

# Fragmentology

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# *Reconstructing Burnt Anglo-Saxon Fragments in the Cotton Collection at the British Library*

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**Abstract:** The British Library conducted a *Fragmentarium* case study in 2017 to explore the possibilities for improving access to burnt fragments of Anglo-Saxon manuscripts from the Cotton Collection. Multispectral imaging and analysis undertaken by Dr Christina Duffy at the British Library Conservation Centre has revealed more details from the surviving fragments than are otherwise visible. The complexity of multispectral imaging presents challenges for online display and long-term storage that need to be addressed in future manuscript digitisation initiatives.

**Keywords:** multispectral imaging, Anglo-Saxon manuscripts, British Library

The burnt fragments of the Cotton manuscripts are among the most evocative artefacts of medieval culture, both for the tragedy of their destruction and the mystery of their contents. Many of the surviving leaves remain critical to scholarship, often containing unique texts or their earliest known copies, but have not been easy to read for centuries. In many cases, their state of conservation means that researchers can only consult them with curatorial permission. The creation of *Fragmentarium* presented an opportunity to make some of the most important surviving fragments accessible to readers in a digital form. This project digitised a selection of known Anglo-Saxon fragments using multispectral imaging (MSI) to create enhanced images that expose far more details than observable with the naked eye.

## **The Cotton collection and its conservation**

The library assembled by Sir Robert Cotton (1571–1631) originally included manuscripts, state papers, printed books, coins and inscriptions. Cotton was famously in the vein of early modern antiquarians who were more collectors than historians, and happily rearranged the volumes they acquired. Although

this often obliterated historical evidence, the placement of the Cotton library in central London, with provisions for public access since the seventeenth century, has made it a common point of reference for generations of politicians, scholars and antiquarians.<sup>1</sup>

Most of the Cotton manuscripts are now held at the British Library, including famous literary and historical treasures such as the Lindisfarne Gospels, the only surviving copies of *Beowulf* and *Sir Gawain and the Green Knight*, and autograph papers from monarchs and other prominent figures. Exceptions include the Utrecht Psalter, borrowed from the library and never returned.<sup>2</sup> Robert's grandson, Sir John Cotton, negotiated for the Cotton library's transfer to the nation on his death in 1702. This donation was the first occasion in the British Isles that any library had passed into national ownership, bringing with it such treasures as the Magna Carta and the largest collection of Anglo-Saxon manuscripts assembled by any antiquary.

A fire broke out on 23 October 1731 that seriously damaged a large proportion of the collection; parts were completely destroyed. The collection had been placed in temporary storage at Ashburnham House, Westminster, along with the Royal manuscripts, having only recently been transferred from their previous home in Essex House, The Strand. Some manuscripts were said to be saved only by throwing them from the windows. Many were badly damaged. The conservation work began immediately — initially drying leaves in front of fires and hanging them up on lines — and has never ended.<sup>3</sup>

On the bright side of this disaster, most of the collection survived in some form, and the reaction to it formed part of the impetus for the creation of the British Museum in 1753. Miraculously, only thirteen manuscripts were completely destroyed, mostly from the Cotton Otho press. The Cotton library was famously organised in shelves headed by the busts of Roman emperors. Conservators and scientists working with the manuscripts have been prominent in developing and implementing new technologies for the preservation of fire-damaged artefacts. For most of the eighteenth to the twentieth centuries, the conservation efforts were undertaken in the mindset of creating a working library rather than preserving historical artefacts. Hence, many of the damaged leaves of the Cotton

1 M. P. Brown, "Sir Robert Cotton, Collector and Connoisseur?", in *Illuminating the Book: Makers and Interpreters. Essays in Honour of Janet Backhouse*, ed. M. P. Brown and S. McKendrick, London 1998, 281–98; J. Summit, *Memory's Library: Medieval Books in Early Modern England*, Chicago 2008, esp. chap. 4. <https://doi.org/10.7208/chicago/9780226781723.001.0001>.

2 B. Jaski, "The Oldest Datings of the Utrecht Psalter", *Quaerendo* 45(2015), 125–43. <https://doi.org/10.1163/15700690-12341322>; K. Birkwood, "'Our Learned Primate' and That 'Rare Treasure': James Ussher's Use of Sir Robert Cotton's Manuscript Library, c. 1603–1655", *Library & Information History* 26(2010), 33–42. <https://doi.org/10.1179/175834909X12593371595824>.

3 A. Prescott, "'Their Present Miserable State of Cremation': The Restoration of the Cotton Library", in *Sir Robert Cotton as Collector: Essays on an Early Stuart Courtier and His Legacy*, ed. C. J. Wright, London 1997, 391–454.

manuscripts were mounted on paper and bound into a new imitation Cotton binding with the idea of allowing everyday consultation and returning to a projection of what the book might have looked like — but many leaves were bound in the wrong order, mislabelled or inserted backwards. The restoration work itself did not go without incident. On 10 July 1865, a fire broke out at the British Museum bindery. Among the victims were several manuscripts, including Cotton MS Tiberius B XI, a ninth-century copy of King Alfred's translation of Gregory the Great's *Regula pastoralis*. Cotton MS Otho A X, which had already been damaged in the Cotton fire, was further reduced, along with fragments from it labelled as Otho A XII.

The burnt Cotton manuscripts will always be at risk of deterioration if they are not stored correctly or are handled improperly. The British Library mitigates this risk by keeping these volumes in optimum storage conditions, by creating digital surrogates, and by ensuring that they are only consulted when absolutely necessary, in order to preserve them for future generations.<sup>4</sup>

Technology has been applied to improve the readability of the Cotton fragments for decades. In the early 1950s, ultraviolet photography was applied to Æthelweard's *Chronicle*, in Cotton MS Otho A X and Cotton MS Otho A XII, making new sense of a handful of pages.<sup>5</sup> A similar process was used with Cotton MS Otho A I.<sup>6</sup> These photographs did not achieve wide dissemination due to the limitations of publishing in print, and were limited to the detail that could be detected by taking a photo using light from a single spectrum. Occasional experiments have also been made of using transmitted light photography.<sup>7</sup> More recently, the British Library Conservation Centre created a dedicated laboratory for imaging science, particularly after the applicability of multispectral imaging to detecting modifications to handwritten objects and restoring damaged texts became apparent. This approach is non-invasive.<sup>8</sup>

4 P. Porter and C. Fagan, "Manuscript Conservation in the British Library: Bridging the Gap Between Conservator and Curator", in *Care and Conservation of Manuscripts 12: Proceedings of the Twelfth International Seminar Held at the University of Copenhagen 14th-16th October 2009*, ed. M. J. Driscoll, Copenhagen 2011, 117–37.

5 E. E. Barker, "The Cottonian Fragments of Æthelweard's *Chronicle*", *Historical Research* 24 (1951), 46–62. <https://doi.org/10.1111/j.1468-2281.1951.tb00348.x>.

6 S. Keynes, "King Athelstan's Books", in *Learning and Literature in Anglo-Saxon England: Studies Presented to Peter Clemoes on the Occasion of His Sixty-Fifth Birthday*, ed. M. Lapidge and H. Gneuss, Cambridge 1985, 143–201.

7 Keynes, "King Athelstan's Books", includes an example with Cotton MS Otho B XI.

8 See the recent work described in M. McGillivray and C. Duffy, "New Light on the Sir Gawain and the Green Knight Manuscript: Multispectral Imaging and the Cotton Nero A. X Illustrations", *Speculum* 92 (2017), 110–44. <https://doi.org/10.1086/693361>.

## Manuscripts on *Fragmentarium*

The opportunity for the British Library to be a partner in the *Fragmentarium* project required a specific research question. The fragmentary manuscripts from pre-Conquest England immediately suggested themselves both for their significance and the relative ease of finding them, thanks to the catalogues of Gneuss and Lapidge and Ker.<sup>9</sup> This dovetailed with the effort made by the Ancient, Medieval and Early Modern Manuscripts section to digitise as many of its early medieval manuscripts as possible in advance of the major *Anglo-Saxon Kingdoms* exhibition opening in 2018. This exhibition is the culmination of an ambitious five-year research programme to reassess the place of books in the Anglo-Saxon kingdoms and their neighbours, directed by Claire Breay. An initial survey of the fragments (see the Appendix) found that there were too many to digitise and catalogue the entire known collection for *Fragmentarium*.

The British Library multispectral imaging system from MegaVision integrates two previously disparate imaging capabilities: high-resolution photography and multispectral imaging. A multispectral image measures light in a series of spectral bands and captures image data within these specific wavelength ranges. The procedure can be time-consuming, requiring careful selection and setup of the subjects. All items also needed to be examined by a conservator. As a result, some of the most desirable items for digitisation had to be omitted. For example, Cotton MS Otho B X can only be consulted with special permission due to the extreme fragility of some sections; it requires conservation treatment before it can be photographed, and full multispectral imaging would require dedicated funding. Nonetheless, it was possible to include some leaves that had strayed from Cotton MS Otho B XI, having been inserted in the wrong volume during restoration. It was eventually decided to include the following manuscripts in the project:

- Cotton MS Otho A I + Oxford, Bodleian Library, MS Arch. Selden B. 26, f. 34 (Gneuss and Lapidge 2014, no. 346): Decrees of the Council of Clofesho 747, 8th century, 17 leaves, Latin [[F-28ac](#) + [F-yew3](#)]
- Cotton MS Otho A X + Otho A XII, ff. 1–7 + Otho B X, f. 66 (Gneuss and Lapidge 2014, no. 349): Æthelweard, *Chronicle*, 11th century; 12 + 7 + 1 leaves, Latin [[F-ez1p](#) + [F-n4oa](#)]
- Cotton MS Otho A XVIII, f. 131 (Gneuss and Lapidge 2014, no. 352): Ælfric, *Homily on St Laurence*, 11th century, 1 leaf, Old English [[F-2p30](#)]
- Cotton MS Otho B IX, f. 1v (Gneuss and Lapidge 2014, no. 354): inscription to the Gospels, 9th century, 1 leaf, Latin [[F-a4xm](#)]
- Cotton MS Otho B XI (multispectral imaging was only applied to pages that would benefit from it: ff. 2r–3v, 8r–9v, 11r–12v, 37r–40v, 45r–47v, 50r–v, 52r–53v; the rest was photographed with a standard camera) + Cotton MS Otho B X, ff. 55, 58, 62 + Add MS 34652, f. 2 (Gneuss

9 H. Gneuss and M. Lapidge, *Anglo-Saxon Manuscripts: A Bibliographical Handlist of Manuscripts and Manuscript Fragments Written or Owned in England up to 1100*, Toronto 2014; N. R. Ker, *Catalogue of Manuscripts Containing Anglo-Saxon*, Oxford 1957.

and Lapidge 2014, no. 357): Bede, *Historia ecclesiastica*, 13 + 3 + 1 leaves, Old English [F-cfmp + F-n40a + F-yb4x]

This selection aimed to obtain multispectral images of these manuscripts as well as to showcase the capacity of *Fragmentarium* to reunify fragments contained under multiple shelfmarks and even at different institutions.

## Case study: Æthelweard's *Chronicle*

Cotton MS Otho A X makes an ideal test case for measuring the effectiveness of multispectral imaging, as some historical imagery of the manuscript is also available. It once contained the only surviving medieval copy of the chronicle written by Ealdorman Æthelweard. Smith describes it as written “in most ancient and beautiful characters”, covering the period “from the beginning of the world to the time of King Edgar”:<sup>10</sup>

1. Fabii Quæstoris Æthelwerdi Chronicon ab initio mundi ad tempora R. Eadgari. Liber vetustus, & pulcherrime scriptus.
2. Historiæ gentis Langobardorum libri sex, characteribus antiquis & elegantissimis.
3. Concilium R. Æthelredi & Magnatum regni apud Wudustok de gubernatione regni, Saxonice scriptum. Solummodo duas paginas continent.

Smith's catalogue indicates that the volume also included a *Historia Langobardorum* in six books (presumably that of Paul the Deacon) and two pages of decrees issued by King Æthelred at a council at Woodstock (IX Æthelred) — the unique medieval witness to this text.

The burnt remnants are now spread across Cotton MSS Otho A X, Otho A XII and Otho B X. Such volumes were created in an attempt to reconstruct the Cotton collection, but often they have little resemblance to their pre-fire equivalents.<sup>11</sup> After the Cotton fire of 1731, the text of Æthelred's code was lost, although post-medieval copies had already been made. A single, burnt folio of Paul the Deacon's text survives. From Æthelweard's *Chronicle*, 18 charred fragments from the fourth book survive; 11 of those fragments, plus that from Paul the Deacon's text, were mounted on paper and rebound following the 1865 bindery fire, probably in December 1883, in the current Cotton MS Otho A X.<sup>12</sup> At the same time a few words that were visible on each folio were transcribed onto the corresponding paper frames. Seven further folios were bound in the current Cotton MS Otho A XII in error. Barker suggests that they were mistaken for Asser's *Vita Alfredi* since, judging from Smith's catalogue, that copy contained

10 T. Smith, *Catalogus librorum manuscriptorum bibliothecæ Cottonianæ*, Oxford 1696, 67. [https://archive.org/details/bub\\_gb\\_uUAv2HzUGxgC](https://archive.org/details/bub_gb_uUAv2HzUGxgC).

11 See, for example, the exploration of Otho B X in S. D. Lee, “Two Fragments from Cotton MS. Otho B. X”, *The British Library Journal* 17(1991), 83–87. <https://jstor.org/stable/42554318>.

12 E. E. Barker, “The Cottonian Fragments of Æthelweard's *Chronicle*”, *Historical Research* 24(1951), 46–62, at 50. <https://doi.org/10.1017/j.1468-2281.1951.tb00348.x>.



similar Anglo-Caroline script to the copy of Æthelweard's *Chronicle*.<sup>13</sup> The folios in Cotton MS Otho A XII were rebound in melinex sleeves in 1987.

Æthelweard's *Chronicle* is the only example of such a work written by a lay nobleman in England before the fourteenth century. The author, the leading *dux* or ealdorman in England in the 990s, wrote this history of events in the British Isles in Latin for his distant cousin and correspondent Matilda, an abbess in Essen, sometime in the fourth quarter of the tenth century, after the death of King Edgar (d. 975) and that of Æthelweard himself (around 998). According to the introductory letter, preserved in an early modern edition, Matilda had written to Æthelweard for further information on their common ancestors.<sup>14</sup> His work not only reveals his construction of English history from the distant past to his own lifetime; its existence also illuminates lay literacy, links between England and the continent, and the role of women in commissioning and reading early medieval historical writing. It also sheds light on late tenth-century literary circles, since Æthelweard and his son were the patrons of Ælfric of Eynsham, the author of the most prolific surviving corpus of Old English texts.<sup>15</sup>

Cotton MS Otho A X (along with its leaves misbound elsewhere) is today the only known medieval copy of Æthelweard's *Chronicle*, but it is unclear whether this was always the case. It is available as a modern edition:<sup>16</sup> the text survives because it was published in an early modern edition,<sup>17</sup> but it is unknown whether this edition was made from this or another manuscript. John Joscelyn (d. 1603) used a copy in his notes on *Anglo-Saxon Chronicle* D, and it is unknown if he had access to another manuscript, now lost. Barker suggested two medieval manuscripts of Æthelweard's *Chronicle* may have survived into the modern period, and that there may even have been an 'extended' edition of the chronicle in the medieval period.<sup>18</sup> The text Barker uncovered from the fragments differed from that of Savile, although this in itself does not prove the existence of another manuscript, since sixteenth-century editors often modernized their texts. Savile also copied some errors, such as *tum* for *cum*, *uia* for *uita*, and so forth.<sup>19</sup> More significantly, Savile did not include the table of contents for book 4 found in Cotton MS Otho A X, f. 1r. That table of contents includes chapters on the reigns

<sup>13</sup> Barker, "The Cottonian Fragments", 49; cf. Cotton MS Otho A X, flyleaf.

<sup>14</sup> The significance of this is discussed in E. van Houts, "Women and the Writing of History in the Early Middle Ages: The Case of Abbess Matilda of Essen and Aethelweard", *Early Medieval Europe* 1(1992), 53–68. <https://doi.org/10.1017/j.1468-0254.1992.tb00004.x>.

<sup>15</sup> S. Ashley, "The Lay Intellectual in Anglo-Saxon England: Ealdorman Æthelweard and the Politics of History", in *Lay Intellectuals in the Carolingian World*, ed. P. Wormald and J. L. Nelson, Cambridge 2007, 218–45.

<sup>16</sup> *The Chronicle of Æthelweard*, ed. and trans. A. Campbell, London 1962.

<sup>17</sup> *Rerum Anglicarum scriptores post Bedam praecipui*, ed. H. Savile, London 1596. [https://archive.org/details/bub\\_gb\\_FV3ruCQJuFkC](https://archive.org/details/bub_gb_FV3ruCQJuFkC).

<sup>18</sup> Barker, "The Cottonian Fragments", 46, 55.

<sup>19</sup> Campbell, *The Chronicle of Æthelweard*, xi.

of Æthelred and Edward the Martyr that do not appear in Savile's text. This does not prove that these chapters existed: Smith's summary of Cotton MS Otho A X indicates that its text ended with the reign of Edgar.

The dating of Æthelweard's *Chronicle* has traditionally been set as between 975 and 988. In the text printed by Savile, Æthelweard stated no "fleet has remained here, having advanced against these shores, except under treaty with the English" since the Battle of *Brunanburh* in 937.<sup>20</sup> He speaks of Arnulf of Flanders, who died in 988, as still living. This suggests Æthelweard was either writing before 988 or omitting some major contemporary developments. The section on *Brunanburh* does not seem to survive from Cotton MS Otho A X, so there is no way to verify if that claim was repeated in this copy of the text. Those chapters could in theory have been written and been lost from the end of the manuscript by the time it was included in Cotton's library. Even if the chapter headings at the end reflect an aspiration to continue the text that was never achieved, Barker suggests that Æthelweard revised and updated or intended to revise and update his chronicle sometime between Æthelred's accession in 978 and Æthelweard's death around 998.<sup>21</sup>

Due to their importance, attempts to recover some of the contents of the burnt fragments have been undertaken at least twice. The first folio was photographed with ultraviolet fluorescence photography in 1950 (Figure 1), but the photographs are only available with the manuscript itself. Dr Christina Duffy conducted multispectral imaging of the burnt folios in the British Library Conservation Centre in 2017. The MegaVision camera with an E7 50-megapixel back was mounted directly over each folio, which was subsequently illuminated with narrow-band LEDs from both sides. Images were captured over twelve spectral bands from the near ultraviolet (365 nm) to the near infrared (1050 nm). MegaVision's Photoshoot digital image capture software controlled all aspects of capture as well as a colour wheel, allowing additional light modifications such as filtration to isolate fluorescence in concert with ultraviolet illumination. As in the 1950s, ultraviolet light revealed more text than other wavelengths.

The improved results of these images are immediately apparent. Duffy was able to create a composite image in colour, showing which text was originally rubricated (f. 1r, Figure 2). This provides a much sharper image of most of the rubricated text than the image from the 1950s: for example, some of the red line fillers look like smudges or damage on the image from 1950. In only a few places was the image from 1950 superior: around the edges, for example, at the end of the word 'capitula', there is now some smudging which makes the letter forms slightly less clear. Given that all the other letter forms seem clearer, this suggests

20 Ashley, "The Lay Intellectual in Anglo-Saxon England", 221, n. 12.

21 Barker, "The Cottonian Fragments", 53.



that minor deterioration has occurred between 1950 and the present, rather than that the imaging technology is deficient.

The value that can be obtained from multispectral imaging lies as much in our enhanced capacity to study its script and decoration as in its text. In particular, modern multispectral imaging allows us to generate colour images, enabling a clearer sense of decoration and script hierarchy. For example, the use of red in the ‘table of contents’ to Book IV of Æthelweard’s *Chronicle* can now be recovered. Previous imaging attempts from the 1950s show neither the colour nor the detail in the coloured areas. The use of red line fillers suggests that this manuscript may in fact date from the 11th century, and not the late 10th century as Barker suggested.

Multispectral imaging also allows for some analysis of script. While the precise scribe or scriptorium is difficult to ascertain definitively from a burnt manuscript, and while some features of script are warped in the surviving fragments, some observations can be made. The new images suggest that the manuscript was produced by a well-equipped English scribe or scribes, working in the Anglo-Caroline tradition associated with the circle around Bishop Æthelwold of Winchester (d. 984) and which spread to other major scriptoria in England by the early 11th century. The red and the use of capitals in the *Explicit* and *Incipit* of books shows that, while this was not necessarily among the most highly decorated manuscripts from this period, neither was it a plain manuscript and the scribe had laid out the pages with some thought to demarcating new sections of text. This, along with a potential new dating for this manuscript, has significant implications for the reception history of Æthelweard’s *Chronicle*.

The traditional narrative holds that Æthelweard’s *Chronicle* had a limited reception, since it was not quoted by later medieval writers. The one exception was William of Malmesbury, who conceded that Æthelweard was an ‘illustrious’ man but described his Latin as ‘disgusting’. This relatively fine copy of Æthelweard’s *Chronicle* might suggest that Æthelweard’s immediate contemporaries held his work in more esteem, and were at least willing to copy and maybe even correct or gloss his work.

## The importance of historical imagery

The history of the manuscript of Æthelweard’s *Chronicle* also includes a relatively early example of the enhanced imaging of manuscripts. The earliest known example of ultraviolet fluorescence photography on an Anglo-Saxon manuscript dates to the early 1930s.<sup>22</sup> At the front of Cotton MS Otho A X and Cotton MS Otho A XII, black and white, enhanced photographs of Cotton MS Otho A X,

22 K. S. Kiernan, “Old Manuscripts/New Technologies”, in *Anglo-Saxon Manuscripts: Basic Readings*, ed. M. P. Richards, New York 1994, 37–54, at 42–43. <https://doi.org/10.4324/9781315799223>.

f. 1r and Cotton MS Otho A XII, f. 1r-v have been added. The image in Cotton MS Otho A X is dated 6 January 1950. A handwritten note on the flyleaf behind it states: “The photograph, by ultra-violet ray process, of folio 1 was inserted 21 March 1950.”

The photograph was produced for E. E. Barker’s 1951 edition of the fragments. Barker’s work demonstrated the usefulness of enhanced imaging for drawing new discoveries even from badly damaged folios. Nevertheless, advances in multispectral imaging and previous successful projects, including the imaging of the burnt Magna Carta and one obscured image in Leonardo da Vinci’s Arundel Codex,<sup>23</sup> suggested that Æthelweard’s *Chronicle* could benefit from further analysis.

Unlike the images of Cotton MS Otho A X and A XII from the 1950s, modern multispectral imaging allows us to generate colour images. The ultraviolet composite colour image is a false-colour image. It is a composite image of three captured in the sequence: ultraviolet light with a red, green and blue filter respectively. While it highlights and enhances areas where colour may not have been seen before, the colours are not a true representation of the original appearance. Nonetheless, this offers additional insight into the manuscript’s decoration. This is important for establishing the cost, status and possible origin of the manuscript. Secondly, digital technologies also make it easier to distribute and reproduce these images, thereby solving Barker’s complaint that scholars were not using either the fragments or the images of the fragments in their studies of the text. This problem has become more acute, since the manuscript can only be issued to the Reading Room with special curatorial permission.

While the multispectral imaging images revealed new features of the physicality of the manuscript, the process also helped to establish its limitations. The new images rarely contradict Barker’s readings, and in places it seems that Barker was able to read more text than can be recovered today. The clarity of the letters ‘cap’ in red (f. 1r, line 6) in the image from 1950 is greater than that in the current image, although, thanks to technological developments, most of the other letters are clearer in the image from 2017. This suggests that some of the red ink may have degraded over the past sixty years, especially around the edges of the parchment.

The experience of using multispectral imaging for this *Fragmentarium* case study demonstrated the potential value of this technology in allowing us to make delicate remnants of manuscripts more accessible than before. All this is not to suggest that multispectral imaging is perfect. Leaves must be placed flat, which is not always possible, either due to cockling of the parchment or a tight binding.

23 C. Duffy, “Hidden figure in Leonardo da Vinci notebook revealed”, *Collection Care Blog* (January 2016). <http://blogs.bl.uk/collectioncare/2016/01/fugitive-figure-in-leonardo-da-vinci-notebook-revealed.html>.

Both setup and processing is time-consuming. It does not cover light spectra beyond either side of 365–1050 nm, and our results are dependent on the sensitivity of the unfiltered monochrome sensor. Most obviously, if there is no ink to image, there is nothing any technology can do. *Fragmentarium* contributes a solution towards one of the problems with multispectral imaging, simply in providing a system that allows more than one image to be associated with a particular leaf, although there remain challenges to overcome in providing an interface that makes the full range of images usable, and in dealing efficiently with the enormous files that multispectral imaging creates. We anticipate that the data generated in this project will be of value in producing a new digital edition of *Æthelweard* and other texts, and in future analyses of these manuscripts.

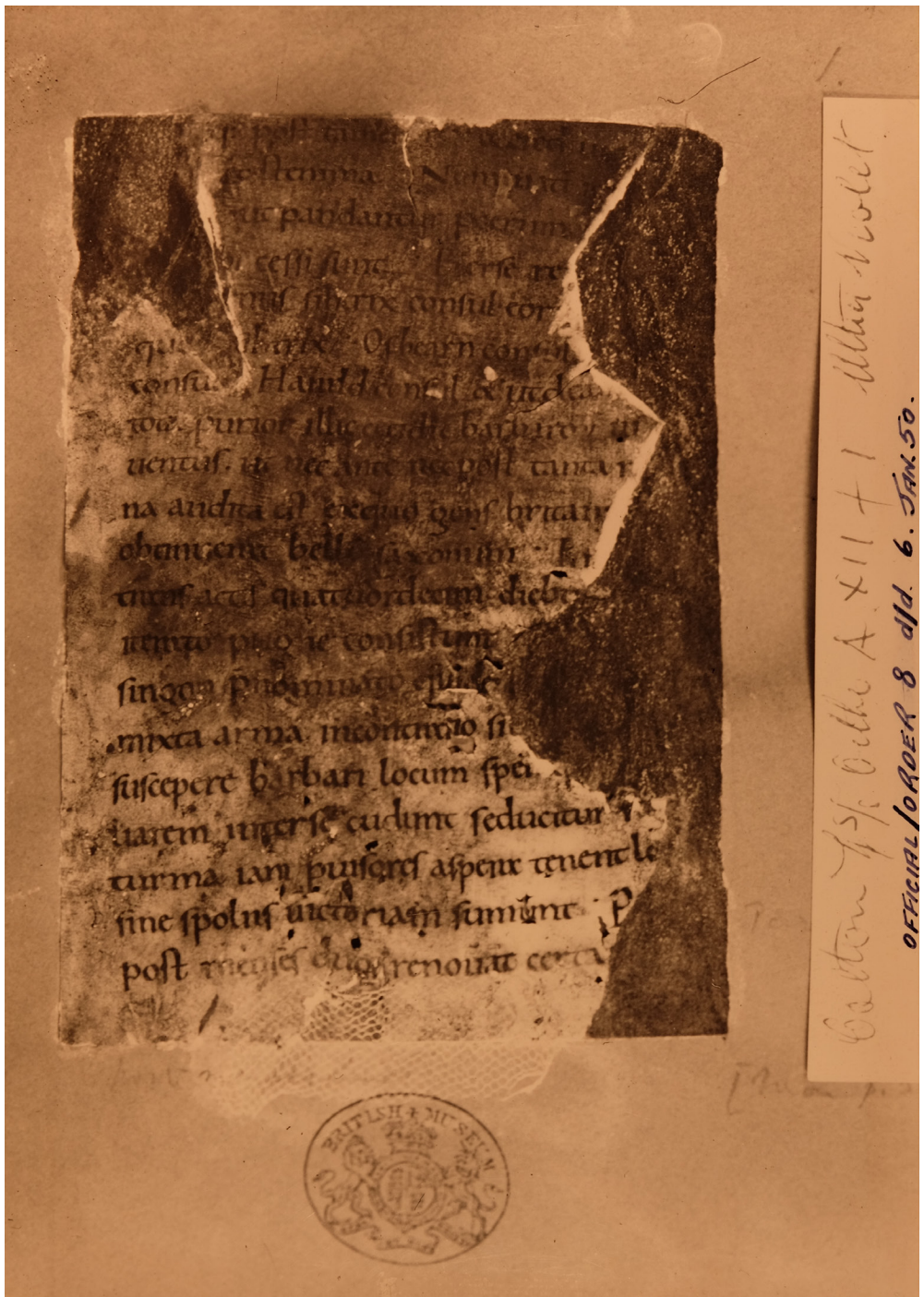


Figure 1: Cotton MS Otho A XII, f. 1r, 1950 ultraviolet fluorescence photograph



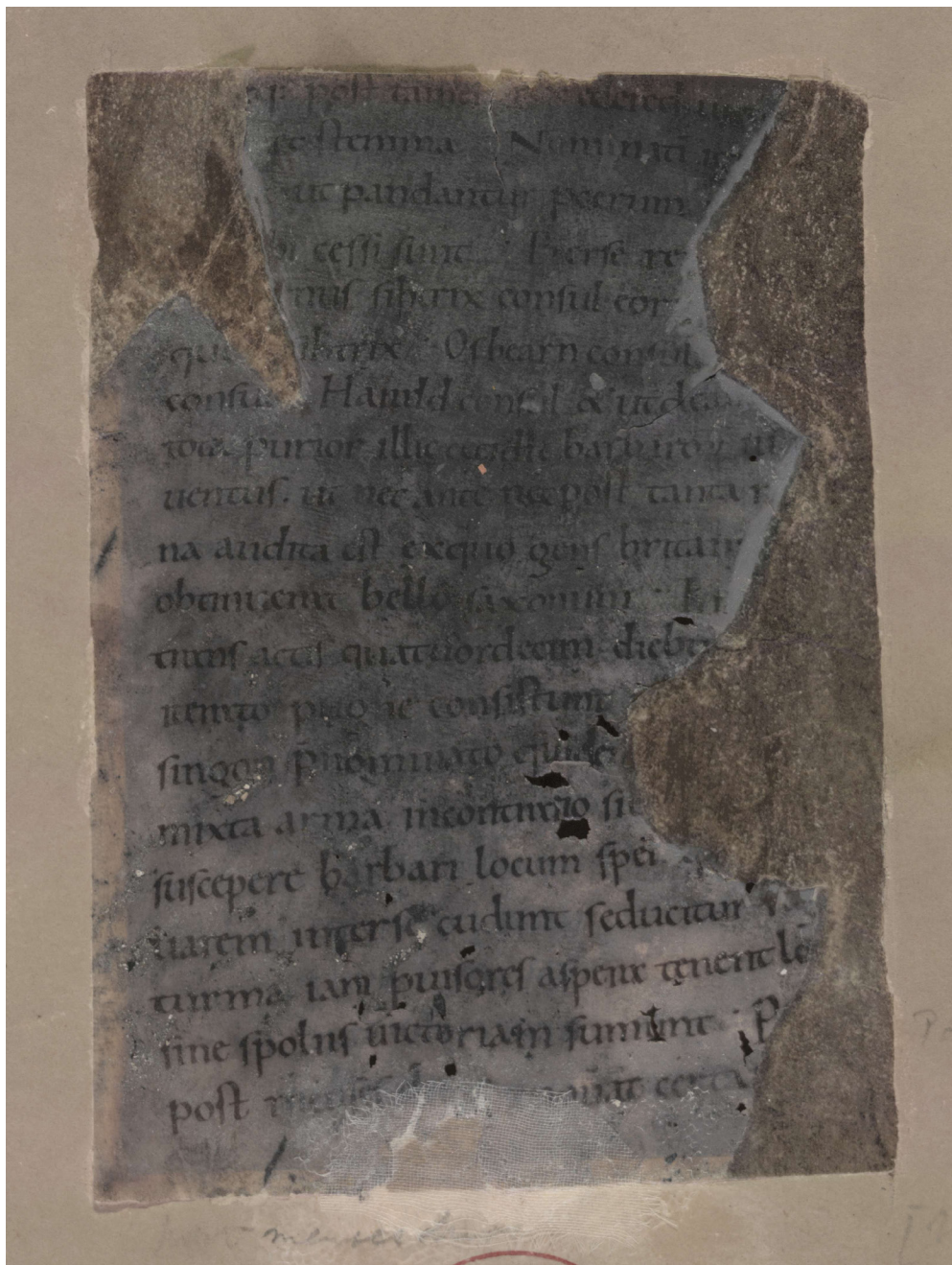


Figure 2: Cotton MS Otho A XII, f. 1r, 2017 composite multispectral image



Figure 3: Cotton MS Otho A XII, f. 1r, 2017 under standard lighting



## *Appendix: Fragments of manuscripts made or owned in England before 1066 at the British Library*

This survey of Anglo-Saxon fragments was made for determining the most worthwhile approach for inclusion in *Fragmentarium*, using the catalogues of Gneuss and Lapidge (2014) and Ker (1957). The list is based on one begun by James Freeman in 2014. The vast majority of these leaves are in good condition, being quires, endleaves or singletons removed from other volumes. Only a relatively small number are fire-damaged and would benefit from multi-spectral imaging.

### **Add MS 15350, ff. 1, 121 (Gneuss and Lapidge 2014, no. 281): s. vii-viii**

Origin: probably Italy

Provenance: Winchester Old Minster

Latin; Uncial; Small rough initials

2 leaves, Each a bifolium opened up to form a pastedown; Pasted side rubbed and scuffed.

### **Add MS 21213, ff. 2–25 (Gneuss and Lapidge 2014, no. 281.5): s. viii<sup>ex</sup>**

Origin: probably England

Latin; Anglo-Saxon square minuscule?

24 leaves, Writing very faint

Add MS 23211 (Gneuss and Lapidge 2014, no. 282): ca. 871x899

Origin: Wessex

Latin and Old English; Anglo-Saxon minuscule; Small coloured initials

2 leaves, Two leaves, trimmed and incomplete

### **Add MS 32246 (Gneuss and Lapidge 2014, no. 775): s. xi<sup>i</sup>**

Origin: probably Abingdon (or Continent?)

Provenance: Additions made at Abingdon

Latin and Old English; Caroline minuscule; Medium coloured initials; Doodle on f. 24v

23 leaves, Single leaf, three quires (6, 8, 8); Leaves whole except at front and back

Part of Antwerp, Plantin-Moretus Museum, MS M.16.2

### **Add MS 34652, f. 2 (Gneuss and Lapidge 2014, no. 357): s. x<sup>med</sup>, xi<sup>i</sup>**

Origin: Winchester

Provenance: Southwick (Augustinian canons)

Old English; Latin; Anglo-Saxon minuscule; Medium initials in ink

1 leaf, Stained around upper edges

Part of BL, Cotton MS Otho B XI (with Otho B X, ff. 55, 58, 62)

**Add MS 34652, f. 3 (Gneuss and Lapidge 2014, no. 288): s. xi<sup>2</sup>**

Latin, with Old English (prose/glossary); Small upright Anglo-Saxon minuscule;  
Small coloured initials and chapter numbers in ink

1 leaf, Trimmed and incomplete

**Add MS 34652, f. 6 (Gneuss and Lapidge 2014, no. 289): s. xi/xii**

Latin; Protothotic book-script; Small coloured initials

1 leaf, Trimmed and incomplete

**Add MS 37518, ff. 116–117 (Gneuss and Lapidge 2014, no. 292): s. viii<sup>1</sup>**

Uncial; Four different hands? (Ker); Small dotted initials

2 leaves, Bifolium

**Add MS 38651, ff. 57, 58 (Gneuss and Lapidge 2014, no. 294): s. xi<sup>in</sup> (before 1023)**

Origin: Worcester or York

Old English; Small fluent and skilled hand

2 leaves

Hand apparently the same as in Cotton MS Nero A I, ff. 70–177 – maybe Archbishop Wulfstan?

**Add MS 40165 A, ff. 1–5 (Gneuss and Lapidge 2014, no. 297): s. iv<sup>ex</sup>**

Origin: North Africa? (Carthage?)

Latin; Uncial

3 leaves, Three very fragmentary single leaves, mounted on guards, trimmed and incomplete

Used as flyleaves for a 12th-century Latin manuscript, now Add MS 40165B

**Add MS 40165 A, ff. 6–7 (Gneuss and Lapidge 2014, no. 298): s. ix<sup>ex</sup> or ix/x**

Origin: S-W England?

Old English; Small pointed Anglo-Saxon minuscule; Plain red/black initials

Adjacent leaves, formerly central bifolium of a quire; Trimmed and incomplete

Used as flyleaves for a 12th-century Latin manuscript, now Add MS 40165B

**Add MS 43405, ff. i, v (Gneuss and Lapidge 2014, no. 299.5): s. xi<sup>1</sup>**

Provenance: Muchelney?

Caroline minuscule; Rustic caps; Coloured initials, with infill

2 leaves, Single leaves

**Add MS 45025 (Gneuss and Lapidge 2014, no. 293): s. vii<sup>ex</sup> or s. viii<sup>in</sup>**

Origin: Wearmouth-Jarrow

Provenance: Worcester?

Latin; Uncial

11 leaf; ff. 1–4 largely intact, losses at edges; ff. 5–6 trimmed and incomplete; ff. 7–9, 11 trimmed but complete; ff. 8–9 a former pastedown; ff. 10a–c, 3 small fragments

**Add MS 46204 (Gneuss and Lapidge 2014, no. 344.5): s. xi<sup>ex</sup>**

Origin: Worcester

Latin; Caroline minuscule; Small red initials

1 leaf and two strips of parchment, Framed

Nero E I, vol. 2, ff. 181–184 is part of this manuscript. Since s. xi, part of Add MS 37777?

**Add MS 50483 K (Gneuss and Lapidge 2014, no. 857): s. ix<sup>in</sup> or s. viii<sup>ex</sup>?**

Latin, with Old English glosses (s. x<sup>2</sup>); Square Anglo-Saxon minuscule; Elaborate initial in ink at beginning of both pages

1 leaf, Verso scrubbed though mostly legible

With Yale, Beinecke Library, MS 401 (fully digitised) and six other fragments: Add MS 71687, Cambridge, University Library, Add MS 3330, Oslo/London, Schøyen Collection, MS 197, Oxford, Bodleian Library, Arch.A.f.131 (pr. bk), Oxford, Bodleian Library, MS Lat. th. d. 24, ff. 1, 2, Philadelphia, Free Library, John Frederick Lewis Collection, ET 121 (fully digitised)

**Add MS 56488, ff. i–iii, 1–5 (Gneuss and Lapidge 2014, no. 301.5): s. xi<sup>i</sup>**

Provenance: Muchelney?

Latin; Caroline minuscule; Neumes; Small coloured initials

6 leaves, Quire of six leaves; First leaf a former pastedown

**Add MS 61735 (Gneuss and Lapidge 2014, no. 302.2): 1007–1025**

Origin: Ely

Latin and Old English; Anglo-Saxon minuscule; Sketch of Christ's head

1 leaf in three strips of parchment, Framed

**Add MS 62104 (Gneuss and Lapidge 2014, no. 524): s. xi<sup>med</sup>**

Origin: Exeter

Latin; Caroline minuscule; Neumes; Coloured initial

1 leaf, Trimmed and incomplete

With three other fragments: Harley MS 5977, no. 59, Lincoln, Cathedral Library, V.5.11 (pr. bk), flyleaves, Oxford, Bodleian Library, Lat. liturg. e. 38, ff. 7, 8, 13, 14

**Add MS 63143 (Gneuss and Lapidge 2014, no. 302.3): s. x/xi**

Latin; Caroline minuscule

1 leaf, Trimmed and incomplete; Stained on verso; Hinged on upper edge

**Add MS 63651 (Gneuss and Lapidge 2014, no. 302.4): s. xi<sup>in</sup>**

Latin; Caroline minuscule

1 leaf, Trimmed and incomplete; Stained; Hinged, with verso visible

**Add MS 71687 (Gneuss and Lapidge 2014, no. 857): s. x<sup>2</sup>**

Latin, with Old English glosses (s. x<sup>2</sup>); Square Anglo-minuscule; Initial in ink

1 leaf, Flattened bifolium; Verso heavily scrubbed though mostly legible

With Yale, Beinecke Library, MS 401 (fully digitised) and six other fragments:

Add MS 50483K, Cambridge, University Library, Add MS 3330, Oslo/London,

Schøyen Collection, MS 197, Oxford, Bodleian Library, Arch.A.f.131 (pr. bk), Ox-

ford, Bodleian Library, MS Lat. th. d. 24, ff. 1, 2, Philadelphia, Free Library, John

Frederick Lewis Collection, ET 121 (fully digitised)

**Burney MS 277, f. 42 (Gneuss and Lapidge 2014, no. 307): s. xi<sup>2</sup>**

Origin: S-E. England

Old English; Rough ill-formed hand (Ker); Anglo-Saxon minuscule; Simple black/red initials

1 leaf, Flattened bifolium; Very stained and partly illegible

**Burney MS 277, ff. 69–72 (Gneuss and Lapidge 2014, no. 307.2): s. xi<sup>in</sup> or s. xi<sup>1</sup>**

Origin: Christ Church, Canterbury

Provenance: Exeter

Latin; Caroline minuscule; Neumes; Coloured initials

4 leaves, 69–70: bifolium, 69 a strip, 71–72: bifolium, trimmed at top

With Stowe MS 1061, f. 125.

**Cotton MS Caligula A VIII, ff. 121–128 (Gneuss and Lapidge 2014, no. 308.2): s. xi/xii or s. xii<sup>in</sup>**

Origin: Winchester Old Minster

Provenance: Ely

Latin; Caroline minuscule; 121r: very large zoomorphic historiated initial; Rustic capitals in colours at opening; Coloured initials

8 leaves; Two quires

**Cotton MS Claudius A III, ff. 2–7, 9\* (Gneuss and Lapidge 2014, no. 362): s. xi<sup>1</sup>-xii<sup>in</sup>; s. ix/x or x<sup>in</sup>**

Origin: Lobbes

Provenance: England (royal court) before 939; Christ Church, Canterbury, s. x<sup>1</sup>

Latin and Old English; Caroline minuscule; Anglo-Saxon minuscule; Initials in ink; Coloured initials on ff. 7 and 9\*; ff. 4r–6r, s. xi<sup>1</sup> hand, similar to Royal MS 1

D IX, f. 44v

7 leaves; ff. 2–7: imperfect quire; f. 9\*, single leaf, folded around fore-edge and lower edge (all intact)

Part of Cotton MS Tiberius A II, with Faustina B VI, vol. i, ff. 95, 98–100

**Cotton MS Claudius B V, f. 134 (Gneuss and Lapidge 2014, no. 316.1): c. 800**

Origin: Court of Charlemagne

Anglo-Saxon minuscule; Miniature pasted onto leaf

1 leaf, A little cracked and worn, but colourful and clear

**Cotton MS Cleopatra A III\* (Gneuss and Lapidge 2014, no. 320): s. viii<sup>2</sup>**

Origin: Northumbria?, S-E. England (Kent)?

Provenance: St Augustine's, Canterbury, s. x?

Latin; Anglo-Saxon pointed minuscule; Doodle on f. 1v

2?, Dark and stained, but mostly legible; Reinforced at edges; Both leaves trimmed and incomplete; Formerly wrappers/pastedowns?

**Cotton MS Domitian A IX, ff. 2–7 (Gneuss and Lapidge 2014, no. 329): s. xi<sup>in</sup> or s. x<sup>1</sup>**

Origin: Christ Church, Canterbury

Latin, with Old English glosses on ff. 4 and 7; Caroline minuscule; Old English glosses in same script and by same hand as Latin; Coloured initials

6 leaves, Quire of six, intact

**Cotton MS Domitian A IX, f. 8 (Gneuss and Lapidge 2014, no. 329.5): s. viii<sup>2</sup>**

Origin: possibly England

Latin; Uncial?

1 leaf, Trimmed at edges a little

**Cotton MS Domitian A IX, f. 9 (Gneuss and Lapidge 2014, no. 329.9 [22?]): s. xi<sup>2</sup>**

Origin: Worcester

Old English; Anglo-Saxon minuscule

1 leaf, Mounted on guard

With Cambridge, University Library, MS Kk.3.18? (fully digitised)

**Cotton MS Domitian A IX, f. 11 (Gneuss and Lapidge 2014, no. 330): s. ix<sup>ex</sup> (after 883) or s. xi<sup>in</sup> (with s. xi/xii additions)**

Origin: S-E. England?, London, St Paul's?

Old English; Runic alphabet; Anglo-Saxon minuscule; Coloured and dotted initials

1 leaf, Mounted on guard.

**Cotton MS Faustina A V, ff. 99–102 (Gneuss and Lapidge 2014, no. 330.5): s. xi/xii or s. xii<sup>in</sup>**

Latin; Caroline minuscule

4 leaves

**Cotton MS Faustina B VI, ff. 95, 98–100 (Gneuss and Lapidge 2014, no. 362): s. xi<sup>1</sup>- s. xii<sup>in</sup>; s. ix/x or x<sup>in</sup>; s. x<sup>1</sup>**

Origin: Lobbes

Provenance: England (royal court) before 939; Christ Church, Canterbury, s. x<sup>1</sup>

Latin and Old English

4 leaves

Part of Cotton MS Tiberius A II, with Claudius A III, ff. 2–7, 9\*

**Cotton MS Nero A II, ff. 3–13 (Gneuss and Lapidge 2014, no. 342): s. xi<sup>2/4</sup>**

Origin: Winchester?

Latin; Anglo-Saxon minuscule

11 leaf, Quire of 10 plus single leaf

Part of Cotton MS Galba A XIV?

**Cotton MS Nero A VII, f. 40 (Gneuss and Lapidge 2014, no. 342.3): s. xi/xii**

Latin; Caroline minuscule

1 leaf, Upper half cut away

**Cotton MS Nero C IX, ff. 19–21 (Gneuss and Lapidge 2014, no. 342.8): s. xi/xii (probably in or after 1093)**

Origin: Christ Church, Canterbury

Latin; Caroline minuscule; Coloured initials

3 leaves

With London, Lambeth Palace Library, MS 430, flyleaves

**Cotton MS Nero E I/2, ff. 181–184 (Gneuss and Lapidge 2014, no. 344.5): s. xi<sup>ex</sup>**

Origin: Worcester

Latin and Old English; Caroline minuscule; Coloured initials

4 leaves, Slight warping at upper fore-edges

With Add MS 46204 [since s. xi part of Add MS 37777?]

**Cotton MS Nero E I/2, ff. 185–186 (Gneuss and Lapidge 2014, no. 345): s. xi<sup>1</sup> or s. xi<sup>med</sup> or s. xi<sup>2</sup>**

Provenance: all Worcester?

Old English; Latin; Anglo-Saxon minuscule

2 leaves, Two leaves probably cut from start and end of manuscript



**Cotton MS Otho A I (Gneuss and Lapidge 2014, no. 346): s. viii<sup>2</sup>**

Origin: Mercia or Canterbury?

Latin; Uncial?; Dotted initials

1?, Very poor; Severely burnt, blackened and barely legible

With Oxford, Bodleian Library, Arch. Selden MS B. 26 (partly digitised)

**Cotton MS Otho A XII, ff. 1–7 (Gneuss and Lapidge 2014, no. 349): s. xi<sup>in</sup>**

Latin; Caroline minuscule

7 leaves, Burnt; Very fragile, blackened and barely legible

Part of Cotton MS Otho A X

**Cotton MS Otho A XII, ff. 8–12, 14–16, 18–19 (Gneuss and Lapidge 2014, no. 350): s. xi<sup>3/4</sup> or s. xi<sup>2</sup>**

Latin; Caroline minuscule

10 leaves, Burnt; Very fragile, blackened and barely legible

**Cotton MS Otho A XVIII, f. 131 (Gneuss and Lapidge 2014, no. 352): s. xi<sup>1</sup>**

Old English; Round Anglo-Saxon minuscule

1 leaf, Burnt; Very fragile, blackened and barely legible

**Cotton MS Otho B IX (Gneuss and Lapidge 2014, no. 354): s. ix<sup>2</sup> or s. ix<sup>4/4</sup>, s. x adds**

Origin: Brittany

Provenance: English royal court, s. x<sup>1</sup>; Chester-le-Street, probably 934; Durham, s. x<sup>ex</sup>

Latin and Old English; Caroline minuscule and rustic capitals

1 leaf, Burnt; Very fragile, blackened and barely legible

**Cotton MS Otho B X, ff. 29 and 30 (Gneuss and Lapidge 2014, no. 356): s. xi<sup>med</sup>**

Provenance: Worcester

Old English; Round Anglo-Saxon minuscule

2 leaves, Extremely fragile and not to be handled

Glosses in tremulous hand, ff. 29, 30 only – originally part of independent manuscript

**Cotton MS Otho B X, f. 51 (Gneuss and Lapidge 2014, no. 358): s. xi<sup>med</sup>**

Origin: Malmesbury?

Old English

1 leaf

Part of Cotton MS Otho C I

**Cotton MS Otho B X, ff. 55, 58, 62 (Gneuss and Lapidge 2014, no. 357): s. x<sup>med</sup>; s. x<sup>1</sup>**

Origin: Winchester

Provenance: Southwick (Augustinian canons)

Old English and Latin; Anglo-Saxon minuscule, hand very similar (probably same) as Royal MS 12 D XVII and Cambridge, Corpus Christi College, MS 173, ff. 1–56 (fully digitised) (chronicle for 925–55) (Ker)

3 leaves, Badly burnt

Part of Cotton MS Otho B XI with Add MS 34652

**Cotton MS Otho B X, ff. 61, 63, 64 (Gneuss and Lapidge 2014, no. 353): s. x<sup>2</sup> or s. x/xi**

Origin: S-E. England, possibly London

Old English; Rough hand (Ker); Initials with black outline, sometimes dotted, filled with colours

3 leaves, Leaves mounted separately

Part of Cotton MS Otho B II

**Cotton MS Otho B X, f. 66 (Gneuss and Lapidge 2014, no. 348): s. xi<sup>4/4</sup>; s. xi<sup>1/4</sup>**

Origin: St Augustine's?, Canterbury

Latin and Old English; Square Anglo-Saxon minuscule; Rustic capitals  
1 leaf

Part of Cotton MS Otho A VIII

**Cotton MS Tiberius A III, ff. 174–177 (Gneuss and Lapidge 2014, no. 332): s. xi/xii or s. xii<sup>1</sup>; s. xi<sup>med</sup>**

Origin: Christ Church, Canterbury

Latin and Old English; Anglo-Saxon minuscule; Coloured initials

4 leaves, Top edge a little damaged

Part of Cotton MS Faustina B III (f. 177 follows f. 198 of Faustina)

**Cotton MS Tiberius A III, f. 178 (Gneuss and Lapidge 2014, no. 364): s. x<sup>3/4</sup> (probably 977x979); s. xi/xii**

Origin: probably Abingdon

Provenance: Canterbury, probably Christ Church, s. xi<sup>2</sup>

Old English; Latin additions; Fluent Anglo-Saxon minuscule; Initials in ink  
1 leaf

Part of Cotton MS Tiberius A VI (same hand, ff. 1–34)

**Cotton MS Tiberius A III, f. 179 (Gneuss and Lapidge 2014, no. 363.2): s. x<sup>ex</sup>**

Old English; Latin; Square Anglo-Saxon minuscule; Initials in ink and in colours  
1 leaf, Top edge a little damaged

**Cotton MS Tiberius A VII, ff. 165–166 (Gneuss and Lapidge 2014, no. 365):****s. xi<sup>3/4</sup>; s. xi<sup>1</sup>**

Origin: W. France

Latin with Old English gloss of s. xi<sup>1</sup>; Caroline minuscule?

2 leaves, Once conjoined, now separate; Slight fire damage

**Cotton MS Tiberius A XV, f. 174 (Gneuss and Lapidge 2014, no. 368.2): s. x;****s. xi**

Latin; Anglo-Saxon minuscule

1 leaf, Burnt; Edges cracked, warped

**Cotton MS Tiberius A XV, ff. 175–180 (Gneuss and Lapidge 2014, no. 369):****s. vii/viii**

Origin: probably S. England

Provenance: Malmesbury?

Latin; Pointed Anglo-Saxon minuscule

6 leaves, Burnt; Edges lost, blackened, fragile

**Cotton MS Tiberius B IV, f. 87 (Gneuss and Lapidge 2014, no. 521): s. ix<sup>2</sup>; s. xi<sup>1</sup>**

Origin: probably Armagh

Provenance: Christ Church, Canterbury by 924x939

Old English; Anglo-Saxon minuscule

1 leaf

Part of London, Lambeth Palace Library, MS 1370 (same hand, f. 114v)

**Cotton MS Tiberius B V, ff. 74, 76 (Gneuss and Lapidge 2014, no. 21): s. viii;****s. x<sup>2</sup>, x/xi**

Origin: probably Northumbria

Provenance: Ely in s. x

Half uncial

2 leaves

Part of Cambridge, University Library, MS Kk.1.24 (fully digitised) with Sloane MS 1044, f. 2

**Cotton MS Tiberius B V, f. 75 (Gneuss and Lapidge 2014, no. 374): s. viii; s.****x<sup>1</sup>, x<sup>med</sup>, xi<sup>1</sup>**

Origin: probably Northumbria

Provenance: Exeter by s. x<sup>1</sup>

Latin and Old English; Square Anglo-Saxon minuscule

1 leaf

**Cotton MS Tiberius B XI (Gneuss and Lapidge 2014, no. 375): 890x897**

Origin: Winchester?

Provenance: Old English; Small pointed Anglo-Saxon minuscule

1 leaf, Burnt

With Kassel, Gesamthochschulbibliothek, 4<sup>o</sup> MS theol. 131

**Cotton MS Tiberius D IV/2, ff. 158–166 (Gneuss and Lapidge 2014, no. 759):**

**s. x/xi or xi<sup>in</sup>**

Provenance: Winchester

Latin; Caroline minuscule; Coloured initials

9 leaves, Burnt; Edges lost and cracked, warped; Parts blackened and heavily worn

Part of Winchester, Cathedral Library, MS 1

**Cotton MS Titus C XV, f. 1 (Gneuss and Lapidge 2014, no. 379.3): TAQN**

**592/593**

Origin: Rome?

Provenance: St Augustine's?, Canterbury

Latin; Half uncial

1 leaf, Small papyrus fragment, mounted, verso visible

**Cotton MS Vespasian B VI, ff. 104–109 (Gneuss and Lapidge 2014, no. 385):**

**805x814**

Origin: Mercia

Latin; Anglo-Saxon minuscule; Coloured and dotted initials

6 leaves, 3 bifolia, stained – framed

**Cotton MS Vespasian D XV, ff. 102–122 (Gneuss and Lapidge 2014, no. 394):**

**s. x/xi**

Origin: W. England (Worcester?)

Latin; Caroline minuscule, ff. 122r–122v: Anglo-Saxon minuscule, f. 122v: Anglo-Saxon square minuscule; Coloured initials

21 leaves, Some loss at bottom, trimming

**Cotton MS Vespasian D XX, ff. 87–93 (Gneuss and Lapidge 2014, no. 395.5):**

**s. x<sup>1</sup> (c. 910xc. 930); s. xi<sup>2</sup>**

Old English; Latin and Old English; Large Anglo-Saxon minuscule; Lat: Caroline minuscule

7 leaves, Complete leaves, quire of 8 (lacking 8<sup>th</sup>)

**Cotton MS Vespasian D XXI, ff. 18–40 (Gneuss and Lapidge 2014, no. 657):****s. xi<sup>3/4</sup> or s. xi<sup>2</sup>**

Old English; Round Anglo-Saxon minuscule; Coloured initials

23 leaves, Quires plus single leaf

Part of Oxford, Bodleian Library, MS Laud Misc. 509 (partially digitised)

**Cotton MS Vitellius C VIII, ff. 22–25 (Gneuss and Lapidge 2014, no. 404):****s. xi<sup>i</sup>**

Old English; Round Anglo-Saxon minuscule; Initials in ink

4 leaves, Slightly burnt

**Cotton MS Vitellius C VIII, ff. 86–90 (Gneuss and Lapidge 2014, no. 173):****s. viii<sup>i</sup>**

Origin: probably Northumbria

Provanance: Durham

Latin and Old English glosses; Anglo-Saxon minuscule; Initials in ink

5 leaves, f. 90v: stained and scrubbed, largely illegible; Some edge damage, especially at top

Part of Cambridge, Trinity College, MS B.10.5 (fully digitised)

**Egerton MS 267, f. 37 (Gneuss and Lapidge 2014, no. 408): s. x<sup>ex</sup>**

Origin: probably Abingdon

Latin; Caroline minuscule

1 leaf, Trimmed and incomplete

**Egerton MS 3278 (Gneuss and Lapidge 2014, no. 410.5): s. xi<sup>in</sup>**

Latin; Caroline minuscule; Some coloured initials

1 leaf

**Harley MS 55, ff. 1–4 (Gneuss and Lapidge 2014, no. 412): s. xi<sup>i</sup>**

Origin: probably York, or Worcester?

Provenance: Worcester by s. xiii<sup>in</sup>

Old English; Anglo-Saxon minuscule; Initials in ink

4 leaves, 4 half sheets

**Harley MS 110, ff. 1, 56 (Gneuss and Lapidge 2014, no. 416): s. xi<sup>med</sup>**

Origin: Winchester Old Minster?

Latin and Old English glosses; Caroline minuscule; Neumes; Coloured initials

2 leaves, Trimmed; Losses at gutter

**Harley MS 271, ff. 1, 45 (Gneuss and Lapidge 2014, no. 418.3): s. xi<sup>2</sup> or s. xi<sup>ex</sup>**

Latin; Caroline minuscule; Coloured initials

2 leaves, Single leaves, trimmed and incomplete

**Harley MS 491, ff. 1–2 (Gneuss and Lapidge 2014, no. 418.6): s. xi<sup>med</sup>**

Origin: probably Lotharingia

Provenance: probably Durham before 1100

Latin; Anglo-Saxon minuscule

2 leaves, Single leaves, trimmed and incomplete

**Harley MS 521, f. 2 (Gneuss and Lapidge 2014, no. 418.8): s. x/xi**

Origin: St. Augustine's, Canterbury

Latin; Caroline minuscule; Rustic capitals?; Coloured initials

1 leaf

**Harley MS 648, f. 207 (Gneuss and Lapidge 2014, no. 423.3): s. xi**

Origin: Continent?

Latin; Anglo-Saxon minuscule; Neumes

1 leaf, Trimmed and incomplete

**Harley MS 652, ff. 1–4 (Gneuss and Lapidge 2014, no. 423.9): s. ix<sup>med</sup>**

Origin: probably N. France

Provenance: St Augustine's, Canterbury

Latin; Rustic capitals; Anglo-Saxon minuscule; Elaborate pen initials, ff. 1\* and 4\*

4 leaves, 2 bifolia: 1<sup>st</sup> leaf of 1<sup>st</sup> bifolia, former pastedown, rust and friction holes

**Harley MS 683, f. 1 (Gneuss and Lapidge 2014, no. 424.5): s. xi**

Origin: England?

Latin; Caroline minuscule; Neumes; Outline of large pen initial, f.1r

1 leaf, Stained and rather dark

**Harley MS 2110, ff. 4, 5 (Gneuss and Lapidge 2014, no. 428): s. xi<sup>i</sup>**

Provenance: Castle Acre?, Norfolk

Old English; Anglo-Saxon minuscule; Rustic capitals; Black capitals filled with red

2 leaves, A central bifolium

Used since at least end of Middle Ages as binding sheet to Castle Acre cartulary

**Harley MS 3020, f. 35 (Gneuss and Lapidge 2014, no. 433.1): s. xi<sup>in</sup>**

Latin; Caroline minuscule; Neumes; Coloured initials

1 leaf, Scraped almost clean; Part of bifolium

**Harley MS 3405, f. 4 (Gneuss and Lapidge 2014, no. 277): s. xi<sup>med</sup>**

Latin; Caroline minuscule; Neumes; Coloured initials

1 leaf, Trimmed and incomplete

Part of Lincoln, Cathedral Library, MS 298C



**Harley MS 5228, f. 140 (Gneuss and Lapidge 2014, no. 439.6): s. ix**

Origin: probably Wales

Provenance: Worcester

Latin; Anglo-Saxon minuscule

1 leaf, Flattened bifolium, trimmed and incomplete; Mounted on guards as single leaf

**Harley MS 5915, f. 2 (Gneuss and Lapidge 2014, no. 440.5): s. xi<sup>med</sup>**

Latin; Caroline minuscule

1 leaf

**Harley MS 5915, ff. 8, 9 (Gneuss and Lapidge 2014, no. 441): s. xi<sup>i</sup>**

Latin, with Old English glossary/cont. interlinear gloss; Round Anglo-Saxon minuscule

2 leaves, Bifolium, trimmed; Former pastedown

With Bloomington, Indiana, Lilly Library, Add MS 1000

**Harley MS 5915, f. 10 (Gneuss and Lapidge 2014, no. 441.1): s. viii<sup>med</sup>**

Origin: probably Northumbria

Latin; Pointed Anglo-Saxon minuscule

1 leaf, Darkened and stained

With Weinheim, Sammlung E. Fischer, s.n. (lost)

**Harley MS 5915, f. 13 (Gneuss and Lapidge 2014, no. 442): s. xi<sup>in</sup>**

Old English; Square Anglo-Saxon minuscule

1 leaf, Trimmed and incomplete

With Cambridge, Magdalene College, Pepys 2981(16)

**Harley MS 5977, no. 59 (Gneuss and Lapidge 2014, no. 524): s. xi<sup>med</sup>**

Origin: Exeter

Latin; Caroline minuscule; Coloured initials

1 leaf, Trimmed and incomplete; Stained on verso; Affixed at edge and may be difficult to photograph

With London, Westminster Abbey Library, MS 36, nos. 17–19 and the following: Add MS 62104, Lincoln Cathedral Library, V.5.11 (printed book), flyleaves, Oxford, Bodleian Library, Lat. liturg. MS e.38, ff. 7, 8, 13, 14

**Harley MS 5977, no. 62 (Gneuss and Lapidge 2014, no. 442.3): s. x/xi or s. xi<sup>in</sup>**

Latin; Caroline minuscule; Some coloured initials

1 leaf, Trimmed and incomplete; Pasted down and verso inaccessible

**Harley MS 5977, nos. 64, 71 (Gneuss and Lapidge 2014, no. 442.4): s. x/xi or s. xi**

Origin: Continent?

Provenance: in England before 1100?

Latin; Caroline minuscule; Small initials in ink

2 leaves, Single leaf, trimmed; No. 64 affixed at upper edge, may be difficult to photograph; No. 71 pasted down, verso inaccessible

**Harley MS 7653 (Gneuss and Lapidge 2014, no. 443): s. viii/ix or s. xi**

Origin: Mercia (Worcester?)

Latin, with Old English gloss; Round Anglo-Saxon minuscule; Initials in ink, filled with colours

1 leaf, Incomplete quire, staining

Old English glosses perhaps in same hand as glosses in Royal MS 2 A XX

**Royal MS 1 E VI (Gneuss and Lapidge 2014, no. 448): s. ix<sup>1</sup> or s. ix<sup>2/4</sup> or s. ix<sup>med</sup>**

Origin: S. England

Provenance: St. Augustine's, Canterbury

Latin

1 leaf

With Canterbury, Cathedral Library, Add MS 16 and Oxford, Bodleian Library, Lat. bib. b.2(P) (partly digitised)

**Royal MS 4 A XIV, ff. 1, 2 (Gneuss and Lapidge 2014, no. 454): s. ix<sup>ex</sup>**

Origin: Continent (France?; Italy? s. ix/x)

Provenance: In England (Worcester?) from s. ix/x?

Latin; Rustic capitals; Caroline minuscule; Coloured and filled initials

2 leaves, Bifolium; Writing faint on ff. 1r and 2v; Former pastedown

**Royal MS 4 A XIV, ff. 107, 108 (Gneuss and Lapidge 2014, no. 456): s. viii/ix or s. ix<sup>in</sup> or s. ix<sup>1</sup>**

Origin: S. England (Winchester?) or Mercia

Provenance: Worcester

Latin; Pointed Anglo-Saxon minuscule; Small filled initials

2 leaves, Bifolium, former pastedown; f. 108v strained and scuffed.

**Royal MS 5 A XII, ff. iii–iv (Gneuss and Lapidge 2014, no. 456.2): s. xi<sup>med</sup> or s. xi<sup>2</sup>**

Origin: Worcester

Latin; Caroline minuscule; Rustic capitals; Neumes; Coloured initials

2 leaves, Two flattened bifolia, trimmed and incomplete

**Royal MS 5 B XV, ff. 57–64 (Gneuss and Lapidge 2014, no. 457): s. xi<sup>ex</sup>**

Origin: St. Augustine's, Canterbury

Latin; Caroline minuscule; Rustic capitals; Coloured initials

8 leaves, Quire of 8.

**Royal MS 5 E VII, f. i (Gneuss and Lapidge 2014, no. 457.6): s. xi<sup>i</sup>**

Latin; Caroline minuscule; Neumes; Coloured initials

1 leaf, Mounted on guard; Trimmed, with losses on lower edge.

**Royal MS 5 F XVIII, ff. 29v–32 (Gneuss and Lapidge 2014, no. 463.5): s. xi<sup>ex</sup>**

Origin: Salisbury

Latin; Caroline minuscule; Small initials in silver

4 leaves, Four single leaves, perhaps once a quire of 4

**Royal MS 6 A VII, f. 1 (Gneuss and Lapidge 2014, no. 464.9): s. xi<sup>ex</sup>; s. xi/xii**

Origin: Worcester

Latin; Caroline minuscule; Neumes

1 leaf, Damaged, holes and tears

**Royal MS 6 B XII, f. 38 (Gneuss and Lapidge 2014, no. 468): s. xi<sup>2</sup>**

Latin; Caroline minuscule; Coloured initials

1 leaf, Formerly a bifolium; Trimmed and incomplete

**Royal MS 7 C XII, ff. 2, 3 (Gneuss and Lapidge 2014, no. 471/[63]): s. vii/viii or s. viii<sup>in</sup>**

Origin: Northumbria (probably Lindisfarne)

Provenance: S. England (St Augustine's, Canterbury?), s. viii<sup>2</sup>/ix<sup>in</sup>

Latin; Square capitals; Half uncial; Coloured initials/letters

2 leaves, Two leaves

Part of Cambridge, Corpus Christi College, MS 197B (fully digitised), with Cotton MS Otho C V

**Royal MS 8 B XIV, ff. 154–156 (Gneuss and Lapidge 2014, no. 474.6): s. xi<sup>ex</sup>**

Origin: Salisbury

Latin; Caroline minuscule/early protogothic?

3 leaves, Three single leaves mounted on guards

**Royal MS 8 C VII, ff. 1, 2 (Gneuss and Lapidge 2014, no. 476): s. xi<sup>in</sup>**

Old English; Anglo-Saxon minuscule (late)

2 leaves, Part of a bifolium, probably the outside sheet of a quire; Were used in binding.

**Royal MS 8 F XIV, ff. 3, 4 (Gneuss and Lapidge 2014, no. 477): s. xi<sup>in</sup>**

Origin: probably Continent

Provenance: Bury St Edmunds

Latin; Caroline minuscule

2 leaves, Bifolium, trimmed on lower edge but no obvious losses; Quite badly scuffed, with lifting of ink onto facing pages

**Royal MS 12 F XIV, ff. 1–2, 135 (Gneuss and Lapidge 2014, no. 666): s. xi<sup>i</sup> (s. xi<sup>ex?</sup>)**

Latin; Anglo-Saxon minuscule; Neumes; Silver and gold? letters, rubrics and initials in silver

3 leaves, ff. 1–2: bifolium (?central). f. 135: single leaf mounted on guard

Part of Oxford, Bodleian Library, MS Selden Supra 36\*, with MS Selden Supra 36, ff. 73, 74

**Royal MS 12 G XII, ff. 2–9 (Gneuss and Lapidge 2014, 480): s. xi<sup>med</sup>**

Latin, with prose in Old English or Latin; Old English glossary

ff. 7–8/2–6, 9: two large round hands, Old English and Latin carefully distinguished

8 leaves, ff. 2–5: 2nd and 3rd sheets of quire of 10; ff. 7–8: central bifolium of a quire; ff. 6–9: bifolium

With Oxford, All Souls, MS 38, ff. I–VI and i–vi

**Royal MS 17 C XVII, ff. 2, 3, 163–166 (Gneuss and Lapidge 2014, no. 498): s. x<sup>ex</sup> or s. xi<sup>i</sup>**

Latin; Anglo-Saxon minuscule; Small initials in colours and silver

6 leaves, All single leaves, mounted on guards; ff. 163–166: losses at edges

**Sloane MS 280, ff. 1, 286 (Gneuss and Lapidge 2014, no. 498.0): s. x?**

Latin; Anglo-Saxon minuscule; Initials in silver

2 leaves, Single leaves, trimmed, with losses to lower edge

**Sloane MS 1044, f. 2 (Gneuss and Lapidge 2014, no. 21): s. viii; s. x<sup>2</sup>, x/xi**

Origin: probably Northumbria

Provenance: Ely, s. x

Latin and Old English; Half uncial; Dotted initials with silver surround

1 leaf, Trimmed and incomplete; Hinged, verso visible

Part of Cambridge, University Library, MS Kk.I.24 (fully digitised) with Cotton MS Tiberius B V, ff. 74, 76

**Sloane MS 1044, f. 6 (Gneuss and Lapidge 2014, no. 648): s. ix<sup>2/3</sup>**

Origin: W. France

Provenance: England by s. x<sup>ex</sup>

Latin; Caroline minuscule; Small initials in silver

1 leaf, Trimmed and incomplete; Hinged, verso visible

Part of Oxford, Bodleian Library, Lat. class MS C.2, f. 18, with the following:  
Cambridge, Corpus Christi College, EP-0-6 (pr. bk, binding fragment), Deene  
Park Library, MS L.2.21, Oxford, All Souls College, MS 330, nos 54, 55

**Sloane MS 1044, f. 16 (Gneuss and Lapidge 2014, no. 498.2): s. xi**

Latin; Caroline minuscule; Initial in silver

1 leaf, Trimmed and incomplete; Mounted, verso visible; Browned and stained  
with loss of text

**Sloane MS 1044, f. 21 (Gneuss and Lapidge 2014, no. 498.3): s. xi<sup>2</sup> or s. xi<sup>ex</sup>**

Latin; Caroline minuscule; Initial in silver

1 leaf, Trimmed and incomplete; Mounted, verso visible; Stained, with loss of text

**Sloane MS 1086, f. 45 (Gneuss and Lapidge 2014, no. 498.4): s. xi<sup>2</sup>**

Latin; Anglo-Saxon minuscule (square?)

1 leaf, Trimmed and incomplete; Hinged, but verso not easily visible

**Sloane MS 1086, f. 109 (Gneuss and Lapidge 2014, no. 498.5): s. xi<sup>2</sup>**

Latin; Anglo-Saxon minuscule (round?)

1 leaf, Trimmed and incomplete; Hinged, but verso not easily visible; Stained,  
verso very dark

**Sloane MS 1086, f. 112 (Gneuss and Lapidge 2014, no. 498.6): s. x/xi or s. xi<sup>in</sup>**

Latin; Caroline minuscule; Coloured initials

1 leaf, Trimmed and incomplete; Hinged, but verso not easily visible

**Sloane MS 1086, f. 119 (Gneuss and Lapidge 2014, no. 124): s. viii<sup>2</sup>**

Latin; Half-uncial?; Dotted initials filled with colours

1 leaf, Trimmed and incomplete; Hinged, but verso not easily visible

Part of Cambridge, Magdalene College, Pepys MS 2981(2)

**Sloane MS 1619, f. 2 (Gneuss and Lapidge 2014, no. 498.8): s. x or s. xi**

Origin: England?

Latin; Caroline minuscule; Coloured initial, scuffed

1 leaf, Folded within the volume

**Stowe MS 1061, f. 125 (Gneuss and Lapidge 2014, no. 307.2): s. xi<sup>in</sup> or s. xi<sup>1</sup>**

Origin: Christ Church, Canterbury

Provenance: Exeter?

Latin; Caroline minuscule; Neumes; Large coloured initial, coloured rubrics

1 leaf, Hinged; Both sides easily visible

Part of Burney MS 277, ff. 69–72

**Loan MS 11 (Gneuss and Lapidge 2014, no. 501): c. 1020**

Origin: Christ Church, Canterbury or Peterborough?

Provenance: Windsor, St George's Chapel

Latin

**Loan MS 81 (Gneuss and Lapidge 2014, no. 501.3): s. vii/viii**

Origin: Wearmouth-Jarrow

Probably from the same book as Add MS 37777

