

Challenges of a very large drawing

Also in this issue

Membership survey – early results

Travelling dressed display figures

The Membership Manager hits the road

the emerging conservator

PAPER, PIGMENTS AND PEARLS

During her internship in Dublin's Chester Beatty Library Puneeta Sharma worked on the conservation of a collection of Indian miniature paintings

OVERVIEW

The Chester Beatty Library (CBL) in Dublin, Ireland, houses one of the world's finest collections of Islamic manuscript material, including Qur'ans, books of poetry and miniature paintings belonging to Sir Alfred Chester Beatty (1875–1968). As the Paper Conservation Intern at the CBL between 2014 and 2015, it was a privilege to work on part of this collection during my time there.

The focus of my work was on a collection of ninety nine single folios of Indian miniature paintings dating from the Mughal era, from the late 16th to the mid-19th century (CBL In 11A). Following a request from a reader, an initial condition assessment was carried out and the decision was taken to conserve the entire collection, most of which had not been treated since they were acquired.

COMPOSITION

The folios would have originally been housed in bound albums, however, when sold at auction, they were detached from their original bindings and sold as individual items; therefore, it is difficult to determine the original groupings of the folios. The folios in the collection are often double-sided with images and calligraphy inset into highly decorative borders. They are striking in their appearance because of the brilliance of the pigments used and the detailed nature of the paintings illustrating portraits of Mughal emperors, courtly scenes, daily life and natural history subjects¹.

Typically the Indian miniature artists' palette includes organic pigments such as indigo, saffron and madder, and inorganics such as gold, lapis lazuli and lead white. The brushes used by the painter were traditionally made from the hair of squirrels, goats, or the inside of a calf's ear, however the finest brushes were made from the hair cut from the throat of white kittens, two months old².

Each folio is a composite object formed of many layers of thin, Islamic paper adhered together. Islamic paper was usually made from flax and hemp and it was often surface sized with rice or wheat starch paste and then burnished using an agate stone, to create a smooth surface to draw and paint on³. Artists preferred the highly burnished quality of the paper, however the smoothness of the sheet is sometimes problematic for certain pigments, as there is little fibrous surface for the paint to attach to⁴.

ASSESSMENT

The In 11A collection had been stored in a series of Solander boxes, with marbled paper and leather spines. These were very heavy and could only house a small number of mounted objects. Approximately half of the folios in the collection were



Detail of calligraphy from CBL In 11A.72, verso. Highly decorative border with fairies and demons, c.1780

adhered to acidic mounts whilst others were mounted between glass plates. The first step in conserving the collection was to carefully remove each folio from its historic mount or enclosure.

Each folio was examined using a high definition digital microscope, which transmits magnified images of the object



Detaching a folio from an acidic mount with a scalpel (above) and removing a folio from a glass mount (below)



onto a screen allowing for detailed image analysis. Upon examination, it was apparent that the majority of the folios were in good condition; nonetheless, because of the natural aging process, a number of unavoidable types of damage had occurred. The flaking of pigments and delamination of the support were the commonest.

CONSOLIDATING PIGMENTS

Consolidation was an important treatment choice for this collection, as a large number of the folios contained pigments that were flaking or powdering. Bermocoll (EHEC), an ethyl hydroxyethyl cellulose-based adhesive, was chosen to stabilise the pigments. Bermocoll has been used on miniature paintings on paper at the Victoria and Albert Museum where testing and research proved the suitability of this consolidant for these collections⁵. It was applied as a 1% solution for brush consolidation of flaking pigments, and as a 0.5% solution with a nebuliser in the case of powdering pigments.

DEALING WITH HINGES

Old hinges made of gummed paper tape were removed from the verso of the folios using a 4% methyl cellulose poultice and localised application of water. A spatula was eased underneath the tape to begin lifting it away from the object and once a small area of tape had been lifted, a piece of blotter and a weight were placed over the top to absorb any excess moisture. In some cases, it was decided to delaminate the layer of tape and introduce moisture on a thinner layer, which helps the moisture to reach the adhesive layer in a shorter period of time. This prevents any risk of loss to the fibres or media, which could transfer onto the tape if not removed properly.

AREAS OF LOSS

Repairs were carried out using thin strips of remoistenable tissue, which were carefully positioned directly over areas of weakness or loss and activated with a small amount of methyl cellulose in water (1%). This ensures a stronger bond between

Removing the previous hinges from the folios



Pigment loss due to abrasion from CBL In 11A.73, verso, *Ganesa and his vehicle*, c.1800–1810

the repair and the object and leaves a slight sheen that matches the burnished surface appearance of the support, whereas water alone can leave the repair looking slightly too matte.

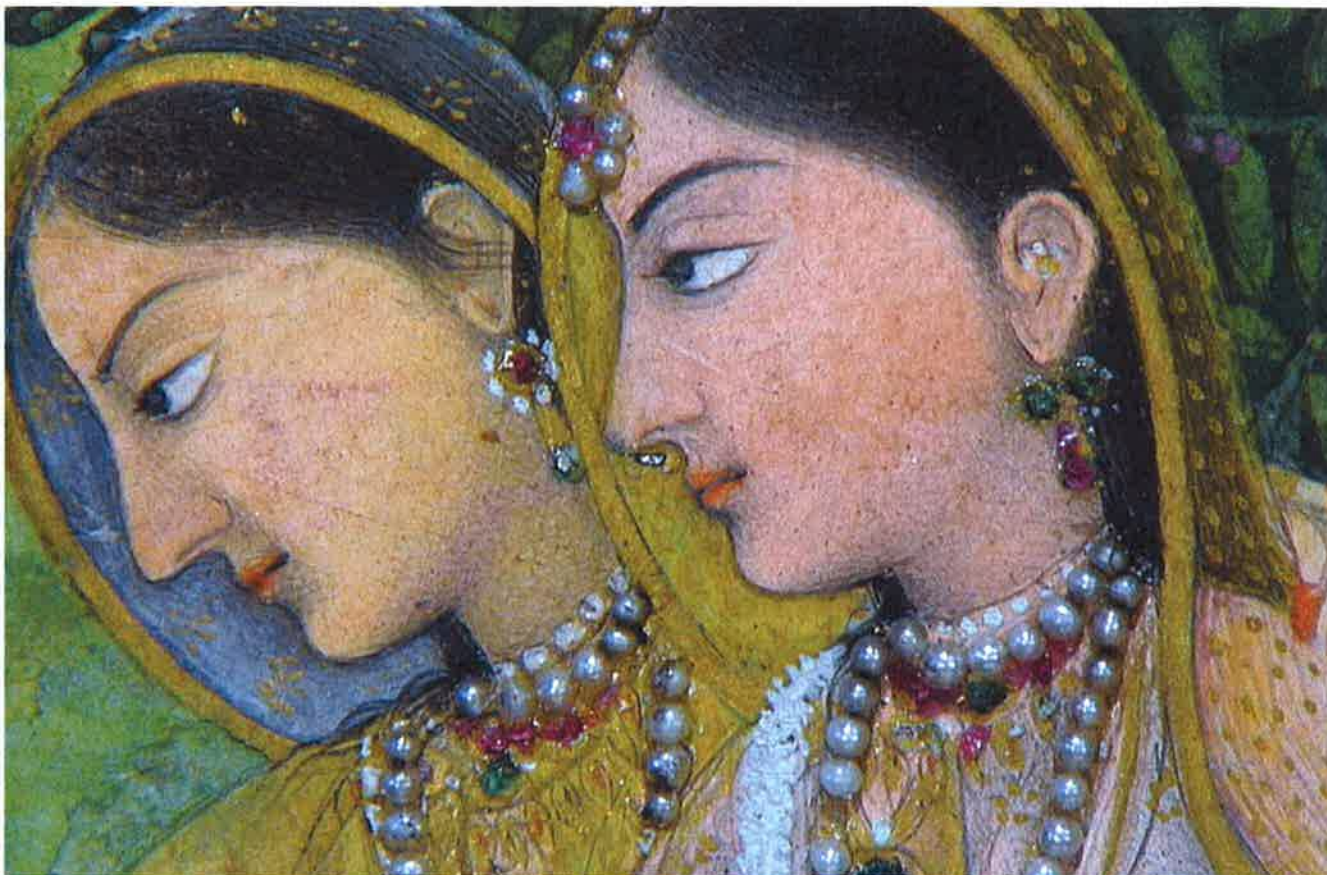
Folio CBL In 11A.61, *Woman carrying a cup and flask*, c.1700–1733, had a large area of loss on the lower left-hand corner. The shape of the loss was traced onto a piece of Melinex™ and then cut out using a water pen. The fibrous edges were adhered to the edge of the missing area on the folio for the initial layer and then built up to match the thickness of the support. In total four layers of paper were used to build up the corner; three layers of Usimino paper were used to give body, and a final top layer of Gampi gave the sheen and texture to blend in with the surface of the object; the paper was also toned using acrylic paints to create a sympathetic repair.

PESTS AND PEARLS

Some folios had suffered from severe pest damage, resulting in areas of weakness along the edges of the borders. In the case of CBL In 11A.69, *Women on a rock slide* c.1760, small repairs of Usimino Japanese paper were inserted into the areas of weakness between the layers of paper in order to support the damaged edges.

Whilst working on this folio, I discovered that real pearls had been used for the jewellery on every single woman in the





Detail from CBL In 11A.69, recto, *Women on a rock slide*, c.1760: seed pearls adhered to the paper support under magnification

painting. Usually pearls are painted with blobs of white paint and pin-pricked upwards to give a three dimensional effect, however in this case real seed pearls had been used and possibly real rubies and emeralds too, further demonstrating the painstaking care and attention that went into producing these works of art. The pearls were in excellent condition and only one pearl was slightly detached from the support. This was stabilised using a 1% solution of isinglass applied with a fine brush.

THE FINAL STAGE

Following conservation treatment, the entire collection has been remounted in two standard mount sizes to ensure consistency across the collection. Each folio was hinged into a custom window mount using T-hinges on the left-hand side to allow the verso to be accessed if needed.

Mounting a folio in a window mount, hinged to the left-hand side



CONCLUSION

Working on this collection has been a huge learning experience, which has allowed me to develop my skills and knowledge of pigmented works of art and Islamic paper. The challenges faced within the collection have allowed me to consider the most suitable treatment options for the folios in order to further preserve them. I must express my deepest thanks to the conservators at the Chester Beatty Library, including Jessica Baldwin, Kristine Rose Beers and Julia Poirier for their continued support, kindness and patience during my time there.

To learn more about the work being carried out at the Chester Beatty Library visit the conservation blog at <https://chesterbeattyconservation.wordpress.com>

Notes

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4. Wheeler, M. et al. (2002) *Indian Paintings on Paper, Textile, and Mica: Conservation, Storage, and Display*. In: Stratis, H.K. & Salvesen, B. (eds). *The Broad Spectrum: Studies in the Materials, Techniques, and Conservation of Color on Paper*. London: Archetype Publications Ltd.
5. Ibid.