

RETHINKING CONSERVATION PRACTICES AT THE BODLEIAN LIBRARIES

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A decade has passed since I participated to the International Course on Conservation of Japanese Paper (JPC), an ideal moment to reflect on its programme and its main outcomes. The JPC 2011 took place at the Kyushu National Museum in Dazaifu, Fukuoka. It was a momentous opportunity for its participants to acquire knowledge of Japanese conservation techniques and approaches. It presented the range of materials and tools used, how scrolls, screens and books are made, how to undertake the lining and mounting of a scroll, best handling practices, housing solutions and the aesthetic considerations underlying these activities. The enjoyable study tours in Mino, Nagoya and Kyoto exposed the participant to remarkable collections, conservation studios, suppliers and production processes, such as the craftsmanship involved into making *washi*, all in exceptional environments. By the end of the course I acquired invaluable skills and knowledge but most importantly the determination to learn more.

The course had a transformative influence on the professional life of the participants in various ways depending on their conservation background, previous knowledge of Japanese paper conservation techniques, and the context in which they operate. In this paper I shall discuss how the course influenced my practical work, research, and the way I look at collections. I will also consider the invaluable impact that this training had on the professional development of my colleagues and on a number of public displays, workshops, and show-and-tell sessions for students, academics, and the general public.

I am fortunate to work in the Conservation and Heritage Science Department at the Bodleian Libraries, Oxford. Here, with the support of the curatorial team, close links with Japanese paper conservation specialists have been cultivated over the course of many years to nurture the development of skills crucial for the preservation of the Japanese collection and more broadly other Bodleian collections. The department initiated exchanges with Japanese paper conservation experts in 1992 with a three month visit from a conservator working at The National Diet Library in Tokyo (NDL). He conducted a condition assessment of the Japanese collection, undertook selected treatment work, trained conservators (for example on how to build *karibari* boards), and advised on the purchase of Japanese tools and materials. This professional exchange with the NDL has continued with reciprocal visits between 2004 and 2019, to date my colleagues Robert Minte, Alice Evans and Alex Walker and the head of department Virginia Lladó-Buisán visited the NDL.

In 1996 the department benefited from the attendance of Robert Minte to the JPC, followed by the conservation treatment of our painted scroll narrating the tale of Urashima Taro (MS. Japan c. 4) in the Far Eastern Conservation Centre at the National Museum of Ethnology, Leiden. In this case Robert Minte participated to parts of the treatment and in 2001 he trained for a year at the Usami Shōkakudo conservation studio in Kyoto. I joined the Bodleian in 2004 having previously acquired some knowledge of Japanese paper conservation in my conservation studies and during a period of training at the Department of Conservation and Scientific Research of the Smithsonian's National Museum of Asian Art, Washington DC. Soon afterwards, in 2008, we started a collaboration with the British Museum (Hirayama Studio) and the British Library to conserve one of our treasures, the Selden Map

of China (MS. Selden Supra 105). This was for us yet another significant opportunity to advance our practical skills and approaches, working with Japanese and Chinese paper conservation experts.

The JPC and all the other opportunities outlined here have given us, over time, first-hand experience of Japanese conservation methods and approaches so important to refine our skill set and revisit our decision-making perspectives and practical solutions.

OUTCOMES

Using Japanese mounting methods

Following the JPC, I started working with my colleague Julia Bearman on a pair of Ming hanging scrolls representing the earth and sky (Sinica 123). Remounting a scroll is always a collaborative endeavour, offering the chance to work together, share knowledge and advance skills. In 1883 the scrolls were trimmed, patched with transparent paper, backed with cloth and treated as any other rolled item from across our collections at the time, with a protective parchment flap attached at one end and a roller at the other (fig. 1-4). The remounting posed aesthetic questions together with technical challenges, associated with the removal of the old repairs and the damage they had caused (Stiglitz and Bearman 2016).



Figure 1 Sinica 123, celestial map



Figure 2 Sinica 123, terrestrial map



Figure 3 Close-up of transparent paper overlay



Figure 4 Close-up of transparent paper overlay

Familiarity with a range of Japanese paper conservation techniques acquired during my previous experience, the fresh attendance to the JPC, and advances in the use of gels and enzymes made the treatment possible. For the purpose of this paper I will focus on the Japanese techniques which offered solutions to the challenges we were facing.

We used a gradual Japanese humidification method to peel away the cloth lining, and the top layer of the Chinese paper lining. This method involved misting the scrolls with dahlia sprays and brushing down several layers of rayon paper on both recto and verso with water and a *mizubake* (a Japanese brush used to apply water) (fig. 5-7). In this way the fragmentary surface of the scrolls was supported and protected at all times, the scrolls were flattened, the dirt was washed out, and the adhesive softened (fig. 9).



Figure 5 Brushing rayon paper with water



Figure 6 Japanese tools and materials



Figure 7 Peeling away cloth lining

The transparent paper even after this prolonged humidification remained firmly adhered to the scrolls. This was removed by localized humidification with the rigid gel Gellan gum in combination with α -amylase enzymes.

Before carrying out the enzymatic treatment another solution from Japan was of assistance. The scroll was restrained with false margins on a sheet of Plexiglas[®] after having been reinforced with a temporary lining of rayon and sanmoa adhered with 2% Methocel[®] A4M and dried on the *karibari*.

With the experience gained, we then decided instead to remove the transparent paper on the other scroll first, reducing the amount of manipulation undergone by the scroll as it was unnecessary to restrain it

on Plexiglas® with a temporary lining. The removal of the old linings could therefore be combined with the application of the first layer of new lining in one session.

The rationale behind using transparent paper emerged from the Bodleian Librarian's records relating to his participation to the St. Gall conference in 1898 (Library Records c. 1429) including his experiment comparing the different repair methods commonly used by the delegate librarians. He laid down samples of transparent paper, goldbeater's skin, silk *crepeline* and Japanese paper to test their transparency over text (fig. 8), this reminds us that Japanese paper was not yet the foremost repair material.

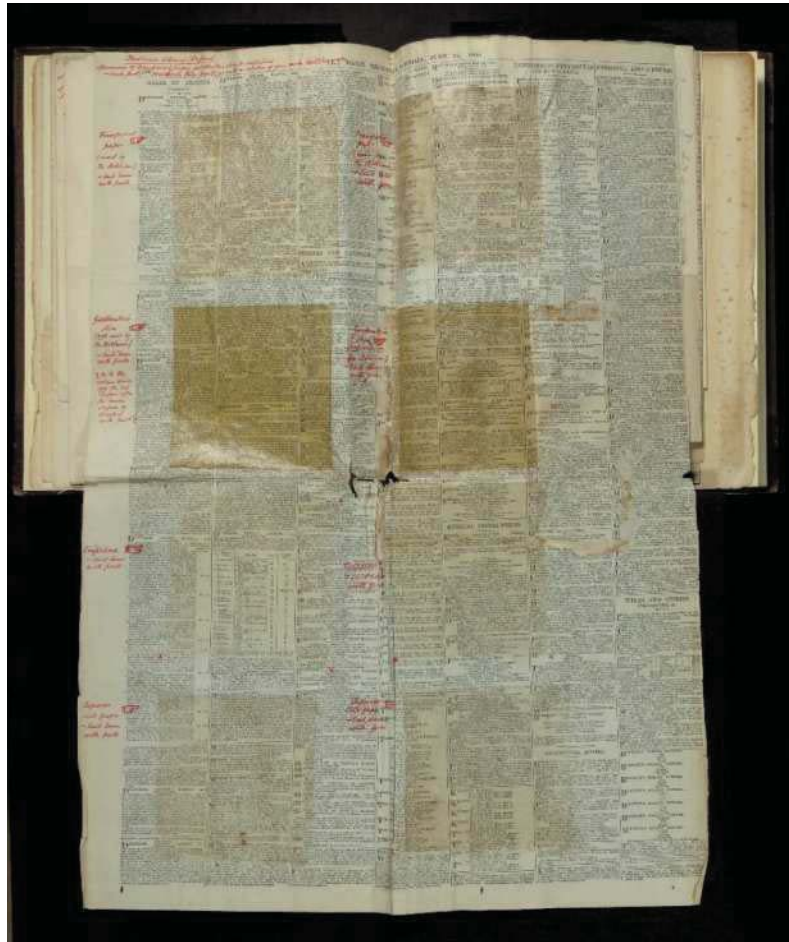


Figure 8 Historic experiment, from the top row transparent paper, gold beater's skin, silk crepeline and Japanese paper (Library Records c. 1429)

The scrolls were extended with Xuan paper to recreate proportions more appropriate to Chinese hanging scrolls. Three layers of *usumino* were selected for the overall lining of the maps. The grain direction of the first and third layer ran with the length of the scrolls and the second counter to the length. Each piece of *usumino* was prepared with feathered edges to minimise the overlap at the joins. The *usumino*, with its long fibres, offered adequate support and flexibility. It is necessary to remember that conservators will choose material and methods they have experience of; therefore ongoing training is crucial to equip conservators with a range of treatment solutions.

Each map was flattened and humidified to receive the extensions and first lining. The *usumino* was pasted with a *noribake* (a Japanese pasting brush) on a Japanese cypress board using diluted wheat starch adhesive (fig. 9). It was then lifted on a wooden stick and brushed down on the verso of the map

with a *nadebake* (a Japanese smoothing brush) (fig. 10). The maps were left to dry between felts and then lightly humidified with a *mizubake* and dahlia sprays and attached to the *karibari*. Then they were squared and the positions of the envelopes for the stave and rod were marked. The scrolls were humidified, and the second lining applied and then left to dry between felts. False margins of *sekishu* were attached at this stage. The scrolls were re-humidified in preparation for the application of the *orebuse* (narrow reinforcement strips), the envelopes, and the last lining. For the final time the maps were left to dry before being lightly humidified and attached to the *karibari* with false margins (fig. 11).

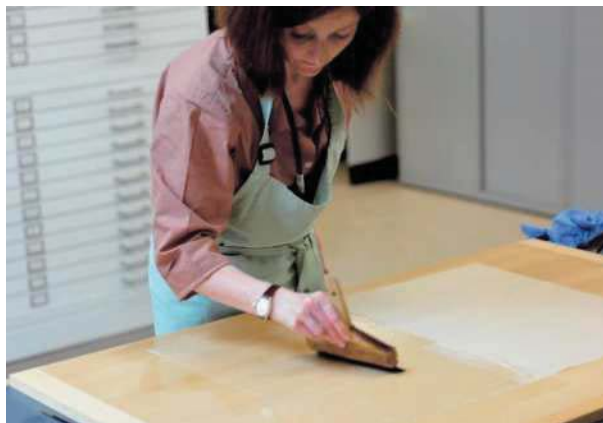
Figure 9 Pasting *usumino* paper

Figure 10 Applying lining

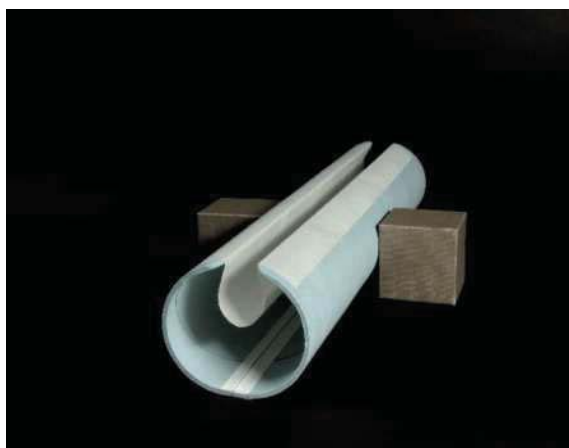
Figure 11 Scrolls drying on *karibari*

Figure 12 Roller clamp

After a few months, the maps were removed from the *karibari*, the excess was trimmed, the verso was smoothed with a loop of glass Buddhist prayer beads and rods, staves and wrapping braids were prepared and added. Finally, hoping to reduce the risk of future distortions, the circumferences of the rolled scrolls were increased by preparing roller clamps from archival tubes (fig. 12) (Suzuki and Kamba 2009), a solution used instead of the more expensive *futomaki*. The display of the scrolls in the Bodleian public hall in 2015 was accompanied by treatment photographs played on a large screen to engage with the public. An overview of the treatment featured on our website.

Examining and conserving the Bodleian Japanese collection

The Bodleian Japanese collection comprises a significant number of painted manuscripts, in various formats from bound volumes to handscrolls, and folded books, produced during the seventeenth and

eighteenth centuries. A preliminary analysis of pigments was carried out during the assessment or the conservation treatment of some of these works in the past few years and we are now initiating a systematic and comprehensive study using Raman spectroscopy, Hyper Spectral Imaging, and other non-destructive technologies (fig.13). A postdoctoral researcher in heritage science will assist with this project over the course of a year from October 2022. The characterisation of pigments used will inform our preservation strategies and treatment methods. The results of this work will also broaden our understanding of the materials used to create painted manuscripts in Japan in the seventeenth and eighteenth centuries and will be relevant not only to conservators but to curators, art historian and anyone interested in the materiality of the Japanese book.

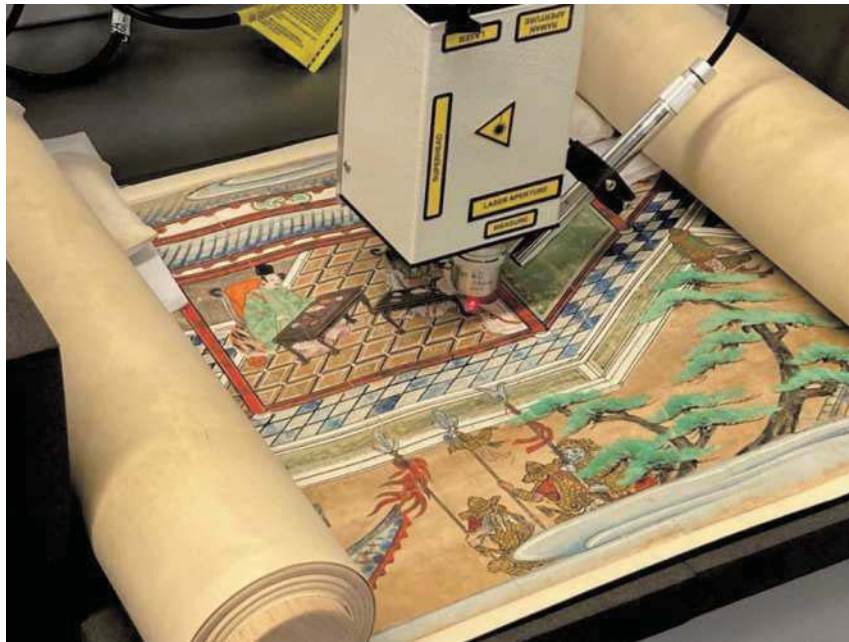


Figure 13 Analysis with Raman spectroscopy

This group of manuscripts includes a number of *Nara ehon* (Nara picture books) dating from the mid-seventeenth century (MS. Japan d. 30-50) (fig.14). The manuscripts presented a fragile paint layer, in particular losses to areas of finely-ground Japanese *gofun* (oyster-shell white), which is very susceptible to flaking and powdering. *Gofun* was originally applied in many successive layers, often with a high pigment to binder ratio in the upper paint layers to create a more vivid white; the insufficient binder contributed to its instability over time. As the binder deteriorates losses occur, exacerbated by the turning of the pages or the unrolling of the scroll (Minte 2017).

In order to test various consolidants, *gofun* was prepared in a traditional way by grinding with a pestle and mortar (fig. 15), mixing with *nikawa* (animal glue binder) (fig. 16), and painting out in thick layers replicating the manuscript's paint layer (fig. 17). These samples were used to observe the behaviour of the pigment, its tendency to flake, and its response to various consolidants. JunFunori[®], extracted from the red algae genus *Gloiopeltis furcata*, was selected for its strength in low concentrations, flexibility and minimal visual impact on the matt appearance of the white paint layer. Two fine sable brushes were used, one to apply the consolidant and the other to apply alcohol to 'settle' loose flakes and aid the flow of consolidant underneath the paint layer.

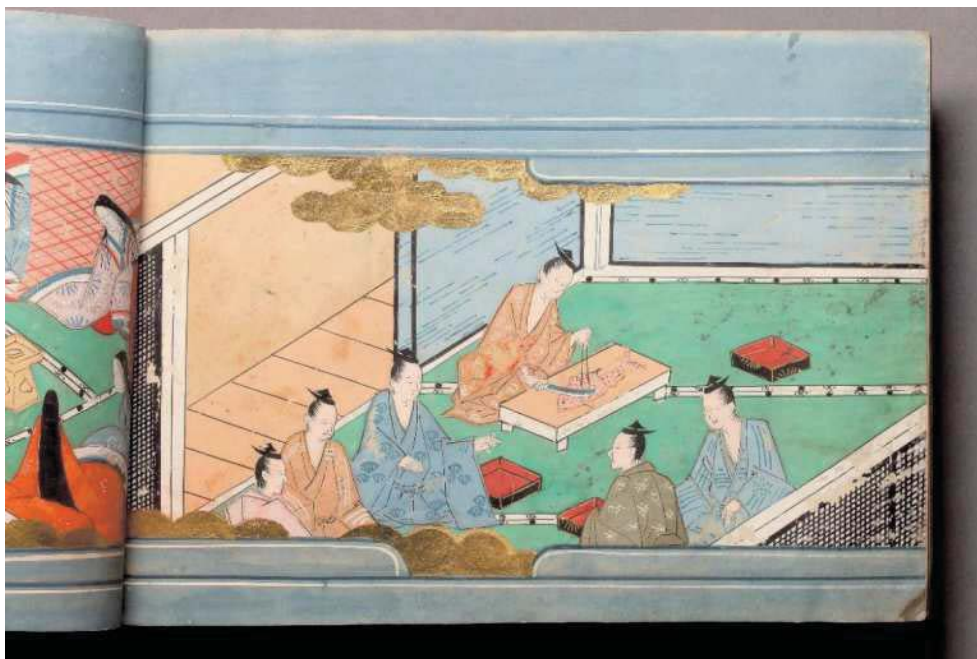


Figure 14 MS. Japan d. 30-50



Figure 15 *Gofun*



Figure 16 Mixing *gofun* and *nikawa*

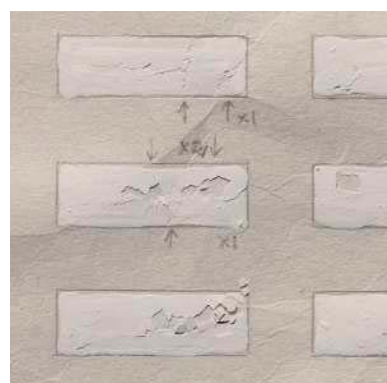


Figure 17 Samples of *gofun* paint

We are also planning to conserve our Tokugawa-period (1603-1868) copy of Sumiyoshi Monogatari (MS. Japan c. 8). We have started a collaboration with the Association for the Conservation of National Treasures (ACNT) to assess and treat this set of scrolls. This collaboration will be very beneficial for the conservation staff at the Bodleian Libraries in order to expand expertise in the assessment and treatment of this type of material. Furthermore, through this collaboration we hope to establish a long term professional relationship with conservation specialists for mutual professional exchanges.

The instrumental analysis of our seventeenth and eighteenth century Japanese painted manuscripts and their conservation offers the opportunity to conservators, curators, heritage scientists and academics, of working together. The results will be shared through a programme of events for the wider public, teaching sessions and publications in order to promote our Japanese collection and our work.

Developing a teaching collection

The Bodleian has been historically collecting materials with the aim of creating teaching collections on various aspects of book production. Recently, we've been working closely with our curatorial

department to begin building a teaching collection which focuses on *washi* and Japanese papermaking. We have acquired many important titles to build upon our already large number of publications on this subject; from *Tesuki washi taikan* (1974), a considerable collection in five volumes with hundreds of samples of Japanese handmade paper, to relevant issues of *Kogei*, the important folk craft magazine published in Japan from the 1930's, one of which includes the late Eishiro Abe's papers. We have also acquired some primary sources and ephemera which relate to production, commercialisation, and use of Japanese paper, for example a copy of *Kami o tsukuru hitotachi* (1950) by Serizawa Keisuke. Also added to the collection is an album with over 200 sheets of different Japanese handmade paper and a foreword by Bunsho Jugaku, which was issued in 1969 to mark the 70th anniversary of the Takeo Company.

We are actively collecting *washi* from significant papermaking workshops; purchasing not only papers used in conservation but often those used to create documents, books and scrolls such as *kumogami*, *hosho* or *torinoko*. We are also including papermaking materials and tools such as bark and papermaking moulds, and planning to develop a photographic resource for teaching (fig. 18-21).



Figure 18 Cleaning *kozo*'s white bark
Photo credit: Hasegawa Washi Kobo



Figure 19 *Nagashizuki*, JPC 2011



Figure 20 Laying down a sheet of *washi*, JPC 2011



Figure 21 Vat with resting wooden frame, JPC 2011

Besides the *washi* teaching collection we continue to expand our pigment teaching resource adding traditional pigments commonly found in Japanese books and the raw materials they derive from. We have recreated a range of pigments to understand their production processes in detail and to be better

prepared when assessing the condition of the paint layer and undertaking its stabilisation. This includes resources on the preparation of pigments such as *gofun*, malachite, liquid gold, safflower and indigo.

During the JPC we visited a pigment shop with a pigment making workshop which was very interesting. The course does not deal with the paint layer of Japanese works on paper, its condition assessment and stabilization treatment. I believe this is an area of research that would be worth exploring and could become the focus of an additional course.

CONCLUSIONS

The JPC has played an important part in giving me and my colleagues at the Bodleian Libraries the confidence to use Japanese conservation methods independently. Furthermore it has given us new impetus to build upon ongoing relationships, create new partnerships to continue developing our skills, put together a teaching collection, and raise the visibility of the Japanese collection and Japanese conservation methods through academic events and public outreach.

Knowing the positive impact the JPC has on its participants and how much more there is to learn, I hope that other opportunities could be created to follow and complement the JPC programme. Additional training and study trips would benefit international conservators by broadening their skills in order to tackle difficult conservation problems commonly encountered on works on paper. Hopefully this thought will resonate amongst many of the participants and the organising teams.

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