

Icon NEWS

THE MAGAZINE OF THE INSTITUTE OF CONSERVATION • SEPTEMBER 2016 • ISSUE 66



Dazzling colour in Cambridge

Also in this issue

Keeping up Standards

Heritage science: SEAHA explained

Agar under threat



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The Royal Mint Experience gives you a chance to see how and where all of the United Kingdom's coins are designed and struck. As well as UK coins, The Royal Mint also makes coins for over 60 countries around the world, many of which are also on display. As part of this project we were delighted to design special cases for the 2012 Olympic medals.



SEPTEMBER 2016 Issue 66



From the Editor

With autumn comes the return to school, college and work and it is time for being serious. So we have some meaty articles to get your teeth into, covering standards, charters and sustainability; spectral imaging crops up a lot and our CEO has important things to say about the glass ceiling. But I

hope we can entertain, too, with the lovely images of the Mary Rose and the illuminated manuscripts in Cambridge.

In the People section and elsewhere, we wish colleagues well who are embarking on new ventures. And maybe you could consider something new: becoming a trustee of Icon? The trustees have overall responsibility for Icon, set its strategy and detailed policy; they approve the budget each year, report to the members annually and supervise the management of the charity through the Chief Executive. Now, this may sound a bit dry but I hear that trustees' meetings are full of lively and sometimes passionate discussion. Trustees care about the profession but do not always agree on how best to take it forward. So why not make your voice heard? And it's awfully good experience for when you decide to smash through that glass ceiling.

Lynette Gill



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Cover photo:
Initial from a Choir Psalter with Hymnal. (c.1444 to 1450)
Master of the Budapest Antiphoner
Lombardy, Italy
© The Fitzwilliam Museum, Cambridge
On display at the Fitzwilliam's current exhibition: *COLOUR: The Art and Science of Illuminated Manuscripts*

Disclaimer:
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professional update

From the Chief Executive



Photo: Matt Wreford

THE GLASS CEILING?

Alison Richmond ACR FIIC
on why it exists and how
Icon might help

I have been musing lately on what appears to me to be a glass ceiling that exists for conservators in the UK. It seems to me that, apart from a handful of high-flyers, conservators tend not to progress up the career ladder beyond the level of Head of Conservation or perhaps the next step up, head of the division in which

conservation resides. Moreover, where are the conservators when it comes to Directors of Museums, Heads of Libraries, or Chief Executives of Archives? And what about heads of non-government departmental bodies, such as English Heritage, Museums, Archives and Libraries Division Welsh Government, Historic Environment Scotland?

If this perception is true what are the reasons for it? Is it that conservators are not interested in these roles? Or is it that conservators do not feel confident enough to compete? Or do they compete but the playing field is not level because the traditional pool of museum directors has always been curators. Or could it be something that is much harder to talk about – class? Are conservators, because they are technical and work with their hands, still perceived as belonging below stairs rather than in the corridors of power?

Or is it something that is not unique to conservators, that faces any professional – scientist, engineer, medic, academic – at some point if you want a top level career you have to accept that you are not going to do what you trained for and love doing, the practical, hands-on work. You are going to be a manager and will spend more time on budgets, fundraising, staff management and ‘politics’ rather than on lovely historic objects, more efficient turbine blades, excising brain tumours and so on, even though enabling others to do these things is a big part of your role as a manager.

At Icon’s recent conference, we held a lunchtime session on leadership. This was led by Katy Lithgow, Head Curator at The National Trust, with Simon Cane, Director, UCL Culture at University College London, and Sarah Staniforth, former Museums and Collections Director at The National Trust, giving short presentations on their careers. It was very well attended. It turns out that many conservators feel that there are indeed barriers to their career progression and more importantly that something can and should be done about that.

Part of the answer lies with ourselves. We need to develop certain attributes, knowledge and skills, for example, understanding of policy and strategy, high level presentation skills, being comfortable with big-picture thinking, courage to take the initiative and to challenge others. It goes without saying that being able to read and understand accounts is vital to progression.

‘Being in the right place at the right time’ is almost always a feature of career progression. However, the lunchtime group recognised the conservator’s need to have a thorough understanding of the job before taking it on (another product of our training). Perhaps we should be less cautious (although our training tells us the contrary) and say ‘yes’ first and then work out how to do it afterwards!

Everyone agreed that Icon could do more to help develop conservators in this direction: promote existing external leadership courses, such as Clore ¹, and provide more and relevant mid-career CPD opportunities to learn management skills. Our keynote speakers both agreed that having a mentor and a peer support network makes all the difference. It would be interesting to debate whether setting this up within the profession would be the most effective way of providing support or whether conservators should join existing external networks, such as the Women Leaders in Museums Network ². It was recognised that whatever provision is made, it should accommodate self-employed conservators as well as public sector employees. Just as Icon has embedded PACR in the conservator’s early career pathway, it is now time to do the same thing for leadership. It is never too early to start preparing for it!

Since the conference, various conversations have been taking place regarding next steps. Among those being discussed are management modules for mid-career professionals and a bespoke leadership course for conservators. I would be very interested to hear your thoughts and ideas.

Although there are few role models to look to, there are some and we can learn a great deal from them. With this in mind, I have set about interviewing as many as I can find to make them more visible to the membership. What I really want to find out from each interviewee is what the barriers were for them and what helped them overcome those barriers, both in terms of external opportunities and internal attributes. You will find the first of these in the next issue of Icon News.

¹ www.cloreleadership.org

² By invitation only

COULD YOU BE AN ICON TRUSTEE?

Planning is currently underway on our new strategic plan for the next three years. This is an exciting time when Trustees will be setting the direction of Icon and establishing priorities within our three main strategic themes:

- Strengthening support for professional conservators
- Raising the public and policy profile of Icon
- Widening the membership through a supporter category

Icon's Board is normally made up of a maximum of sixteen Trustees, plus the Chair. Of these, twelve are elected members (usually from the conservation field) and four, who are not conservators, are co-opted to bring in external expertise and perspective. In December 2016 we will need to fill five elected seats and two co-opted seats.

If you are a member, please do think about standing as a candidate. You will need to ask two members to nominate you. Alternatively, you could consider nominating a colleague. There are five seats this year including those reserved for Scotland and Northern Ireland. Although some Trustees may stand again the Board positively encourages new candidates. You don't need to be an expert on strategy, finance or governance (although that could help). Most members will have learned enough in their work to provide the expertise we need. Experience is valuable but emerging professionals, including students, would be very welcome and you can make your case through our election system. You can find more information at <http://icon.org.uk/trustee-institute-conservation>.

Members will have recently received an email 'Nominations Now Open!' from Mi-Voice, our election system provider. The on-line nominations form is easy to use. Note that because Trustees communicate by email, nominations can only be dealt with electronically.

In early November all members will get another email inviting them to vote. If you don't have an email address, write today to Mi-Voice, Democracy Technology Limited, Gamma House, Enterprise Road, Chilworth Park, Southampton, SO16 7NS, asking them to register you as an Icon member who has no email address and they will send you voting papers by post.

Supporters, you don't have to be left out. Why not upgrade to Associate Membership and you will then be able to stand for and/or vote in an election. It's easy to do; just call or email the membership team at 0203 142 6799 - membership@icon.org.uk.

The Nominations Portal closes at the end of Sunday 2 October 2016, so please act now.

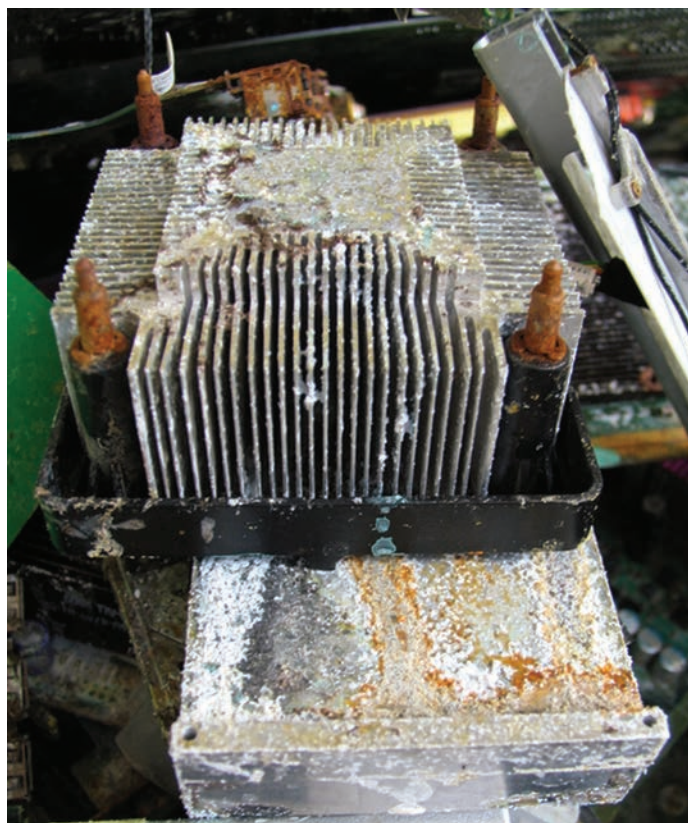
Simon Green

Business Manager

JOURNAL UPDATE

Call for Submissions

The Journal of the Institute of Conservation (JIC) primarily publishes peer-reviewed Full Articles and Shorter Notices detailing innovative research and practice focussed on the preservation of cultural heritage in all its forms. Book Reviews are also warmly welcomed.



The future of conservation: 0s, 1s and their substrates

You can sample the Journal at tandfonline.com/toc/rcon20/current

In June 2017 we will publish a special 40th anniversary issue on The Future of Conservation – please see <http://icon.org.uk/news/call-papers-future-conservation> for further details about how to submit your article for consideration for inclusion in a wide ranging and diverse issue.

We are also accepting submissions for publication in the forthcoming February and October 2017 issues and topics could include (but not exclusively):

- advances in collection care, display and archiving
- advances in interventive treatments
- advocacy and ethics
- critical approaches to conservation
- new understandings of decay
- participatory and collaborative processes
- professional and ethical issues
- remedial or preventive conservation
- technical studies of objects and conservation materials

If you would like to discuss potential articles for any of the issues, please contact the Editor, Dr Jonathan Kemp. (journal@icon.org.uk)

MANUSCRIPTS CONSERVATION GRANTS

The National Manuscripts Conservation Trust is once again offering grants for the conservation and preservation of manuscripts and archives. **The next deadline for the submission of applications is 1 October 2016** and the results will be announced in early December. If you want to plan ahead, the deadline after that is 1 April 2017.

Since its founding in 1990 the NMCT has awarded grants of nearly £3m. It is the only grant giver solely focused on manuscript conservation and they are keen to spread the

benefit of their available funding, so do consider applying. Their grants ensure that important collections can once more be made accessible to the public and researchers.

Applications are welcome from non-national institutions such as county record offices, museums, university archives/special collections, cathedral archives and libraries, as well as owners of manuscripts that are exempt from capital taxation or owned by a charitable trust.

Grants can cover conservation, binding and other preservation measures, including digitisation if it is part of a wider conservation project. The significance of the collection or items to be conserved, as well as the proposed conservation treatment are carefully reviewed by Trustees when making their decisions.

Download the application form from the NMCT website: www.nmct.co.uk.

If you have any queries contact Mrs Nell Hoare, who manages the Trust. You can contact her either through the NMCT's website or at info@nmct.co.uk.

OUTSTANDING SERVICE

Many of you will have already heard about the retirement of Walter Henry after twenty nine years as the moderator of the Conservation DistList. Under his stewardship the service has grown since its inception in 1987 to reach nearly thirteen thousand subscribers and over one hundred countries. So we join conservators all over the world in wishing Walter a well-deserved rest from his labours. Not that he is giving up entirely, as he will continue to manage the Conservation Online (CoOL) digital archive.

The Foundation for the American Institute of Conservation (FAIC) relies on donations to help keep the Cons DistList running at a cost of \$30,000 a year. So any contributions would be gratefully received both to honour Walter's role and ensure the survival of this valuable service for another thirty years. Contact FAIC Development Associate, Melissa Ezelle, on mezelle@conservation-us.org.

NEWS FROM THE GROUPS

Book and Paper Group Chair's update

The Book and Paper Group would like to thank the following for contributing to our breakout sessions at the Icon 2016 conference: Aafke Weller, Mette Peters, Carien van Aubel, Lisa Forman, Melissa Huddleston, Nathaniel Deines, Benjamin Lord, Louise O'Connor, Elodie Lévêque, Gabrielle Vergnoux, Rowena Doughty, Karen L. Pavelka, Ayshea Khan, Françoise Richard, Sarai Vardi and Ted Stanley. We would also like to thank Cordelia Rogerson, Fiona McLees and Sonja Schwoll for chairing the sessions and last but definitely not least Rebecca Goldie and Liz Ralph for all their work before, during and after the conference.

We would also like to welcome the new CTR Chair Fiona McLees and give a big thank-you and farewell to outgoing

Chair Françoise Richard who has done an amazing job!

We are pleased to announce a new bursary scheme for Book and Paper Group members. The two-year scheme will fund twenty bursaries of up to £100 for Group members undertaking training and professional development. We are hoping to start the first run in September/October, so please keep an eye out – we will be advertising through various channels.

Applications will be assessed every six months and bursaries awarded in the following categories:

- ACR and PACR
- Independent conservators
- Conservators in institutions
- Students
- Qualified and looking for work.

The scheme is funded using the surplus from the Book and Paper Group *Adapt and Evolve Conference* 2015. We are delighted to be reinvesting the proceeds of the conference for the benefit of our members and the profession as a whole.

Michelle Stoddart

News from the CTR

Hello from the new Chair of the Book and Paper Group Co-operative Training Register! I work as a Paper Conservator at the Bodleian Library, and have been an active member of this committee for over three years and was also deeply involved in planning last year's *Adapt & Evolve* conference.

To refresh your memory on what this committee does: the CTR exists to plan events such as courses and lectures for the Book and Paper Group. Our members can offer training if they have a particular skill they wish to share, or alternatively request training if they have a skills gap. I strongly encourage you to contact us with ideas or proposals for workshops, courses or lectures, as we need to know what you want so that we can offer a suitable programme of events.

Currently in the pipeline is a course on making drop-spine pressure boxes, as well as 'Alexander Technique for Conservators' and a re-run of 'Photoshop for Conservators'. I will provide you with further news in the next issue concerning upcoming events. In the meantime if you wish to propose an idea for a training session you would like us to run, or that you would like to run with us, please use the online forms on the Icon website. You will need to login, go to the Book and Paper Group pages, and then to Conservation Training where you will find the relevant information. Alternatively you can contact us at iconbpg@gmail.com.

Fiona McLees, CTR Chair

Ethnography Group

There have been a number of changes to the committee over the last few months. Emilia Kingham has stepped down after six years as Chair, with Charlotte Ridley taking on the role. We would like to thank Emilia for all her hard work and commitment to the committee over the years and wish her the best of luck for the future.

We would also like to thank Gemma McBader who stepped down from the committee earlier this year. Gemma dealt with Web Administration for the group and we are very grateful for her contributions to the committee.

On 1 June we hosted an evening talk at UCL given by Sophie Downes, on the types of fungi encountered within historic collections and the damage that can potentially be caused to organic materials. It is clear that Sophie's PhD research has far-reaching implications on how the profession prevents and treats mould growth across collections. We would like to thank Sophie for giving a fantastic talk and we look forward to hearing more about the outcomes of her research in the near future. Another big thank you to those who joined us for the AGM and drinks reception held afterwards, it was great to see such a mix of familiar and new faces.

Committee member Misa Tamura is currently the Research Conservator for 'Situating Pacific Barkcloth Production in Time & Place', an AHRC funded multidisciplinary research project looking at the history, manufacture and conservation of barkcloth (<http://www.tapa.gla.ac.uk/>). Plans are underway on a behind the scenes tour of this project at the Centre for Textile Conservation and Technical Art History at the University of Glasgow, to be held in November. Look out for further information about this event and how to register via Icon.

There are two possible gallery talks in the works, one of which will focus on the conservation of shadow puppets undertaken for an exhibition on shadow puppet theatre from Indonesia, Malaysia and Thailand at the British Museum. We're also planning another Icon Ethnography 'Showcase' for next summer. We hope to make this event in the same style as the hugely successful Japanese Tissue Showcase held in 2015, which contained a mixture of both talks and practical demonstrations.

The committee really wants to host more events outside of London and we're currently working with Icon membership to get a greater understanding of our members' locations. However, if you're a member of the Ethnography Group and know that your institution/place of work would be happy to host an event, please get in contact (see below for contact details).

Finally, the Group committee is in need of more members to help plan, organise and create events. If you'd like to join the committee and help be a part of this process or would like further details, please contact Charlotte Ridley via cridley@horniman.ac.uk

Furniture and Wood Group

The committee would like to take this opportunity to express their gratitude and thanks to the out-going chair of the Group, Piran Harte. Under Piran's careful stewardship the Group has gone from strength to strength. His dedication and commitment mean that we have grown in size and stature – recruiting new members and putting on an impressive rostrum of events. Thank you!

The new chair, Alex Owen, was elected at the Group AGM and intends to carry on in the same vein - continuing our focus on providing affordable, high-quality training and

informative networking events. As part of the ensuing reshuffle, Tristram Bainbridge takes over as Secretary, and we welcome Michelle Kirk as Web Officer. Ernest Riall remains as treasurer.

Upcoming events

Please keep an eye out for a call for papers for our second Furniture and Wood Group Symposium. Our inaugural event last year was a great success and we hope to repeat the same interesting breadth of topics again this year – practical and research topics both being very welcome! We currently have the event pencilled in for Easter 2017.

Due to the success of our 'Photoshop for Conservators' workshops held in conjunction with the Book and Paper group in June and July, we are scheduling repeat events for the Autumn in London and Northampton. These events will, again, be held in conjunction with other special interest Groups. We will be sending out an Iconnect to members, or see the website for details.

We are in the process of organising a day of studio visits to be held in Amsterdam to accompany the Stichting Ebenist Conference held there this November. Again, look out for the Iconnect or see the website for more details.

And finally our next committee meeting is due to be held on Wednesday, 26 October from 6 to 7pm at the Dove pub by the river in Hammersmith, London. All are welcome!

Paintings Group

It is with regret that we must announce the cancellation of John Finlay's previously advertised talk 'Ripolin, Flags, Wicker and Wood: Picasso's "Notre Avenir est dans l'Air" (1912) and the Invention of Cubist Sculpture, 1912-14' planned for Monday 26 September.

However, in place of this Rebecca Hellen will be giving her talk "*Fearful Difficult Subject*" *Carnation, Lily, Lily, Rose (1885-86) & Sargent's Process: New Research*. This study was originally begun as part of wider research into John Singer Sargent's methods and materials for easel paintings, carried out at Tate with Joyce Townsend. A more focused piece was then developed with art historian Elaine Kilmurray. This will be at the centre of the talk on September 26, revealing new evidence and its deepening of our understanding of this iconic work.

Rebecca Hellen is a practising Paintings Conservator at Tate Britain and has worked at Tate since 2002. Her focus on Sargent began with treatment of his easel paintings at Tate, and has deepened recently with research supported by The Paul Mellon Centre for Studies in British Art.

The talk will be at our usual venue, Freemason's Hall, 60 Great Queen Street, London WC2B 5AZ (close to Covent Garden and Holborn Underground stations). Doors open at 6:00pm, with the talk 6:30-8:00pm. Ticket prices are as follows: Icon members £10, non-members £15, students £5 (student card required to be shown on the door); wine and cheese will be available. Tickets must be booked through the Eventbrite website (www.eventbrite.co.uk). Note that refunds for those

unable to attend can only be issued if you notify us at least two days before the event.

Please also keep your diaries free on Tuesday 22 November, when Professor Aviva Burnstock (Head of the Department of Conservation & Technology at the Courtauld Institute of Art) will present her talk 'New technical imaging of paintings at the Courtauld' at Freemasons' Hall. This will introduce some of the data from recent studies of paintings at the Courtauld using scanning x-ray fluorescence (MA-XRF) and near infrared (NIR) imaging. The images have provided novel information about the materials and techniques used for some of the Courtauld Gallery's most important pictures. New insights and issues related to interpretation of the results of these imaging techniques will be discussed.

Photographic Materials Group

Icon16 Conference: student bursaries

The Icon16 Conference may seem like a happy but distant memory already, however, we would like to pass on our congratulations to our two student bursary recipients, Stephanie Jamieson and Clara Prieto. We had originally intended to make just one award, but due to the standard of submissions and the closeness of the final anonymous marking, we made the decision to award a second. Clara, a PhD student at Escuela Superior de Conservación y Restauración de Bienes Culturales de Madrid, and Stephanie, then a student on the MA Conservation course at Camberwell, have shared their experiences of the conference on our blog. Which brings us onto the next item, the launch of...

The Icon PHMG blog

We are very pleased to announce the launch of the new blog: <https://iconphmgblog.wordpress.com/>

The blog has been set up disseminate information about best practice, research and understanding relating to the conservation and preservation of photographic materials. We hope that as it develops, the blog will become a valuable platform through which we can:

- publicise and report on events of interest to those who work in the field of the conservation and preservation of photographic materials
- provide a forum for photographic materials conservators and related professionals to share research, and to connect and discuss the issues and questions that we encounter in the course of our practice
- share the information about photographic materials conservation and preservation with other conservation professionals and members of the public

If you would be interested in submitting a post on your work, a project, or research you have carried out, or you would like to provide a review of a course, event or exhibition you have attended, or would like to share your ideas on an issue you feel would be of interest to our readers, we would love to hear from you. As a guide, we would generally like posts to follow the following format:

- A title
- A brief biographical description
- Photographs to illustrate the content of your post, preferably including one of yourself
- About 400 words/roughly three paragraphs of text

In terms of style, for most posts, the intended audience will be national and international photographic conservators, but please contact us at iconphmg@gmail.com in the first instance to tell us about your idea.

Textile Group

The Icon16 conference, *Turn and Face the Change: Conservation in the 21st Century*, was held in June at Aston University, Birmingham. On the first day, there were two textile plenary sessions, with eight presentations in total and all were well attended. Many thanks to Alison Lister and Leanne Tonkin for chairing these. For reviews of these sessions see pp 27 ff.

The Textile Committee are currently organising several visits and events – look out for details of these as they are confirmed on the Icon Textile Group web page. Further Group news is available on Iconnect and the Facebook page.

The National Museum of Scotland, Edinburgh, is hosting the DATS (Dress and Textile Specialists) conference, 3–4 November 2016, to coincide with the opening of the new fashion gallery. The theme of the conference is unlocking the commercial potential of fashion and textile collections.

Finally, many thanks to Kate French for organising this month's successful visit to Tankerdale Furniture Conservation and Restoration Studio in Hampshire, which included a tour of the studio and an insight into their work

CHANTRY LIBRARY NEWS

In welcome news announced by the Oxford Conservation Consortium, the Chantry Library re-opened after a period of closure on 1 August. The OCC became the new owner of this unique collection of conservation publications in February this year and has now put in place a new librarian, Valérie Beautemps, and a new website. You can visit the Chantry Library online at:

<https://chantrylibrary.org/> or contact Valérie on chantrylibrary@gmail.com to arrange a visit.

CORRECTION

In the July 2016 issue of Icon News the image at the bottom of page 22 was incorrectly described as a presentation by Professor Maria Perla Colombini.

The caption should have read:

Dr Marianne Odlyha's presentation on nano-thermal analysis and atomic force microscopy (AFM)

Sincere apologies to all concerned.

Congratulations!



Frances Lennard has been promoted to the post of Professor of Textile Conservation at the University of Glasgow. This is the first appointment to a professorial position in textile conservation in a UK university, and Frances joins a small number of professors in other conservation programmes, a testament to the development of conservation as an academic subject.

Frances leads the MPhil Textile Conservation programme at the University of Glasgow. She is currently Principal Investigator on two research projects: an investigation of Pacific barkcloth in collaboration with Royal Botanic Gardens, Kew and the National Museum of Natural History, part of the Smithsonian Institution, which received funding from the AHRC, and a Leverhulme Trust-funded project investigating tapestry conservation and display, in collaboration with the School of Engineering at Glasgow.

Departures



Last month, the office bid goodbye to an especially dedicated member of staff, as **Julia Jablonska**, Administration Officer, wrapped up her role and headed north to begin her MA in Fine Art Conservation at Northumbria University.

Julia's role brought her into close contact with a wide variety of members – from Group Committees who liaised with Julia over financial administration; conference delegates who mingled with Julia at Icon16, where she was conference administrator; and indeed, in the many conservation practices whose studios Julia visited as part of her own private research ahead of her MA studies.

'I've been very lucky to gain a far deeper understanding of the sector than I had before,' said Julia ahead of her move to Northumbria. 'Members welcomed me into the fold and were all very keen to share their experiences with me. I am very sad to be leaving Icon.'

A highly-rated member of Icon's team, Julia's sheer efficiency and attention to detail will be hard to replicate. Thankfully, Julia will still be very much involved with the conservation sector and we will surely be seeing her at an Icon event soon.

Appointments



From left to right: Mark Searle, Judy Wetherall, Gerry Alabone, Siobhan Barratt, Carmen Vida, Heather Porter

Building work on the new conservation studio at Knole is nearing completion and we are extremely pleased to announce the new team of conservators who will be working on the fantastic collections at Knole:

After receiving an MA in Upholstery Conservation from the Royal College of Art/Victoria and Albert Museum, **Heather Porter** spent eight years working in America at The Colonial Williamsburg Foundation, Williamsburg, Virginia, going to The National Trust for Historic Preservation at Lyndhurst, Tarrytown New York, and a Fellowship at The Metropolitan Museum of Art, New York. After a period working on the upholstery for the Arts of the America's Galleries at the Museum of Fine Arts, Boston, she returned to the UK at the end of 2010 on contract as Senior Upholstery Conservator at The Victoria and Albert Museum, London. A deliberate move into the London upholstery trade lasted three years before the pull back into conservation employment was too strong to ignore.

Having previously studied Archaeology and Classics at Edinburgh University, **Mark Searle** completed a Post-Graduate Diploma in Conservation Studies at City and Guilds of London Art School. Since graduating, Mark has

worked in both the private and museum sectors, specialising in the conservation of frames and furniture. Mark was employed as a freelance Decorative Arts Conservator at Titian Studios in West London, and in 2015 undertook an internship in Frame Conservation at The Guildhall Art Gallery. Mark has since been working as a Frame Conservator for the National Maritime Museum.

Carmen Vida trained as a conservator at the Institute of Archaeology, UCL London, and graduated from the MSc in Conservation for Archaeology and Museums in 2013, after completing internships at the Museum of London Archaeological Conservation, and in the British Museum Organics Section. After graduation Carmen worked as a project conservator for University of Cambridge Museums, and for the last two years has been back in UCL working as a Conservation Teaching and Research Assistant. Carmen has an active interest communicating and promoting engagement in conservation, and has volunteered with Heritage without Borders and run conservation schools in post-conflict areas such as Sarajevo and Kosovo. Carmen organised the Conservation engagement programme of activities for UCL's World Archaeology Festival for the last couple of

years and instigated the creation of a Conservation Lab blog.

Gerry Alabone has specialised in frames conservation for over twenty years. After studying painting at Bath Academy of Art, he was employed in the framemaking trade and public galleries before studying conservation at London Guildhall University. He was Lead Frames Conservator at the City of London's Guildhall Art Gallery, Head of Frames Conservation at Tate, and Joint Chair of the Icon Gilding & Decorative Surfaces Group. Gerry is currently also Lead Lecturer of wood conservation at the City & Guilds of London Art School.

Judith Wetherall's primary conservation training was in the conservation of wood, stone and allied materials at the City and Guilds of London Art School, specialising in gilding, japanning and period paint. Following a Winston Churchill Travelling Fellowship studying gilding and decorative period paint on architecture, furniture and frames, Judith became self-employed and has now run her own workshop for forty years. During this time Judith worked at Brighton Pavilion, numerous NT properties, Wallace Collection, Historic Royal Palaces, the V&A, The Burrell Collection, cathedrals and numerous churches.

Judith also researched, developed and carried out the gilding and painting on the new Shakespeare's Globe. Concurrent with her freelance work Judith has taught gilding, period paint technology and japanning at the City and Guilds of London Art School for eighteen years, and at West Dean on all levels of their courses there since 1991. Last year Judith was delighted to have been awarded the Radcliffe Trust's Lord Balfour of Burleigh Tercentenary Prize for Exceptional Achievement in Crafts.

Siobhan Barratt ACR
Conservation Studio Manager
Knole

New ACRs

The Accreditation Committee approved the accreditation of the following conservator-restorers at its meeting in July.

Congratulations to all these new ACRs!

Abigail Bainbridge book conservation; lecturer in book conservation and conservation science, Bainbridge Conservation, West Dean College and Camberwell College of Arts

Claudia Fiocchetti wall paintings, marble and stone and historic decorative interiors conservation, Claudia Fiocchetti Art Conservation

Daniel Hanrahan furniture and decorative surfaces conservation, Tankerdale Ltd

Deborah Harris archaeological conservation, conservation project management and income generation, Norfolk Museums Service and Conservation and Design Services

Elizabeth Keay collection care, The Royal Household

Katherine Knowles paper conservation, Wellcome Library, Wellcome Trust

Melissa Lewis paper conservation, Modern British Conservation

Sarah Maisey easel paintings, Royal Museums Greenwich

Gianlorenzo Pignatti Morano printed books and manuscripts conservation, Private Practice (Associazione Bastioni)

Philippa Räder book conservation, Royal Collection Trust

Siobhan Watts preventive conservation, National Trust

Stella Willcocks modern and contemporary sculpture conservation, Stella Willcocks

Welcome to these new members

We'd like to extend a very warm welcome to all those who joined us in April and May 2016. We hope to see you at an event soon!

Malcolm Archer
West Dean College
Associate

Christian Baars
National Museum Cardiff
Associate

Kate Barlow
Student

Rosie Blay
Student

Ashleigh Brown
A.B.Conservation
Associate

Lorna Brundrett
Student

Bethan Bryan
Durham University
Student

Ilaria Budgen
The National Archives
Associate

Elizabeth Chalmers
NADFAS
Supporter

Ian Channell
Student

Rita Correia
New University of Lisbon
Student

Peter Dickson
Associate

Kelly Dixon
Supporter

Samantha Emmanuel
Associate

Adriene Galindo
Student

Rowan Gillis
Student

Isabelle Gulliver
Associate

Emily Harris
Associate

Rebecca Hayton
Student

Lorna Hetherington
Associate

Thomas James
Associate

Olesya Kachanovskaya
Student

Paul Latham
The Regeneration Practice
Associate

Eloise Lovejoy
Associate

Mariam Marco Navarro
Supporter

Rowan Mastin
Student

Emma Murphy
Complimentary Publications

Paula Ogayar
Associate

Jennifer Park Phelps
Associate

Annabelle Remnant
Associate

Evelyn Robertson
Associate

Wanda Robins
Associate

Ariadna Rodriguez
Student

Scott Schiavone
Associate

Melissa Schutt
Associate

Nicholas Sharland
Associate

Claire Shepherd
Associate

Sanchi Singh
Supporter

Emily Smith
Student

Annie Starkey
Lancashire Archives
Student

Michael Tusay
Student

Cecilia Voss
University of Glasgow
Student

Sebastian Wakefield
Associate

Ruth Watson
Student

Sara Watts
Supporter

Katarzyna Weglowska
The British Museum
Associate

Martyn Willis
Associate

Madeleine White
Associate

Bo Kyung Yoon
Student

Standards for conservation

David Leigh ACR updates us on the latest developments and explains why standards are useful and important

Standards affect many aspects of our lives. One can barely get through a day without some standard being applied, from the power plug on our laptop charger, to Website Accessibility Standards, to law, medicine, architecture and even advertising. Standards are there not to restrict or burden our lives but rather to make things better and more reliable; to protect us; and to help ensure best practice in the services we receive and provide.

HERITAGE AND CONSERVATION STANDARDS

Many of our heritage colleagues use standards in their professional lives. **Spectrum**, for instance – the *UK Collections Management Standard* – is internationally recognised for documenting collections. BS 7913 *Guide to the conservation of historic buildings* has been around since 1998 and is widely used by conservation architects and contractors.

Icon members are already aware of the Professional Standards which underlie Icon's Code of Practice, its Accreditation scheme and the associated CPD. More specifically, published conservation standards have been available for quite a few years. For instance, conservators working in libraries and archives are quite familiar with BS 5454 which began life in 1977. It has been widely used, though considerably criticised, the more so in recent years for its excessive rigidity on environmental control and the expense of its recommendations. It was replaced by PD 5454:2012 *Guide for the storage and exhibition of archival materials*, to bring its environmental advice more in line with current conservation thinking.

“The scope for UK influence is considerable”

PAS 198, Specifications for managing environmental conditions for cultural collections, was created in 2012 under the auspices of the **British Standards Institution** (BSI), led by The National Archives in collaboration with and financially supported by the sector. It reflects a challenge from national directors and others for development of an environmental standard which was less reliant on fossil fuels and underpinned by advances in scientific research.

Now in preparation, BS EN 16893, *Buildings for the storage and use of collections*, will be the first ever building construction standard intended to cover museums and galleries as well as archives and libraries. The work is being

carried out under the European banner and is intended to replace both of the above documents.

Environmental guidance for archival collections will now be included in BS 4971, currently under review and to be called *'Conservation and care of archive and library collections'*. This 'Code of Practice' standard, which has been around since 1973 under the title *'Repairs and allied processes for the conservation of documents'*, was widely used in the archives sector, setting out to instruct 'operatives' on how to repair documents. It has evolved over the years, becoming increasingly focused on preventive activities and material qualities, and its new iteration, due for public consultation in 2016, will concentrate on planning, preventive measures and the criteria to be used when designing and evaluating remedial conservation projects. Its target audience will no longer be solely conservators but will also aim to help custodians. It is being re-focussed away from being a prescriptive standard ('Do it like this!') towards being a performance standard ('This is the result you need to achieve').

DO WE NEED STANDARDS IN CONSERVATION?

It is true that our profession has lots of books, conference proceedings and journals. Yet their wisdom is in a format not easily conveyed to others such as colleagues, clients or contractors. Conservators cannot point to them and say: 'This is what we are about, this is how we work, this is our approach, these are the criteria which matter. Here, read the several hundred pages in this book and you'll understand'. In contrast, standards documents, which are generally quite concise, do encapsulate the latest thinking and best practice for a wider audience.

To quote BSI: 'Standards are the distilled wisdom of people with expertise in their subject matter and who know the needs of the organizations they represent.' In compiling them conservators agree with each other what they are trying to do and often seek the agreement of colleagues and clients too. Standards are in fact excellent advocacy tools for conservation. We could make more use of them for that purpose.

'In essence, a standard is an agreed way of doing something.' It may take the form of guidelines, a specification, a code of practice or a glossary of terms. Some conservators may feel that having to conform to standards infringes their professional judgement, but this is definitely not the intention. They are not themselves mandatory or legally binding; rather they can be used as benchmarks, though they can be made requirements of contractual arrangements. Nor are they fixed for all time. Provided they have been found useful they are revised every five years, to reflect current practice.

THE LATEST CONSERVATION STANDARDS

For the last eleven years a new dynamic has been applied to the creation of conservation standards under the auspices of CEN [**Comité Européen de Normalisation** = European Committee for Standardisation], a public standards organisation founded in 1961. Although it is closely linked to the European Union, its membership includes non-EU bodies, such those from Norway and Switzerland and other countries currently outside the EU, so the UK's involvement is unlikely to be affected by Brexit; indeed BSI says that it intends to remain a member of the CEN community. The UK works with CEN via its **BSI Committee B/560: Conservation of tangible cultural heritage**, on which are represented the main UK heritage, museum and conservation bodies, including Icon.

It was an initiative by Italian conservation scientists and architects which resulted in a new CEN Technical Committee being created: **TC 436: Conservation of cultural heritage**. Although the UK was at first sceptical of the whole project, we are now fully engaged. Furthermore, English is the working language of the project so all documents are first drafted in English; all working groups and committees discuss everything in English and native English speakers are valued at all meetings and in correspondence. The scope for UK conservators to influence these standards is therefore considerable.

HOW A STANDARD IS MADE

The process of creating a new standard starts with someone, namely a national expert, proposing a new work item which – if it is agreed by everyone as worth pursuing – is taken up by a working group which meets to compile a draft; a wide-reaching consultation follows; then refinement in the light of comments leads to the final version. All agreed documents are published in three languages (English, German and French), and translated by some other countries for their own use. The production of a published document takes up to twenty seven months.

It must be said that discussion with non-UK colleagues on our different approaches to conservation concepts and practice is valuable in itself: revealing, stimulating, thought-provoking and humbling.

A FEW EXAMPLES

The range of conservation topics is considerable (twenty three published so far) and includes, for example, the lighting of museum exhibitions, the design of showcases, packing for transport, condition recording, heating within buildings, laser cleaning, the characterisation of waterlogged wood and analytical techniques for assessing change and the water permeability of stone before and after treatment. A standard on *Integrated Pest Management* has just been finalised and will be published shortly – this is likely to have a big impact in all manner of heritage organisations.

Two standards now under way are *Conservation Process* and *Investigation of architectural finishes*. The first concerns

decision making, planning and implementation, in effect a conceptual framework for planning conservation and agreeing it with others; the other addresses the procedure, methodology and documentation of results as a way of promoting better understanding of building archaeology by properly recording decorative surfaces, other than wall paintings. Another standard on which work is about to start is *The Commissioning of Conservation Work*.

“Standards are excellent advocacy tools”

One quite fundamental standard, BS 15898:2012, now up for revision, concerns fifty two of the *Main General Terms and Definitions* used in conservation. Addressing such familiar words as ‘object’, ‘condition’, ‘authenticity’ and even ‘conservation’, it has proved its worth, in part because it underlies the vocabulary used in all the other conservation standards. It is one not insignificant mark of professionalism to use language in a consistent fashion.

HOW CAN THEY BE OBTAINED?

The standards are sold by the BSI shop (shop.bsigroup.com) in hard copy and as downloads. If your organisation subscribes to BSI the cost of each document is halved. You can also consult standards in libraries which subscribe, as do University libraries. One alternative is to ask to see a copy held by someone else. Purchase could be offset against tax.

FIND OUT MORE

To enquire about becoming involved in the rewarding preparation of standards or to suggest a new one, contact the Icon office in the first instance to be put in touch with a standards representative of one of the relevant UK heritage and conservation organisations.

Commenting on draft standards is a particularly valuable contribution and Icon welcomes your participation. We will endeavour to keep you notified of new drafts which are open for comment.

David Leigh is one of Icon's representative on BSI's B 560 Committee (*Conservation of tangible cultural heritage*)

He is grateful to Jane Henderson, Chris Woods, Nancy Bell and Barry Knight for their help in preparing this article.

SEAHA

Josep Grau-Bové, Lecturer at UCL Institute for Sustainable Heritage, explains how Science, Engineering, Heritage and Archaeology come together

HERITAGE SCIENCE ON THE ROAD

On a clear and crisp spring morning, the Mobile Heritage Lab went down the road along Portland beach, heading to Portland Castle. In public events, the large white vehicle is often mistaken for an oversized ice-cream van. Nothing is further, however, from its actual contents.

That morning it transported a collection of scientific equipment for the study of outdoor heritage: instruments for surface analysis, pollution monitors, a weather station and a ground penetrating radar. The radar was used, later during the day, to study the presence of voids and other structural anomalies within the stone walls of Portland Castle.

The experiment was conducted by a group of seven PhD students, supervised by Professor Heather Viles of the School of Geography and the Environment at Oxford University. The results of the GPR survey informed the conservation management of the castle, but the experiment was also a learning opportunity for the students.

During the day, visitors to the castle saw the students in action, and had the opportunity to discuss their scientific tools. After the event, the students reported their findings to the Castle staff. The field trip was an exercise in communication, where the students had to solve the puzzle of a multifaceted dialogue between science, conservation, and the interests of the public.

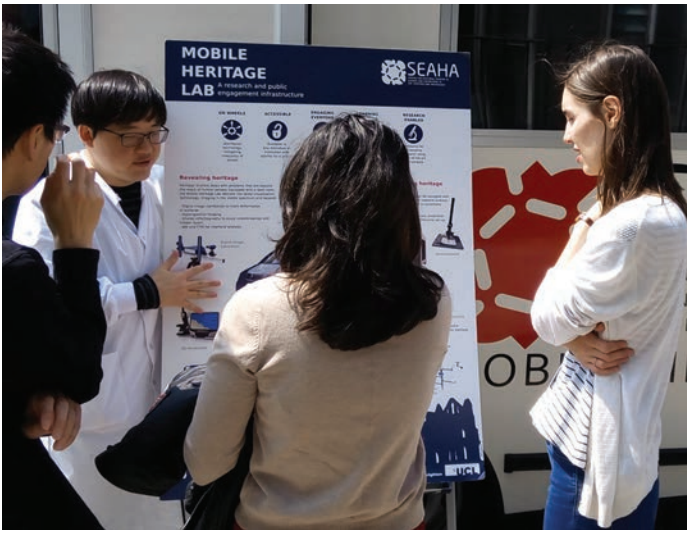
THE SEAHA EXPERIENCE

This is just one of the exceptional experiences that are part of SEAHA (pronounced [sɛˈhɑ]), the EPSRC Centre for Doctoral Training (CDT) in Science and Engineering in Arts, Heritage and Archaeology. SEAHA was created in 2014 by University of Brighton, University of Oxford and University College London in collaboration with more than fifty heritage, research and industrial partners, with the objective of training at least sixty PhD researchers during eight years.

The research students who join SEAHA have the most diverse backgrounds imaginable. Approximately half of the PhD

The Mobile Heritage Lab in the Brighton Pavilion





Dr. Lik-Ren Tai, the Mobile Lab Technician, during a public engagement event



SEAHA students explaining the operation of the Ground Penetration Radar to visitors at Portland Castle

candidates have a background in conservation or related disciplines, and half have a degree in science or engineering. Consequently, the training offered by SEAHA takes place in an environment where the divisions between disciplines are blurry if not totally non-existent. Candidates may join us as scientists or conservators, but they all leave as heritage scientists, aware of the complexity of the field.

Next academic year, a SEAHA student will be supervised by Historic Royal Palaces, IBM and University College London. Another student is currently working with The Smithsonian Conservation Institution, Analytik Ltd and the University of Brighton. Another student will work with The Getty Conservation Institute, the Dunhuang Academy and University of Oxford.

These three examples illustrate one of the cornerstones of interdisciplinary training in SEAHA: the model of tripartite supervision. All SEAHA, PhD projects are supervised by at least three supervisors from a heritage organisation, an academic institution and a company. This partnership is needed to meet the challenges of heritage research, and is also an enriching experience for the PhD candidates. The ongoing projects currently involve eighteen companies, not only multinationals but also small and medium sized ones, and nineteen heritage partners, from the UK and abroad.

AN OPPORTUNITY FOR COLLABORATION

Formal PhD training is, however, only an aspect of the centre. SEAHA students participate in an exciting range of activities that include field trips, public engagement, career fairs and the organization of a yearly international conference. (Now on its second edition, the SEAHA conference this year took place in Oxford over two days in June.)

The Mobile Heritage Lab is one of the infrastructures that support this learning and research experience. It has many functions. First and foremost, it has the mission to mitigate the inequality of access to scientific equipment for conservation science. In order to achieve this, it can be used by any institution that wishes to carry out a short research or public engagement project with the help of SEAHA students.

Anyone can apply to use the mobile lab, and it is free to use. There is only one condition that needs to be satisfied: the projects need to be of interest to at least one SEAHA student. In the last ten months it has been used to explore tapestry conservation, to carry out stone degradation research and to explain imaging techniques to the public, just to mention some examples. It has visited historic properties, science festivals such as the Cheltenham Science Festival, and conferences. SEAHA students use the Mobile Heritage Lab to take heritage science where it is most needed.

The variety of student-led activities means that there are many other opportunities to engage with SEAHA. You are welcome to our monthly lectures, annual conference or frequent public engagement events.

You will find more information in our website: www.seaha-cdt.ac.uk. If while reading about the research of SEAHA students a ground-breaking but potentially challenging research idea pops into your mind, just let us know. The Mobile Heritage Lab might be able to help!

Taking 'Thermies' (i.e. Selfies with a thermal camera) during a public engagement event



A shortage of Agar

Misa Tamura explores the sustainability of a common conservation material

On a recent visit to Nora Lockshin, senior conservator at the Smithsonian Institution Archive, she brought to our attention the current shortage of agar. During our conversation on the subject of options for aqueous gel systems for localised stain removal, I was made aware that working properties, material stability and toxicity should not be the only factors that inform the choice of conservation materials. A greater understanding of the degree of exploitation of a natural resource and its potential environmental impact should also come into the equation.

This news also came as a surprise to me on a more personal level, as I was brought up in the area where agar was traditionally found in such abundance: Japan's Izu peninsula. The area is known as the largest harvester of the seaweed *Gelidium*, the raw material for agar. One of my earliest memories is of my grandmother wandering to the seashore, and returning home with handful of the seaweed to make jelly for me each day.

Agar, or *agar-agar*, is derived from polysaccharide extracted from certain types of seaweed such as *Gelidium*, *Pterocladia* and *Gracilaria*. The resulting jelly-like substance is widely used in the food industry as a gelling and thickening agent, as well as in microbiology as a growth medium for micro-organisms in petri dishes.

In conservation, it has been used as a very effective aqueous rigid gel for surface cleaning and stain removal. Its effective property of capillary action, combined with its availability, ease of preparation, PH neutrality and lack of toxicity has made it a highly promising and desirable material. However, how this material is sourced is scarcely discussed within our community. even if the impact of the shortage has become a cause for concern among other sectors. The raw material is largely harvested in its natural, rather than cultivated, habitat, using labour intensive methods with little automation, but the industry's steadily declining yields demand our attention.

In October 2015 it was reported that Thermo Fisher Scientific had suspended its sales of several agar products used for culturing bacteria and fungi. The company cited low yields, more restrictive quotas for trade and the varying qualities of harvested raw material as the reason for their action (MacDonald, 2015). According to an article from *Nature* on the subject, Millipore Sigma is another lab materials supplier who suspended their supply of agar, attributing the cause of the global shortage to over-harvesting and the increased use of the material in the food industry.

The rationing and rising price of this important reagent naturally raised concerns regarding the future availability of the material, which will no doubt impact on such fields as medical and micro-biological research. The article also suggested that, on top of the global decline of harvests, trade restrictions imposed after the decline of yields in Morocco,

the world's major harvester of the seaweed, has crucially affected the situation. The world's agar supply appears very reliant on this specific region. This means that the yields from other regions, whose seaweed harvests are also in decline, could not meet the increasing demand worldwide (Callaway, 2015).

Historically there have been attempts to cultivate and farm the *Gelidium*. Although it is not impossible to cultivate in a controlled environment, past experiments indicated that it is not economically viable (McHugh, 2003). *Gracilaria*, conversely, has been successfully cultivated in countries such as Chile. However, because of the difference in its properties from *Gelidium*, *Gracilaria* cannot be used for bacteriological agar. Moreover, the industrial-scale farming of *Gracilaria* requires a significant modification to sea beds which may affect other natural habitats (Santelices, 2014).

Inspired to investigate the issue further, I recently visited the Izu Branch of the Shizuoka Prefectural Research Institute of Fishery to speak to Masatoshi Hasegawa, research manager, and Koji Takagi, senior researcher, who conduct the annual population studies of the *Gelidium* seaweed and assess the production of agar in the region. The institute was originally founded in 1957 with a specific research focus on *Gelidium* habitats in the region.

In the Izu peninsula, the situation of the declining seaweed population presents a slightly different picture, not merely attributable to over-harvesting or trade restriction. There the problem is understood as a wider issue, both socio-economic as well as environmental, about how humans engage and sustainably maintain the natural resources.

Since the mid-1960s, following the economic boom in post-war Japan, the region found a flourishing new market in tourism, exploiting its natural resources, such as the volcanic hot springs, beaches and plentiful fresh fish. Many of the local population who had worked in the fisheries, including those harvesting and processing *Gelidium* and *Pterocladia*, collectively called *tengusa* in Japanese, switched their occupations to the more lucrative hospitality and tourism.

Consequently this reduced activity had an adverse effect on the rocky beds where the seaweed was harvested. If not regularly maintained their habitat can be easily overtaken by other types of seaweed that are more competitive than *tengusa* in the ecological system. Traditional harvesting of the seaweed left the roots to encourage the growth of new shoots and undesirable seaweeds were weeded out, to prevent *Gelidium* and *Pterocladia* from being overtaken (Tengusa Fishery in Izu Compilation Committee, 1998, pp.72-74, 85-87).

The shift in the area's local economy resulted in the decline of *tengusa* harvesters and processors, and thereby the



Harvested tengusa showing inclusion of impurities such as barnacles and non-agar-producing seaweed

maintenance of the habitats. Currently the Research Institute is attempting to encourage and recover the *tengusa* population. The habitat has been regularly monitored and growth has been encouraged by weeding other species from rock sea beds by divers. However, they have found that it is a challenge to restore the same degree of seaweed population once it has been taken over.

Similarly, restoring the number of harvesters and processors has posed a challenge in the region. The harvesting and processing of the seaweed remains a labour intensive process, few stages of which have been mechanised or automated to date. Because of the nature of the environment that *Gelidium* and *Pterocladia* prefer to inhabit, harvesting is largely carried out by divers picking them up from the surface of the rocks by hand. It is also common to collect those beached ashore naturally, albeit these yields are perhaps even lower. Historically in Izu, female free-divers, or *Ama*, have taken a major role in this.

After sun-bleaching the seaweed, there is another arduous, non-mechanised stage of painstakingly removing the non-*tengusa* seaweed as well as other impurities, such as barnacles, from the entangled bunches of *tengusa* seaweed. The sheer intensity of this labour, coupled with its small monetary return, make the agar industry economically unsustainable and hence unattractive to the younger generation. Consequently, people who engage with the agar industry in the region are ageing and increasingly scarce (Tengusa Fishery in Izu Compilation Committee, 1998, p.75–76).

In conclusion, the conservation community is becoming more aware of the environmental impact of our practice and of what we can do as a profession to encourage its sustainability. However, investigation into the current agar shortage has made me realise that we are probably not talking enough about how our materials are produced and what the environmental and human costs are.

Studies and experiments into the use of agar rigid gel in conservation have been very promising and I am one of many conservators who would like to pursue these techniques further. Indeed, it is tempting, because of its ease of

preparation and use, to make agar gel one's go-to material for many things aqueous, from stain removal to poulticing. Nevertheless, it is important to be aware of other options in instances where the desired effect can be achieved using less environmentally problematic materials than agar. Good, and sustainable, conservation practice benefits from a good understanding not only of conservation materials' specific properties, but also of the environmental and economic contexts in which they are sourced, processed and eventually arrive in the lab.

Acknowledgements

I would like to thank Masatoshi Hasegawa and Koji Takagi at Shizuoka Prefectural Research Institute of Fishery Izu Branch for offering a fascinating insight into the subject. My thanks also go to Nora Lockshin, senior conservator at the Smithsonian Institution Archives and Michele Austin-Dennehy, conservator at Smithsonian National Museum for Natural History for the discussion which inspired me to pursue the topic further.

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Misa Tamura is the Research Conservator for the Situating Pacific Barkcloth Production in Time and Place project at the Centre for Textile Conservation and Technical Art History, University of Glasgow

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around and about

Icon member Arthur Green has opened a new book conservation studio in Oxfordshire. Arthur celebrated the official opening of his new 'Green's Books' on 28 July with a gathering of invited guests. The evening was a chance to show off the new studio in the Oxfordshire countryside but also an opportunity to celebrate with friends and former colleagues. The official opening was attended by over thirty local conservators, librarians, archivists, and bookbinding students, who were impressed by the bright and spacious studio. Guests were invited to view some of Arthur's past work and to hand-print their own keepsake.

Arthur started his career as a commercial bookbinder in London but was attracted to historic books and conservation. He retrained, graduating with distinction from a Post Graduate Diploma in Conservation at Camberwell College of Arts in 2008. He continued his training with internships at The Leather Conservation Centre and The British Library. Arthur then went on to work at the Oxford Conservation Consortium and, after more than five years working on the early printed books and manuscripts at the University of Oxford's Bodleian Library, he took the bold step of opening his own book conservation studio. In the studio, Arthur continues to develop his core interest in the history of the book but also teaches a regular programme of bookbinding and conservation workshops.

For more information see www.greensbooks.co.uk



Photograph: Cyrus Mower

Arthur Green hand-printing a keepsake on an Adan 8/5 printing press at the official opening of Green's Books

Glorious colour

Some of the finest illuminated manuscripts in the world are currently on display at the Fitzwilliam Museum in Cambridge. And what's more it is an exhibition with a strong conservation interest. *COLOUR: The Art and Science of Illuminated Manuscripts* showcases the Fitzwilliam's illuminated manuscript collection and also celebrate the Museum's bicentenary.

The exhibits – and those which are from the founding bequest of Viscount Fitzwilliam in 1816 can never leave the building – highlight the incredible diversity of the collection, including



© The Fitzwilliam Museum, Cambridge

Historiated initial from a Gradual, Louis XII healing the sick (c.1500) Paris, Northern France

treasures, such as the Macclesfield Psalter made locally in East Anglia c.1330–1340 and a medieval encyclopaedia made in Paris around 1414 for the Duke of Savoy. One hundred and fifty manuscripts and fragments span the tenth to the sixteenth centuries.

As well as the dazzling items on display, the exhibition also presents new art historical and scientific research. Four years of scientific analysis and discoveries made at the Fitzwilliam have traced the creative process from the illuminators' original ideas through their choice of pigments and painting techniques to the completed masterpieces.

Merging art and science, *COLOUR* shares the research of MINIARE (Manuscript Illumination: Non-Invasive Analysis,

Historiated initial formed of green branches on a gold ground, Adoration of the Child (c.1500) Tyrol, Italy



© The Fitzwilliam Museum, Cambridge



Historiated initial from a choir book, King David kneels in prayer (c. 1490–1500) Rome and Bologna, Italy

Research and Expertise), an innovative project based at the Fitzwilliam. Collaborating with scholars from the University of Cambridge and other partners, including experts from the National Museum of Art in Washington, the Getty and the

Leaf from an Antiphoner, Creation of heaven and earth. Siena, Italy, 1460–1477 Pellegrino di Mariano Rossini (act.1449–d.1492)



Border miniature from a Book of Hours, Ascension (c.1490–1500) Jean Poyer (French, doc. 1483–d. c.1503) Tours, France

V&A, the Museum’s curators, scientists and conservators have employed pioneering analytical techniques to identify the materials and methods used by illuminators.

‘This has been an exciting project,’ says research scientist, Dr Paola Ricciardi. ‘By combining imaging and spectroscopic analysis and by exploring such a diverse range of manuscripts, we can begin to understand how illuminators actually worked.’

‘A popular misconception is that all manuscripts were made by monks and contained religious texts, but from the 11th century onwards professional scribes and artists were increasingly involved in a thriving book trade, producing both religious and secular texts. Scientific examination has revealed that illuminators sometimes made use of materials associated with other media, such as egg yolk, which was traditionally used as a binder by panel painters.’

Miniature from the Hours of Albrecht of Brandenburg, St Anne, the Virgin and Child. Bruges, Flanders, 1522–1523. Simon Bening (Flemish, 1483–1561)





Book of Hours c.1480 – c.1490 Illuminated by Vante di Gabriello di Vante Attavanti (active c.1480 – 1485) Florence, Italy

Book of Hours c.1490–1510 Use of Rome, The Three Living and the Three Dead, Western France





Book of Hours c.1440–1450
Use of Paris
Dunois Master (active c. 1435–1466) Paris, France

Historiated initial from an Antiphoner, St Lawrence holding a palm branch, the gridiron and a book (c.1390), Don Silvestro dei Gherarducci, Niccolo Rosselli, Cenni di Francesco di Ser Cenni Florence, Italy



Other discoveries include pigments rarely associated with manuscript illumination – such as the first ever example of smalt detected in a Venetian manuscript. Smalt, obtained by grinding blue glass, was found in a Venetian illumination book made c.1420. Evidently, the artist who painted it had close links with the famed glassmakers of Murano. This example predates by half a century the documented use of smalt in Venetian easel paintings.

Analyses of sketches lying beneath the paint surfaces, and of later additions and changes to paintings help to shed light on manuscripts and their owners. One French prayer book, made in about 1430, was adapted over three generations to reflect the personal circumstances and dynastic anxieties of a succession of aristocratic women. Adam and Eve were originally shown naked in an ABC commissioned around 1505 by the French Queen, Anne of Brittany (1476–1514) for her five-year-old daughter. However, a later owner, offended by the nudity, gave Eve a veil and Adam a skirt. Infrared imaging techniques and mathematical modelling have made it possible to reconstruct the original composition without harming the manuscript.

Icon member Edward Cheese ACR, told Icon News 'Conservation work for the exhibition has been going on for several years and has covered a wide range of treatments, from the consolidation of pigments and remounting of manuscript fragments to the conservation and rebinding of a magnificent early fifteenth-century Parisian encyclopaedia, which is the first exhibit in the show.

We have been able to launch an online resource about the rebinding work, entitled *Under the Covers: The Conservation and Rebinding of Fitzwilliam MS 251*, alongside the major digital legacy of the exhibition: *Illuminated: Manuscripts in the Making*. *Illuminated* presents high-quality digital facsimiles of manuscripts together with the latest art-historical research and scientific analysis, and we hope the resource will inspire scholars and conservators to develop and explore new avenues of research when using it.'

The exhibition runs to 30 December this year and admission is free.

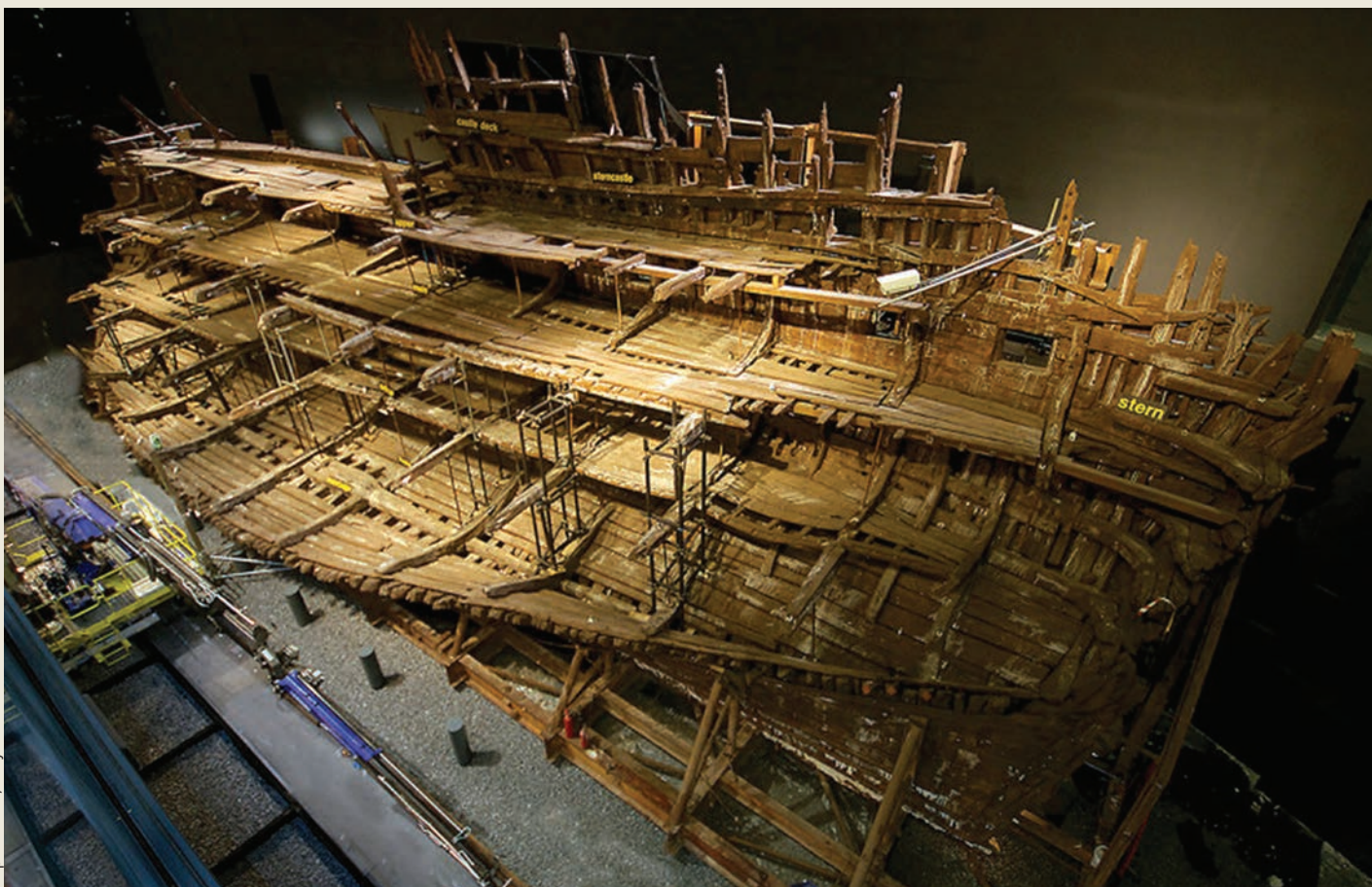
Mary Rose on full display

As many of you will know from over thirty years of following her recent history, the Mary Rose, Henry VIII's flagship, sank in the Solent in 1545. She remained buried under the seabed until her rediscovery and subsequent excavation in 1982. Since this time the hull has been undergoing conservation, and when it has been possible to be put on display there have always been barriers to fully viewing the remaining vessel. After reaching a critical milestone in its conservation, the Mary Rose is now on display in Portsmouth Historic Dockyard with unrestricted views. The museum had a re-launch event on July 19 which is estimated to have reached 1.5 billion people worldwide.

Visitors now enjoy views of the ship from nine different galleries on three different levels, giving never seen before



Looking down on the amazing structure of the Mary Rose



perspectives of the hull. All of these are ceiling to floor glazing, except the upper deck walkway which has a balcony looking down onto the hull. This gallery is only possible by the incorporation of air locks as visitors walk in, which ensure that the tight environmental controls within the ship hall are maintained.

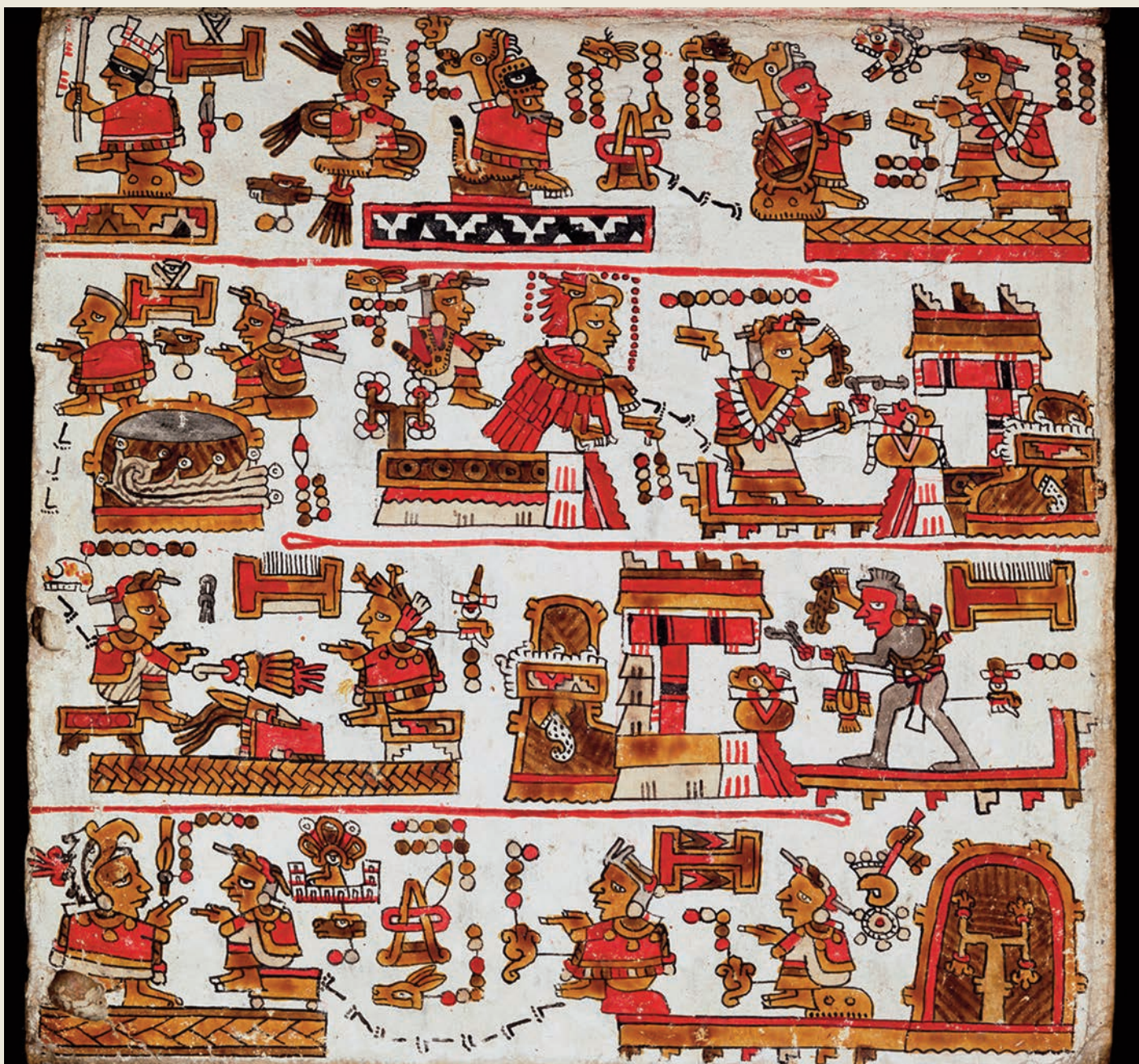
Dr Eleanor Schofield, Head of Conservation and Collections Care said 'It is so exciting to see the ship on display like this and know that everyone can now enjoy these incredible views. The conservation of the hull continues as we keep a close eye on the environmental conditions.'

www.maryrose.org

MEXICAN GLORIES

High-tech imaging also plays a key role in this story from Oxford University's Bodleian Libraries, where heritage scientist and Icon member David Howell and university colleagues from the Netherlands have used high-tech imaging to uncover the details of a rare Mexican codex dating from before the colonization of the Americas. The newly revealed codex, or book, has been hidden from view for almost five hundred years, concealed beneath a layer of plaster and chalk on the back of a later manuscript known as the Codex Selden, which is housed at the Bodleian.

The front of Codex Selden, showing the known pictographic scenes that are visible to the naked eye



Bodleian Libraries, University of Oxford



Pages 10 and 11 of the back of Codex Selden showing what is visible to the naked eye. These pages were scraped in the 1950s during tests which uncovered this vague impression.



An image created using hyperspectral imaging, which shows the hidden pictographic scenes on pages 10 and 11 of the back of Codex Selden

Features found on the pages shown include:

- Two figures in the top left corner that are probably siblings as they have red umbilical cords attached to their backs (this conforms to Mixtec writing conventions seen in other codices).
- A total of twenty seven people can be seen on page 11 alone (page 11 is on the left). Some of these people are identified by their calendar names, reflecting the day in the Mesoamerican character that they were born. Individuals are also sometimes identified by their personal names, which are often incorporated into the dress of the depicted figure or drawn next to them.
- A prominent individual appears repeatedly on lines 2, 3 and 5 of the page shown, and he is represented by a large glyph consisting of a twisted cord and a flint knife.

Since the 1950s, scholars have suspected that Codex Selden is a palimpsest: an older document that has been covered up and reused to make the manuscript that is currently visible. The codex consists of a five-metre-long strip composed of deer hide that has been covered with gesso, a white plaster made from gypsum and chalk, and folded in a concertina format into a 20-page document. The manuscript underwent a series of invasive tests in the 1950s when one page on the back was scraped, uncovering a vague image that hinted at the possibility of an earlier Mexican codex hidden beneath.

Ancient Mexican codices are some of the most important artefacts of early Mexican culture and they are particularly rare. Codex Selden, also known as Codex Añute, dates from around 1560 and is one of fewer than twenty known Mexican codices to have survived from pre-colonial and early colonial

NOTICE OF ANNUAL GENERAL MEETING

Notice is hereby given that the 12th Annual General Meeting of the Institute of Conservation will be held on Wednesday 7 December 2016 at 5.00 p.m. at the St. Bride Foundation, Bride Lane, Fleet Street, London, EC4Y 8EQ, to consider the following business:

Ordinary Resolution 1: To receive the Trustees' Annual Report and Accounts for the year ending 31st March 2016.

Ordinary Resolution 2: To authorise the Trustees to appoint the auditors to serve until the end of the next Annual General Meeting and to authorise the Trustees to decide the remuneration to be paid to the auditors.

A member of the Institute of Conservation who is entitled to attend and vote at the meeting (being a paid up Accredited, Associate, Graduate or Student Member) is entitled to appoint a proxy, who need not be a member of the Institute of Conservation, to attend and vote instead of them. Proxies may be appointed via the web portal or to the registered office so long as they are received before 5.00 p.m. on Monday 5th December 2016. Those received later will not be counted.

If you are eligible to vote you will be sent an email by our election support provider Mi-Voice inviting you to access the Proxy Notice enabling you to register your instructions on-line. If you do not have an email address, please phone the Mi-Voice office at 0845 241 4148.

We will advise you of any changes or additions to the Agenda as soon as they become available.

Following the close of business, there will be an update presentation about the development of Icon's Strategy 2017-2020 and an opportunity for members to contribute to the discussion on the future direction of Icon.

Members are invited to stay on after closure of business for a glass of wine.

So that we can estimate numbers for catering please let us know if you are planning to attend by sending an email to membership@icon.org.uk

Simon Green, Company Secretary
1 September 2016

Mexico. Of those, it is one of only five surviving manuscripts from the Mixtec area, now the Oaxaca region of Mexico. These codices use a complex system of pictures, symbols and bright colours to narrate centuries of conquering dynasties and genealogies as well as wars and the history of ancient cities. In essence they provide the best insight into the history and culture of early Mexico.

Until now, no other technique has been able to unveil the concealed narrative in a non-invasive way. 'After four or five years of trying different techniques, we've been able to reveal an abundance of images without damaging this extremely vulnerable item. We can confirm that Codex Selden is indeed a palimpsest,' said Ludo Snijders from Leiden University, who conducted the research with David Howell and Tim Zaman from the University of Delft. This is the first time an early Mexican codex has been proven to be a palimpsest. 'What's interesting is that the text we've found doesn't match that of other early Mixtec manuscripts. The genealogy we see appears to be unique, which means it may prove invaluable for the interpretation of archaeological remains from southern Mexico.'

Some pages feature more than twenty characters sitting or standing in the same direction. Similar scenes have been found on other Mixtec manuscripts, representing a King and his council. But the analysis of this particular text shows that the characters are both male and female, raising interesting questions about what the scene represents. The researchers analysed seven pages of the codex for this study and revealed other images including people walking with sticks and spears, women with red hair or headdresses and place signs containing the glyphs for rivers. They are continuing to analyse the remainder of the document with the aim of reconstructing the entire hidden imagery, allowing the text to be interpreted more fully.

The study was funded by NWO, the Netherlands Organisation for Scientific Research as part of its Science4Arts programme and the researchers have published their findings ('Using hyperspectral imaging to reveal a hidden precolonial Mesoamerican codex') online in the *Journal of Archaeology: Reports*.

'Hyperspectral imaging has shown great promise in helping us to begin to reconstruct the story of the hidden codex and ultimately to recover new information about Mixtec history and archaeology,' said David Howell, Head of Heritage Science at the Bodleian Libraries. 'This is very much a new technique, and we've learned valuable lessons about how to use hyperspectral imaging in the future both for this very fragile manuscript and for countless others like it.'

The Bodleian acquired its scanner in 2014 and it is now used to reveal hidden text and images and identify unknown substances and pigments with a high degree of accuracy. Recent uses include clarification of the text of the famous Bakhshali manuscript from India, which includes the first use of zero, analysis of the earliest road map of Great Britain – the medieval Gough Map – and the revelation of a hidden devil in a centuries-old Armenian gospel-book.

COURSES

INTERNATIONAL COURSE ON WOOD CONSERVATION TECHNOLOGY

Norway, 19 May – 29 June 2016.

ICCRUM is an organisation that perhaps struggles to make its voice heard in UK Conservation circles. But it offers CPD opportunities that allow conservation professionals to gain an international perspective.

This summer I was fortunate to be the UK representative at the 17th International Course on Wood Conservation Technology (ICWCT), a six-week programme in a partnership among ICCROM, Riksantikvaren (Directorate of Cultural Heritage of Norway), and the Norwegian University of Science and Technology (NTNU).

For ICWCT 2016 twenty one students from twenty different nations gathered in Oslo from 19 May to 29 June. Some came from far-flung locations such as the Philippines, Buthan, Malawi and Mexico. The majority of the participants came from within Europe.

The course combines lectures with visits to museums and heritage sites all over Norway. It covers a diverse range of topics all connected to wooden heritage including: demonstrations of traditional forestry and converting timber, through to the latest research to treat archaeological wood and



A demonstration of traditional crafts

digital documentation techniques for museum objects.

The Stave Churches are possibly the most famous example of Norwegian cultural heritage. Riksantikvaren recently completed a ten year project to conserve all the Norwegian Stave churches. To mark this we were given a tour of some of the churches, around the country and attended a conference discussing their conservation.

One of the guiding principles of this project and a common Norwegian approach to conservation is to regard historic timber structures as sources of inspiration and living evidence of ways of sustainable conservation. There is a high value attached to the role of traditional crafts and projects often look to share heritage skills by training local craftsmen to complete the work, conserving a community alongside the cultural heritage, as part of a holistic approach to conservation. As always, there's a Youtube film that can illustrate this much better than I can by writing about it: www.youtube.com/watch?v=6CPvGC9drWY The ICWCT embraces this, recognising that sharing a greater understanding of our wooden heritage is perhaps the best way to ensure it is valued by future generations.

I returned inspired by my new colleagues and I would encourage others to experience the ICWCT in 2018 or another of ICCROM's courses. Find out more at www.iccrom.org/courses/.

Jon Slight, Assistant Conservator, Wallace Collection

Reinli Stave church



FRENCH UPHOLSTERY

Icon Furniture and Wood Group
High Wycombe 18–22 July 2016

The Furniture and Wood Group have successfully run another of its French Upholstery courses with **Laurent Laine** from Ecole Boule in Paris. I say successfully, which it was from most ways to evaluate the success of a course like this: all of the students learned a great deal, they were very pleased with all aspects of the course from the teaching, the facility, the location and it ran very smoothly in its new location. Regrettably one area that was not successful was that we only had two students sign up for this great course.

These two enthusiastic students, Kathryn Nisbet and Hannah Thompson, received almost undivided attention from Laurent. The result was a very intensive and fulfilling course, where the tutor was able to help the students in the standard object as well as a custom project. Each of the students finished their buttoned footstool as well as one extra project. While Hannah chose an oval back, Kathryn chose a cushion to hold her upholstery tools.

As both students were new to French Upholstery, the starting project was the buttoned square footstool (experienced students would work on a Louis XVI style chair) and it began with the classic French approach to filling up the bottom of the seat with webbing (unlike the English approach that leaves gaps), followed by adding springs which, again, were tied down in the French fashion.

While most of the process is very similar between the English and the French approach, one of the key differences is the stitching; both Kathryn and Hannah were excited to learn about the differences to finish with a very tightly stitched base on which the hair could be placed. Then they learned how to button in the French style. And finally, the last procedure was to complete their project by putting on the top covers to the pieces.

The class was also lucky in that the weather was perfect through the entire week. This allowed the participants and the teacher to go on long walks in the English country side and to enjoy lunch next to the Wye River, basking in the sun. While there was great weather for enjoying the countryside, it was a very focused hard-working week. Both Kathryn and Hannah accomplished a lot of excellent quality work resulting in learning new skills and in some very nice pieces to take home.

Hannah summarized her week thus:

'I thought that the course was good value for money – an intensive short course is a great way to learn, as you can immerse yourself without distraction, and get good continuous hours in the workshop. I would



The French Upholstery Class and the objects produced. Laurent Laine, Hannah Thompson and Kathryn Nisbet



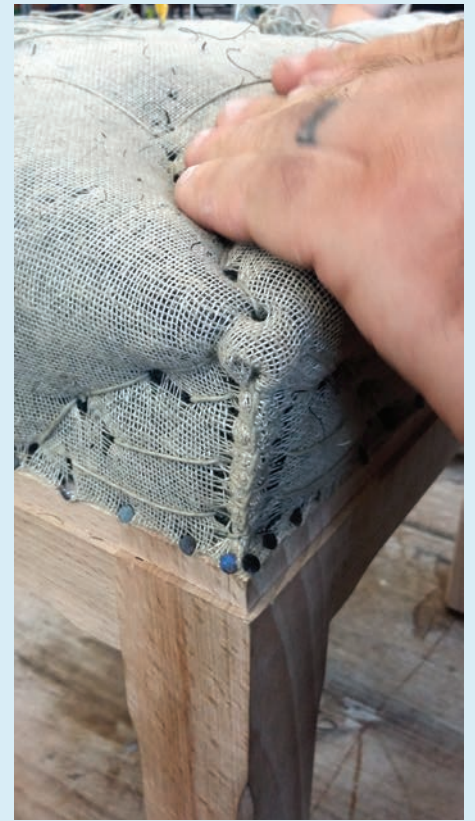
The French approach to webbing with no gaps

Hannah tying down the springs





A finished stitched base onto which the hair for buttoning would be added



Pushing the vegetable fibre into place



Preparing the hair for buttoning



Placing the hair and tying the button cords



Hannah's final footstool in situ at home

love to do another course here, and would happily recommend it to anyone either beginner or expert. The course has inspired me to continue pursuing a career in upholstery, particularly working with antiques and upholstery conservation.'

And Kathryn wrote the following:

'I have spent my week here learning French upholstery from a Master Upholsterer/craftsman, who in my opinion is the 'guru' of the upholstery world. Laurent is an excellent teacher, you learn at your own pace, he will demonstrate every process for you and repeat it time and time again if

necessary. I have learnt many new skills from him and am looking forward to practising them in all my future work. If you have never done any upholstery before or if you are an accomplished upholsterer and have never practised French upholstery techniques, then this is the course for you. I loved every



Laurant helping to pull the calico in place

second of this course: five stars.'

Although the turn-out was less than anticipated, it turned out to be a great week; intensive and fun, smooth running and in a fantastic location. We are only sorry more people could not have joined us!

About the students:

Hannah Thompson has a BSc (hons) degree in Conservation & Restoration from London Metropolitan University, and has just completed a City & Guilds Diploma in upholstery from Chichester College. (Hannah_thompson@live.com)

Kathryn Nisbet runs her own Upholstery business in South Oxfordshire, she has level 2 and level 3 diplomas, passed with distinction, from The Association of Master Upholsterers in Hertfordshire. (ridgewayupholstery@gmail.com)

Ernest Riall

Conservator & Director of The Wooburn Craft School
Furniture and Wood Group Treasurer

TALK

LEGISLATIVE LACUNAE? The Vandalism of Cultural Property: Legal Perspectives for Museum Professionals

Icon Paintings Group

Freemason's Hall, London 23 June 2016

This talk, given by **Morwenna Blewett**, conservator at the National Gallery in London, provided an introduction to the legal issues that arise when objects within museums are vandalised. Based on an article written by Blewett for the journal *Art, Antiquity and Law* in 2015 entitled 'When Cultural Property is Just Property: How English Law Approaches Damage to Movable Versus Immoveable Cultural Property', it focused on the legal definitions of 'property' in contrast to 'cultural property' and the difficulties this causes for objects in museums which, simply because they are

'moveable objects', are not legally considered part of cultural heritage. Blewett also proposed that reform is required to allow such objects to become 'cousins' of their immovable counterparts so as to ensure, in the event of their damage, that they are not left within a legal loophole.

Blewett began her talk by introducing the current legal brackets into which artworks may fall. Legally, damage done to property, both cultural (a painting in a gallery) and normal (a personal object) are covered by the Criminal Damages Act of 1971. There is, however, further legislation which specifically concerns the narrower category of immovable cultural property, eg a Roman ruin, but does not cover moveable artefacts within museums. This led Blewett to a question which, in some ways, summarises the main issues of the talk: 'Why is a Titian just property and a Roman mosaic in situ cultural property?'

By looking at the history of the preservation movement begun in France by Victor Hugo in 1825 and soon after in Britain by Sir John Lubbock, Blewett shows how the legal foundation for the protection of cultural objects focused on sites and monuments, rather than on individual pieces that had no concrete geographical location. Thus 'cultural property' became both location specific and linked to the immovable. Movable objects were instead viewed as private property, and suggestions of extending this act to cover them were, historically, met with alarm. The problem is however, as Blewett pointed out, that in today's legislation a smashed sculpture falls into the same criminal bracket as a smashed car window.

From this, and somewhat reassuringly, Blewett went on to show that this discrepancy has not gone unnoticed by the legal profession and is recognised in some areas of English law. For example, the Dealing in Cultural Objects (Offences) Act of 2003 defines a cultural object as one of

'historical, architectural or archaeological interest', rather than one that is site specific. However, this act still clearly ties the cultural value of an object to its historical setting and artworks outside this are not necessarily covered.

The next significant point that Blewett examined relates to the legal definitions of damage itself, which are left intentionally vague. By looking at a number of specific cases, however, Blewett shows that 'damage' is relative to both its type and permanency and, importantly for museums, the significance and legacy of the object upon which the damage occurs. She compared, for example, a scratch on a scaffolding pole to one on a painting. Through an examination of specific examples of legal cases, Blewett also showed that the cultural value of an object was often recognised within the proceedings. However, this was mainly within the final sentencing remarks of the judge, rather than having any legal implication for the sentencing itself.

Blewett ended her talk with a look at the gathering momentum that exists currently to reconsider the objectives of protecting cultural property. She highlights a report from 2012 carried out for English Heritage which commented on the need for reform, stating: 'the most fundamental question is whether heritage crime should be specifically recognised in law rather than being covered indirectly or in part by a large number of separate strands of legislation'. Finally, Blewett pointed out the relative ease with which this could be rolled out over objects in museums and galleries due to the accessioning of all publicly owned works of art – a quick way in which moveable cultural property could, as their immovable counterparts already are, be covered more fully by heritage protection laws.

Annie Cornwell, Conservation of Easel Paintings Student
Courtauld Institute of Art

CONFERENCES

ICON16 TURN AND FACE THE CHANGE: Conservation in the 21st Century

Icon Textile Group

Birmingham 16–17 June 2016

Textile Group Session 1

As part of this two day conference, the Textile Group hosted two plenary sessions, chaired by Alison Lister and Leanne Tonkin. The first session comprised of four speakers.

The first paper, *The Assessment and cleaning of the large-Scale 'Christ in Glory' Tapestry, Coventry Cathedral*, presented by **May Berkouwer**, detailed her collaboration with Alison Lister, Stella Gardener and Maria Armstrong on the 1962 tapestry commissioned by architect Basil Spence and



Danielle Connolly discussing the conservation treatment of feathers

designed by Graham Sutherland. A continuously woven tapestry, measuring 23 x 12 m, with a cotton warp running vertically, a mostly wool weft, weighing one tonne in total.

Freelance conservators Berkouwer and Lister joined forces to work on site for four weeks. A permanent scaffold structure with eleven platforms at the reverse provided a difficult work area due to lack of space. Examination, vacuuming and wet cleaning tests were undertaken, despite working times being restricted by the Cathedral services, something not encountered when working in a museum or studio environment. Berkouwer discussed the ingrained soiling and that mechanical cleaning would damage the fibres, so that wet cleaning is required. The many logistical challenges of how and where to wet clean and how to remove the tapestry from display are still under consideration.

Christine Supianek-Chassay's paper, *Digital mapping in textile conservation- new documentation methods with MetigoMap 4.0* highlighted several projects where she used digital mapping for 2D and 3D objects. On a 16th century tapestry, altered in the 1700s and reconstructed early last century, she plotted and calculated infills within the object. Supianek-Chassay (a freelance conservator working in Germany) had also used the program to document wall hangings later put into storage and, in conjunction with historical documentation, had assimilated a wealth of easily accessible information.

Danielle Connolly (Assistant Textile Conservator, National Museum of Scotland) presented *Feather in my cap*, explaining her newly acquired practical skills used whilst working on seven hats with feather decoration. Having familiarised herself with feather anatomy and terminology, she consulted colleagues who had attended a feather conservation course. Connolly determined the materials and techniques for treatment by experimenting on a broken feather. Gütermann™ mara (polyester) thread and Japanese tissue paper (coloured

with watercolours) were used for repairs. She acknowledged that an estimate of ninety hours meant that time taken for testing was kept to a minimum, to allow more time for the actual treatment. Her experience showed the importance of knowledge exchange and collaboration between conservators.

Preserving the visionaries: fashion preservation and the designers' intent presented by **Leanne Tonkin** (Polaire Weissman Research Scholar in Conservation, The Costume Institute, The Metropolitan Museum of Art), provided an insight into the use of plastics in modern and contemporary costume design, conservation issues emerging from this and how the designers themselves regarded the deterioration. Tonkin discussed the designer Elsa Schiaparelli's use of cellulose acetate and nitrate during the 1930s and highlighted differences in the plastics constituents and variations in quality control during manufacture, shown as different rates of deterioration.

Using an example of transparent plastic shoes designed by Beth Levine in the 1960s, Tonkin described the use of poly (vinyl chloride) (PVC), an unstable material affected by light and heat, resulting in discolouration or fogging and therefore a change in appearance, which can differ from the designer's intent. Levine felt replication was an acceptable way of dealing with the degradation of the original object. A designer more ephemeral in her approach is Rei Kawakubo. The Metropolitan Museum of Art acquired a pinafore containing laminated polyurethane, a potentially problematic material affected by oxidation and hydrolysis. In order to fully assess the object's stability, Tonkin suggested further analysis to determine the specific type of polyurethane.

The delegates provided an interesting insight into challenges that can occur in textile conservation and the ways in which these can be viewed or overcome.

With thanks to the Alison Lister for chairing

this first session and to the Clothworkers' Foundation and Icon for their bursary for my attendance.

Nadine Wilson, Textile Conservator
National Trust

Textile Group Session 2

This session was a satisfying mix of scientific research based papers and practically applied textile conservation papers. The session started with a particularly scientific paper titled *Hanging by a molecular thread: exploring the strength of historic wool proteins in Tudor tapestries* presented by UCL postgraduate student **Nanette Kissi**. The project is in collaboration with Historic Royal Palaces and looked at analysing historic wool as a method of determining mechanical strength properties to highlight risk to tapestries. Employing analytical methods such as keratin reduction, SEC and FTIR will hopefully add another tool to the conservator's arsenal in condition assessment and prioritisation of treatment.

The second paper was presented by textile conservator **Tess Evans**, titled *Blurred Lines: Conservation of costume/restoration of aesthetic. Costumes from the 'Golden Age of Hollywood' exhibition*. Tess gave an overview of five months of conservation carried out on a private collection of original costume from Hollywood film from the 1920s–1960s. The collection included garments worn by Elizabeth Taylor, Greta Garbo and Ava Gardner to name a few, and the presentation featured many fabulous images. Conserving, cataloguing, documenting and researching the costumes and props, sometimes included watching the films the garments starred in! Tess discussed the conservation carried out on some of the garments, as well as the reversal of some alterations to bring the garments back to their original aesthetic as seen in the films in which they starred: successfully 'blurring the lines' between conservation and restoration.

The third paper was presented by Alison Lister on behalf of **Wendy Hickson** and **Janie Lightfoot**, titled *Crowd-sourcing conservation*. It used the case study of the 4.5m x 5m embroidered mural, 'The Country Wife', to highlight what can be achieved when funding for conservation cannot be found. The 'crowd-sourcing' in this case was not used to raise the funds required; it was physically sourcing a crowd of people to volunteer in the conservation and care of the mural.

Volunteers were recruited over a six month period, assessing individuals for the particular skills required in textile conservation, training the volunteers to question treatment methods, materials used and to employ the ethics of conservation. The mural is particularly heavy and required at least eight people to move it, so further crowds were sourced. The mechanics at the neighbouring garage, the building security



Hyperspectral imaging used to reveal a partially erased devil in an Armenian manuscript dated 1609. (Bodleian Libraries, University of Oxford, MS. Arm. d. 13, folio 22r)

staff and members of the local motorcycle group were all utilised to assist with moving the project forward, showing what can be achieved when the odds are against you.

The final paper of the session was presented by Dr **Anita Quye** titled *The Power of Two: Uniting chemical and historical research of the 19thC early synthetic dyes for conservation*. This project looks at synthetic dyes and their chemical composition; challenging the misconception that finding particular chemical compositions for a particular named dye will give you definitive dating information for a textile. With the use of UPLC, 19thC dyeing manuals and reference material were analysed revealing different dye chemists and manufacturers achieving the same named colour but with a different chemical composition and highlighting the potential of a time lapse between dye discovery and commercial use impacting on dating. It was fascinating to discover that commercial dyers were still using natural dyes until the 1890s, that synthetic and natural dyes were used together to achieve particular colours and that the same colours were given different names by different chemists and manufacturers.

Danielle Connolly, Assistant Textile Conservator
National Museums Scotland

MULTISPECTRAL AND HYPERSPECTRAL IMAGING

SEAHA Special Seminar
Wolfson College, Oxford 30 June 2016

As a conservator rather than a scientist, I was initially nervous that this SEAHA special seminar might require a base-level of knowledge significantly higher than that of my own, non-scientifically trained mind. However all fears were cast aside as soon as the talks began, with the fantastic opening presentation from Dr **Fenella France** of the Library of Congress discussing a host of marvellous discoveries (who isn't curious to uncover redacted text in saucy diaries?) facilitated by various spectral imaging techniques. As well as recovering lost information, the Library of Congress has also made in-roads into using spectral imaging to map the condition of historic materials, such as identifying the extent of copper pigment deterioration or the fading of light sensitive colourants following just a six-week exhibition period.

The day was bookended by another absorbing talk, by Dr **John K. Delaney** of the National Gallery of Art, Washington DC, who gave many examples of results achieved from visible and infrared spectroscopy of painted surfaces; such as being able to map the use of different paint binders (egg yolk and animal skin glue).

The overall theme of the day crystallised into

a thorough assessment of the evolution of multispectral and hyperspectral research techniques and an evaluation of issues that require further development. This included some areas for improvement: SEAHA doctoral candidate **E. Keats Webb** delved wholeheartedly into problems caused by a lack of standardisation across European institutions due to the use of diverse instruments, calibration methods, processing systems, and file formats. Other problems discussed seemed closer to finding resolution: we heard from **Cerys Jones** on the development of an image registration technique which aims to allow more accurate alignment and comparison of multispectral images.

A project of particular interest to me is **Hend Maghoub's** PhD investigation into material characterisation of Islamic papers. Sadly not able to be present on the day, her research was presented by Professor Matija Strlič who showed how she is using over two hundred samples of Islamic papers from the 15th–19th centuries in order to provide calibration for near-infrared imaging of historic manuscripts. The research aims to allow visualisation of differences in composition, as well as mapping acidity, degradation and the degree of polymerisation across an object. I look forward to hearing further outcomes of her research in the future.

Aside from our own **David Howell** (the architect of the event and an excellent chair), the Bodleian and its collections were strongly represented by SEAHA doctoral candidate **Ian Maybury** who has been working with David to identify pigments and find devils in the Armenian manuscripts. The Bodleian's hyperspectral imaging equipment has also proved valuable during **Ludo Snijder's** research into the Codex Añite palimpsest; and here he presented some of his findings and discussed the challenges of interpreting the results further. He also touched on an issue more widely discussed across the day: how to disseminate the results of the hyperspectral imaging more widely, especially in this instance with peers in Mexico who do not have easy access to Mixtec documents in Europe.

Throughout the day, there was a palpable desire common to the speakers and attendees present to broadcast more widely the kinds of research results being achieved through spectral imaging, and to encourage humanities scholars and curators to consider that this kind of scientific analysis could be of great benefit to them. Dr **Roger L. Easton** and Dr **David Messinger** of the Chester F. Carlson Center for Imaging Science at RIT championed dissemination and engagement during their talk, focusing on projects to train students in imaging and processing skills, and then provide these students and the

necessary equipment to institutions in need of expertise, at no cost. The emphasis was very much on collaboration, sharing of data, and encouraging researchers to engage. However when the topic moved onto manifold learning algorithms and Laplacian Eigenmaps I'm afraid my note-taking skills wavered....

The discussion forum at the end of the day picked up on just such problems: that scientists, conservators, and scholars need to have shared terminology in order to work together effectively, and perhaps fewer acronyms and better standardised technical vocabulary would assist us all. UCL's **Melissa Terras** and Professor **Matija Strlič** (both essential presences throughout the day) emphasised that UCL is beginning to offer training and consultancy in order to assist scholars, researchers and curators in understanding scientific techniques; and David Howell finished by contributing that the book he is currently writing aims to explain various analytical techniques in a clear manner, comprehensible to non-scientists.

I, for one, was buoyed by the whole day and the amazing encouragement from these experts for us to come to them with our questions – it's rare to encounter a field so loudly crying out to be given more work! –and look forward to engaging further with my spectrally gifted colleagues and to many exciting future discoveries.

Fiona McLees, Paper Conservator
Bodleian Libraries

PUBLICATION

HAND PAPERMAKING

Volume 30, Number 2, Winter 2015

Published twice a year since 1986, Hand Papermaking is a handsome, scholarly magazine on the art and craft of papermaking. Although it is not written with conservators in mind, this particular issue contains a range of articles concerned with the sizing of paper and may well be of interest to colleagues

Sizing Terminology and Practice

The first paper in this collection, by **Timothy Barrett**, gives us a thorough overview of the two key classes of sizing, which includes surface sizing (also referred to as tub or external sizing) and internal sizing (also known as engine sizing). Barrett also gives advice to hand papermakers about the various options available to them for sizing their papers according to the requirements.

Sizing Science: Can Physical Science and Engineering Answer Some of Our Lingering Questions?

John Baty's article goes through the chemical differences between internal and surface sizing, referencing the history of each, and the effect they have on the paper both in terms of physical properties like translucency and chemical stability in the long term. It is interesting and would be useful for the papermaker who is comfortable with science and for the conservation student.

The article, however, finds limited success in its attempt to explain the subject, according to Mina Takahashi's introduction, 'in language that science-averse readers will enjoy and understand'. In some places, the language really is approachable: terms like 'hydrophilic' are immediately explained, and acid-catalyzed hydrolysis of paper is described in the simpler vocabulary of the cellulose chain breaking into small pieces in the presence of acid. At the same time though, skeletal diagrams used to explain the attachment of various sizing molecules would really only make sense to someone versed in organic chemistry, and their captions do not use vocabulary accessible enough to make sense to a novice. It is not that the science should be diluted to the point that a reader does not learn or feels spoken down to, but the fear is that this would have the opposite affect on a science-averse reader, that is, the reader feels like he or she should understand, does not, and is even more averse to the subject.

Sizing at Hayle Mill

Simon Barcham Green provides the readers with a detailed history of this topic. Wide ranges of papers were produced at the Mill throughout its history, including ledger and publishing papers, which needed to be strong and impermeable. Gelatine was chosen over starch as the sizing material, which resulted in a stronger, water resistance paper.

Green explains that as tanneries were often set up near paper mills, both being dependent on fresh water and a stream, gelatine was often easily available to papermakers, as tanneries produced by-products, which were the unusable parts of hide that contain collagen. The papermakers at Hayle Mill would have had easy access to these by-products to make gelatine at the Mill. The process for making gelatine is then detailed by Green, which provides an insightful account for the reader. Green explains the process of sizing from creating the mixture with alum, applying the size by hand dipping and using sizing machines, and finally drying.

Alongside this article is a sample of Crisbrook Imperial gelatine-sized paper, as described in the article, which was made at Hayle Mill, circa 1960.

Nineteenth-Century Papers: Sizing Does Matter

Cathleen Baker's short article looks at 19th century sizing, explaining the materials used and processes employed as well as the different sizing requirements of various papers according to their use, such as soft-sized or unsized papers for printing or hard sized papers for writing. As new technologies were introduced in the 19th century, new requirements and demands for papers emerged, affecting the papermaking industry. It would be interesting to hear more; one comment in particular struck a chord: that the author 'doubt[s] that gelatin tub sizing was performed in pre-nineteenth century binderies because of the problems obtaining fresh gelatine solutions and the expertise required'. Mirjam Foot* has documented that in German binderies it was common practice for the binders to do the sizing rather than the papermakers, thus raising the question of whether Baker's supposition is true for elsewhere in Europe or if more research needs to be done in the area.

* Foot, Mirjam, *Bookbinders at Work: Their Roles and Methods*, London: The British Library and New Castle, DE: Oak Knoll Press, 2006, p. 46.

Historical Catalan Sizing Recipe

In this essay, **Victoria Rabal** details the recipe and process for creating a gelatine size, which was used in Catalonia, Spain, from approximately 1350. Between the 11th–13th centuries, Hispano-Arabic paper was in use in Catalonia, which was surface sized with rice or wheat starch. However, by 1350, this type of papermaking began to disappear and, simultaneously, starch sizing was replaced by gelatine sizing. Rabal provides a historical context of the revival of Catalan papermaking from the end of the 17th century and details the difficulties of the sizing operation for papermakers due to the high temperature of the gelatine to be effective.

Unveiling the Sources of Chromium in Pictorialist Photographs: Gum-Dichromate Process or Paper Sizing?

Authors **Anna Vila, Silvia A. Centeno, Lisa Barro,** and **Nora W. Kennedy** summarise their research into the gum-bichromate photographic process as published through three previous articles (with the implication for more in future). The group used research into historical methods to develop a set of test samples for aid with identification and analysis of the originals. The article gives enough detail in both the history of the materials and the analysis undertaken to be interesting on its own but also prompts one to find the longer articles.

Hungry Bibliophiles: An Experiment in Utilitarian Bookmaking

Printer and type-founder **Russell Maret** discusses the production of his cookbook, *Hungry Bibliophiles*, as an experiment in sizing after printing, a result of discovering by accident that the handmade paper he printed on for a previous book performed much better after removal of the gelatine sizing. That gelatine is important to Maret primarily for the tactile properties it gives the paper, if not for the water-resistant properties that were historically important for allowing a reader to heavily annotate the book.

The author describes the process of Tim Barrett making unsized paper for him to print on, then sizing post-printing. In order to get the aesthetic of glossed margins and overcome the fear of really using a fine press book, he solicited printers, binders, papermakers, and librarians to submit recipes; participants were given copies of finished books in the end and asked to cook the recipes and annotate them over the course of a year.

Two samples of UICB Chancery paper are available following the article: one sized with gelatine and one without. It is particularly useful for the reader to be able to feel these samples and make the comparisons between the two.

On the Florentine Codex: Reflections of a Reader

Elena Osterwalder's reflections as a reader on holding what must have been her first 16th century manuscript, *Historia General de las Cosas de la Nueva España*, may be intended to communicate the wonder and preciousness of such an object to Hand Papermaking's audience of artists and papermakers, but for me the brief article served as a reminder on how our clients and library patrons see these objects that we may now take for granted. That wonder is something we can harness in our outreach and work to improve the profile and importance of conservation.

Abigail Bainbridge ACR, Book Conservator, Bainbridge Conservation and

Puneeta Sharma, Project Assistant (Conservation), The Royal Collection Trust

DESIGNING OBJECT SUPPORTS

Christopher Weeks ACR, Conservator at Manx National Heritage on the Isle of Man, uses *SketchUp* to create a new canoe mount

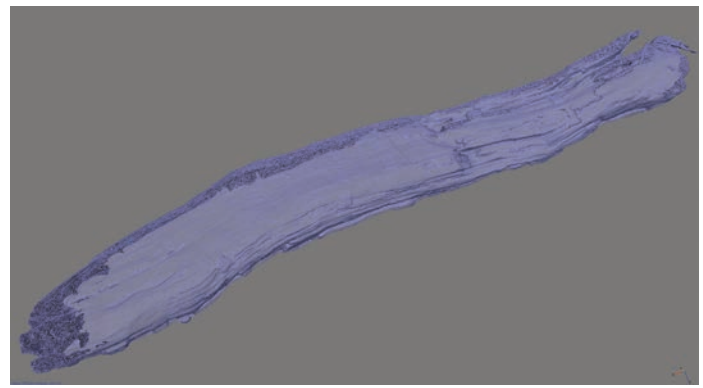
For some years we have been using *Trimble SketchUp* which, for those of you unfamiliar with it, is a piece of software for creating 3D sketches quickly and easily. Unlike in CAD, *SketchUp* users create line and form by modelling and sculpting shapes. At Manx National Heritage it is used for exhibition and workspace design, and it is a great communication tool. Living on an island has plenty to recommend it but it does mean that we often are forced to come up with solutions to difficult conservation problems ourselves. Recently we have used *SketchUp* several times in the design of displays and object mounts, as the following example illustrates.

THE CANOE

Displayed in the Manx Museum in Douglas was a 4.5 metre oak dugout canoe dated to 3000 BP. It had been excavated in the 1880s from a farmer's field in the West of the Isle of Man, at which time it was drawn and photographed. Unfortunately it had been allowed to dry naturally and had suffered shrinkage, distortion and splitting as a result. Since the 1980s the boat had been displayed resting directly on an open plinth.

In 2010 it was moved to another gallery for inclusion in a temporary exhibition. This entailed a manual dead lift by eight staff, followed by a hair-raising journey through the museum galleries. At a critical moment a failure in communication led to the boat being damaged – a fracture opened at one end. Although it was kept intact for the duration of the exhibition, afterward the boat was removed to the workshop so that a new support could be fitted. The new mount would support it more effectively along its length and would permit the object to be moved in future without having to manhandle the boat directly.

The boat in a gallery at the Manx Museum



The 3D wireframe of the boat in Photoscan

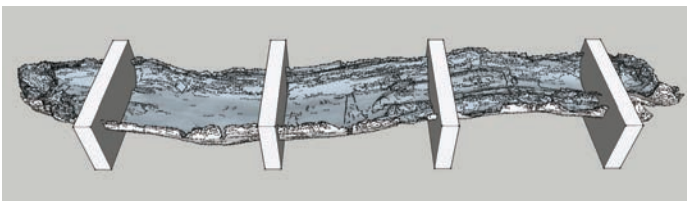
MODELLING THE OBJECT

Once in the workshop we explored a number of potential solutions before eventually settling upon the following procedure. The boat was placed face-down on a scaffold trestle. With the help of an intern I made a three dimensional model of the exposed underside using photographs and *Agisoft Photoscan*. This involved an awful lot of experimentation because I had not tackled such a large and awkward object with *Photoscan* before. Once we had a model we were confident about, I scaled it carefully and exported a mesh of the model as an *object (.obj)* file. I had to set a relatively low polygon count for this because *SketchUp* cannot handle large polygon meshes easily.

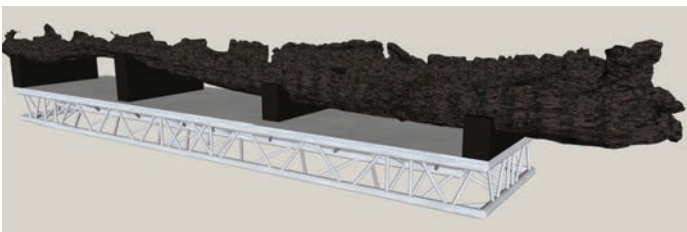
MODELLING SUPPORTING CUSHIONS

I then imported the *.obj* file into *SketchUp*. In *SketchUp* it was very simple to manipulate the model to get it to sit in the best possible aspect and orientation for display, something that obviously was not the case with the real thing. For the supports I drew four simple blocks that could be cut to fit the hull form, and I set them in a row with their bottom edges aligned. I then 'dropped' the 3D model of the boat into them and distributed them along the hull, as the illustration shows.

The next step eluded me for a time and eventually I had to purchase the professional version of the *SketchUp* software (we were able to buy an educational licence which was much cheaper). This gave me access to the 'Intersect Faces' tool which I used to 'subtract' the boat shape from the blocks. With a bit of trimming I then had 3D models of the cushions that would support the boat.



Designing support cushions in *SketchUp*



The boat and mount completed in *SketchUp*

MAKING UP THE SUPPORT STRUCTURE

I sent a digital file of each cushion to Polyformes Ltd. in Leighton Buzzard who created them for me by CNC routing black Plastazote LD60 foam. I chose LD60 having calculated the mass distribution along the boat and compared it to published data on the foam to make sure the foam would not squash or sag excessively.

To make a strong and rigid base for the cushions to sit upon I set aluminium-skinned honeycomb composite boards – Hexlite – on a frame made of lightweight aluminium lighting trusses. Again, this was designed in *SketchUp*. In this way I was able to send the supplier of the trusses detailed drawings and a 3D model of what I wanted, which meant that I was sure of getting it.

The boards and truss frame were adhered together with high-modulus silicone. The Hexlite was etch-primed.

MOUNTING THE BOAT

To mount the log boat the whole thing was assembled upside-down with the foam cushions adhered to the Hexlite with Scotch Glue.

Finally, we strapped the new base to the scaffold trestle and flipped it the right way up using an electric winch.

The finished mount and object in store



Boat ready for turning the right way up

The completed mount can be moved by pallet truck or forklift. It can be dressed with side panels for display and painted any colour, though currently it remains as shown below because the boat is in storage for the time being.

The total cost was £2500.

SketchUp is becoming increasingly valuable as a design tool for displays and mounts. Perhaps its greatest strength is as a platform for trying new mounts in a meaningful virtual context, such as a model of the destination gallery.

Christopher Weeks ACR
Conservator (Objects) Manx National Heritage
Eiraght Ashoonagh Vannin

Suppliers

Agisoft Photoscan: <http://www.agisoft.com/>

Trimble SketchUp: <http://www.sketchup.com/>

Aluminium trusses: TRB Lightweight Structures – <http://trbls.com>

Hexlite: Technical Resin Bonders Ltd, located at 12 Clifton Road, Huntingdon, Cambridgeshire PE29 7EN.

Plastazote: www.polyformes.co.uk/

the emerging conservator

FROM THE ANTI-SCRAPE* TO TURIN AND BEYOND

BA student of Conservation Studies at City and Guilds of London Art School, India Carpenter takes us on a tour of significant conservation charters over the ages

What conservation is, how it is defined, its philosophy and methodology have and will continue to be debated and contested. So long as cultures continue to evolve (which they will) and people continue to care (which they may not) then ideas of heritage, of value and cultural property will continue to affect our understanding of how and what to preserve.

THE BIRTH OF CONSERVATION IN THE UK

The idea that conservation is an entity for debate, for argument and therefore worthy of guidelines, is a relatively recent one, a phenomenon cemented in the twentieth century, with its roots established in the mid-1800s. Towards the middle of the 19th century conversations were rife about the somewhat – to put it mildly – cavalier ‘restorations’ witnessed over the previous fifty years. Medieval masterpieces such as Salisbury Cathedral had fallen victim to the over-zealous, neo-classical driven tastes of the time. Carvings were ripped out, grisaille glass removed and polychrome wall paintings were whitewashed to present a more pure and ‘tasteful’ aesthetic. Almost immediately such actions were questioned and, as momentum built, feelings soon developed into resentment and a call for action. In Britain the man leading this call was the art critic and painter John Ruskin.

Ruskin’s angle was one of ‘trusteeship’ rather than restoration and it was in *The Seven Lamps of Architecture* that he set out his stall:

*‘...it is again no question of expediency or feeling whether we shall preserve the buildings of past times or not. We have no right whatever to touch them. They are not ours. They belong partly to those who built them, and partly to all the generations of mankind who are to follow us’*¹

His criticism develops into a clear distinction between restoration and repair, leaving no ambiguity as to his feelings regarding restoration: *‘...the most total destruction which a building can suffer...’*. His fervour and strength of feeling, though now quite justly viewed as a little reactionary, should not be undermined, for his writings were groundbreaking, especially his championing of what we could now describe as an early call for ‘preventive’ conservation. Inspired by his writings came William Morris and Philip Webb who together in 1877 founded The Society for the Protection of Ancient Buildings, which can be recognised as the first manifesto concerning buildings conservation.²

ELSEWHERE IN EUROPE

In France things were developing very differently. The infamous Eugene Viollet-le-Duc was busy making some extraordinarily inventive restorations, blending historical fact with his own creative modifications (in Carcassonne he went

so far as to adorn the medieval fortifications with little slate roofed turrets, totally incongruous to either the time or the place). His stance held restoration as *‘a necessary re-establishment in the finished state [of that] which may in fact never have existed at any given time.’*³

Over in Italy, things were a rather more measured. Camillo Boito (another architect-engineer-historian) was working hard towards some kind of reconciliation between the two perspectives and in 1883 presented a document titled *‘Prima Carta del Restauro’* (The Charter of Restoration) in which he reveals the absurdity of strictly adhering to either. His position was that restoration should be a last resort *‘...architectural monuments should be consolidated rather than repaired, repaired rather than restored, taking great pains to avoid any additions or renovations.’*⁴ However, when they are necessary, restorations must be simultaneously sympathetic and distinct from the original building, and furthermore everything must be rigorously documented:

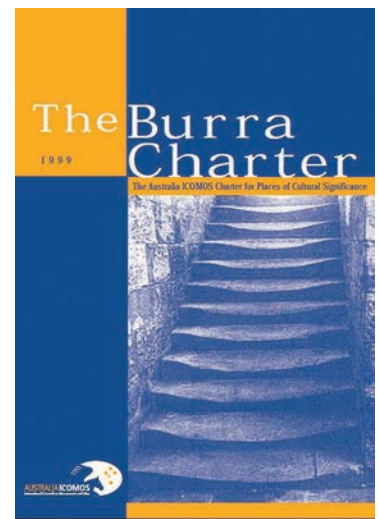
*‘...the addition or the renewed blocks, whilst taking the original form, should still be made of obviously different material, or that they be clearly marked with an engraved sign or better still with the date of the restoration, so that not even here a careful observer be misled.’*⁵

He believed that interventions were totally valid and that distinguishing these layers was key to the historical authenticity of the building. What is most exceptional was Boito’s recognition that intervention is always based on value judgments and therefore conservators should always question their own prejudices. Boito’s excellent pamphlet crowned him the founding figure of Italian conservation, but because it was never translated into English he was, until recently, little known outside his own country.

AN INTERNATIONAL APPROACH

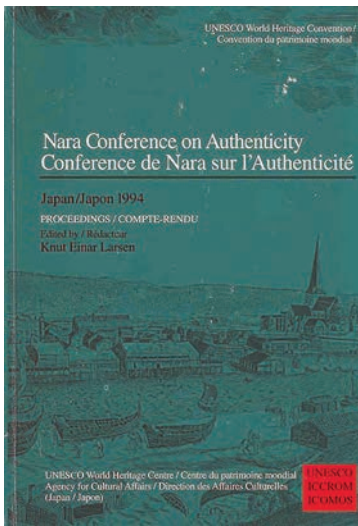
The first attempt to set down a truly international code of ethics came in 1931 at the League of Nations Conference in Athens. The conference concluded with the drafting of seven main resolutions and introduced four totally new concepts to the conservation debate. These were:

- the idea of a common world heritage
- the importance of the setting of monuments
- the principle of integration of new materials, and, finally,
- the calling for the reburial of archaeological remains when conservation cannot be guaranteed.



The Burra Charter (1999 edition)

* An early nickname for the Society for the Protection of Ancient Buildings



The Nara Document (1994 edition)

Remarkably it took another thirty three years for the Athens Charter for the Restoration of Historic Monuments to be reconsidered and updated, but what replaced it is commonly recognised as the most significant of all charters and a milestone for the conservation movement. The Second

International Congress of Architects and Technicians of Historical Monuments and Sites met in 1964 in Venice and formed both a new charter and a new organisation: ICOMOS. ICOMOS (International Council on Monuments and Sites) was created to be an international non-governmental organisation that would promote the study of theory, methodology and technology of conservation applied to monuments, historic areas and sites.

The Venice Charter, building upon the Athens document, stressed the importance of settings, respect for the original fabric, rigorous documentation of any intervention, the significance of contributions from all periods to the building's character (even the dodgy ones), and the maintenance of historic buildings for a socially useful purpose.

The Venice Charter soon became an invaluable framework for conservators, however, the more it was used and tested the more apparent became its faults and omissions, most significantly its Eurocentric ideas and attitudes, which is unsurprising, considering that seventeen of the twenty three participants who compiled the charter were European. Criticism was rife and within ten years it was deemed outdated: 'Let us preserve the Venice Charter as a historic monument!'⁶

So what followed was a plethora of new charters and recommendations, conventions and standards covering everything from gardens to specific countries to tourist activities. Each one attempting to pin down with increasing accuracy a set of rules that would take into account the varying opinions and nuances of whatever thing they were trying to protect.⁷

THREE SIGNIFICANT CHARTERS

Of the new wave of post-Venice charters, three have been particularly instrumental in questioning the very nature of conservation as a cultural construct. What are we and what should we be trying to conserve, who are we conserving this for (and who are 'we'), why, and how are we going to do this in a culturally respectful and un-dictatorial manner? – these were just some of the new questions that needed tackling.

The Burra Charter (Australia 1979) was a national charter concerned with the conservation of cultural sites in Australia. It was particularly significant for the way it re-defined what passes as 'culturally significant' and how these sites should be managed and conserved, taking into account the values and



Car mechanics at work

needs of particular nations and, importantly, cultural groups within nations.

The Nara Document on Authenticity (Japan 1994) similarly addressed what counts as cultural heritage (including both the tangible and intangible) and went further to assert that there should be no fixed criteria with which to judge value and authenticity. Cultural property should be evaluated within the cultural context to which it belongs and the care and management of heritage belongs primarily to the culture that produced it.

The most recent is the Turin Charter (2011), which addresses the preservation of historic vehicles and falls under a wider umbrella of the protection of industrial heritage.⁸ Historic vehicles are significant not simply for their physical role as means of transport and technical state of art, but also for their enormous impact on society. However, for a number of reasons (including their sheer size and complexity), conservation has always been a problematic topic and has often been left to the discretion of the enthusiast rather than the museum. The Charter was drafted not simply to protect the vehicles (and all related artefacts) but importantly to protect conservators and enthusiasts from the rather strict and dogmatic rules of existing charters.

The main issue at stake was one of usability. What is a car if it cannot be operated? What happens to the intangible heritage, the technical skill and knowledge implicit in the operation of vehicles if the vehicles themselves are rendered inoperable? However, in order to maintain the workability of vehicles, restorations and alterations may have to be made and such alterations may not only fall outside the guidelines of existing charters, but also challenge the vehicles' claims of authenticity.

The Charter (written by a mixture of conservators and representatives from the Fédération Internationale des Véhicules Anciens) carefully addressed this issue by first distinguishing the differences, and then making allowances for restoration, repair and even modification of vehicles and their parts. There are, of course, strict guidelines, derived and modified from the Venice Charter; historically accurate materials and techniques should be used wherever possible, all interventions must be documented and 'Components and materials inserted... should be identified with simple and permanent markings to distinguish them from historic substance.' (This final instruction is pure Boito).



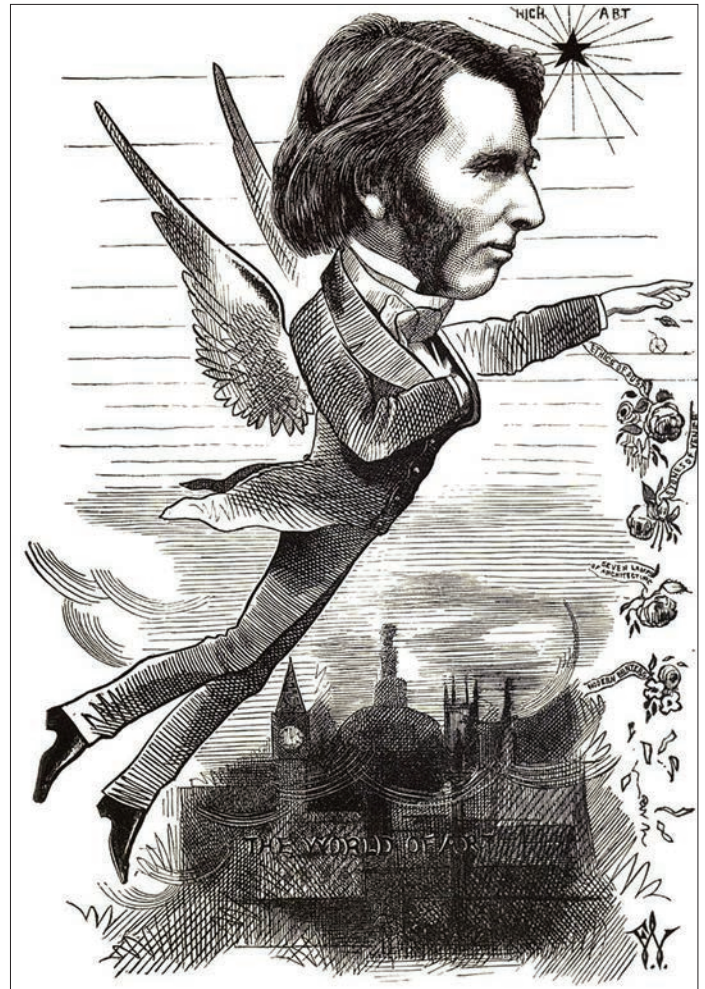
Camillo Boito

By re-jigging and adapting existing charters, the Turin Charter aimed to achieve a compromise between preserving the material integrity and the conceptual integrity of vehicles, whilst acknowledging and accepting the physical changes that may occur through their continued use. Furthermore, it recognised that the material preservation of vehicles is only one aspect of their cultural value and that the knowledge, skill, expertise and ultimately the society that surrounds the term 'vehicle' needs protecting too. The Turin Charter asserts that high quality and informed conservation can and should continue to exist outside of the museum/heritage structure.

CONCLUSION

The necessity of charters is clear, they provide an invaluable framework for good practice, protecting heritage and simultaneously providing protection for the practitioners of conservation. However, in trying to provide guidelines, the creation of charters has brought forth the need to define and categorise and with that, it can be argued, an over-simplification of ideas. As noted by Joel Taylor,⁹ the reality of conservation is much more nuanced than the simple division based on single, consistently applied philosophical approaches.

The practice of conservation is a very young cultural phenomenon, its existence born and continually evolving from an amalgamation of societal developments, scientific learning, resounding successes and gross mistakes. As culture evolves, so do its constructs. Therefore, to stick rigidly and unquestioningly to prescribed rules in any discipline, particularly one so young, is to stagnate, and to see 'known truths' as a shelter rather than a stepping-stone is to hinder evolution. What is at risk, at best, is a kind of reification of



John Ruskin illustrated by Frederick Waddy (1870)

heritage and consequently conservation practice, a transferring of a rich and complex subject into something passive and determined.

If conservators wish to continue to participate, with authority, in the preservation of heritage they must continue to question their own assumptions. I would go further and suggest that due to their unique placement, it is the active responsibility of the conservator to progress and develop discourse, not simply on the day-to-day questions of how and what to conserve, but on the very value and meaning of conservation.

- 1 Ruskin, J, Rosenberg,JD. *The Lamp of Memory In The Genius of John Ruskin: Selections from His Writings*. (University of Virginia Press 1998)
2. www.spab.org.uk/what-is-spab-/the-manifesto/
- 3 Matero, F. *The Conservation of Immovable Cultural Property*. JAIC 1993, Volume 32, Number 1, Article 2 p.15
- 4 Ashurt, J. *Conservation of Ruins*.(Elsevier Ltd 2007) p.5
- 5 Jokilehto, J. *A History of Architectural Conservation* (D.Phil Thesis, University of York.1986) p.464
- 6 Erder, C. *The Venice Charter Under Review*. (Ankara 1977) See www.icomos.org/venicecharter2004/erder.pdf
- 7 Gillon, J. *Conservation Charters and Standards*. See ihbc.org.uk/context_archive/51/charters.htm
- 8 <http://fiva.org/newsite/commissions/culture-commission/charter-of-turin-2/>
- 9 Taylor, Joel. 2015 *Embodiment Unbound: Moving Beyond Divisions in the Understanding and Practice of Heritage Conservation*. Studies in Conservation Volume.60 No.1 pp. 65-779

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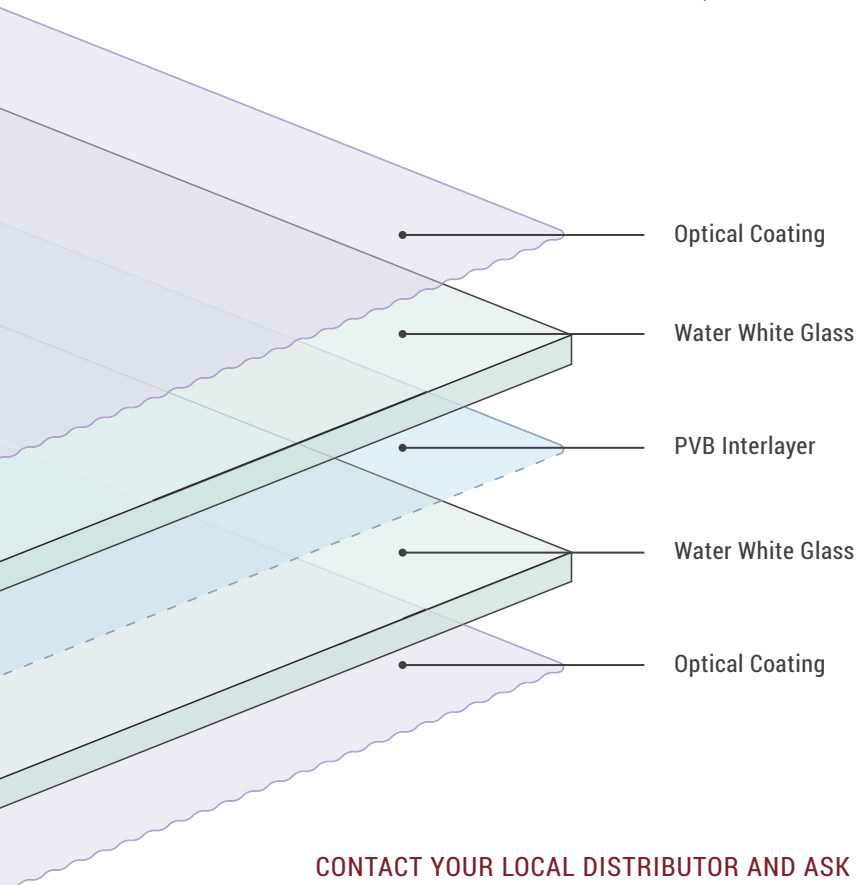
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