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# Conservation Journal

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# **Editorial**

#### Sandra Smith Head of Conservation

A New Year and new challenges ahead!

The end of 2004 saw a rush to complete galleries: Architecture, Domestic Metalware, The Gilbert Bayes Sculpture Gallery; the closure of Dresser and Encounters; the couriering of Westwood to Canberra; the opening of Art Deco in Boston and a major loan of exquisite Diaghilev ballet costumes conserved and mounted for display in Groningen, Netherlands. Barely had we all drawn breath, taken part in the inhouse and traditional pantomime (with Conservation taking starring roles) and imbibed at the Museum Christmas party then we were hurtling along into the new year. Preparation is now underway for the Jameel Gallery of Islamic Art with the Ardabil carpet in the process of being redisplayed horizontally for the first time in over 110 years (Hillyer & Pretzel); the Sacred Silver and Stained Glass gallery will contain many beautiful objects and will challenge traditional methods of stained glass display within the Museum; preliminary work has already begun for the Medieval and Renaissance galleries.

This Journal picks up on some of the interesting challenges and discoveries presented to the Department at the close of last year. Elizabeth-Anne Haldane discusses how one painted dress brought together skills of both textiles and paper conservators. Research into an object for the Architecture Gallery (Burgio), highlights the invaluable role that conservation scientists make in verifying, or challenging, perceived opinions of parts of the collection, whilst the article by Townsend highlights that science alone will not give definitive answers of authenticity. Every new year offers new challenges, but with no appreciable increase (in real terms) of the Grant in Aid that the Museum receives, this year will certainly be more challenging than the last. Finding ways to deliver work from exhibitions, loans and gallery displays whilst also allocating time to preserving the reserve collections, is causing us to look increasingly for external funding to support conservation projects. This is bringing new skills to the Department but making an application involves a considerable amount of preparation, preliminary work, and negotiation to meet funding criteria and the timescales and deadlines within ones own institution, without any assurance of ultimate success. Happily, the Department has been successful in securing funds for the conservation of the Mazarin Chest (Rivers) and Houghton Hall collections (Smith). Both are long term projects, which bring with them opportunities of partnership and new relationships with other conservation professionals. They have also resulted in stronger relationships within the V&A as different departments have come together to support the application.

The progress of these projects, together with that of the Messel collection (Theatre Museum) and the Daily Mail Archive which are two other projects which have attracted external funding, will be tracked through the V&A website over the next few years. In all instances the projects will result in a collection becoming more accessible and more fully understood and some will move professional conservation practice forward and build skills for the future.

#### Lucia Burgio

V&A Conservation

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Object Analysis Scientist, Science Conservation



Pigment analysis was requested by Victor Borges, V&A Senior Sculpture Conservator as an aid to dating. Samples of the pigmented areas of the stuccoes were first analysed by Raman microscopy, a nondestructive, non-intrusive technique which is particularly suitable for the identification of pigments (Figures 2 and 3). Subsequently, the samples

were mounted as dispersions and

examined by polarised light microscopy.<sup>2</sup> The identification of the pigments present on the stucco fragments as well as the evaluation of the shape and size of the pigment particles provided clues about the date of the fragments (Table 1).<sup>3</sup>

Traditional materials were detected on four stucco fragments supposedly still covered by the original decoration. When mercury(II) sulfide (HgS, also called vermilion or cinnabar) was detected and identified by Raman microscopy, its particles examined by polarised light microscopy showed an irregular distribution of shape and size, as well as the presence of striations on some of the biggest particles. These features indicate that the red pigment is either of mineral origin, in which case it is more accurate to

refer to it as cinnabar, or it is of synthetic origin, by means of the so-called dry process. Similarly, the particles of lazurite, seen under the optical microscope, showed the characteristics typical of a ground pigment, i.e. irregular size and shape, broken edges and non-uniform colour. This indicates that the pigment was obtained from lapis lazuli, and it is not the synthetic material called ultramarine blue, which was first synthesised in 1828. As expected for stuccoes, gypsum and occasionally calcite were detected in the mortar samples.

Conservation scientists, conservators and art historians can often obtain useful clues for the dating and authentication of art objects by identifying the materials used on them. For example, when pigment analysis is carried out on a museum object, it can reveal the presence of date-marker compounds, i.e. materials which have a first date of manufacture or, for other reasons, are unlikely to have been used for the decoration of a work of art produced at a particular time and place. This concept is exemplified by the analysis of five painted stuccoes from the Victoria and Albert Museum's collection of medieval Hispano-Islamic panels (Figure 1). The stuccoes are from the Alhambra Palace in Granada, Spain, and supposedly date from the fourteenth century.

Panel museum number	A.9-1913	A.171-1919	A.10-1913	A.12-1913	A.176-1919
Traditional materials present	Lazurite Gypsum Quartz Cinnabar	Gypsum Chalk	Gypsum Lead white Carbon black Red lake	Gypsum	Gypsum
Modern materials present			Prussian blue Wet-process Vermilion Chrome yellow		

Table 1. Materials identified on the Alhambra stucco panels.

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Figure 2: Kaman spectra of a) lazurite from a blue area and b) vermilion from a red area on panel A.9-19 Reference spectra of known samples of lazurite and cinnabar are also shown for comparison purposes





In contrast, modern pigments such as Prussian blue and lead chromate (also known as chrome yellow) were detected on stucco fragment A.10-1913 (Figure 3). This indicates that either the whole fragment is a modern replica or the fragment is original, but was re-painted at some point in the nineteenth century. This *terminus post quem* derives from the fact that Prussian blue was first synthesised in 1704, but it was not commercially available until the 1720s; on the other hand lead chromate, was first synthesised at the beginning of the nineteenth century. One of the fragments (A.10-1913) also shows traces of synthetic, wet-process vermilion, characterised by uniformly sized, small, rounded particles.

## The analysis of pigments and materials found on these stucco panels from the Alhambra Palace in Granada, Spain, gave sufficient clues to hypothesise that one of the panels was not from the fourteenth century, as originally thought. Gypsum, and in

was not from the fourteenth century, as originally thought. Gypsum, and in one instance, calcite were detected in the stucco mortar, and traditional materials such as lazurite, cinnabar, and carbon black were detected on stucco fragments supposedly still covered by the original decoration. Pigments such as Prussian blue and lead chromate were found on one stucco fragment, which was therefore thought to be either an original fragment repainted at some point in the nineteenth century or a copy made in the nineteenth century. The latter hypothesis is supported by observations collected during the conservation treatment of the stucco fragments.

#### Acknowledgements

I am grateful to Professor Robin J.H. Clark, University College London, for kindly granting access to his Raman spectrometer for pigment analysis.

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# **Conservation of Houghton Hall textiles** and furniture

#### Sandra Smith

Head of Conservation

Houghton Hall, Norfolk, was built and furnished in 1722-1735 for Sir Robert Walpole, the first British Prime Minister, by the innovative and leading designer William Kent. Many of the state rooms retain their original furnishings.

In 2002, under the Government Acceptance-in-Lieu (AIL) system, the V&A acquired two state beds, three sets of tapestries and two suites of gilded seat furniture, to be preserved *in situ* at Houghton Hall for the nation. These items have fragile original hangings and upholstery and are in urgent need of conservation. A conservation survey, prior to acquisition, identified over a million pounds worth of conservation work. This extensive conservation project could not be undertaken by the V&A Conservation Department and external studios needed to be commissioned to undertake the work.

The DCMS provided £250,000 toward the costs of this project and in 2004 an application was made to the National Heritage Memorial Fund (NHMF) for further funding. Submission of the application involved the planning of conservation work, identification of appropriately skilled studios that could undertake the work within the five year timescale suggested by the NHMF and consideration of the impact of this work on the staff and visitors to Houghton Hall.

Two factors, fragility (conservation) and historical significance (curatorial) were used to prioritise the collection. The Embroidered Bed (Figure 1) and the King's and Queen's tapestries (Figure 2) followed by the Venus and Adonis tapestries (Figure 3) were in most urgent need of conservation, followed by the Kent Bed counterpoint and the two suites of seat furniture. The Bacchus tapestries were sufficiently robust not to be included in the NHMF fund application.

Conservation method statements were written for the tapestries by Lynda Hillyer, Head of the Textile Conservation Studio, and furniture by Christine Powell and Nigel Bamforth of the Furniture Conservation Studio. These specified for external tenders' standards of treatment, quality of work and documentation, and emphasised the need for the appearance of the conserved items to be appropriate to the ambience of the Hall.

Completing all conservation within a five year time scale was a challenge, particularly for complex and time consuming work involved in the treatment of the Embroidered Bed and tapestries. Treatments were broken down into smaller packages to enable two or more studios to work on items simultaneously. The 'lead studio' was responsible for ensuring quality and consistency of method and materials for all the studios conserving the the King's and Queen's tapestries and the curtains of the Embroidered Bed. In total for the five items/groups of furniture and textiles to be treated, thirteen packages of work were defined (Table 1).

Object Description	Conservation Work	Packages
Venus and Adonis Tapestries	4 Panels & Borders	Package 1
Seated Furniture	Full Conservation	
	Upholstery	Package 1
	Gilding	Package 2 (V&A)
	Preventive Work	
	Netting	Package 3
	Gilding	Package 4
Embroidered Bed	Headboard & Valances	Package 1
	Counterpoint	Package 2
	2 Curtains	Package 3 (lead)
	2 Curtains	Package 4
	2 Curtains	Package 5
King's and Queen's		
Tapestries	3 Panels	Package 1 (lead)
	2 Panels	Package 2
Kent Bed	Counterpoint & Valances	Package 1

Table 1: Packages of work for the Houghton Hall Conservation Project.

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igure 1. Embroidered State Bed.

Studios with a proven track record of working on comparable collections (e.g. National Trust and English Heritage) were invited to tender for one or more individual packages/items. The studios were encouraged to apply their considerable experience and suggest materials and methods which would best fit the method statements.

A selection panel identified preferred studios for each of the packages; quality of work, consideration of risk and timetabling were of primary importance, and cost being a secondary consideration. Some studios successfully secured a number of packages. Further negotiation clarified costs and timetabling as well as the responsibilities of Houghton Hall, the V&A and the studio in undertaking various aspects of work. Discussions between lead studios and their partners clarified roles and responsibilities which in turn led to further adjustments in costs and timetabling.

The V&A conservators made the final decision on proposed treatments, methods and materials. As a result, all studios working on the Embroidered Bed will use the same materials and techniques (where possible); one type of lining fabric and thread will be used throughout and the V&A will commission and purchase the replica braid to ensure historical accuracy. Similar treatments will be used for both sets of tapestries; all will be wet cleaned in Belgium and re-hung in a manner that will ensure the ability to be rapidly removed in the event of a disaster.

As far as is reasonably possible the conservation work was programmed for October – March, when the house is closed to the public, particularly important when the work has to be undertaken in situ at Houghton Hall. Disruption during the conservation of the Embroidered Bed and the tapestries is unavoidable. Work by the different studios is being coordinated to minimise the effect on the House staff, and steps are being taken to minimise its impact on the visitor experience.



igure 2. A panel from the King's and Queen's Tapestries

The curtains of the Embroidered Bed will be rotated to ensure that the base of the bed is always dressed. and a silk coverlet will be placed over the mattresses whilst the counterpoint is being conserved. A tapestry from the V&A Collection will replace the King's and Queen's tapestries in the state room whilst it is out of the house being conserved.

Information panels will inform the public of the conservation project and progress reports on the V&A website (linked to the Houghton Hall website) will help to forewarn visitors that those collections are not accessible.



Figure 3. A panel from the Venus and Adonis Tapestry.

In October 2004 a grant of £500,000 was secured from the NHMF. This, together with the DCMS funding and support from the V&A (salary cost, insurance, materials and equipment) will secure the conservation of the Embroidered Bed, the King's and Queen's tapestries and three out of the four Venus and Adonis tapestries (funding for the remaining panel is currently being sought).

Work on this project began in October 2004 with the dismantling of the Embroidered Bed and the removal of the Venus and Adonis tapestries. The work will be undertaken by five different conservation studios, and will take five years to complete.

My thanks go to the following people, without whom this project would not have got off the ground: DCMS and the NHMF for their generous support (in particular Ellen Dempster); the V&A 'Houghton Team', conservators, curators, Development, ISSD, Learning and Interpretation, Contracts, Finance and in particular Michael Casartelli; to all the studios who tendered for the work and raised our standards even higher!; Lord Cholmondeley and the Houghton Hall staff, for their help and (continued) patience as we invade their beautiful property and disrupt their lives.

# Funding a collaborative conservation project: the Mazarin Chest

Shayne Rivers

Senior Furniture Conservator



Figure 1. Detail of a hunting scene from the left side of the Chest that shows the fine detail with which the Chest was decorated. The boar are approximately 4cm in length

The Mazarin Chest (412-1882) is an extraordinary object of major cross-cultural significance, renowned as one of the finest pieces of Japanese export lacquer to have survived from the late 1630's (Figure 1). What makes the Mazarin Chest truly exceptional is the range of different techniques and the extraordinarily fine workmanship with which the lavish decoration was executed. Conservation is urgently needed to stabilise the poorly adhered lacquer and decoration in which much of the artistic, aesthetic, historical and technical value of this object is located. At present the Mazarin Chest is not stable enough for display or transport and is at some risk of further loss even if it simply remains in storage.

Although the Mazarin Chest is artistically and historically important in both Japan and the West, what is valued about the Chest in each culture differs. This in turn effects how the conservation of this object would normally be approached. In the West, conservators use a variety of materials and aim to work within the ethical principal of reversibility. Japanese conservators usually utilise traditional urushi-based materials and techniques that are non-reversible but maintain cultural continuity, integrity and authenticity.

The Mazarin Chest conservation project has two strands that will run over three years (Dec 2004 – Dec 2007). The first is an Anglo-Japanese collaborative conservation project. I will be working with Yoshihiko Yamashita, for three to four months a year, cleaning the Chest and consolidating loose decoration. We will discuss and critically evaluate Western and traditional Japanese materials and techniques in order to choose those that are most appropriate for each given problem.

The second strand is a scientific research project by Brenda Keneghan that will investigate three traditional Japanese conservation treatments – the treatment of a photo-degraded lacquer surface using the urushi-gatame process, the consolidation of foundation layers using mugi-urushi and the use of kokuso as a filler. The urushi-gatame process aims to strengthen the surface of light damaged lacquer without changing its appearance by impregnating the microcracks with dilute urushi, but removing all excess urushi from the surface of the lacquer. Mugiurushi is a consolidant whilst kokuso is a traditional urushi-based filler. This research is intended to allow the project team to make well-informed, ethical decisions about the treatment of the Mazarin Chest and, by extension, similar lacquer objects in Japan and in the West.

The Getty has awarded the project a grant of £84,000, primarily to meet the costs of Mr Yamashita's time in the UK. The Toshiba International Foundation will also support the project. The V&A is making a substantial commitment of resources of photography, conservation, scientific research, curatorial input and website development. The Mazarin Chest project team are Fiona Campbell (website), Rupert Faulkner, Julia Hutt, Brenda Keneghan, Lucia Burgio and Shayne Rivers, all from the V&A, and Yoshihiko Yamashita, a freelance lacquer conservator based in Tokyo, Japan.

#### Acknowledgements

The project team is grateful for the ongoing support of Albert Neher, Graham Martin, Sandra Smith and Carolyn Sargentson. We would also like to thank Jonathan Ashley-Smith, who supported this project from its inception in 1999.

# The Safavid Cope

Marion Kite Senior Textiles Conservator

V&A Conservation

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Figure 1. The Safavid Cope (477-1894). Photography by V&A Photographic Studio

The redevelopment of the main Islamic Middle East Gallery at the Victoria and Albert Museum has provided an opportunity to study and carry out materials analysis on a silk knotted-pile cope which has long been recognised as one of the most important examples of Safavid (Safavid empire, 1502-1736) pile-weaving of the seventeenth century (Figure 1). Dating from about 1605, the cope combines Christian iconography together with the typical Safavid floral motifs and is unique in that it was clearly woven as a cope rather than being made into a vestment from some other textile. Its history is unknown but it came to the Museum as fragments. There have been differences of opinion with regard to the religious community for whom the vestment was made, but the most recent technical examination and conservation research has provided new evidence which enlarges existing knowledge about the cope. Discoveries made during the conservation have enabled new conclusions to be drawn which define more clearly the origins of this vestment. Dye analysis, metal thread analysis and other technical examination have also completed the documentation of this object.

The cope had been last conserved about fifty years ago, but full conservation of the object was again necessary. The colours of the cope were remarkably fresh but the support crepe fabric had faded and the darned repairs were visually distracting and causing distortion. Small areas of weakness and loss of pile were apparent in many areas and although stitching was holding these areas to the crepe support there was no cohesion of structure to the cope fabric and many knots were loose.

It was clear that stitching the fragments to a new support fabric would not prevent loss of knots over time. The current conservation strategy would therefore need to incorporate additional support to secure loose knots and supplement the stitching method chosen.

In the previous conservation the cope was mounted in its cropped form. The orphrey (border) of the cope was for the most part missing and space had not been allowed to indicate where the boundaries of the orphrey would have been. No sense was therefore given of the original dimensions of the cope nor the positioning of the Virgin and Angel Gabriel figures in relation to the orphrey boundaries and rest of the cope.

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This time the cope would be conserved and mounted in such a way as to indicate its original size and shape and to give a better understanding of it as a complete object. The conservation would involve removing all previous conservation and darning, then remounting the cope fragments in their correct alignment on a fabric marked out to the original size of the cope.

It was decided that the first phase of the conservation would need to support the fragile pieces on an adhesive treated film in order to prevent knots falling away and to give an overall support to the fragments. Although it would still be necessary to carry out couched repairs, the adhesive support would enable the couching to be kept to a minimum and limit the visual distraction of surface stitching. A mixture of Lascaux 360 and 498 was chosen as the most suitable adhesive and Stabiltex as the fabric on which to cast the film.

When removing previous stitching, care was taken to avoid disrupting loose knots. Those which fell away were collected to be used for dye analysis. A few loose metal threads were also collected for analysis. Sufficient linen was prepared and dyed to colour match. A second piece of linen was prepared for use behind the dyed linen to give an additional backing and make the combined weight of the two closer to that of the cope fabric. Once all the old repairs had been removed and there were no surface distractions the cope was examined and areas of distortion noted.

On the orphrey, around the Angel Gabriel figure, (Figure 2) faint areas of loss were noticed which had originally been shapes worked in black silk. Most of the black silk had degraded and fallen away leaving poorly defined worn areas. It was not immediately clear what these represented but examination of this area from the back of the cope revealed that these areas appeared to be part of a script. A tracing of the shapes was taken, and this was compared to the back in order to make certain the tracing recorded the shapes correctly. The script was incomplete but clearly formed a part of a larger text. Dr Vrej Nersessian, an Armenian scholar from the British Library, was consulted and confirmed that the characters were Armenian. Although incomplete, the



Figure 2. A detail of the cope, showing the Angel Gabriel.

text remains were recognisable as an abbreviated form of the Magnificat. It was now possible to fit the characters forming the complete text into a digital image of the reconstructed cope.

A tracing was made of all that remained of the orphrey. The remains of a curved red line worked into the design were noted. This line, situated beneath the feet of the Angel Gabriel figure, was not part of the floral design and served to delineate a change of colour in the metal thread used on the orphrey ground. It also appeared to mark a boundary to the text. Taking the crucifixion scene on the centre back as the measuring point, the design of the two halves of the cope are predominantly worked as mirror images of each other. The figures of the Angel Gabriel and of the Virgin Mary are symmetrically placed so when the cope is worn these figures face each other. Logically, it would follow that there should also be a line by the feet of the Mary figure and that the text could therefore be defined within the boundaries of these two lines. More of the orphrey was missing by the Virgin Mary figure so there was no remaining evidence of this line.

The first phase of supporting the cope was carried out using a vacuum hot table. Once supported, the fragments were placed upon the prepared double layer of linen and aligned in their correct position. They were tacked in place to help prevent creep and any misalignment occurring as the cope was being couched. The fragments were couched to the support linen and the excess adhesive film support was trimmed away back to the fragment edges as work progressed. Split areas were couched, although it was possible to keep this to a minimum due to the overall adhesive support.

The size of the cope and boundary line was calculated by taking measurements from various points where small fragments of the outside edge of the border remained. This was marked with a line of tacking. The linen support was turned back to this line and herringbone stitched. The cope was then stitched to a fabric-covered Hexalite board which had been cut to the shape of the cope. The cope was intended to be displayed in a sealed case so it was not framed at this time.

The conservation work was carried out in the Textile Conservation Studio over a period of six months. During this time the relative humidity (RH) was generally low, averaging no more than 35%. Coinciding with the time of mounting the cope, the museum heating was turned off and there was a severe rainstorm. The RH rose to 55%. Consequently the cope reached equilibrium with this and sagged on the mounting board. This caused a dilemma. It was a simple matter to release the stitching holding the cope to the board, re-stretch the cope and re-stitch it, but this would put unacceptable tension on all the conservation stitching when the RH returned to the more usual 35% level or less. This illustrated undeniably the need for strict environmental control for this object, as it was due to travel to a multi-venue exhibition. It was agreed that the best solution would be to seal the cope in an environmentally controlled frame. Time did not permit for this to be done before shipment to Washington, the first venue of the exhibition, but it was agreed that it would be done before the object was shipped to the second venue.

While the cope is on exhibition, work is ongoing to complete the reconstruction of the text and to recreate digitally the missing areas of the cope. A full article expanding the conservation details and discussing the history, iconography and significance of the text is in process and should be ready for publication by early 2005.

# The Ardabil carpet – a new perspective

Lynda Hillyer, Head of Textiles Conservation Boris Pretzel, Materials Scientist

The Ardabil carpet will form the centre piece of the new Jameel Gallery of Islamic Art at the V&A which opens in July 2006. This most famous of Persian carpets has been the subject of endless copies ranging in size from small rugs to full scale carpets. There is an "Ardabil" at 10 Downing Street and even Hitler had an "Ardabil" in his office in Berlin.<sup>1</sup> The real Ardabil was first seen in London in 1892 when it was exhibited in a dealers showroom in Wigmore Street. William Morris described it as "a remarkable work of art...the design is of singular perfection ...its size and splendour as a piece of workmanship do full justice to the beauty and intellectual qualities of the design". It was Morris, in his capacity as one of the V&A's Art Referees, who persuaded the Museum to raise, with the aid of public subscription, the then vast sum of £2000 to purchase the carpet in March 1893.

The Ardabil carpet measures 10.51m x 5.34m (34' 6" x 17' 6") and is thought to be one of the largest carpets in the world. Unknown to the Museum at the time, there was a second Ardabil, more finely knotted, which is now in the Los Angeles County Museum of Art. This carpet has lost its borders and part of its central field; a portion of the missing areas are thought to have been used to repair the carpet owned by the V&A.<sup>2</sup> Occasionally fragments originally taken from the Los Angeles carpet have appeared on the open market. The two carpets were almost certainly a royal commission and would have taken about four years to weave. Their origins remain unclear but they are said to have come from a complex of shrines and mosques at Ardabil in North West Persia, burial place of Shaikh Safi al-Din, ancestor of Shah Ismail, founder of the Safavid dynasty. At one end of the Ardabil carpet, a cartouche contains an inscription which dates it to 1539/40 AD. The large central medallion is characteristic of carpets woven in Tabriz (North West Persia) and the fantastic design of the ground of the carpet consisting of two layers of swirling leaves, stems and flowers is typical of the art of the early Safavid dynasty.

After its acquisition the Ardabil carpet was given a linen support and repairs were carried out in silk thread. It was attached to a three fold frame and placed behind glass in Gallery 42 where it remained on display until 1974, when it became obvious that the repairs were failing and that the carpet needed further support. Furthermore it was very dirty and lacked the clarity of its sister carpet in Los Angeles which had been wet cleaned. The Museum had no facility to clean an object of this dimension and it was taken to Birmingham where it was washed outside on a specially constructed ramp using local water which comes directly from the Welsh mountains and is low in mineral and chlorine content. After its support and repair it was attached to a secondary support of Terylene sheeting which was lashed to a new twelve section metal frame using pre-shrunk Terylene ropes around all four sides. A series of ties connected the carpet and the sheeting to the frame at regular intervals.<sup>3</sup>

The work carried out on the Ardabil in 1974 ensured its safe display for thirty years. However, the real beauty of the Ardabil carpet has never been seen in the Museum. The glazing which protected it had a slightly green tinge and obscured the vibrancy and harmony of its ten colours and the brilliance of its design. The carpet was designed to be seen flat; the difference in size between the two lamp motifs is deliberate and counteracts the foreshortening of the design along its length. This was achieved at a time when the use of perspective in Safavid art was uncommon. Low cushions would have been placed on the end of the carpet where the weaving began; thus the carpet would have been viewed against the pile, making the colours appear even more luminous.

The Jameel Gallery will allow the Ardabil to be seen horizontally for the first time since 1892. The carpet was de-installed in June 2004 and was the last object to be taken out of Gallery 42 to clear the space for its refurbishment. The whole operation was filmed just as its installation had been filmed thirty years earlier. Preparatory work in the first half of June released the ties which secured the carpet and its Terylene support to the multiple section frame. On deinstallation day, the frame carrying the carpet was pulled out on its runners to the east side of the Gallery. Eight pulleys had been attached to the high framework supporting the runners. The lacing which held the Terylene support to the top of the frame was undone and the carpet and its support were



Figure 1. Pulleys and ropes in position ready to lower the Ardabil carpet.

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gradually transferred with new lacing to a two part baton made of wood faced with aluminium. Eight ropes were threaded through the pulleys, attached to the top of the baton and tensioned on eight anchor points on the Gallery floor. The remaining lacing on the sides and bottom of the Terylene was undone so that the carpet and support were then totally suspended from the baton (Figure 1). Slowly and gently this huge and very fragile object was gently lowered by a team of technicians under the expert and appropriate guidance of Marion Kite (Marion had been involved in the installation of the carpet thirty years earlier) (Figure 2). The carpet was moved safely to a larger central space in the Gallery on a large polyester floor cloth, made specially for the deinstallation by a sail maker. The stitching which attached the carpet to its Terylene support was released and the carpet was rolled and taken to the Textile Conservation Studio.

The Ardabil carpet will be one of the star objects of the Jameel Gallery. It will be displayed flat under a suspended canopy. Its central position in the new Gallery will ensure that it can be viewed from all sides. The canopy forms the top of the case which will enclose the Ardabil and will thus protect the carpet from general gallery lighting. Glazing will be of low-iron glass with an anti-reflective coating applied to both sides. Adjustable fibre optic lighting will illuminate the carpet but extensive testing is necessary to determine the level of lighting.

Given the size of the carpet, its prominence in the new Gallery, and its importance to the collection, it will not be possible to rotate this artefact or take it off display after a few years. It is therefore essential that the Museum is aware of the long term consequences for the carpet of continued illumination and the likely benefits that might be gained by different lighting proposals. The response of four of the ten colours present in the carpet will be established using the equipment originally designed to determine the response of William Morris's Bullerswood carpet, presently on display in the British Galleries.<sup>4</sup> The equipment consists of a dual beam UV-visible-near infrared spectrometer coupled to an external

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Figure 2. Lowering the carpet onto the Gallery floor

integrating head using optical fibres. The external integrating head is used both to concentrate intense illumination (from a Schott microscope illuminator fitted with a tungsten halogen lamp) on to selected areas of the carpet and, periodically, to measure the reflectance spectrum of the area under consideration to determine colour changes as a function of exposure. The equipment was designed specifically to allow the response to illumination at levels likely to be encountered in the Museum to be determined from the exposure trials with a high degree of precision, thereby allowing extrapolation of data well beyond the exposures actually used in the experiments. Although the process does induce some limited damage to the selected areas (as they are exposed to up to 8 mlx.h of illumination), judicial choice of measurement areas (in the present instance, on the back of the carpet) limits the damage to the artefact. Measuring the response of actual areas on the carpet guarantees that the results are applicable to it in its current condition.

The experiments will take place over the course of the next three months and will feed directly into the decisions on how best to illuminate the carpet. As it will not be possible to take the carpet off display once the Gallery has opened, it is also the intention to provide means to blackout the carpet in its new display case, allowing the illumination to be restricted if this should become necessary.

#### Technical details

Warp: cream or undyed silk. 35 threads per square inch Weft: cream or undyed silk. 3 paired shoots after each row of knots Knot: asymetrical; 340 per sq. inch Pile: wool, 3 shades of blue, 3 shades of red, yellow, green, black and white.

#### Acknowledgements

We are grateful to Jennifer Wearden for advice and information.

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# **Encounters with Paper Conservation: the treatment of a Chinese painted silk dress**

#### Elizabeth-Anne Haldane Textile Conservator

*Encounters - the meeting of Asia and Europe 1500-1800* was one of the V&A's major exhibitions of 2004. A diverse selection of artefacts was chosen to illustrate the exhibition themes of 'discoveries', 'encounters' and 'exchanges'. The subject of this article, a mid-eighteenth century sack back dress and petticoat made in England from silk imported from China, epitomised the theme 'exchanges', which explored the influences of the trade in luxury goods and the fascination with each other's diverse cultures (Figure 1). Appropriately the conservation of this costume has been about exchanges of ideas, methods and techniques between paper and textile conservation resulting in an unusual but successful treatment.



Figure 1. Detail of the back of the dress, after treatment.

Painted silk is a rather impractical dress fabric and not surprisingly the silk showed signs of a certain amount of damage through wear. The paint on the bodice had worn away completely in places exposing the warp threads and at some point repair patches had been used to fill in holes under the arm. Parts of the costume, such as the skirts of both dress and petticoat, which were not fitted so closely to the body and less subject to wear from abrasion, were in much better condition although there were many small splits in the silk, all in green painted areas. A detailed assessment of the condition revealed that the costume had been altered at least twice in its lifetime causing further damage to the silk. There had been a number of attempts to repair the splits in the silk over the life time of the costume ranging from stitching to adhering patches to the reverse using a dark brown resinous adhesive. All of these treatments had both failed and caused further damage to the silk. This article focuses on finding a new, safer and visually less intrusive method of supporting these areas of damage. Adhesives were chosen as the main method of attaching support patches to the silk in order to avoid stitching through the painted surface. Fortunately the paint surface was not actively flaking, so consolidation was not deemed necessary.

A review of literature on Chinese painted silk costume had revealed that splitting of the silk ground fabric in areas painted green was a common problem. This has been attributed to the use of the copper-based mineral malachite to produce the characteristic bright green colours in Chinese painted silks. There was concern that an aqueous treatment would exacerbate the problem by creating an environment where copper ions would be released promoting further degradation of the silk. It was therefore necessary to identify formally the green pigments present. Lucia Burgio, of the V&A Science Section, analysed paint samples from both the dress and petticoat by Raman microscopy and optical microscopy to determine their composition. The light green samples were identified as malachite and the dark green samples as a mixture of malachite and indigo. The white pigment used was lead white. All the pigments were found to be in good condition and showed no sign of degradation.

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The use of heat-setting thermoplastic adhesives would have avoided the use of moisture, however the support fabrics that are used with these adhesives are very sheer and lightweight. As the costume was made from a heavy silk with the added weight of the paint layers it was considered that a more robust support fabric would be required. There is a welldocumented history of paper being successfully used as a support material for textiles. In this instance it would provide the strength and firmness required and could be attached with a variety of adhesives including starch and modified celluloses.

The Paper Conservation Studio at the V&A was consulted about the project. Following discussions on the concerns about aqueous-based adhesives applied to the malachite paint, it was agreed that although wheat starch paste would provide a stronger more flexible bond, Klucel G<sup>®</sup> (hydroxypropyl cellulose) had the advantage because it was soluble in both water and organic solvents.

The conservation of the dress was carried out as a joint project with Gordana Car, intern in the Textile Conservation Studio. We were interested in a method used by Paper Conservation to produce a pre-prepared paper film that could be solvent re-activated *in situ*. Extensive tests were carried out to find a combination of paper type and adhesive concentration that would work for textiles. Five



Figure 2. Gordana Car preparing paper and Klucel G® films

different weights of Japanese paper were selected for the tests. Experiments included dissolving the adhesive in IMS (Industrial Methylated Spirits), or 50:50 IMS and water, or just water. The smoothest film produced was with water alone. After initial tests three papers were chosen and tested with aqueous adhesive concentrations from 2% to 10%. The adhesive was brushed onto a polythene sheet, then the paper was gently laid on top and smoothed down (Figure 2). Once dry, it was peeled away from the polythene. The samples were adhered to silk using a solvent re-activation technique common to textiles where IMS vapour is applied onto the silk through Sympatex, a semi permeable membrane. This method was very quick, requiring approximately two minutes to activate the bond between paper and silk. The silk and paper samples were (subjectively) assessed for peel strength and flexibility and checked for staining of the silk by the adhesive. The lightest weight paper tested, Tengujo, with Klucel G<sup>®</sup> at a concentration of either 8% or 9% worked best giving a smooth flexible sample. At 10% the adhesive stained the silk in places.

The paper films worked well for the small splits in the painted silk, but another method was required for areas with more extensive loss where silk was required to infill holes: or where there were loose threads which needed to be stitched to a support. A combined adhered and stitched technique was devised by modifying a technique previously developed to adhere textile infills to a Tudor embroidery in the V&A's collection.<sup>2</sup> A free film of Klucel G<sup>®</sup> (3% w/v in 75% IMS: 25% water) was cast onto polythene. Once dry the film was carefully peeled off and attached to one side of the textile infill/support with IMS solvent vapour to make a onesided adhesive film. In this project selected areas of the support fabric needed to be free of adhesive where it was filling an exposed area of the object. To do this a template was made of the patch and tissue shapes were stitched to the support to mask off the chosen areas when the adhesive was applied. Once the tissue was removed a partial adhesive patch was made (Figure 3). These patches were also adhered to the object with IMS vapour applied through



Figure 3. Inserting a patch of silk with Klucel G® free film on the upper side.

Sympatex. Supplementary stitching, (laid thread couching) was carried out in areas without paint to secure loose threads. Normally couching would begin and end in strong undamaged areas. In this instance couching was only possible in the damaged areas so the adhesive film performed the function of securing the patch. In the case of very large splits where there were areas of plain silk, couching was carried out where possible in order to maintain the flexibility of the patch rather than using large areas of free film.

There were pros and cons to both methods described. The paper patches blended in very well and were scarcely visible on the reverse but they worked best where there was little flexing of the fabric. Splits along the front pleats of the bodice were supported with paper patches. The advantage was that the patches were thin and didn't add much bulk to the pleats but the paper was inclined to peel off when the fabric was manipulated in order to treat different areas or to re-pleat the fabric. In some instances extra Klucel G<sup>®</sup> was added as a free film to adhere the paper, or a combined stitched and adhered silk

support was used instead. The silk and free film patches worked very well to infill areas of loss and as a base to stitch loose threads to. The free film of Klucel G<sup>®</sup> and the silk patches were more strongly adhered to the object than the paper film but were not as flexible. Also the free film was more difficult to prepare and as each patch was individually made involving several processes they were much more time-consuming to prepare. By contrast the paper film could be quickly prepared in advance and water cut to size as required. Although it was somewhat unusual to use a combination of different methods and substrates on one object, each was suited for the purpose and the use of one adhesive provided a degree of consistency.

#### Acknowledgements

With thanks to Gordana Car, Lara Flecker, Frances Hartog, Pauline Webber, Mike Wheeler, Merryl Huxtable and Lucia Burgio from the Conservation Department and curators Susan North and Verity Wilson.

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# An insight into the craftsman's techniques

Katia Viegas Wesolowska

Metals Conservator

This article describes the conservation of a seventeenth century Dutch monstrance (Museum no 303-1874), and the manufacturing techniques used to produce it. Recognition of the techniques and the materials from which an object is made allows for the selection of appropriate conservation treatments and a better appreciation of the craftsman's work for both the conservator and the museum visitor.

The term "monstrance", from the Latin monstrancia (monstrare = to show), was originally used for any container made by gold or silversmiths to display either the Sacred Host or the relics of a saint. Today, the term is used specifically to refer to vessels displaying the Blessed Sacrament. They are used only in the Catholic Church, mainly for the ceremony of Corpus Christi.

The monstrance (Figure 1) was made in Haarlem, capital of the Province of North Holland, in the late seventeenth century. It is made of silver which has been partially gilded (parcel gilt), decorated with white enamel, garnets, turquoises, rock crystal and pearl simulants. The imagery on the foot includes the symbols for the Evangelists and representations of three Apostles, Peter, James and John, looking up at the container for the host (representing the Transfiguration). Above and below the host are scenes which symbolise the Eucharist, Passover and the Fall of Manna from Heaven.

Figure 1. Monstrance (303-1874) before treatment Photography by Katia Viegas Wesolowska



Figure 2. Dismantled object.

Previous unrecorded treatments may date back to the mid 1950s. Since then the surface has become heavily tarnished. The tarnish was concentrated in areas where the gilding had blistered, exposing the silver beneath. There were areas of distortion that were considered disfiguring to the object; and an old adhesive which secured two stone settings to the crown had broken down. After careful examination, it was decided to dismantle the object for treatment (Figure 2). By doing so the object could be seen from the inside which would aid in the identification of the maker and the methods and date of construction.

Once dismantled each part was recorded using digital photography. The monstrance is made of silver, a metal that can be formed by cold-working and/or casting. In this case, there is evidence of both. Lost wax casting was used for the figures, scrolls and columns, and the central images of the Ascension and the Fall of Manna were cold-worked from a sheet of silver. They are examples of repoussé work which has been chased (engraved). Repoussé refers to a method of tracing the design on the front and raising the relief from the back. Chasing work is done on the front of the metal piece. The tool marks from punches and tracers are visible on the inside. Chased, repoussé and cast pieces were joined with solder and also by mechanical means using screws and pressure fitting. Once complete the silver pieces were mercury gilded. In this process it is possible to gild on selected areas of the metal. Pieces were gilded only where the metal can be seen to reduce the amount of gold required. The method of mercury gilding involves applying an amalgam of gold and mercury onto a degreased surface, usually silver or copper. The surface is then heated until the mercury evaporates, leaving behind the gold layer bonded onto the surface. This technique allows various layers of gold to be applied, and creates a tight bond with the substrate metal. To further confirm that this process was used on the monstrance, one of the pieces was analysed using x-ray fluorescence. The results showed a residual amount of mercury on the surface.

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The same set of four hallmarks was found on various parts of the monstrance, proving these to be all of the same provenance and maker (Figure 3). The first mark, a crowned lion, is of the Provincialen gekroonden Leeuw, which guaranteed a higher content of precious metal (875/1000) in Holland. The second mark, the town mark, is of the town of Haarlem (as noted in existing Museum records). The date letter was found to be of a later date than the one in the Museum's records. It is from 1674. The maker's mark had not been previously identified because the only visible mark was indistinct. A clearer stamp was found when the monstrance was dismantled. It was identified as the stamp of Jan Van deer Pille from Haarlem, Holland. He was a goldsmith working mainly on church metalwork during the mid seventeenth century. The Museum records have been modified according to the findings.



Figure 3. Set of hallmarks revealed after dismantling.

Treatment proposals were discussed with a metalwork curator. The treatment began with the removal of the old lacquer using acetone. The heavy tarnish was removed using Goddard's Long Term Silver Foam. Where this was not effective, Duraglit 'Silvo' Silver Polish Wadding was used. The surface was degreased with acetone and a coating of Frigilene nitrocellulose lacquer was applied with a brush to protect the surface from further tarnishing. The crown was decorated with gem stones and pearl simulants. Some gems were held in position with adhesive which had broken down and the gems had become loose in their settings. Once dismantled the adhesive was removed mechanically. Originally the gem settings would have been bolted into the crown and secured with a nut. The original pin was worn, so it was rethreaded and a nut made to secure the setting. The new pieces were carefully identified with a V&A logo micro stamp for future record. Further treatment options were discussed with a curator and it was decided to re-shape the distorted cross. The monstrance was then carefully re-assembled using the digital photographs as a guide.

The bright lustrous pearls were in a fragile state. They were examined under the microscope for identification. It appeared that the pearls were made of thin glass filled with a waxy substance (Figure 4). The pearls were identified as pearl simulants in the form of small glass beads coated internally with a material called 'essence d'orient' and then filled with wax for internal support. This particular technique originated in France. Essence d'orient is a material made from ground iridescent fish scales (from the bleak fish) mixed with a lacquer. The time scale of this project did not allow for the possibility to treat the pearls, but a sample pearl was stored for future research.

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Figure 5 shows the reassembled monstrance after treatment was completed. The information revealed by this treatment allowed records to be updated and provided a valuable insight into the craftsman's techniques.

#### Acknowledgments

I am grateful to Simon Metcalf for being my mentor during this project and for encouraging me to look at objects through the makers' eyes. Also to Tonny Beenties for allowing me to make use of his extensive personal library and to Joanna Whalley for identifying the gem materials.

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Figure 5. Monstrance after treatment Photography by V&A Photographic Studio

# William Blake's only surviving palette?

Dr Joyce H Townsend, Senior Conservation Scientist, Tate Dr Bronwyn Ormsby, Conservation Scientist, Tate Dr Julia Jönsson, formerly Conservation Scientist, Tate Dr Mark Evans, Senior Curator of Paintings, Victoria and Albert Museum

William Blake (1757-1827), whose literary output is widely studied today, was regarded primarily as an artist and printmaker in his own lifetime.

On 17th September 1927, the leading Blake scholar Geoffrey Keynes wrote to Eric Maclagan, then Director of the V&A:

'Dear Maclagan,

The American dealer, Gabriel Wells, recently bought the palette used by Blake during the brief period when he used oils. He put it in an exhibition at the Burlington F.A.C. where it attracted a good deal of attention (tho' relics of this kind do not excite me much!). It seems to have a good pedigree.

Wells has now gone back to the U.S.A., and wishing to give the object to some public institution, has left it to my discretion.

The Vict. & Albert seemed to me to be the best place, tho' Binyon suggests that the London Museum might also have a claim. Would you express an opinion? It can go to the Vict. & Albert if you wish.

Yours sincerely

#### Geoffrey Keynes'

In the above quotation, Keynes referred to the 1927 exhibition at the Burlington Fine Arts Club commemorating the centenary of Blake's death. Of modest scale but superlative quality, this was accompanied by a deluxe illustrated catalogue, and included a fragment of a copper plate for Blake's America, and a plaster cast of the artist's head formerly owned by the son of George Richmond (1809-96), a leading member of The Ancients, followers of William Blake who included Samuel Palmer (1805-81).

The palette (Figures 1 and 2), not in the catalogue, was evidently a late addition to the 1927 exhibition. Its owner was a Blake dealer of some repute. Kevnes was told that the palette had belonged to the dealer Francis Harvey, who handled numerous works by Blake during the 1860s, including some from the studio sale of Frederick Tatham (1805-78), another of The Ancients, who had inherited Blake's studio contents from the artist's widow.

The palette was received in a presentation case, today labelled Palette used by William Blake in 1780. Given by Mr. Gabriel Wells. There is paint on both sides and it is inscribed around the thumb-hole on the 'reverse' William Blake/28/Broad Street/1780. Blake submitted his entry to the Royal Academy in 1780 from that address, and moved shortly afterwards. Basil Long, then Keeper of Paintings at the V&A, concluded that 'the authenticity of the relic appears reasonably likely', and recommended its acceptance as a gift.



igure 2. Reverse of the palette.

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We analysed material from this palette towards the end of a research project on Blake's temperas, watercolours and colour prints,<sup>1</sup> to compare them with Blake's painting materials. The analytical methods used, namely polarising microscopy, energydispersive X-ray analysis, FTIR microscopy and gas chromatography, are described elsewhere.<sup>2</sup> There was no evidence to suggest that the palette had been re-used after a long interval, or that the paint was inconsistent with an eighteenth to nineteenth century date.

It resembles oil paint, and because of the inscribed address it has always been assumed to date from c.1780, the brief period during Blake's training when he used oil, a medium he strongly criticised and therefore avoided for the rest of his life. Analysis confirmed that it includes linseed oil in many colours, poppy oil in some, and a mixture of these, or possibly walnut oil, in others. These oil types are typical of artists' oil paint both hand-ground in the late eighteenth and earlier nineteenth centuries, and supplied in tubes later in the nineteenth century. It is surprising that in this palette the poppy oil, known to yellow less than linseed oil, was not strongly associated with the white and blue paint that would have benefited most from it.

At least one shade of yellow and one of orange lead chromate were identified with optical microscopy, and supported by EDX and FTIR results. These pigments could not have been used by Blake or anyone else c.1780. Yellow lead chromate (also known as chrome yellow) was patented in 1814, and a pale yellow shade has been found in a Turner oil painting exhibited early that year, while the darker yellow and orange shades were probably available only later, in the 1820s. These remain the earliest occurrences of lead chromate in the British collection at Tate, and in the literature on British art. Zinc white was also detected on the palette. This pigment was produced in a useful form for oil medium in 1834, the earlier variety being too transparent for the purpose. The traditional form of Prussian blue, found here, was used by J.M.W. Turner c.1800-1840s. Constable (17761837), in contrast, was using the modern, fine-grained form by the end of his life, as indeed was Turner (1775-1851). The Pre-Raphaelites used the modern form in the early 1850s, and the traditional form has never been identified on Tate paintings of later date. The other pigments found on the palette (lead white, chalk, gypsum, barytes, bone black, umber, Mars colours, vermilion, talc, kaolin, natural yellow ochre, red lake and natural ultramarine) were available throughout Blake's lifetime and well beyond. These observations suggest a date of use of *c*.1834-45 for the palette.

The connection with Harvey implies that the palette was in existence by the 1860s, a period when Blake had a small following, and his work fetched correspondingly low prices. Nevertheless, the possibility cannot be excluded that it is a deliberate fraud, of mid nineteenth century date. If it has a genuine connection to Blake, it could have been used by one of *The Ancients*, who had acquired it from Blake's widow, herself an artist. Our limited analyses of the paint used by Richmond and Palmer have shown that, like Blake himself, they used a mixture of animal glue and plant gums in their paintings during his last years, in the 1820s. Few of their later works have been analysed, but a Richmond Self-portrait of 1853 is catalogued as in oil, so their use of this medium is possible. The only certain conclusion is that the paint on the palette could not have been used by William Blake.

#### Acknowledgements

Nicola Costaras, Senior Paintings Conservator at the V&A, made the palette available for examination. Dr Catherine Higgitt and Raymond White of the Scientific Department, National Gallery, London, gave valuable help in interpreting the GC results.

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# **New Staff**



Ann Marsh Stained Glass Conservator

I was formerly a Marketing Communications Manager for Marconi plc organising and managing exhibitions, advertising, literature and other promotional material. Although I enjoyed the job, after nearly twenty years I was ready for a different creative challenge. Having been introduced to stained glass during a weekend course I decided to go back to school and study full time for a BA (Hons) in Architectural Glass at the Swansea Institute.

I was just about to start the final year of the course when the opportunity to work in stained glass conservation for twelve months arose at the V&A. This unique opportunity was just too good to miss, so I revised my plans and decided to complete the rest of the degree course over two years. I will write my dissertation while working at the V&A and return to Swansea to complete the practical modules in October 2005.

The experience gained in helping to prepare panels for the Sacred Silver and Stained Glass Gallery due to open in September 2005 will be invaluable in completing my degree and developing a future career in stained glass.



Daniella Peltz Stained Glass Conservator

I fell in love with stained glass as a twelve year old when I took a stained glass class at summer camp. After graduating with a BA in Art History from Vassar College in New York State, USA, I was working at a law firm in New York City when I realized I was miserable. I came upon a stained glass course in the catalogue for Parsons School of Design, took the course and decided to volunteer at the St. Ann Center for Restoration and the Arts. The St. Ann Center was then in charge of restoring the oldest ensemble of figural stained glass windows made in the United States - from 1844-48. After volunteering at the Center for two years I was asked to join the apprenticeship program. I spent three years as an apprentice in stained glass conservation and later received a Kress Fellowship to study stained glass conservation at various sites in Europe for six months, including Cologne Cathedral and Canterbury Cathedral.

Since finishing my fellowship I have been working as a freelance conservator in New York City for six years on projects that range from Tiffany to Whitefriars to LaFarge.

I am happy to be able to come to the V&A for twelve months to help with the preparation for the Sacred Silver and Stained Glass Galleries and look forward to being able to increase my knowledge of European stained glass.

## **New Staff**



#### Karen Vidler Paper Conservator

2 year MPhil by research "The treatment of redrot damaged bookbinding leather: A decisionmaking framework"

Back in the 1980s, during the era of big hair, I went to Art School. Later I undertook a postgraduate study in Librarianship. While working as an assistant curator in Rare Books and Special Collections at the University of Melbourne, I had an epiphany. One day while removing a late eighteenth century leather bound book dripping with gold decoration, the front board slipped from the book, landing by my feet. Turning to the curator, I enquired as to the fate of books that needed repair. He replied, 'we send books for repair to various book restorers ... but I am not completely happy with their work. Why don't you become a book conservator?'

So in 1998, I found myself for the next fifteen months working for a book conservator in North London. This led to bookbinding studies at Guildford College. Two years later I walked away a qualified bookbinder with a prize for bookbinding in calf leather to my name. I then worked in the conservation bindery of The National Archives, Kew. I returned to post-graduate study in book conservation at West Dean College and in the summer of 2003 I started working with Jane Rutherston in the Book Conservation Studio of the V&A. More recently I commenced an MPhil by research at the RCA/V&A. This research into the treatment of red-rot damaged book leather was prompted by questions raised during my previous conservation work on decayed leather bindings in library and archive collections both here and in Australia.



Michelle Murray Conservation Administrator

After graduating with a BA (Hons) degree in Fine Art Painting at Norwich School of Art and Design, I worked as Information Officer at the Photographers' Gallery for two years whilst continuing with my own work as a painter. I then worked as an artist on a self employed basis, before returning to an administrative role at the architecture firm Allies and Morrison. At this time I also began studying towards an MA in Art History with the Open University, which I am currently pursuing, and I continue to paint in my spare time.

I am very much looking forward to working in Conservation Administration at the V&A and also being involved in the RCA/V&A Conservation Programme. Interns

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Madhu Rani Paper Conservation Intern

I started my conservation career at INTACH Chitrakala Parishath Art Conservation Centre (ICKPAC), Bangalore in South India, after completing a five year Fine Arts degree at Bangalore University, specialising in painting. In 1997 I enrolled as a conservation trainee at ICKPAC. After a two year internship, during which I obtained an MA in Art History, I began working as a full time conservator.

ICKPAC is the sole conservation centre for Southern India and receives a wide variety of art objects for treatment. My main interest is the treatment of paper based objects. I have had the opportunity to work on traditional South Indian paintings of the Mysore and Thanjavur school, etchings and lithographs from the company period to present day posters, miniatures, drawings and watercolours.

Since 2003 I have been the project coordinator for Karnataka – under the National Manuscripts Mission undertaken by the Government of India, Department of Culture for the Preservation of Manuscripts. I feel extremely fortunate to have been awarded the Charles Wallace India Trust Grant and also the UK travel award by the Nehru Trust for the Indian Collections at the V&A. This has allowed me to undertake the internship at the V&A as well as attachments at the British Museum and the British Library.

The two months spent as an intern at the V&A has given me the opportunity to work with experts in paper conservation and to broaden my experience of the conservation field as a whole. I am looking forward to sharing my knowledge and expertise with my co-workers on my return to India.



#### Harrie Schuit Furniture Conservation Intern

I am a final year student at the Netherlands Institute for Cultural Heritage (Instituut Collectie Nederland, ICN) in Amsterdam where I am attending a four year furniture conservation course. Prior to this course I attended the Amsterdam school for cabinet making where I undertook the cabinet making and restoration programme. I had internships throughout 2004. In January I started with a four month internship in Cologne, Germany, and returned to the Netherlands to take up a further internship for three months at the Het Loo palace in Apeldoorn.

At the present time I am undertaking an internship in the Furniture Conservation Studio of the Victoria and Albert Museum and I am very pleased to have been given the unique chance to be here. I have gained an immense amount of knowledge working in such a large museum. My first experience was built up around the 'Encounters' exhibition, and I also became familiar with the issues involved in the transportation of different types of fragile objects.

After a course on Integrated Pest Management I applied my newly acquired knowledge by checking the insect traps around the museum. I have also worked on very interesting objects which have given me the opportunity to test conservation materials. This has broadened my thinking process and has allowed me to develop my confidence in the art of conservation practice. I hope this summary renders faithfully my wonderful time at the V&A, prior to returning to Amsterdam where I hope to graduate.



#### Lara Wilson Paintings Conservation Intern

My first degree was in classics at Oxford University, where I also continued the training as a singer which I had begun at school. After graduating I began to develop a career as a singer in Florence, Italy, where I was also able to indulge my interest in art. In 1999, having decided to switch to a career in art, I went on an introductory course in paintings conservation at Palazzo Spinelli. I then returned to Oxford University to do a masters degree in the history of art, specialising in the Florentine Renaissance.

Having gained the necessary qualifications I began training as a paintings conservator at the Hamilton Kerr Institute in Cambridge. On completion of the course I was awarded a Leverhulme Studentship and spent a year as an intern in the State Russian Museum, the Hermitage in St. Petersburg, Russia, and in the National Museum of Art in Maputo, Mozambique.

I hope to use my time at the V&A to improve my technical skills and increase my ability to work independently so that I will be in a position to begin a career as a paintings conservator in a museum at the end of my internship.

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