

THE GOUGH MAP: ITS NATURE, CONSERVATION HISTORY AND DISPLAY

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INTRODUCTION

IN 1809 A GREAT TREASURE of cartography came to the Bodleian Library as part of Richard Gough's collection. It was given the shelfmark MS. Gough Gen. Top. 16 and is commonly known nowadays as the Gough Map. There have been several studies concerned with the content and significance of the map, but little has been published about its physical properties. Moreover previous works do not focus, to our knowledge, on past phases of restoration, conservation and framing. These issues, together with a systematic study of its storage and display since the map entered the Library, are addressed in this article.

To preserve the authenticity of the map it was necessary, before starting any treatment, to consider its physical condition and the possible causes of various past marks and damages. All this posed some new questions that will be analysed, and in part answered, in what follows. New archival discoveries, and related discussion, have been complementary to a lengthy intervention on the map, improving our knowledge considerably and enabling us to carry out more assured conservation treatments.¹

GENERAL DESCRIPTION

The parchment support

The map's maximum dimensions are (height) 553 mm by (width) 1164 mm. It is made up of two pieces of sheepskin parchment, joined vertically with the right half overlapping the left. The lap-join would have been held together originally by a plain running-stitch – clearly identifiable because not only are there sewing-holes and thread-indentations along the join, but also because the thread has interrupted the application of the green wash which represents the sea, indicating that the sewing was done before the map was painted. The two parchments are now joined by adhesive only (Plate 2).

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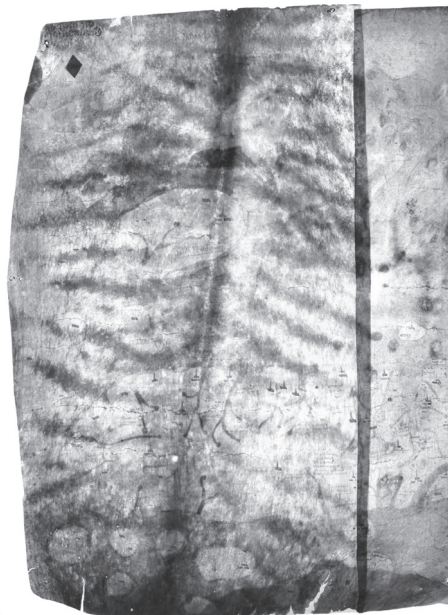


Fig. 1. The lambskin parchment on the left-hand side shows its backbone and ribcage, through transmitted light.

It is difficult to determine the anatomical features of the larger, right-hand parchment, but the left-hand skin, seen in transmitted light, has what appears to be the backbone and whole ribcage of a lamb (Fig. 1). The map was drawn on the flesh-side of each part. The thin 'silvery' slick membrane layer of the flesh-side of the skin was retained only in parts during the manufacturing process.² The image is more or less continuous across the surface, even across original losses of the flesh membrane (Plate 3). On the hair-side or verso the map has been patch-repaired using sheepskin parchment.

Image and text

The map is orientated with east at the top.³ Each town is marked by a vignette – a building or small group of buildings. The names of London and York are picked out in gold leaf; the gold was applied over a white bole and burnished. The round windows and portcullis of the London vignette may have been covered in silver leaf, now tarnished, and its roof painted blue (Plate 4).⁴ Other town names are in black/brown ink. Red ink is used for county names within a plain red box-border, as well as for the Roman numerals indicating distances between the main towns. Roofs are painted red, the rivers and the sea are painted green.

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The green wash of the rivers was painted in a slightly different hue and separately from the sea; this explains the darker bands at the river mouths, where the two colour-washes overlap. Many of the rivers west of Winchester were either not coloured or the paint has dramatically faded or been abraded.⁵ Much of the green paint of the sea appears to have originally been a relatively thick layer and certainly, away from the coastline, the wash is modulated in some areas.⁶ It was first applied to outline the mainland as well as the islands and, afterwards, to paint the whole sea. Where the green paint washes overlap, therefore, they form broad rings or shadows of a darker green tone (Plate 5). North of Hadrian's Wall the rivers inland from the coast, certain islands, and the fisherman seem to lack outlines. The red roofed buildings are outlined with a lighter ink than that used for the rest of the map, giving the map an unfinished appearance.⁷

W. B. Sanders wrote in 1871, 'The outlines of the buildings and other prominent features of the map are all pricked out in pinholes, which at first raised some doubts in my mind as to its originality; but from Gough making no allusion to it in his account, I suppose they were made by Basire while engraving it, thou[gh] Basire's engraving is on a considerably reduced scale.'⁸ Basire's reproduction was engraved for Richard Gough's *British Topography* in 1780.⁹ The pricking around many of the features of the map could date from much earlier, especially if the Gough Map was one of a number of late medieval copies.

Mounting and housing

In 1999 the Gough Map was still in a nineteenth-century glazed oak frame, associated with it since at least 1916, when its measurements were given in the *Summary Catalogue* as 30¼ inches by 53¼ inches.¹⁰ It was lined with an open-weave white textile and wheat-starch paste.¹¹ This cloth lining extended beyond the edges of the map and was, at some stage, turned under to follow the map's contour, leaving a border of 10–15 mm around its edges.¹² The map was pinned through this border into a softwood stretcher that had first been covered with cartridge-like paper.¹³

The mortised and tenoned stretcher, with three fielded centre panels, has a maximum height of approximately 657 mm. Its width, extended by the addition of wooden strips glued and nailed to each side, is approximately 1242 mm. There are numerous pinholes through the cartridge-like paper into the stretcher. A number of these holes are beyond the edge of the present cloth lining, suggesting that the map may have had an earlier, larger lining; or that the present lining was originally larger, and was cut and folded-in later; or, maybe, that the present folded lining has simply been re-pinned to the stretcher in different places. On the back of the stretcher, at the head, the

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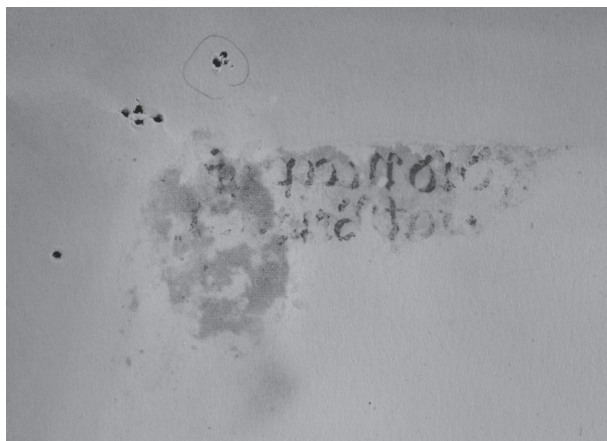


Fig. 2. Cartridge-like paper showing pinholes and the offset from the inscription on the map's verso (the offset reads in reverse).

number '20827' is written in pencil in a nineteenth-century hand.¹⁴ In the centre panel the framer's name and address is lightly scorched: 'Hogarth / printseller / mounter of drawings / and picture frame maker / 5 Haymarket / London'. For some time before being lined the map was evidently tipped to the cartridge-like paper, as shown by the offset from an inscription on the verso of the map (Fig. 2) and by glue residue at each corner.

In 1999 the map was remounted before it went on exhibition at Hereford Cathedral.¹⁵ The stretcher was retained and reused as packing, thus keeping it in close association with the map. However, between the stretcher and the map was placed a layer of 6-ply museum board. The map was attached to the board by broad strips of a heavy Japanese *mitsumata* paper, pasted to the edges of the cloth lining; the free ends of the strips were then drawn through slits and pasted to the back of the board.

CONDITION

Condition of the parchment support

The parchment displays a pattern of parallel vertical distortions, immediately suggesting that the map has been rolled at some stage. In addition there are four lacunæ along the bottom edge, all equidistant, and they would overlap if the map could be rolled from the left side with an approximate diameter of 80 mm. This fact supports the assumption that the map has been rolled and while rolled has been damaged. Three of the four damaged areas along the bottom edge appear to be accidental; the fourth, and largest, has a deliberately shaped outline. This was often the result of tidying up



Fig. 3. Detail of the top left-hand corner of the map, showing evidence of previous mountings. The rust marks on the map pre-date its lining and patches.

edges damaged during the manufacture of parchment. When in the rolled state this void, by not offering support, probably contributed to the other edge-damage.

The parchment has a series of rust-stained holes around the perimeter, evidence that the map has been pinned directly to a support – not necessarily within a frame – before it was lined (Fig. 3).

The lining of the map was poorly executed; most likely the parchment skins were made too wet; uncontrolled drying and possibly pressing fixed numerous distortions (Fig. 4), resulting in many groups of fine wrinkles and some pleats. The effect of too much moisture is particularly noticeable

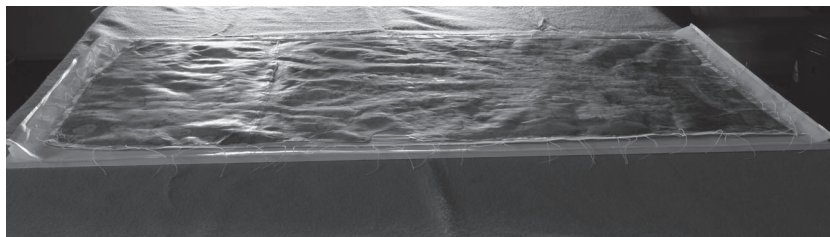


Fig. 4. Photograph of the map under raking light before conservation. The lap-joint is visible approximately one-third across the map from the left side.

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along the re-joined edges: not only are there distortions, but the registration of the map's image across the join is poor. It matches in the lower quarter of the join, but the misalignment of the image gradually increases until at the top edge of the join the left parchment has expanded by 5 mm – a considerable difference over 547 mm (see Plate 2). At present the adhesive bond along the join is firm, apart from the top and bottom edges, where the map and lining have also begun to separate. Gelatine-based glue has oozed from a few areas around the edges of the join.

The map has a number of parchment patch-repairs on the verso. The excessively large patch on the right-hand side has caused much of the distortion and pleats to the parchment (Plate 6).¹⁶ Three of the four lacunæ along the bottom edge have been patch-repaired. Gelatine-based glue has also oozed from around these patches. There are also some small, light grey circular stains affecting the parchment – possibly mould-damage, though the skin is not substantially weakened in those areas.

Condition of the surface and image

It is difficult to ascertain how much paint or ink has been lost. Others have noted the map's faded, dirty, and rubbed appearance. Parsons in 1958 recorded that 'Many names in Cornwall, Devon, Somerset, Wales, Scotland, and the Islands have faded or have been rubbed off with use, being mostly at the lower, i.e. western, part of the map. Users leaning over the map would rub this part with their sleeves. Many names have been overwritten in a later hand.'¹⁷ Apart from the overall losses, much of the remaining paint layer appears to be stable, except in the areas of heavier deposits of green paint around the coast, which suffer from craquelure; the burnished gold lettering marking London and York; and the red paint of a few roofs of the many buildings, which may require consolidation.¹⁸

Across England the surface of the map is more abraded and grimed than it is across Scotland. The far right-hand side of the map has the most damaged, distorted, and patch-repaired areas. In addition to the handling grime there are extensive dark brown liquid stains in the Bristol Channel and all along the English Channel. Parsons reported: 'Several lines of indecipherable writing can be seen in the lower right-hand corner of the map in the position where one would expect to find details of the purpose of the map, its compiler's name, and date of compilation.'¹⁹ There are various later ink splashes in which the ink preparation appears to be different from the original. Crude touching-up and in-painting has taken place on the exposed areas of patch repair, and occasionally the paint has spread onto the original.

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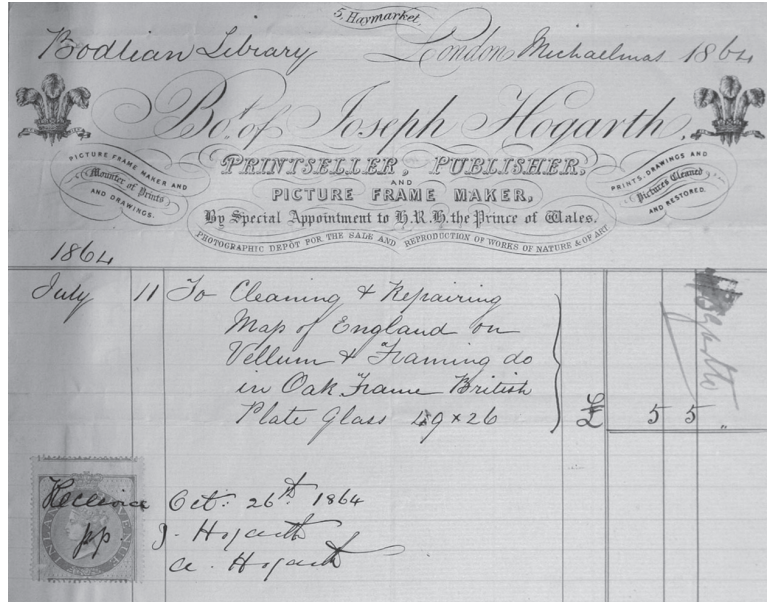


Fig. 5. Joseph Hogarth's bill for the map repair and framing, 1864. Bodleian Library, Library Records b. 46.

ARCHIVAL DISCOVERIES

Visual examination of the map and assessment of its condition revealed many aspects of its manufacture and its materials, its past restoration, and the way it was used and displayed. Some of these observations were further clarified by archival documents and old reproductions of the map.

Information on the stretcher is essential in determining when the map was framed and in unveiling other important aspects of the map's treatment. As already described, the centre panel of the stretcher has lightly scorched on it, 'Hogarth/printseller/mounter of drawings/and picture frame maker/5 Haymarket/London'. Craster, in his *History of the Bodleian Library, 1845–1945*, recorded 'Mr. Joseph Hogarth was called in, in 1862, to carry out much needed repairs to frames and canvases.'²⁰ The National Portrait Gallery website 'British Picture Framers, 1750–1950' confirms that Joseph Hogarth worked at 5 Haymarket, London during 1845–66.²¹

With this evidence in hand the library bills preserved in Library Records of the period were searched. In the volume containing bills dated from 1862 to 1864, J. Hogarth's bill was found: 'To cleaning and repairing map of England on vellum and framing do. in oak frame British plate glass 49 x 26 [inches], £5.5 Received Oct 26th 1864' (Fig. 5). This very recent

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find strengthens the supposition that Hogarth not only made the stretcher, but also carried out the in-painted sheepskin parchment patch-repairs. It is also likely that he tipped the map onto the cartridge-like paper where the offset from the inscription on the verso of the map, is still visible (see Fig. 2). The dimensions given in his bill correspond to the stretcher dimensions, including the additional wooden strips on each side.



Fig. 6. Watercolour of Arts End in 1843 by Robert William Buss. It has been suggested that the framed item hanging under the bust of Sir Thomas Bodley is the Gough map. W. D. Macray records that the map was hanging in Arts End in 1868. Bodleian Library, Janitor's List no. 403.

In 1867 a reduced photo-zincograph of the map was printed for the *Facsimiles of the National Manuscripts of Scotland*.²² This shows the pin-holes surrounded by rust-marks already present, and the lambskin side of the join already expanded, so the re-join must have been carried out before then, possibly as part of Hogarth's repair. In 1958 a collotype facsimile of the map was produced by Oxford University Press to accompany the publication of *The Map of Great Britain – ca. A.D. 1360* by E. J. S. Parsons. The nine glass-plate negatives were recently deposited in the Bodleian Library by the Press.²³ The glass plate marked 'Gold' has minimal blocking-out and thus an almost clean negative was preserved, which confirmed that the map was already on its present cloth lining. Between 16 and 23 May 1969, according to an entry in the daybook of the Bodleian map-liner Mrs M. Ellis, an unspecified treatment was carried out on the map.²⁴

After the map arrived at the Bodleian Library in 1809 it appears, from various sources, that it was displayed for long periods in different parts of

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the Library. The deterioration of its media and of the parchment support is consistent with exposure to natural and artificial light for many years. A small watercolour by Robert William Buss, dated 1843, shows a framed item hanging on the wall below the bust of Sir Thomas Bodley in Duke Humfrey's Library; it appears as if it could be the Gough Map, oriented with north at the top instead of on the left (Fig. 6).²⁵ In 1868 W. D. Macray described 'a very curious manuscript map of England and Scotland which now hangs, framed and glazed, in the eastern wing of the Library'.²⁶ Thirteen years later, in 1881, Falconer Madan recorded that the Gough Map was still exhibited in the Library.²⁷ An exhaustive search of the hand-lists of items displayed in glass cases has recently been carried out. The map was exhibited in the Picture Gallery (now the Upper Reading Room), in glass case no. 40, according to lists dated 1921 and 1931, but not according to the one dated 1925–31.²⁸ Later, according to a list dated 1946,²⁹ it was hanging on the partition between the Picture Gallery and the old English Reading Room. From some time after the opening of the New Library, the map was displayed on the wall of the Map Reading Room. In 1980, on the advice of the newly formed Conservation Department, it was taken down and placed in the air-conditioned bookstack, to halt damage being caused by overexposure to light and environmental fluctuations. There must be more documents to be found concerning the history of the map's display.

PHASES OF THE CURRENT CONSERVATION TREATMENT

The current programme of conservation treatment was begun in 2006, in order to make the map safe to lend to a major exhibition at the Field Museum in Chicago.³⁰ It was decided that this should be the start of a longer term project to stabilize the condition of the map, while retaining – and even attempting to regain – its unique character. At the end of the treatment the map will be remounted and preserved in a secure, environmentally safe new frame.

The first step was to examine the surface of the map carefully under low magnification (up to $\times 50$), using a binocular microscope and fibre-optic light source at different angles of illumination. This indicated that although part of the paint layer is damaged or lost, most of what remains appears stable and firm. By placing the map over a large light-box it was possible to plot the positions of patch-repairs, though the thickness of the cloth made the edges of repairs indistinct.

In 2007 some friable or flaking paint layers were consolidated, using a combination of alcohol and isinglass or clear gelatine. Loose heavy deposits

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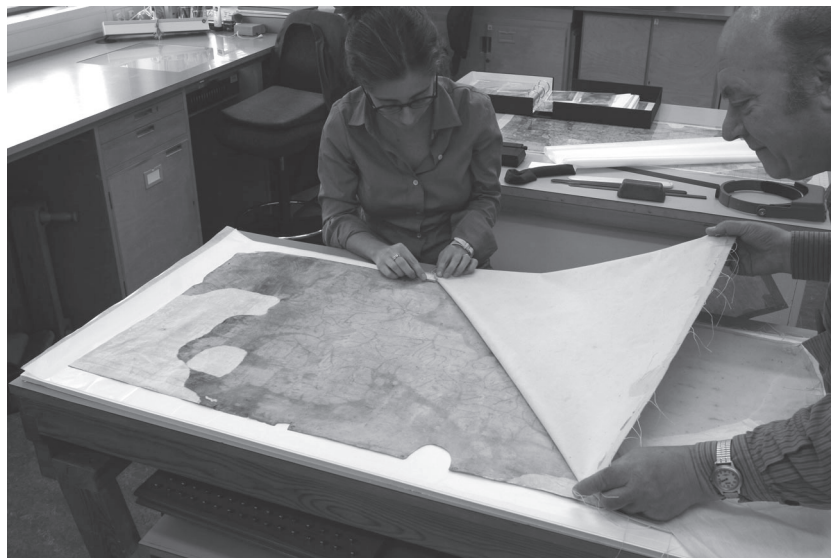


Fig. 7. Removing the cloth lining of the map.

of green and red paint, and a few fragments of gilding bole, were treated in this way. In 2008 the whole of the image surface was gently cleaned mechanically, mainly using soft brushes and a soft white vinyl eraser; this treatment has enhanced the image. In areas where the fine flesh membrane is lacking, dust particles have become embedded in the fibre structure of the parchment. Little can be done to clean such areas, except light, soft, hair brushing. In places affected by liquid staining and what appears to be handling grime (particularly on the right-hand side), no discernible improvement could be gained by such gentle surface treatments. Microscopic examination revealed that much of the dirt and oily grime is embedded in the fibre network and could not be extracted without solvent treatments. This would, however, entail unacceptable risk, including local changes to the character of the parchment.

After the above treatments had been completed, consideration was given to removing the cloth lining. Because in a few areas the adhesive bond between the map and the cloth lining was already broken – mainly due to stress from undulations in the parchment – it seemed that it might be possible carefully to separate the rest of the lining from the map. The face side of the map was therefore covered for protection, and the map was turned over onto a narrow island bench, allowing it to be worked on from both edges at the same time. A parting-tool was inserted under one of the places at the edge of the map where the adhesive had failed, and gradually

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the lining cloth was rolled back, breaking the bond between the lining and the map (Fig. 7).

With the lining removed the verso of the map was visible and could be examined for the first time in many years. There were thick layers of adhesive, mainly remains of paste, as well as several parchment patch-repairs. A diamond-shaped paper label with the number 405 on it and the ink inscription 'Old map of Great Britain', on the north-eastern corner, are evidence of the sale of Thomas Martin of Palgrave's manuscripts on 20 May 1774 at which Richard Gough purchased the map for half-a-crown. It was offered as lot 405 and described as 'a curious and most ancient map of Great Britain' (Plate 7).³¹ All the damage, dirt, and discoloration at the southern end of the map surely suggest that the map had been rolled and stored with this end on the outside. The position of the label and title on the verso support the possibility that the map was re-rolled so that the clean end was prominent at the sale.

Examination also revealed that the parchment patch-repairs, covering areas much larger than the lacunæ themselves, were made from an unused, red-ruled sheet of sheepskin parchment (see Fig. 7). The rusty attachment holes in the map do not pierce these patches and must therefore pre-date these repairs. The removal of the cloth lining not only enabled an accurate inspection of the verso of the map but, by releasing some of the constraints, has allowed the parchment to relax and regain in part its flexibility, restoring somewhat the map's original appearance.

The next stages of the conservation treatment will involve: removal of the adhesive residue, removal of the nineteenth-century parchment patches, temporary repair of breaks and lacunæ to straighten gently their distorted or expanded edges, sympathetic infilling of the lacunæ, repair of the tears and reinforcement of fragile areas. Once these stages are completed, the Gough Map will be mounted in a softly sprung, stainless steel mount within a closely sealed frame of stainless steel and laminated, low-reflectance glass and acrylic, which will also permit examination of the verso. This sophisticated housing, made and first used in 2007 for the loan to Chicago, is enclosed by a simple oak over-frame when the map is exhibited.³² It will continue to protect the map during transport, on exhibition, and in storage.

This extended conservation project has been made possible by the generous support of Mr Brian Wilson, a member of the Friends of the Bodleian Library.

¹ The investigations and treatments reported in this article have been undertaken by the authors in consultation with Nick Millea, Map Librarian in the Department of Special Collections and Western Manuscripts.

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² The great majority of medieval, single-sheet parchment documents are written on the flesh-side, probably because this was the easier side to prepare. Even today the parchment-maker will try to preserve intact the thin 'silvery' membrane.

³ In this article references to the image side of the map (recto) and the verso use the words 'top', 'left', 'right', and 'bottom' when it is being viewed in this original orientation.

⁴ No analysis of the paint layers has so far been carried out.

⁵ This does not necessarily discount the suggestion that the map is unfinished north of Hadrian's Wall.

⁶ In many areas it is now difficult to determine an original wash from a green stain remaining from a heavier paint deposit.

⁷ 'It has been supposed that the map is unfinished. There is no doubt, however, that originally every symbol and every river had a name.' E. J. S. Parsons, *The Map of Great Britain circa A.D. 1360 known as the Gough Map* (Oxford, 1958), p. 3.

⁸ W. B. Sanders, *The Thirty-second report of the Deputy Keeper of the Public Records*, 1 (1871), p. vii.

⁹ Richard Gough, *British Topography, or an Historical Account of What Has Been Done for Illustrating the Topographical Antiquities of Great Britain and Ireland* (London, 1780).

¹⁰ *Summary Catalogue of Western Manuscripts in the Bodleian Library at Oxford*, iv (Oxford, 1897), number 17610, pp. 171–2.

¹¹ More coarsely woven than expected of a modern map-lining material. Its fibre composition (most likely cotton or linen) has not yet been identified.

¹² This cloth lining was removed from the map in October 2008.

¹³ Not an artist's stretcher; it does not have corner expansion keys, and the map was not tensioned across it. The term is only used in the sense of providing a support for the map and to distinguish it from the glazed frame.

¹⁴ Not a *Summary Catalogue* number, but one in the series of inventory numbers given to framed objects in the Library's collections.

¹⁵ Exhibited 27 June to 3 October 1999, in association with the International Mappae Mundi Conference.

¹⁶ The largest lacuna measures (height) 175 mm × (width) 32 mm (at the top edge) × 14 mm (at the bottom edge). In order to reduce tensions developing between the original parchment and the new parchment patches, the repair material would need to have been conditioned and shaped to the lacunæ, so as to overlap the original material as little as possible.

¹⁷ See Parsons, *The Map of Great Britain*, p. 3.

¹⁸ The red certainly has glair as a binder and thus is very tenacious. Even in the Florence flood of 1966, when all other colours and inks were washed off manuscripts, the red was as fresh and stable as ever. Damage to the red roofs is therefore an indication that the map has undergone extremely rough handling.

¹⁹ Parsons, *The Map of Great Britain*, pp. 3–4. This and other faint indications may yet be made visible. Consideration will be given to the use of techniques such as hyperspectral imaging, when the map can again be handled safely.

²⁰ Sir Edmund Craster, *History of the Bodleian Library, 1845–1945* (Oxford, 1952), p. 115.

²¹ <http://www.npg.org.uk/research/conservation/directory-of-british-frame-makers.php>

²² *Facsimiles of the National Manuscripts of Scotland*, photozincographed by Sir H. James, 3 vols. (Southampton, 1867–71), iii, plate II.

²³ Martin Maw, archivist of the University Press, kindly made possible the deposit of the negatives in the Bodleian. Through him it was also possible to trace David Phipps

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(ex-OUP Drawing Office), who had worked on the collotype facsimile in 1958. At a meeting in the Bodleian Library on 3 November 2008 Mr Phipps generously shared his knowledge and memories of the production of the facsimile.

²⁴ The entry lists the shelfmark twice.

²⁵ Janitor's List no. 403.

²⁶ W. D. Macray, *Annals of the Bodleian Library* (Oxford, 1868), p. 211, n. 3.

²⁷ Falconer Madan, *List of books, manuscripts, portraits etc. exhibited in the Bodleian Library*, 1881, Library Records f. 75, p. 17.

²⁸ Library Records d. 1572, p. 10; d. 1573, p. 12; d. 1571.

²⁹ Library Records d. 1887, p. 15.

³⁰ 'Finding Our Way in the World', 2 November 2007 to 27 January 2008.

³¹ Auction catalogue of the sale by S. Baker and G. Leigh, York Street, Covent Garden, 18–21 May 1774, p. 19.

³² The frame was designed by Christopher Clarkson, Dana Josephson, and Simon Moulder, head of the Clarendon Physics Laboratory's engineering workshop, where it was made. The oak over-frame was made by Graham Hooper in the University Estates Directorate's joinery workshop.