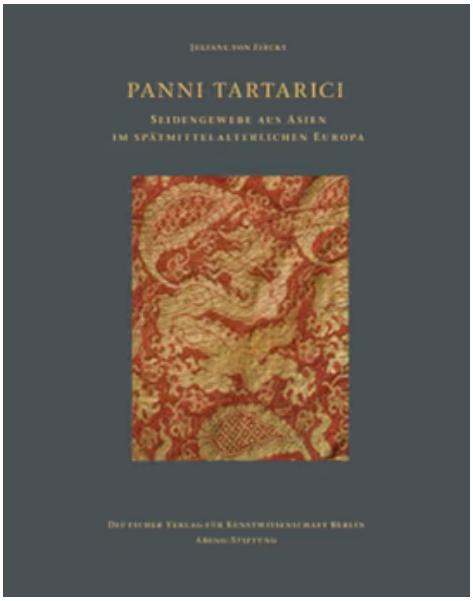

Panni tartarici: Fortune, Use, and the Cultural Reception of Oriental Silks
Maria Ludovica Rosati

in the Thirteenth and Fourteenth-century European MindsetWhile luxury fabrics were imported from Byzantium and Spain until the 13th century, silk fabrics from the Mongol Empire increasingly reached the West after 1300. The publication deals with robes and textile objects made of panni tartarici that have been preserved in tombs, church treasures and museum collections in Europe. It traces the development of silk weaving under Mongolian rule and explains how Western elites appropriated the foreign material. In addition, the study addresses global networking in the pre-modern era by examining regions of origin and showing the paths of silk fabrics to the west.

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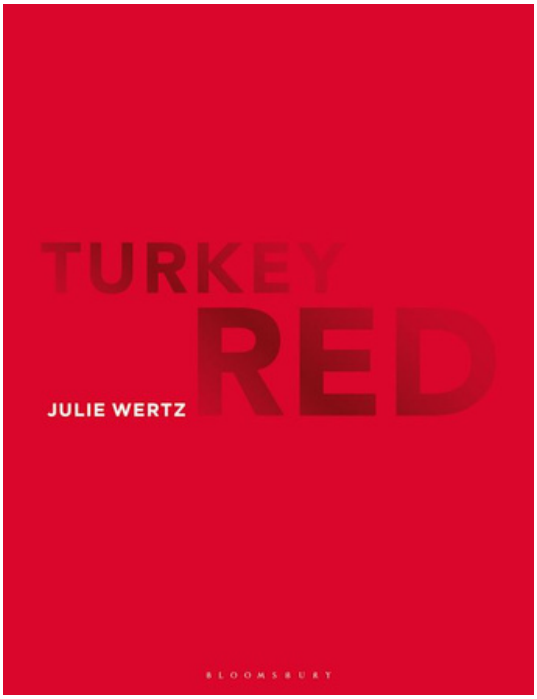

Turkey Red

Julie Wertz

This multi-disciplinary study examines the exceptional Turkey red textile dyeing process and product. Prized for its brilliant colour and durability, yet notoriously difficult to produce, the textile was consumed locally and exported around the world. Considered one of the first instances of industrial espionage, the expansion of the Turkey red industry is closely linked to the Industrial Revolution and the emergence of a new global economy. Significant technological advances in chemistry and dyeing were motivated by the demands of Turkey red dyers and printers, who were located primarily in the west of Scotland, the north of England, and around Mulhouse, Switzerland.

This book explores the arc of the Turkey red industry, the evolution of the process through key producers and technical developments, the complicated printing process, and finishes with an examination of significant Turkey red collections and a selection of object case studies. The chemistry of the process is described in an accessible, contextual manner, highlighting the significance of the distinctive technique that yielded the best red attainable on cotton.

Drawing on both historical and contemporary study, Turkey Red presents significant new research on the material characterisation of this fascinating, eye-catching textile, and offers an in-depth historical example of the global effect of textile consumption.

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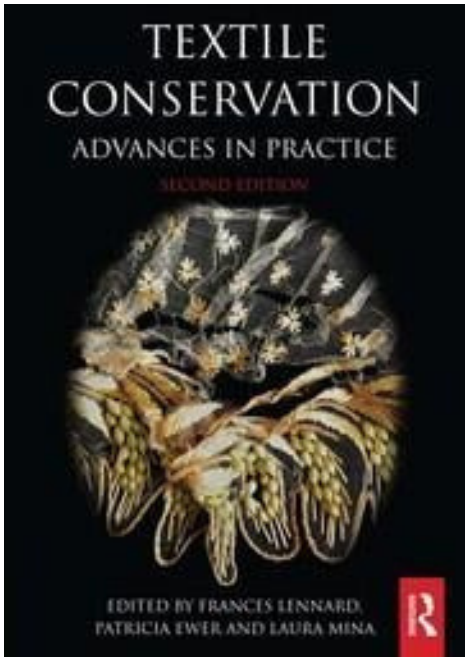

Textile Conservation: Advances in Practice

Edited by
Frances Lennard, Patricia Ewer & Laura Mina

This second edition of Textile Conservation offers an up-to-date perspective on the role and practice of textile conservators, capturing the diversity of textile conservation work across the globe.

The volume considers key factors that are integral to effective conservation decision-making. It achieves this by focusing on four major factors that have influenced development in textile conservation practice over the past decades: the changing context, an evolution in the way conservators think about objects, the greater involvement of stakeholders, and technical development. Features of the new edition include:

- Updated chapters that explain new techniques and recent developments in the field;
- New and updated international case studies that demonstrate conservation decision-making in practice, including assessments of the conservation of objects in some of the world's major cultural institutions;
- Full-colour illustrations that demonstrate conservation in practice.

Textile Conservation will be essential reading for conservators around the world. It will also be of great interest to academics and students engaged in the study of the conservation of textiles, as well as museum and heritage professionals.

https://www.routledge.com/Textile-Conservation-Advances-in-Practice/Lennard-Ewer-Mina/p/book/9781003358787

Book Preview

Riggisberger Berichte vol. 27
Linen Damask in its Historical Context

Edited by Anna Jolly and Lea Hunkeler

This volume presents the papers of an international colloquium hosted at the Abegg-Stiftung in 2021, which brought together scholars from numerous European countries to discuss linen damask in its historical context, drawing on surviving table linen, household inventories and pictorial representations.

Riggisberg, Abegg-Stiftung
ca. 336 pages, 128 figs., paperback, 23 x 31cm
2024
ISBN 978-3-905014-82-2
CHF 85.00

Recent Conference

Re-intertwining!

Textile networks and perspectives in a museum and archaeological context" Hybrid conference on textile conservation which was held 27-29 June 2024 in Cologne. Although there are only two lectures in English and most in German, the range of topics is very diverse, and it aims to link with the many different disciplines that are involved in textiles.

https://www.restauratoren.de/termin/neu-verflechten-tagung-der-fachgruppe-textil-2024/

Exhibition

Abegg-Stiftung

The Deceived Eye – Textile Effects and their Simulation

28 April to 10 November 2024
Open daily 2.00 – 5.30 p.m.

Can textiles be deceptive? What are textile effects? How are they produced and simulated? Why simulate them at all? These are some of the questions that the Abegg-Stiftung's new exhibition seeks to answer. The theme is textile trompe l'oeils, that is, the representation of fabrics and their distinctive qualities in other textile arts.

The highly skilled depiction of "textiles within textiles" has been practised since ancient times. Comparison with real fabrics provides vivid evidence of just how accurate and convincing such representations can be. The illusionistic depiction of textiles is not limited to the creation of their image, however, but also includes the simulation of textile effects: the appearance of one textile technique convincingly imitated in another. Visitors will be surprised to discover that the fabrics, embroideries, wall hangings and vestments on display, dating from the fourth to the seventeenth centuries, are not what they seem at first glance. This exhibition is the first to be devoted to textile trompe l'oeils. It seeks to explain the reasons for such simulations and presents a wide range of illusionistic representations of textiles. Visual pleasure awaits those who look closely.

IMAGE
Detail of a minstrel scene; wool and silk tapestry; Strasbourg, ca. 1500; Abegg-Stiftung, inv. no. 2396

Recent Publications

2024

Brockmann N, Sicken A and Krüger J (2024) 'Effects of laser cleaning on the condition of different silk model samples using varying wavelengths and pulse durations', HERITAGE SCIENCE, 12(1), doi:10.1186/s40494-024-01152-1.

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Recent Theses

PhD Theses

GAME CHANGER! CO2 balancing as conservational management tool for the ecological transformation in museums and depots

Tanja Kimmel | The University of Applied Arts Vienna, Austria

Museums are important actors in the fight against climate change. In order to limit global warming to a maximum of 1.5 Celsius, they are also required to cut down on CO2 emissions and thus actively contribute to overcoming the climate crisis. The first step towards reducing a CO2 footprint is to gather knowledge about its current status. Acquisition and analysis of climate-damaging emissions is done by means of a CO2 balance; this evaluation identifies relevant action, indicates saving potential and facilitates a prioritisation of procedures. The effects art has on the climate is still a blind spot for the most part; setting up climate balances for the museum branch is something totally new and the necessary know-how is in dire short supply. First initiatives and insights in the German-speaking regions are focused on the portions of museums used as exhibition venues. Within the scope of her dissertation, the author started a pilot project in autumn 2021 with the Kunsthistorisches Museum Association, whereby, for the first time in Austria, the CO2 emissions of museum storage areas are scientifically documented during running operations. This paper presents the procedures, methods, and results of the joint project with the BOKU (University of Natural Resources and Life Sciences, Vienna) Competence Center for Climate Neutrality, meanwhile naming the challenges, but also chances inherent in the balancing process.

With regard to Austria's targeted climate neutrality by 2040, intermediate objectives on the way to net-zero are defined and a road map showing the effective measures to reduce CO2 emissions in the storage areas was created. In this way, the KHM Museum Association will acquire not only a reliable database for strategic environment management, but also a "climate-fit package" thus enabling the transition from knowledge to practical action. Against the backdrop of current sustainability debates, the paper reports on the development of awareness of this topic in the cultural sphere – especially museums – and on the basic legal conditions on international, European, and national levels.

Masters Theses 2023-2024

Plastics in Textiles Arts Centre Melbourne

Sophie Fairbridge | University of Melbourne, Australia

It is widely understood that plastic objects in collections pose many challenges for conservators. What is not so well understood is the state of polymeric materials in textile collections. A collection survey was applied to determine the condition of and identify signs of deterioration of polymeric materials on a selection of three costumes from the Arts Centre Melbourne (ACM) collection dating from 1922, 1967 and 1997. ATR-FTIR was also used to determine the identity of the polymers. The analysis undertaken in this thesis revealed that of the seven plastics identified, two of these were malignant and that although the synthetic fibres were in good condition, decorative elements on two of the costumes analysed (from 1922 and 1967) showed signs of active deterioration, whereas the costume from 1997 displayed none. The collection survey conducted in this thesis is an initial investigation into the ACM's collection, bringing to light some of the problematic materials and acting as a valuable tool for the ACM in the future care of its collection.

An investigation of the current state of practice regarding the treatment of areas of loss in knitted fabrics: Results of an industry survey

Portia Lawson | University of Melbourne, Australia

Infilling and stabilisation techniques are ubiquitous across conservation disciplines and object material types as a means of providing visual integration and minimising the risk of ongoing structural degradation. However, there is a lack of published literature which specifically addresses the conservation of local areas of loss in knitted fabrics. This research utilised an industry focused, questionnaire style survey to identify and collate relevant embedded knowledge among conservation professionals. Thematic analysis of the 22 survey responses identified trends in the techniques and materials employed, the decision-making which guided their application, and broader concerns towards the conservation of knitted fabrics. While this research provides an indication of the current state of practice, scope limitations mean guidance on best practice would require additional experimental research.

Unraveling Crochet in Nineteenth Century Britain: A Case Study of an 1886 Crocheted Shawl Pattern

Emily Burnham | Fashion Institute of Technology, NY, U.S.A

This paper offers a brief overview of the history and origins of crochet as a needle art, explores the cultural and political climate contributing to its popularization, before analyzing pattern books and garments at the height of the first wave of popularity in Britain through examining primary sources, specifically the 1886 third edition of Needlework for Ladies of Pleasure and Profit by 'Dorinda' (pseud.), examining the role of late Victorian Work Societies in the production and commercialization of crochet, before detailing the recreation of a three-cornered shawl, the pattern for which is in the book. The recreation of the shawl from primary sources uses the author's decades of crocheting experience and empirical knowledge to further investigate into the design and construction of Victorian crochet techniques, as well insight into the economic feasibility of crochet as an income source in the period.

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The Conservation of a Qing Dynasty Ao (Late Nineteenth-Century Chinese Women's Robe)

Alyson Katz | Fashion Institute of Technology, NY, U.S.A

This qualifying paper documents the conservation treatment of a Qing Dynasty Ao (late nineteenth-century Chinese Han women's robe). The robe is now part of the Graduate Study Collection and is available for research.

The first section of this paper looks at the historical context of this style of robe as well as the meaning of the different decorative motifs and embellishments seen on the garment. The second part of the paper is a complete documentation of the condition, treatment proposal, and treatment report.

To conclude, this paper assesses the treatment along with an overview of the different ideologies of compensating for loss to justify the treatment options. The research thoroughly discusses the choices that lead up to the decisions made during treatment. The conservation treatments involved included: hand stitched underlay and overlay supports, adhesives, custom dying, and rehousing.

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An Exploration of Embroidered and Pieced Kashmiri Shawls

Kripa Kamlesh Kewalramani | Fashion Institute of Technology, NY, U.S.A

The Kashmiri shawl developed over three hundred years, with each culture bringing its own unique contribution to the evolution of the Kashmiri shawl. The variety of Kashmiri shawls is endless; this can be seen museum and private collections, on auction websites and published in books. The majority of Kashmiri shawls in museums and private collections today is of nineteenth-century manufacture. The invention of embroidered shawls, which originally started as a touch-up on designs of completed shawls, started in the mid-eighteenth century. In the nineteenth century, shawl production received a powerful external stimulus and took a change of course when European attention impacted local designs and manufacture. It was during this time that piecework resulted and culminated in the shift from atelier weaving toward mass market.

This qualifying paper will focus on three shawls attributed to Kashmir, India, analyze the use of embroidery and piecing in their construction, and review a comprehensive treatment for one. The research and treatment of that shawl, done for FT644, Advanced Conservation II, in Spring 2022, provided the inspiration for this paper. The body of this paper is a comparison of the three shawls. All three are lined, composite and embroidered - yet are all different. All three are hand-woven in the kani weave, a twill tapestry weave with interlocking wefts, from Kashmir, India. This paper analyzes the similarities and differences of all three and the publication on Kashmiri shawl conservation treatments.

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Unwrapping a Korean Folk Textile: The Historical Analysis and Treatment of a Mid-Twentieth Century Jogakbo-Bojagi

Minna Kim | Fashion Institute of Technology, NY, U.S.A

The purpose of this qualifying paper is to emphasize the historical importance of a post-1950 jogakbo-bojagi, a Korean wrapping cloth featuring patchwork, and to treat it prior to mounting for a private collector.

Chapters one through five cover the history, function, qualities, and variations of bojagi textiles and their cultural importance to society, particularly women. Traditionally, women played a large role in the making of bojagi, which is why this paper will explore the societal expectations of women in Korea during the Joseon dynasty. To fully grasp the cultural context of bojagi textiles, this paper will briefly cover Korea's history from the ancient Three Kingdoms Period to the end of the Japanese occupation period.

In this paper, topics covered include trade, cultivation of fibers, synthetic dyes, and global history from the late-nineteenth to mid-twentieth centuries. Lastly, chapters six through eight will cover the condition and treatment of the jogakbo-bojagi, as well as final conclusions and dating of the object.

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Analysis, Treatment, and Mounting of an 1820 Embroidered Sampler

Molly Leonard | Fashion Institute of Technology, NY, U.S.A

This qualifying paper explores the history of Dutch embroidered samplers, focusing on common imagery, and discusses a cleaning treatment for a c. 1820 Dutch embroidered sampler. Of particular interest in this paper are popular embroidery motifs, the importance of embroidered samplers in women's lives, methods for addressing tidelines caused by water contact, and mounting for future display. The sampler is in the collection of an FIT Adjunct Instructor and will return to her possession after treatment.

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The Historical Analysis and Conservation of a c. 1885 Girl's Jacket

Megan O'Brian | Fashion Institute of Technology, NY, U.S.A

This qualifying paper describes the historical analysis and conservation treatment of a c. 1885 girl's jacket with integrated waistcoat belonging to the BLUE: Tatter Textile Library (Tatter) located in Brooklyn, New York. The paper starts with a technical description of the jacket's construction, examining the materials, components, and dressmaking techniques used. The paper then shifts focus to the jacket's historical context and late Victorian childrenswear. It then illuminates how the design and silhouette of the jacket reflect contemporaneous social ideals regarding gender and childhood. The jacket's condition and treatment process is then documented. The treatment goals and rationale are detailed, followed by a narrative account of steps taken to improve both the structural and aesthetic condition of the jacket as an object accessible to researchers to Tatter's historic textile collection. Appendices include the formal condition report, treatment proposals, and treatment reports.

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Research, Treatment, and Digital Reconstruction of a Wari Tie-Dyed Tunic

Lucinda Pelton | Fashion Institute of Technology, NY, U.S.A

This paper is an investigation into a Wari tie-dyed tunic, dated to 600-1000 CE, donated to the Graduate Study Collection at the Fashion Institute of Technology in 2023. The first chapter describes the four-selvage weaving technique perfected in Peruvian antiquity, and scaffold weaving as a more complicated form of this type of weaving that Wari used in examples of similar extant tie-dyed tunics. This chapter goes on to examine the construction of the tunic, walks through how it was made, and lastly discusses the natural dyes that could have been used to create such vibrant colors.

The following chapter is an extensive examination into the condition of the tunic as it arrived from the donor, discussing the loss, discoloration and staining, and distortion that affect the tunic. The next chapter discusses a brief history of the exportation of artifacts from Peru, concluding with what provenance information is known about this tunic.

The final chapter explains the conservation treatment that the tunic underwent. It also discusses digital reconstruction as an alternative to invasive treatments, and the practical and ethical reasons why this strategy can be useful as a method of study. The chapter concludes with a discussion of the digital reconstruction of this tunic in CLO 3D, which was created as a strategy of engaging with a textile that is too fragile for display.

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The Everfast Fabrics Collection, 1921-1967: A Case Study of Archives Arrangement, Description, and Preservation in the Special Collections and College Archives Unit of the Gladys Marcus Library at the Fashion Institute of Technology

Emily Werner | Fashion Institute of Technology, NY, U.S.A

This paper records the steps taken to fully process the collection, breaking it down into four main steps: surveying the contents of the collection; developing and implementing a rehousing and arrangement plan; creating a names index and

finding aid with contextual and structural information about the collection; and providing recommendations for future use and care of the collection. The final part of the project establishes the collection's importance to the field of fashion and textile studies through a historical analysis of the company and its place in the mid-century American textile industry.

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Fibre Analysis Techniques and Methodology for Rural and Regional Museums

Taryn Ryan | University of Melbourne, Australia

This research aimed to assess the viability of simple analysis techniques that can be used to identify the material type of textile objects within a museum collection, where identification is desired but access to analysis equipment or expert assistance is restricted. The research explored identification of various natural and some synthetic fibre types through visual and haptic investigation, excluding both instrumental and destructive techniques. The desired outcome of the research will be a methodology with flow-chart steps that can be easily followed by non-expert museum staff to reach a more systematic approach to material identification. This will then empower small museums to make the best choices on how to proceed with the materials in their collection.

Cleaning museum textiles using hydrogels: Case study 18th-century collection at MoMu Antwerp

Sarah De Leeuw | University of Antwerp, Belgium

This study focuses on a case within the historical collection of the Fashion Museum (MoMu) Antwerp, where varying textile objects have been found with red stains. A hypothesis links these stains to the use of red paper as lining in historical costume cases. This research aims to investigate the composition of these stains and develop an effective cleaning method.

Analytical techniques including optical microscopy, portable X-ray fluorescence (pXRF) and Fourier-transform infrared spectroscopy - attenuated total reflection (FTIR-ATR) are employed to investigate the stain composition. Results from pXRF and FTIR-ATR provided limited information on the staining and HPLC-PDA and SEM-EDS are recommended for further investigation.

Cleaning research includes the development and testing of hydrogels-based cleaning methods, especially Gellan gum and PVA-borax/Gellan gum, for efficient stain removal. This specifically looks at the time window for optimal performance, the residue issue with barriers as protection and the added value of a low-suction table in gel cleanings. Using lens tissue as a barrier and a low-suction table in gel cleaning proved effective. Finally, PVA-borax/Gellan gum in demineralised water was chosen.

Black Space: Investigating the condition and risk assessment of black woolen samples in four eighteenth-century sample books from Museum De Lakenhal

Zofia Lu Ya Zhang | University of Amsterdam, The Netherlands

This thesis investigated the condition of eighteenth-century black woolen samples in four Stalenboeken van de Lakenhal, referred to as the Lakenhal Sample Books, from the collection of Museum De Lakenhal in Leiden, Netherlands. The goal was to understand the causes that led to some woolen samples detaching to evaluate their stability for future projects. Five other sample books from similar time periods were used to place the function and condition of the samples in context. Historical production with theoretical knowledge of the degradation of wool revealed the underlying problems with the black dyeing technology. The condition and structural information of the objects was first examined using the naked eye and the handheld digital microscope Dino-Lite; this was followed by non-invasive multispectral imaging techniques using the forensic camera Crime-Lite®AUTO and Video Spectral Comparator (VSC®8000/HS).

These revealed that the books contained a variety of fabrics other than laken broadcloth and that despite passing the same color quality test, the samples differed in hues and values. Inverted near-infrared photographs especially highlighted surface abrasions and darkened centers with punctured holes. The possible impact of the dyeing technology on the condition of wool and the material composition of the sealing wax used for attaching the samples were investigated with non-destructive analytical techniques. Raman spectrometry revealed the presence of indigo in the majority of both detached and attached samples. X-ray fluorescence spectroscopy reported a relatively low amount of iron only in the attached samples. Both techniques suggested that the red sealing wax is colored with vermillion. Possibilities of weak adhesion at the book construction stage and the impact of cracked wax were explored with reconstructions. Peel strengths demonstrated that freshly adhered samples form very strong bonds, but the influence of cracking wax couldn't be confirmed due to difficulty in controlling the cracking pattern and wax amount.

Combining theoretical analysis and reconstruction results, led to the conclusion that factors impacting detachment can first be attributed to textile production related to the iron-tannin dyes and the strongly alkaline environment required for dyeing with indigo and for producing the napped surface. Second, the small amounts of sealing wax, i.e., the little surface area in contact with the adhesive, further made the bond unstable.

But these two intrinsic factors would not lead to detachment if the pages had not been handled so frequently by users. Handling-impacted detachment produces even more risk today given that the deformed paper can easily get caught by the deformed samples. The results of this thesis are relevant for informing safe handling and for contributing to the current historical knowledge of the early modern Dutch laken industry.

Link for full access:
https://scripties.uba.uva.nl/search?id=c9222905

The Poor Person's Purple: Investigations into the production and properties of an ancient purple dyestuff

Line Flo | University of Oslo, Norway

The exploration of the ancient purple dyestuff, referred to as 'litmosi' in old Norse and 'farge-korkje' in modern Norwegian, has been the focal point of this master's project. The research aimed to assess the feasibility of creating a historically accurate reproduction based on historical sources, and investigate both the light-aging properties and molecular characteristics of the dyestuff. The mockups will go on to serve as standards for

future research and identification. Covering the journey from exploring primary sources, through dye production and mockup dyeing, to analytical investigations of light-aging properties and chemical makeup, the masters-project aims to provide a wide range of diagnostic data in order to compile a comprehensive dataset on Norwegian lichen purple.

The color purple holds a special place in history, where the extreme cost of the snail-purple known as Tyrian purple or Murex-dye, made the opulent color into the ultimate symbol of wealth and power.

However, a vibrant purple dye, covering hues spanding from barbie-pink to blueberry purple, could also be produced from a range of lichen species native to different parts of the world. These dyes, known collectively as orchil dyes, have been described in historical sources for almost as long as the Tyrian purple. In Scandinavia, this dye was known as 'litmosi' ('color-moss') in old Norse, lending its name to the litmus used as pH indicator to this day. The lichen most commonly used for the dye, Ochrolechia tartarea, known today as 'farge-korkje', was exported in large quantities for centuries. In order to enhance the understanding of, and possibly aid in the identification of purple dyestuff produced from native Norwegian lichen, this master-project aimed to create historically accurate mockups using this lichen.

Following dye production and mockup dyeing, artificial aging was conducted to observe and quantify colorimetric changes over time. Subsequently, both the dyed mockups and the pure dyestuff, both fresh and aged, underwent rigorous analytical scrutiny employing techniques such as microfading, colorimetry, FTIR, Raman Spectroscopy, HPLC-DAD, and UV/vis spectroscopy.

The production of dyed textile mockups from historical sources on orchil-production succeeded in providing a wide range of analytical data. The information offered valuable insights in developing conservation strategies and potentially aiding the identification of Norwegian lichen-purple in archaeological and historical textiles. The diagnostic data provides insights into the aging properties and molecular characteristics of the dye. The investigation also identifies what could potentially be an unknown degradation product that could further aid in identification. These findings can also have the potential to aid in the development of more non-invasive methods of identification of lichen purple.

Study and conservation of an early 20th-century female dress: Issues and conservative solutions for a fragmentary object

Margherita Barone | University of Turin, Italy

This thesis project focused on the study and treatment of a female dress from 1904-1907, part of a private collection in Rome, comprising of a bodice and skirt. The study aimed to analyze the garment's tailoring, materials, and techniques, to understand its historical and social context, and to address intervention needs comprehensively.

A meticulous diagnostic investigation was conducted to gather insights into the materials' chemical and physical characteristics, guiding the choice of intervention methodologies.

The examination of the object's conditions uncovered significant degradation in the bodice and skirt main fabric, which indicated the need for reshaping and consolidation.

The project entailed an in-depth study of the dress's historical and technical aspects to help plan a successful conservation strategy respecting the object's construction.

The first phase was humidification, to restore flexibility to fibers and flatten folds and deformations. Both bodice and skirt were humidified on a plain surface, while only the skirt was reshaped on a mannequin prepared according to the silhouette required by the time's fashion.

As for the consolidation process, it focused primarily on the skirt due to its poorer condition and its potential for an interdisciplinary approach between conservation and tailoring.
Consolidating the skirt proved to be one of the most challenging aspects of the process. The fabric was severely damaged, and the absence of the original internal lining posed historical accuracy concerns due to the sheerness of the main fabric.
A meticulous methodology was developed, focusing on restoring the fabric's structural integrity while respecting its historical authenticity. It consisted of applying a total support in organza that followed the sartorial construction of the pleats at the waist while providing support. The color of the support was chosen according to the taffetas used for the reconstruction of the separated underskirt so that these two fabrics overlayed would have created the same visual effect as the original lining. In conclusion, this thesis project demonstrated the complexity and intricacy involved in conserving historical garments; the consolidation process highlighted the importance of a systematic approach and interdisciplinary collaboration between conservation and dressmaking study. The meticulous planning and execution of the treatment ensured the successful conservation of the skirt, preserving its historical and cultural significance for future generations.

Through the Loops: Documentation of knitted silk stockings from seventeenth-century Jena, Germany

Nao Saito | Abegg-Stiftung, Switzerland

Three pairs of silk stockings were excavated from the seventeenth-century collegiate church graveyard in Jena, Germany. They provide excellent information about the vestimentary culture of academic elites in the Holy Roman Empire, as professors, their family members, and selected students are buried in attire that reflects their social status and cultural affiliation.

Detailed documentation and technical analysis using a proposed protocol and an agreed-upon terminology offer reliable, descriptive records of early knit work. They are used in scholarly discussion to compare the stockings to each other and other knitted items of the early modern period. A close analysis, which was preceded by an initial micro-aspiration cleaning, revealed that two stockings of the same pair are not knit identically. The construction and shaping techniques also vary significantly among the three pairs, suggesting that each pair are knit in different workshops or by different hands. Such evidence helps to map the knitting geography, enable precise identification of specific phenomena, and put them in the context of knitting history.

All master's theses since 2010 are listed under the website of the Abegg-Stiftung. Please consult www.abegg-stiftung.ch/en/masters-theses-conservation-restoration

Sous la cire, la soie : Étude et conservation-restauration des broderies du manteau de la reine Arégonde (VIe siècle ; Musée d'Archéologie nationale, Saint-Germain-en-Laye). Étude comparative de différentes méthodes de retrait d'un mélange cire-résine

Blandine Dadillon | Institut National du Patrimoine, France

This dissertation is devoted to the conservation treatments of two gold-thread embroidered braids from the Merovingian period, preserved at the Musée d'Archéologie Nationale in Saint-Germain-en-Laye. These embroideries, found in the grave of Queen Arégonde in the necropolis of the Saint-Denis Basilica, were restored as soon as they were discovered in 1960.

Metal restorer Albert France-Lanord applied a melted wax-resin mixture to the embroidery, which was then glued on a paper. This study therefore focuses on the context of the embroideries' discovery, the reconstruction and provenance of the elements of Arégonde's costume, and the treatment carried out by France-Lanord. Wax-resin conservation interventions have led to degradation of the textile and gold threads, and we have therefore oriented the technical-scientific protocol towards the question of lightening or removing this adhesive mixture. At the end of the experiments, a methodology was proposed and conservation treatments were carried out: these improved the sanitary condition of the work, stabilized the weakened areas and restored stability and legibility to the embroidery.

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Décollage imminent : « Etude et conservation-restauration d'une coiffe en plumes Jeanne Lanvin (vers 1927, Musée de la Mode de la Ville de Paris, Palais Galliera) « Nettoyage de soie imprégnée de résine : éléments de comparaison entre dégagement mécanique et laser

Louise Thomas | Institut National du Patrimoine, France

This thesis is devoted to the study and conservation-restoration of a feathered hat created around 1927 by the Jeanne Lanvin fashion house. Kept in the reserves of the Palais Galliera since the mid-1980s, this work, perfectly representative of the stylistic modernity of Paris in the Roaring Twenties, cannot be exhibited. Many of the feathers are missing, having been detached from their support by the passage of time, making it impossible to understand the original fast of the ensemble. Following a technical and scientific study, conservation-restoration treatments are applied to slow down the natural ageing of the materials and stabilize the object's structural condition. Then, supported by a historical and technical study, the original decoration is restored to its original state, thus restoring the historical testimony it represents.

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Transhumance en transparence » Étude et conservation-restauration d'un manteau de berger des Causses (XXe siècle ; Marseille, Musée des Civilisations de l'Europe et de la Méditerranée – MuCEM) Apports de l'ingénierie mécanique pour la recherche d'un matériau de consolidation translucide

Lucie Marandas | Institut National du Patrimoine, France

This dissertation focuses on the study and conservation treatments of a shepherd's coat, which entered the collections of the Musée National des Arts et Traditions Populaires during an ethnographic campaign carried out in the Causses (Gard) in 1961. It now belongs to the Musée des Civilisations de l'Europe et de la Méditerranée - Mucem in Marseille. Made by assembling two coats, one in striped woollen twill, the other in thick, waterproof cotton canvas, the coat reflects its repeated use and the ingenuity at work in reusing materials. As a result of its intensive use, the coat has been through a great deal of mending, and now suffers some large gaps in the fabric.

The technical and historical studies clarified the context of use of this everyday garment by placing it in a geographical, social and material context. The technical-scientific protocol explores the choice of a translucent consolidation material, using mechanical engineering to compare the rigidity of different textiles and study their behaviour when used in conjunction with a stiffer material. This protocol has enabled the restoration project, which aims to restore legibility to the shape of the coat while respecting its history of use, to be carried out with greater serenity.

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Distressed or not distressed, that is the question. A study into the methods, characteristics and preservation consequences of deliberately distressed theatre costumes

Scarlet Faro | University of Glasgow, UK

Theatre costumes are a feature of many heritage collections. The technical discipline of costume 'distressing' or 'breaking down' often includes extreme methods, physically impairing the garment to give the impression of realistic and natural-looking wear and tear. In museum collections, deliberately distressed theatre costumes pose unique and specific challenges for textile conservators including discriminating between deliberate and naturally occurring damage and understanding the preservation consequences occurring as a direct result of these distressing techniques. Investigation into what drives conservators to make certain treatment decisions has helped in understanding why intervention may be necessary and together with information on methods used, conservators will be better equipped to make improved treatment decisions. The information learned from research and case studies led to the compilation of a checklist that can be utilised by future conservators to provide indicators about what to look for during object assessment of deliberately distressed theatre costumes.

A Preliminary Investigation into the Viability of Menthol as a Volatile Binding Media in Textile Conservation Practice

Tabitha Gibbs | University of Glasgow, UK

This dissertation investigates the viability of menthol as an alternative volatile binding media (VBM) to cyclododecane (CDD) in textile conservation practice. VBMs are primarily used as a barrier in aqueous treatments in textile conservation. The research has two primary elements, first a research survey to establish current practices and attitudes towards VBMs in the textile conservation field, and second, experimental testing which directly compared the sublimation time of menthol and CDD and investigated whether menthol could provide a barrier for aqueous treatments. It establishes that although textile conservators are regularly using VBMs, there are still many questions around the suitability and safety of CDD. It further argues that menthol shows promise as a viable alternative to CDD as it has many advantageous properties including that it has lower melting point than CDD (meaning it can accurately be applied with a brush), can provide a barrier for aqueous treatments, and sublimes faster than CDD. Additionally, it is cheaper than CDD and has a more established health and safety and environmental profile. By highlighting the potential of menthol as an additional VBM, this research will allow conservators greater flexibility to choose the correct treatment for each different textile object.

Flexible Hydrogels: An investigation into their suitability for textile conservation

Lois Glithero | University of Glasgow, UK

Hydrogels have been in use for decades in conservation, however the rigid hydrogels currently used in textile conservation fail to achieve sufficient surface contact to be truly effective. This paper aims to address this through investigating an alternative flexible hydrogel made by combining xanthan gum, konjac glucomannan, and agar. The water retention, solute uptake, and flexibility of eight variations of the XKA blended hydrogels were assessed and compared to control agar hydrogels made at the same concentrations. This was achieved by assessing the impact the hydrogel samples had on sample fabrics stained with water fugitive ink as well as measuring the form the hydrogels took when draped over a fixed glass rod. The blended hydrogels' properties changed with the ratios of the ingredients, a higher proportion of xanthan creating a more flexible hydrogel, a higher proportion of konjac increasing the water retention of the hydrogel, and a higher proportion of agar producing a more rigid hydrogel. The blended hydrogels were difficult to make at 3%, consequently changing the proportions is preferable to changing the overall concentration. In general, the blended hydrogels had less water retention then the agar controls, but better solute uptake. For localised aqueous cleaning in textile conservation a starting point of 2% overall concentration hydrogel of 30% xanthan, 50% konjac, and 20% agar is recommended.

The Blue That Once Was: A Study on the Light-fading Characteristics of Aniline Blue

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Aniline blue synthetic dyes, which are di- or triphenylated derivatives of the chemical components of another aniline dye magenta, became available in 1860, and were classified as spirit blues, soluble blues and alkali blues based on their dyeing solubility. Literature indicates that aniline blues are fugitive to light and that textile conservators may encounter them combined with natural or other synthetic dyes. This study assessed the real-time and predicted lightfastness and detection of a modern-equivalent soluble aniline blue dye.

Model samples of aniline blue silk fabrics, dyed in light and dark shades following a recipe from 1885, underwent real-time light-exposure for six weeks. Weekly visual and instrumental monitoring revealed significant colour change from high levels of outdoor illumination and UV, and perceptible change inside a conservation workroom. Colour parameters showed that all exposed samples became lighter and more neutral, indicating fading.

Microfading tests on unexposed dyed silk showed that aniline blue could undergo subtle but progressive fading under visible illumination typical for museum displays while UV irradiation would increase photodegradation, agreeing with real-time observations.

Non-invasive fibre optic resonance spectroscopy detection of real-time exposed silk dyed with aniline blue and distinction from indigo- and indigo carmine-dyed silk were demonstrated. Spectral characteristics, however, were less distinguishable in lighter shades and higher levels of photodegradation.

Assessment Of the Feasibility Of Historical Synthetic Textile Fibre Identification Without Scientific Analytical Equipment

Emma Pattinson | University of Glasgow, UK

This research investigates alternative methodologies for discerning synthetic textiles without the reliance on sophisticated scientific instrumentation. Through a comprehensive review of both scholarly and lay sources, a number of approaches was identified. An online survey targeting over 70 heritage personnel engaged in collections management investigates extant practices, proficiency levels in discerning synthetic versus natural textiles, and the availability of resources for such assessments. Subsequently, the researcher collaborates with a cohort of 6 volunteer participants to undertake and reflect upon a series of practical identification tasks. These exercises aim to gauge the ease and accuracy of discerning synthetic textiles without analytical equipment in 'normal' workplace settings. Findings indicate that contextual object information can bolster confidence in identification but doesn't necessarily improve the accuracy of determinations. The research underscores the formidable challenge inherent in identifying synthetic textiles without scientific analysis. Variances in participant abilities are observed, often linked to prior experience with specific materials. Concluding discussions revolve around strategies to bolster support for heritage staff in their identification endeavours, emphasizing the imperative of accurate documentation and exploring avenues for transmitting the tacit knowledge possessed by seasoned practitioners.

Processional banners of the Votive Church in Vienna: Technological and condition report, creation of a concept for restoration treatment and storage as well as restoration of a flag

Bianka Böröcz | University of Applied Arts Vienna, Austria

There are seven processional banners in the possession of the Vienna Votive Church. They were dedicated to the church by various people and groups. This diploma thesis is dedicated to the research of Viennese embroidery studios and artists at the end of the 19th century, who were involved in the creation of the flags, as well as to an extensive investigation of the people and groups, who dedicated them to the Votive Church. Based on the inventory and condition report, a concept for conservation and restoration was developed, which was subsequently implemented for one flag. The focus is primarily on conservation measures. In addition, an adequate storage concept for the flags was developed to support their long-term preservation.

Masters Theses 2022

Two Turkmen tent band fragments: Technological examination and discussion of measures for conservation and the presentation as well as restoration of one of the fragments

Pia Madlener | University of Applied Arts Vienna, Austria

This diploma thesis deals with two Turkmen tent band fragments in mixed technique consisting of knotted pile areas on a warp-faced ground fabric. They originate from the region of present-day Turkmenistan and are dated to the 19th century in the course of the work. The classification of the objects in terms of art and cultural history enables a better understanding of their function. In the course of the technological inventory, the special features of the manufacture of these objects are illuminated and hence damage inherent in the material and production was identified. The practical part focuses on securing one of the two fragments by stitching repair, which is then lined and mounted. The concept of conservation developed in advance of the restoration and the mounting will serve as a guideline for the restoration of the other fragment.

Masters Theses 2021

Two-piece summer dress of Empress Elisabeth: Technological survey, formulation of a restoration concept and execution of restoration examples

Caroline Dalhed | University of Applied Arts Vienna, Austria

The two-piece summer dress, fashioned in the style of the lingerie dress, features the typical s-bend silhouette of the early 1900´s. To understand the manufacturing process and to reconstruct the alterations in the bodice and skirt, an extensive condition survey was carried out to identify the applied materials and an analysis of the dress pattern was performed. Based on the condition assessment a restoration concept was formulated which will be applied for a call for tender. The severely degraded weighted silks presented the most dominant feature of the various damages found in the dress. These are further investigated by performing an array of scientific analysis. Examples for the restorations were carried out in areas with representative damages. The focus lied on the conservation of the fragile fabrics. The discussed and tested methods involved stitching and adhesive repair techniques.

Conservation of a Twentieth-Century Tapestry Treated with a Flame Retardant: Two Panels from Ina Golub's The Spiritual Journey

Anna Andreeva | Fashion Institute of Technology, State University of New York, USA

This qualifying paper is an account of the conservation of two out of seven panels comprising a twentieth-century tapestry The Spiritual Journey. The artwork was created by Ina Golub, a fiber artist whose largest collection of works is housed at the Yeshiva University Museum (YUM). At the time of acquisition, the tapestry was found to be in poor condition with severe deterioration of its warp structure, especially where the linen warp yarn was exposed. Along with many years of exposure, it is probable that the tapestry's present deteriorated condition was in part caused by a flame-retardant treatment in the early seventies when the tapestry was installed in a public space. A conservation treatment plan was proposed to treat those two

specific panels because their condition issues were representative of problems shared by the whole tapestry.

The goal of this project was to develop a set of protocols that could be implemented by future conservators for the remaining five panels. The research for this project added to current understanding and treatment of flame-retardant deterioration in fiber art. The project was enriched by the object's archived documentation held by YUM which traces the process of its creation.

The paper begins with the placement of The Spiritual Journey tapestry within its art historical context as well as its place within the collection at YUM. Following that is a detailed description of the artwork and its condition. The chapter that follows contains a development of the conservation treatment plan based on testing and a researched analysis of the flame-retardant degradation of the linen fiber. The planned process is reported, based on the physical assessment of the object's condition as well as results from the pre-testing and analysis. Re-warping was the main treatment for the deteriorated warp structure, and samples were developed to explore appropriate methodologies. Next is the treatment report that includes a full description of steps, the evolution of the methodology and new discoveries. The paper concludes with recommendations for storage and care of the tapestry in its post-treatment condition.

Masters Theses 2020

Prehistoric grass- and bast strings from the Hallstatt salt mine, Naturhistorisches Museum Wien. Investigation - Conservation - Storage

Cordula Redl | University of Applied Arts Vienna, Austria

This diploma thesis addresses the conservation of grass and bast cord fragments from the prehistoric Hallstatt salt mine. The focus of investigation is on finding the gentlest method for desalting and drying the plant fragments. The work first deals with the circumstances of how the finds got into the mine and why they were able to survive there for over 3000 years. This was followed by an inventory and condition report of the collection of comparable objects stored in the NHM depot. Test series for a conservation concept were then carried out and evaluated. Building on this, the method found was exemplarily tested and evaluated on five cords.

Of lace-collars and straw-hats: Conservation and storage strategies for textile collections. Storage planning for the museumkrems

Eva Klimpel / Lena Fuchs | University of Applied Arts Vienna, Austria

The museumkrems in Lower Austria owns a collection of diverse objects outlining the city's history with an emphasis on viniculture. To keep the collection safe and store it sustainably, the depot is being refurbished and re-organized. In the framework of the thesis, the textiles' inventory was taken from a conservation perspective and the planning of a textile storage that meets contemporary museum standards was carried out. Current storage technology, lighting, climate and pest prevention are discussed. Packaging solutions, that are applicable for the whole collection, were developed. Furthermore, two groups of textile objects, the straw-hats and the lace-collars of the collection, received more in-depth investigation. Next to technological examinations and analyses, exemplary conservations were carried out.

Two 18th Century pleated black bourgeois bonnets from the Tyrolean Regional Heritage Museum, Innsbruck. Historical and technological examination, condition assessment and discussion of measures for the stabilisation and protection of the silk gauze fabric

Caroline Göllner | University of Applied Arts Vienna, Austria

This thesis focuses on two 18th century, black pleated bourgeois bonnets originating from the region of Bozen (South Tyrol). Their stylistic classification within costume history is based on contemporary portraits and a comparative example.

Furthermore, an insight into the silk production in South Tyrol at the end of the 18th century was given. The technological examination and condition assessment of the bonnets provided answers to questions concerning their material composition and tailoring as well as the causes of the present damage, which can be attributed to the materials used and the manufacturing process. The practical part of this thesis elaborates suitable measures for the conservation of the black silk gauze with its protein-containing coating. Here, a local insertion of monofilaments as bridges is proposed for stabilisation and the efficacy of this technique is demonstrated through its practical application on one of the bonnets.

Masters Theses 2019

Conservation and storage strategies for folkloristic textile collections: Using the example of a storage planning for the textile collection of Museumsdorf Niedersulz, Lower Austria

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The Museumsdorf Niedersulz is the largest open-air museum of Lower Austria, which represents the village life in the Weinviertel. The folkloristic collection of the museum also includes a textile collection. It is currently stored in the historic houses under poor environmental conditions. In the future, the textile collection should be housed in new rooms according to conservation standards, considering the spatial, personnel and financial conditions. The focus of this work was the planning of the textile storage. In addition to the room and storage technology, sample packaging was created for the storage of the textiles, which will later be transferable to the whole collection.

Bachelor Theses 2023

Colour terminology in the textile industry in Western Europe: Reconstruction of three recipes for the colour 'feuille morte' from the Haarlem Manuscript (1669-1700) and The Whole Art of Dying (1705)

Jenny Moreels | University of Antwerp, Belgium

'Feuille morte' can be translated as 'dead leaf' and is a colour that speaks to the imagination, but this term is only seldomly used today. By reconstructing historical recipes for this colour, it

can give a clearer idea of how this colour would have looked like in the past. Real 'dead leaves' vary a lot in colour depending on various factors like the climate, species of tree or season. Because of this diversity, the colour is difficult to define. The aim of this research was to bring this colour back to life and record it using CIELab values. There was a selection made of six recipes for the dyeing of wool in 'feuille morte' from the 17th and 18th century using different ingredients and ratios. The most common way to obtain this colour was using a two-step method with a yellow weld bath, followed by a bruniture bath to achieve the correct hue. Within this research, three recipes were reconstructed (one recipe from The Haarlem Manuscript (1669-1700) and two from The Whole Art of Dying (1705)). The colours of three other existing reconstructions and swatches were also included. The results showed that the colour varies a lot depending on the recipe, with colours ranging from dark greens and greys to yellows and reds. In conclusion, the colour range of 'feuille morte' can be interpreted very broadly which reflects the colours that can be seen with real 'dead leaves'.

Stripes, bows, and a small silk cap: Documentation and conservation of a child's burial clothes

Maria Enqvist | Metropolia University of Applied Sciences, Finland

This thesis concentrates on the documentation and conservation of a set of child's burial clothes. The set of clothes belongs to the collections of Cathedral Museum in Turku Cathedral. The set consists of a small cap, three fragments made of striped fabric, and three bows. These burial clothes were found in 1924 when, during restauration works, archaeologist Juhani Rinne was leading excavation under the cathedral's floors. The set was, however, left untreated in a wooden box till present, and there was very little documentation available. Therefore, the goal of this thesis is to redocument the material and thus supplement the lacking context. The aim of the conservation treatments is to make the material more comprehensible.

The background chapters address the burial customs in Finland during the 17th and 18th Centuries. An emphasis is given to the burials of children. The principles of conservation of archaeological textiles as well as the ethical questions when handling burial textiles are also discussed. Since there are some risks when conserving archaeological material, there is a chapter dedicated to work safety.

During the documentation process, the textile and metal materials were identified. The fabrics are all silk decorated with gilded silver metal threads. The cap was hand sewn from a silk damask. The striped silk fabric was of a weft-faced weave. The parts of clothes had been attached to each other with small brass pins.

The conservation treatments consisted of surface cleaning, humidity treatments, and one of the fragments was also supported by stitching. After the humidity treatments one could see that the striped set was a sleeve, a pillow, and a dress. Originally, two of the bows had probably been stitched to the pillow. The third bow was possibly used as a closing in the dress. During the conservation, there was a storing system prepared for the burial clothing set.

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Conservation of a bead embroidered tin weighted silk jacket: Identification of jet and its imitations

Camilla Jakobson | Metropolia University of Applied Sciences, Finland

A woman's beaded jacket was conserved as part of this final project. The jacket is presumed to be from the late 19th century. It is made of grosgrain, tin weighted silk and silk crepeline.

The front and back are decorated with black bead trimmings. The jacket is owned by a private vintage collector. The aim was to conserve the jacket's most serious damages so it could be placed safely on display on a torso. The fabrics were split and torn in several places, and the beads were covered with dust. The weighted silk sleeves and lining were supported with silk crepeline and laid couching stitches as well as with adhesive support fabric. The grosgrain cloth was supported with support fabric and laid couching stitches.

There is no reliable information about the jacket's origin. Therefore, its history was assessed through by genealogy, a study of fashion history and material identification. The materials were identified with a microscope and by X-ray fluorescence spectrometry technique (XRF). Comprehensive documentation was compiled.

The black beads were initially thought to be jet. Very little has been written in Finnish about the properties, identification or conservation of black beads, so the study was deemed necessary. The fact that the beads were glass and not jet indicates that the research was essential. The original aim was to investigate jet, its imitations and identification and conservation of jet and its imitations.

The jacket was conserved into display condition. The jacket has been given a new significance, as it was discovered who it belonged to. During the study a question arose about whether the 'jet' jewelry and beads in Finnish museum collections really are jet or perhaps imitations, either glass or gagaite, which is a jewelry stone variant of lignite. A lot of useful information was gained which conservators in Finnish museums can use. However, attention needs to be paid to the terminology and identification.

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Mounting historical costume on mannequins: Designing display mounts for seven historical costumes at KAMU Espoo City Museum

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The goal of the thesis was to plan display mounts for seven historical costumes for the Espoo City Museum's incoming exhibition. A senator's uniform from 1901, four art nouveau dresses from 1900–1910, a 1920s dress and a woman's riding suit from the early 1930s. An estimate of material demand, costs and working hours is part of the thesis. A practical conservation work was also included, with the goal to conserve one of the costumes, considering the requirements of the display.

The display of historical costume and the costume history of the era were investigated in discussion with existing written sources. In addition, it was investigated how the structure of historical costume, the aspects of conservation and the visual requirements of the exhibition are considered in the making of display mounts. When presenting a historical costume, it is essential to create a silhouette for the costume in accordance with the beauty ideal of the era.

The 1920s dress was chosen for conservation, since its damages posed the biggest challenges for its display. The museum's objective was to achieve a safe display of the dress and ensure its preservation. The dress was documented, and a condition report was made. Material research was carried out to gather further information about the condition. The dress was surface cleaned, its damages supported and finally the appearance improved with ultrasonic mister. The objective of the museum and the requirements of the exhibition were met successfully in the conservation of the dress.

The thesis highlights issues that affect the conservator's work with historical costumes. The conservator must understand how a costume is designed and manufactured, and how the structure of a costume dictates its need for support, conservation and means of display in interaction with the costume's historical context.

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Sámi silver collar: Origin research and conservation

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The topic of the thesis was to conserve a Sámi silver collar and to do origin research as there was not much information about its background. The collar belongs to the collections of Sámi Museum Siida in Inari. The silver collar was collected by A.V. Koskimies during his expedition to Lapland in 1886.

The starting point was the information gathered from the museum and the silver collar itself. The assumption was that the patterning and design would provide clues about original context, as the certain patterns and colours are specific to certain families and regions. The source materials were literature, articles, and internet. The most important sources were the Sámi museums and communities in Finland, Sweden and Norway as the research progressed.

In the beginning, the thesis provides an overview of Sámi and their traditional clothing. Moreover, the thesis studies Koskimies' expedition and how the silver collar ended up in the collections of National Museum of Finland and finally made its way to Siida. In conclusion, it was discovered that the silver collar is most likely from Sea Sámi origin and possibly from the Lyngen area in Northern Norway. The decorative patterns of the collar strongly resemble the Lyngen costume used by men.

The secondary aim was to prevent more damages from occurring and to maintain the current condition of the silver collar. The materials and condition were analysed, and the silver collar was documented before any conservation treatments. Based on the results, a conservation plan was made. When creating the plan, the impacts of different methods were also considered. The conservation treatments included surface cleaning, straightening folds and supporting the most fragile areas with backing fabric. An inner support for the collar and a storage box were prepared for long-term storage. Recommendations were also given for storage and display.

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Identification and conservation of needle and bobbin laces

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Lace has an intriguing and fascinating history. It played a significant role in European fashion for over two hundred years, and it was worn to signify wealth and social status. Because of its high status, the use of lace was governed by sumptuary laws and its trade was strictly regulated.

This paper serves as an introduction to how to identify and conserve needle and bobbin laces. The laces that are studied are from a private collection and are from the 17th and 18th centuries.

Lace is often taken off from its original context and there can be very little background information available, which can make it difficult to determine the place of origin or the date when the lace was made. Identifying the material of the thread can help with dating, as the most common material used to mace lace before 19th century was linen. To identify the lace type, one must study the design and technique that has been used.

The most unique qualities of lace are its lightness and transparency, and just these qualities are the reason lace is so difficult to conserve. This might also be the reason there is so little literature on the conservation of lace, and especially on conservation of guipure lace, a type of lace that has no net ground. Some methods that are especially suitable for conservation of guipure lace are introduced in this paper. These methods are derived from traditional mending techniques and are easy to learn. However, their execution requires patience and time.

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Conservation and documentation of a fragmentary burial find: Preserving textiles as historical documents and source of evidence

Mirjam Ruutma | Metropolia University of Applied Sciences, Finland

The aim of this thesis was to enable the research, to improve the legibility and to ensure the preservation of a fragmentary burial find through in-depth documentation, conservation, and mounting solutions. The fragmentary burial find was excavated in the 1920's during the restoration project of the medieval Turku Cathedral in Turku, Finland. The burial find consists of six fragmentary garments made of silk: a woman's satin coif, a boy's lined damask coif, a fragment of an adult's damask coif, two potential forehead cloths made of gauze, and a brown velvet fragment.

The concept of ideal state was chosen as the starting point when choosing the conservation goal. It was decided that the fragments should be presented in their as-used state as burial clothes with visible signs of decay. However, the legibility of the textiles was found as one of the main values of the find. The non-material aspects or values of an item are best embodied in its ideal state and thus, both cultural and physical context of the burial find was also studied. The burial find was documented in detail reducing the need of extra handling in the future. To ensure that only the necessary conservation treatments are carried out, the conservation was approached with the concept of minimal intervention as a guiding principle. Various means were used to preserve potential evidence, such as soiling and creasing, while stabilising the item. The safe preservation and improvement of legibility was achieved by building supportive mounting for the items. Oddy-tests were carried out to establish the inert properties of the materials used for the mounting. The results indicated that Fosshape® and KAPA®-board could only be used temporarily and thus Ethafoam®, polyester wadding, archival grade cardboard and silk were used instead. The conservation treatments performed ensure an easier and safer examination of the burial find in the future. In addition, the legibility of the find was improved. Consequently, the objects are better preserved and their values and meaning better revealed.

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Conservation of the pearl wreath and finding out its origin using historical sources

Evita Sysilä | Metropolia University of Applied Sciences, Finland

This thesis is about the pearl wreath belonging to the Turku Cathedral and the process aimed at finding out its origin. The aim of the thesis was to find out if the wreath comes from the grave of Kaarina Maununtytär. The research was based on the cathedral's item lists, archaeological excavation reports and literature about the Turku Cathedral.

XRF-analysis is used in materials research and historical reference points are searched based on the results. The practical conservation of the wreath was also an important part of the thesis. At the same time, the necessity and ethics of used conservation measures were discussed.

Based on the collected information, the origin of the pearl wreath is very likely from France of the 1880s-1940s. The exact route of its migration into the Turku Cathedral could not be determined within the scope of this study, but thanks to the collected samples and the basic research, the possibilities for further research are excellent.

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Bachelor Theses 2020

The Medieval Relic Silks of Turku: Documentation and Conservation

Emma Hartikka | Metropolia University of Applied Sciences, Finland

The purpose of the thesis was to document and conserve the silk covers of a medieval skull relic from Turku Cathedral. The silk covers of the skull relic were in poor condition and highly fragmentary. One of the most important goals of the thesis was the documentation and material analysis of the textiles as well as determining their original shape and appearance if possible. All of this reduces the need for future handling of the textiles and thus lowers the risk of further damage. In the thesis, the so-called object biographical perspective was used. The life cycle of the skull covers was mapped from their production to the start of the thesis project. With that, also their medieval context as a part of the cult of relics and the transfer to their current context was investigated. The background information of the object is an important step towards analysing the meanings that the object carries for various stakeholders. These include the value as a museum object, as a source of historical information and as a piece of living Catholic tradition, among others. Being aware of the intangible attributes of the object helps to determine the correct and ethical conservation methods.

The object consists of three silk layers which were sewn around the skull to protect it. The uppermost layer is a red coloured silk fabric under which lies a bluish-green coloured silk. The silk layer nearest to the skull has a beige tint. It was common during the Middle Ages to cover relic bones with precious silks. Also, on the front side of the red silk cover, there is an opening with a tablet woven silk band around it. The band is decorated with gilt silver lamellas. The textiles were discovered in the 1920's. They were found lying in a closed cabinet situated in the sacristy of Turku Cathedral. There is no certainty of the identity of the relic bones accompanying the textiles. However, it is possible that they are bones which were thought to belong to Saint Henry.
The conservation treatment took place to improve the preservation and the legibility of the silks. They were surface cleaned and straightened with humidity treatment. The textiles were too fragile to be mounted on a three-dimensional support mount. Therefore, they were supported horizontally on a padded board. In this way, the skull covers get the support they need while they still remain accessible for future research.

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Women's evening wear and shoes from 19th century: Conservation and mounting of small entity

Anne Hänninen and Miia Jerkku | Metropolia University of Applied Sciences, Finland

The aim of this thesis was to conserve and mount late 19th century clothes and shoes from Pohjanmaa museum's collections. The objects of the thesis are a women's evening dress, a jacket and two pairs of shoes. The aim was for the Museum to have the textiles displayed at an exhibition in the future.

In the conservation of the evening dress, it was essential to support the holes in the skirt and to straighten it. The bodice's missing sleeves were replaced with reconstruction sleeves and the skirt's missing support crinoline and petticoat were also replaced. The jacket's fabric had vast damages which were necessary to support, in order to safely display it in an exhibition. A fitting mount was prepared for the jacket for the same reason. The shape of the shoes had suffered from lack of support over time. The shoes were mounted, and the shape was restored. The aim of the conservation was to stabilize the condition of the textiles and to improve the appearance of the textiles for exhibit.

In the costume history part of the thesis, each textile is presented with background information. The textiles were documented thoroughly using drawings and tables so that unnecessary handling of the textiles can be avoided in the future. Reconstruction sleeves were prepared to replace the missing sleeves on the bodice of the evening dress and therefore the significance of authenticity was emphasized in the written part of the thesis. Mounting the textiles was also substantive and therefore the theme of display and exhibitions was also addressed in the written part of the thesis.

There were various stages in the practical part of the thesis. The most time consuming was supporting the jacket's vast damages and the mounting of the textiles. The biggest challenge was the broadness of the work, even though this thesis was completed by two people. The textiles' appearance has improved after conservation, and they are more stable. Mounting restored the textiles to their historically correct shape and reconstruction sleeves completed the evening dress.

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Laundry bluing in laces of the Finnish folk headdress tykkimyssy

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This thesis concerns 15 separate lace parts of the Finnish folk headdress called tyk kimyssy. These starched laces are from the collection of the Turku Museum Centre and they have some discoloration caused by ageing in addition to fabric finishing used, like starch and laundry bluing. Apart from the coloring effects of the laundry bluing pigments and dyes, this study focuses on their effects for example on the acidity and elemental content of the textiles. For the identification of bluing substances FTIR spectrophotometer and X-ray fluorescence measurements were carried out.

The history of laundry bluing methods and the pigments used as well as the safety issues for both textile and the conservator were traced. Recommendations for future display and storage of the laces were also drawn up.

The presence of laundry bluing often goes unnoticed by the conservator because the colorant is not meant to be seen. These pigments may, however, have an effect on the conservation treatments used, like wet cleaning and reductive bleaching. In order to find out these effects two laces which were blued differently were wet cleaned and then bleached with borohydride. The results were compared to the third lace which was only wet cleaned. The aim was to maintain the bluing pigments during the conservation treatments. All the other 12 laces were only surface cleaned.

Alongside the conservation of laces, experiments with two types of laundry bluing made of Prussian blue were carried out. Fabrics made of cotton and flax were treated with solutions of different bluing liquid concentration. The blued fabrics were analyzed, and the results were compared with the results of the laces studied.

The thesis brings new knowledge about bluing, the almost forgotten process of improving the whiteness of textiles. Museum collections, however, can still have textiles treated with bluing pigments and because bluing is part of the textile's history, one has to consider whether to preserve it or not.

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The Silk Gown of Elvira Standertskjöld

Emma Klemettilä | Metropolia University of Applied Sciences, Finland

This thesis presents the conservation of a gown made of weighted silk in 1896 and the study of the history related to the gown. The two-piece gown belonged to Elvira Standertskjöld, a singer and baroness who owned Villa Elfvik in Laajalahti, Espoo. The gown was made by atelier Magasin du Nord, which was the largest fashion studio in Helsinki at the time.

The gown was conserved to make it possible to put it on display. In addition to conservation, the costume was carefully documented, and the changes made to the gown over time were examined. To support the choice of the right conservation method, weighted silk, its properties and the damage it causes to the silk as well as its conservation were studied.

The goal of the conservation was to stabilize the gown's structure. The conservation focused on the skirt of the gown, which is in a significantly worse condition than the bodice. Both the bodice and the skirt were surface cleaned by vacuuming. The skirt was straightened and supported almost entirely using sandwich technique. It was important to minimize the amount of stitches and handling of the skirt during the conservation, as the fabric is very brittle. Due to the structure of the skirt, adhesive support methods or patch supports were not suitable for supporting it.

The sandwich technique was chosen because it provides the necessary support and requires relatively few stitches. Due to the skirt's structure and to minimize the need to move it, the skirt's own, well-maintained lining was used as the support fabric beneath the area needing support. The uppermost support fabric is silk crepeline dyed to match the gown. The presentation of the fragile gown was also considered.

The thesis provides a successful example of the conservation of a large area of weighted silk performed with stitching methods. The study gives the costume an interesting background and a story. The Espoo City Museum can also make use of the thesis when dealing with other textiles from Villa Elfvik or other textiles made by Magasin du Nord. The thesis can also be useful for other parties dealing with textiles made by Magasin du Nord.

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Supporting hole damages in colored knitting and tapestry crocheting: Conserving Korsnäs pullover for Pohjanmaan museo

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The theme of this Thesis is supporting holes in colored knitting and tapestry crochet. The object of conservation was a Korsnäs pullover from the Pohjanmaan museo. The pullover is from the turn of the twentieth century. It was purchased for the museum's collection in the 1950s from Korsnäs.

Before the conservation, the pullover was in poor condition. It had various hole damages in the crocheted and knitted areas. The Korsnäs pullover was discolored, and the wool structure had become hard. The aim of conservation was to stabilize the Korsnäs pullover's holes so it could be displayed.

Various methods of supporting holes in knits and crocheting were studied based on literature and experimentation. The experiments were carried out by making twelve colored knitting and tapestry crocheting patches. Holes were made to the patches, which were then supported with reknitting, re-crocheting and with support fabrics. Experiments were then evaluated by reversibility, aesthetics, and structure. Based on the experiments, reknitting, re-crocheting, and support fabrics were chosen for conservation treatments.

After the conservation, the pullover can now be displayed at the museum's exhibition. The shirt was washed, and the holes were supported with reknitting, re-crocheting and with support fabrics. The Korsnäs pullover is now stable. The hardest parts of the conservation were the fastening of reknitting and supporting stretched loop structures.

The thesis brings new information on methods to conserve and support knitted and crocheted textiles. The conserving methods can be used for conserving other knitted and crochet textiles.

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The research and conservation of a kimono: Iro tomesode: the formal kimono of women

Sayuri Matsuoi | Metropolia University of Applied Sciences, Finland

The thesis presents the conservation of a silk kimono. This iro tomesode kimono ended up in Finland from Japan and belonged Tero Kiiskinen, a set decorator and passionate explorer after the 1980s. The kimono is studied and preserved for National Museum of Finland.

With the help of the literature on the decoration techniques and symbolism of kimono and Japanese textiles, the different types of kimonos and their intended uses were investigated. The information helped to better understand the iro tomesode kimono and to determine the structure of the kimono as well as plan and implement the conservation.

Traces of usage could be seen in the kimono, telling the story of the kimono. Traditionally, when washing or repairing a kimono, its parts are taken apart. For the reasons mentioned above, and due to the prevailing and limiting situation of the Covid-19 epidemic, it was decided to leave the stains visible in the kimono. Therefore, the practical work is limited only to the hem and the seams that have been unraveled in places. In the work silk Habotai® fabric dyed to suit the multicolored areas of the hem and 2 strands organzine silk yarn dyed to suit the shades were used. The open seams were sewn back with suitably colored two-threaded silk sewing threads.

The work provides additional information about kimono and their uses. The different types of kimonos, decoration techniques, and symbolism presented here just scratch the surface of the great world of kimono.

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Sámi textiles: Conservation of three scarves

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The objectives of the thesis were to gain a better understanding of Sámi scarves (sg silkki) with regards to their cultural and historical meaning and significance, to understand both the materials used in their manufacture and the appropriate methods of conservation, and to conserve three Sámi scarves. The goal of conservation was that the condition of the scarves would allow their exhibition.

The first part of the thesis covers, Sámi history, from the perspective of Sámi handcraft (Sámi textiles and scarves, especially). Sámi handcraft is strongly related to a human-nature relationship as well as to a sense of community. A key feature

is also its transmission from one generation to another. A Sámi scarf can also embody information of its manufacturer, the person wearing it, or the traditions it originates from. The staff of Sámi Museum Siida advised the choice of the scarves from their collection for the thesis.
One of the conserved scarves (Scarf 1) was a traditional woollen scarf. The two other scarves (Scarves 2 and 3) were made of manmade cellulosic fibers, most likely viscose. Scarf 2 was conserved. For Scarf 3 a conservation plan was written. Scarf 1 originated from the Scoltic region, Scarf 2 from Inari region and Scarf 3 from the Enontekiö region.

The objective of the conservation was, to prolong the longevity of the scarves. The scarves were photographed both before conservation (Scarves 1, 2 and 3) and after it (Scarves 1 and 2). The biggest challenges, with regards to conservation, were holes on Scarf 1 and stains on Scarves 2 and 3. The holes were repaired via French weaving. The stains were treated with potassium borohydride solutions and/or ammonia solution. A distinguishing feature of Scarf 3 was that it had earlier been treated with ozone. The ozone treatment can have a damaging effect on textile fibers, which had to be taken into account in the making of a conservation plan.
The holes in the woolen scarf (Scarf 1) were successfully woven via French weaving,
without a more accurate examination, they could not be distinguished from the intact
parts. Bleaching was observed on Scarf 2 after borohydride treatment, both on the
stains and the entire scarf. However, the stains remained visible after treatment. It
appears, that the dirt is partly ingrained into the fibers, and cannot be completely removed,
at least without risking damage to the scarf. The conservation plan for Scarf 3
was written based on assessments of both damage and materials.

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Recent publications by emerging professionals 2023

The research and treatment of a Qing Dynasty garment from the Buffalo Museum of Science

Nhat Quyen Nguyen | Buffalo State College, USA

The scope of this project was to research, analyze and treat a sleeveless garment from the Buffalo Museum of Science that is thought to be originally from China. The sleeveless garment was donated to the museum by Chauncey J. Hamlin and little information is known about the context or origin of the garment. Research was conducted to gain historical information about the type of garment and why it was made. Analysis was conducted on the fibers, metal wrapped threads and dyes to identify the materials used. The garment was treated with a heat activated adhesive support patch to stabilize the areas of splitting on the main fabric.

https://digitalcommons.buffalostate.edu/art_con_projects/30/

Knit in Gold: An Examination of a Seventeenth-Century Knitted Waistcoat

Margaret O'Neil

Seventeenth-century knitted-silk waistcoats have mystified dress historians for years since little is known about how these intricately patterned knitted garments were worn or used. This paper documents the examination and research of a seventeenth-century woman's knitted-silk waistcoat from the Burrell Collection, Glasgow Museums, Scotland. This waistcoat, acquired by the museum in 1937, is knitted in silk yarns and illustrates the impressive craftsmanship of seventeenth-century knitting techniques. In

documenting the close study of this seventeenth-century waistcoat, this research report shows that this garment was significantly altered for sale prior to the acquisition into the Burrell Collection and serves to contribute to knowledge of early modern knitting techniques.

Published in *Dress,* The Journal of the Costume Society of America, August 2023.

The Role of a Significance Assessment in the Replacement of Plastic in A Stephen Sprouse Dress

Kris Cnossen, Annika Blake-Howland, and Amanda Holden

The treatment of a dress by Stephen Sprouse (1953–2004) demonstrates that understanding significance is as important as material composition when making treatment decisions. Sprouse designed garments using modern technologies and materials that are challenging to treat. A 2022 exhibition of the Sprouse collection at the Indianapolis Museum of Art at Newfields necessitated the treatment of a dichroic nylon and acetate velvet and clear polyurethane film dress. Treatment focused on the replacement of the polyurethane, which had yellowed and become brittle. A significance assessment was created using a format researched and designed by one of the authors and used to anchor all treatment decisions. The materials of the dress were analyzed to understand their chemical composition and physical properties.

Multiple mock-up dresses were made to examine the drape and appearance of the plastics considered for the replacement panels and to test different attachment methods. A clear, 6mm vinyl plastic film resembled the original appearance. The new plastic was hand stitched to the original velvet using the original stitch holes.

This treatment furthers the discussion of replacement and introduces a style of significance assessment. It also demonstrates the need to explore the treatment of synthetic and modern materials in collections.

Published in the 2023 North American Textile Conservation Conference (NATCC) Postprints.

Spotlight on the Spattered Jama: Examination and Conservation of the Jodhpur Court Ensemble at the Victoria and Albert Museum

Annabelle Camp and Ekta Raheja

This paper presents the historical context, analysis, and conservation treatment of a man's court ensemble (ca. 1879) from the collection of the Victoria and Albert Museum, highlighting the value of collaborative research between curators and conservators to gain a fuller understanding of a garment's material, manufacture, and context.

The ensemble was made in Jodhpur in Rajasthan, India, and likely worn by Maharaja Jaswant Singh, GCSI (1838–1895). It includes a jama, kurta, paijama, kammerband, two scarves, and a turban. The jama and four associated textiles are dyed using red dye in a spattered pattern.

The spattered pattern posed curatorial questions and conservation challenges. Curatorial research determined the technique, locally known as faganya, was practiced between the 17th and 19th centuries in the region. To estimate the original application method, the authors collaborated to recreate the pattern using rudimentary tools. The test results and the value of research through practice are summarized.

Analysis was conducted to determine the composition of decorative metal components, and identify the mordant, dyestuff, and dye binder. These tests are summarized, and the full conservation treatment is outlined. Conservation steps included surface cleaning, selective wet cleaning, tarnish reduction on metal components, crease reduction, stitch stabilization, and mounting.

Published in the 2023 North American Textile Conservation Conference (NATCC) Postprints.

Future contributions

If you would like to publish with our Newsletter or have ideas for the Newsletter please get in touch!

Please send contributions or inquiries to the coordinator