

# Bodleian Library, MS. Lat. liturg. d. 48, The Martindale leaves Conservation Report

Andrew Honey  
Conservation & Collection Care  
Bodleian Libraries

1 June 2026

---

This report records the condition and conservation of three parchment manuscript fragments donated in 2025, now MS. Lat. liturg. d. 48. The fragments and their condition before donation are described by Michael A. Michael, 'The Martindale and Gurney leaves: a dismembered early thirteenth-century Psalter from St Albans Abbey reunited', *Bodleian Library Record* 38 (2025), pp. 36-63.

The fragments are three non-consecutive bifolia from two consecutive quires of a manuscript. They are now foliated to reflect the original order of the leaves in the bound manuscript, without making allowances for now missing leaves. Before the current conservation the leaves of bifolia 1 and 3 were folded backwards, with the second leaf of each before the first.

M. A. Michael order	Bodleian foliation
Bifolium 1, leaf 1	MS. Lat. liturg. d. 48, fol. 1
Bifolium 1, leaf 2	MS. Lat. liturg. d. 48, fol. 2
Bifolium 2, leaf 1	MS. Lat. liturg. d. 48, fol. 3
Bifolium 2, leaf 2	MS. Lat. liturg. d. 48, fol. 6
Bifolium 3, leaf 1	MS. Lat. liturg. d. 48, fol. 4
Bifolium 3, leaf 2	MS. Lat. liturg. d. 48, fol. 5

The following photographs were taken during treatment in the Conservation studio: 25C00886-897, 25C01236-1241.

There are two further portions of this manuscript, four bifolia at the Robertson Davies Library, Massey College, Toronto (Gurney Pam 0008; <https://fragmentarium.ms/overview/F-qe0w>) and a single framed leaf sold at Bloomsbury Auctions, London in 2008.<sup>1</sup>

## Condition

Three folded parchment bifolia, leaf size approximately 309 x 216 mm. The manuscript is ruled in red and green ink and written in dark brown iron-gall ink, with gilded, red and blue initials, and decoration in red and blue. The bifolia are now grubby and worn, with crumpled areas, minor losses, and breaks along the green ruling. At acquisition two of the bifolia (bifolia 1 and 3, fols. 1 & 2 and 4 & 5) were folded backwards, in variance with the original order in the manuscript. It appears that each of the bifolia had been unfolded and kept flat for a considerable time before acquisition.

---

<sup>1</sup> Bloomsbury Auctions, London, 10 October 2008, lot 5. With thanks to Peter Kidd for supplying a photo of this mounted and framed leaf.

Each of the unfolded bifolia has surface dirt on both sides, though the surface dirt is heavier on one side of each (fols. 1v & 2r, 3v & 6r, 4r & 5v). There are stains and insect frass in places on all three bifolia, and exit holes from wood-boring insect activity through the parchment. These exit holes do not continue through facing areas on conjoint leaves and the damage must have occurred when the bifolia were unfolded. There are groups of adhered frass in many places in the form of small round dark dots which are probably spider spots, and one insect cast (fol. 6r).

All three bifolia have folds and crumpled areas, misshapen spine-folds, and small tears or losses in places. The lower fore-edge of fol. 4 has the largest loss, with part of the margin torn away.

Each of the bifolia has between two and six ragged oval holes (6 x 4 mm) ringed with rust towards the edges of the leaves, and a series of regularly spaced holes along the perimeter of either two or three sides of the opened bifolia; these are separate from the pricking for ruling. Two of the bifolia (bifolia 1 and 2, fols. 1 & 2 and 3 & 6) have evidence that an entire leaf was folded vertically at an angle (fols. 1 and 3). There is a large liquid stain to fol. 3 and an indistinct annotation in iron-gall ink to the tail edge of fol. 6v.

### ***Conservation***

All three bifolia were lightly brushed to remove loose dust or surface dirt; no other surface cleaning was attempted and the insect cast, frass, and other accretions and dirt remain in place.

Folds and crumpled areas, and misshapen spine-folds were locally relaxed with a 1:1 mixture of water and isopropanol (Propan-2-ol) and dried under light weight. The spine-folds were again locally relaxed with a 1:1 mixture of water and isopropanol (Propan-2-ol) and refolded. The spine-folds of bifolia 1 and 3 (fols. 1 & 2, 4 & 5) were refolded to the original order of the leaves in the bound manuscript.

Vulnerable breaks and tears to the fore-edges of fols. 4 and 5 (bifolium 3), especially along the copper green ruling, were supported with shaped patches of (0.03 mm thick) parchment prepared from the swim bladder of a fish, coated on one side with a thin layer of acrylic adhesives (Plextol M630 and B500). The patches were cut from the prepared sheet and the adhesive was reactivated with locally applied isopropanol (Propan-2-ol) and stuck in place.

Guards of machine-made Japanese paper (RK17) were stuck to the spine-folds of each of the bifolia and they have been guarded to the support leaves of a 'c' size fascicule. A copy of M. A. Michael's 'Proposed gathering structure of Martindale leaves' annotated with the Bodleian foliation, and an ultraviolet light photograph of the inscription at the tail edge of fol. 6v, have been included in the fascicule. The fascicule is housed in a four-flap archival folder.

### ***Observations***

The opportunity for close study during treatment has allowed further observations to be made about the inscription on fol. 6v and the condition and possible later use of the fragments.

Michael managed to partially transcribe the worn iron-gall ink inscription written at the tail edge of fol. 6v, one written with the leaf upside down.<sup>2</sup> A photograph taken under ultraviolet light has allowed the inscription to be slightly expanded (25C00897)<sup>3</sup>:

4 Nove[m]b 82    his p[re]sentibus    Stephano C[-]pp  
Gulielmo Raynes [in? \_\_\_\_]  
Hoving

The unusual condition of the fragments led Michael to also speculate on the cause:

‘The Martindale leaves also display damage consistent with a large metal object being placed on top of them for a considerable amount of time during which damp caused rust which produced burn marks from the corroding metal rivets and crumpling of the parchment’; a footnote adds, ‘the shape of the indentations suggests that a pair of scissors or pincers may have lain on top of the leaves for a considerable length of time.’<sup>4</sup>

He assumed that the damage occurred while the leaves were still in codex form. However, investigations during the recent conservation indicate that the damage to these bifolia happened after they had been disbound and unfolded into separate bifolia, and was caused by a second non-book use.

As noted above each bifolium has between two and six ragged oval holes (6 x 4 mm) ringed with rust towards the edges, and a series of regularly spaced holes along the perimeter of either two or three sides of the opened bifolium. The holes and rust are likely to have been caused by the heads of iron nails, and the regularly spaced holes are sewing holes. Sewing holes on the fore-edges of two of the leaves from two different bifolia have the same spacing indicating that they were sewn together to make a bigger sheet (bifolium 3, fol. 5; bifolium 2, fol. 6). These two bifolia were joined with their texts in different orientations (25C00896).

The most noticeable scissor-like shape of ‘crumpling’ and ‘indentations’ noted by Michael is found on fol. 3 (25C00889). This is liquid staining that is symmetrical along an earlier fold that runs at an angle vertically up the leaf; there are four rust holes from nails along this fold, two on either side at equal distances from the fold. The surface dirt to this bifolium (fols. 3 & 6) is also uneven, with a shaped lighter area on fols. 3v & 6r that was protected by the part of fol. 6 that was folded over. It would appear that the parchment bifolia were sewn together to make a larger sheet, some of the edges were folded over to make shaped or angled ends, and the larger sheet was nailed down around its perimeter.

All three bifolia have exit holes from common furniture beetle (*Anobium punctatum*) a wood-boring insect. However, one bifolium (fols. 1 & 2) also has clusters of smaller exit holes, usually near the *Anobium punctatum* exit holes (25C01239). These are most likely the exit holes of *Spathius exarator*, a parasitic wasp that lays its eggs of the larvae of *Anobium punctatum*, this parasitic activity usually occurring with a heavy *Anobium* infestation in wood which was stored in a damp environment.<sup>5</sup>

---

<sup>2</sup> “It gives the date: ‘4 November [15]82’. The name ‘Guilem’ can be discerned in part of the erased pen trial which suggests a draft of a letter was being made” Michael (2025), p. 49.

<sup>3</sup> With thanks to Mike Webb and Peter Kidd for the transcription.

<sup>4</sup> Michael (2025), p. 40 and footnote 9.

<sup>5</sup> With thanks to Catherine Harris and David Pinniger for insect identification.

The heavier surface dirt of one side of each bifolium, the nail and sewing holes, as well as the folds to two leaves, indicate that the parchment was formed into a larger sheet with angled ends, one where the text was not important and which was attached to a wooden object. The arrangement of nail holes and sewing holes fall into two types. The first were bifolia that were joined by sewing on one long and two short sides, and nailed on the other long side (Type 1). The second were bifolia that were joined on one long and one short side, with one leaf folded at an angle and nail holes on the non-sewn edges (Type 2). Within the Martindale leaves there are one type 1 and two type 2 bifolia (diagram 1).

The Gurney leaves exhibit the same sewing and nail holes as the Martindale leaves, their eight leaves being two type 1 and two type 2 bifolia. The edges of the Bloomsbury Auction leaf are covered by a mount and any sewing or nail holes now cannot be seen. However, it has the same pencil annotations using the King James Bible numbering in its margins as the Gurney leaves, and must have passed through the same bookseller and presumably came from the same source. It would appear that all fifteen leaves were once sewn together to create one large sheet that was possibly used as a lining for a wooden object at some point after 1582. This was rediscovered, disassembled and sold as fragments before 1974. The standard arrangement of the sewing and nail holes within the two types allows an estimate of both the size and shape of this use: a sheet eight leaves wide and two leaves high or approximately 174 x 61 cm, though the orientation of this use is not known. The folded and then nailed edges of four leaves indicate that the ends of this larger, narrow rectangular sheet were angled.

		<i>Martindale leaves</i>	<i>Gurney leaves</i>
<b>Type 1</b>	Joined by sewing on one long and two short sides, nailed on the other long side	Fols. 4 & 5	Fols. 1 & 4, 5 & 6
<b>Type 2</b>	Joined by sewing on one long and one short side, with one leaf folded at an angle and nail holes on the non-sewn edges	Fols. 1 & 2, 3 & 6	Fols. 2 & 3(?), 7 & 8

MS. Lat. liturg. d. 48 – Contact sheet of conservation documentation photographs



25C00886.jpg  
Shelfmark: MS. Lat. liturg. d. 48  
Folio/page number: Bifolia: 1 ((2r), 2 (1r), 3 (2r), Fols. 2r, 3r, 5r  
Standard description: 23: opening right  
Description: Martindale leaves as received  
Purpose of shot: Before treatment



25C00887.jpg  
Shelfmark: MS. Lat. liturg. d. 48  
Folio/page number: Bifolium 1 (1v-2r), Fols. 2v-1r  
Standard description: 21: opening left &...  
Description: Martindale leaves as received  
Purpose of shot: Before treatment



25C00888.jpg  
Shelfmark: MS. Lat. liturg. d. 48  
Folio/page number: Bifolium 1 (2v-1r), Fols. 1v-2r  
Standard description: 21: opening left &...  
Description: Martindale leaves as received  
Purpose of shot: Before treatment



25C00889.jpg  
Shelfmark: MS. Lat. liturg. d. 48  
Folio/page number: Bifolium 2 (2v-1r), Fols. 6v-3r  
Standard description: 21: opening left &...  
Description: Martindale leaves as received  
Purpose of shot: Before treatment



25C00890.jpg  
Shelfmark: MS. Lat. liturg. d. 48  
Folio/page number: Bifolium 2 (1v-2r), Fols. 3v-6r  
Standard description: 21: opening left &...  
Description: Martindale leaves as received  
Purpose of shot: Before treatment



25C00891.jpg  
Shelfmark: MS. Lat. liturg. d. 48  
Folio/page number: Bifolium 3 (2v-1r), Fols. 4v-5r  
Standard description: 21: opening left &...  
Description: Martindale leaves as received  
Purpose of shot: Before treatment



25C00892.jpg  
Shelfmark: MS. Lat. liturg. d. 48  
Folio/page number: Bifolium 3 (1v-2r), Fols. 5v-4r  
Standard description: 21: opening left &...  
Description: Martindale leaves as received  
Purpose of shot: Before treatment



25C00893.jpg  
Shelfmark: Fols. 2v-1r, MS. Lat. liturg. d. 48  
Folio/page number: Bifolium 1 (2v-1r)  
Description: Transmitted light photos showing insect damage, rusted nail holes a...  
Purpose of shot: Before treatment

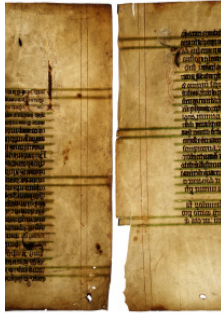


25C00894.jpg  
Shelfmark: MS. Lat. liturg. d. 48  
Folio/page number: Bifolium 2 (2v-1r), Fols. 6v-3r  
Description: Transmitted light photos showing insect damage, rusted nail holes a...  
Purpose of shot: Before treatment

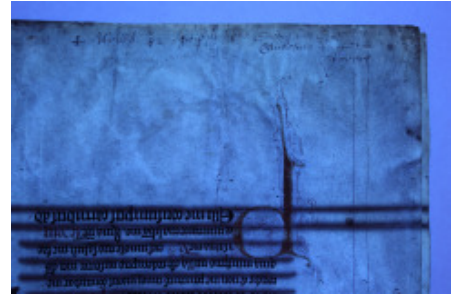
MS. Lat. liturg. d. 48 – Contact sheet of conservation documentation photographs



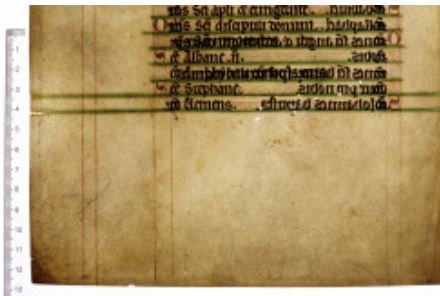
25C00895.jpg  
 Shelfmark: MS. Lat. liturg. d. 48  
 Folio/page number: Bifolium 3 (2v-1r),  
 Fols. 4v-5r  
 Description: Transmitted light photos  
 showing insect damage, rusted nail holes  
 a...  
 Purpose of shot: Before treatment



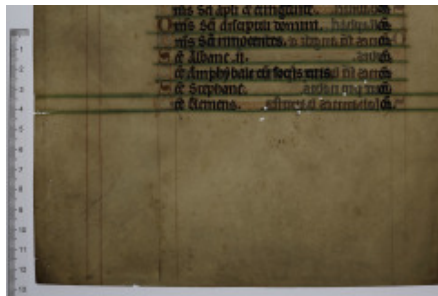
25C00896.jpg  
 Shelfmark: MS. Lat. liturg. d. 48  
 Folio/page number: Left: bifolium 2 (2v);  
 Right: bifolium 3 (2v), Left: fol. 6v ...  
 Description: Sewing holes on two of the  
 leaves from two different bifolia with t...  
 Purpose of shot: Before treatment



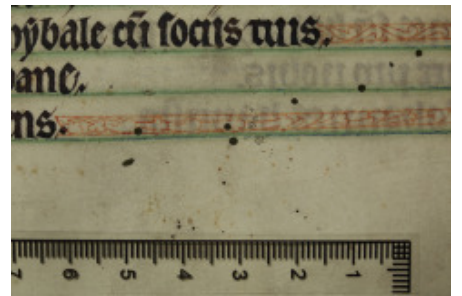
25C00897.jpg  
 Shelfmark: MS. Lat. liturg. d. 48  
 Folio/page number: Bifolium 2 (2v), Fol. 6v  
 (inverted)  
 Description: Inscription to tail margin,  
 ultraviolet light.  
 Purpose of shot: Before treatment



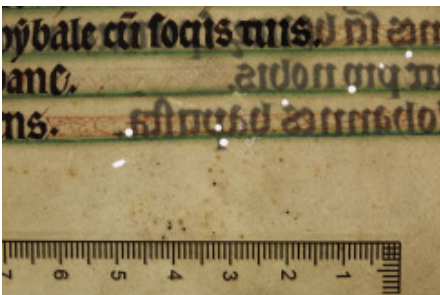
25C01236.jpg  
 Shelfmark: MS. Lat. liturg. d. 48  
 Folio/page number: Fol. 2v  
 Standard description: 22: opening left  
 Description: Wood boring insect damage to  
 parchment  
 Purpose of shot: During treatment



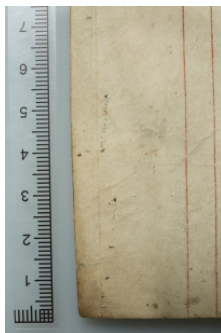
25C01237.jpg  
 Shelfmark: MS. Lat. liturg. d. 48  
 Folio/page number: Fol. 2v  
 Standard description: 22: opening left  
 Description: Wood boring insect damage to  
 parchment.  
 Purpose of shot: During treatment



25C01238.jpg  
 Shelfmark: MS. Lat. liturg. d. 48  
 Folio/page number: Fol. 2v  
 Standard description: 22: opening left  
 Description: Wood boring insect damage to  
 parchment.  
 Purpose of shot: During treatment



25C01239.jpg  
 Shelfmark: MS. Lat. liturg. d. 48  
 Folio/page number: Fol. 2v  
 Standard description: 22: opening left  
 Description: Wood boring insect damage to  
 parchment.  
 Purpose of shot: During treatment



25C01240.jpg  
 Shelfmark: MS. Lat. liturg. d. 48  
 Folio/page number: Fol. 2v  
 Standard description: 22: opening left  
 Description: Wood boring insect damage to  
 parchment (coinciding with sewing thre...  
 Purpose of shot: During treatment



25C01241.jpg  
 Shelfmark: MS. Lat. liturg. d. 48  
 Folio/page number: Fol. 2v  
 Standard description: 22: opening left  
 Description: Wood boring insect damage to  
 parchment (coinciding with sewing thre...  
 Purpose of shot: During treatment

MS. Lat. liturg. d. 48 Diagram 1  
June 2026

