

THE MAGAZINE OF THE INSTITUTE OF CONSERVATION • APRIL 2019 • ISSUE 81

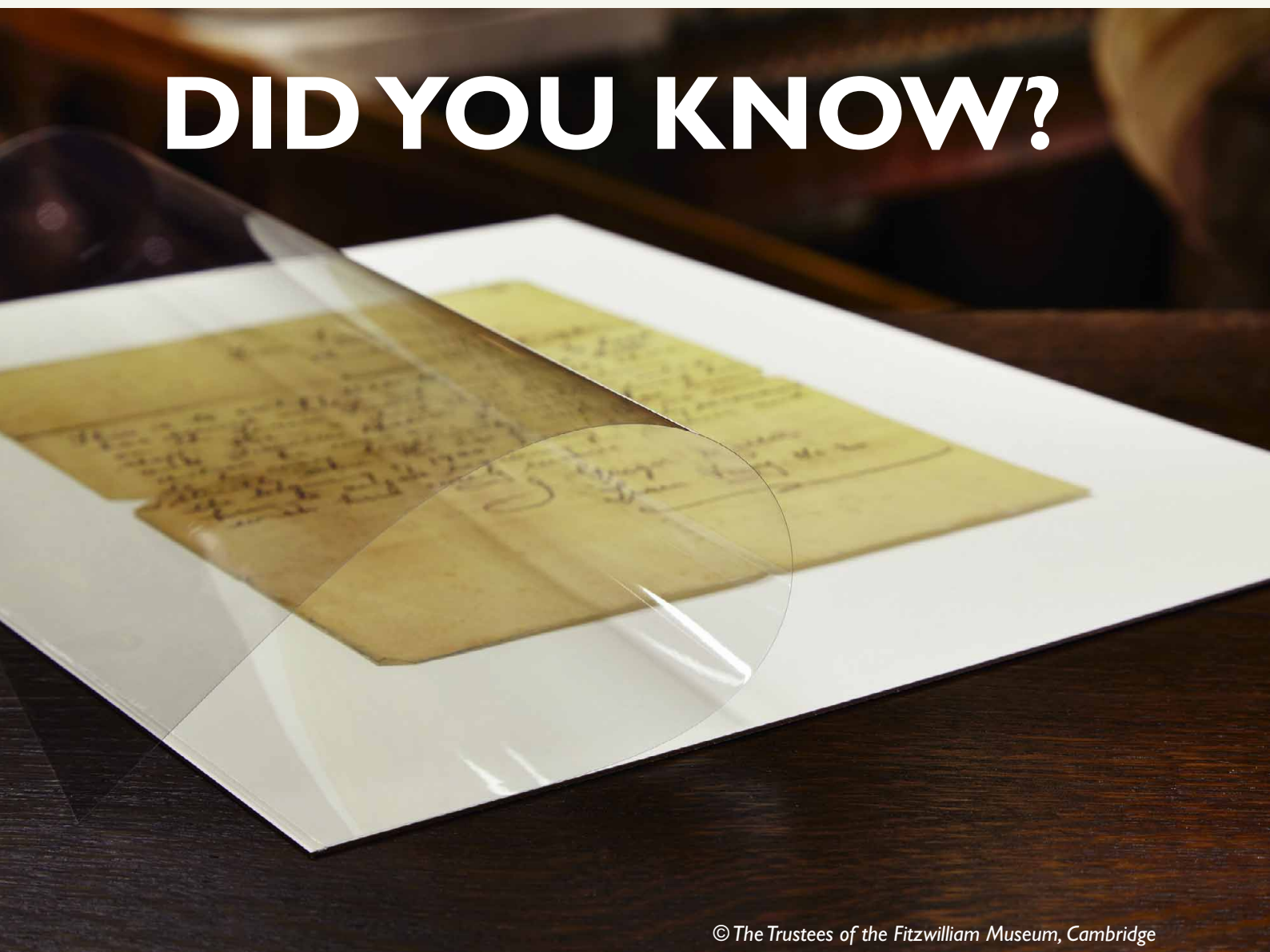


Revisiting Mount Stewart in Northern Ireland

Also in this issue

Detecting gamboge • A book spine treatment • PACR news

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APRIL 2019 Issue 81



From the Editor

It is a great pleasure to return to the National Trust property of Mount Stewart in this issue, having previously visited it in the February issue of last year. It is the destination for one of the #Icon19 Conference tours, so read the article (and the one in issue 74) and you will

have a foretaste of what lies in store. The focus of the article is the unusual decision to introduce replica elements into the restoration of a rather grand bed at the property and the role that a replica can play is also at the heart of our second feature about a very jolly fellow indeed.

Beds crop up in this issue not only at Mount Stewart but also in a review by Cathy Proudlove ACR of a fascinating day conference about a rather more mysterious bed— is it 18th /19th century or 15th century? So tantalising and interesting is the topic that the Icon website has an extended report by Joyce Townsend ACR on the findings and deductions of a range of experts - conservators and others. You decide.

Lynette Gill



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The Genoa bed in the West Wing at Mount Stewart after treatment.
National Trust Images/Bryan Rutledge

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Deadlines for adverts and editorial

For the June 2019 issue
Monday 1 April

For the August 2019 issue
Monday 3 June

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professional update

From The Chief Executive



Sara Crofts reflects on her first few weeks at Icon

A little over a month has passed since I arrived at Icon and I am happy to report that I have thoroughly settled in thanks to the wonderfully warm welcome that I received from the staff team. Alison Richmond also deserves my sincere gratitude for skilfully putting in place a series of measures to help smooth the transition. During my introductory phase I have

also been fortunate to start meeting some of you, the members, who are the lifeblood of the organisation. It was a pleasure to join the Board of Trustees at their annual planning day in January and to be present at the launch of the new Modern Materials Network at the beginning of February. This fascinating event, held at Blythe House, was a useful reminder that caring for cultural heritage is not a static business – there are always new challenges to address and new problems to solve. This point was made clear when I joined a group of delegates debating the possible reasons why relatively new designer garments are starting to degrade after only a couple of years in the V&A's collection.

As it happens, I am familiar with the conservation of modern materials from my own architectural profession. I have a particular fondness for mid-C20 buildings; my personal favourite is the derelict St Peter's Seminary in Cardross, a Grade A listed Brutalist structure which has so far defeated everyone who has tried to find a sustainable future for this uniquely difficult set of buildings. Talking to the passionate and energetic team who are leading the new Modern Materials Network was therefore a timely reminder that the challenges faced by conservators and architects are very similar; we also share the excitement of pushing new boundaries in order to develop new solutions to problems.

So, I am looking forward to rekindling my connections with Icon and its members over the coming months. I originally had the pleasure of meeting and learning from conservators and heritage scientists during my SPAB Lethaby Scholarship¹ (a long time ago!) and then nudging clients towards Icon's Conservation Register when I was part of SPAB's technical team.² I also commissioned conservator colleagues to help me preach the gospel of maintenance to churchwardens as part of SPAB's Faith in Maintenance training project.³ So, I have witnessed at first hand the skills, professionalism and expertise of Icon members. As a result, I am wholeheartedly supportive of Icon's commitment to excellence through

professional accreditation and am delighted to have taken on a role where I can champion your skills within and beyond the cultural heritage sector.

As someone coming into the organisation from the Heritage Lottery Fund (now the National Lottery Heritage Fund⁴) I have been hugely impressed to find that Icon has blossomed into an efficient, effective and well-governed organisation with a clear, forward-looking and outward-facing strategy. I also greatly admire the fact that Icon is ambitious but, most importantly, I recognise and value the central role of the membership and the core strength of Icon's volunteer-led activities.

However, I must also acknowledge the challenges ahead, and that part of the problem is the rather 'unknown' nature of some of these challenges. As I write we still don't know how the Brexit story will play out and then there is the ever-changing, and indeed diminishing, pool of funding. The National Lottery Heritage Fund (NLHF) launched its new five-year Strategic Funding Framework⁵ in January and although the key messages will seem quite familiar to many, it will take time for the details to emerge and for Icon and others to fully identify the new opportunities that arise. In the meantime, Icon's dynamic Policy Officer, Anni Mantyniemi, has prepared a summary, which we will share on the Icon website shortly. One potential area of interest is the clear statement of intent for NLHF to support the heritage sector to work internationally and to contribute to the Government's soft power agenda. Given that Icon has already built a good relationship with the British Council through our work in China we are well-placed to take advantage of this.

But how should Icon position itself to take advantage of the other opportunities? After three and a half years of working in a policy and advocacy role my feeling is that we need to invest in more and different partnerships and allegiances – though any new collaborations need to be developed with the right people, at the right time and for the right reasons. We will also need to be agile enough to move quickly when worthwhile opportunities arise, while continuing to deliver our core commitments such as increasing the number of accredited professionals and developing the new Conservation Register. But, after a few weeks of getting to know the talented staff team and some of the many dedicated volunteers, I know that Icon is in good shape to achieve this and I am delighted to have returned to the voluntary sector at an exciting – if unpredictable – time.

¹ The Society for the Protection of Ancient Buildings – <https://www.spab.org.uk/learning/scholarship>

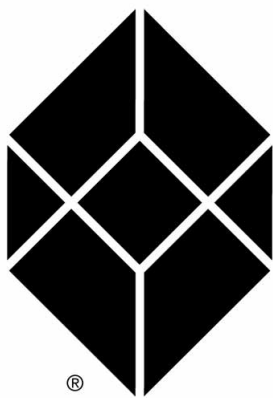
² <https://www.spab.org.uk/advice/technical-advice-line>

³ <https://www.spab.org.uk/campaigning/faith-maintenance>

⁴ <https://www.heritagefund.org.uk/>

⁵ <https://www.heritagefund.org.uk/publications/strategic-funding-framework-2019-2024>

THE PACR CONSULTATION



The PACR logo

Background

In September 2018 the Board of Trustees agreed that Icon's Professional Standards and Development (PSD) Committee should investigate what Icon members want for PACR and consider the resource implications around the key topics identified.

On 14 February 2019 PSD considered a report based on several consultations with Icon members that have taken place between November 2018 and

January 2019. A clear approach to this consultation was crucial in identifying areas for development of such a key aspect of Icon's work. The aim of the various research exercises has been not to identify 'issues' with PACR but rather to identify areas for development to ensure that PACR can be responsive and remain relevant to the conservation profession into the future.

Methodology

In undertaking this review, the Professional Development team have consulted widely to ensure support from as broad a cross-section of the conservation profession as possible. Key consultation exercises have included:

- Icon 2019 Membership Survey: this included a dedicated section on the views of the membership on PACR. Members were directed into different aspects of the survey depending on their answers to specific questions, for example members on the PACR pathway would be directed to a different set of questions from those directed to Accredited members. This has ensured that the findings of the survey are relevant and reliable. 495 people completed the 2019 membership survey.
- Webinar: this was run by PSD member, Deborah Cane ACR. Members were invited to join the webinar remotely to raise any points of view they felt should be considered during a review of PACR.
- Events: as well as inviting members to provide informal feedback during *Conservation Matters in Wales* (2018), a dedicated session and roundtable discussion was run during the 2018 PACR Pathway Event. Approximately fifty members attended and participated in the debate.
- 2017 PACR Pathway Survey: a survey was undertaken in 2017 on the PACR Pathway, the key actions from that report have been considered as part of this consultation.
- 2018 External Stakeholder Consultation: SkyBlue Ltd was commissioned by Icon with funding from The Pilgrim Trust to undertake an external consultation on PACR. Whilst the work has largely focused on marketing and advocacy of PACR which is already under consideration by Icon's Board

of Trustees, key findings have also been considered as part of this research.

- Focus Group: members of Icon were invited to put their names forward to join and participate in a focus group which took place on 29 January 2019. An open call was put out for members to join the group to represent the key stakeholder groups within Icon. The group was asked to assess and prioritise the fourteen key areas which had been identified through the various consultation exercises.
- Focused Survey: over one hundred members put their names forward for the focus group. As the spaces at the group were limited, those members unable to join the focus group were asked to provide feedback on the same fourteen areas.
- Board of Trustees planning day: part of the agenda included a session for Board members to discuss the marketing of PACR, in relation to the PACR logo and the message it sends, and how and when PACR should be re-launched.

Looking ahead

Following PSD's February meeting a report is due to go to Icon's Board of Trustees for its meeting on 20 March. The outcome of the Board's consideration of the proposals will be shared with Icon members.

This PACR consultation report will help to shape accreditation for the next five years. Thank you to all the Icon members who contributed to this consultation exercise.

Susan Bradshaw

Head of Professional Development

TRAVELS WITH THE HEAD OF MEMBERSHIP

The last few months have been a busy time for Group events and AGMs, and I've been running around the country keeping in touch with our members and Group Committees.

Getting involved

I am always struck by the diversity of ways people get involved and contribute to the sector, through Icon or in many other ways. Over the last year, some Group Committees have seen substantial change; and while some are aflood with willing new volunteers, for others it is a priority to bring in new members to help carry the flag. What drives these systems, and how can Icon help to build capacity?

I thought about this in the context of our latest membership survey, the results for which will be available soon. In the previous membership survey, conducted in 2015, we explored the reasons why members got involved with Icon Groups and Committees: what were the motivating factors, and what barriers did they encounter along the way? As we await the complete analysis of our latest results, how might this picture have changed – if at all? At recent Group events, I have spoken to a few members about this and sought to develop an understanding of the current situation.

The top reason for involvement as cited by survey

respondents in 2015 was a desire to access broader professional and social networks. Notions of community were very strong here, and the sense of belonging that participation in a voluntary committee can provide was a key factor driving engagement. This was followed very closely by a desire to change Icon for the better and give something back to the conservation sector.

Ceramics & Glass Group AGM

This past November, I headed to Farnham to attend the Ceramics and Glass Group AGM, where four new members were welcomed on to the Committee to fill Events, Publications and two Student Rep roles. 'Some see the Committee as an excellent opportunity to learn more,' says Dana Norris ACR, Chair of the Group, 'especially if they're new to the sector or coming into it from a different area.' Networking plays a key role in recruitment here, and recommendations from others leading to personal invitations often bore fruit. This was especially the case when recruiting emerging conservators, for example, and the CPD aspect has been key. 'I know that since I've been Chair, I've had to do quite a bit that I've never needed to learn in the previous ten years in conservation,' says Dana. 'I've learned how to organise conferences, how to handle budgets and sponsorship, and how to refine my approach to time management.' The diversity of the resulting skills gain can be substantial.

Stained Glass Group AGM

Similarly, at the Stained Glass Group AGM this October in London, new recruits were welcomed on to the Committee while others shifted to assume new roles. Sarah Jarron ACR stepped into the Chair to replace Sarah Brown, who had led the Group since 2016. In so doing, she was motivated by a desire to give something back to the profession while ensuring a measure of consistency. 'It was a mixture of already being on the committee and being keen to give something back,' Sarah explained of her reasons for taking on the role. There were people prepared to step up, she says, and so continuity on the Committee was assured.

But of course, all of this comes at a cost. The 2015 Membership Survey sought to illuminate the barriers to involvement with Icon Groups and Committees using a free-text space for respondents to provide their unvarnished, anonymous views. Many members reported they simply do not have the time to volunteer. There are enduring pressures between professional activity and family life, for example. Other commitments – and economic realities – can also limit flexibility for professionals to devote time for free. Similarly, in the current climate not all organisations provide flexible support for their employees to contribute to their professional bodies.

How can Icon ensure all those who want to participate can navigate through these challenges? Respondents to the 2015 Survey emphasised practical support such as bursaries for events and improved online access to papers and content, along with a varied geographic spread. In this way, the continued efforts of Groups to stage events and conferences

in different areas around the country, and the increasing variety of online access methods for Committee meetings and events can help to mitigate barriers to participation.

These avenues can help to increase the chances that all who desire can become involved, and feedback indicates the rest of the challenge is about communication. 'I just think we need to keep reminding the membership that we offer engagement opportunities and welcome input', said one respondent to the 2015 Survey. The opportunity for engagement should not be underestimated, says Jacquie Moon ACR, Chair of the Photographic Materials Group, shortly after the Group's AGM in London in late November. 'Being involved in an active committee means that you get to network with your peers, you get to understand more about your profession as you understand the breadth, and you get to participate in the workshops and events that you put on and learn practical skills as well.'

Scotland Group AGM

Skills refinement was a pinnacle benefit of involvement, as Rob Thomson ACR explained. Former chair of the Icon Scotland Group, at the Group's AGM in Dundee this November he retired from the role after seven full years – providing a stunning vantage point to consider the dynamics of engagement. 'I think you have to be clear in telling people what's available for them and emphasise the opportunity to learn new things while being supported by the rest of the group.' The chance to develop stronger financial acumen by serving as a Group Treasurer, for example, was a prominent example in this vein. As a freelancer, Rob saw this as part of the mix – engaging and maintaining with a stronger network both inside and outside the sector came part-in-parcel with other professional activities such as advertising and marketing.

As Rob explained, serving on a Group Committee provides the chance to meet professionals in allied fields that one might not normally meet – and in this, the 'bigger picture' can become more visible. For this reason, mitigating challenges and barriers to Group involvement is a key objective for Icon going forward. With the results of our latest membership survey, and the results of Icon's Groups Review, we will take a

closer look at the landscape, and the methods and modes of engagement, and look to ensure opportunities can be harnessed by all Icon members.

Michael Nelles

Head of Membership





AC Chair Sarah Peek

THOUGHTS FROM THE NEW AC CHAIR

Sarah Peek ACR, the new Chair of the Accreditation Committee (AC), gave a presentation at the AC and Assessors Review meeting in December 2018. She reminded those present that AC members need to cover the breadth and depth of the conservation disciplines for the Committee to fulfil its duties and that it has a collective accountability for the process of assessing and granting accreditation.

New to the AC this year are Joyce Townsend ACR, as the heritage science specialist, Beky Davies ACR as ceramics and glass specialist and Jane Rutherford as wall paintings specialist. Kerren Harris ACR, specialist in preventive conservation, will also be a new deputy AC Chair. The aim is for conservation areas represented on the committee to reflect current conservation practice in the real world.

Importantly, Sarah highlighted that the Accreditation Committee needs to guide the applicants as fairly as possible, to help them get ready for their assessment and to try to reduce the risk of difficult assessments. As is the case with all types of assessment, they may not always go to plan and there may be several reasons for this. Some candidates may not have prepared themselves across all the activities that are required in order to be deemed ready for accreditation. Perhaps the AC might misinterpret the strength of the application, or there be a clash between applicant and assessor? The AC role is to judge applicants on their work and not to judge with any subjective value system, so that it can remain consistent and true to the model of Icon's professional standards.

Sarah continued this point to say that 'the AC needs to challenge its deliberations by being visible, open and objective and be able to receive constructive feedback, as is expected of PACR applicants too'. For the benefit of both the candidates and the high regard in which ACR status is held, in her position as AC chair she will ensure that feedback is clear, understandable and actionable, enabling conservators to make progress. She stated that 'I wish to use feedback to create positive outcomes. When I say positive outcomes, I do not assume that the candidate has been successful. Positive outcomes could mean that we have another lovely ACR to join the team, but arguably more important is that feedback is unambiguous and can be used to enable a successful partial or full re-application'.

She went on to say 'Let's also not forget the personal investment that's required to complete this process. Candidates need to be thanked for the time, effort and engagement they have shown. During the heat of an

assessment day the idea that the candidate may not meet the standard is difficult. On behalf of the Accreditation Committee I would like to take this opportunity to thank our assessors for their considered care, attention to detail and professionalism during both straightforward and sometimes difficult assessments. I would also like to say thank you to our assessors for your patience when the Committee ask you to provide more detail over and above your written report. Thank you again'.

'Members of the AC also give a great number of hours to the process, their dedication is testament to the strength of the system. The steady steerage of this ship, via Susan Bradshaw and Patrick White's attention to detail, ensures that the process runs smoothly and that applications continue to come forward. Their contribution is fundamentally important and their value should not be underestimated'.



PROFESSIONAL DEVELOPMENT IN CONSERVATION

23 April: Dust and Dirt - Strategies for Prevention and Management
(Held at the British Library)

29 April-2 May: Conservation and Repair of Timber*
(Building Conservation Masterclass)

9 May: Preserving Historic Photographs
(Held at the British Library)

13-16 May: Conservation and Repair of Slate and Stone Roofing*
(Building Conservation Masterclass)

28-31 May: Conservation of Plasters and Renders*
(Building Conservation Masterclass)

***10% discount on BCM courses for Icon members**

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Dr Ben Arnold

CHANTRY LIBRARY NEWS

We are pleased to announce that our new part-time librarian, Dr Ben Arnold, joined us on 7 February. Ben will be working 9.00 - 1.00 on Thursdays and you will find his hours and contact information on the library website, www.chantrylibrary.co.uk.

Our other news is the start up of the Chantry Library Subject Bibliographies project.

Through this project, we aim to support the work of

conservators by providing a *vade mecum* guide to key sources of information on a subject, written by a specialist. Please have a look at our first annotated bibliography on South Asian Paper by Jasdeep Singh Dhillon, 2018 winner of the Icon Book and Paper Group's annual Frederick Bearman Research Grant: <https://chantrylibrary.org/chantry-library-subject-bibliographies-2/>

Our final announcement is that we have received the Frederick Bearman research archive. We are very grateful to Dr David Anfam for this gift and the Book and Paper Group for their support. We will be looking into ways of making this available for study.

For further news, follow our blog <https://chantrylibrary.org/blog/>

Jane Eagan ACR FIIC

Head Conservator, Oxford Conservation Consortium

NEWS FROM THE GROUPS

Archaeology Group

The Archaeology Group committee was delighted with the response to our one-day conference 'Whose find is it anyway? Revisited' which was held at Birmingham Museums Trust Collection Centre in December. A huge thank you to committee member Pieta Greaves for organising the event and to everyone who attended and took part. A review of the conference by Kimberly Roche, a conference attendee and speaker, can be found on page 24 and on the Icon AG website.

Icon AG would like to encourage people to join the new ICOM-CC Working Group, Archaeological Materials and Sites, whose first newsletter is now available on the ICOM-CC website. The group is interested in holistic approaches to archaeological collections and sites and is looking forward to taking an active role in future conferences and events. Please contact the group's coordinator Emma Hocker (emma.hocker@gustavianum.uu.se) if you would like to join.

Archaeology Group committee members continue to attend

meetings of The Archaeology Forum (TAFF), the British Archaeological Trust (RESCUE), the Chartered Institute for Archaeologists (CIfA) and the All Party Parliamentary Archaeology Group (APAGG) and report back at our committee meetings which are held four times a year.

Icon AG is looking forward to hosting further events this year. In the future we wish to have a focus on training and are hoping to run one conference and one workshop annually in addition to the AGM. Our events team are currently looking into a possible event on X-radiography. Our 2019 AGM will be held on 8 August at the Ashmolean Museum, Oxford. Please put the date in your diary, further information to follow shortly. Suggestions for future events and workshops are always welcome. Please watch ICONCONNECT, Twitter (@ICONArchaeology), Facebook and the website for further announcements.

Charlotte Wilkinson

Icon AG Communications Rep.

Book and Paper Group

Chair's update

This will be my last update as chair after stepping down in December. I have enjoyed being part of such an energetic Group for the past four years and have been very proud of what we have achieved. Thank you to the rest of the committee for all their hard work and making it so easy for me!

Abby Bainbridge will be taking over the duties as Chair until a replacement treasurer is found. We have also been successful in filling quite a few positions on the committee, however we are still keen to hear from anyone who would like to be involved (even a little) so please get in touch in the usual ways with ideas for courses, extra pairs of hands at events etc.

The tenure of committee members runs from AGM to AGM and lasts for two years, so around November/December each year there will be adverts for committee members, so keep an eye out if you missed this year's round. With that being said, many thanks to the committee members who are stepping down for their hard work and dedication.

With very best wishes,

Liz Ralph

Chair, Book and Paper Group.

Events and Training Sub-committee

Although I have been writing these updates for some time as Co-chair of the Events and Training Subcommittee, I have now been formally elected as Chair and thought it was time I introduced myself! My name is Holly Smith, I have been working as a book and paper conservator since graduating from West Dean College in 2011. I currently work part time at The National Archives, Kew and as a freelance conservator. I joined the Events and Training Subcommittee to help with fundraising for the Adapt and Evolve Conference in 2015 and haven't managed to leave yet! I find being part of the committee is a great opportunity to meet fellow conservation

professionals and tutors, who are leaders in their fields; and provide platforms for members of our profession to share their knowledge and expertise.

We have sadly never had any volunteers from outside the South East of England who feel that they are able to join the committee, which has made it difficult in the past to organise events at great distances from our volunteer committee members. But to try and tackle this, we have introduced a new Travel Bursary, which provides funding to cover travel and accommodation costs for people travelling more than one hundred miles from Book & Paper Group Events. We have also invested money in a microphone, video camera and webinar platform to record and live stream more of our events so that more people can benefit.

I am aware that this is currently only available for lectures, and practical workshops are more difficult to share electronically. So if there are any readers out there who have a venue that could host workshops and provide access to members further afield then please get in touch at iconbpg@gmail.com. As always, we welcome your suggestions of events or training you would like to see.

Holly Smith Chair

BPG Events and Training Subcommittee

Furniture and Wooden Objects Group

Since the last issue we can now announce the speakers for our biennial symposium, to be held at The Linnean Society, London on May 10. On the day we have Silvia Tagliante (The University of Turin, Italy), Mohamed Moustafa (Grand Egyptian Museum), Tania Desloge (Organics Conservator, British Museum), Helen Hughes (Historic Interiors Research & Conservation), Isobel Harcourt (Textile Conservator), Letizia Marcattili (Easel Painting & Furniture Conservator), John Hartley (joint with Claire Goulbourn, National Trust), Beatrice Farmer (Textile Conservator, Historic Royal Palaces), Harriet Lewars (City & Guilds of London Art School) and Amy Anderson (Commissioned Treatment Conservation Supervisor, Historic Royal Palaces). Please see our web page, Twitter and Iconnect bulletins for more details on the full programme and booking details.

Other upcoming events include new courses at The Wooburn Craft School such as seat caning and rushing, wood carving, traditional upholstery and marquetry. Prices are subsidised for Icon members – again, please find more details from our ‘upcoming events’ web page.

If you are interested in getting involved, whether it is writing an article for Icon or joining the committee, or have any questions, comments or suggestions, please get in touch via email (furniture.events@gmail.com) or our Twitter page.

Apart from this, we look forward to getting together and seeing you at the May symposium!

The Furniture & Wooden Objects Group Committee

Heritage Science Group

Committee meeting

The latest committee meeting was hosted by Helen Wilson at The National Archives. Finalising the Ethical Sampling Guidance and planning this year's events were the focus of the meeting. The next committee meeting will be held at West Dean College on 29 March 2019.

Ethical Sampling Guidance – available for download!

Led by Dr Anita Quye, University of Glasgow and Professor Matija Strlic, UCL, with feedback from the Heads of Conservation and Scientific Research at Heritage Institutes in the UK and input from the E-RIHS (European Research Infrastructure for Heritage Science), Icon's Ethical Sampling Guidance is now freely available online https://icon.org.uk/system/files/documents/icon_hsg_ethical_sampling_guidance_-_jan_2019.pdf

Events

Making Heritage Science Data Fair and Impactful was a free seminar with eighty attendees, held on 11 February 2019 at UCL's Here East Stratford Campus. Jointly organised by the National Heritage Science Forum (NHSF), European-Research Infrastructure for Heritage Science (E-RIHS), and Icon's Heritage Science Group, this free seminar with its invited speakers, posters, panel session, and tour of the new Heritage Imaging Lab proved to be highly successful. There will be a report of the event in the next issue of Icon News.

Want to share your heritage science research?

Consider contributing to the Group's blog (<https://icon.org.uk/groups/heritage-science/blog>) or to Icon News! Contact Natalie Brown or Helen Wilson for more information.

Keeping in touch

Finally, keep an eye out for our notices in Iconnect, on our webpages, and on Twitter (@ICONSci) and get in touch via our Group email address (hsg@icon.org.uk) if you would like to become more involved in the Group's activities.

Helen Wilson ACR

Historic Interiors Group

We started the year with two fantastic events, firstly the Bed of Roses Symposium at the V&A on 21 January which illustrated the amazing multidisciplinary specialisms brought together in conservation research. Look out for Cathy Proudlove's report on the event on page 25, and an extended review by Dr Joyce Townsend on the Icon website. We were also proud to see a review in National Geographic magazine (published on January 31 2019).

In February we hosted our AGM at Leighton House Museum which included talks from the senior curator, architect, paint researcher and wallpaper conservator involved in the recent restoration of the museum and a chance to explore the stunning interiors.

By the time of publication, we will be about to host our 10th Annual Cambridge Conference on April 12, this year's theme being *From Pre-Raphaelites to Arts & Crafts*. If you haven't yet booked tickets, get onto the Icon Events page and follow the Eventbrite link. Cambridge in the Spring is always wonderful and we enjoy fabulous talks, lively discussion and a lunchtime walk to a location fitting the conference topic. We look forward to seeing you soon.

Charlotte Owen

HIG Committee

Icon Scotland Group

Training and events

Our first training event of 2019 was a book conservation workshop focussing on board reattachment, which took place on 19 March in St Andrews. The tutor, Emma Fraser ACR, taught the participants a method she had developed for use on tight back bindings where one or more of the boards are detached but the spine and sewing is intact.

We also supported a study day on 'Tracing Paper: Transparent Perspectives', run on 20 March by Historic Environment Scotland. A number of speakers including conservators from

HES gave presentations describing the identification of different tracing papers and the conservation challenges they pose. Delegates enjoyed the opportunity to view a display of drawings on transparent paper from the HES Archive and to discuss some of their personal case studies.

Our next event is a two-day course on 'Sewing a late-medieval Gothic binding', which will be held at the National Library of Scotland in Edinburgh on 25-26 April 2019. Arthur Green will explain the underlying structure of Gothic bindings and the relationship between the text-block, the sewing and the boards, and the course will largely be practical, with participants sewing a model on double supports with packed sewing. Tickets were still available through Eventbrite at the time of writing.

Announcements about events scheduled later on in 2019 will follow shortly, and we promise that having kept our book and paper colleagues happy, there will be a good variety of other subjects!

Contact and keep in touch

We obviously welcome primary and secondary members, but remember that all you need to do in order to receive the emailed Scotland Group Iconnects is tick the Group on your



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Icon membership form. You can also see our latest updates on social media: our blog is at <https://iconscotland.wordpress.com>, our Facebook page is <https://en-gb.facebook.com/iconscotlandgroup> and our Twitter feed is @icon_scotland. Comments and suggestions for events can be emailed to scotland@icon.org.uk.

Paintings Group

We would like to thank all the speakers and attendees at our conference 'Wet Paint', held at the National Museum of Scotland in October 2018, for making it such a successful day (see the review by Jenny Williamson ACR in Icon News February 2019). Our thanks also go to our committee member Donatella Banti whose simultaneous translation of the keynote speaker's paper was excellent. For those of you who could not join us in Edinburgh, Helen Dowding, Rhiannon Clarricoates and Adele Wright are editing the post-prints - *Interactions between Water and Paintings* - which will be available through Archetype Publications in 2019.

February saw our first talk of the year: Patrick Baty on the quest for colour standards in twentieth-century Britain. More talks are planned for later in the year so please keep your eyes out for details on the events page of the Icon website. If you are interested in reviewing a talk for Icon News please contact us using the Group email.

Committee member Clare Finn is investigating holding a Modular Cleaning Program workshop, led by Chris Stavroudis, later 2019.

As always, we are keen to hear from Icon Paintings Group members about what events you would like us to organise. We are always looking for speakers for our talks so please let us know if you have any suggestions for speakers or topics you would like addressed.

The Paintings Group Committee

Email: Icon.paintingsgroup@googlegmail.com

Twitter: @IconPaintings

Photographic Materials Group

The PhMG committee has been busy organising the next Group event, which will take place this summer. This will be a workshop on daguerreotype preservation, showing participants how to create effective housing systems. Please visit the Icon website for more information.

The committee has recently purchased an analogue photography sample set for the Group to use as a training tool at our events. Purchased from the AIC Photographic Materials Group, it includes seventeen examples of prints, negatives and transparencies produced using analogue photography.

If you have a photographic conservation story you would like to share, please get in touch (phmg@icon.org.uk), as we are always looking for updates for our blog (<https://iconphmgblog.wordpress.com/>), Facebook (ICON Photographic Materials Group) and Twitter (@ICONPhMG) pages! Both long and short posts are welcome.

Textile Group

Icon Textile Group Events

The events team are finalising several workshops, including a Fosshape workshop and a tour of the Westminster Abbey effigies. Details and booking information can be found on the Icon Textile Group webpage and the Iconnect.

Textile Committee AGM

The Textile Group's AGM will be held at the British Library on Tuesday 30 April, from 2.30pm-5pm, to include a presentation given by Zenzie Tinker on her work on the funeral effigies at Westminster Abbey. Tea and coffee will be provided. After 5pm, the gathering will be continued in a nearby pub. Although there is no charge for attending, booking is required for the AGM and presentation and is available through Eventbrite.

Colour Symposium: Change of Date

The Textile Committee are organising a one-day symposium based around the theme of colour, to be held on Friday 8 November at the People's History Museum, Manchester. This was mentioned in the last issue of Icon News, but the date has been changed to coincide with the Textile Society's conference The Power of Colour, which is being held the following day at the Museum of Science & Industry, Manchester. Call for papers and booking details to follow.

New Committee Members

At the AGM in April, the Committee's Secretary and News Editor will be stepping down. If you are interested in joining the team, please check the Iconnect and webpage for details of how to apply.

Upcoming Events

ICOM-CC Textiles Working Group Meeting, Abegg-Stiftung, Switzerland, June 2019

This interim meeting, *A Challenging Dimension: The Conservation and Research of Costume and Accessories*, is being held at the Abegg-Stiftung in Riggisberg, on 20 - 21 June. The meeting itself is free to attend- further details can be found on the ICOM-CC website (<http://www.icom-cc.org>).

DATS Conference, 16 -17 May 2019

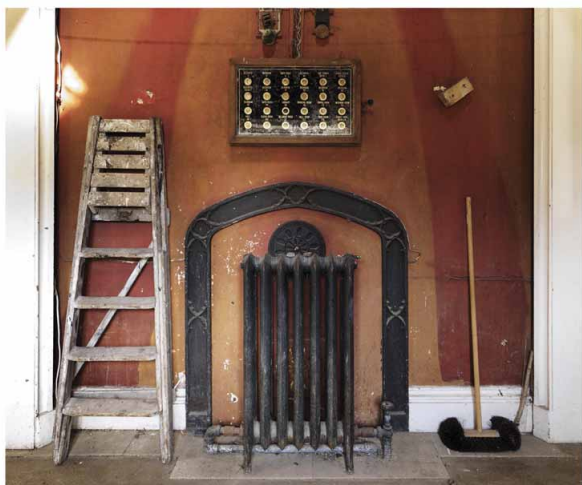
Redressing Diversity: Making Hidden Histories Visible, is being hosted by Norfolk Museums Service, Norwich. The conference will explore how dress and textiles can be used to make hidden histories more visible and accessible within museums, which are increasingly looking to diversify their collections, audiences and outputs. (www.dressandtextilespecialists.org.uk/events/)

Keeping in touch

Due to publication deadlines, it is not always possible to mention all events so please check the Icon website, Facebook page, Twitter feed and Iconnect for details. If you have anything that you would like mentioned in our communications please contact nadine.wilson@nationaltrust.org.uk.

Technical Conservation Guidance and Research

Online Advice and Downloadable Guidance



January 2019

'These manuscripts are magnificent examples of ancient Mexican historiography, which used a sophisticated form of pictorial writing: they tell the history of the dynasties that ruled several Mixtec city-states prior to the Spanish conquest (1521). Genealogical information is combined with the depiction of events such as sacred origins, military conflicts, rituals, oracles, marital alliances and political intrigues.

'Due to the fragility of the codices, very little work had been done in the past to scientifically characterise their materials and composition, yet it is these very aspects that are critical to understanding their nature, construction and durability. Through an award from the Cultural Heritage Advanced Research Infrastructures, Synergy for a Multidisciplinary Approach to Conservation/Restoration (CHARISMA), we were able to pursue the characterisation of the colours present in the manuscripts. These and other investigations by prominent scholars and scientists contributed to situating the codices in the context of the pre-Columbian and colonial societies that produced them, describing the world they depict, and reflecting upon their meaning in contemporary Mexico and beyond.

HE PUBLICATION UPDATE

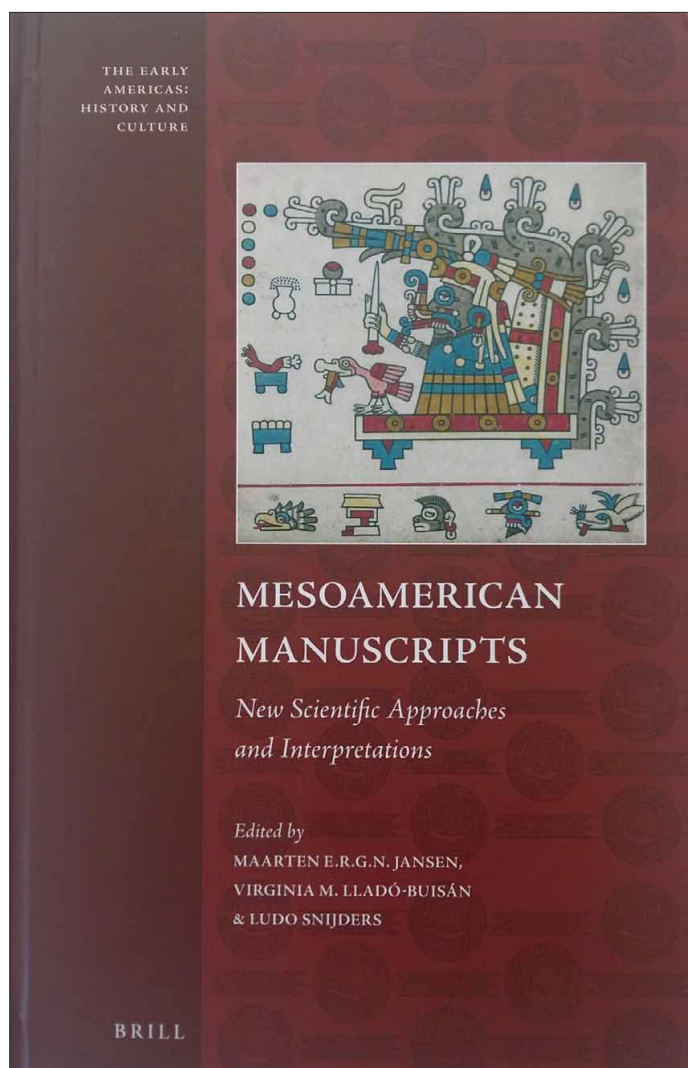
Historic England have recently published a new, updated edition of its *Technical Conservation Guidance and Research*. The brochure lists all HE's current free-to-download guidance and research reports on all aspects of the repair and maintenance of the historic built environment. It also includes information on its series of Practical Building Conservation books and guides on building stone types. The topics covered range widely from finding wall paintings; planning for emergencies like fire; conserving war memorials; insuring historic buildings and many more.

You can find it in downloadable pdf form at:
<https://historicengland.org.uk/advice/technical-advice/buildings/technical-conservation-guidance/>

MESOAMERICAN MANUSCRIPTS EXPLORED

It is always good to have news of publications involving Icon members and here **Virginia M. Lladó-Buisán ACR** introduces a scholarly work on mesoamerican manuscripts, which she has co-edited. Virginia is Head of Conservation & Collection Care, Bodleian Libraries, Oxford University.

'A lot of rain has fallen since I organised the international conference *Mesoamerican manuscripts: scientific approaches and interpretations* at the Bodleian in June 2016. This was a wonderful event that brought together conservators, curators, scientists, and scholars and experts in Mesoamerican studies to contribute and learn more about the pictorial techniques and other materials used in the Bodleian's five pre-Hispanic and early colonial Mesoamerican manuscripts: Codex Laud, Codex Bodley, Codex Selden, Codex Mendoza, and the Roll of the New Fire (a.k.a. the Selden Roll).



'After many years of research and the 2016 conference, I am now delighted to announce that the book *Mesoamerican Codices: New Scientific Approaches and Interpretations*, which I have co-edited with Professor Maarten Jansen (Professor Emeritus of Mesoamerican Archeology and History, Leiden University) and Dr. Ludo Snijders (Former PhD Student, Leiden University), has now been published by Brill (<https://brill.com/view/title/36446>). The book is the 8th part of the series *The Early Americas: History and Culture*, and it includes a chapter on the virtual reconstruction of the palimpsest Codex Selden by Dr. Ludo Snijders and David Howell ACR, Head of Heritage Science at the Bodleian.'

To those who are fans of Art UK it is great news to hear that you can find the first thousand sculptures from its nationwide sculpture digitisation project on the Art UK website..

Art UK has its roots in a registered charity, The Public Catalogue Foundation, founded in 2002 with the aim of recording the nation's entire collection of publicly owned oil paintings. This record was made accessible to the public through a series of

After four years of planning and fundraising Art UK, along with seven partner organisations, secured a £2.8 million grant from the National Lottery, and a further £1 million of match funding, to launch this latest project. Working from a small office in Glasgow, photographic recording of sculpture began last year and the first results can now be seen at <https://artuk.org>



There may just be time to get your application in to Conservation by Design for its renowned book conservation scholarship being offered for the 15th consecutive year. The winner will receive £1,500 towards the cost of attending the Montefiascone Book Conservation Summer School, a unique bookbinding and restauration course held in the medieval town of Montefiascone, Italy.

The scholarship is offered in memory of Dr Nicholas Hadgraft, a good friend of Conservation By Design who died tragically in 2004. Nicholas was a fellow of the University of the Arts London and a key collaborator on the “Squelch Drying” technique devised by Stuart Welch (the founder of CXD), the most effective way to date of drying valuable rare books.

Application forms are available from the CXD website: www.conservation-by-design.co.uk. Completed applications must be received by midnight on **Sunday 7 April 2019** and the successful applicant will be notified by the end of April.

For further information on the Nicholas Hadgraft Memorial Scholarship, contact Conservation By Design on 01234 844 260 or visit www.conservation-by-design.co.uk.

Appointments



Dr Isobel Griffin, ACR was appointed in January as the new Head of Conservation at the National Galleries of Scotland. Isobel graduated from the Conservation of Wall Painting course at the Courtauld Institute of Art in 1997, and went on to hold posts in preventive conservation and conservation management at the National Trust, National Museums Scotland and then the National Trust for Scotland.

From 2009 to 2013 she undertook a PhD on *Deterioration mechanisms of historic cement renders and concrete*, focussing on the WWII buildings at the National Museum of Flight in Scotland. She was the Head of Collections Care at the National Library of Scotland from 2013 to 2019, where she worked in particular on heritage science collaborations and public engagement projects, and she is hoping to further develop these interests in her new role.

Isobel can be contacted at igriffin@nationalgalleries.org.uk or on 0131 624 6572.



Our Editor of the *Journal of the Institute of Conservation*, **Dr Jonathan Kemp**, has been appointed Associate Researcher/Lecturer at the University of Melbourne's Grimwade Centre for Cultural Materials Conservation. As well as continuing to edit the *Journal*, his time there will be split between postgraduate seminars on the treatment of objects, supervising doctoral students, and executing his own research including into CO2 transport in stone; a science, technology and society study (STS) of marble; and developing a framework for practical ethics for conservation in the form of a 'consensual versioning system'.

Jonathan is a stone and sculpture conservator with nearly thirty years' experience in both the private and public sectors and he has worked in the UK, Spain, Ukraine, Iran, Canada, and Taiwan. Previously he was a lecturer in stone conservation at the City & Guilds of London Art School and a senior conservator in sculpture conservation at the Victoria & Albert Museum, London. He is also an experimental media artist with an international profile.



Sandra Smith has recently taken up the role of Head of Collections Care at the British Museum. She has moved there from the Victoria and Albert Museum where she spent sixteen years as Head of Conservation and, from 2015, Head of Conservation and Technical Services.

Welcome to these new members

We would like to extend a very warm welcome to all those who joined us in December 2018 and January 2019. We hope to see you at an Icon event soon!

Karolina Allan

KK Art and Conservation Associate

Stephanie Allen

Student

Angelica Anchisi

Associate

Maria Antao

Associate

Samantha Bailey

Student

Emily Bird

Student

Sara Bohuch

Student

Maria Borg

Student

Kim Boursnell

Associate

Juliette Butler

Student

Bryony Cairncross

Science Museum Group Associate

Shan-Ying Chen

Student

Dorota Chyrowska

Associate

Melissa Colin

Science Museum Associate

Nathalie Debono

Associate

Harriet Dixon

Associate

Erik Dop

Associate

Lisa Duncan

Associate

Sophie Easten

Northumbria University Student

William Erskine

Ramsec Ltd Supporter

In memory

It is with sadness that we report the death of **Bernard Middleton** MBE, one of the last of a generation of leading bookbinders and restorers. Born in London in 1924, he learned his trade at the Central School of Arts and Crafts, then as an apprentice at the British Museum Bindery and student at the London College of Printing. After a spell managing the large binding firm of Zaehnsdorf Ltd, he became self-employed in 1953.

Along with researching and writing on the history of bookbinding and restoration, he also undertook speaking tours in the USA and elsewhere and raised the profile of British bookbinders considerably in the process. In addition to many articles, he wrote two books, *The Restoration of Leather Bindings* (1972), and *A History of English Craft Bookbinding Technique* (1963), both of which became seminal texts. He was approached like a celebrity at bookbinding events, which he attended even recently despite diminishing health - a grandfather of the field and a fount of knowledge about how things used to be done.

Kathryn Finnerty
West Dean College
Student

Patricia Gabriac
Associate

Maud Gallagher
Student

Alyssa Green
Student

Lynsey Haworth
Historic Environment Scotland
Supporter

Victoria Herbert
Student

Wendy Huang
Middlesex University
Student

Sarah Keene-Stanley
West Dean College
Student

Sameena Khan
The Belfry Kitchen
Associate

Meejung Kim-Marandet
The British Museum
Associate

Kristen Loudermilk
Loudermilk Conservation LLC
Associate

Beatriz Lourenco
Supporter

Luke McDermott
Heritage Stone Works Australia
Supporter

Joanna Moylett
Student

Ellen Nigro
Student

Noelle Ocon
North Carolina Museum of Art
Associate

Xinghua Pan
Supporter

Rika Pause
Student

Emily Phillips
Associate

Stephanie Poppe
Supporter

Anna Rolph
Student

Charlotte Rostek
Mount Stuart Trust
Supporter

Kathryn Royce
Student

Catherine Stevens
Cardiff University
Student

Marta Szmuc
Associate

Ayaka Takaki
Donald Insall Associates
Associate

Paul Taylor
Intaframe
Supporter

Jenna Taylor
Imperial War Museum
Associate

Karen Thomas
Thomas Art Conservation LLC
Associate

Christina Tofari
Student

Ellen Turnock
Supporter

Kristjana Vilhjalmsdottir
Student

Brittany Wallace
Student

Kate Warner
UCL
Student

Wonsun Yeom
Northumbria University
Student

THE GENOA BED

Claire Magill ACR, National Trust Regional Conservator and Project Manager, discusses the treatment of a bed during a three year project to restore the West Wing Rooms at Mount Stewart

INTRODUCTION

Between 2012 and 2015, Mount Stewart, near Newtownards, Northern Ireland, underwent a three-year, £8 million building project: *Mount Stewart Renaissance*. The project saw the house restored to its jewel-like condition of the early twentieth century, when the wife of the seventh Marquess, Edith, Lady Londonderry, and their family used the property as their favoured retreat. The project included structural repairs to the house, improvements to services and also careful conservation and restoration of its treasures. (You can read more about the project in issue 74 of Icon News.)

Throughout the project, the team were keen to ensure that the work benefitted visitors, the local community and the economy.

New jobs were created, local companies were appointed and there were opportunities to learn and share new skills from specialists brought in from across the National Trust. Wherever possible, visitors were given physical and intellectual access as the work progressed, so that they could feel involved in both the detail and the sheer scale of the restoration of this local landmark, including an accessible Collections Store, a Conservation Studio and a six-part television series *The Big House Reborn*.

During the main project, we shared with visitors the extent of the outstanding work. This resulted in a generous gift from a private foundation, which supported an additional conservation project in the West Wing and enabled us to open its rooms to the public for the first time. Part of this work involved the conservation of the four poster bed in a bedroom named

The Genoa bed in its tired state before work began



The bed revived to its former glory



'Genoa', a project that spanned three years from the initial research and gathering of samples to final completion. Much of the bed was in such poor condition that, unusually for a conservation project, various elements were conserved but then retired and replicated. Using sumptuous textiles and trimmings, we have reproduced those elements to reflect the vibrancy and theatrical approach so typical of Edith Londonderry's tastes.

OBJECTIVES

The project entailed restoring the furniture and textile elements of the Wing's private rooms. The teams of specialists who had worked on the main building project understood the concept of 'spirit of place' that informed all the interventions at Mount Stewart, but the West Wing project provided the opportunity to realise this approach in a very different way. As well as conserving the tangible heritage as far as possible by stabilising the textiles, the aim was also to conserve Mount Stewart's intangible values by reinstating Lady Edith's original vision for rooms which now looked tired, shredded and sad.

Whilst the principle of conserving as much as possible guided our decision-making, it was balanced against an ambition for the textiles to regain their colourful and dramatic appearance as in Lady Londonderry's time. Elements which would not convey these values after conservation were therefore retired. Albeit potentially controversial, this approach was essential to ensuring that the rooms reflected Mount Stewart's 'spirit of place'.

Informed by a 'statement of significance' written by the curator, specifications were drawn up, in collaboration with the Trust's conservation advisors, for the conservation of original textile elements, the making of replacement textile elements and furniture conservation.

The work involved in conserving and restoring objects and interiors, and opening the rooms to the public, was designed so that staff and visitors would understand their significance better, illuminating how the rooms were originally intended to be viewed and used and giving greater insight into the vision and personality of Lady Edith.

Engaging the public was also a way to promote understanding, enjoyment and participation in the Trust's core purposes, and to develop the skills and experience of both National Trust Conservation teams and external conservation specialists. The outcomes of the work were intended to improve the visitors' experience through enhanced interpretation. In sum, this project aimed to let the spirit of Mount Stewart shine and speak for itself.

BACKGROUND

Edith, Lady Londonderry, chose the West Wing for her bedroom and private apartment as it was the most secluded part of the mansion, with the best views of Strangford Lough and the Mourne Mountains beyond, as well as of her gardens. She loved light and the large windows in the West Wing rooms provided the context for the textiles and furnishings in these spaces.

The 18th century bed had had several interventions during its lifetime. It was said to have belonged to Queen Mary II and was bought for Lady Londonderry's first home, Springfield in Rutland. Parts of the bed probably date to c1700s, and the velvets and trimmings used to cover the bedstock were certainly added later. Edith adorned the hangings still further with a large applique coat of arms on the head cloth and crests of the Women's Legion on the inner valance.

This inner valance was in good condition and therefore the decision was taken to conserve it and use it as the point of reference for the final appearance of the bed, taking our lead from it when choosing new velvets to replace textiles that had deteriorated beyond economic repair. Replacing the red velvet re-injected colour and vibrancy into this room, and reflected the spirit of Mount Stewart as well as of Edith herself, whose approach was to replace rather than allow her furnishings to fall into poor condition.

THE WORK

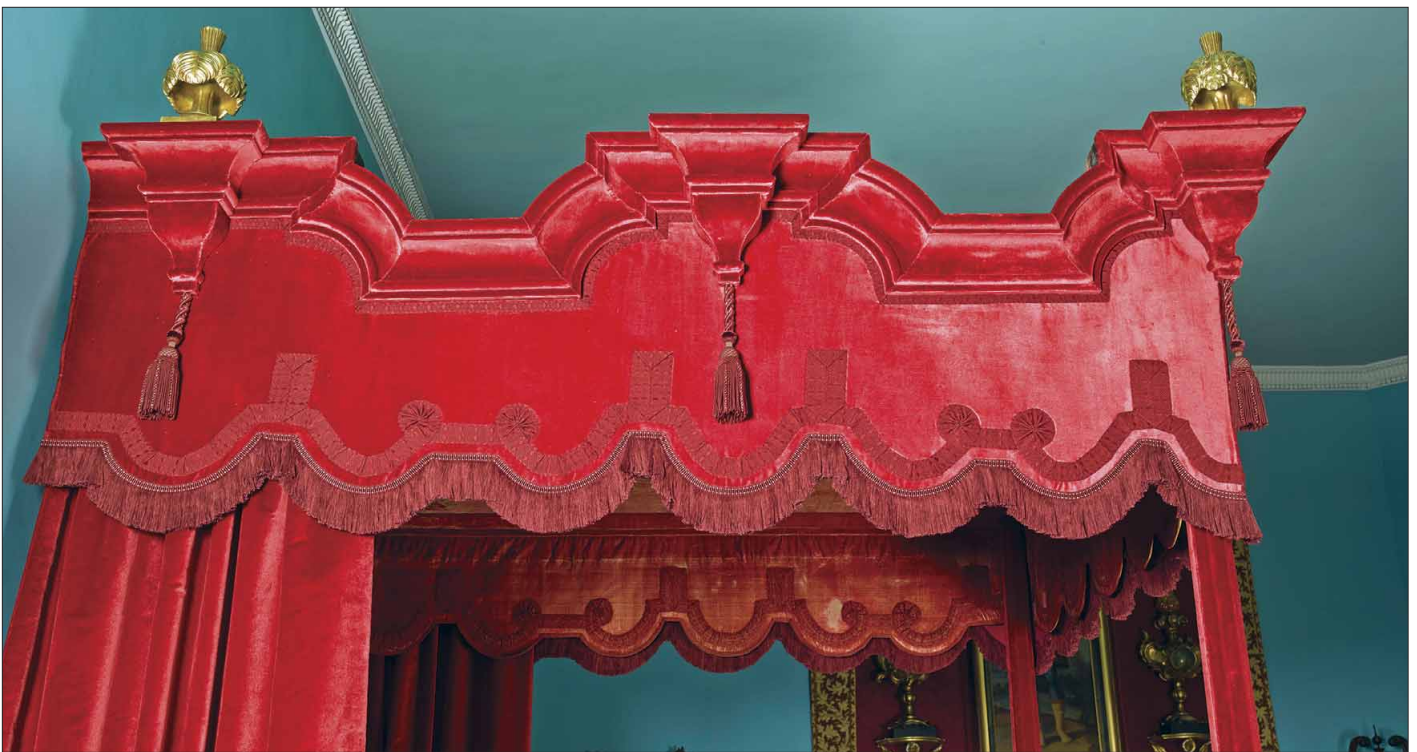
Each element of the bed was inventoried on the Trust's electronic Collections Management System (CMS) and its condition checked by textile and furniture conservators. On the

The giltwood shell motif on the bed has been conserved, whilst the textile covering its mounts has been replaced, as the fading and splitting of the original silk velvet was irreversible and no longer conveyed the bed's original appearance, of only one hundred years earlier





Before and after: details of the side of the Genoa bed facing the window, with replica silk on the pelmet, outer valance and curtains, reused passementerie and original conserved inner valance



basis of the specifications four suppliers were appointed (furniture conservator, textile conservator, interior designer and seamstress) whose teams helped dismantle and pack the various elements into packing cases for transport to the contractors' workshops. Packing and transport was in itself a complex procedure because of the large number of elements and their fragility, whilst getting them to the right place at the right time involved a lot of communication and organisation.

The inner valance, which we wished to conserve, turned out to be attached in a complex fashion, a fact which only became evident during dismantling. Therefore the decision was taken to leave it in place and for the textile conservators to travel to

the property to carry out their work in situ.

The original plan for the coat of arms on the headcloth was to conserve and reinstate it. However, the specification for the work elicited the response that conservation treatment would extend the embroidery's life for only forty to fifty-five years, and that it would still appear lacklustre in comparison to the new elements (velvet, trimmings and passementerie) and the desired vision for the bed. Therefore the project team decided to conserve the coat of arms and archive it. A textile conservator who was also a trained needle-worker was commissioned to draw up templates and recreate the coat of arms. This took eight months of intense work.

Staff, volunteers and supporters were kept abreast of progress by regular updates of blogs and Facebook pages. Groups of staff and volunteers were given regular access to the work, rather than inviting them only to a 'big reveal' upon completion. As a result, these stakeholders understood the reasons behind the decisions that were taken, securing their support for the bold approach to the bed. The donor family were engaged in the same way, making decisions collaboratively, for example over the colour and quality of the replacement silk velvet. Working closely with our stakeholders in this way meant that they waved the flag for the project, which had a great positive impact on the visitor experience.

The conservation studio set up in the house as a legacy result of the building project enabled staff and volunteers to remove and clean original elements on site under supervision. Not only were their skills and experience developed, but also visitors could benefit by seeing the work taking place.

A celebratory booklet of 'before' and 'after' images of the bed was created for the foundation that donated the funding, helping them to understand the impact of their gift. On completion of the project, a final book was created covering all of the work of the project, which is currently being printed as a souvenir to enable visitors to appreciate the extent of the work, as they enjoy a guided tour of the spaces for the first time. The

book continues to generate support for the project and the work of the National Trust and, with copies sent to each of the main contractors, it has also helped to share the details of the project beyond Northern Ireland and beyond the National Trust.

BUDGET AND TIMESCALES

The complete budget for the three year project to open the West Wing rooms was £300,000 (\$450,000), of which the conservation and restoration of the Genoa bed cost £72,000. The treatment of four historic beds, and over fifty-five items of furniture (sofas, wingback chairs, bidets) and textiles (curtains, pelmets, dressing table skirts, altar cloths) was also funded (thanks to beneficial exchange rates). Moreover, clear and detailed specifications and the guidance of specialist conservation advisers facilitated work with local suppliers from the building project. These two factors allowed us to commission over 35% more work than originally anticipated.

The funding did not cover associated interpretation, which in hindsight it would have been beneficial to include, although this is not always within the interest of particular funding bodies. However, alternative arrangements can be planned for work that is not aligned with donors' interests.

The coat of arms: the original was conserved and archived. Note the original colour of the silk velvet revealed by the removal of the mirrored sconces





Genoa Bed:

- Original inner tester retained, cleaned and conserved
- Outer tester recreated using velvet
- Bespoke braiding, fringing, ropes and tassels recreated
- Head-cloth recreated using velvet
- Headboard conserved and re-covered with velvet
- Bed posts conserved and re-covered with velvet
- Foot rails conserved and re-covered with velvet and damask
- Missing button screw covers recreated and covered with velvet
- Head curtains recreated in velvet
- Original coat of arms conserved and retired to Archive store
- Replica coat of arms recreated using a range of skills
- Shell, 5 finials, 4 feet conserved and regilded



A page of the book created to celebrate the project, showing images of the Genoa Bed before treatment

PARTNERS

The resident donor family were very closely involved. Lady Rose Lauritzen lives at Mount Stewart for six months of the year, and she was invaluable in decision-making through her link to the past and clear memories of her grandmother Edith, Lady Londonderry, and of how things were run at Mount Stewart.

Many external suppliers were also involved. As several of the rooms are still used by the donor family, the specifications needed to accommodate this use – whether the room will be open to the public every day or only a few times a year, whether the bed will be slept in or the furniture sat on and so on - in order to make appropriate decisions that balance conservation and apply restoration techniques with conservation principles. Crucial to achieving this outcome was collaboration with accredited conservators who were able to apply their professional judgement to this particular context. Indeed one of contractors used the project for their successful Professional Accreditation application.

OUTCOMES

The response from the funders and from our supporters has been overwhelmingly positive. Through careful interpretation, our supporters have been able to understand Edith, Lady Londonderry and the spirit of place that is preserved and now reanimates her home. Interpreting this rationale has helped an understanding of why some elements have been retired and some conserved and to reflect the theatrical and joyous approach to textiles throughout the interior.

This spirit is also reflected outside the house where Lady Edith's exotic avant-garde approach to planting has been recreated in the gardens, showing the same confidence in putting bold and

riotous colours together as inside the house, and resulting in Mount Stewart's consistency of setting both inside and out. Visitor feedback witnesses to how much they love the results, and the fact that they are returning to see different rooms opened at various times of the year, in line with how the room is used by the family.

LESSONS LEARNED

The 'statement of significance' proved invaluable, helping with the specification of the work and the commissioning of external specialists by articulating the objective of the treatment, and providing the rationale underlying the decisions to conserve and reuse or recreate. Many decisions arise during the life of a project and a clear vision that can be readily shared makes taking those decisions more straightforward by providing clarity of thought and consistency.

The opportunity to undertake this project arose in the final year of delivery of the main building project. This meant that resources, in terms of capacity and energy, were at their lowest. The wisest move was not only to build the predicted resource needs into the business case, but also to add a healthy contingency to cater for the 'unknown unknowns'.

Engaging with stakeholders was essential to bring them along with the decision-making. As project manager, I prioritized making myself available, through attending open mornings, conducting briefings at volunteer meetings at the start of the open seasons, being available for informal discussion and ad hoc walk-about as well as scheduled days on site. Bringing people along with the work meant that more was achieved than the sum of its individual parts, in the emotional as well as the technical and intellectual impacts of the project.

'OH NO, IT'S NOT THE ORIGINAL!' OR GIANT STEPS?

Following a visit to an exhibition of a most unusual artist, Clare Finn ACR considers the role a replica can play

INTRODUCTION

Conservators are often uncomfortable with the idea of replication. Might it be done at the expense of conservation, lack the essence and subtlety of the original? Yet preventive conservation accepts replicas of light-sensitive materials when display of such items in higher light levels cannot be avoided. Digital reproduction allows the eye to go where it generally cannot, so that sketchbooks can be displayed with pages turned digitally.¹ Medieval manuscripts can be digitally unchained from their libraries.² Experimental archaeology tests hypotheses through replication and the restoration of historical interiors would be difficult without at least some replication.³ So benefits are to be had. But not often do we find a replica

The author with Pullen's original, now rather dilapidated, Giant



Image: Ben Morris

The replica Giant on display at the Watts Gallery



Clare Finn



James Henry Pullen photographed in his Admiral's uniform, c.1880s

raise the profile for disability.

Few will know of James Henry Pullen or his work recently exhibited at the Watts Gallery in Surrey. Pullen's life was spent far from the beaux arts. He was an inmate of Earlswood 'Idiot' asylum, the term 'idiot' differentiating it from asylums for lunatics, such as that in which Victorian painter Richard Dadd was incarcerated for killing his father. Nicholas Tromans, the Watts' previous curator, happened upon Pullen's work while visiting Normansfield for his research into Dadd.⁴

Normansfield was where Dr. Langdon Down, who gave Down's syndrome its name, established a home for those with developmental and intellectual disabilities in 1868. Some - textile conservators in particular - may know the Normansfield theatre there with its rare survivals of Victorian stage scenery.⁵ Today Normansfield houses the Langdon Down Museum for Learning Disability, among whose prized exhibits are Pullen's works.

Pullen spent sixty-eight years in Earlswood, from 1848 to 1916, where Langdon Down was Medical Superintendent from 1858. Today Pullen, who had difficulties learning, communicating and was also possibly deaf, might perhaps, be diagnosed as having

Queen Victoria's State Barge, made by James Henry Pullen, 1866-7, various woods, metal, string





James Henry Pullen's Study after the State Barge, 1867, pencil and bodycolour on paper

Autism. Langdon Down called him an 'idiot savant'. The term 'idiot' is nowadays only used inappropriately. Pullen's skill, the intricacy and imagination he displayed - all demonstrate that he was no 'idiot'. Employed as a carpenter, it seems he spent more time creating his own work, and with his lifelong fascination for the sea he drew and created ingenious ships' models.⁶

It is, however, his colourful model Giant that has begun to spread his name further afield. At the Watts Gallery he stood in the sculpture studio, fourteen feet high, facing George Frederick Watts' model for Alfred, Lord Tennyson, Poet Laureate for much of Queen Victoria's reign. Incongruous? Not as much as you might think. Watts made his huge gesso model of Tennyson between 1898 and 1904, whereas Pullen's bold, brash Giant began appearing in photographs from the mid-1860s, with construction and refinement continuing throughout the 1870s and 80s.

Conspicuous? With his height, his expansive chest decorated with medals, his scarlet coat, belted in brilliant yellow, the gold of his epaulets and fastenings, his bright turquoise sash and crowning fez - little is inconspicuous about him. Pullen's doctors called this his 'Giant Russian' but his scarlet coat actually suggests that he is a not entirely accurately attired British soldier from the Crimean war (1853 to 1856).

Created from wood, metal, cardboard, linen, horsehair and rope, Pullen's Giant marched, his arms swung, his ears flapped, his eyelids, mouth and head moved. He makes Watts' monochrome Tennyson look dull indeed. But the model at the

Watts' Gallery is not Pullen's original Giant; he can be seen at Normansfield in a stairwell just beyond the theatre. In his 'youth' he brandished a scimitar and, according to a contemporary, made 'unearthly shrieks' through 'tusk-like teeth' to the delight and terror of any child at the Earlswood annual fete. Today he has lost his hands and hence his scimitar. His sash is stained no longer blue, his uniform creased, dust has settled on him, the megaphone through which he roared sits silent by his side, its deep red fringe trembles no more. His great teeth and wide, handlebar moustache are still indicators of his once proud bearing. Assessed as stable, he is nevertheless too fragile to move.

But opportunities to raise his and his maker's profile came in other ways. Julie McNamara, artistic director of the touring theatre company Vital Xposure that collaborates with professional disabled artists, came across Pullen's Giant in 2015 while undertaking a commission from the Research Centre for Museums and Galleries, as part of *Exceptional and Extraordinary: Unruly Bodies and Minds in the Medical Museum*. The project sent four artists from National Disability Arts networks to eight medical museums, Normansfield among them, to investigate collections, both stored and on display to answer the question: 'Why are some lives more highly valued than others?'

'He [Pullen's Giant] was something else... we simply had to rebuild him' said McNamara. The chance came in 2017 when the Liberty Festival commissioned Vital Xposure to join their

outdoor arts event at the Queen Elizabeth Olympic Park. Master puppet maker, Tony Mason, did the work and it was no mean task. Pullen designed his Giant so that he could manipulate him on his own. McNamara recalled Mason scratching his head looking at the array of pulleys, ropes and strings. 'Pullen had created a track at the base of the neck with over a hundred ball bearings he had fashioned himself to enable the head to turn in a complete circle. The eyes had tiny tear ducts with string fed through to the lids to ensure full movement.' The replica was created as faithfully as possible to Pullen's original creation and now preserves aspects that the original can no longer demonstrate - not just his vibrant colours. He moves, he swings his arms, winks his eyes, flaps his ears, his mouth opens and closes, his head turns 360°. With Vital Xposure's cast of actors with disabilities they brought Pullen's Party to exuberant life, the Giant stealing the show.⁷

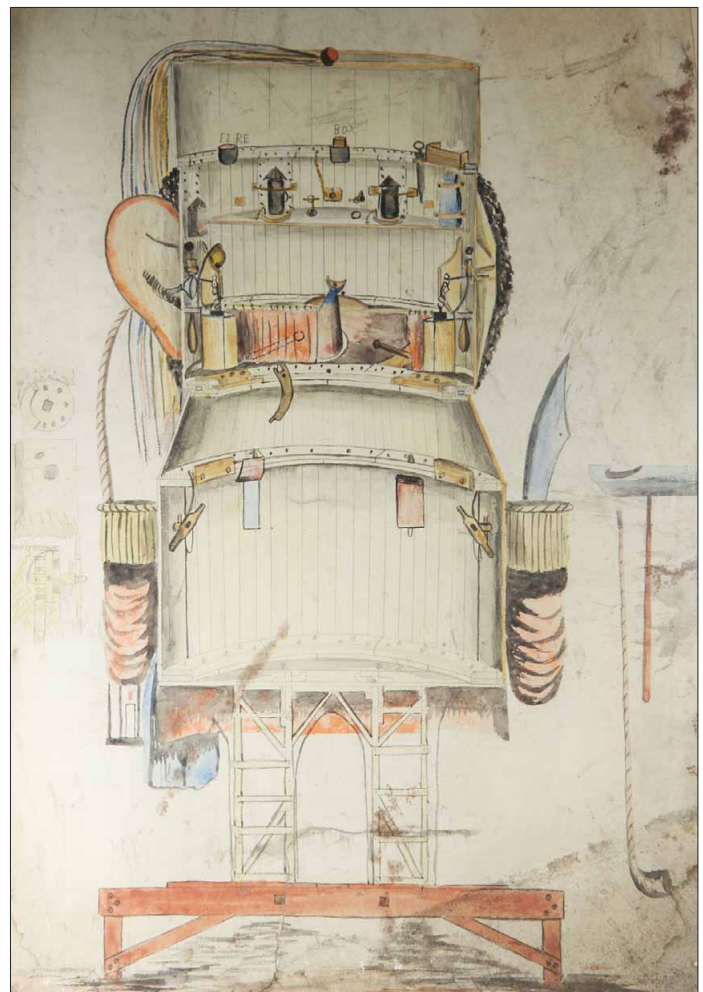
Catastrophe then struck and this magnificent being was destroyed in the Tottenham fire of September 2017, so Tony Mason got to work again and it was Giant No.3 that strode the leagues to the Watts Gallery. He will still raise the flag for disability entertaining adoring throngs and demonstrating the

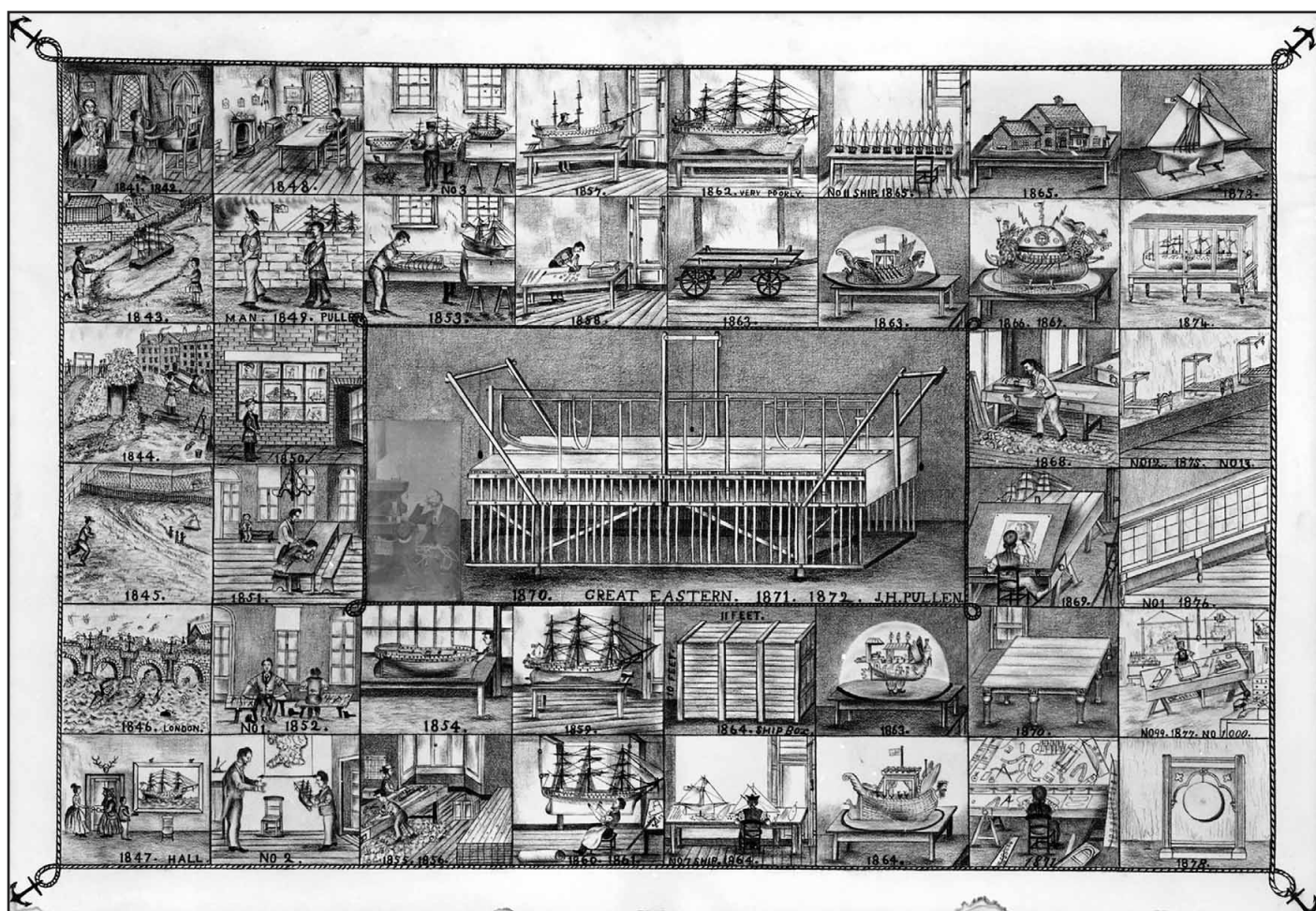
creative imaginations and unique possibilities of artists with learning disabilities. Pullen's story and Giant No.3's connection to the original contribute positively to his magic, which you must now seek out for yourself together with Pullen's wonderful models.

Notes:

- 1 For example, Turner's sketchbooks can be seen on the Tate website: <https://www.tate.org.uk/art/research-publications/jmw-turner>
- 2 The Aberdeen Bestiary is a splendid example featured in Icon News issue 73. Find it at <https://www.abdn.ac.uk/bestiary/>
- 3 The BBC programme aired in July 2018 shows the combination of restoration and craft replication skills that went into the renovation of Miss Cranston's Willow Tea Rooms by Charles Rennie Mackintosh: www.bbc.co.uk/programmes/p06fvz77
- 4 This research resulted in both a book by Nicholas Tromans, *Richard Dadd: The Artist and the Asylum* (2011, Tate Publishing, London) and an exhibition *Richard Dadd: The Art of Bedlam* at the Watts Gallery 16 June - 1 November, 2015.

Pullen's Drawing of the Giant (outside view left and inside view right), late 1860s or early 1870s, pencil on paper





James Henry Pullen's Pictorial Autobiography, c.1878, Pencil on paper

5 See Thompson, K. and Lennard, F. (2013) *Normansfield theatre scenery: materials and construction revealed through conservation*. <http://eprints.gla.ac.uk/91793/1/91793.pdf>

carried out minor work on other pieces all adding to our knowledge of Pullen.

7 <https://vimeo.com/237712409>

6 Model maker, Henry Milner, conserved Pullen's Rotary Barge and

Dream Barge. Harmoniously formed of a creature part human, part feathered and part snake the barge is made of wood, metal and string



Clare Finn

CONFERENCES

WHOSE FIND IS IT ANYWAY? REVISITED

Icon Archaeology Group
Birmingham 6 December 2018

The Archaeology Group held a one-day conference at Birmingham Museums Trust Museum Collection Centre on conserving archaeological finds discovered by members of the public fifteen years after the first conference on this subject was held at the British Museum. With museum professionals, conservators from private and public organisations, and finds liaison officers (FLOs) in attendance, the event served as an excellent forum for discussion.

Pieta Greaves (with **FLO Arwen Wood**), **Gretel Evans**, and **Dr Sarah Morton** presented papers on their experiences as private conservators contracted to stabilise and record archaeological finds found by metal detectorists. In all three cases, the conservators joined the respective projects after the artefacts had been excavated. Alternatively, **Rebecca Lang** (with **FLO Stuart Wyatt**), **Pippa Pearce**, and **Neil Mahrer** offered their perspectives as conservators representing various museums and public heritage organisations. In all cases, the FLOs and Treasure Trove Unit officers served as intermediaries between the finders and archaeologists/conservators. The conference gave me an opportunity to present an outreach project I conducted with London Mudlark whilst a student at Cardiff University and seek feedback from established professionals on their respective approaches. The different perspectives served to offer a more holistic representation of the challenge faced by conservators in effectively meeting the demand to preserve these finds.

With an increased awareness and interest in archaeology and conservation in Britain, members of the public are actively seeking for artefacts with historical significance. Many positive steps have been taken to mitigate counterproductive home remedies (goodbye olive oil) and offer professional guidance on first aid for finds. However, FLOs remain overwhelmed and require the support of local conservators. Unlike archaeologists, who have organised to develop public archaeology schemes and programmes, engagement from conservators remains limited by institutional guidelines, unclear professional ethics, and funding.

The conference took an overall positive tone, celebrating the successes and improvements made in the intervening fifteen years and offering optimism for future public engagement projects. Special thanks to **Pieta Greaves**, Icon Archaeology Group Secretary, for organising the conference.

Kimberly Roche, Conservator MSDS Marine

MIGRANTS: art, artists, materials and ideas crossing borders

Cambridge 15/16 November 2018

This past November, the Hamilton Kerr Institute of the University of Cambridge hosted a conference on the role of migration in the conception of works of art and material culture and its conservation. The event gathered scholars and students of different disciplines from around the world, who discussed how artists, conservators, materials, ideas and techniques have crossed borders from antiquity to the modern day.

The first session - Art and Artists - dealt with the contributions, influences and interactions between foreign artists/artisans in the conception and creation of works of art. **Dr Kristin Kausland**, from the Norwegian Institute of Cultural Heritage Research, talked about how migration and cross-national collaboration are key elements for understanding 'Hansa Art' from late medieval Norway. **Jessica David** and **Edward Town** from the Yale Center for British Art rediscovered the Daniel Van der Queborn oeuvre, and explained how this Netherlandish painter, who never travelled to England, ended up being the most important artist in Elizabethan Britain, with the authors evaluating the strong influence he had on the development of full-length format portraiture. **Javier Grossutti** followed by exploring the Italian migration experiences and their influence on the diffusion of marble mosaic flooring in the UK during the 19th century, through the story of the Mazzioli family. Lastly, **Pia Gottschaller**, from the Courtauld Institute of Art, demonstrated the active exchanges of ideas and two-way cooperation between Latin

American and European Concrete artists during the mid-twentieth century.

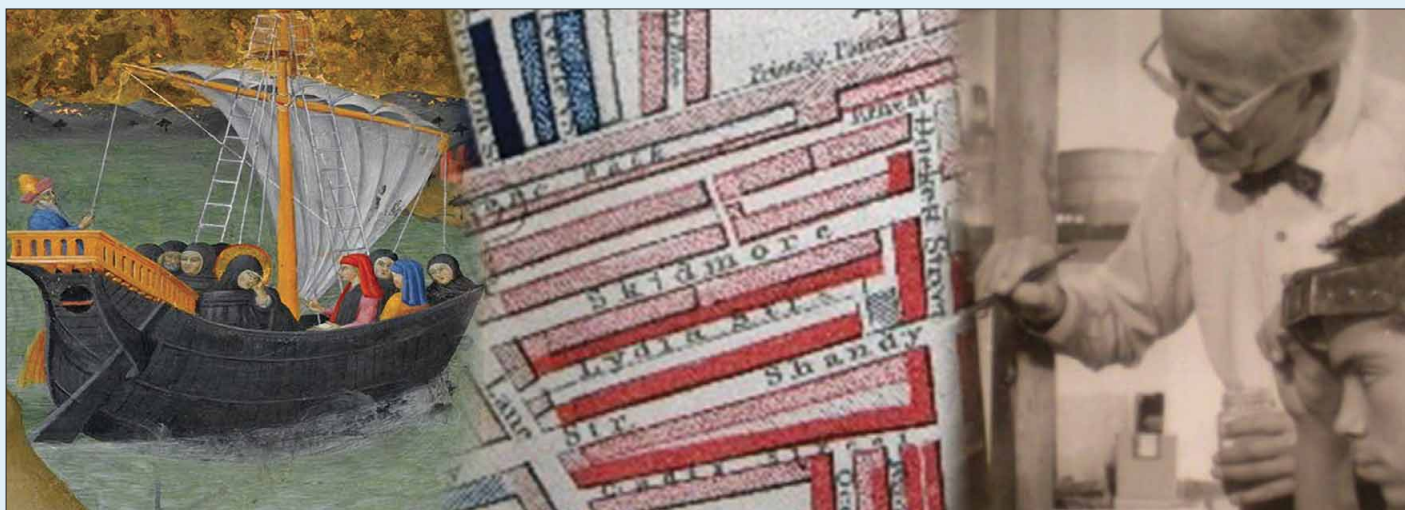
The second session focused on how and why conservators and their treatment practices travel across borders. It highlighted the paths through which conservation knowledge is disseminated, by on-the-job training, formal education or immigration. **Caitlin O'Grady**, from University College London, spoke about archaeological consolidation practices in the early 20th century, pointing out how these techniques were developed and disseminated between archaeology colleagues and professor-student relationships. Then, **Valeriia Kravchenko** and **Katya Belaia**, from the Museum of Ukrainian Paintings and the National Trust, demonstrated how art production and cultural heritage conservation practices in Ukraine have been influenced by changes in the country's political ideology in recent years. In addition, Kravchenko spoke about Ukrainian conservation programs and shared her experience as a student. The final talk of the session, by **Rebecca Rushfield**, focused on European conservators who moved to the United States, tracking the reason behind their moves and their experiences along the way.

Session three - Art and Conflict - started with **Morwenna Blewett** of the Ashmolean Museum, University of Oxford. She explained how British intelligence obtained valuable information on the German colour manufacture industry and conservation technology in the aftermath of the Second World War, and the extent to which British colourmen and German conservation and scientific experts were involved. Subsequently, **Dr Roderick Bailey** analysed the challenges, approaches and shortcomings faced by the Allied

The first migration movement of 'non-Western' artists to the four main destinations (NL, USA, FR, DE). It concerns 'non-Western' artists whose work has been acquired by the Stedelijk Museum Amsterdam between 1895-2003, in the sub-collections Painting, Sculpture, Moving Image and/or Sound & Installation.



Graphic design: Dorian Chouteau



The Migrants conference logo

Monuments Fine Art and Archives team sent to safeguard the cultural heritage in Greece at the end of the German occupation in 1944. Art historian and independent curator **Dr Charlotte Bank** closed the session discussing the current situation of exiled Syrian artists, the challenges they face in their new locations, and how they struggle with the art market that has boxed their works into the 'war art' category.

The fourth session, on materials and techniques, covered a wide range of topics, without confining itself to any specific discipline. **Eckhart Marchand** started off proceedings with the broadly conceived 'Plaster of Paris' and Italian Formatori, an interdisciplinary discussion of how the migration of casting techniques and materials took place against and alongside particular regional and national clichés. This was followed by **Felicia Gottman**, whose paper drew upon new theoretical developments in Science and Technology Studies to trace the surprising legacy of a group of Levantine craftspeople brought to France in the 1750s. **Jenny Bulstrode** brought together the artistic and the scientific in her account of the materiality of copper across cultures in displacement and diaspora. The last speaker of the session was **Jacob Simon** from the National Portrait Gallery, who explored the development of new trading routes for artists' materials between Britain and the rest of Europe, the experience of artists overseas, and the improvements in materials resulting from technological innovation.

Opening the final session of the conference – Transmitting ideas -, **Karen French** discussed the active exchange of ideas between Italian and Ethiopian artists working in the Ethiopian Court during the late medieval period, focusing on icon painter Fre Seyon and the Venetian monk Niccolò Brancalone. **Julia Brandt** and her colleagues from the Technical University of Munich presented findings on the art of the 17th century Paracuarua Jesuit settlement in South America which suggest the use of materials and techniques that strongly echoed the Spanish Baroque Art prevalent in Colonial times.

Lastly, **Esmee Schoutens**, from the Stedelijk Museum, presented research on the

museum's acquisition and exhibitions trends between its foundation and 2003, in an attempt to comprehend how art institutions deal with art production from outside Western Europe and North America. Schoutens noted interesting conclusions concerning geographically underrepresented artists and the impact of migration on artist's visibility.

In times when migrants are at the forefront of the public's attention across the world, sometimes subjected to rejection, this conference successfully reminds us how migration is a driving force for cultural enrichment. The experts provided striking examples of contributions made by migrants to culture, past and present. Moreover, the conference embodied the spirit of migration by encouraging an interdisciplinary and multicultural audience and promoting the sharing of knowledge. The idea is that this conference becomes a recurrent event, sponsoring debate and discussion on the subject. In the meantime, the conference post-prints will be published by Archetype in 2019.

Maria Carolina Peña Mariño

Intern, Conservation of Easel Paintings
Hamilton Kerr Institute, University of Cambridge

A BED OF ROSES: Royal or Revival? Icon Historic Interiors Group

London, 21 January 2019

This one day symposium about the case of an antique bed was held at the Victoria and Albert Museum and chaired by **Anna Buelow**. Congratulations are due to all involved in its organisation.

The event focussed on a single object, a richly-carved oak bed frame, which has been controversial since its 'rediscovery' in 2010. The symposium set out to determine whether this object, with its chequered history and dubious associations, could really be the marriage bed of King Henry VII.

Dr Kate Giles, Buildings Archaeologist, was not the first speaker, but I start my review with a quote from the abstract of her talk, since it gives a key to the whole day's presentations:

Interdisciplinary study is an increasingly

popular term within academia and multi-disciplinary study, bringing together academics, conservators and heritage professionals is at the heart of many major conservation projects. However, interdisciplinary study brings with it a series of challenges. What happens when the sources disagree? Or when 'scientific' evidence challenges long-held popular stories about people or places?

Dr Giles's talk explained how a group of historic buildings in Stratford-upon-Avon were investigated by a team that included the buildings' owners and occupants, local historians and volunteers, architects, conservators and academics. This way of working helped understand the buildings' history and raised new questions for investigation.

Ian Coulson, an antique dealer with an art history degree, 'discovered' the bed in 2010. Historic beds have been his obsession for thirty years. In a conversation with **Anna Buelow** he explained how, from the moment he saw it – catalogued as a Victorian four-poster -, he suspected that it was in fact medieval. His subsequent investigations increased his confidence, eventually convincing him that this was a work of art from the dawn of the Renaissance that should qualify as a national treasure. He had managed to trace the movements of the bed through much of its later history, including a period in the hands of George Shaw, a keen admirer and imitator of Tudor furniture.

Three academic historians applied their specialist knowledge to different aspects of the bed's meaning and possible contexts for its production. **Dr Hollie Morgan** explained the significance of beds as symbols of status and power. **Dr Peter Linfield** showed us what 'gothic revival' beds were like in the 18th century and Regency periods. Nothing like this one!

Dr Jonathan Foyle gave two talks. The first looked at technical and stylistic factors, all indicating that the bed is medieval, then detailed the subtle iconography of the carved figures and ornament, barely comprehensible to most of us in the 21st century. The theme appears to be specific to a Royal Wedding, that of Henry VII to Elizabeth of York. This was highly important evidence.

Dr Foyle's second talk attempted to trace the early history of the bed, starting life at Westminster, probably left with the Stanley family in Lancashire for a century or so, then spending much of the 19th century in the homes of northern industrialists and used as a film prop in the 20th (*Carry on Dick*, 1974).

Study of the materials could be invaluable in a case like this, and much of the afternoon was taken up with material analysis. With specialists unavailable, **Anna Buelow** heroically tackled the Dendrochronology and RCD reports. There had been several attempts at dendrochronology, difficult in a case like this, with some contradictory results. Radio carbon dating was inconclusive. **Lasse Schindler** and **Dr Hilke Schroeder** of the Thünen Institute in Hamburg had looked at the timber DNA. Their results indicate that the oak is Haplotype 7, a species recorded all over Europe, including parts of Britain. In a case like this it is essential that all available tests are carried out, and ideally by more than one lab, especially if there is any doubt. This time, the results did not help a great deal, but it seems that the analysis of wood is a developing field that may deliver increasingly useful information in the future.

In the final technical study **Helen Hughes** looked at the surface coating. The bed frame is currently covered with the sort of dark varnish that was accepted over two centuries as 'typically Tudor' but lurking in the crevices are traces of paint. Oak was an everyday material in the medieval period, and was often painted, sometimes in imitation of more expensive hardwoods. The complex combinations of expensive pigments indicate that a highly elaborate scheme was used on this bed, but the fragments, having survived a thorough stripping operation, are vestigial and could easily have been missed altogether. While there had undoubtedly been contributions to the project from woodworkers and furniture restorers, we did not hear directly from a woodcarver.

In summary, not a minute was wasted on this fascinating day. There is plenty more fun and information to be had by checking Henry VII's bed online but this symposium drew all the threads together. By the end, few if any of us were in any doubt that this was the real thing. This is a ripping yarn, but a very complex one and I apologise to anyone whose contribution has not been reflected adequately here. Many questions remain to be answered more fully. Where did the timber come from? Who made the bed and where? Who removed the original paint and why? Do more comparable objects survive in UK or Europe? And if so, have any original finishes survived?

This meeting hardly touched on the subject of conservation treatment, but showed how combining the expertise of all relevant disciplines can contribute to the identification

of an object and to securing its survival.

In this case the historic record and the paint analysis have so far proved more valuable than the wood tests. New and improved techniques may emerge to rebalance this. It is clear that all evidence, 'scientific' or not, is subject to interpretation and may need to be revisited several times. For decades conservators have been encouraging curators and historians and other academics and specialists to make use of the technical information generated by conservation projects. Much resistance to this seems to have sprung from a deep-seated prejudice against those who get their hands dirty. The gut feelings and instinctive responses of all kinds of specialists deserve respect, as they may often be justified by more formal research. The concept of the multi-disciplinary team

has caught on in the wider world. It has helped museums deliver their most successful building projects. It is hoped that conservators and other practical people can look forward to many successful collaborations in the future.

This event had special significance for me because I have been co-ordinating a comparable investigation into the 17th century figure of Samson from Tombland, Norwich. This object, which I first wrote about in *Conservation News* in 1995, has now been conserved and will go on display later this year. For more information about Samson, please contact me on cathy.proudlove@btinternet.com.

Cathy Proudlove ACR,
Researcher

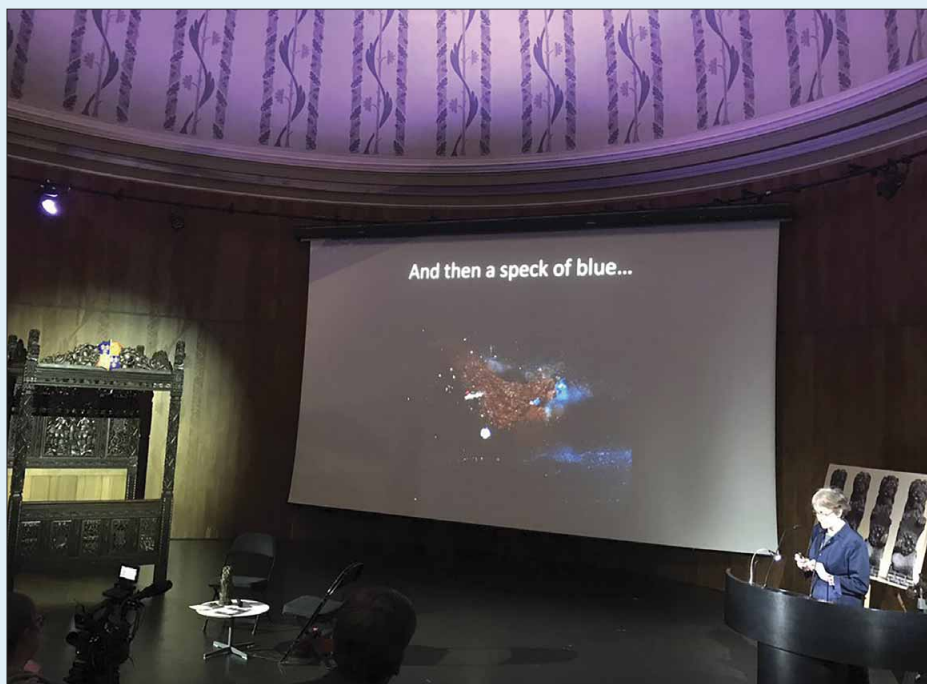
Too good to be true? The bed – royal or revival?



Image: Helen Hughes



Detail of the bed's carving showing Adam



A speck of blue: Helen Hughes discusses paint traces on the bed

**AT THE GOING DOWN OF THE SUN:
approaches to war memorial conservation**
Icon Stone and Wall Paintings Group

Birmingham 15 November 2018

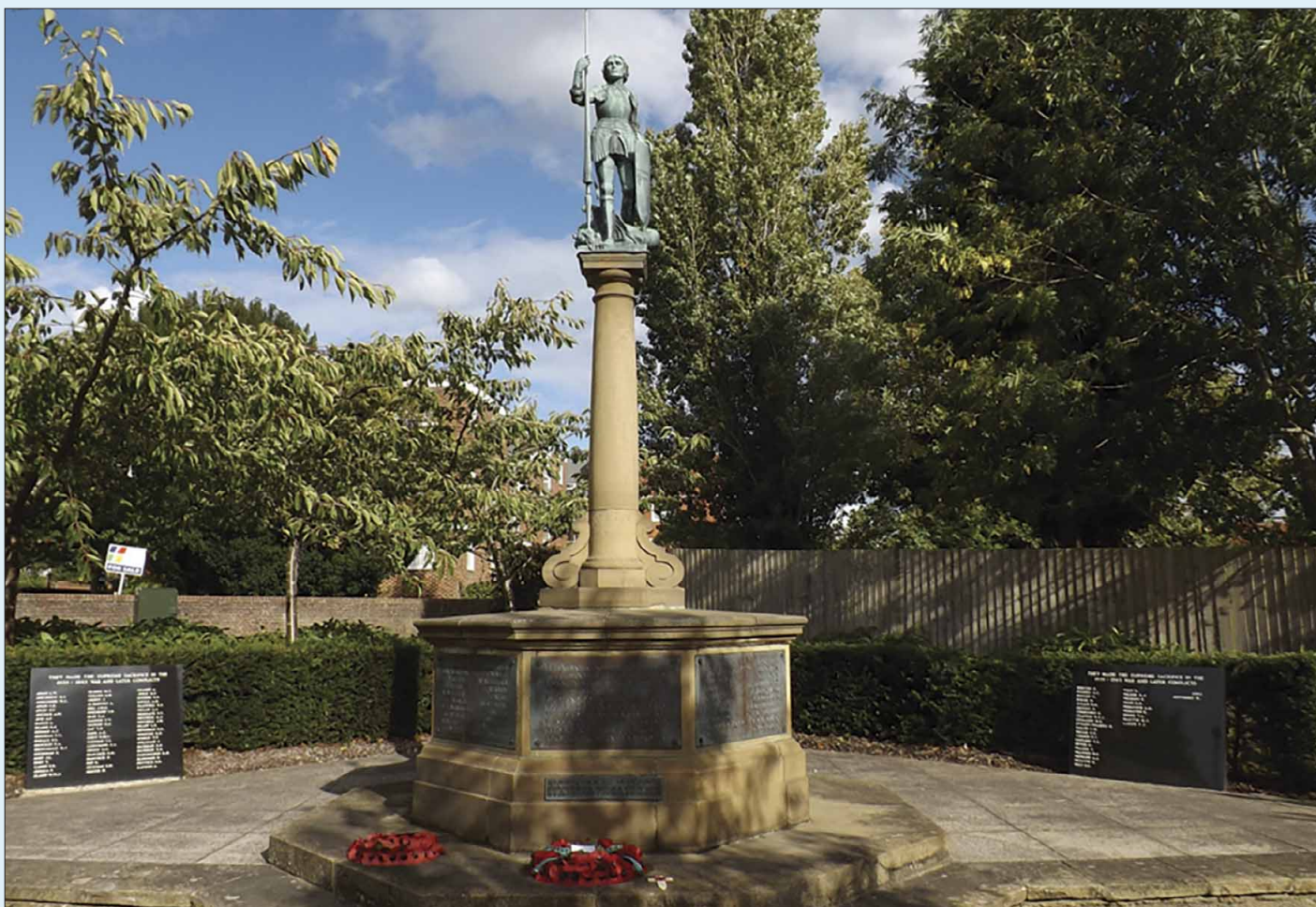
In the context of this special week of centenary remembrance it was quite fitting

that the Stone and Wall Paintings Group with support from Historic England organised a one day conference which brought together those of us responsible for the care of our nation's war memorials.

Ranging from the simplistic to the architecturally sophisticated and often

incorporating a variety of materials, any conservator who has worked with war memorials is aware that even the simplest structures can present both complex issues and ethical challenges. It is also remarkable, and perhaps rightly so, how these civic structures can, and do, generate interest and

Burgess Hill War Memorial by David Larkin. Memorials vary widely in scale and types of materials



strong emotions within a community, whilst other notable structures of architectural interest several times their age can go unnoticed. The communal, spiritual, and family connections with our war dead touches us all.

The first topic of the day was commemoration itself and the different types of war memorials we encounter. **Dr Emma Login** spoke to us about the origin of these memorials and the shift from them celebrating triumphalism alone to that which we are familiar with today, where sacrifice in war is elevated in status regardless of a conflict's outcome. The turning point it seems was the Second Boer War Memorial at Canon Hill Park, Birmingham (c.1906), where the names of individual soldiers were recorded alphabetically regardless of rank. In contrast, I was particularly fascinated by the somewhat makeshift, yet deeply personal and ephemeral street shrines that served as daily reminders for those at war which were erected and positioned on people's houses or street corners within a neighbourhood which have now been lost.

Peter Lloyd of War Memorials Trust (WMT) built upon the previous talk by discussing the challenges our mixed media memorials can present in all their shapes and sizes and the conservation principles that guide the Trust in their decisions of care. Differing levels of cleaning were discussed, often intrinsically linked with legibility of the inscription. The use of biocides continues to be a hot topic; it is a comfort knowing that Historic England are currently undertaking a biocide study at Cheltenham war memorial, so keep your ears to the ground for the results of this.

David Odgers highlighted the important distinction between memorials and buildings in that, although they share common decay mechanisms, memorials are more often than not built and designed without any thought to the efficacy of efficient rainwater dispersal, which can create and expedite deterioration. Apart from the standard considerations concerning the immediate landscape, environment, and its physical consequences, he emphasised the importance of the survey and assessment, which should include the foundation and damp proof course, and the role which previous interventions may play in advancing decay mechanisms. The latter he illustrated to great effect with the aggressive deterioration of the Cenotaph in Whitehall, which in the past was cleaned cyclically at night every four weeks over a sustained period and which has now left the stone surface 'open pored', providing perfect conditions for pollution, algae and microbiology to thrive.

An interesting development and one he hopes to trial on the Royal Artillery Memorial is the use of essential oils as a biocide. Trials

at the Vatican Museum on external statuary have provided positive results. He also posed the question that, with the recent drive to restore our memorials for the centenary, is there a risk that communities will leave them until the next? Or at the other end of the spectrum, now that communities know what can be achieved will they take continual measures to retain this level of maintenance?

David Andrews from the Imaging Team at Historic England gave us an insight into 3D recording in the form of Structure from Motion (SfM) Photogrammetry, which is essentially the knitting together of overlapping images to provide a high definition 3D image of an object. For good results the user should be proficient at photography, and images should ideally be taken by tripod with a 28mm lens and f8 aperture. Images should also be in sharp focus in order for the software to identify the common points (groups of pixels) in each image, providing datum points for the individual images to be pieced together. Images taken by smartphones are best avoided. Agisoft appears to be the 'go to' software which comes in both free and paid versions. As with all software a certain degree of patience and dedication is presumed to master it. But this form of recording should be within the grasp of most users and is an exceptionally good visual aid for recording decay mechanisms over long periods.

Metals conservator **Simon Cottle** gave an introduction to some common problems associated with metalwork, in particular bronze. Proving if corrosion is stable or active is difficult and normally left to visual clues and the individual expertise of the conservator. Attitudes to green oxidation of bronze on the Continent appear more relaxed, whilst we in the UK are more interventive in its treatment; preferring to revert the bronze back to its traditional dark brown colour, especially if corrosion has become uneven and streaky.

Cleaning of bronzes prior to repatination is generally carried out with high temperature water and steam to remove corrosion/pollution products and previous wax treatments. Black waxes containing lanolin were applied frequently in the past, often over existing corrosion, and consequently the control of contaminated run off is of paramount importance to prevent soiling of surrounding masonry. Sadly it seems, such care is not reciprocated by some stone conservators when cleaning around bronze, resulting in damage to the metalwork patina. Sympathetic repatination is a genuine skill that cannot be justified in a few words here. Hot waxing with microcrystalline wax should be undertaken yearly in highly polluted environments.

Jon Gedling gave us an insider's look into the remarkable work of the Commonwealth War Graves Commission (CWGC). We all know what they do but few of us carry the figures around in our heads. The CWGC is responsible for commemorating the 1.7 million war dead of the Commonwealth from both World Wars in 23,000 locations, shared between one hundred and fifty countries and territories. The only continent with no CWGC presence is Antarctica. They maintain 1.1 million headstones in 2000 constructed war cemeteries, which also makes them the largest gardening organisation in the world. Approximately 3,000 headstones are replaced every year and some 15,000 headstones are re-engraved each year in France and Belgium alone. They recover thirty to fifty remains of the lost per year, and get to the site of these remains within four hours of being told of its discovery. All this is achieved with a highly polished professionalism. CWGC, you have my highest admiration.

Unanimously agreed upon, and regardless of architectural or artistic provenance the prime concern of any memorial is the inscription and its legibility. **Angus Lawrence** illustrated the various types of lettering we could expect to see on a war memorial and numerous examples of how these can deteriorate. Lighting conditions are important to assessing an inscription; anyone who has worked on a memorial will have noticed how the legibility can fluctuate throughout the day in relation to its position with the sun. Angus touched on the sometimes complex issue of negotiating the surfaces around the letters of an inscription to mitigate damage whilst cleaning. High temperature water and steam cleaning can be a big help here as it produces high temperatures at low pressure. He also discussed the use of dispersed lime and its exceptional ability to penetrate deep into the fine cracks of limestone inscriptions. Last but not least he could not emphasise enough the importance of engaging an experienced letter-cutter who understands form and cuts on a daily basis to undertake the re-cutting of an inscription.

Looking to the future, **Frances Moreton** of WMT alerted us to the concerning issue of government funding which is now coming to an end following the push to conserve as many memorials as possible before the centenary. The strong need within communities to memorialise was acknowledged, however lessons from the past are not necessarily taken on board. The future-proofing of new war memorials by providing blank recesses for later inscriptions appears to have developed at design stage, but in order to get to grips with the issue of future-proofing then a good move would be to appoint a conservator at design stage to flag up potential design flaws, and

hence reduce the burden on the WMT in future. At present WMT are not involved with new war memorials.

All in all the day provided us with a broad insight into the complexities surrounding our war memorials, and I have merely touched the surface here. On the day there was much to provoke discussion, and I'm sure all attendees will have walked away with a greater insight.

Paul Wooles ACR

Freelance Conservator

MEETINGS

ROUND-TABLE DISCUSSION AND AGM Icon Photographic Materials Group

30 November 2018 London

The format for this repeat of the Photographic Materials Group event was based on the Icon Scotland Group's annual news and ideas exchange, at which speakers give five minute presentations. This latest round-table saw fourteen speakers present a range of topics related to photograph conservation. The main aim was to create an open and relaxed atmosphere in which ideas could be presented and pursued, further questions asked and new connections made. The event was held at the Dana Research Centre and Library in South Kensington, part of the Science Museum.

The first speaker was **Christopher Harvey**, Head of Conservation at the College of Arms

Library and associate lecturer at Camberwell College of Arts. In his five minute talk, called *Every Cloud has a Silver Lining: A Return*, Christopher took the audience back to 1993, when he was working on a programme to rescue photographic collections affected by the Perth flood. He focused on his work at the time, as well as his aim to go back and evaluate whether and how the collection has changed in the intervening years.

Second to speak was **Stephanie Jamieson**, Icon PhMG communications officer and project conservator at the Glamorgan Archives. In her five minutes Stephanie reported on methods and techniques recently learnt from a workshop on the conservation of photographs on glass, held at the Art Gallery of Ontario in Toronto. She spoke about how she was using this new knowledge when working on her current project with glass plate negatives. **Jordan Megyery**, the PhMG's new treasurer and Icon photographic materials intern at the National Archives, spoke about her research into *A Technique for Separating Image Layers from Degraded Cellulose Acetate Film*, sparking a discussion about the different variations to this treatment.

Next was **Ioannis Vasallos**, conservator at the National Library of Scotland and the PhMG's events assistant. He used his five minutes to talk about his experiences working with large collections of plastic negatives affected by mould, explaining how he identified the mould and developed a treatment process for its removal. Then

Emmanuelle Largeteau from the National Maritime Museum discussed how to manage cellulose nitrate negatives and film within collections, including the use of a chocolate chiller as a temporary storage option.

Konstantina Konstantinidou, conservator at the Natural History Museum, spoke about the use of Organic Elemental Analysis (OEA) in identifying cellulose nitrate, comparing this technique to investigation methods such as infrared spectroscopy and the 'float test'. Her research focused on the identification of X-ray sheets in the Natural History Museum's collections. PhMG secretary **Vanessa Torres** then gave a presentation on the need to frequently adapt decision-making approaches according to circumstances. She used her experience of working at the University of Bradford and the National Science and Media Museum to illustrate some important points.

The first session was completed with a talk from **John Balean**, who drew the group's attention to the incredible wealth of images held by digital picturebase Topfoto.co.uk and the challenges that a private photographic archive has to face. This subject continued to be discussed when all the speakers returned for questions.

The second session of presentations was started by **Anita Bools**, photographic conservator for the National Trust. She described a recent trip to Beijing to attend a symposium on paper and photograph conservation at the Palace Museum, at which she was asked to present a poster. Anita spoke about the content of the symposium as well as approaches to conservation in the studios she visited.

Sarah Allen from Lux Conservation was next up with a talk about her recent work at the *Being Brunel* museum at the SS Great Britain in Bristol. She spoke about her work on a collection of photographs in preparation for exhibition; these included salted paper prints, daguerreotypes and stereograms. Her presentation encouraged further discussion about why many of the salted paper prints had a 'W' inscription on the verso, originally hidden behind the mount. Despite these collective efforts the mystery remains unsolved.

Then **Thomas Bower** from the Parliamentary Archives gave a talk on *Work in Progress: Presenting an Ongoing Photograph Conservation Project at an Outreach Event* about his experience of showcasing a conservation project at the *Museums at Night* weekend in the Palace of Westminster. The project he presented at the event involved the conservation of a collection of fire damaged photographs from the papers of William Wedgwood Benn. The next presentation was from **Dr Elena Nepoti**, Preservation Manager at the Imperial War Museum, who described the organisation of

At the Photographic Materials Group AGM and round-table discussion





Fabiana Portini and Adriana Francescutto explore the Science Museum stores before the MMN meeting

a preservation programme for photographic collections at the museum and the challenges that this has presented.

The group then heard from **Lauren Ashley Irvine** and **Simon Fleury**, conservators at the Victoria and Albert Museum. Their talk *Gallery Guide: Introducing the new Photography Centre* gave a taste of what can be seen in the V&A's new galleries, and looked at the work that has gone into this two-year project.

Our final speaker was **Vanessa Applebaum**, conservator at the Science Museum. Her talk about the new Modern Materials Network prompted a keen discussion, particularly concerning the importance of collaboration between the PhMG and this new Network, in part due to a cross-over of the materials in which both specialise.

Following these presentations was a final session for open discussion before the PhMG AGM. The committee would like to thank everyone involved for their contributions to another successful day of photographic discussion.

Icon PhMG Committee

MMN INAUGURAL MEETING Icon Modern Materials Network

London 13 February 2019

The Icon Modern Materials Network was set up in 2018 as a forum to share information on the collection care and conservation of modern materials in UK collections. In mid-February 2019 the inaugural meeting took place at Blythe House Archive in London, where a group of thirty conservation professionals spent the afternoon enjoying talks and tours on all things plastic.

Blythe House Archive houses a hugely diverse range of artefacts from collections including the Science Museum and the Victoria and Albert Museum. Modern materials are found in almost every storage room from early 20th century prosthetic legs to 1980s' roller skates, making it the perfect venue for the very first MMN meeting.

V&A Senior Scientist (polymers) **Dr Brenda Keneghan's** years of experience with modern materials made for an engaging opening talk on the history of plastics. She highlighted the diversity of polymeric materials through a

timeline of plastics including the different manufacture techniques. She showed us many types and causes of polymer deterioration such as how oxygen can lead to the chemical breakdown of polyurethane foam or how the emission of organic acids from cellulose acetate accelerates the deterioration of the polymer. Her talk underlined the importance of collection surveys to understand how many plastics are in our stores and displays and how crucial identification is to find the most suitable approaches to care. Most of all it reminded us that there is still much more to learn.

This led perfectly to **Dr Anita Quye**, Senior Lecturer at Glasgow University, who came to speak about the exciting new MSc in Modern Material Artefacts, starting in September this year. She has identified the lack of education in the investigation and preservation of modern materials, including fibres and dyes, and intends to work with the collections of Glasgow University's Hunterian Museum, Glasgow's civic museums and the Scottish Business Archive to give hands on experience as well as making links with industry and manufacturers.

For the second part of the afternoon we toured both the V&A and Science Museum stores to see a wide variety of plastics and examples of polymer deterioration. At The Clothworkers Centre for the Study and Conservation of Textiles and Fashion (V&A) I was most drawn to a beautiful Vivienne Westwood gown from 2013, where the natural rubber bodice had already started to discolour. The Science Museum showcased their plastics store which is kept at ideal conditions to store the most fragile of their plastics collection.

The afternoon finished with a drink and exchanges about the preservation of plastics and how to move forward with the Network. There is a definite appetite for knowledge-sharing on this complex topic, highlighted by the oversubscription of the meeting, leading to plans for a much bigger venue for the next MMN event. Keep an eye on the website for updates. In the meantime, there will be a MMN session at the upcoming Icon conference in Belfast, or if you have any comments before then please feel free to tweet to @IconMMN and use #IconMMN.

Carla Flack ACR

Sculpture and Installation Art Conservator
Tate



Before treatment: The fragile, fragmented spine

LAYERED PAPER INFILLS

Jasdeep Singh Dhillon of the Oxford Conservation Consortium discusses one approach to re-integrating spine fragments in book conservation

INTRODUCTION

In conservation we are often confronted by objects where the damage has caused significant losses to the original material. There are two main options of dealing with such damage:

i) stabilisation to prevent further losses

OR

ii) infilling of missing material to 'complete' the object

On a very simplistic level, approach two can sometimes be seen as a misguided attempt at restoration, an attempt to disguise damage and make the object appear as if it were new and undamaged. However, the issue is much more complex and a diverse set of factors can affect the decision-making of a conservator. Infilling is sometimes a necessary step towards stabilisation, especially as a method of protecting fragile damaged edges from further damage through handling. Additionally, infilling can also be an important measure to prevent the aesthetic value of an item from being compromised by a conservation treatment.

THE CASE STUDY

At the Oxford Conservation Consortium, we recently worked on an Arabic manuscript from St. John's College where this issue led to an innovative use of Japanese paper to fill gaps in a leather spine. The manuscript in question is MS 370, an Arabic manuscript of Maqamat-al-Hariri (written before 1715) which originally came from a Maronite family of Aleppo before arriving at St John's College Cambridge and then St John's College Oxford.

Originally sewn with a two-station linked structure, it had been re-sewn on tapes and given a late western-style binding with false bands, false endbands and a stiff spine hollow. The weak board attachment had broken through prolonged use but the structure was otherwise mostly stable.

THE TREATMENT

The conservation treatment involved re-attaching the boards using an adapted version of the board slotting method originally developed by Christopher Clarkson.¹ Once the boards were re-attached using a cotton textile spine piece, we now faced the problem of what to do with the incomplete spine fragments.

When placed on the textile spine piece, the leather fragments appeared slightly odd and distracting due to the marked textural difference between the leather and the textile. The thickness of the fragments meant they were in an exposed position and prone to become damaged through abrasion within the box as well through handling.

One approach would have been to store the fragments in a paper or polyester film enclosure within the manuscript box. However, this would have left the fragments prone to further fragmentation and the bare, flat textile spine would have looked inappropriate on a binding which originally had precisely gold-tooled false raised bands. Another option would have been to use new leather dyed and shaped to fit around the original fragments. However, this would have been time-consuming and would not necessarily have produced the precise finish that was possible with Japanese paper.

During treatment: the appearance of the fragments on the dyed aero-cotton board-slotting spine





A diagram showing the layers of paper used in the infill

THE PAPER INFILL APPROACH

After consultation with Petra Hofmann, the college librarian of St. John's College Oxford, we decided to create a layered infill spine piece using toned and un-toned Japanese paper. This would allow the thick fragments to sit protected within a recessed area. The use of Japanese paper for supporting fragile spine fragments is not a new concept in book conservation.² However, in this case the Japanese paper was actually being used to infill gaps in the leather as opposed to just acting as a support.³

Layering the toned and untoned papers in this manner allowed the original fragments to sit comfortably protected within a recessed area where they would not be at risk of abrasion when handled. Each layer was adhered with wheat-starch paste and allowed to dry before the next layer was applied. The entire spine infill was adhered onto the cotton textile spine before the fragments were fitted into their original positions.

Once fully dry, the surface of the infill was finished with an even mixture of SC6000 and Klucel-G. When burnished, this helped transform the fibrous Japanese paper to become smooth and leather-like. Overall, the layered infill spine piece played a protective role but also added a sense of aesthetic completeness to the otherwise incomplete set of spine fragments.

CONCLUSION

Dealing with fragments is a common problem faced by conservators. Ensuring that fragments are stored safely yet also arranged accurately to give a sense of the original, complete object can be challenging. It is sometimes difficult to avoid housing large numbers of fragments in polyester sleeves and paper folders. Yet this is not always desirable or possible due to reasons of space and practicality.

Re-integrating fragments with the object can be especially difficult where they are fragile and broken-up large areas. This

can result in island-like fragments floating in a sea of new material. Not only can this look slightly odd, the weak and isolated fragments can easily become damaged during handling. This case-study showed how carefully toned, layered and surfaced Japanese paper can be used to create infills which are protective and sensitive to the appearance of the object.

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About the author

Jasdeep Singh Dhillon has been a library and archives conservator at the Oxford Conservation Consortium since May 2017. Prior to this he worked on a Wellcome funded project at Berkshire Record Office in Reading. In addition to working at the consortium, he takes a particular interest in the history of South Asian manuscript and print traditions and helps run a charitable organisation called Pothi Seva for the conservation of Sikh religious books and manuscripts.

Notes

¹ See Clarkson, Christopher. 1992. Board slotting—a new technique for re-attaching bookboards. In *Conference papers Manchester 1992*, ed. Sheila Fairbrass. Leigh: Institute of Paper Conservation. 158–164

² See Honey, Andrew, 'The conservation of *Annotaciones in Libro Evangeliorum* using a natural cloth hollow over a moulded Japanese paper spine-former' in *Paper Conservator*, Volume 27, 2003

³ I am grateful to OCC conservators Jane Eagan and Katerina Powell for discussions about this technique

After treatment: the layered spine infill showing the fragments settled within a protective recess



DETECTING GAMBAGE IN 19TH CENTURY WATERCOLOUR MIXTURES

Alice Derham presents the main findings of her project for her MA in Conservation of Fine Art at Northumbria University

INTRODUCTION

My research started on a visit to Jane McAusland's paper conservation studio in Suffolk, where I had the chance to look at an 1830 copy of 'An index of colours and mixed tints' by Theodore Henry Fielding (1781-1851).¹ T. H. Fielding was the elder brother of the renowned water-colourist, Copley Fielding, and was well-known for his artists' manuals on the topics of drawing, painting and engraving. Many such manuals were published in the 19th century due to the rise in popularity of amateur watercolour painting. Included in Fielding's manual was a colour chart of hand-applied watercolour washes of twenty-eight pigments commonly used in watercolour painting, as well as fifty-one named watercolour mixtures. With Jane generously agreeing to loan the object to me I embarked upon a fascinating research project on 19th century watercolour mixtures.²

One of the most sensitive pigments included in Fielding's chart is gamboge, the focus of my study. Gamboge, a resin extracted from trees of the genus *Garcinia* (primarily found in India and South East Asia), was inexpensive, widely available and commonly used as a watercolour pigment in the nineteenth century. It is a brownish-yellow colour in its hardened state but produces brilliant yellow transparent washes when combined with water. Since it contains a naturally high proportion of gum, there is no need for gum Arabic to be added as a binder.³ When mixed with blue pigments such as indigo it can be used to create a wide range of rich greens, making it a useful pigment in the palette of landscape and natural history watercolourists.

The identification of gamboge is of particular importance as it is very light sensitive. For instance, areas where Prussian blue and gamboge were used to create foliage greens can appear bluer after prolonged light exposure as the gamboge fades.



Page 1 from 'An index of colours and mixed tints' by T. H. Fielding (1830) (private collection)

Gamboge is also sensitive to water, alcohol, alkalis and chemical bleaching, which can make aqueous and solvent treatments extremely risky if gamboge lies undetected. In watercolours gamboge can be difficult to detect, especially when it is mixed with other pigments, and it is this problem that prompted my research.

Pigment mixtures including gamboge in 'An index of colours and mixed tints' by T. H. Fielding (1830). Popular mixtures recommended in five or more manuals are shown in bold

Binary mixtures				
	Gamboge + Indigo	Gamboge + Sepia	Gamboge + Lake	Gamboge + Venetian Red
Ternary mixtures				
	Gamboge + Indigo + Burnt Sienna	Gamboge + Indigo + Vandyke Brown	Gamboge + Indigo + Lake	Gamboge + Indigo + Venetian Red

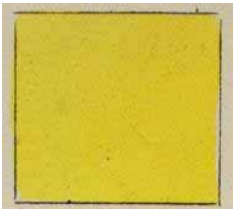


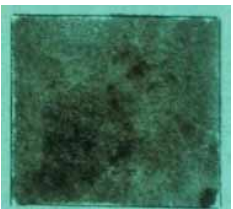



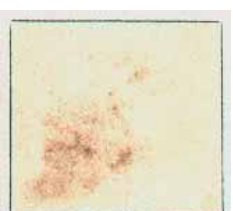
RESEARCH RATIONALE

To the best of my knowledge there has been no study that critically examines the wide range of pigment combinations recommended in 19th-century artists' manuals on watercolour painting, and my research aimed to address this gap in knowledge. The lists of suggested pigments and mixtures found in artists' manuals are a valuable resource for conservators, technical art historians and artists, as they not only provide an indication of when new pigments came into common use but can also help to unravel the reasons why artists may have chosen to use certain colour mixtures. In my project I reviewed a number of key nineteenth-century artists' watercolour manuals from a new angle, to reveal the range of mixtures recommended to artists and amateurs that included the problematic gamboge.

REVIEWING WATERCOLOUR MANUALS

After a systematic search, I found fifty seven manuals (ranging in date from 1800 to 1887) that contained practical

Technical examination results for sample washes of gamboge and yellow ochre on page 1 of T. H. Fielding's *'An index of colours and mixed tints'* (1830)

	Gamboge	Yellow Ochre
Reflected		
UVF		
IR		
IRFC		

information on the use of named pigments and mixtures for watercolour painting.⁴ Fifteen of these manuals only listed pure pigments, but forty-two provided information on both pure pigments and mixtures; indicating that selective colour mixing was a key element of instruction in watercolour manuals throughout the century.









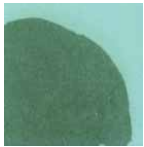


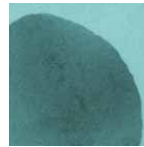
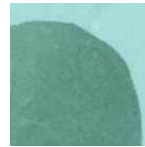


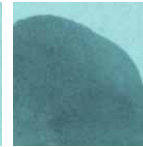
The ways in which information on pigments and colour mixing was presented varied from manual to manual. Some included colour charts, like Fielding's, whilst other authors preferred to provide example pictures or simply list recommended pigment combinations. For instance, Aaron Penley's *'A system of water-colour painting'*⁵ includes long lists of pigment mixtures grouped into categories according to subject matter (e.g. trees and foliage). Towards the end of the nineteenth century, example pictures accompanied by descriptions of the pigments and mixtures used were popular, a possible reason being that images could be easily and cheaply mass-produced, as lithographs or aquatints.

In order to conduct a more detailed and meaningful analysis, a final selection of twenty key manuals was made from the fifty-seven, to include those with the greatest relevance to pigment mixtures. These titles included the most popular authors and were likely to have had a profound influence on practice at the time and the content of less well-known manuals.

PURE PIGMENTS IN WATERCOLOUR MANUALS

The total number of pigments recommended in each manual varied widely, but more than half of the manuals recommended a palette of fewer than twenty pigments. The largest palettes were given by manuals that were published by the colourmen: Ackermann, Windsor & Newton and Reeves. This strongly suggests that these publishers urged authors to include longer lists in order to promote the sales of their colours in the competitive market.

For the twenty manuals, the pure pigments recommended by each author were recorded, to provide evidence of how pigment recommendations changed across the nineteenth century. It was revealed that gamboge and yellow ochre were the two yellows that dominated the nineteenth century, with yellow ochre mentioned in every manual and gamboge mentioned in all but one. Traditional yellow pigments that were less commonly recommended included Indian yellow and Italian pink. The results also indicated when new pigments began to be recommended by authors; for instance, cadmium yellow and lemon yellow were only recommended in manuals published in the second half of the nineteenth century. Finally, green pigments were not often recommended in manuals and authors would instead recommend mixing yellows and blues to obtain the range of greens required for landscape painting.

	Gamboge + Indigo		Yellow Ochre + Indigo		Gamboge + Indigo + Lake		Yellow Ochre + Indigo + Lake	
Reflected								
UVF								

Reflected light and UVF images of pigment mixtures from T. H. Fielding's *'An index of colours and mixed tints'* (1830), showing a more greenish absorption in UV when gamboge is present, in contrast to equivalent mixtures with yellow ochre

GAMBOGE MIXTURES IN WATERCOLOUR MANUALS

In Fielding's manual he recommends eight different gamboge mixtures; four binary mixtures and four ternary mixtures. All of the different gamboge mixtures mentioned in the twenty key manuals, including Fielding's, were recorded in a table that could be used to aid pigment identification (available on request), with the mixtures ordered by category (e.g. trees/foliage) and then sub-category (e.g. autumnal).⁶ In conjunction with other methods, the historic information in this table could be used to help conservators and researchers establish whether or not a mixture is likely to include gamboge based on its location. Identifying mixtures with three pigments can be very difficult, even with instrumental analytical techniques, so historic information on the ternary mixtures including gamboge could prove very useful.

A wide range of gamboge mixtures was suggested for trees/foliage and foregrounds/grass, and the total number of unique pigment combinations including gamboge exceeded fifty. Out of these mixtures, only six were commonly recommended and five of these were included in Fielding's 1830 chart (highlighted in bold in the illustration on page 33). These common gamboge mixtures were chosen for technical examination in the next stage of this project.

THE EXAMINATION OF FIELDING'S CHART

The pure pigments and the common gamboge mixtures in Fielding's chart were examined using reflected light, ultraviolet fluorescence examination (UVF), infrared

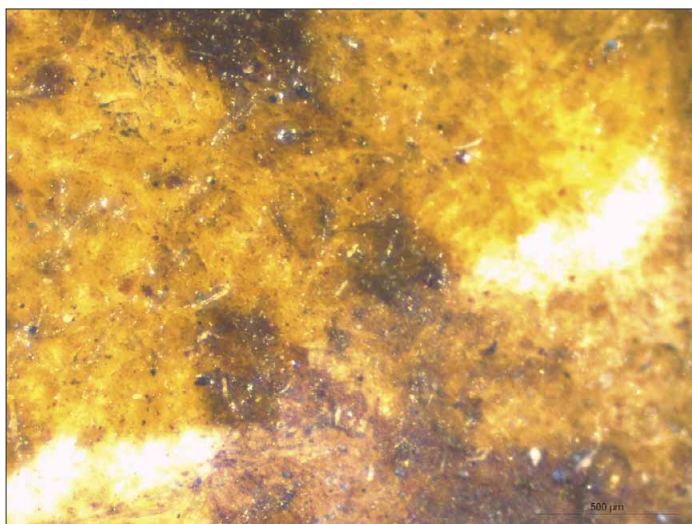
reflectance photography (IR), infrared false colour photography (IRFC), and x40 binocular microscopy.⁷ Mixtures where the more permanent yellow ochre was used in place of gamboge were also examined for comparison.

For the pure pigments, it was found that all of the yellow pigments absorbed UV, were transparent in the infrared and appeared as various shades of pale yellow or orange with IRFC. This demonstrates the difficulty of using technical examination for differentiating between yellow pigments. However, there was a noticeable difference between the UV absorptions, with gamboge absorbing more strongly than the other yellows, including yellow ochre. In addition, gamboge appeared to have a greenish tinge in UV, whereas yellow ochre appeared a dull greyish brown. It was also observed that gamboge had a higher level of gloss and transparency than yellow ochre, under 40x magnification. However, the pigment/gum ratio can be altered by the artist and colourmen as certain pigments require more gum than others, so differences in gloss cannot be relied upon for identification.

UVF photography also gave promising results for the identification of gamboge in pigment mixtures. The strong absorption and slight greenish tinge of gamboge in UV was notable in mixtures with indigo and lake/indigo, for both dilute and concentrated washes, but when the ratio of gamboge to the other pigments was low its greenish tinge was less apparent. Interestingly, for mixtures of gamboge/indigo/burnt sienna or Vandyke brown, the greenish appearance of gamboge in UV appeared to be masked by the brown pigments, both of which absorb strongly and appeared dark brown in UV.

Image of *'Bolton Abbey'* (1834) taken in reflected light (left) and using ultra-violet fluorescence photography (right)





Photomicrograph (40x magnification) of the foliage in the right-hand tree in 'Bolton Abbey'

EXAMINING TWO WATERCOLOURS

By using the historical information gathered from the manuals in conjunction with the results from the technical examination of Fielding's chart, it was possible to infer the presence of gamboge in certain locations when examining two watercolours by David Cox (1783-1859).⁸ For 'Bolton Abbey' (1854) thickly applied gamboge could be detected, due to its transparency, high gloss and gummy appearance under 40x magnification. The greenish tinge of gamboge in UV also proved to be a good indicator of its presence in areas where the ratio of gamboge was high. By using technical examination it was possible to build up a picture of the other pigments/mixtures most likely to be present, without the use of other more complex non-invasive analytical techniques.

CONCLUSIONS AND FURTHER STUDY

Non-destructive analytical techniques (XRF, Raman and VIS-NIR reflectance spectroscopy) used in conjunction with imaging techniques are the most reliable methods for the identification of pigment mixtures at present. However, these techniques are not always effective in identifying gamboge and are likely to remain expensive for some time. These techniques are generally limited to use in conservation science labs by specialists and their use by practising conservators to inform treatment options is in many cases unrealistic.

Although there are challenges in differentiating pigments using the methods described in this article, combining historic and technical methods to infer the presence of sensitive pigments such as gamboge could be a relatively easy and low-cost option for professionals. It is hoped that the new information gathered during this project, specifically the use of UV for inferring the presence of gamboge, may be of interest to practising conservators and could contribute to treatment decisions when treating nineteenth-century watercolours.

Since pigment identification relies heavily on the systematic process of elimination, my intention is to extend this research to include a wider range of pigments and mixtures for comparison, as well as other pigments with potential sensitivities. Developing this study further to include multispectral and hyperspectral imaging technologies and gloss measurements would also be a valuable next step. With greater spectral range and an increased number of

wavelength bands it may be possible to infer the pigments present in mixtures with greater certainty.

Acknowledgements

I am extremely grateful to my supervisor, Dr Jane Colbourne, for encouraging me throughout this research project. I would also like to express special thanks to Jane McAusland for inspiring me to embark on this project, Dr Richard Mulholland for sharing his expertise in pigment identification, Panos Galatis for assisting with the technical examination, and Christina Stephenson (TWAM) for arranging the loan of the David Cox watercolours.

About the author

Alice is currently a Contract Conservator at the Chester Beatty in Dublin. She is willing to share her MA Thesis with anyone who is interested in the results of her research. You can get in touch with her via email: alicewoodward33@gmail.com.

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- 4 An annotated bibliography of the chosen manuals can be found in 'Appendix 1' of the thesis – see note 2 above
- 5 Penley, A. (1850) *A system of water-colour painting: being a complete exposition of the present advanced state of the art, as exhibited in the works of the modern water-colour school*. 1st ed. London: Windsor & Newton. Available at: <https://tinyurl.com/yynpxkvt> (Accessed: 24 November 2018)
- 6 The full table can be found in 'Appendix 4' of the thesis - see note 2 above
- 7 Full technical information can be found in 'Appendix 5' of the thesis – see note 2 above
- 8 Two watercolours by David Cox, 'Bolton Abbey' (1834) and 'Mountainous Landscape' (1838), were generously loaned from Tyne and Wear Archives and Museums (TWAM).

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