

Tradition and Individuality

Bindings from the University of Michigan
Greek Manuscript Collection

Julia Miller



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Mich. Ms. 15. Front cover; a later Greek binding (fourteenth/fifteenth century?) on a twelfth-century manuscript. Round domed bosses are not uncommon and can be seen on Mich. Mss. 24, 44, and 67.

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with contributions by Pablo Alvarez and Kyle Clark

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This book is dedicated to the staffs of various departments at the
University of Michigan Library that provided me with help and resources:
Special Collections Research Center (SCRC),
Preservation and Conservation, and
Digital Content and Collections.

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Preface and Acknowledgments

This descriptive catalog of bindings began as something else entirely when I was invited by Special Collections Research Center curator Pablo Alvarez and author Nadezhda Kavrus-Hoffmann to examine and describe the bindings in the Greek manuscript collection at the University of Michigan, the idea being my descriptions could be a resource for Dr. Kavrus-Hoffmann as she prepared her two-volume catalog of the Greek manuscripts. At a certain point, the possibility arose for a complementary book of binding descriptions to coincide with the publication of the first volume of Kavrus-Hoffmann's *A Catalogue of Manuscripts in the University of Michigan Collection, Ann Arbor*. What began as notes and documentary photographs taken in the SCRC reading room has become this catalog of descriptions and images of the bindings.

I have spent most of the past twenty years studying and writing about historical bindings, and the rich collections at the University of Michigan have been the resource for much of this research. The collections are extraordinary, ranging from the largest repository of Greco-Roman papyri in the United States, hundreds of manuscripts from cultures and countries from all over the world, incunables, early printed works, unusual collections such as the marvelous Hubbard Collection of Imaginary Voyages, a superb map collection, and modern literary, political, film, and photographic archival materials. And this is just a sampling of what these holdings can offer. Riches indeed, and many of these materials have provided me with endless historical binding exemplars to study over the years.

There is nothing mundane or straight-forward about the U-M collections, including the collection of Greek manuscripts. Most of their bindings are made in traditional Greek style, but every one of them has some aspect that also sets it apart and makes it individual. It takes the closer look to unravel what is going on with books that have been in use for a thousand years, and the surprise and delight this collection has afforded me in the course of studying the bindings is, I hope, expressed in the descriptions. It has been a pleasure and an honor to have the opportunity to study and describe the Greek manuscript bindings and to present them in this catalog.

ACKNOWLEDGMENTS

I would like to express my gratitude to the following individuals who have contributed to this catalog in a variety of ways: Pablo Alvarez for inviting me to do this project, helping me with it, and for contributing an excellent introduction to this catalog; Kyle Clark for contributing Appendix 1, a wonderful example of science and craft uniting to aid in historical description and facsimile model-making; and Nadezhda Kavrus-Hoffman as an invaluable resource on the manuscripts. I thank Randal Stegmeyer for the beautiful images of the bindings and his great patience, and J. Wayne Jones for the images of Mich. Mss. 141 and 142. Anna Embree from the University of Alabama, Tuscaloosa, and Karla Vandersypen, retired U-M Special Collections librarian, served as readers for this catalog and helped me immensely with suggestions and corrections; Anna also contributed to the section in Chapter 1 about the value of modeling historical structures.

Sometimes a puzzling challenge results in a wonderful collaboration among scholars, and this was the case with one of the manuscript bindings – I thank from my heart Sylvie L. Merian and Georgios Boudalis for their contributions to solving the puzzle of Mich. Ms. 96.

My thanks to Cathleen Baker, U-M conservation librarian emerita, for her work publishing this catalog via her The Legacy Press, another beautifully produced book in a long line of them.

I am deeply grateful to Carl D. Winberg, who has been a devoted and enthusiastic supporter of the University of Michigan Library all these years, for his substantial contribution in funding the publication of this catalog. Meeting with Carl to show him some of the bindings was a joy as he exhibited such real interest and understanding of the importance of the bindings, and that makes all the difference.

Julia Miller
December 2020

Introduction

Pablo Alvarez

Tradition and Individuality: Bindings from the University of Michigan Greek Manuscript Collection is a comprehensive description of the material, structure, and decoration of each of the bindings of the collection of Greek manuscripts at the University of Michigan Library. In the tradition of bookbinding scholars and conservators of the last few decades, such as Christopher Clarkson, Nicholas Pickwoad, Janos Szirmai, and Guy Petherbridge, Julia Miller has achieved many of the goals that Mirjam M. Foot had eagerly listed in 1992 as constituting the ideal future of bookbinding research:

The time has come to extend our knowledge of bookbinding into the more obscure and hidden corners of the run-of-the mill bindings and their structure, from the first development of the codex format onwards; to establish a better defined methodology, backed up by a more precise and internationally usable terminology; to pursue binding ornament back to its source, to discover more about the tool cutter and to establish his relationship with the binders and their patrons, and to use this knowledge to increase our understanding of the history of the book and its place in the history of society at large.¹

In other words, far away are the times when bookbinding research was almost exclusively devoted to the examination and interpretation of bookbinding decoration, with the aim of identifying ornamental tools, linking sets of tools to workshops, and ultimately, assigning names to the binders working in these workshops.²

This catalog includes 100 entries based on a collection consisting of 110 codices and fragments ranging from the fourth to the nineteenth century, the largest collection of this kind in America. It is also a fully illustrated expansion of the brief descriptions of bookbindings included in Nadezhda Kavrus-Hoffmann's *Catalogue of Greek Manuscripts at the University of Michigan in Ann Arbor*.³ Moreover, while Kavrus-Hoffmann

1. Foot, Mirjam M. "The Future of Bookbinding Research." In *The Book Encompassed: Studies in Twentieth-Century Bibliography*. Ed. Peter Davison, 106. Cambridge: Cambridge University Press, 1992.

2. For an account of the early scholarship on bookbinding, especially during the first decades of the twentieth century, see Goldschmidt, E. Ph. "The Study of Early Bookbinding." In *The Bibliographical Society 1892-1942: Studies in Retrospect*, 175-184. London: Bibliographical Society, 1945.

3. Kavrus-Hoffmann, Nadezhda. *Catalogue of Greek Manuscripts at the University of Michigan in Ann Arbor*. Vol. 1. Ann Arbor, Mich.: University of Michigan Press, 2021; vol. 2 forthcoming. Formerly, the Greek manuscripts had been briefly described in the three-volume *Census of Medieval and Renaissance Manuscripts*, which was published by Seymour De Ricci in 1935, and in its *Supplement*, which was published by William Bond and Christopher Faye in 1962. See De Ricci, S. with W.J. Wilson. *Census of Medieval and Renaissance Manuscripts in the United States of America and Canada*. 3 vols. New York: H.W. Wilson, 1935-1940, 1103-1126; Faye, C.U. and W.H. Bond. *Supplement to the Census of Medieval and Renaissance Manuscripts in the United States and Canada*. New York: Bibliographical Society

exclusively describes extant bindings, Miller adds descriptions of sewing structures as reconstructed from some unbound fragments, which often consist of just a few leaves. In general, and as a point of departure, Miller uses a well-established framework of what constitutes the typical material, structural, and ornamental features of early Greek bindings, resulting in the use of a terminology widely accepted by scholars in the field. In brief, and for the sake of a practical generalization, it might be useful to recall Szirmai's characterization of these bindings according to their structural features:

Link-stitch sewing on more than two sewing stations, spine lining of cloth extending to the outer face of the boards, smooth back, wooden boards usually with grooved edges and attached to the bookblock by means of the sewing thread, no squares, endbands extending onto the board edges, and fastenings of the peg and strap type. Obviously, these features can vary with the date and place of origin of the bindings and not all traits are necessarily always present.⁴

The last sentence of Szirmai's definition is an important caveat, as well as a key to understanding the nature of Miller's catalog. As the first part of its title suggests, *Tradition and Individuality*, many of these bindings reveal a tension between the traditional features of Greek bindings, as described by Szirmai, and unique individual characteristics. These idiosyncrasies can be explained, for instance, by the binding tradition of a particular Greek monastery or by the work of binders working outside the Greek Orthodox religious tradition. For example, the binding of Mich. Ms. 96, a fourteenth-century Greek manuscript containing a patristic miscellany, is an extraordinary case study of the confluence between different cultural traditions throughout time. Notably, the binding of this codex reveals some features of the Armenian binding tradition, such as the use of a fore-edge flap, the sewing technique on the boards, and the fact that the endband combines features of the Greek and Armenian traditions. Accordingly, both Kavirus-Hoffmann and Miller agree that this binding was made shortly after the manuscript was bestowed to the church of Hyperhagia Theotokos of Petriotis in Trebizond – a city on the Black Sea coast of northeastern Turkey – in 1591/2. Appropriately, Trebizond had an Armenian community up until the time of the Armenian genocide in 1915. Indeed, this is a good example of how knowledge about bookbinding plays a vital role in book history, being one of the pieces of evidence in the historical journey that begins with the production of a manuscript and then continues through its use by successive communities of readers.

While Armenian manuscripts are rightly famous for including inscriptions on the bindings, as well as detailed colophons informing us when, where, and by whom these manuscripts were copied, knowledge of the dating, origin, and provenance of Latin and Greek manuscripts often depends on non-explicit evidence, such as the script and the physical features of the codex, including those of the binding.⁵ This challenge

of America, 1962, 287–293. Only the New Testament manuscripts were described more fully, and in a more scholarly fashion, in a specialized catalog published by Kenneth Clark in 1937. See Clark, K.W. *A Descriptive Catalogue of Greek New Testament Manuscripts in America*. Chicago: University of Chicago Press, 1937, 275–340.

4. Szirmai, J.A. *The Archaeology of Medieval Bookbinding*. Aldershot, U.K.: Ashgate, 1999, 62. However, Szirmai uses the phrase “byzantine codices,” which, as he admits, is both ambiguous and restrictive because it would exclusively refer to bindings within the geographical and chronological boundaries of the Byzantine Empire.

5. For inscriptions present in bindings, see Kouymjian, Dickran. “Inscribed Armenian Manuscript Bindings: A Preliminary General Survey.” In *Armenian Texts, Tasks, and Tools*. Ed. Henning Lehmann and J.J.S. Weitenberg, 101–109. Aarhus, Denmark: Aarhus University Press, 1993. For a catalog of colophons on Armenian manuscripts, see Sanjian, Avedis K. *Colophons of Armenian Manuscripts, 1301–1480; a Source for Middle Eastern History....* Cambridge:

can be exacerbated in some manuscript collections held at U.S. libraries and museums. At the beginning of the twentieth century, numerous American institutions acquired great collections of manuscripts from dealers who were often unable, or unwilling, to reveal their exact origin and provenance. Whereas this unfortunate situation can be confirmed by many of the medieval and Renaissance manuscripts at the University of Michigan Library, fortunately, we are much better informed about the previous whereabouts of many of the Greek manuscripts, especially about those bought at an auction in London in 1922. Indeed, the story of how all these Greek manuscripts came to the University of Michigan deserves to be told.⁶

We largely owe our collection of Greek manuscripts to the vision and hard work of Francis Willey Kelsey (1858–1927), professor of Latin language and literature at the University of Michigan from 1889 to 1927.⁷ Kelsey was an enthusiastic advocate of the role of archaeological excavations as sources for artifacts to be collected and used for teaching by the new museums and universities being established in the United States. His collecting and educational activities put him in contact with major financiers and philanthropists such as Charles Lang Freer, Andrew Carnegie, and J.P. Morgan, and particularly with those living in nearby Detroit, some of whom would support Kelsey's ambitious projects. In various letters addressed to donors, faculty, and university administrators, Kelsey described several major objectives to justify the funding of what would be known as "the first expedition" (1919–1921), a collecting and research journey in Europe and the Middle East. One of the goals of this expedition was the acquisition of ancient artifacts, biblical manuscripts, and papyri.⁸ Certainly, this emphasis on the search for biblical texts explains why our holdings mostly consists of Christian texts, including the Gospels and other works that were central to the liturgy and religious life of any given monastery such as lectionaries, *menaia*, and collections of sermons.

Accompanied by his wife, Isabelle; their son, Easton; and the University of Michigan photographer, George Robert Swain, Kelsey began the long-planned first expedition in September 1919. The group first spent almost three months in Europe, as Kelsey and Swain engaged in various research projects, including photographing a selection of manuscripts in the British Museum and the Bibliothèque nationale de France.

On December 4th, Kelsey and his small entourage arrived in Constantinople. In addition to various scholarly projects, Kelsey explored the Grand Bazaar in the Old City, where he inquired about the availability of biblical manuscripts. On December 9th, the group set out early from their lodgings near the American embassy. From the district of Pera in the New City, they headed toward the Old City, Stamboul, via the Galata Bridge.⁹ In brief, Kelsey's stay in Constantinople resulted in the purchase of five Greek manuscript fragments (Mich. Mss. 5, 6, 7, 12, 13) and a codex (Mich. Ms. 8) from the shop of Andronicos M. Kidaoglon in the Grand Bazaar, and a fragment (Mich. Ms. 4) from the antiquarian dealer Ed. S. Beghian, possibly the owner of one of the antique shops near the American embassy and the Grand Hotel.¹⁰ Unfortunately, none of these dealers was able to give any precise information on the previous whereabouts of these manuscripts. By the beginning of July 1920, already in the late stages of the expedition, Kelsey was back in Paris. There he

Harvard University Press, 1969.

6. For a full account, see my "Preface" to Kavirus-Hoffmann, *Catalogue of Greek Manuscripts*, xi–xxvi.

7. Pedley, J.G. *The Life and Work of Francis Willey Kelsey*. Ann Arbor, Mich.: University of Michigan Press, 2012.

8. Pedley, *Life and Work*, 254–255.

9. Leontis, Artemis and L.E. Talalay. "A Day's Journey: Constantinople, December 9, 1919." *Michigan Quarterly Review* 45, no. 1 (2006): 73–98.

10. Francis Willey Kelsey, diary, December 9, 1922, box 4 (1920–1927), Francis Willey Kelsey Papers, Bentley Historical Library (BHL), University of Michigan; Pedley, *Life and Work*, 265–266; memorandum from Francis Willey Kelsey to William Warner Bishop, December 26, 1919, folder 8, box 1, FWKP, BHL; memorandum from Francis Willey Kelsey to William Warner Bishop, October 12, 1920, folder 10, box 1, FWKP, BHL.

established a business relationship with I.E. Géjou from whom he bought three Greek manuscripts (Mich. Mss. 9, 10, 11), the last purchase of manuscripts before Kelsey's return to Ann Arbor.¹¹

The acquisition of these codices and fragments in Constantinople and Paris in 1919 and 1920, respectively, together with the purchase of a tenth-century manuscript (Mich. Ms. 14) from the antiquarian book dealer, Wilfrid M. Voynich, in 1922, provided a fairly solid foundation, bestowing Kelsey with the necessary confidence to look to future acquisitions.¹² In fact, a unique opportunity arose in May 1922: the sale of the Burdett-Coutts Library, which included a remarkable collection of Greek manuscripts.¹³

Angela Georgina Burdett (1814–1906) was a British philanthropist who, at the age of twenty-three, inherited an immense fortune from her maternal grandfather, Thomas Coutts, founder of Coutts Bank. One of the conditions of this inheritance was that she added the name of her maternal family, and as Angela Burdett-Coutts, she used much of her fortune to advance numerous philanthropic endeavors for which she received the title of baroness in 1871. All her life, Baroness Burdett-Coutts purchased objects of art, manuscripts, and books, including a group of approximately one hundred Greek manuscripts acquired between 1870 and 1872. Acting as an agent on behalf of the baroness, Reverend Reginald Henry Barnes, prebendary of Exeter (d. 1889), had purchased them in 1864 from an antiquarian dealer in Ioannina, the capital of Epirus – Albania at that time but now northwestern Greece.

Although Angela Burdett-Coutts died in 1906, a large part of her collection of Greek manuscripts was auctioned along with the rest of the baroness's library by Sotheby's in London in May 1922, following the death of Burdett-Coutts' husband the previous year.¹⁴ By the beginning of April 1922, Voynich and Kelsey were exchanging letters discussing the content and value of the Greek manuscripts in the auction. Voynich was hired to bid on behalf of the University of Michigan through his agent in London, and Kelsey ultimately obtained funding from Horace H. Rackham on May 9th; Rackham drew a check for \$15,000 just a few days before the auction on May 15th.¹⁵

The University of Michigan Library purchased fifty of the sixty-five Burdett-Coutts lots auctioned in the 1922 sale: fifty-five manuscripts in Greek and one in Latin. Forty-seven Greek manuscripts were purchased in the course of the auction through the services of Voynich's London agent: Mich. Mss. 15–22, 23a, 23b, 24–51, 53–54, 55a, 55b, 56–60. Shortly afterward, other manuscripts were acquired from two antiquarian dealers who

11. Memorandum from Francis Willey Kelsey to William Warner Bishop, July 15, 1920; memorandum from Francis Willey Kelsey to I.E. Géjou, July 16, 1920; memorandum from I.E. Géjou to Francis Willey Kelsey, July 17, 1920; and memorandum from Francis Willey Kelsey to I.E. Géjou, July 23, 1920, all in folder 10, box 1, FWKP, BHL; Pedley, *Life and Work*, 281.

12. Back in 1919, university librarian William Warner Bishop had already expressed his enthusiasm for the future purchase of this manuscript. See memorandum from William Warner Bishop to Francis Willey Kelsey, May 14, 1919, p. 4, folder 8, box 1, FWKP, BHL.

13. For the most comprehensive studies on the holdings of this collection see Cataldi Palau, Annaclara. "The Burdett-Coutts Collection of Greek Manuscripts: Manuscripts from Epirus." *Codices Manuscripti* 54/55 (March 2006): 31–57, pls. 1–23; Cataldi Palau, Annaclara. "Greek Manuscripts from the Meteora Monasteries in the Burdett-Coutts Collection." In *Studies in Greek Manuscripts*. Spoleto, Italy: Fondazione Centro italiano di studi sull'alto Medioevo, 2008, 2:585–613, pls. 1–12; and Cataldi Palau, Annaclara. "Bindings of the 16th Century from the Monastery of St. Nicholas Anapausa in the Meteora." In *The Book in Byzantium: Byzantine and Post-Byzantine Bookbindings*. Ed. N. Tsirone, 317–342. Athens: Ellenike Etaireia Vivliodesias, 2008.

14. Sotheby, Wilkinson & Hodge. *The Burdett Coutts Library. Catalogue of the Valuable Library. The Property of the Late Baroness Burdett Coutts*. London: Sotheby, Wilkinson & Hodge, 1922.

15. Francis Willey Kelsey, diary, May 9, 1922, box 4 (1920–1927), FWKP, Bentley Historical Library; see Pedley, *Life and Work*, 304.

had also bid at the auction: seven from I.E. Géjou (Mich. Mss. 65–69 and 78–79), and with Voynich again acting as an agent, one of the eight Burdett-Coutts manuscripts offered by Maggs Bros. Ltd.: Mich. Ms. 83.

In the last decade, Annaclara Cataldi Palau has examined the Greek manuscripts acquired by several institutions from the Burdett-Coutts auction with a special emphasis on their origin and provenance. Considering that the manuscripts were acquired in Ioannina, Cataldi Palau convincingly argued that there are two important nearby monastic centers where many of the Burdett-Coutts manuscripts might have been produced: the island in Ioannina Lake in the modern Epiros region of Greece and the so-called Meteora monasteries, which refers to a group of monasteries built on high pinnacles of rocks in an area located at the northwestern edge of Thessaly.¹⁶

Based on the script and artistic features of Epirote manuscripts, Cataldi Palau has identified as Epirote, nine Burdett-Coutts manuscripts from the University of Michigan collection: Mich. Mss. 17, 28, 29, 31, 38, 43, 50, 59, and 83.¹⁷ Furthermore, Cataldi Palau has identified seven of these Burdett-Coutts manuscripts as being from the monastery of St. Nicholas Anapausas in the Meteora. There are two keys for this identification. First, there are explicit possession notes in Mich. Mss. 35, 38, 39, 78, and 79. Second, the style of the bindings also links some of these manuscripts to this particular monastery: Mich. Mss. 35, 44, 47, 78, and 79.¹⁸

In the years following the 1922 auction, the University of Michigan Library bought more Greek manuscripts, often through the intervention of Kelsey and from I.E. Géjou, but there was never a purchase that, in terms of scope and magnitude, could be compared to the acquisition of a considerable part of the Burdett-Coutts Library. The remaining part of this collection, consisting of twenty-seven manuscripts, was sold in 1987 at a Sotheby's auction in London.¹⁹ One of the manuscripts sold in that auction, purchased by a private collector, was again sold at a Sotheby's in London in 2016.²⁰ Unfortunately, the University of Michigan Library did not bid in any of those auctions.

I close this introduction by noting a remarkable addition to this catalog that further highlights the relevance of understanding the various archaeological layers of historical bindings. In the Appendix, Kyle Clark meticulously describes how the making of the facsimile of Mich. Ms. 79, a fourteenth-century manuscript from St. Nicholas Anapausas in the Meteora, helps us understand, and visualize, the process of how this manuscript was originally bound. For this reconstruction, Clark relies not only on what is left of the binding – the manuscript is missing the lower board – but also on our current knowledge of the binding tradition of other manuscripts produced in the Meteora monasteries.

Pablo Alvarez, PhD
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16. Cataldi Palau, "Greek Manuscripts from the Meteora," 145–146.

17. Cataldi Palau, "Burdett-Coutts Collection," 31–57, pls. 1–23.

18. Cataldi Palau, "Greek Manuscripts from the Meteora," 148.

19. Cataldi Palau, "Greek Manuscripts from the Meteora," 145. See also Sotheby's, *Western Manuscripts and Miniatures*. London: Sotheby's, 1987. The auction was held on June 23, 1987 and the manuscripts were lots 41–67.

20. Sotheby's, *Medieval and Renaissance Manuscripts*. London: Sotheby's, 2016. The auction was held on December 6, 2016, and the manuscript was lot 38.



Fig. 1.1. The front cover of Mich. Ms. 182, a typical decorated Greek binding.

Chapter 1

Tradition and Individuality: The Groundwork of Description

What's real, Whitehead says,
is the moment, taking in
the past, holding it
an instant, passing it on.²¹

Pablo Alvarez eloquently describes in his introduction the varied and important historical facets of the Greek manuscript collection belonging to the Special Collections Research Center (SCRC) of the University of Michigan (U-M) – a collection that is relatively large at 110 manuscripts, dating from the fourth to the nineteenth century, many of the manuscripts retaining most or part of their traditional bindings whether contemporary with the date the manuscript was written, or not – some bound or rebound in both traditional and non-traditional styles – all together offering us a thousand years of codicological information. Elements of the long-lived Greek binding tradition are well represented in the collection – it contains some stunning primary bindings exhibiting all the typical features of that tradition – and the collection also includes examples of artisan choices that appear to be changes from and possibly innovations to traditional practice. There are exemplars that are outright mysteries with puzzling structural aspects, bindings that mix traditional Greek elements with those of other binding traditions, and examples of real care – and charm – in the piecing and repairs we see on many of the bindings. Damage and loss become aids to understanding, revealing underlying structure, and many bindings in the collection are damaged. Most of the manuscripts in the collection that survive only as fragments still retain some binding evidence.

I came to this work with a very basic knowledge of traditional Greek binding methods and materials, and that knowledge has grown with the study of the collection items. I have also drawn upon numerous excellent sources on the topic that record in detailed fashion the many variations in structural elements used in the creation of Greek monastic bindings, and the descriptions in this book pay homage to those sources, while expanding our knowledge about these important bindings.

It is a truism that an intact binding is a largely indescribable one, because without damage, and the wear, breaks, and losses that reveal structure, descriptions are necessarily superficial. It is unprofessional to create a description without evidence; the idea is to record only what you see, to interpret fragments of evidence if they tell us what could have been present, but not to decide what you think *should* be present if you cannot support that with evidence. A large number of the bindings in this collection has sustained substantial amounts of damage over their many years of existence and use, revealing a great deal of structural information to us. Damage is regrettable but not surprising, or altogether a negative; the wear attests the long use of these manuscripts, and they continued to be valued by their owners, despite their damage, losses of

21. Hilberry, Conrad. "Enormous Leaf." In *Until the Full Moon Has Its Say*. Detroit: Wayne State University Press, 2014, 61.

text, and overall fragility. In the past, conservation treatments might have altered their appearances by taking them apart, repairing, and rebinding them in order to make them less fragile. Today, conservation philosophy and ethics have turned away from such invasive treatments except in dire cases of damage and weakness – the watchwords of today’s conservators have become stabilization and protection, along with the preservation of all binding evidence – and for those engaged in studying the history of the book, this is a vitally important change, preserving rather than discarding the very evidence we have to have to accurately understand and describe these bindings.

The words of poet Conrad Hilberry, quoted above, sum up in a very lovely if indirect way the work many of us do to examine, identify, and describe historical bindings. The reward of examining this manuscript collection has been an education (“taking in the past”), laced with surprise and delight (“holding it an instant”), and sharing what has been learned (“passing it on”).

CONNECTIONS

This volume of binding descriptions is published as a complement to the catalog of the manuscript texts authored by Nadezhda Kavrus-Hoffmann in her two-volume work, *A Catalogue of Greek Manuscripts at the University of Michigan, Ann Arbor*. It is important to consult the manuscript descriptions by Kavrus-Hoffmann to obtain information about the content and codicology of the manuscripts, their dating, provenance, colophons, inscriptions, and decoration of the bindings.²² Some information contained in Kavrus-Hoffmann’s preliminary binding description notes have been incorporated with her permission, into the binding descriptions in this book.

Scholarly work on Greek manuscript bindings

In order to acquaint the reader with past and current research on Greek bindings, I offer this literature review by J.A. Szirmai from his masterwork, *The Archaeology of Medieval Bookbinding*, published in 1999. The publication of his book was a watershed event for book conservators, bookbinders, and rare-book catalogers and curators because he discussed the great binding traditions of the Near East at some length, beginning with Coptic binding, moving on to the early medieval binding traditions of the West, and ending with medieval gothic and limp-vellum binding. The knowledge and insights presented in his book are augmented by what is arguably just as valuable: his efforts to establish the rate of loss of bindings in a given tradition, and his inclusion of a comprehensive and exhaustive comparison of scholarly sources for each tradition he covers with a bibliography to match. His comments on survival and his review of sources for byzantine (Greek) binding is an excellent example:

Hardly any original binding from the first half of the Byzantine millennium has managed to survive, mainly due to three reasons: first, the extensive destruction of religious literature on the fall of the Byzantine Empire, second, the shameless neglect and ignorance of custodians, who had no inhibitions about using leaves of ancient manuscripts to cover jam-jars or light the kitchen stove.” The third – and possibly saddest – factor was the later private and institutional owners, who had the supposedly unsightly bindings, damaged or undamaged, rebound to fit the taste of the period.

22. Kavrus-Hoffmann, Nadezhda. *A Catalogue of Greek Manuscripts at the University of Michigan, Ann Arbor*. 2 vols (vol. 2 forthcoming). Ann Arbor, Mich.: University of Michigan Press, 2021. Kavrus-Hoffmann describes Mich. Mss. 1–58 in vol. 1; vol. 2 will include descriptions of Mich. Mss. 59–238.

Thousands of byzantine works in large collections in the Western world were stripped from their original covers; this is clearly reflected in a recent survey of the collection of byzantine bindings in the Vatican Library by Federici and Houlis (1988), which brought to light that out of 4700 Greek manuscripts only 94, in other words not more than 2 per cent, have retained their original bindings, dating no earlier than from between the eleventh and seventeenth centuries. A sad consequence of the lack of extant bindings from the first half of the Byzantine millennium is that it has become virtually impossible for us to assess the extent of the influence of this bookbinding tradition on the evolution of the binding structures of the Western world.

Although this insignificant figure of only 2 per cent demonstrates that our knowledge of byzantine bindings is truly built on sand, a relatively large amount has been written about them. Adam (1914; 1923–4) wrote down his valuable observations on Greek bindings, but mostly without providing his sources.” Van Regemortel published two studies (1954; 1967) on byzantine bindings and two articles on Armenian (1953) and Southern Slavic (1959) variants.^[fn] Klepikov (1961) has presented some details on Russian bindings; a brief outline of byzantine binding structures was given by Irigoin (1981). Byzantine bindings from the Peloponnese were the subject of a study by Grosdidier de Matons (1991). The first systematic attempt at investigating byzantine bindings was made by Petherbridge (1991) who laid out important basic guidelines for their study. An extensive work is the investigation of 94 byzantine bindings and a further 18 detached byzantine covers in the Vatican Library by Federici and Houlis (1988), mentioned above. Their study holds such a wealth of numerical data that their own statistics can hardly do justice to it. Nevertheless, it is an admirable and exemplary attempt at scrutinizing the complexities of binding structures; its significance is limited by the too small number of still intact bindings and their many different and often uncertain provenances, which in fact are only established for 48 out of 112 bindings and covers (25 are from Constantinople, 7 from Cyprus, 5 each from Crete and Italy, 4 from Greece, 1 each from Thrace and the Near East). Sixty bindings are dated to the fifteenth century or later; of the 50 earlier bindings (mostly from the fourteenth century, only one from the tenth century) 24 are probably not in their original binding. Further details of the sewing structures in this material have been published by Houlis (1993). Additional details are given by Mokretsova (1994).

An investigation into c. 160 codices in the Patmos Monastery of St John the Theologian was initiated in the 1980s by Guy Petherbridge and John L. Sharpe III, but so far only a few details have been made available (Petherbridge 1991). Such studies on bindings from a given monastic library hold indeed promising results, since the material is likely to be far more homogeneous than what has landed by chance in collections of our large libraries. It is regrettable that manuscript surveys like those of the 1950 Sinai and Jerusalem Expedition (Clark 1953) and the 1960 Mount Sinai Expedition (Forsyth 1964; Weitzmann 1964) failed to pay attention to binding structures. Still, at least some information on bindings in St Catherine’s monastery on Mount Sinai is provided by Harlfinger et al. (1983) and Sonderkamp (1991). Geographical differences in technical details have been studied by Canart, Grosdidier de Matons and Hoffmann (1991).²³

It is important to mention more recent work contributing to the scholarly record on Greek bindings, most notably the work of the St. Catherine’s Library Project to document and preserve Greek bindings in the

23. Szirmai, J.A. *The Archaeology of Medieval Bookbinding*. Aldershot, U.K.: Ashgate Publishing Ltd., 1999, 62–64.

monastery library, initiated in 1998 under the direction of Dr. Nicholas Pickwoad. Another rich resource is the PhD thesis work and subsequent research and publications on Greek bindings and Greek endbands by Dr. Georgios Boudalis. Annaclara Cataldi Palau has written extensively on the Meteora bindings described in the introduction. The most exhaustive resource to date is the results of the undertaking of a full-scale, comprehensive survey by Ligatus, under the auspices of the University of the Arts London, of the bindings in St. Catherine's monastery library, also under the direction of Pickwoad. The following is from Pickwoad's description of the St. Catherine's survey:

The library of the monastery of Saint Catherine, Sinai, is famous for its rare biblical manuscripts, including the first complete texts of the New Testament Gospels in Greek and Syriac. The survey of the 3,306 bound manuscripts was devised and conducted under my direction over a 5 year period. It is the first full survey of the collection and also the first ever attempted. It is part of one of the highest profile library conservation projects currently existing internationally. The books and their bindings were recorded in greater detail and more rapidly than had ever been attempted before, using written, graphic and photographic records. I made use of traditional techniques to yield new results (e.g. drawing as a means of training the eye of the surveyor) and devised new techniques (e.g. percentage records of the extent and severity of damage) to achieve consistent and reliable results that reflect the complexity and variety of the material recorded. The 88-page manual describes the methodology. The recording forms have been published on the project website (<http://www.ligatus.org.uk/>) making them available for use by other survey projects, greatly extending the existing methodologies of future condition surveys.²⁴

There are numerous other present-day scholars writing about aspects of Greek binding, too many to describe here. Some of the older sources mentioned in Szirmai's literature review are cited in this book and are included in the Bibliography.²⁵

A general note about Near Eastern binding traditions

Before continuing the discussion of the Greek binding tradition, it is important to point out that traditionally bound Greek manuscripts share features that are broadly termed Near Eastern, broken down into more specific traditions. The Near Eastern binding traditions include Coptic, Ethiopian, Syriac, Greek, Georgian, Arabic/Islamic, Slavic, and Armenian. Most of these traditions share at least some of the structural elements assigned to Greek bindings: full-leather covers, usually over shaped wooden boards flush with the

24. Pickwoad, Nicholas. "The St. Catherine's Library Survey of Bound Manuscripts Catherine on Mount Sinai." University of the Arts London. 2006:<<https://ualresearchonline.arts.ac.uk/id/eprint/1547/>>; accessed October 2020.

25. A word about bookbinding historian Berthe van Regemorter. Szirmai notes her two articles, "The Binding of Greek Manuscripts" (1954) and "Byzantine Binding" (1967). These were the first or among the first scholarly sources to offer comprehensive information on Greek binding structure, as well as decoration. She also wrote about the Coptic influence on Greek binding, and based on the articles about Armenian and Slavic variants mentioned above, subsequent scholars drew from and built on Regemorter's work to their great credit. Binding historians do well to remember the number of binding traditions she studied and how that developed her broad view of historical binding. The translation of her articles into English by American book conservator and binding historian, Jane Greenfield, and their subsequent publication in 1981 in *Binding Structures in the Middle Ages* was an important moment for bookbinders, binding historians, and book conservators in the United States and elsewhere. Regemorter, Berthe van. *Binding Structures in the Middle Ages: A Selection of Studies by Berthe van Regemorter*. Trans. Jane Greenfield. Brussels: Bibliotheca Wittockiana, 1981.

manuscript, sometimes with grooved edges; some variation of sewn-board construction utilizing bridling, recessed unsupported link-style sewing utilizing v-shaped notching of the quire folds (quire is the term for a gathering of text leaves); smooth, rounded spines; cloth overall spine linings; projecting (raised) endbands anchored on the boards; and edge fastenings that are some variation of a peg-and-strap-style.

They all differ as well. Coptic and Arabic/Islamic binders appeared, based on surviving evidence, to only use wooden boards in limited ways, relying on papyrus cartonnage (Coptic) and paper-based pasteboards (Islamic) instead.²⁶ Sewn-board attachment to an already sewn manuscript or boards sewn-on in conjunction with the sewing of the manuscript is common among the traditions but executed in different ways. Unsupported link-style sewing of manuscripts, though varying in style of execution, was used for all the traditions except Armenian, which is the first and earliest Near Eastern tradition known to employ sewing supports, a feature considered to stem from Western influence.²⁷ Like the other, but unsupported, sewing styles, the Armenian tradition also employs v-shaped notching across the backs of the quires to recess the sewing support and thread. Extended or overall cloth spine linings crossing the spine and finishing on the outer board faces are typical among most of the traditions aside from Ethiopian. Ethiopian, Armenian, and Arabic/Islamic bindings feature cloth board linings on the inside face of the boards. Endband styles among the traditions have similarities, but also substantial differences.²⁸ Most of the traditions began with endbands anchored on the boards, some did not (early Coptic and Ethiopian); later Coptic bindings did adopt this structure. Edge or side fastenings are a common feature except on Ethiopian bindings, which tended to have protective enclosures instead. Early Islamic box bindings had edge fastenings crossing the box walls from one board to the other (Armenian influence?), but later Islamic bindings discarded edge fastenings for fore-edge flaps extending from the back cover, finishing inside the front cover. Coptic bindings had closure systems ranging from flaps with wrapping bands to loop-and-toggle systems to peg-and-strap systems, most extending from the front cover and finishing on the back-cover fore edge or on the side of the back cover. Greek and Armenian bindings have fastening straps that pass from the back cover and finish on the front cover on board-edge pegs (typical Greek) or on side pegs set in the cover near the fore edge (typical Armenian). Flaps on Coptic and Arabic/Islamic bindings, early and late, were extensions of the cover leather while Armenian bindings had independent fore-edge flaps attached inside the back cover, held in place against the manuscript fore edge by fastening straps crossing the fore edge/flap and catching on side pegs. The fastening straps themselves differ, tradition to tradition: Coptic wrapping bands were flat, but the loop-and-toggle and peg-and-strap systems were often braided. Islamic and Greek straps are typically braided or slit-braided, while Armenian straps are flat.²⁹ The point

26. Miller, Julia. "Puzzle Me This: Early Binding Fragments in the Papyrology Collection of the University of Michigan Library." In *Suave Mechanicals: Essays on the History of Bookbinding*. Vol. 2. Ed. Julia Miller, 244–264. Ann Arbor, Mich.: The Legacy Press, 2015.

27. Armenian bindings are thus considered a bridge between the Eastern and Western binding traditions. For a primary source on Armenian bindings, see Merian, Sylvie L.A. *The Structure of Armenian Binding and its Relation to Near Eastern Bookmaking Traditions*. PhD dissertation, Columbia University, 1993.

28. For an important source on Greek endbands, see Boudalis, Georgios. "Endbands in Greek-Style Bindings." *Paper Conservator* 31 (2007): 29–49. Boudalis is preparing a monograph on Greek endbands to be published by The Legacy Press.

29. There are three bindings in the U-M collection, Mich. Ms. 43, Ms. 130, and Ms. 134, that have side pegs. All three manuscripts have traditional Greek bindings; Mich. Ms. 130 not only has side pegs, but it also has flat vs. braided fastening straps. If you studied one hundred exemplars from any of the Near Eastern binding traditions under discussion, you would find structures that are extra-traditional or crossovers from another tradition. This is where the

of the foregoing discussion is to explain that while a binding tradition can be very distinctive, as the Greek tradition is, many of its features are shared.

Structural elements developed for early codex binding often occurred, early on, in an intuitive way, or were applied across a craft spectrum – if you could sew clothing or make shoes, you could sew manuscripts and work leather covers. And while clothing and leatherwork differed stylistically from culture to culture, the techniques of sewing and making leather items had at least some commonality, culture to culture.³⁰ Despite a staggering amount of loss of early codices, we still have a substantial number of bindings from some of the Near Eastern traditions to study (and restudy) for what they can tell us about the history of the codex – the cross-cultural influences that went hand-in-hand with the development of individual binding traditions – and we are lucky in that all these traditions maintained a fairly consistent, specific binding style for centuries amounting in some cases to millennia.³¹ We have few survivals of the earliest exemplars of most codex binding traditions, but identifying consistencies of binding practice in later exemplars can give us a good idea of how those earlier, lost examples might have looked and functioned.

TERMINOLOGY: BYZANTINE BINDINGS VS. GREEK-STYLE BINDINGS

For many years, there has been a sort of wrestling match among scholars about the identifying terminology for bindings on Greek manuscripts with the term “byzantine binding” in wide use and applied to almost all traditional bindings on Greek manuscripts, but never clearly defined.³² More recently, since the initiation of the Ligatus survey of Greek and other bindings belonging to the St. Catherine’s monastery on the Sinai Peninsula, the publication of the project assessment manual and survey forms, and the advent of the *Language of Bindings Thesaurus* (LoB) website, also a Ligatus project, a different way of describing Greek bindings is becoming current, and they are now referred to as “genuine Greek-style bindings,” “Greek-style bindings,” or “hybrid Greek-style bindings.”^{33, 34}

One way to approach these terms is to pose “Greek binding” as the umbrella term that can refer to any Greek binding made at any period in the tradition with “genuine Greek-style bindings,” “Greek-style bindings,” and “hybrid Greek-style bindings” as subcategories. The following are definitions of the three subcategory terms from the *Language of Bindings Thesaurus*: Figs. 1.1 (chapter frontispiece) and 1.2

idea of artisan intuition and choice leading to change arises – the maker either intuitively finds a path to a different structural choice or is influenced by seeing a different structure used on another binder’s work.

30. For an illustrated discussion of craft influence on binding practices, see Boudalis, Georgios. *The Codex and Crafts in Late Antiquity*. New York: Bard Graduate Center, 2018.

31. Kalligerou, Maria. “Tenth-Century Georgian Manuscripts in the Library of St. Catherine’s Monastery, Sinai.” In *Care and Conservation of Manuscripts 11*. Eds. Matthew James Driscoll and Ragnheiður Mósedóttir, 151. Copenhagen: Museum Tusculanum Press, University of Copenhagen, 2009. Kalligerou provides an excellent discussion of the features of Georgian bindings and the structural elements they share with the other Near Eastern traditions.

32. The history of bookbinding terminology is complicated by changes over time, as bookbinders, book conservators, and binding historians continue to try to refine and standardize terms. Earlier scholars tended to use the language of art and architecture to describe bindings, and in many cases, those terms have dropped out of use, but as binding scholar Pamela Spitzmueller has pointed out, those terms should continue to be valued for what they tell us about the way bindings have been assessed over time. Personal communication between Pamela Spitzmueller and the author, August 2014.

33. The Ligatus assessment manual and survey form for the St. Catherine’s Monastery project was downloaded from: <<http://www.ligatus.org.uk/sites/default/files/manual20050110.pdf>>; accessed October 2020.

34. LoB: <<https://www.ligatus.org.uk/lob/>>; accessed June 2019. The website is a valuable source for terminology, set up on a system of hierarchies; contributors include Dr. Athanasios Velios, who was a participant in the St. Catherine Project.

genuine Greek-style bindings

Bindings made in the tradition that was practised in the territories and period of the later Byzantine empire (A.D. ca 1000–1453) and that are also, for that reason, often referred to as Byzantine bindings, but the stylistic and structural features shared by such bindings may be found outside the strict geographical and temporal limits of the Byzantine empire. The term Greek-style binding usefully avoids the limitations of using the word Byzantine. The Italian term *alla greca* and the French *à la grecque* are used to describe bindings made in the Greek style in those two countries. The distinctive features shared by such bindings made in the genuine Greek manner must include unsupported sewing structures (which may be sewn in two sequences) and consequently smooth spines which are often heavily rounded, a sewn-board attachment, projecting endbands sewn to the edges of the boards and bookblocks cut to the same size as the boards. Greek-style bindings will often also have grooves cut into the edges of the boards and fastenings in the form of double or triple interlaced straps laced through one board which are attached to ring clasps with [*sic*] which fit over edge pins in the edges of the other board.^{35, 36}

Greek-style bindings

Bindings recognisable by a variety of features including smooth spines, projecting endbands, bookblocks and boards of the same dimensions, frequently with grooved board edges, and fastenings with edge pins, which may be either genuine or hybrid Greek-style bindings.³⁷

hybrid Greek-style bindings

Imitations of Greek-style bindings made outside Greece which adopt only the external features of Greek-style bindings, and often retain supported sewing.^{38, 39}

Telling the difference

The terms above can be confusing; reading the definitions for “genuine Greek-style binding” and “Greek-style binding,” they appear to be interchangeable, and for the purpose of clarity, the description of every identifiably Greek binding in this catalog will use only the term, Greek binding. The definition of the term “hybrid Greek-style binding” is distinct and will also be used in the descriptions where applicable: a binding assumed made outside of Greece, made with a nod to traditional features, but usually bearing some Western

35. The term “bookblock” is the British spelling and “book block” is American.

36. LoB, definition of genuine Greek-style bindings: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=genuine+greek-style>; accessed April 2020.

37. LoB, definition of Greek-style bindings: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=greek-style+binding>; accessed April 2020.

38. LoB, definition of hybrid Greek-style bindings: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=hybrid+greek-style+binding>; accessed April 2020.

39. Berthe van Regemorter authored an eloquent statement on the Greek binding tradition and why imitating that tradition when binding and rebinding Greek texts in Europe mattered: “When an object has a very characteristic shape our memory retains it. Even when we think we are only concerned with its decoration, we do not forget its form. The humanists knew how the manuscripts bound in Greece or the Near East looked and could not conceive of a Greek book in a binding like that of a Latin one. From the beginning of the Renaissance they found binders in Italy who could satisfy their demands, and even in later times bibliophiles attached importance to the form of their treasures.” Regemorter, “Binding of Greek Manuscripts.” In Regemorter, *Binding Structures in the Middle Ages*, 71.



Fig. 1.2. Front cover of Mich. Ms. 130, a skeleton binding that serves as an aid to understanding underlying structure.

binding element, such as supported sewing, non-Greek endband styles, metal clasps, or gold tooling or stamping – these disqualify the binding from being considered genuinely Greek in style.

Study the typical characteristics in the definitions above as you make your descriptive notes, and if you have any doubt or speculation about a feature on a binding you are describing, state the doubt and the reason for it, and identify any speculation on your part (or by another scholar) for what it is: a guess. This caution holds true as you study any of these bindings, looking for characteristic materials and structures: Is the binding contemporary with the date of the manuscript? Is the binding the primary, or original binding, meaning the first binding of this manuscript? What is the board sewing/hinging method? What style of bridling is used? Is the endband traditional? Is there evidence of a secondary endband? Is it woven on one core or two, or more? What type of leather is used? Goatskin was traditional, but beware of guessing; use leather as your default term. There are numerous elements to assess on each of these bindings – when you can, that is. Time, wear, and damage assist examination and description of historical bindings, but most of these bindings were well-made with strong materials, meant to hold up with heavy use, and very often, they have.

The same descriptive challenges greet you again and again: you only see half the story, if that much, on many bindings. For example, you can see the sewing in the center of the quire, but the spine is covered up. You know that tradition dictates that unsupported, link-style sewing should be recessed in v-shaped notches cut in the quire folds, but you cannot be certain because you cannot see the sewing on the spine of the manuscript. You can make an assumption that the sewing is traditional based on the fact that the spine is smooth, indicating recessed sewing, and if the book could be opened to the center of the quires, you might see the v-shaped notches of the sewing stations and the sewing thread running between stations. If there is no evidence of a sewing support resting in those notches, your assumption of traditional unsupported sewing is likely. And it is a good assumption, but your descriptive note should indicate assumption, not firm evidence. “Probably,” “possibly,” and “uncertain” are very handy words.

DESCRIPTIVE TERMS AND PHRASES USED IN THIS CATALOG’S BINDING DESCRIPTIONS

The following is a listing of descriptive terms and phrases you will find used in the binding descriptions in Chapters 2 through 5; the Figures in all six chapters are numbered with the chapter numeral first, followed by the specific image number next. They are arranged in the same order as below and refer to the typical material, structural, and decorative elements found on Greek bindings, drawing in part upon the Ligatus assessment manual developed for the St. Catherine’s survey project, the online *Language of Bindings Thesaurus* (LoB), and on other sources cited. Many of the terms below are accompanied by the manuscript, illustration, and chapter numbers of a specific binding or bindings in the catalog that possess the feature under discussion to allow you to page ahead to see the indicated images. See Figs. 1.1 and 1.2 for labeled images of two Greek bindings in the U-M collection illustrating exterior and interior materials and structure.

Boards and board preparation

- wooden board types

Poplar common, also see conifer, oak, beech, walnut, fruitwoods, and olive.⁴⁰ Note grain direction, whether hardwood or softwood, if possible.

40. Szirmai, *Archaeology*, 73.

- board-shaping

Note shape; spine edges of boards often rounded in some way, see board-shaping diagrams in Szirmai and Federici and Houlis et al.⁴¹ Ms. 14: Fig. 2.11c.

- grooved board edges

Grooves cut into the edge of a board; they are characteristic of Greek binding. They may stop short of the corners or run corner-to-corner and may be v-shaped or semi-circular, sometimes ending in forks. It is believed that they are meant to emulate the appearance of Coptic double boards.^{42, 43} Ms. 16: Figs. 2.21a–b. The edge grooves on Ms. 134 are v-shaped and end shy of the corners in a decorative fork.⁴⁴ Ms. 134: Fig. 5.42a–b.

- square board edges

Cut edges of the board left as is, no shaping or grooving, on head, tail, or fore edge. Ms. 14: Fig. 2.11b.

- asymmetrical combination of square and grooved edges

There is only one example in this collection. Ms. 101: Figs. 5.27, 5.29a–b.

- flush boards

Boards that have been cut flush to the same height and width as the manuscript, typical on traditional Greek bindings.⁴⁵ Figs. 1.1, 1.2 and Ms. 15: Figs. 2.14, 2.15, 2.17, 2.18a.

- board-edge recesses

“Short lengths of the head and tail edges of boards with squares which are adjacent to the spine and are cut down to the height of the bookblock to allow Greek-style endbands to be sewn to the boards. This type of board preparation would appear to be restricted to Western European imitations of Greek-style bindings (hybrid Greek-style bindings), but has not yet been recorded on a genuine Greek-style binding.”⁴⁶ Mich. Ms. 60, described and illustrated in Chapter 4, appears to have this style of board recess.

- reused boards

Like all early binding traditions, the recycling and reuse of wooden boards and covers were common in Greek traditional binding. Ms. 69: Figs. 4.30a–b, 4.31–4.33.

41. Szirmai, *Archaeology*, 75, Figure 6.9; Federici, Carlo, Kostantinos Houlis, Paul Canart, Francesca Pascaliccio, and Gaetano Sabatini. *Legature bizantine vaticane*. Roma: Fratelli Palombi Editori, 1988, 28.

42. Petersen, Theodore C. *Coptic Bookbindings in the Pierpont Morgan Library*. Part I, Fig. 35. Unpublished typescript, ca. 1949. The Legacy Press will publish this book in 2021; the editor is Frank Trujillo. Petersen lists five examples of double papyrus boards among the Morgan Hamuli bindings: M. 569, 570, 574, 575, and 672.

43. Regemorter, Berthe van. “The Influence of Egypt on the Binding of Greek Manuscripts.” In Regemorter, *Binding Structures in the Middle Ages*, 57–60.

44. Szirmai, *Archaeology*, 74, Figure 6.9c. Also see Federici, *Legature byzantine vaticane*, 28, Figs. 19 and 20.

45. LoB, definition of cut-flush boards: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=cut-flush+boards>; accessed June 2019.

46. LoB, definition of board-edge recesses: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=board-edge+recesses>; accessed June 2019. Boudalis appears to differ on this definition; see Boudalis, “Endbands,” 29–49, 34, Figure 17.



Fig. 1.3. An example of zigzag bridling inside the front cover of Mich. Ms. 101.



Fig. 1.4 An example of Southern Slavic style of board bridling inside the front cover of Mich. Ms. 19.

Sewing

- bridle(s), bridling

“The threads laced through holes drilled in the boards to which the outermost gatherings can then be sewn or attached by thread loops. This is a typical feature of Greek-style bindings and seldom if ever found elsewhere.”⁴⁷ The bridling thread travels from one station to the next, making horizontal wraps at each station, sometimes recessed in channels, then traveling on to the next station, usually via diagonal channels (creating a zigzag effect) and occasionally straight-line (vertical) face of the boards; of nine examples in the U-M collection where the bridling is visible, only Ms. 38 has the bridling on the outside.⁴⁸ A distinctive

47. LoB, definition of bridles: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=bridles>; accessed June 2019. Note: LoB uses the term “bridle” with the term “hinging loops” as an alternative; Petersen uses “hinging catches” with reference to the bridling of late-Coptic boards (*Coptic Bookbindings*, Part I, 53, and Szirmai uses the term “hinging loops” (*Archaeology*, 69).

48. Szirmai, *Archaeology*, 71–72 and Figure 6.6a–c.

bridling variant has hinging threads resting in v-shaped channels cut in the boards, believed to be a southern Slavic style, first identified by Regemorter.⁴⁹ ⁵⁰ Figs. 1.3–1.4.

- sewn-board attachment

“Attaching boards to the bookblock by sewing thread only, either directly or indirectly. This form of attachment may be found on both supported and unsupported structures.”⁵¹ Figs. 1.2–1.4 and Ms. 65; Fig. 4.14a.

Sewn-board-attachment styles can be difficult to determine. It is a technique typically used with wooden board bindings in North African and Near Eastern binding traditions (Ethiopian, Greek, and Armenian, for example). The sewing originates from the first board, transferring to the text quires, and finishes with the attachment of the second board. There are a variety of ways the sewing is anchored in the boards, such as holes drilled through the board, tunnels drilled in the board’s spine edge exiting on one or both faces of the board, or a combination corresponding to the text sewing stations. Part of the system involves bridles, a method of board attachment that probably originated with Coptic binding around the 7th/8th century. The evidence we have indicates bridling in the Coptic tradition was only done on cartonnage boards. Holes are pierced along near the spine edge of the boards at stations corresponding to text sewing stations; multiple thread-wraps are made, crossing the spine edge of the board, the thread traveling to the next station, wrapping, and so on until all the bridles are made. The text-to-board attachment is done via independent thread loops tying together board bridle to text sewing station, by a traveling thread visiting and wrapping around each set of board/text stations, or by thread extensions from the text block sewing that perform the same maneuver. Greek bridling is very similar but used on wooden boards with channeling and tunneling involved. Unless you can see both the exterior and interior faces of one the boards, as well as a spine edge of a board, and inside the first or last sewn quires, it is difficult to tell whether boards are sewn and by what method. Federici and Houlis et al. suggest in three sewing diagrams that Greek bindings could have boards sewn along with the manuscript quires, or boards sewn onto or attached to the manuscript by methods similar to late-Coptic bridled board attachment.⁵² Figs. 1.2–1.4.

- unsupported link-style sewing

Type of sewing, also referred to as chain-stitch sewing, without supports, in which the thread as it emerges from each sewing station is taken behind the sewing thread of the previous quire before returning inside the

49. Regemorter, Berthe van. “The Binding of Yugoslav Cyrillic Manuscripts.” In Regemorter, *Binding Structures in the Middle Ages*, 194–195. Szirmai, *Archaeology*, 74, Figure 6.8. It should be noted that while Regemorter appears to be the first scholar to identify this style of board lacing as Slavic, Petersen illustrated a similar type of lacing in *Coptic Bookbindings* in Fig. 23. Petersen describes it thusly in the caption: “Method of providing separately laced hinging links of cord for wooden bookcovers [excised in TS: as seen in Ms. M. 748, *The Four Gospels* in Greek, Anatolia or Southern Italy, 9th to 11th century.]”

50. Petersen, *Coptic Bookbindings*, Part I, 51–59, Figs. 25–28. Bridled *papyrus* (cartonnage) boards are common on late Coptic bindings; zigzag styles are typical and Petersen identifies four variants. The U-M Library Papyrology Collection contains numerous fragments of papyrus boards and other binding fragments, see Miller, “Puzzle Me This,” 244–264.

51. LoB, definition of sewn-board attachment: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=sewn-board+attachment>; accessed June 2019.

52. See Federici and Houlis et al., *Legature byzantine vaticane*, 29–31, Figs. 2–I through III.

Fig. 1.5. A beautiful example of double-sequence sewing (biaxial stitch disposition). Note the braid effect of the extended-link sewing; in this case, the sewing thread from the quire being sewn drops two or more stations below to loop and return to the quire, creating the braid effect. Note the typical pattern of this style of sewing: |>>>>|<<<<| and the traveling thread arrows) connecting the two halves of the book down the center of the spine. Mokretsova, "Principles of Conservation," 145, Fig. 1b.

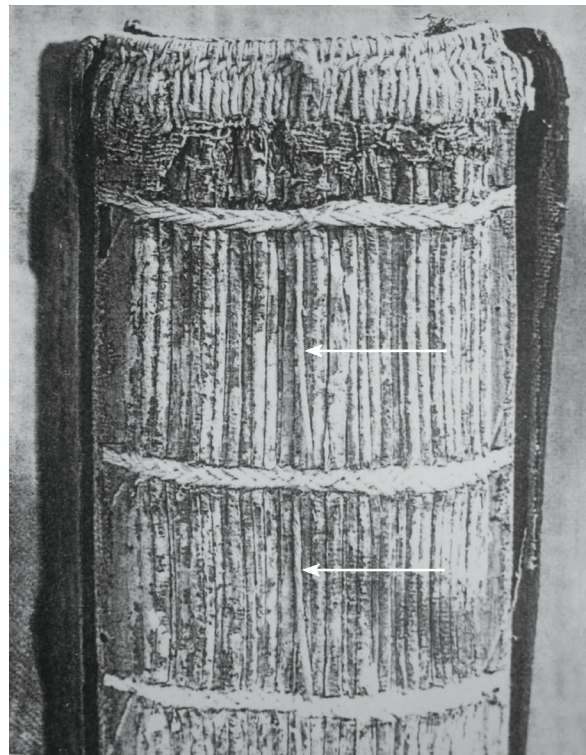


Fig. 1.6. An example of extended unsupported link-style sewing on the spine of Mich. Ms. 70.

same quire, creating a loop, and then traveling on to the next sewing station.^{53, 54} Unsupported link-style sewing can be done with and without kettle stitches. Kettle stitches are the first and last sewing stations when a book is sewn with one thread and one needle. The kettle stations are the entry and exit holes for kettle stitches; as the sewing of the quires commences and continues, the thread emerging from a kettle station forms a half loop around the previous kettle stitch before entering the next quire.⁵⁵ Figs. 1.5–1.6 and Ms. 22: Fig. 2.37a–b.

53. LoB, definition of link unsupported sewing: <[https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=link+unsupported+>https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=chainstitch+>](https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=link+unsupported+>)

54. Spitzmueller, Pamela and Gary Frost. "A Trial Terminology for Describing Sewing Through the Fold." *Paper Conservator* 7, no. 1 (1982): 44–46.

55. LoB, definition of link supported sewing: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=link+supported+>

- extended-link sewing

Unsupported link-style sewing where needled thread climbs down more than one gathering to form a link; this creates a bulkier but stronger sewing connection and can look like a braid. Found on Greek-style bindings.⁵⁶ Fig. 1.5–1.6.

- recessed sewing

Recesses cut across the spine of a book block with a saw or knife, to accommodate unsupported link-style sewing; recesses cut as “v” or semi-circles; typical on Greek-style bindings.⁵⁷ The recessed sewing creates a smooth spine, and sewn-on boards draw the manuscript into a more or less pronounced curve, typical of Greek binding.⁵⁸ Figs. 1.2.

- double-sequence sewing

“A bookblock which is sewn unsupported in two halves starting from each board with the two halves tied together down the centre of the spine. This style is typical of many genuine Greek-style bindings, and allowed the binders to create acute joints along the spine edge of both boards.”⁵⁹ Inna Mokretsova includes an image of a beautiful example of this sewing style in her article on the conservation of Byzantine bindings, p. 145, Fig. 1b.⁶⁰ There are a number of bindings in the U-M collection that appear to be sewn in this style, including Mich. Mss. 51, 57, 59, 65, 101, and 130. Others are probably sewn this way, but the evidence is not visible. Here is a representation of how double-sequence sewing would look on the spine of the manuscript: |>>>>|<<<<| with the outer upright bars representing the boards, the angle brackets representing the direction of the sewing/looping and the central upright bar representing the meeting point of the two sewn halves of the text. Fig. 1.5 and Ms. 22: Figs. 2.37a–b.

Biaxial stitch disposition: Another term for “double-sequence sewing,” initiated by Guy Petherbridge.⁶¹ Szirmai uses and illustrates this term with an excellent drawing.⁶² Fig. 1.5.

56. Szirmai, *Archaeology*, 67–68.

57. Regemorter, “Binding of Greek Manuscripts,” 73. Regemorter uses and defines the term *grecquage*, once used to describe the practice of cutting notches in quires (sawing in) to aid recessed sewing; she describes the way a Greek binder would make the cuts (chisel) vs. how a Western binder would do so (with a saw). Szirmai cites the term, but only refers to the Western method of using a saw to make the cuts. Szirmai, *Archaeology*, 84. This and many other terms also appear in a bilingual glossary in Regemorter, “Byzantine Binding,” 307.

58. LoB, definition of recessed sewing: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=recessed+sewing>; accessed August 2020.

59. LoB, definition of double-sequence sewing: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=double-sequence+sewing>; accessed June 2019.

60. Mokretsova, Inna. “Principles of Conservation of Byzantine Bindings.” *Restaurator* 15 (1994): 142–172.

61. Petherbridge, Guy. “Sewing Structures and Materials: A Study in the Examination and Documentation of Byzantine and Post-Byzantine Bookbindings.” In *Paleografia e Codicologia Greca. Atti del il Colloquio Internazionale (Berlino-Wolfenbüttel, 17–21 ottobre 1983)*. 2 vols. Eds. Dieter Harlfinger, Giancarlo Prato, Marco D’Agostino, and Alberto Doda, 1:206, Figs. 11–12. Alessandria: Edizioni dell’Orso, 1991. In the same work, Petherbridge uses the term “uniaxial stitch disposition” to refer to a book sewn continuously at one time, rather than in two parts, by way of contrast with biaxial sewing. Uniaxial sewing is represented thusly: |>>>>>>>>>| with the two upright bars representing the boards and the angle brackets in between representing the direction of the sewing/looping. The use of open (<) or closed (>) angle brackets in the diagrams depend on whether sewing began in the first or last quire of a manuscript.

62. Regemorter makes this point, comparing the Greek cloth spine linings to the leather spine linings of the Nag

Spine linings

- overall spine linings

Cloth linings, usually plain, of linen, cotton, or hemp are cut to the height of, but wider than, the spine. Each extension, sometimes a third or half as wide as the board, is adhered to the outside of the boards.^{63, 64} Linings with extensions adhered to the outside of the boards are typical of Greek-style and Islamic bindings. Also observed on late-Coptic bindings with spine linings.⁶⁵ “Spine lining” and “overall spine lining” are used interchangeably in this catalog, unless the lining does not extend over on to the boards and requires a different description. The color range of most of the spine linings visible in this collection varies from natural cream to dark brown, depending on age and exposure, and is expressed in most of the descriptions simply as “plain.”⁶⁶ Fig. 1.7b and Ms. 19: Figs. 2.30a, 2.30c, 2.31a.

Endbanding

- projecting endbands (also commonly referred to as raised endbands)

Endbands that project beyond the height of the boards because the boards are flush with the height of the book block, and the endband cores are able to extend over on to the board edges and be tied down. Typically worked on single or multiple cores of cord and sometimes, leather or parchment (vellum). Primary endbands are usually of plain thread around a core or cores anchored in the boards and with tie downs in all or most of the quires, usually with packing (extra wraps of thread added around the core) between tie downs. Secondary endbands are usually made with colored thread (wool or silk) and are woven on the primary endband, without tie downs inside the quires.^{67, 68, 69} Figs. 1.1, 1.2, 1.7a–d and Ms. 130: Figs. 5.31a–b, 5.32a–b, 5.33. For excellent drawings of the steps involved in creating a traditional Greek endband, see those drawn by Kyle Clark in the Appendix, Figs. A.30 through A.37.

Hammadi Codices. Regemorter, “Byzantine Binding,” 273. Szirmai, *Archaeology*, 68–69.

63. Regemorter mentions that sometimes the overall spine lining extended all the way across each board to the fore edges. Regemorter, “Binding of Greek Manuscripts,” 79. The only identifiable example of such a lining in the U-M collection is on Mich. Ms. 172. Manuscript BL Add MS 28821/1, described in fn. 75, appears to have had a spine lining that may have reached edge to edge when intact. I found no mention of edge-to-edge spine linings in other sources, including Szirmai, *Language of Bindings*, Mokretsova, and Boudalis.

64. Mokretsova mentions that some byzantine (Greek) bindings have leather spine linings. Mokretsova, “Principles of Conservation,” 143.

65. LoB, definition of overall spine linings: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=overall+spine+linings>; accessed June 2019; Petersen, *Coptic Bookbindings*, Part I, 55–58, Fig. 36.

66. There are six manuscripts in the collection with blue, blue-green, or indigo cloth spine linings: Mich. Mss. 34, 45, 47, 101, 130, and 172. One, Mich. Ms. 97, has a colorful stenciled spine lining.

67. LoB, definition of extended endbands: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=extended+endbands>; accessed June 2019; LoB, definition of projecting endbands: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=projecting>; accessed September 2020.

68. Please note the use of the term “endbands” when referring to both endbands. “Headband” or “tailband” is used when referring only to the endband at the head or tail of the spine.

69. There are many variations of endband styles documented by Boudalis in “Endbands in Greek-Style Bindings.” He includes a useful cross-cut diagram of three ways that anchor holes are drilled into the boards in Fig. 11 on p. 33. If a binding is intact, it is often impossible to determine which anchoring method was used or even how many cores an endband has. Szirmai has another useful diagram for sewing a primary endband on two cores in *Archaeology*, 77, Figure 6.10, and a beautiful historical example of the same endband style in Figure 6.11; see Fig. 1.9 in this catalog.

Covering (materials and features)

• leathers

Goatskin is common on Greek bindings; the term “morocco” was first used in the early eighteenth century for a very specific type of red-dyed skin made from hair sheep, but the term has tended to be incorrectly applied, retrospectively, to every red goatskin used for binding. It is better to use the term goatskin, or if the leather is not easily identified, use leather.⁷⁰ Other leathers documented are sheepskin or calf.⁷¹ Colors are mostly different shades of brown, red/brown, and sometimes black.⁷² Usually leathers have darkened with age, but turn-ins tend to show the original color. A good example of this can be seen in images of Mich. Ms. 21, described and illustrated in Chapter 2. Figs. 1.1, 1.8, 1.9.

• textile covers

Treasure bindings are often covered entirely in precious metals embellished with precious gems, or carved ivory, or are covered with textiles (brocade, silk, velvet). Regemorter describes textile bindings as used on “slightly less luxurious manuscripts” than manuscripts covered with precious metals and embellishments.⁷³ Sometimes textiles were used as a secondary cover over leather on some treasure bindings.⁷⁴ Four examples of textile bindings on Mich. Mss. 24, 25, 28, and 30 are described and illustrated in Chapter 2. Mich. Ms. 30 has a pieced brocade binding with intentional holes around the front-cover edges that may indicate embellishments. Mich. Ms. 76, described and illustrated in Chapter 4, has a painted canvas secondary covering.

• tight back

Feature of the spine in which the covering material is adhered directly to the back of the sewn text block or on top of the previously adhered spine lining; the latter typical on Greek-style bindings.⁷⁵ Fig. 1.7b.

• tight-back vs. hollow-back spines

There is some question regarding tight vs. hollow backs when considering traditional Greek bindings. A tight-back binding is one where the spine of the cover is adhered directly to the bare or lined spine, or back, of the manuscript. A hollow-back binding is one where the spine of the cover is not adhered, intentionally, allowing the free flex of the material crossing the spine during opening and closing. Some early binding traditions, such as Syriac bindings, are known to have hollow backs, the “hollow” or non-adhered portion of the cover extending beyond the spine for a distance on to each board, thus allowing the flex to act across the joints and beyond. The question concerning Greek bindings is whether they were all tight back or not. There seem to be quite a few where the spine is detached, but whether this is due to the natural release that often happens as a binding ages and the adhesive fails, or whether some of these are examples of hollow backs is something to think about as bindings are examined and described.⁷⁶

70. LoB, definition of goatskin: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=goatskin>; LoB, definition of morocco: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=morocco>; accessed June 2019.

71. Regemorter, “Binding of Greek Manuscripts,” 81.

72. Federici and Houlis et al., *Legature bizantine vaticane*, 35–36.

73. Regemorter, “Byzantine Binding,” 261.

74. Regemorter, “Binding of Greek Manuscripts,” 81; Szirmai, *Archaeology*, 80–81.

75. LoB, definition of tight back: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=tight+back>; accessed June 2019.

76. This thoughtful question was raised by Anna Embree. Personal communication, 25 August 2020.

- board linings

Parchment or paper lining is added to the inside of the board before the covering was added and the turn-ins made. Sometimes done to strengthen a weak board. Cloth board linings are common on Ethiopian, Islamic, and Armenian bindings. See Mich. Ms. 96, described and illustrated in Chapter 5.

- turn-ins

Folding in and adhering of the cover material extending beyond the height and width of the boards, generally turn-ins are uneven on Greek bindings and often notched. Figs. 1.3, 1.4.

- corner turn-in styles

Include overlapping, mitered, mitered with overlap, tongue, and overlapping tongue styles, and occasionally examples of right-angle, or square, corner turn-ins. A mitered example can be seen in Fig. 1.4 and Ms. 16: Fig. 2.22b; Ms. 21: Fig. 2.33b–c.

- turning in and extended endband cores

Leather turn-in is slit to avoid covering all of the endband core extension, the slit leather stretched to rest below the extension on the inside of the board, fully or partially covering the core tie downs; the term “cheeks” is applied to this structure.⁷⁷ Sometimes the slit leather is partially cut away, leaving the board face beneath the extension bare; sometimes an extra piece of leather is added to create cheeks. The stretched or added leather is sometimes decorated with blind-tooled two- or three-ringed circles.⁷⁸ Figs. 1.7a, 1.7c–d and Ms. 31: Fig. 2.64b–c.

- pegging

Small metal or wooden pegs used to hold a cover in place, usually located on the exterior or interior of the cover near the edges; seen on some of the manuscripts in this collection, including pegging inside the grooves on some board edges. An example of a pegged cover is that of Mich. Ms. 31, described and illustrated in Chapter 2. Ms. 31: Fig. 2.64b.

- pastedown

Leaf extending from the book block (usually conjugate) adhered inside each cover once the turn-ins were made. Most of the bindings in the collection show evidence of having had pastedowns.

Cover decoration

- leather decoration

Traditionally, only blind tooling is found on Greek bindings, typically consisting of lines, circles, and a variety of other shaped tools from fleurs-de-lis to rhombs filled with a variety of figures.⁷⁹ It is unknown whether the

77. Szirmai, *Archaeology*, 77, Figure 6.11.

78. Federici and Houlis et al. illustrate the shapes and, in one case, decoration of the slit leather inside the board below the endband core extension in drawings in *Legature bizantine vaticane*, 38, Fig. 30, Nos. 3–8. Two- and three-ring circle tools, also referred to as “annules” or “annular dot tools,” are nearly ubiquitous in their use on Near Eastern bindings, particularly those of Coptic, Ethiopian and Greek origin.

79. Regemorter has this to say about tools: “There are two types of tools, those of which the outline is clear cut and geometric – circle, square, rectangle, lozenge [another term for a diaper ◇], triangle – and those cut with an outline that follows the shape of the ornament itself.” Regemorter, “Byzantine Binding,” 293. She includes further description of these shapes on p. 300 and rubbings of examples she has observed on p. 303, Pl. 59.

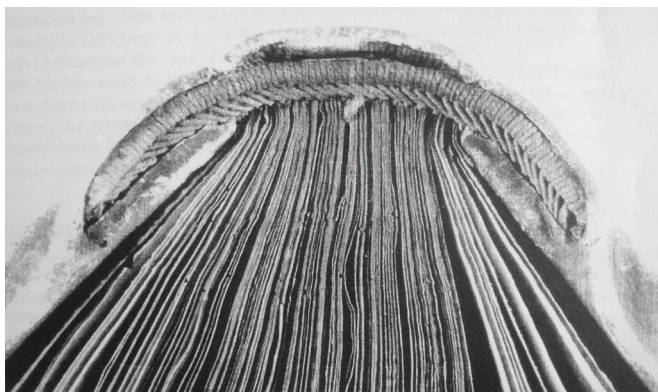


Fig. 1.7a. Head edge; an example of a typical Greek primary endband with double cores, in perfect condition, note the marker thread in the center extending from under the endband and entering a quire. Szirmai, *Archaeology*, 77, Figure 6.11.



Left: Fig. 1.7b. Ms. 134. Spine; another style of traditional endband; note the tie-down threads.

Right: Fig. 1.7c. Ms. 134. Tail edge; note the thick endband core, and the edge titling.



Fig. 1.7d. Ms. 16. Head edge; a traditional endband worked with a secondary endband in broad bands of red, yellow, and cream (?) thread, now very faded. Ms. 79 (Ch. 4) has a similar style of endband.

tooling was done with cold or heated tools, but the assumption is that before the fourteenth century, the tools were probably used cold on dampened leather.⁸⁰ Thereafter heated tools became more commonly used. Sometimes the figured hand tools are referred to as “stamps,” and they were used singly as part of the design field or in close repetition to build up a larger design or to fill a frame, for instance. Later bindings sometimes feature large “stamped” centerpieces where an engraved metal or wooden block transferred a design onto the leather with the aid of a press. Gold tooling is unusual on traditional Greek bindings; its presence usually indicates a hybrid Greek binding or an entirely different style of binding. Figs. 1.1, 1.8, 1.9.

Design layouts usually include border lines, panels or frames (one or more), and a central panel usually divided with vertical, horizontal, and diagonal lines. The divisions create empty spaces that are either left empty or filled with decoration. The most common shapes of the fields on Greek bindings are diaper (◊), saltire or St. Andrew’s cross (X), triangular, or rectangular. (Note that in the scholarly literature, the terms rhomb, diaper, and diamond all refer to the shape represented by the symbol ◊.) Depending on the design goal, these fields can consist of one large diaper, for instance, or multiple small ones, or the lines that create a large diaper but also bisect it into smaller fields. The typical shapes of decorative tools include filled diapers (◊), filled circles, filled squares, and filled rectangles; empty versions of these shapes are not used. The fills are generally vegetal, geometric, or zoomorphic, including imaginary creatures such as double-headed eagles. Filled rectangles are often used in repetition to fill a frame; the fill is usually a variation on interlace, vegetal (vine), or arabesque.

80. Regemorter defines blind tooling (*gaufre*) as follows: “Blind tooling of leather or *estampage à froid*, is a decoration without gold obtained from the impression of slightly warm tools or fillets, or cold tools impressed on damp leather. The tools used for blind tooling are cut so as to leave an impression at two different levels. Usually the design appears in relief.” Regemorter, “Byzantine Binding,” 307. Georgios Boudalis would later use much the same characterization of heated tools in: *The Evolution of a Craft: Post-Byzantine Bookbinding between the Late Fifteenth and the Early Eighteenth Century from the Libraries of the Iviron Monastery in Mt. Athos/Greece and the St. Catherine’s Monastery in Sinai/Egypt*. 3 vols. PhD dissertation, Camberwell College of Arts, University of the Arts London, 2004, 1:267.



Fig. 1.8. Front cover of Mich. Ms. 180; note the way line tooling has divided the cover into compartments of different shapes: square, rectangular, diapered (◊), and saltire (X).



Fig. 1.9. Back cover of Mich. Ms. 180; note how differently the line tooling divides this cover, the lines creating a large diaper *and* a large saltire design. Asymmetrical cover decoration is common on Greek bindings. The decorative tooling is easier to see on this cover.

There are also decorative tools that do not have an outside border and are cut in a distinct shape, including fleurs-de-lis, palmettes, rosettes, and other flower shapes. Figs. 1.1, 1.8, 1.9.

Edge decoration

Edge decoration is not uncommon on Greek bindings, but there are only a few examples of any type of edge decoration in the U-M collection. This section heading is only added to those descriptions where some type of edge decoration is visible or suspected.

Cover furniture

- bosses

Shaped metal pieces used at the corners and center of a cover; the shapes include domes, fleur-de-lis shapes, and lobed bosses; see Fig. 1.1 for decorative nailing and evidence of round bosses. Rows of three equaling nine or twelve domed bosses are seen on a few bindings in the collection. An excellent example with nine domed bosses or boss evidence can be seen on title-page frontispiece.

- corner and center plates

Attachments such as crosses and other decorative metal pieces. Fig. 1.1 and Ms. 29: Fig. 2.56.

Cover fastenings

• fastenings

Used to hold a book shut when it is not in use; in the case of parchment leaves, edge fastenings keep them from cockling and swelling. The fastenings can take a variety of forms and be made from different materials, but their essential function is to secure one board or cover to the other across the fore edge of the book block, and often the head and tail edges as well.⁸¹

• peg-and-strap-style

Term used in this catalog for a fastening typical of Greek bindings, composed of slit-braid leather straps, typically three per fastening, braided on variously shaped metal rings, extending from the back cover and catching on the corresponding peg or pegs set in the fore edge of the front cover.⁸² There are also examples of single fastenings on the fore edges and of four fastenings at head, tail, and two on the fore edge.⁸³ Ms. 26: Figs. 2.48a, 2.51a–b. The metal rings and external part of the straps tend not to survive; evidence they were present is in the form of holes drilled in the boards and the tail ends of the straps, which often remain inside the back covers.⁸⁴ See evidence of edge and side pegs on Mich. Mss. 182 and 130 in Figs. 1.1–1.2, and evidence of the holes pierced through a cover for fastening straps in Fig. 1.9. For excellent depictions of peg-and-strap attachments, see the drawings in the Appendix, Figs. A.50–55.

• pegs (pins)

Metal shafts with a sharpened end (tang) driven into a wooden board, usually on a board edge, over which pin straps or pin clasps can be fastened. They may be round or square, or have more shaping; some have bolsters.^{85, 86}

81. LoB, definition of fastenings: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=fastening>; accessed August 2020.

82. A slit-braid requires two strips of material, or one strip folded over on itself; the strips laced alternately one through the other via lacing slits. Triple straps were created from three individual strips of leather, or a wide strip slit to form three straps, the middle of the strip left whole.

83. Szirmai, *Archaeology*, 82, Figure 6.15, drawings of rings with and without straps attached and edge pegs. Mokretsova, *Principles of Conservation*, 156, Figs. 4a–b, photos of numerous rings and pegs. See Mich. Ms. 15, described and illustrated in Ch. 2 of this book and its four fastenings, specifically Figs. 2.17, 2.18b; see also Figs. 1.12, 1.13.

84. There are no catch rings remaining on any of the U-M Greek bindings, but they do survive in other collections. For example, see Boudalis, *Evolution of a Craft*, Ms. S. 663, 2:392, photo 14.

85. LoB, definition of pins: <<https://www.ligatus.org.uk/lob/concept/2987>>; accessed July 2020; LoB, definition of bolster: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=bolster>; accessed August 2020.

86. It is common for scholars to employ different terms for the same structure; it is important that readers, looking at a multitude of scholarly sources, remember this. An example is the use of pin vs. peg for the catches on traditional Greek bindings. LoB employs the term pin (<<https://www.ligatus.org.uk/lob/concept/2987>>; accessed July 2020), while other scholars, for example, Szirmai (*Archaeology*, 82) uses peg. LoB has an extensive hierarchy of terms for pin fasteners, including pins, pin clasps, spiked pins, side pins, edge pins, fastened edge pins, capped pin clasps, open pin clasps, etc. I have chosen to include pin in the terminology discussion and in definitions in this chapter, many of which derive from LoB, but I use peg, edge peg, and side peg in the binding descriptions. This choice is based on a preference for peg as used by Szirmai, and to the way the Merriam-Webster Pocket Dictionary (1958) defines them: peg: “n. 1. A small pointed piece, as of wood, used for various purposes. 2. *A projecting piece on which to hang things* [my italics]”; pin: “n. 1. A piece of wood or metal used to fasten articles together. v. t. 1. To fasten with a pin. 2. To seize and hold fast.” The irony is that the traditional term “peg” is also used numerous times in this catalog for small spikes of wood or metal nailed into covers and turn-ins to hold the leather in place, and in these cases, the term pin would be *much* more appropriate.

Typically metal, but ivory and wood are used for pegs on some bindings in the U-M collection, for example on Mich. Ms. 79 (ivory) and Mich. Ms. 130 (wood). Fig. 1.1.

- edge pegs

Metal (or bone, ivory, or wood) pegs inserted into the edges of a book board, usually the front board with a corresponding fastening usually composed of braided leather straps on a metal ring extending from the back cover to catch on the pegs.⁸⁷ Fig. 1.1 and Ms. 26: Fig. 2.48a–b.

- side pegs

Usually metal and usually with a pointed tang on their ends for driving into the outer side, or face, of a wooden book board, or set into already-drilled holes. They often have a bolster to prevent the pin from being driven too far into the boards.⁸⁸ Not as common as edge pegs on Greek bindings but typical of Armenian bindings; see the descriptions and illustrations of Mich. Ms. 43 (Ch. 3), and Mich. Ms. 96 and 130 (Ch. 5); see Fig. 1.2.

- bolsters

“Stopper,” often square, at the base of a peg with the tang extending beyond it. The bolster prevents the peg from being driven too deep into the board. Fig. 1.1 and Ms. 26: Fig. 2.48a–b.

- tang

Flat, blade-like extension on some catch pegs, the part driven into the board to secure the catches. See Figs. A.45 through A.48 in the Appendix.

- right-to-left fastenings

Looking at the fore edge of the binding, the strap part of the fastener originates on the right board (back board) and finishes (catches) on a peg set into the edge of the left board (front board); in shorthand, the fastening “finishes on the front cover.” Greek bindings typically fasten from right to left.⁸⁹

Titling, inscriptions, markers, inclusions

- titling

Inscribed in ink on the spine or one or more of the text-block edges; tooled on the spine; titled via a leather or paper title piece on the spine. Fig. 1.7c and Ms. 30: Fig. 2.63.

- inscriptions

A catch-all category including marks ranging from doodles to *ex libri*. The U-M Greek manuscript bindings abound in such marks, usually on the pastedowns but often directly on the bare wood inside the covers when the pastedowns have lifted or are missing.

- markers

Also known as registers, signets, bookmarks. Sewn, compound, plaited string, leaf string, looped string,

87. LoB, definition of edge pins: <<https://www.ligatus.org.uk/lob/concept/2987>>; accessed July 2020.

88. LoB, definition of side pins: <<https://www.ligatus.org.uk/lob/concept/3026>>; accessed July 2020.

89. LoB, definition of right-to-left fastenings: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=right-to-left>; accessed June 2019.

endband string, knotted string, and see below: board strap and leaf tab markers. Marker loops and endband strings can be seen on numerous manuscripts in the collection, including Mich. Mss. 24, 74, 80, 100, and 130, all described in Chapter 4. A marker thread is visible near the center of the manuscript, just beyond the endband, in Fig. 1.7a.

Board strap markers: Straps, usually of leather, attached to the inside of one or both boards of bindings, usually on fore edges with the outer ends inserted between the leaves of the book as a marker. Inner ends may lie over or under the turn-ins and, in the latter case, will emerge through holes made in the covering material. The inner end of the straps may be secured either by one or more nails or adhesive, and outer ends may be cut to a decorative profile. Board strap markers are a common feature of Greek-style bindings; originally thought to be lifting tabs.⁹⁰ There is no evidence of this style of marker in the U-M collection.⁹¹

Leaf tab markers: Small usually rectangular pieces of parchment, leather, paper, textile, or even metal, adhered to fore edges to mark locations of specific passages and beginnings of sections. Some project beyond the edge of the leaf; some are braided leather Turk's head knots. The tabs could be added at any time during or after the book was bound, though generally such tabs are believed to have been added later by owners/readers.⁹² There is one example in Mich. Ms. 24, described in Chapter 2, and a fragment of another on a leaf of Mich. Ms. 80, described in Chapter 4. Ms. 24: Fig. 2.43.

- inclusions

Anything added to the text, whether laid in, bound in, attached by sewing or adhered; an example would be a curtain added to protect a miniature. Marker loops and threads, usually bound in, could be considered an inclusion. Fig. 1.7a and Ms. 25: Fig. 2.47a–c.

OUTLINE FOR THE BINDING DESCRIPTIONS

The descriptions herein address different parts of the binding structure and materials in roughly the following order – each description beginning with a synopsis of the binding features identified, followed by the description of the specific features.

Synopsis

Is the binding Greek in style or is it a hybrid Greek binding? If neither, one of the following might apply: “retrospective” (sympathetic): rebinding utilizing some Greek binding elements; “notable”: rebinding done in a recognizable tradition, such as Renaissance Italian, or bound in a design binding, or attributable to a known binder; or “unsympathetic”: rebinding usually in a modern style. Other information in the Synopsis includes whether the binding is contemporary with the dating of the manuscript, or not, and a list of binding features and measurements.

Boards

Material used, wood or paper-based boards; if wood, type of wood and grain direction, if obvious; board

90. LoB, definition of board strap markers: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=board+strap+markers>; accessed June 2019.

91. Georgios Boudalis has an extensive article on book markers in *Journal of Paper Conservation*, devoted to the late Christopher Clarkson. Boudalis, Georgios. “Straps, Tabs and Strings: Book-Marks in the Codices of the St Catherine’s Monastery in Sinai.” *Journal of Paper Conservation* 20 (January 2019): 81–105.

92. LoB, definition of leaf tab markers: <https://www.ligatus.org.uk/lob/search?search_api_views_fulltext=leaf+tab+markers>; accessed June 2019.

thickness measurements in millimeters; board preparation, including shaping, smoothing, square or grooved edges; and tool marks, if visible.⁹³

Sewing, spine lining, endbands

Sewing: Bridle/hinging description and description of holes/tunnels/channels for board attachment, if visible; sewing style and other description, if visible (unsupported, supported, extended link-style sewing, double-sequence sewing (biaxial stitch disposition); presence/absence of notching of quires for sewing; relative bulk of thread (thin, thick); physical condition of the sewing, e.g., intact, broken, lacking. Spine lining: Note if an overall spine lining or other; the material and the color (plain, colored, patterned); measurement of board overlap; and if visible, lining condition. Note non-traditional lining variations on hybrid Greek bindings or on rebindings. Endbands: Greek style or not; core number and material; color of primary thread; anchored in boards or not; exit points if visible; packed sewing or not; presence of secondary endband evidence or not; and the color and type of thread used for the secondary.

Covers

Material whether leather, parchment, tawed skin, cloth, paper, or a combination; condition. Turn-ins: depth, shape (trimmed out or uneven); corner turn-in style; presence of notching on turn-ins; wood pegs or metal nails used for securing the cover material on board edges and/or turn-ins; and presence or absence of pastedowns.

Cover decoration

Tooling in blind is typical (gold tooling indicates a hybrid Greek binding or another non-traditional binding type); decorative attachments such as bosses, crucifixes or enamels. Subcategory for edge decoration, including gilding, gaufering, and edge coloring, added when applicable.

Edge decoration

Type of decoration that is sprinkled or painted with media, the color of media, design description, gilding, gaufering, or a combination.

Cover furniture

Attachments such as bosses and their locations; notes about the evidence of missing attachments in the form of metal shanks, intentional holes (drilled/pierced), imprints from attachments, and color differences on cover material, indicating that attachments were once present.

Cover fastenings

Type of fastening – peg-and-strap-style is traditional; materials used such as wood, metal, ivory, and leather; notes on evidence of missing fastenings in the form of holes for pegs on the front cover and holes for straps on the back cover.

Titling, inscriptions, markers, inclusions

Note edge titling locations; direct titling on a cover; the use of title pieces. Inscriptions made by users, including

93. Stating a wood type without corroborative testing or consultation with an expert is a doubtful exercise in guessing; nevertheless, the wood types offered in a few of these descriptions are absolute guesses.

names, dates, pen practice, and drawings. Marker loops and threads, bound in. Inclusions bound in, adhered in, or laid in.

INDIVIDUALITY

One of the benefits of looking at a discrete collection of bindings that are largely the product of a well-documented binding tradition is how it allows you to learn as you go. Looking for traditional elements, and finding them, is energizing, and the longer you spend at it, the quicker you become in noticing and documenting such elements. That is a benefit and a reward.

Another benefit is to remark upon interesting elements that may repeat on other bindings in the collection, giving one ideas about a relationship and historical significance, and when resemblance is strong, the idea that similar bindings came from one maker's hand.

There are other rewards in store as you examine a collection like this one: the reward of paying attention and discerning original binding evidence beneath a repair or rebinding done with much different standards or from a different binding tradition. There is the surprise in noting the presence of something you perceive as unique, whether material, structural, or decorative. There is too, delight: from appreciating a beautifully made and preserved exemplar of the tradition, to finding a carefully pieced plain leather cover so beautiful in its piecing that it stuns you with both its intricacy and simplicity.⁹⁴ This collection has proven rich in tradition and equally rich in individuality.

Every handmade historical binding, whether belonging to an established binding tradition or not, is unique, so while you can declare two manuscripts are bound in genuine Greek-style bindings, you can never declare that they are identical. We do well to document what is unique or unusual, as well as what is recognizably traditional in a structure. Studying historical bindings is an endless feast, and so it has been with this collection of Greek manuscript bindings at the University of Michigan.⁹⁵

HOW MODELS ADVANCE OUR UNDERSTANDING OF HISTORICAL STRUCTURE AND BINDING TECHNIQUE

One way to thoroughly document a given historical binding in all its facets is to model it. Fig. 1.10. Book models that are generic in structure, based on sampling characteristic structures of numerous examples of a historical tradition, go hand-in-hand with models of specific historical exemplars from a specific collection – the former allows a researcher to understand the basic traditional structure, while the latter can give people an idea of how much variety there is among bindings from a specific tradition. Constructing a reproduction of a specific historical binding demands that you think very deeply indeed about the structure you seek to emulate, the why and the how, and whether you can find sympathetic, if not identical, materials to build with.

94. There is real joy in locating a fragment that has its own story to tell, such as this one belonging to the British Library (BL), a damaged cover removed from a paper manuscript dated 15th–17th century: BL Add MS 28821/1. It is well worth the time to visit the BL website to see this beautiful cover. It once protected a mathematarion. The wooden boards, red-cloth spine lining (faded on the outside, still vibrant inside), endbanding and sewing fragments, and part of the cover leather remain: beautiful in its worn way and in terrific condition, all things considered. Whoever removed the cover in 1967 disbound it very carefully, preserving all those sewing threads, and saving, rather than discarding, the cover, and for that we can be eternally grateful. Visit this link and see the two images of the original binding, a work of craft become art: <http://www.bl.uk/manuscripts/Viewer.aspx?order=b&ref=add_ms_28821!1_fblefr>; accessed October 2020. The manuscript was rebound in black leather with gold tooling. Another handsome example of a “cut off” cover from a 12th-century Greek Gospel with much of the sewing preserved can be seen on Moscow, Russian State Library F. 181 N 9, illustrated and described in Mokretsova, *Principles of Conservation*, 158, Fig. 5a.

Today the teaching of historical binding structures in bookbinding-training and book-conservation programs now routinely include replicating numerous historical binding traditions in either generic or specific model structures.

Anna Embree is professor in the MFA Book Arts Program in the School of Library and Information Studies at the University of Alabama (UA). She teaches courses and workshops in bookbinding, box making, and special topics in book preservation and book history. She has a strong interest in the physical and material aspects of book structures, she has collaborated with printers and papermakers on limited-edition handmade books, and she has exhibited widely. She grounds her students in historical book structure and materials, as well as in other branches of bookmaking. She writes:

Book structure and form are the focus and heart of my work. Achieving a synergy of excellence in the physical content, structure, and materials is foremost in my mind when I design a single book or an edition. I find inspiration in the content of the text, both in form and function, and I believe a truly successful bookbinding draws the reader in through the materials and aesthetics of the piece, while additionally operating in a manner that facilitates the reader's interaction with its pages.

The Appendix in this book is by University of Michigan library conservator Kyle Clark, a graduate of the UA MFA program; Embree was his bookbinding instructor. Clark offers a meticulous physical description of one binding in the U-M's Greek manuscript collection, Mich. Ms. 79, dated to the fourteenth century. Clark has not only thoroughly described the binding of Ms. 79 – its origin, materials, structures, and decoration – but has also created a facsimile model of the binding and documented his decisions and processes in words, photographs, and drawings.

THE BINDINGS INCLUDED IN THIS CATALOG

The bindings and fragments examined and described in this catalog total 100 of the 110 manuscripts in the U-M collection, including two parchment rolls because I could not resist the opportunity to showcase the roll and the codex, those bulwarks of ancient bookmaking, together. Most gaps in the numbering occur because manuscripts in the U-M collection were sequentially numbered as they were acquired; gaps indicate a non-Greek manuscript acquisition occurring between the next numbered Greek manuscript; for example, Mich. Ms. 52 is a Latin manuscript.

Mss. 8 to 11	Mss. 64 to 84	Ms. 151	Ms. 196
Mss. 14 to 22	Ms. 92	Ms. 155	Ms. 208
Mss. 23a and 23b	Ms. 94	Ms. 168	Mss. 214 and 215
Mss. 24 to 51	Mss. 96 to 101	Mss. 170 to 172	Ms. 238
Mss. 53 and 54	Ms. 130	Ms. 173h	
Mss. 55a and 55b	Mss. 133 and 134	Ms. 180	
Mss. 56 to 60	Mss. 139 and 140	Ms. 182	

The following fragments are not included in this catalog; they were examined and found to lack significant binding evidence.

Mss. 4 to 7	Ms. 61	Ms. 95
Mss. 12 and 13	Ms. 93	Ms. 124



Fig. 1.10. A group of teaching models created by Anna Embree representing a variety of book traditions, including Coptic, Syriac, Armenian, Carolingian, Greek, and medieval account-book structures.



Fig. 2.1. Ms. 28. The severe damage to and loss of cover fabric reveals structural evidence on the back board, indicating that this is a Greek-style binding. See the full description and more images of Ms. 28 in this chapter.

Chapter 2

Binding Descriptions

Mich. Ms. 8 through Mich. Ms. 32

The following manuscript bindings or fragments of bindings are described in this chapter: Mss. 8 to 11 and Mss. 14 to 32.

Each binding description begins with basic bibliographic information: manuscript number, content, date, measurements of the manuscript (H × W in millimeters), and the material used for the writing substrate – parchment, paper, or a combination of both. This bibliographic information is derived from *A Catalogue of Greek Manuscripts at the University of Michigan, Ann Arbor* by Nadezhda Kavrus-Hoffmann and the following abbreviations are among those used: fols. (folios) and s. (seculo – in the century).⁹⁵

The physical description follows, beginning with an initial synopsis indicating whether the binding is Greek (or not), contemporary with the manuscript date (or not), listing the materials and structural features of the binding, and the approximate measurements of the binding or fragment (H × W × T in millimeters). More detailed description of individual features that are visible by intent, or visible through damage (revealed by losses in the covering material or other types of damage) follow the synopsis. Fig. 2.1. Each section of the description is labeled as follows:

Synopsis

Boards

Sewing, spine lining, endbanding

Covers

Cover decoration

Edge decoration, when applicable

Cover furniture

Cover fastenings

Titling, inscriptions, markers, inclusions

These categories do not apply to every manuscript, and if not, the category is not included in the description. Some manuscript descriptions will only have a synopsis; this is primarily true of manuscript fragments that have lost their covers but retain some binding evidence, or rebound manuscripts where all original binding information has been removed or is not accessible.

The numbering of the manuscripts in this collection occurred as they were acquired, with the result that manuscript numbers for the Greek manuscript collection are not always consecutive.

95. Kavrus-Hoffmann, *A Catalogue of Greek Manuscripts*, 1:xxxi: “Approximate dates are given in Roman numerals for centuries and in Arabic numerals or letters, which signify abbreviated words, for segments of a century; Arabic numerals and letters are shown in superscript. For example, “s. x” means the tenth century, “s. xⁱ” means the first half of the tenth century, “s. x²” means the second half of the tenth century, “s. x^{2/4}” means the second quarter of the tenth century, and so on; “s. xⁱⁿ” means the beginning of the tenth century (“in” stands for Latin *ineunte*), “s. x^m” means the middle of the tenth century, “s. x^{ex}” means the end of the tenth century (“ex” stands for Latin *exeunte*). The beginning of the century is identified as the first decade of the century; the middle of the century comprises decades that follow the beginning and precede the end; and the end of the century is the last decade of the century.”

Mich. Ms. 8 (partial palimpsest)

Menaion for September, October, November, and December

<Palestine or Sinai ?>, s. xiii¹

Palimpsest folios (96r–v and 106r–112v):

A. Upper text: Menaion (restoration of parts of the original text for October and November)

s. xiv

B. Underlying text (fols. 96r–v and 106r–112v): New Testament, fragments

s. vi–vii (?)

Parchment; fols. 221; 265–275 × 195–200 mm.

Figs. 2.2–2.3

Synopsis

The binding is Greek. Binding elements include leather over wooden boards cut flush with the manuscript, unsupported link-style sewing, a cloth overall spine lining, and projecting endbands anchored in the boards.⁹⁶

Measures approximately 275 × 200 × 90 mm.⁹⁷

Boards

Wooden boards, 10 mm. thick, with the grain running vertically, the boards cut flush with the parchment manuscript. The exterior spine edge of each board is shaped to a curve; the other board edges are square. There are no pastedowns, and the inner faces of both boards are exposed, both showing tool marks made as the board was smoothed.

Sewing, spine lining, and endbanding

There is no obvious evidence of bridling on the boards. The manuscript is sewn at four stations with plain thread, the thread entering/exiting four tunnels drilled in the spine edges of the boards, indicating a sewn-board binding.⁹⁸ The cloth overall spine lining extends approximately 50 mm. on to the outside of each board. The binding has projecting primary endbands with double-cord cores anchored on the boards through multiple sewing holes drilled down into the board, exiting to the exterior face (board shoulder) of each board as anchoring tie downs were made. As the endbands were woven on the cores, extra thread-wraps packed the spaces between quire tie downs. There is no evidence of a secondary endband.

Covers

The dark-brown/black leather of the cover is dry and has severe wear damage and losses. The leather on the

96. “Overall spine lining” is a *Language of Bindings Thesaurus* (LoB) term indicating the lining is the height of the manuscript and extends over on to the outer face of both boards. For definitions of other terms used in these descriptions, see Ch. 1.

97. The measurements can vary due to differing heights and widths at different points on a board, or changes in the manuscript itself; these measurements are approximate. Typically, Greek bindings are “flush” meaning the boards and the manuscripts are the same height and width. It should be noted that the projecting endbands, typical of Greek binding, can add up to 6 mm. (or more) to the actual height of the binding; these measurements do not reflect the height of endbands, only the boards. Some scholars take a measure around the book, reaching from one fore edge and around the spine to the other fore edge, a method not used in this catalog. Federici and Houlis et al. have a drawing about how to do midsection measuring in *Legature bizantine vaticane*, 20, Fig. 6.

98. Kavirus-Hoffmann, *A Catalogue of Greek Manuscripts*, 1:178; Pl. 8; image showing the sewing thread of Ms. 8 entering/exiting the board-edge tunnels.

spine is cracked and has loss areas, exposing the plain cloth lining and much of the lower endband. The turn-ins are irregular and vary from 20 to 30 mm. in width. There is hole evidence that the mitered corner turn-ins were pegged to stay in place. Three evenly spaced holes pierced in the fore edges of both covers probably carried pegs to hold the leather in place; if this was the case the pegs are now lacking.

Titling, inscriptions, markers, inclusions

A later cloth reinforcement was attached across the head of the spine, and there is a fragmented paper label inscribed in ink adhered to the spine just below the cloth patch.



Fig. 2.2a. Ms. 8. Spine; with cloth repair patch and paper additions, the tail endband visible.



Fig. 2.2b. Ms. 8. Tail edge; note the square boards, the endband, and the drilled anchor holes visible on the right.



Fig. 2.2c. Ms. 8. Front board and part of the spine and endbands.

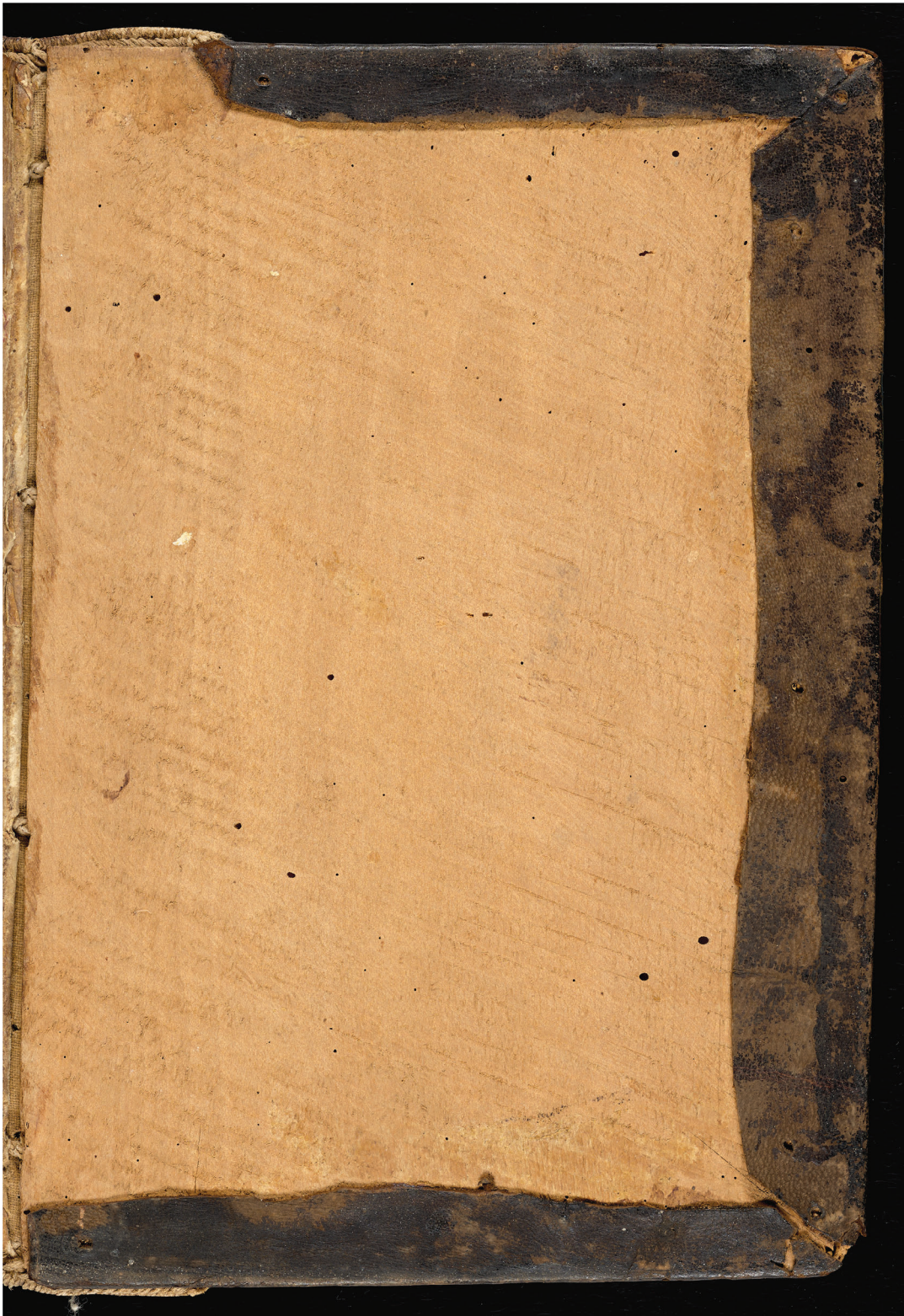


Fig. 2.2d. Ms. 8. Inside back cover; note the uneven turn-ins and the four points where the sewn manuscript is attached to the board.