Parker Library Conservation Now
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Please note: The images that accompany this talk are currently available as a slide show on the Parker on the Web "About Conservation" main page.

Introduction: The Parker Collection and its Conservation in Context

Since Matthew Parker donated his precious collection of manuscripts and rare books to Corpus Christi College for safekeeping just before he died in 1574, the college has done its best to preserve the collection. There have been at least two major repair and rebinding programmes since that time: the first was in the eighteenth century when a number of the manuscripts were rebound with brown tanned sheepskin spines and re-used parchment sides. Over 120 manuscripts remain in this type of binding (Fig. 1). The next major rebinding programme came in the 1950s when over half the collection was repaired and rebound by two Cambridge bookbinding firms. During this programme of work the manuscripts were put into full tanned goatskin or half-style bindings with tanned goatskin spines and corners with either paper or cloth sides. Over half the manuscripts in the collection are in this type of binding (Figs. 2 and 3). A few of the most important manuscripts, such as the Peterborough Psalter, the Bury Bible, and the Anglo Saxon Chronicle, were also rebound during the 1920s at the British Museum. These have full blind-tooled goatskin bindings (Figs. 4a and b). The common feature of all these rebinding programmes is that all the manuscripts involved were rebound in the style of printed paper books. Although the eighteenth-century bindings were sewn on raised cords, most of the 1950s bindings have a recessed cord sewing structure, chosen for speed and ease of binding rather than for durability and suitability to the material. False raised bands were then stuck to the spine before covering to mimic the appearance of a raised-cord structure. The sewn books were then rounded and given backing shoulders to take new boards, the spines were coated with hot hide glue, and several layers of heavy paper linings, interspersed with cotton mull, were applied, forming an inflexible spine.

In 1983, Professor Raymond Page, the then Fellow Librarian, commissioned Dr Nicholas Pickwoad to survey the Parker collection and devise a strategy for the long-term preservation of the collection. This was a turning point in the history of conservation and preservation in the Parker Library (Fig. 5). The main recommendations from the report were implemented over the next three years and included installing modern security and fire detection systems as well as alterations to the existing shelving to allow horizontal storage of the manuscripts in custom-made, lined wooden boxes (Figs. 6a-d). Several manuscripts were also conserved at this time, including the eighth-century Northumbrian Gospel book, MS 197B. Work in the Parker Library caused a great deal of interest within...
the Cambridge College community and in 1989 the Cambridge Colleges’ Conservation Consortium was formed so that other college libraries could share in the insights and expertise built up at Corpus Christi. The Consortium was a success from the outset and has continued to add to its membership: since its foundation, it has doubled in size from the original five Founder Members to the current membership of ten college libraries.

In the two decades since the original survey project the conservation department has endeavoured to continue working in the spirit of the Pickwoad Report’s recommendations for the Parker Library. There have been several updates to the preservation recommendations in that time, and a programme of conservation work on the books is on-going, with many of the manuscripts in most urgent need of conservation having been treated. Most recently MSS 16 and 26, Matthew Paris’s *Chronica Majora*, and MS 473, the Winchester Troper, which contains the earliest surviving example of polyphony in Europe, have been repaired and given new medieval-style bindings (Figs. 7-11). Only a small number of early manuscripts in the collection retain their original bindings. The conservation department has worked to ensure their longevity by making special boxes to hold them safely and by undertaking minimum intervention repairs to the bindings. MS 89 is one such book: a twelfth-century century manuscript with its original binding, it was in a very fragile condition few years ago (Figs. 12 and 13a-c). The binding has now been repaired using minimum intervention techniques, so that the necessary repairs cause as little disturbance as possible to an important historical artefact (Figs. 14 and 15), and it now has a loose alum-tawed protective chemise and a special custom-made box with cut-outs to protect the remaining tab endband and rare medieval bookmark (Figs. 16 and 17). MS 246 has also been treated following a similar philosophy, with Japanese handmade paper being employed to support and bring together the tattered and fragile alum-tawed covering material (Figs. 18 and 19).

The College’s commitment to safeguard the Parker collection well into the future continues. In 2005 a state-of-the-art conservation centre was built, providing dedicated studio space and a home for the Cambridge Colleges’ Conservation Consortium. Building work on the centre started in the Spring of 2005 and by the Summer the steel framework of the building had been erected (Figs. 20a-c). Progress after the metal framework had been erected was swift and the move into the new building began in the week before Christmas 2005 (Figs. 21a and b). The next project is to extend the Parker Library to include the area beneath the existing room, which formerly housed the undergraduate library. The plans include a new reading room and a secure vault with a controlled environment in which to store the Parker manuscripts. Most recently the Parker Library, in a major collaboration with Stanford University, embarked on a project funded by the Mellon Foundation to digitise the entire Parker Collection. The project is being carried out within Corpus Christi College. The preservation and care of the manuscripts has been to the fore from the start of the project to ensure the safety of the manuscripts during the
digitisation process, with all members of the project’s staff collaborating closely to achieve this end.

**Digitising the Manuscripts**

The photographic cradles are of a bespoke design, which enables the supports to be adjusted easily to hold the manuscript safely during digitisation (Fig. 22). Unlike many other digitisation cradles, the design worked out for this project does not involve the use of glass plates to hold the leaves flat, as this was felt to pose too great a risk to the binding structures, fragile leaves, and highly illuminated material. Instead, the conservation department was closely involved in making small magnetic bone holders to hold the leaves gently in position (Fig. 23), as well as rigs for the digitisation of disbound leaves and particularly fragile bindings. The special cradle for disbound material is made from two pieces of board, which are hinged in the centre, with a soft linen thread attached to one side of the hinge (Fig. 24). The loose end of the thread has a Velcro tab attached to it. A piece of the soft, non-scratchy side of Velcro is attached along the hinged area of the cradle. The quire is carefully positioned with the spine fold along the hinged area of the cradle (Figs. 25-27). The thread is then positioned in the fold to hold the quire gently in place and is itself held in place by the Velcro fixings. A flap of archival card at the top of the cradle holds the upper part of the quire in position. Fragile bindings with restricted openings are photographed on a cradle, made by the conservation department, which is fully adjustable not only in terms of the angle at which it holds the book, but also in terms of the two padded plates on which the boards rest (Figs. 28a-c). These plates are mounted so that they can be adjusted to allow the spines of the books space into which to flex during photography, and the cradle can be set to stop fragile books having an opening of more than 90 degrees. A Perspex holder is designed to hold the board of the book to the plate. The temperature and relative humidity on the rigs themselves, rather than in the wider studio environment, is closely monitored and controlled to ensure that the environment is kept to the same level as the Parker Library and thus minimise the 'shock' to leaves and pigments alike.

The decision to digitise the manuscripts has resulted in the largest programme of conservation work to the collection as a whole for many years. Carrying out the project entirely in house not only makes the security issues in transferring priceless books to and from the photography studio easier to manage, but, crucially, allows for close and constant communication between librarians, bibliographers, photographers and conservators to ensure the safety of the manuscripts and the smooth running of the project. The conservation approach has been proactive rather than reactive: the manuscripts are checked for damage and repaired before going to the photography studio so that they are in a safe physical condition to be handled, rather than after photography when damage may well have been exacerbated.
The conservation process begins with the bibliographers in the Parker Library. As each manuscript is examined its opening characteristics are assessed and any damage to the binding, leaves, inks and pigments is recorded. The manuscripts are then transferred to the Conservation Department for treatment prior to digitisation. Recommendations for handling, together with other relevant information, are passed on to the digitisation team with the manuscript. Manuscripts which retain their original bindings will probably not be digitised – or at least only a few representative leaves will be photographed – so as not to endanger the original structures. This also applies to manuscripts with fragile or stiff early bindings, which are at risk of being damaged if the whole of the text is photographed. Many of the manuscript leaves are repaired in-situ, whether they have just one small tear or, in the case of some of the paper manuscripts, many stabilising edge repairs (Fig. 29). Parchment leaves are also relaxed and flattened in-situ if there are only one or two leaves which require treatment: if the distortion is extreme and the manuscript is disbound, the leaves are relaxed in a humidity chamber, with moisture provided by an ultrasonic humidifier, then flattened by having lined, padded bulldog clips attached to their edges to enable them to be pinned out to dry flat (Figs. 30 and 31).

The inks and pigments of the great majority of the manuscripts appear to be in good condition, but there are books in the collection, which have needed work on a microscopic level to stabilise the text and images before digitisation. MS 49 provided one of the most dramatic examples of problematic text in the whole of the project, as the letters were lifting off the page and there were already bare patches in the lines, with tiny letters which had become detached lying in the spine margin (Fig. 32). The lengthy process of consolidating the ink was carried out under the microscope, using a 0000 miniaturist’s brush to apply the consolidant (methyl cellulose mixed with ethanol) to the backs of the letters (Fig. 33). This treatment caused the previously cupped films of ink to relax into a flat state, thus re-adhering themselves to the parchment leaves (Fig. 34). A similar procedure was used to consolidate cracked pigment layers and fragile damaged raised gilding in a number of other manuscripts (Figs. 35a and b), although application of a weak gelatine solution in the mist produced by the ultrasonic humidifier was found to be the best way of consolidating the powdery rubricated initials of MS 328.

The major problem in digitising the manuscripts, which threatened to derail the project in its initial stages, was the opening characteristics of the books. As mentioned above, the various rebinding programmes have resulted in a collection of books whose openings make them difficult to read and almost impossible to photograph satisfactorily; yet these bindings also made the project possible: they are judged not to be of such historical importance that they cannot be adapted by the conservators to allow the manuscripts to open properly. Ideally, one would like to replace all such bindings with new conservation bindings, which would be more sympathetic – and less damaging – to the manuscripts, but to rebind such a large collection within the time-frame of the project was impossible. Furthermore, the
manuscripts are in constant demand from readers and it is important to have as few manuscripts as possible in a disbound state for any length of time – the library continued to provide its normal services throughout the project. It was important to ensure that stress to the leaves during digitisation would be at a minimum and that the cameras could capture text right into the inner margin of the manuscripts. It was therefore essential that a suitable compromise was found to make the bindings work better, and the following treatments were adopted. Disbinding was not ruled out entirely, but was only carried out in cases where the sewing structure had broken down beyond repair or where the leaves of the most important texts required extensive repair, which was considered unfeasible to carry out in situ.

Opening Books: Treatment of the Bindings

Many of the eighteenth-century bindings are quite fragile: the joints are either very weak or broken and the tanned sheepskin is degraded, so that it is liable to soil hands and desks with powdery red-rot, which is then easily transferred to the manuscript leaves (Fig. 36). In such cases the conservation department used toned Japanese handmade paper to repair the joints (Fig. 37), or, for volumes where the leather was particularly badly degraded, rebacked the books with the same material (Fig. 38). The 1950s bindings, with their heavy applications of hide glue and linings of mull and paper, resulted in extremely inflexible structures (Fig. 39), which, when opened, cause the leaves to flex in the spine margin area rather than at the spine fold (Figs. 40 and 41). The leather on most of the 1950s bindings is in good condition, so the conservation department experimented in partially disbinding one of the manuscripts to remove the linings and retain the 1950s binding to see if this would solve the opening problems satisfactorily. This method proved successful and provided a satisfactory and manageable solution to the problem.

Some of the manuscripts were resewn in the 1950s on raised sewing supports, but the majority were sewn on recessed cords with false raised bands stuck to the spine liners. The end-leaves were not generally sewn to the textblock but simply stuck to the first and last sections, sometimes obscuring text and illuminations. MS 221, for example, was sewn on raised supports, but the opening was very restricted (Fig. 42). For such bindings where the leather was in reasonable condition, the paste-down was cut on the lower board along the inner joint where the cotton strengthener ended. This area of paper and cotton was then lifted and the spine leather carefully peeled back from the spine (Figs. 43 and 44). The upper joint was left untouched to maintain as much strength as possible in the joint, which works the hardest when a book is read. (This treatment, carried out on most of the bindings of this type, revealed a multitude of variations on the false raised band, which were made with old string, binding hemp, and leather scraps, and were sometimes even glued on as double cords! (Figs. 45-47).) When the spine was exposed, a gelatinous poultice of methyl cellulose mixed in purified water was applied to the spine linings and glue to humidify and soften them (Fig. 48). When softened, the glue, mull and paper was
lifted away using the edge of a bone-folder. The spine was then pasted with purified wheat-starch paste and a piece of Japanese handmade kozo-fibre paper, cut wider than the spine to leave an extension to form a new joint, was adhered to the spine (Fig. 49). The Japanese paper liner was applied to provide a barrier from the EVA adhesive, which was applied to attach a new paper hollow, made from archival Kraft paper supplied by Conservation By Design (Figs. 50 and 51). The spine leather was then glued back in place on the new hollow and the lifted joint was readhered to the board. There is a marked improvement in the opening of the manuscripts given this treatment, and the leaves flex from the spine fold (Fig. 52).

The manuscripts which were sewn on raised sewing supports were treated in a similar way, except that the leather was re-glued to the Japanese paper liner directly without a hollow. Removing the leather from some of these books revealed that even raised cord structures had been falsified with extra pieces of cord glued across the spine on top of the sewing supports during the 1950s rebinding (Figs. 53-55). These extra pieces of cord seem to have been applied to make the structure appear more robust than it is: they provided no extra strength to the sewing, but rather act like girders to create a very inflexible spine. Once again, removing these impractical additions greatly improves the opening of the manuscripts (Fig. 56).

This treatment transforms the opening characteristics of the manuscripts, and provided a three-fold solution to the problems the digitisation project raised: 1) It allows the manuscript to open more easily without placing stress to the leaves along the inner margin; 2) It keeps the 1950s bindings functioning until there is time to replace them with a more suitable structure; 3) It allows the manuscripts to be digitised safely and obtain all the text and inner marginal information without either distortion to the text or the need to have them re-digitised in the future.

In cases where the 1950s bindings were weak, the bindings have been removed completely and the glue and linings removed as described above. The books are then rebacked with toned aero-linen.

Peeling the leather from the spines of a few of the 1950s bindings revealed an early sewing structure beneath. As before, the hide glue and linings were removed using a poultice of methyl cellulose (Figs. 57 and 58). The sewing structure was then supported using linen braids, which were sewn around the early sewing supports using a helical stitch of soft linen thread which compresses well so as not to cause undue strain on the structure with excessive bulking from the new thread (Fig. 59). New backbead endbands of linen thread were then worked at the head and tail in order to strengthen the early structure and to improve the opening characteristics (Fig. 60). The manuscript was then provided with a temporary binding for digitisation (Fig. 61). When the manuscript has been digitised it will have a new medieval-style binding.
Some of the Renaissance paper manuscripts consist of what was once single leaf material, taken by Parker from a variety of sources. The leaves have, in some cases, been guarded together, but during most early attempts at repairing and rebinding these books, the leaves have been simply stuck to one another and overcast (Fig. 62). We know that some of these manuscripts were originally compiled by Matthew Parker himself, or by his secretary, John Joscelin, as they are foliated with his famous red pencil (Fig. 63), but almost all have been rebound in the past two hundred years, again with copious amounts of hide glue being applied to the spines. The use of hide glue has had disastrous results, often producing an irreversible amalgam of paper and adhesive in the spine margin. The text, running right to the edges of the leaves, has not been seen for many years, and, without extremely careful handling, is in danger of being lost altogether (Fig. 64). Further damage has occurred where heavy-handed use of the backing hammer has distorted spine folds of the fragile paper leaves (Fig. 65). Some of these important manuscripts consist of collections of letters and documents, the leaves of which have been folded in half to form sections, which were then sewn through the text area (Fig. 66). Other leaves have been folded many times to conform to the book format (Fig. 67), but the uneven foredge produced by this method of book construction, combined with rebindings using boards which are slightly too small, has left the protruding edges of the leaves vulnerable to damage (Figs. 68a and b).

Many of the manuscripts of this type have been disbound and repaired prior to digitisation, and careful notes and diagrams are kept to record the sometimes bewilderingly complicated collations (Fig. 69). Care has been taken to cause as little disturbance as possible to Parker’s typical pasting together of various separate documents, although it has been necessary to separate some of these leaves in order to conserve them properly and prevent more of the text being lost. Discussions as taking place between the conservators and librarians in order to work out the best way of preserving such material after digitisation. It may well be better to put at least the most fragile leaves into fascicules, rather than rebinding them.

All the disbound material is repaired and placed between folds of archival paper, and the quire number, collation, and any other information for the digitisation team is written on the outside of the fold. A phase box is provided to hold the disbound leaves, and this also has printed information notes on the outside for the digitisation team. It was felt that it would be better to keep the quires of the disbound material together during the digitisation process and the conservators worked with the digitisation team to devise a special cradle to hold this material during photography. After digitisation, the manuscript is returned to conservation department and thread tackets are sewn at the head and tail through original sewing holes in the manuscript to the temporary archival paper cover, to ensure that the leaves do not become damaged or misplaced before the manuscript can be rebound (Fig. 70).
From Manuscript to Print to the World-Wide Web

What would Matthew Parker have made of the five-year project devoted to digitising his entire collection of precious manuscripts? Computing technology and the possibilities opened up by the internet would probably startle him, but in essence he may well have approved of a project to publish his manuscript books: he had printed copies of several of his manuscripts published. Matthew Paris’s Chronica Majora was printed in Parker’s own lifetime and the manuscript still bears the inky fingerprints and blockmarks left by the printer as he held or weighted down the leaves while setting the type (Figs. 71 and 72). An engaging human side to the story of the books though these inky marks are, we have endeavoured not to leave such obvious evidence of our attempt to publish the manuscripts after the completion of this project.

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