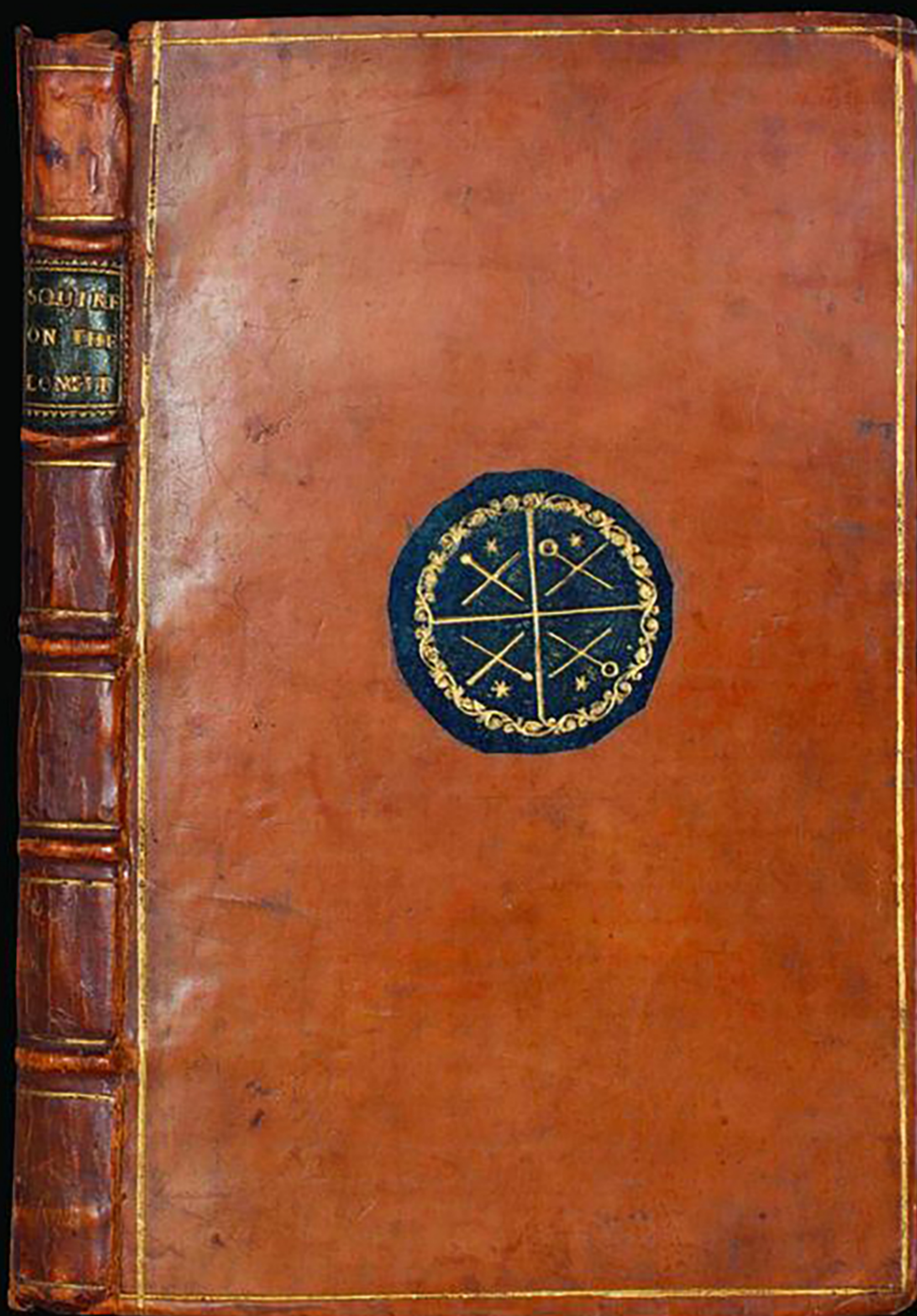


Books Will Speak Plain

A Handbook
for Identifying and Describing Historical Bindings

Julia Miller



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A Handbook
for Identifying and Describing
Historical Bindings

Third Edition

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Note: The 1st and 2nd editions of this book included a DVD, which reproduced all of the images printed in the book plus additional ones of each of those books, as well as many other examples of bindings that further illustrate the history of binding structures.

Purchasers of the 3rd edition can access these images at:
<https://www.thelegacypress.com/books-will-speak-plain-image-pdf.html>.

Frontispiece montage designed by J. Wayne Jones.

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Vivunt in aeternum

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Preface and Acknowledgments

You ought to learn how to take care of these.

Those were the words I heard often when I was a freshly graduated archivist from Ohio working at my first job at Berea College in Kentucky in the late 1970s. The words were spoken by a gentleman named Alfred Perrin. Mr. Perrin was a chemist and bookman of the old school, and had retired to Berea where he was a volunteer in the college library. He was the angel of a small but, under his careful guidance, growing rare book collection. His words to me referred to yet another artifact binding he had just shown me from the collection, and it was from him that I first learned how beautiful and varied old books could be. When I left Berea and moved to Pittsburgh, I took his advice and his encouragement, and began to learn about book conservation.

Over the years, I learned more about the history of bookbinding, the many forms a book could take, and the fascinating variety of historical structures and decorative styles represented in American collections I have visited. As a conservator, I learned much at the bench as I prepared for treatment projects, in the library collections where I surveyed books for damage and treatment needs, and most of all, from mentors and teachers in a variety of learning environments.

When I took up bookbinding and conservation, there were almost no formal training programs in the United States specifically for book conservators. You had to be lucky, as I was, to cross paths with skilled teachers willing to give you time and instruction. There was plenty of research being done into the history of the book and bookbinding by superlative scholars, and it was available, of course, but sometimes it seemed almost too arcane to relate to the type of work occurring in most library conservation laboratories or to the types of books being treated. Much of the research tended to relate only to the texts or only to highly decorative or extremely rare examples of binding, with little attention given to the structure and style of the many interesting but more pedestrian types of bindings we were more likely to treat.

I have often wished I had had more historical binding training starting out, especially as I find it so satisfying to research a particular style of binding or structural element these days. I think that wish is the main motivation for this book. Another motivation is the dearth of reference works on bookbinding structures and styles of ordinary books. It seems to me that such a book, not limited to very expensive or very ancient bindings, that both furnishes visual

and descriptive aids to help custodians of collections recognize and describe a wide variety of binding styles, and explains why it is important to do so, will aid in the preservation of historical bindings. One of my goals writing this book is to reach the book-conservator-in-training. I would also like to reach beyond the conservation community to those likely to make decisions about the retention and treatment of historical bindings: librarians, curators, antiquarian booksellers, and collectors, in an effort to add to their knowledge about the books in their collections.

I have gradually combined my original involvement in the conservation of books with studying and teaching about the history of bookbinding. Through my research, my teaching, and creating exhibits of historical bindings, I continue to learn myself. I have in turn enjoyed communicating the historical identity and importance of individual artifact bindings to collection custodians and others interested in the history of binding, and learning from them in return. Many of the students in the bench courses I teach on historical structures are artists or school teachers or both, and my emphasis on the beauty and value of historical bindings, however ordinary, using artifact bindings from my own collection as class exemplars, has carried over into their use of historical structures in their art and their own teaching.

Since the days when I first embarked on my book conservation career, a number of excellent avenues for training have grown up in the United States, and they all include some instruction in the history of binding structure and decorative style. There is also a widespread network of organizations and workshop venues in this country that provides some training opportunities to anyone interested in the book arts, including those interested in conservation and the study of historical bindings. I believe that the information gained from studying bindings from different perspectives can only make the work of identifying historical bindings more thorough, whether you are a book conservator or you play a different role in relation to a book collection. I view this book as a tool that can be combined with in-house training of custodians of books so they can study, learn, identify, and describe within their own collections.

This book is structured with an introduction followed by four chapters outlining the history of the handmade book from the earliest days of the codex until the end of the nineteenth century. By that time, the huge demand for books combined with the inventions of the industrial revolution had led to a great change in the book marketplace, from books made entirely by hand to books made almost entirely by machines.

The reason for including the historical outline is to remind the reader of the long history of hand bookbinding, and the myriad materials, structures, and styles that appeared during that long history. The history of binding is not linear; it branches and it has dead ends. It is true, however, that, with the handmade book, elements of structure and style have a habit of being forgotten and then reappearing. I believe the observant custodian should be reminded of this possibility and be encouraged to recognize it.

I should also make the clear distinction that, when I write of outlining the history of the book, I begin with the early Near Eastern book tradition that saw the development of the

codex occur near the beginning of the first millennium CE, and continue with the progress of the codex through the first millennium.¹ A broad outline of the Western or more specifically, the European tradition that developed from the midpoint of the first millennium is presented and followed through the nineteenth century. There is the long, rich, and interesting history of the many non-European binding traditions from around the world, and the many types of materials and formats used to store the cultural and intellectual knowledge of many places, but that history is beyond the scope of this study.

This work is also confined to the study and description of handmade books, even though interesting and unique bindings were developed during the early machine-made era. This book will address some of the overlap between the two eras, but the proper study of those early machine-made bindings belongs to another effort.

The final three chapters of this book discuss why and how to identify and describe historical bindings. The chapters provide images and definitions of materials, structural elements, different formats, and numerous binding styles, as well as provide suggestions for proceeding with identification, including a sample descriptive survey for collection custodians to follow. The last chapter describes the task ahead for those of us who wish to ensure that historical binding descriptions are included in online catalogs, and it concludes with comments on the interface between the historical book and the digital present and future. Appendices are provided that include a terminology hierarchy, additional survey format information, stacks maintenance and condition assessment information, a glossary, and a selected bibliography. The accompanying DVD* has all of the images used in the text with additional images of some of those books included to give the reader more information. The DVD also contains groups of images illustrating other binding structures and styles discussed in the book but not illustrated here. All of the images in the DVD have captions explaining their relevance.

1. Defining the terms Near East and Middle East is problematical, but today these terms are considered by scholars to be interchangeable, applying to the following countries of the present-day Arabian Peninsula (Saudi Arabia, Kuwait, Oman, Qatar, Yemen, southern Iraq and Jordan), as well as Cyprus, Egypt, northern Iraq, Iran, Israel, northern Jordan, Lebanon, the Palestinian territories, Syria, and Turkey. Ethiopia is not considered part of this area, but it also played an important role in the development of the codex in the first millennium CE; Ethiopia's codex tradition is considered to be as old as the Coptic period, confirmed by the existence of the Abu Garima gospels dating between 390–570 CE.

While it has long been believed that the Near East, specifically Egypt, is the birthplace of the codex, that belief is becoming more nuanced. The ancient book forms of the Far East, in the areas encompassing present-day China, southeast Asia, and the Indian subcontinent, undoubtedly include formats that, like multi-leaved tablets and notebooks in the Near East, presaged a codex format. The ancient trade routes carried ideas back and forth, as well as goods. With improved and faster communication, and the reduction of language barriers, we are on the cusp of learning so much more than we presently do about the history of the book – and the codex.

This footnote is an addition to the 3rd edition of *Books Will Speak Plain*.

* See Note on the copyright page regarding the online pdf that has taken the place of the DVD, which accompanied the 1st and 2nd editions.

I have gathered some of the information and most of the images during my own research, but I have also relied on the vision, the research, and the writing of many scholars for the contents of this book, whom I acknowledge with gratitude. Except where indicated the images that illustrate my text were made from books in my collection of historical bindings, formed as a teaching resource and containing many damaged bindings that support structural study.

The title of my book, *Books Will Speak Plain*, was chosen because it expresses my belief that, if custodians are able to make the time and turn their efforts to understanding the structural and stylistic elements of their collections, sharpening their eyes and their knowledge so historical artifact bindings can be identified, described, and preserved, books will indeed “speak plain” to future scholars of the book.²

ACKNOWLEDGMENTS

Many thanks to the Samuel H. Kress Foundation and the Foundation for the American Institute for Conservation (FAIC) for the conservation publication fellowship award in 2008 that made writing this book possible. I would like to thank Eric Pourchot, FAIC Institutional Advancement Director, for all his help with my fellowship proposal. It was a great honor to receive the fellowship, and I deeply appreciate it.

I thank Alfred Perrin, posthumously, for setting my feet on a path that has rewarded me every day since I took up the practice of book conservation. I would also like to thank my first two teachers from those early days for their generosity and their patience in accepting me first as volunteer, then student, and finally apprentice: Olivia Primanis, who had a book bindery in Pittsburgh at the time and is now Senior Conservator in book conservation at the Harry Ransom Humanities Research Center in Austin, Texas, and Jean Gunner, who was the rare-book conservator at the Hunt Botanical Library at Carnegie Mellon University.

I would like to express my profound appreciation as well to the library and conservation professionals who accepted and guided me as a volunteer or researcher in their collections, thereby giving me the opportunity to study many types of bindings at close hand: Peggy Daub, Kathryn Beam, Pablo Alvarez, and Eryn Kropf, Special Collections Library, and Shannon Zachary, Preservation and Conservation, University of Michigan Library; John Dann, Kevin Graffagnino, Donald Wilcox, Emiko Hastings, Clayton Lewis, Oksana Linda, Jackie Raphelson, and Julie Fremuth at the William L. Clements Library, University of Michigan; Peter Berg, Special Collections, and Eric Alstrom, Conservation, Michigan State University. A special thanks to Eileen Heeran, now Assistant Head of Technical Services for Special Collections, Wilson Library, University of North Carolina at Chapel Hill, for the grand collaboration we enjoyed while she was a rare-book cataloger at the Hatcher Graduate Library at the University of Michigan.

2. Bacon, Francis. “XX. Of Counsel.” In *The Essays; or Counsels, Civil and Moral; with the Wisdom of the Ancients*. Ed. S.W. Singer. London: Bell & Daldy, 1856, 79. Bacon wrote the essay “Of Counsel” in 1612; the quotation here appeared in the 1625 revision.

A project such as this book is always the work of many hands and minds, and I have been fortunate to have colleagues and generous teachers who have encouraged me throughout my career. The team of readers who have done so much to shape my idea of this book into a presentable form are all friends, colleagues, and teachers, and I can never thank them enough: Martha Little, former head of Conservation and Book Repair at the University of Michigan Library and now a conservator in private practice; Pamela Spitzmueller, James W. Needham Chief Conservator for Special Collections at the Weissman Preservation Center, now retired, at Harvard University Library; Karla Vandersypen, former rare books librarian at the University of Michigan Special Collections Library and now a volunteer in the Special Collections Library; and Shannon Zachary, Head of Preservation and Conservation at the University of Michigan Library. The friendship, patience, and attention to detail they have shown throughout the writing process has been truly generous; all errors of fact or omission are mine alone.

A book detailing the historical development of the structure and decoration of hand-bound books would be futile without illustration. The rich variety, the beauty of historical bindings, pristine or damaged, is presented in this book primarily through the excellent photography of J. Wayne Jones, who has contributed his time and skill to what has become a huge project in addition to his duties as the Arthur F. Thurnau Professor of the Department of Materials Science and Engineering in the College of Engineering at the University of Michigan. His efforts can never be repaid, and this project would never have succeeded without his help.

Illustration of another type has been provided by Pamela Spitzmueller in the form of drawings of early bindings and details of their decoration in several sections of the book. These beautiful drawings add another layer to the information presented in this book, and I would like to thank her for the time she invested creating the drawings and for contributing them to this work.

It is my good fortune that another friend and colleague, Dr. Cathleen Baker, Conservation Librarian and Exhibit Conservator at the University of Michigan Library and a leading scholar on the history of papermaking is also a publisher, and that she took on the jobs of copy editor, designer, and publisher of this book. It has been a great experience to work with her, to see my book take shape, and to be able to enjoy knowing that the book has been printed and bound in Michigan.

Many thanks to the following for permission to use photographs of items in their collections: the Special Collections Library and the Papyrology Collection at the University of Michigan Library, William L. Clements Library, Newberry Library in Chicago, Tom Nicely, Pamela Spitzmueller, Martha Little, and Brigitte Romero. Thank you to Peter and Mary Lou Greenfield for the photograph of Mary Lou reading her Kindle. Thank you to a dear friend and colleague, Maria Grandinette, for the permanent loan of a very special book, the nineteenth-century tacket binding illustrated and described in this book. Many thanks as well to Shannon Zachary for permission to reprint her excellent stacks-cleaning guidelines in an appendix. I would also like to thank Shannon Henderson for her assistance in arranging and cataloging my book collection in preparation for this project.

I end with a thank you to the two people who have done the most to help me complete this project through their love, support, and pride in the work: my husband John Allison and our son John Robert Friend Allison.

— Julia Miller, 2010

SECOND EDITION NOTE

I am grateful to have the opportunity with this second edition of *Books Will Speak Plain* to make corrections and add information and images to both the text and the DVD. I have made a few additions to the original Acknowledgements to thank generous colleagues who have made this project so rich in resource. Photographer J. Wayne Jones has helped again to photograph more bindings to include in the 2nd edition text and DVD, and I am so grateful to him. My book would not have happened without the help of my teachers, my friends, my students, and my colleagues, and it would not have succeeded without the support of the individuals and institutions who have purchased it for their reference collections. I thank you all, and in the words of an extremely wise woman, Hedi Kyle, “may you land on a green branch.”

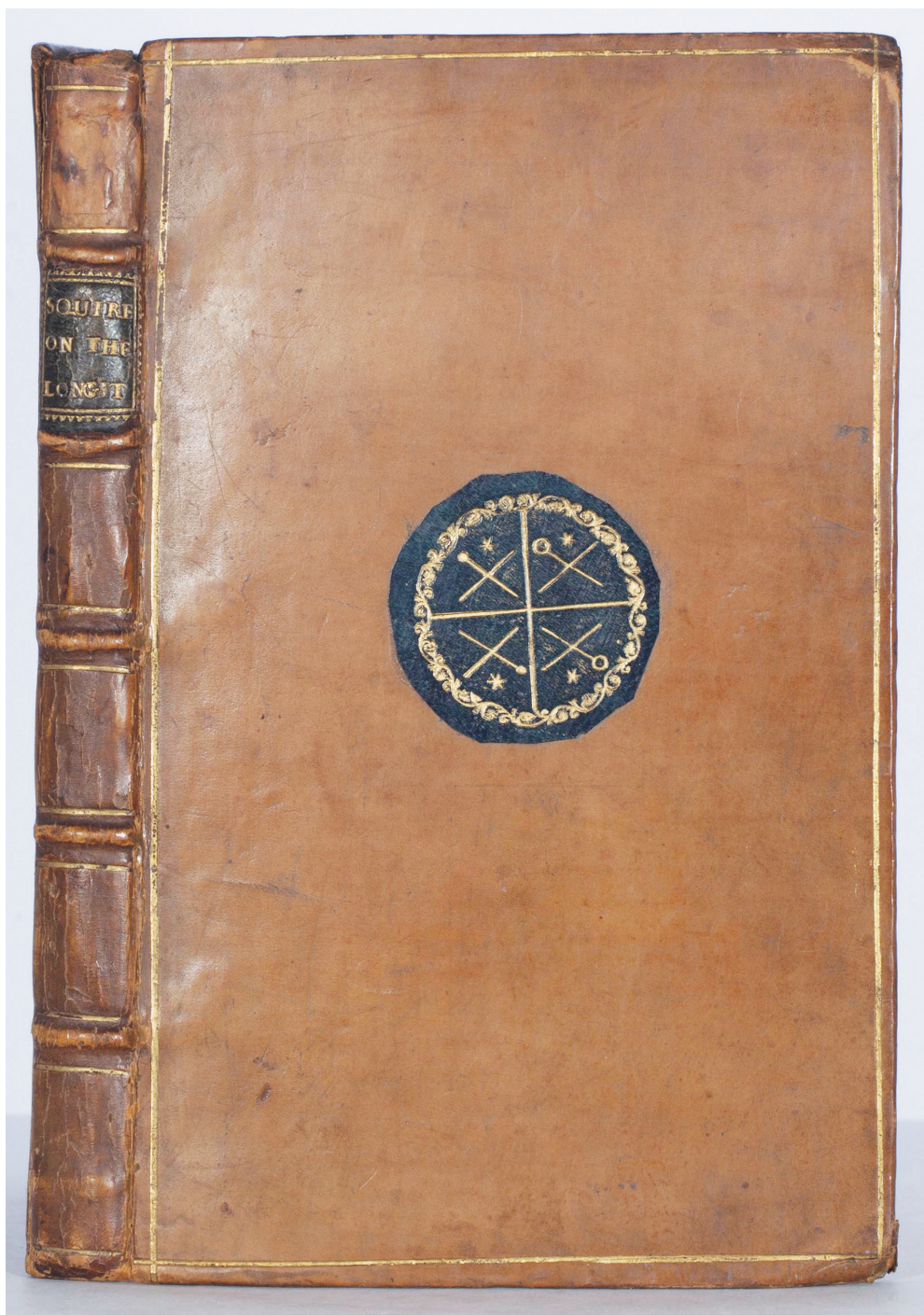
— Julia Miller, 2014

THIRD EDITION NOTE

Years have passed since the second edition note was written in 2014, and the world has changed in dramatic ways. The world of the book has changed dramatically, too – the way we catalog books, the way we do research, the way we inform one another of new discoveries. Our book collections endure, though many more collections are now in remote-storage facilities, less accessible to the browsing eye and hand, and more dependent than ever before on thorough and accurate descriptions. Interest in the study of bindings across the historical spectrum also endures, and *Books Will Speak Plain* continues to be a useful tool for that study.

The entire book has been revised for this third edition with additions to the main text, the footnote citations, the selected bibliography, and the index. The selected glossary has also been revised and now includes terms describing the structure of early book forms and the Coptic contributions to the history of the codex. It is a great satisfaction to me that this edition is in full color. More than a decade has passed since I wrote *Books Will Speak Plain*, and in that time, I have had the opportunity to continue to study and learn and write – all with the help of extraordinary people, generous with their time and ideas, and I thank them all for helping me along the way – none more so than Cathleen Baker and her The Legacy Press. Cathy, now Conservation Librarian Emerita, continues to encourage the work and our collaboration has deepened and grown with the *Suave Mechanicals* collected-essays series – it has been such a privilege to work with her all these years.

— Julia Miller, 2022



Trade binding, 1743, with distinctive “extra” touch: black-leather onlays on both covers decorated in gold, using special type cast to print formulas in *A Proposal to Determine Our Longitude* by Jane Squire.

Introduction

The Purpose of This Handbook

To meet an Antique Book –
in just the Dress his Century wore.³

Emily Dickinson has in two lines summed up the value of identifying and preserving the vast cultural heritage represented by two thousand years of bookbinding history. When we “meet an Antique Book,” our response to the book transcends its primary function as a storage depot for specific information. We relate to a historical binding on a cultural and emotional level, as people always have and as Emily Dickinson did so long ago when she penned those lines. We relate to how it looks, how it feels, how it opens, even how it smells. When we meet that book “in just the Dress his Century wore,” we absorb much more than the information contained in the text. We record color, design, condition; we “see” the book as an appealing, or unappealing, object. We might reject an old book because it is worn, dirty, and damaged, or we might be charmed by it. We make all sorts of judgments about the book, but most of all, we *notice* it. Books have always been very personal objects to those who read them, often carrying marks of enjoyment that range from dog-eared pages to marginalia and coffee stains. How often, as children, were we admonished not to write in our books, and how often, as adults, have we cherished our endpaper drawings, dedications, and signatures? These same marks of affection, ownership, and penmanship appear in historical bindings from the earliest days of the codex and continue to provide delight and information to those who handle such books today.

In the United States, we are in no danger of our vast national collection of books disappearing. Elegant, rare public and private collections, public libraries, personal libraries, booksellers, the junk store down the street, grandmother’s attic, our basements, and our garages all contain sections, large and small in number, of that collection. Our national collection contains every kind of “book” format, and the books themselves come from every country in the world. Our collections contain some of the oldest books ever made, some of the rarest books on earth and some of the most pedestrian, and usually they are all mixed together in the larger collections. Some individual book collections are devoted to a tiny moment in history, each volume chosen with exquisite care; many collections come together in a half-organized, haphazard way and have no real unifying element except that it is – someone’s library.

3. Dickinson, Emily. *The Poems of Emily Dickinson*. Ed. R.W. Franklin. Cambridge: Belknap Press of Harvard University Press, 1999, poem 569.

Some of our national book collection is “under control,” in the sense of being identified and accessible in the traditional format of a bound book on the shelf of the local town or college library, located by a card index or electronic catalog. Some of our national collection survives as images on increasingly outdated media such as microfiche or microfilm, and we do not really know how long those media will survive or be accessible. Some of our materials are becoming accessible online through massive scanning projects that capture content and, occasionally, binding information, albeit often to a limited degree. Some of our national collection will pass through many more hands, bought and sold, before coming to rest in a permanent home, and some of it will simply be discarded and end up in a landfill.

While we are not in danger of losing all or even most of our books, we *are* in danger of losing the thread of history represented by the successive stages in the life of the book, the development and changes in its structure and decoration. Whether books of historical significance are discarded or rebound, the result is the same: the loss of what that book could have told us about its place in the history of bookbinding and what it might have told us about our cultural history and our reading practices.

A different type of loss occurs when a book is in a collection, but its historical significance is unnoticed. The vast majority of books in our national book collection fall into this latter category of loss: they sit on shelves in every type of collection, perhaps cataloged but with little or no physical description recorded in an accessible way. The desire to describe bindings may be present, but custodial time or expertise is often not available. Many public institutional libraries are so challenged for space, staff, and money that they simply cannot dedicate staff time, or even assign a desk and computer time, to a binding-description project. If they wish to assign staff to such a project, the next hurdles can become: level of expertise, release time and funding to receive appropriate training and most difficult, opportunities to gain that training from knowledgeable instructors.

It would be easy to say that there is no hurry or even need to describe the physical attributes of historical bindings. Like our other favorite things, they will “always be around.” Not true. Issues of storage space, staff time, and maintenance budgets influence public libraries every day to discard books or put them in remote storage, and those bindings may never be looked at again, let alone described for the catalog. Bindings held by private collectors are probably more likely to have been researched and have at least basic descriptions made of them by their owners. Certainly many, many public and private institutions have been fortunate through the years to draw on the skills of incredibly talented rare-book librarians and catalogers to do some of the description work, but the task overall is monumental, and the hands are too few, have always been too few.

We are also perhaps finally witnessing what has been foretold many times in the recent past as the “death” of the physical book as an object of daily use. Our books are not dying, and neither is our use of them, but our children are learning, more thoroughly with each high-school graduating class, to seek, acquire, and digest information differently from their parents. The book will not die because it is a bad idea. It may die because it is unnecessary. At the time of this writing, six institutions of higher learning in this country have embarked on an experiment

to deliver all class content via computer, not printed works.⁴ If the experiment is successful, it will lead the nation to its wider use. Such a trend will raise the question of what to do with the contents of all those miles of library shelves that is pressing, even now, on custodians of large collections where remote storage has, for years, been the pressure valve for overstuffed libraries. If the use of the bound book is dropped from curricula, and research material is available only via digital content files, then relocated holdings resulting in restricted use or no access could become our new reality.

The future of the physical book is more and more uncertain, but our historical bindings will continue with us, and become more precious and more interesting, if we can access them.

We still have many areas in the history of binding to understand. There is a wealth of information waiting for observant researchers to record, and to make their jobs easier, we need to strive for a consistent and thorough terminology for our online cataloging that not only describes the decorative style of a binding but also describes structural elements when visible through intent or damage. The ideal project in our great research libraries is to combine the skills of rare book librarians, catalogers, and book conservators, not only to work together to evaluate items for treatment – something they do and must do as a matter of course – but also to work together to capture decorative and structural information about each binding that passes through their hands in a way that is accessible to the research public through the online catalog descriptions. This is, first and foremost, a project of preservation.

Such a project need not rely entirely on paid staff already charged with many tasks. There are volunteers who can be called upon, who already contribute so much, to participate in a binding identification and description project. Enlisting the help of retired library, preservation and conservation professionals is one approach; using their skills to train non-professionals will expand the volunteer pool. There are already many library professionals and book conservators who can and do participate as volunteers. Many book conservators, some retired, are sharing the structural knowledge they have acquired from years of study, bench experience, and collaborating with library staff and collection curators to add to the descriptive record, as well as teaching what they know to younger colleagues and the general public through lectures and bench courses on historical binding styles and methods of construction.

A collaborative effort along the lines described above was initiated at the Special Collections Research Center (SCRC) at the University of Michigan Library in 2004. The collaboration was between Eileen Heeran, rare-book cataloger, and myself, a book conservator and volunteer at the SCRC. Our project was to capture decorative and structural information for selected bindings for the library's online catalog, following an exhibit of historical bindings displayed April–July 2003 in the SCRC. Hundreds of bindings from the rare collections were studied and described before final selections were made for the exhibit. The exhibit, *Suave Mechanicals*,

4. As the years have passed, the move to computer-aided education has continued to grow, but in-person instruction has survived. The long-term effects of the blow delivered to in-person instruction by the Covid-19 pandemic remain to be seen, but it is clear that desperation has led to a more welcoming climate for computer-based education than ever before.

drew many visitors to the library, and a CD was made through volunteer effort as a fund-raising project for the University Library. The CD included photos and descriptions of the bindings and also a valuable description of the steps in the exhibit preparation, including the process for the conservation evaluation, treatment, and re-housing of each book identified as an historical exemplar. Subsequent to the exhibit, a decision was taken to utilize the extensive research on the bindings and to capture all the descriptions generated in the preliminary selection stage of exhibit preparation by merging them into the online catalog. Future researchers would have those descriptions available when they accessed the record for that particular book; over four hundred bindings were described in the course of the project. A further component of the plan allowed for the records to be searchable by form and genre binding terms.

Eileen and I also worked together to design an approach to describing the bindings and capturing the information online. A template for the cataloging record was designed that allowed a descriptive note for each binding to be entered in a MARC 590 local-note field, and then, using the American Library Association (ALA) Rare Books and Manuscript Section (RBMS) *Binding Terms: A Thesaurus for Use in Rare Book and Special Collections Cataloging* terminology, a list of form/genre headings was made to add into the 655 field(s).⁵ An example can be found in Appendix 2. The *RBMS Controlled Vocabularies* for use in rare books and special collections cataloging takes the form of six individual volumes, including the *Binding Terms Thesaurus*, in print as well as an online version that is constantly updated when new terms are added. These thesauri are valuable tools for those working to describe rare materials but are perfectly useful for the description of early non-rare books and other materials as well. The Thesaurus Committee is working hard to update the accuracy and applicability of the terminology in the *Binding Terms Thesaurus* and welcomes collaboration with librarians, binders, and book conservators to accomplish that task.

Lengthy discussions of the strengths and weaknesses of the terminology in the ALA/RBMS *Binding Terms Thesaurus* were an added benefit of our collaborative effort and resulted in the recognition that additional terms should be proposed to the Thesaurus Committee. Ten terms have been submitted for inclusion in the *Thesaurus*, and six have been included to date. One of the terms pending approval is vital to the subject of this book: *visible structure through damage*.⁶

A second, similar project was proposed and conducted by myself at the William L. Clements Library of Americana at the University of Michigan. The section of the bound collection documented, so far, spans the early sixteenth century to the late eighteenth century.

5. A MARC format record is a record which is readable by one particular type of machine, a computer, that can read and interpret data in the cataloging record. "MARC" is taken from this definition: a MACHine Readable Cataloging record.

6. This section, written twelve years ago, is still relevant in part, but readers are becoming familiar today with a more recent terminology website that is now available on websites, such as the Ligatus Foundation's Language of Bindings Thesaurus (LoB). Terminologies are valuable tools, but we must bear in mind that older scholarly sources often use different terms, and it is important to note earlier usages as part of a comprehensive terminology.

The opportunity to compare a large collection of primarily British, French, Dutch, Spanish, and American bindings on texts on a variety of topics dating from the same period has been an invaluable training experience. The descriptions added to the online catalog have increased the accessibility of the collection to scholars of bookbinding history. Some 1,200 bindings have been surveyed and described by one volunteer, working approximately six hours a week over the course of a year; to date almost one thousand entries have been input into the online catalog by a meticulous volunteer who is a retired cataloger.

A valuable outcome of the projects described above has been the expertise exchange that occurred among the rare-book librarians, the rare-book catalogers, and the book conservator. Each learned part of the others' jobs to the benefit of these projects and future ones. The exchange has also initiated a wish to incorporate what has been learned during the project into an instructional tool to aid caretakers of collections of books in identifying, describing, and documenting their collections. Such a descriptive project can be launched (and, in some programs, is already part of the curriculum) by the training of student interns in schools of information and conservation-program interns. Training community volunteers as well as permanent collections' staff in the techniques of identification and description represents a great opportunity to expand the capture of information on the historical bindings contained in our national collection. Conservation and library professionals can also, as they always have, continue to share their knowledge and give advice to those in the greater bibliophile community who may well have responsibility for important historical bindings from our national book collection but who may not have the time or expertise to study and recognize the importance of items in their care or the need for assessment and description before repair or rebinding is contemplated. Volunteers drawn from the general bibliophile community can accomplish such a truly formidable task. Our job is made much, much easier with the electronic tools that are now available.

There are already many projects in place that have or will greatly advance the identification and description of historical bindings. Many heralded and unheralded efforts to survey specific types of historical bindings are in process in rare collections all around the world as well as in this country. We can expect that the results of such projects-in-process will be made available to scholars, just as so much information has already been shared. Both small- and large-scale projects are underway in the United States and include a project that originated at Princeton University designed to evaluate and describe the bindings on the incunabula in collections in the United States. The results of this study will be a rich source of information on a specific period of bookbinding history. Princeton also held an exhibit in 2002 on the history of bookbinding, which was captured on their library website and included rich images and depth of detail. Exhibit curators of binding exhibits around the country are adding such documentation to the websites of their academic institutions when they can. The University of Alabama and the University of Wisconsin-Madison libraries have embarked on a joint project to create a database of nineteenth-century bindings with evolving levels of description as more information is gathered, as well as photographic documentation of the bindings, accessible online. Tallinn University in Estonia has created a beautiful and extremely useful research tool by documenting the metal furniture

(bosses, clasps, etc.) used on medieval bindings. Mirjam Foot and other binding scholars at the British Library have, for some years, been building a database on historical bindings, accessible online, a resource that allows a researcher to find bindings of a particular style, date, binder, and material. A conference titled *New Bownde, New Scholarship in Early Modern Binding* held at the Folger Shakespeare Library in Washington D.C. in August 2013 brought together a variety of book conservators and binding scholars to discuss the state of binding scholarship and future possibilities. The focus was on building databases of binding images and descriptions that would use consistent terminology and be available for peer editing. These are just a few examples. Such efforts to document bindings are happening all over the bibliophile world; much more is possible, and each project enriches the next.⁷

The aim of this handbook is to help custodians of collections *notice* interesting elements of historical bindings in their collection and to give them a framework for making judgments about what is important to record about that binding and why. Although damaged bindings can reveal *more* information than intact bindings, undamaged bindings have their own way of giving us structural information, and both damaged and undamaged items communicate much to us about materials and decorative technique. This handbook describes many varieties of binding structure and decoration, and although the major focus of the handbook is to help custodians identify elements common to many kinds of binding, the aim is also to sharpen the observer's ability to identify the unusual.

An example: suppose you have a book of manuscript verse in your collection and the manuscript carries the date 1860. It is bound in quarter leather, golden brown, with a medium diaper-grain emboss, red straight-grain leather corners, and marbled-paper sides. The spine is missing, revealing two sewing supports of dark-brown patterned cloth and an all-along sewing style. The text edges have been sponged or brushed with blue color. Is there any need

7. We are in the midst now, in 2022, of a watershed event relating to the history of bookbinding – our language is changed and enriched by terms such as “materiality,” “the physical book,” “intentionality,” and “the whole book” – terms that imply that at last the description of a book is a cover-to-cover project, describing not just the content and writing substrate, but all the other features of a given book, its materials, binding, structure, decoration, and repairs. World book traditions are being documented in all their fascinating array and are no longer viewed as offshoots of or inferior to Western binding traditions. The contributions of indigenous peoples to the history of bookbinding, their book formats and structures, are being sought for, described, and cherished by scholars, as are the contributions to the book trades of the peoples enslaved and brought to European colonies in the Americas and other countries. See the website, *Race and the Boundaries of the Book: Seven Early American Perspectives* for articles, including the Dippold-Galban article: <<https://rarebookschool.org/rbs-online/race-and-the-boundaries-of-the-book/>>; accessed March 2022; “Early Indigenous Bookmaking: The Indian Primer (1669), Steffi Dippold and Michael Galban”: <<https://www.youtube.com/watch?v=LHCqGK-oerU>>; accessed March 2022. Dippold and Galban discuss the binding, materials, and beautiful painted decoration of the leather cover, believed to be done by an Algonquin craftsman. The binding is believed to be a combination of the European and the indigenous – a stabbed text block with American beechwood scaleboards covered in brain-tanned buckskin decorated with an asymmetrical painted design.

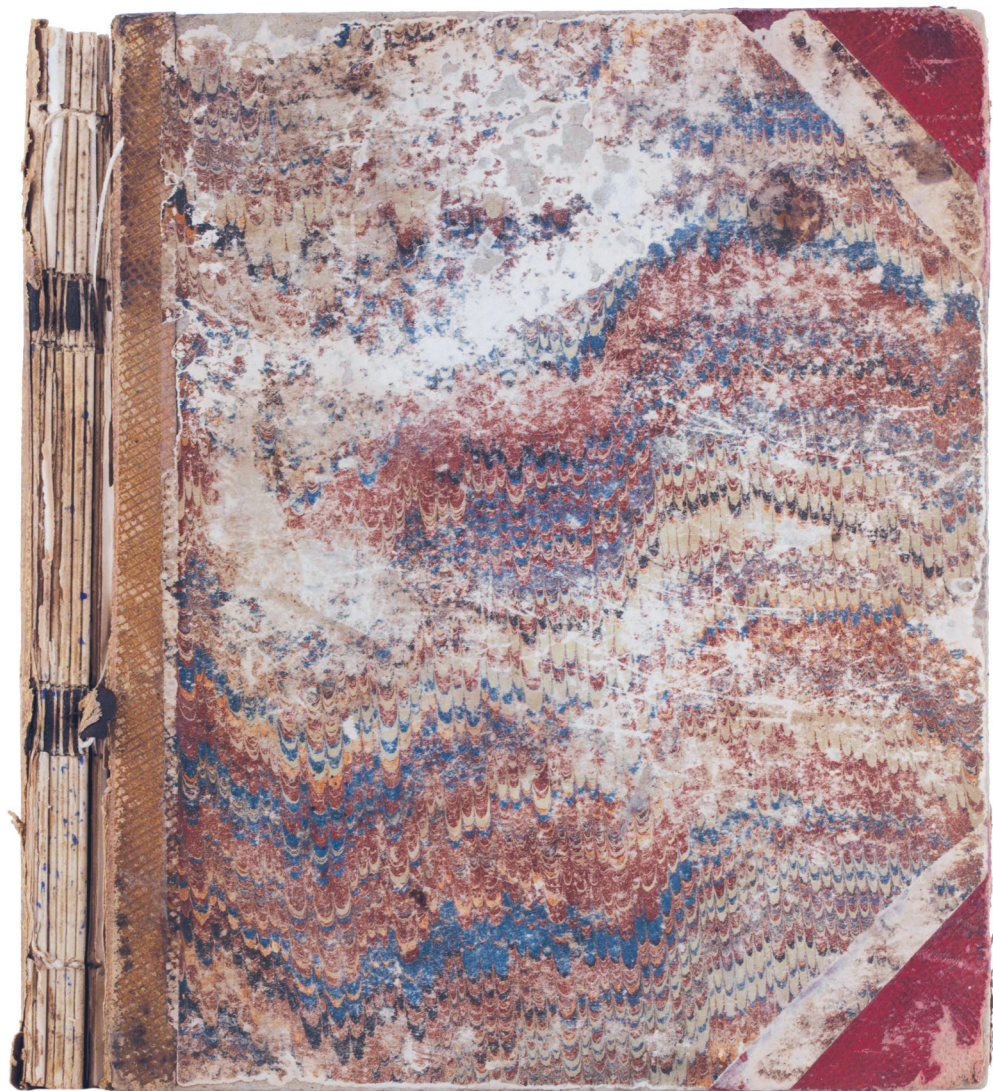


Fig. I.1. Stationery binding, ca. 1860s. Damage to spine reveals use of cloth scraps as support strips.

to document this binding? The answer is yes because that book began as a blank stationery binding, or blankbook, a type of book produced by the thousands by bookbinders specializing in the stationery trade and used by nearly every home and business in America.⁸ The mottled edge treatments are uncommon by this period, visual evidence of the use of a particular sewing

8. Metzger, Consuela G. "Colonial Blankbooks in the Winterthur Library." In *Suave Mechanicals: Essays on the History of Bookbinding*. Vol. 1. Ed. Julia Miller, 95–161. Ann Arbor, Mich.: The Legacy Press, 2013.

style is valuable to record; and the presence of contemporary cloth strips used as supports on a hand-sewn binding predates by thirty years the appearance of cloth tapes manufactured for the purpose for use on early machine-sewn bindings (Fig. I.1).

Another example: you have a schoolbook in your collection, *The American Spelling Book*, printed in Hartford in 1816; the binding is quarter brown leather with blue paper sides. The blue paper is torn away in spots, and you can see that the cover is made of thin, brittle-looking wood with a horizontal grain. There is no sewing evident, but you can see that the text block has two wide cuts pierced through the side of the book along the spine with a thick, tawed skin strip passing through each cut. Each end of these two supports was brought over and glued on the top side of the cover boards before the leather spine was attached. You can see and feel the bumps made by the support thongs under the spine leather and extending beyond the leather. The text paper appears to be sound, and you are thinking of having the book rebound; those thongs piercing the text block cannot be a good idea, but is the apparently original binding important? Yes, it is; it is part of a long tradition of American binding that began in the earliest days of the colonial period when thin wood known as scaleboard (also sca'bord, scabbard) was used for covers. The wood served as a cheaper alternative in place of expensive pasteboard that had to be imported, just as native tanned leathers were often used in place of imported goat, calf, and sheepskin. Your 1816 binding could be identical in structure to one from the 1680s; the only difference is that, in 1680, the cover would have been full leather. The use of scaleboard in American binding continued until at least the midpoint of the nineteenth century, often on the type of schoolbook you have in your collection, leading many to erroneously describe the material as being primarily used for schoolbooks. Recording the use of scaleboard in a binding is a valuable addition to your online catalog; this binding is contemporary with the imprint and is important for that reason as well (Fig. I.2).

Another example: you have in your collection a dark-brown, full-calfskin binding. It is a London imprint from 1710. The calfskin is damaged, and the front joint broken. The binding is decorated with blind tooling: borders of double fillet lines on the covers, a decorative scallop roll used as a border to create a center panel, and a decorative tool in the shape of a carnation used at the corners of the center panels.⁹ The spine has five raised bands, and is unlettered and undecorated. There are tying-up marks on each side of the raised bands caused by the cord wrapped around the book to hold the wet, glued leather in place over the raised supports while the leather dried. It is a perfectly beautiful book, but it seems like a good candidate for repair to the joints and the addition of a spine title, and you might have a binder you know make a gold-tooled label for the spine after repairing it. A title label would certainly make it easier to find the book on your shelves, and you think that perhaps the original lettering piece fell off. The response of the historian of bookbinding would be to advise you against changing the spine. The binding is an example of what has become a relatively rare group: an unlettered binding made before 1720 (Fig. I.3). The practice of lettering spines began in England as early as 1604 and was generally in use by 1660, but leaving spines unlettered on trade bindings as

9. The carnation tool is also referred to as a *hedgehog tool* by some scholars.



Fig. I.2. Binding style utilizing scaleboards on 1816 imprint. Cover is quarter leather with paper sides.

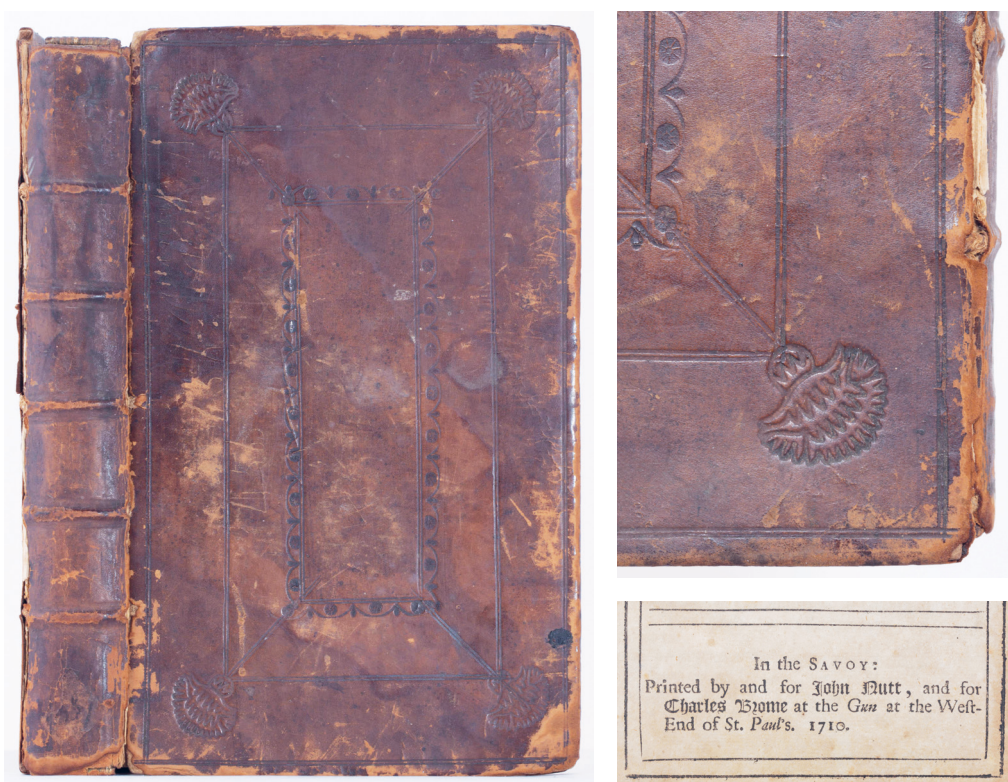
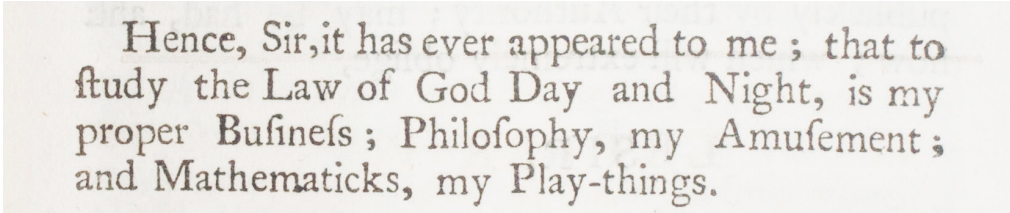


Fig. I.3. Unlettered trade binding, 1710, decorated with blind panel design. Right, top: Detail of carnation tool on the lower cover. Right, bottom: Typical printer's citation from title page.

an economy continued to be common as well. Spines were titled with regularity in England beginning around 1720, and once begun, many collectors had their earlier, unlettered bindings titled directly on the spine, or leather labels made for them and stuck on, and it is difficult for scholars to find many untouched examples of unlettered bindings.

Another noticeable feature of the binding under discussion is its decorative style: it belongs to a group described as English panel bindings. Concentric frames are formed on the covers by blind (and sometimes gold) tooling with plain or decorative rolls, and the inner frames are often finished with a decorative tool known as a corner fleuron. Less expensive to produce than gold-tooled bindings, these trade bindings were made in several variations and in increasing numbers between 1660 and 1740. They tended to be made with less expensive leather, and fewer pains were taken with the sewing of the text. Blind-panel bindings were an economical choice by a purchaser for adding decoration to a binding. Such bindings appear on many of the significant surviving philosophical, scientific, and literary works of the era. The variety of the decorative rolls and corner fleurons used on these panel bindings is a possible subject for future documentation. Unfortunately, the very prevalence of the use of this binding style and the deterioration of the poor quality of leather used on many of them have often led collectors to discard damaged original boards and replace them with new bindings.



Hence, Sir, it has ever appeared to me; that to study the Law of God Day and Night, is my proper Business; Philosophy, my Amusement; and Mathematicks, my Play-things.

Fig. I.4. Squire, in a letter to Sir Thomas Hanmer in 1732, includes the above comment after pointing out that, as a woman, she was actively discouraged from participating in the competition (page 31). “Hence, sir, it has ever appeared to me; that to study the Law of God Day and Night, is my proper Business; Philosophy, my Amusement; and Mathematicks, my Play-things.”

We arrive at a last binding to discuss here; the book that appears on the dust jacket and the frontispiece of this Introduction is a prime example of the reason why the author undertook this work on identifying and describing historical bindings. The book is *A Proposal to Determine Our Longitude* by Jane Squire, and this second edition was published for the author by S. Cope of London in 1743.

In 1714, the British Parliament established a committee for discovering a sound system of determining longitude with a large prize for whomever came up with a valid system.¹⁰ Jane Squire wrote an eleven-page pamphlet presenting her theory on how to determine longitude, but apparently her submission was largely ignored. This book is her follow-up to that first effort, and in it, she publishes her original proposal combined with a series of letters to the members of Parliament who served on the longitude committee, voicing her protest that her work was not considered. The book also includes the replies Squire received from some of the committee members.

We do not know very much about Jane Squire. She was born around 1671 and died in 1743 as the second edition of her book was published. It is clear she was an educated gentlewoman and a mathematician (Fig. I.4), but not only did her contemporary scientific community ignore her, but her work was not mentioned in a recent history of the longitude competition.¹¹ Her book is worth reading for the light it casts on the experience of women in science in the early eighteenth century, for the persistence of this one individual in trying to have her theories taken seriously, and as an example of bureaucratic response in the face of repeated attempts by Squire to gain notice and redress under the terms of the competition.¹²

10. John Harrison was the winner with his prototype chronometer.

11. Sobel, Dava. *Longitude: The True Story of a Lone Genius Who Solved the Greatest Problem of His Time*. New York: Penguin Books, 1996.

12. See Baker, Alexi. “Jane Squire, the Lady of the Longitude: Gender and Religion in Early Modern Science.” University of Cambridge. Research: <<https://www.cam.ac.uk/research/features/the-lady-of-the-longitude>>; accessed May 2022, and Findlen, Paula. “The Pope and the Englishwoman: Benedict XIV, Jane Squire, the Bologna Academy, and the Problem of Longitude.” In *Benedict XIV and the Enlightenment. Art, Science, and Spirituality*. Eds. Rebecca Messbarger, Christopher M.S. Johns, and

For the purposes of this book, however, it is not the author of this interesting work that is of primary importance but the physical aspects of the book she had published. We do not know how many copies were made for the second edition. The book itself is bound in plain brown calf and is the epitome of an inexpensive trade binding. It is exactly what one would expect for a book published privately. The covers have a single gold line rolled around the boards, and there are gold lines tooled across the spine above and below the raised bands. There is a black leather lettering piece in the second spine compartment, tooled in gold. So far as the preceding description goes, this is a very typical binding for the period and the expected buying group: scholars, and perhaps naval officers, shipping merchants, and captains, since the outcome of the longitude competition was of utmost importance to them. As it happens, this copy also has at least two aberrations, found in other copies as well: the title of the frontispiece chart has a typesetting error – LODGITUDE instead of LONGITUDE – and the postscript is bound in after, rather than before, the contents section meant to conclude the book, an error undoubtedly made by the binder and not uncommon.

The distinctive and unique feature of this otherwise solid but plain binding is the addition on both covers of a central roundel of black goatskin (Fig. I.5), the rim of the roundel tooled with a decorative roll in gold, the roundel itself divided into four quadrants by crossed gold lines, and each quadrant carrying a design using the special type cut to print the symbols expressing Jane Squire's experimental theorems in the text (Fig. I.6).¹³ The reason this book and its decoration is so exciting to a student of the history of binding is that, before the nineteenth century, it was extremely unusual to find a book with decoration on the cover that in any fashion related to the contents of the book. It was not uncommon to find emblematical devices tooled on spines and covers that related to the broad subject of the book in the seventeenth and eighteenth centuries, for instance the use of harps for a book about Ireland, or thistles on a book concerning Scotland, or fish on a book about fishing, but aside from these rather generic ornaments, decoration tended to be unrelated to the text. The Squire book breaks this convention and may well be unique in the eighteenth century. Did Jane Squire request this decorative addition? Making a choice like that would have increased the per-book cost, and perhaps considerably, and it would be unlikely that it was undertaken by a publisher or bookbinder without instruction. The point for this work is that there has been no previous identification of this binding for this unique quality, because *very few people realize that it is important as an example of a content-related decoration on a cover this early*. Making sure that books like the Squire book are noticed and recorded is what this book on identifying and describing bindings is all about.

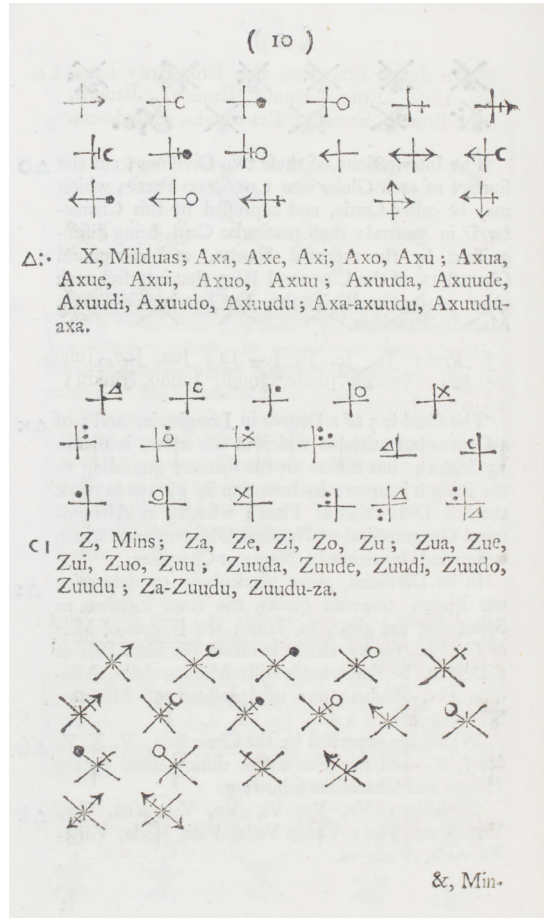
Philip Gavitt, 40–73. Toronto: University of Toronto Press, 2016. My thanks to Ruth Bardenstein for this citation.

13. Squire developed a notation system based on divisions she called *cloves of longitude* or “lacinfanta.” The cutting of special type to represent her notations would have been a relatively expensive extra cost to the binder and would have been passed on to Squire. To date, the author has seen six copies of this book, all with roundels.



Fig. I.5. Black leather roundel roughly trimmed, decorated in gold with floral circler divided by crossed lines creating four spaces, stamped with symbols from Squire's formulas.

Right: Fig. I.6. Page of text illustrating use of symbols.



CONCLUSION

The examples provided above are meant to illustrate the decision-making process a custodian of a collection might go through when assessing collection items: the book is noticed for something interesting, such as the style of its decorated paper, or its edge treatment, or some other element is revealed by a damaged area, and the custodian notices or recognizes an important structural feature. Perhaps no decision about conservation treatment is required, but having noticed the decorative or structural feature, the custodian can record it as something recognized, or to be investigated. Documenting the element through digital photography will give the custodian a further aid in answering the question that will occur again and again in studying a historical collection: "What is it?"

Binding scholars have been forestalled in their research time and again by two factors: the lack of even cursory descriptive binding information in collection catalogs and their inability

to visit closed stacks to see for themselves what is on the shelves. If more and more institutional book collections are put in remote storage with restricted access, the problem will just be exacerbated. It would be ironic indeed, if in this age of “everything is available on the Internet,” the very problem that has always plagued scholars of the book – the cost and wear of travel to visit collections to study bindings that may or may not be of importance – is made even more expensive and fruitless. Digitization projects must be designed that fully record bindings as well as texts with attention to details such as endbands and edge decorations. We must also strive for cataloging records that describe bindings, noting decorative style as well as structural elements made visible through intentional design, or visible through damage when it is present. Such thoroughness in our visual and written records will greatly advance the work of scholars of binding history, making it possible for them to find revealing bindings much more easily and allowing them, the real experts, to give us back a coherent record of binding history based on visual evidence.

The purpose of this handbook is to advance that goal, to serve as a resource for our skilled eyes, hands, and minds to help carry forward the painstaking comparison and description that has been done sincerely and brilliantly in small pieces by scholars of the book over the years. We have it in our power to give them and future scholars of the book a rich vein of research information to study, and by so doing, increase our own individual knowledge of the history and discipline of bookbinding.

We will serve ourselves as thinking individuals as well, because we will contribute to the preservation of objects that are part of our cultural and intellectual history. Our historical books carry the story of our intellectual development, our artistic taste, and our reading habits; they testify to both our human condition and our connection to one another. For centuries, the book has been both a direct and an indirect record of our intellectual achievement – direct because of content, indirect because of the evidence of interaction we leave in our books as we read them.

Chapter 1

The Early History of the Codex

The embers of a thousand years....¹⁴



Fig. 1.1. Book illustration, 1841, of multi-leaved stylus tablets, papyrus rolls, the caps or bucket that rolls were stored in, reed pens, and ink wells.

THE BOOK IN ANTIQUITY

The shape and material of that object that we think of as a *book* has changed radically from what the ancients might have considered it to be (Fig. 1.1). In ancient times, information storage and transmittal – the function that our present-day books perform – was accomplished through a number of formats that might all be termed book without also being a *codex*, the form we are most familiar with today in the West.

The papyrus roll was a book to the Egyptians from at least the fourth millennium BCE.¹⁵ One of the earliest known papyrus rolls found so far was located in the tomb of an Egyptian

14. Dickinson, *Poems of Emily Dickinson*, poem 1405.

15. The words roll and scroll are considered interchangeable for the purposes of this work.

official of the First Dynasty named Hemaka; the tomb is dated to around 3100 BCE. A roll in a tomb as an offering is thought to indicate that the deceased was an educated person, and it is not unusual for blank rolls to serve as the offering. Although the roll in Hemaka's tomb was blank, it is more important to note that it was also well made, indicating that the manufacture of papyrus for rolls was already advanced at the time the roll was placed in the tomb. While the earliest surviving inscribed papyri we have date to the Fifth Dynasty, ca. 2494–2345, it is known that simple hieroglyphics date from the time of Hemaka, including the hieroglyphic signs for a book roll and a scribe.¹⁶ The papyrus roll was used later on in Egypt for the Books of the Dead, perhaps as early as the Middle Kingdom, ca. 2025–1700; the large number discovered in tombs has given us a rich source of information to study and compare.

Papyrus in roll format was known and used in Greece by the fifth century BCE. Papyrus rolls were the format for the formal presentation of a text. They were used for literary works, and if the manufactured roll was too short, another roll or partial roll was pasted onto the end. If single sheets were required for letters and account writing, rolls were cut down to form them. Rolls were in common use in Greece by the time Alexander conquered Egypt in 332 BCE, and their use was still considered the endpoint of the preparation of a manuscript drafted upon other materials. The Greeks certainly continued the use of papyrus rolls after their conquest of papyrus-rich and papyrus-dependent Egypt. Greek texts were often drafted before committing them to papyrus, and single- and multi-leaf wooden tablets remained the notebook of choice in Greece, but notebooks of parchment or papyrus were also used.

The papyrus roll was embraced by the Romans and continued in use in Egypt, along with Greek as the official administrative language, after the Roman conquest of Egypt in the first century BCE. Papyrus was known and used in Roman Italy as well, though the climate of Italy has allowed for few survivals of imperial-era documents on papyrus. The excavations of Pompeii and Herculaneum have yielded some finds of Latin papyri, including a library of over a thousand carbonized rolls discovered at Herculaneum in the eighteenth century. Roman papyri have also been found in Egypt, but little has survived from Roman Gaul or Britain. Despite the scarcity of surviving papyri in regions outside Egypt, scholars believe papyrus was used throughout the lands constituting the Greek and Roman empires.

In Egypt itself, the manufacture and use of papyrus for many purposes would continue, in spite of conquest and upheaval, until the end of the first millennium CE, when the material would gradually disappear. The *Cyperus papyrus* plant became extinct in the marshes of Lower Egypt by the time of the Egyptian campaign of Napoleon Bonaparte in 1798, when the collecting of inscribed papyrus fragments dating from the Pharaonic era began in earnest and the first description of the plant in relatively modern times was written.¹⁷ Another century

16. Černý, Jaroslav. *Paper and Books in Ancient Egypt. An Inaugural Lecture Delivered at University College London, 29 May 1947*. London: H.K. Lewis & Co. for University College London, 1952, 11.

17. The dating of most early papyrus and parchment manuscripts and bindings is problematical, to say the least, and can and has changed from scholar to scholar as new ways of interpreting and assigning dates to letterforms and materials emerge; radiocarbon testing is still the best way to get a ballpark estimate of age for materials; we rely on paleographers for dating handwriting. It is best to be cautious

would pass before the first important discoveries were made at Hawara of papyrus copies of classical authors, known, until then, only through medieval manuscripts.

The papyrus plant continued to thrive without interruption in the Sudan from ancient times and continues to do so today. A wild strain of the plant has been identified at Wādi Natrun northwest of Cairo, but it is not known whether it is native or was introduced at some point.¹⁸ The plant was grown with mixed success in Sicily in the eighteenth century and into the twentieth century. Papyrus was gradually reintroduced into the marshes of the Nile delta in the 1960s. There is today a thriving marketing of papyrus sheets used primarily for paintings and prints for the tourist trade in Egypt and for export to paper shops around the world.

The debate on exactly how the pith of the papyrus plant was prepared and peeled, and how the resulting strips of wet fiber were combined to form a sheet through pressing, beating, adhesion, or a combination continues today. Scholars believe papyrus was made near the marshes where it grew and that processing, and sheet and roll formation all happened immediately after harvesting while the fiber was fresh. Unfortunately, no primary source descriptions of the papyrus-making process survive, and no manufacturing sites have been found and excavated in the Nile delta. The physical nature of papyrus and its suitability for the long career it enjoyed as the substrate for over three thousand years of written information is not well understood or appreciated today. Modern papyrus used for writing and artwork has admirable characteristics that it shares with ancient papyrus: a surface that accepts a wide variety of media, amazing tear strength, and flexibility if rolled. Just like ancient papyrus, however, it has little fold endurance.

The use of the roll format was not restricted to papyrus as the substrate to any particular culture or even to antiquity.¹⁹ The history of writing around the world includes many variations on the roll as a carrier of information, and leather, bark, metal, textiles, and paper have all been used to make book rolls.

The roll was in use among early Hebrew communities in the Near East, though often the rolls were made of animal skins, at least for formal and important texts, and the less-expensive papyrus was used for private and ephemeral uses.²⁰ The Dead Sea Scrolls, dating from the third to the first century BCE and found in a cave near the Dead Sea in 1947, represents one of the most important modern finds of ancient texts. The texts are mostly written on

(and general) when stating the date of early books.

18. *Wādi* is an Arabic term used in the Near East and northern Africa for a valley, a river, a ravine through which a stream flows, the channel or bed of a watercourse which is dry except in the rainy season, an oasis.

19. Roberts, Colin H. and T.C. Skeat. *The Birth of the Codex*. London: Oxford University Press, 1983, 51–52: “the massive use made of rolls throughout the Middle Ages and even later. Although for literature of all kinds the codex reigns supreme, for administrative records the roll long continues to be the dominant format. This is particularly the case in England, where many great series of state records were kept in roll form for upwards of six centuries, some, like the Patent Rolls, literally down to the present day.... The roll also survived to a considerable extent in the East in the liturgy of the Orthodox Church, which was commonly written on parchment rolls.”

20. Diring, David. *The Book before Printing: Ancient, Medieval and Oriental*. New York: Dover Publ., 1982, 175–189.

thin leather, the sections of skin carefully sewn together.²¹ Seven large scrolls and seventy fragments, including some from the scrolls, were found at the initial discovery site at Wādi Qumran in the Judean desert.

After the discovery of the first cave and its amazing contents, made by a young boy looking for his stray goat, archeologists scoured the other caves in the Wādi Qumran region with the result that eleven caves yielded many thousands of text fragments, more leather scrolls, and two copper scrolls. Most of the smaller fragments and all of the large text fragments and intact scrolls are in Jerusalem. The seven scrolls that were found initially are in the Shrine of the Book there. Some unknown number of fragments of text from Qumran disappeared into the antiquities market and doubtless into collections through the agency of treasure hunters who also scoured the Qumran hills when news of the original find circulated. There has been much debate about the origin of the texts through the years since discovery, but the texts have been identified by some scholars as the remains of the library of an Essene community known to have once existed in the area.²² The debate continues sporadically, fueled by scholarly rivalry, but with little conclusive new proof.²³ Parchment scrolls bearing the words of the Torah are still used for part of the Sabbath ceremony in Jewish synagogues around the world to the present day.²⁴

Wood, limestone, clay, ivory, tanned leather, a sort of proto-parchment, and potsherds (ostraca) were also all in use for writing surfaces in different parts of the Near East during the same period that papyrus was being made and used as a writing surface in Egypt and elsewhere.

Wooden tablets were known in Egypt, but the Greeks and Romans brought increased use of them as everyday writing surfaces in Ptolemaic and then Roman Egypt. The Roman army carried the use of papyrus and wooden tablets into the areas of northern Europe they conquered. The information storage format that has survived in greatest numbers from the Roman conquest era and continues to come to light through archaeological excavations in Northern European areas are wooden tablets made of native woods and often carrying the records of army outposts, such as those found at Vindolanda.²⁵ By comparison, little papyrus

21. Avrin, Leila. *Scribes, Script and Books. The Book Arts from Antiquity to the Renaissance*. Chicago; London: American Library Association; British Library, 1991, 102–103. Avrin notes that a fine, white leather was made and used by scribes for some of the Dead Sea Scrolls; the leather visually resembles parchment and predates the use of parchment for codices. Avrin goes on to state that writing on thin animal skin was common in western Asia from at least the late Hellenistic era.

22. Sussmann, Ayala and Ruth Peled. *The Dead Sea Scrolls*. Jerusalem: Israel Antiquities Authority, 1994, 8–10.

23. Lawler, Andrew. “Who Wrote the Dead Sea Scrolls?” *Smithsonian* 40, no. 10 (January 2010): 40–47.

24. See Norman, Kim. “Conserving the Historic Torahs of Congregation Mickve Israel in Savannah, Georgia.” In *Suave Mechanicals: Essays on the History of Bookbinding*. Vol. 7. Ed. Julia Miller, 340–364. Ann Arbor, Mich.: The Legacy Press, 2022.

25. Thomas, J. David. “The Latin Writing-Tablets from Vindolanda in North Britain.” *Bibliologia* 12 (1992): 203–209.

has survived the damp climates of Britain and Germany, and the rare finds are cause for great interest to scholars who would like to document the use of papyrus in northern Europe and the type of texts involved.²⁶

The fact that different materials and different formats were being used simultaneously to record information throughout antiquity should not be a surprise. It could be said that it has always been the case, an expediency of form, function, and availability. Although inspiration may well have traveled far, materials to hand would dominate over expensive imports. For example, a material dating from antiquity unearthed in Germany and thought to be papyrus has proven to be made of the fiber of locally grown willow trees.²⁷ The use of locally obtained wood and locally produced parchment and leather as writing surfaces in place of imported papyrus was probably the norm in the outposts of the Roman Empire for reasons of expense and practicality.

THE PROTO-CODEX

Debate is certainly the key word for almost every discussion of every aspect of early text formats. We have artifact evidence that continues to emerge from the desert, the cemetery, the ruins of ancient homes and institutions, and occasionally, the modern bank vault that confirms or casts doubt on scholarly conclusions about ancient writing practices and materials.

A good example is the divergent opinions in the scholarly community regarding the origins of the information system we call a codex. One opinion holds that the codex – a gathering of multiple leaves in a single-quire or multi-quire format, usually written on both sides of the sheets and often protected with a covering material – appeared after the first century CE. Another and more recent opinion proposed by John Sharpe is that the nascent form of the codex was already widely known and used by the first century CE in the form of wooden or ivory tablets in multiples, the inner leaves also written on both sides, attached together by cord, metal rings, or leather ties, and carrying important account records and drafts of literary and legal documents.

It is possible that the use of wooden or ivory tablets and their hinging styles descends to us from the neo-Hittites of the eighth century BCE. A set of intricately hinged, inscribed ivory tablets was found at Nimrud in 1953. A second set of tablets, made of walnut wood, was also found at Nimrud, carrying the same text as the ivory tablets on their wax panels. The wooden set had holes pierced through the sides for leather thongs to loop through, rather than the hinges found on the ivory set. The side-piercing concept is further documented by the depiction of carved tablets attached together in the same fashion in a series of Assyrian stelae.²⁸

26. A papyrus codex was unearthed near Tongeren, Belgium, in 2007, and the codex is thought to be in a single-quire format. The papyrus sheets are carbonized and solidly clumped together and, at this time, have not been separated nor has any text been revealed for decipherment. It is thought the codex was brought to the area by the Romans and may contain a Latin text.

27. Parkinson, Richard and Stephen Quirke. *Papyrus*. London: British Museum Press, 1995, 70.

28. van Regemorter, Berthe. "The Bound Codex at the Time of the Neo-Hittites." In *Binding Structures in the Middle Ages: A Selection of Studies by Berthe van Regemorter*. Trans. Jane Greenfield, 183–191. Brussels; London: Bibliotheca Wittockiana; Maggs Bros., 1992. The illustration of one stele contains a book

Part of Sharpe's argument rests on the discovery of two intact examples of multi-leaved wooden tablets found at the Dakhleh Oasis in Upper Egypt in 1986.²⁹ Another supportive observation is his identification of a partially sawn block of wood at Dakhleh, which had puzzled the archeologists, as the start of a set of wooden tablets. The presence of sawn-in registration notches on the edges of the two intact tablet sets found at the site indicates that each set of tablets was also sawn from a single block of wood and was intended to be kept together in its sawn order. The same type of sawn-in registration mark has been found on other wooden tablets in other collections (Fig. 1.2). Sharpe interprets this as evidence that multi-leaved hinged tablet sets were common, and their production methodical. Sharpe states that ten wooden leaves attached together appear to be the maximum limit of feasibility for such structures.³⁰ The Papyrology Collection at the University of Michigan contains a wooden wax tablet that shows evidence of being part of a group of tablets attached together. P. Mich. Inv. 2730 has four hinging holes along the spine edge, a hole pierced on the fore edge for a tie of leather or cord, wells for wax excavated on both sides of the board, and most importantly, the telltale diagonal registration groove sawn on the fore edge.

The discussion over whether to acknowledge multi-leaved wooden tablets as codices in the history of bookbinding is interesting, and the evidence to support Sharpe's argument lies in collections of artifacts around the world, and perhaps also in yet-to-be unearthed caches of tablets, awaiting identification and documentation.³¹

Notebooks of papyrus and parchment were also in common use by the Greeks and Romans of late antiquity as noted earlier. They, like the multi-leaved wooden tablets, represent a precursor or variation to the format of the codex. In many cases the surviving notebooks are so crudely made and of such poor quality materials it is thought they were made by individuals for personal use rather than manufactured en masse like papyrus sheets and rolls.³² The notebooks were made as gatherings of single leaves or folded sheets, stacked and attached together with a lacing through the side, of cord or leather, the lacing often passing around the spine in a style familiar to us from East Asian bookbinding.

side-sewn or laced with the sewing/lacing wrapping around the spine edge, similar to East Asian binding.
29. The ancient place name for Dakhleh Oasis is Kellis, and scholarly archaeological works tend to use the older name – the tablets are usually identified as the Kellis tablets.

30. Sharpe, John. "Wooden Books and the History of the Codex: Isocrates and the Farm Account, Evidence from the Egyptian Desert." In *The Compleat Binder: Roger Powell*. Ed. John L. Sharpe. *Bibliologia* 14 (1996): 107–129. See also Bagnall, Roger. *The Kellis Agricultural Account Book*. Dakhleh Oasis Project, Monograph 7. Oxford: Oxbow, 1997, and Worp, K.A. and A. Rijksbaron, eds. *The Kellis Isocrates Codex. (P. Kell. III Gr. 95)*. Dakhleh Oasis Project, Monograph 5. Oxford: Oxbow, 1997. With an introductory chapter by John L. Sharpe.

31. The discussion seems to be confined to bookbinders and the scholars who study the history of bookbinding. Archaeologists and paleographers do not appear to have a dog in that fight; to them, wooden books are wooden books.

32. Petersen, Theodore C. *Coptic Bookbindings in the Pierpont Morgan Library*. Ed. Francisco H. Trujillo, 19. Ann Arbor, Mich.: The Legacy Press, 2021.



Fig. 1.2. Undated wooden tablet from multi-leaved set, indicated by diagonal registration mark cut across fore edge. Stylus tablet type with wells cut into wood, filled with wax, and written on with metal tool or stylus. Many styli had one flattened end to erase tablet. P. Mich. Inv. 2730. Courtesy University of Michigan Library (Papyrology Collection).

Clearly there were many ways to record and transmit information in antiquity, many materials that could be used, and many shapes the materials were made to assume to facilitate writing. The debate about what a book is has been with us for a very long time indeed. Stephen Emmel notes:

At the beginning of the third century of the Common Era, the Roman jurist Ulpian expressed his professional opinion as to what should be understood as comprised by the term ‘books’....Ulpian’s formulation leaves no room for doubt that the only thing he recognized to be self-evidently a ‘book’ was the scroll, ‘whether of papyrus or parchment or whatever other material’. He goes on to acknowledge, however, that also codices, ‘whether of parchment or papyrus, or even ivory or another material, or waxed wooden tablets’, must be included in the legal definition of ‘books’, even if – as he implies – they are nonetheless not, properly speaking, ‘books’.

Emmel goes on to add that Ulpian’s attitude was old fashioned by the time he wrote it and that:

Probably more reflective of the current view at the time was the statement by Ulpian’s colleague Paulus, that ‘books’ legally comprise both papyrus and parchment rolls, and also codices, ‘because,’ he wrote, ‘by the term “books” is meant not (just) papyrus rolls, but any kind of written work that comes to a conclusive end’.³³

THE CODEX

We come now to the place of the codex among “the embers of a thousand years,” quoted at the beginning of this chapter, with a discussion of the appearance of the format of what was recognizably the codex by modern standards during the first millennium, in single- and multi-quire form with writing substrates of papyrus or parchment. There are numerous surviving partial texts that date from as early as the second century believed to have formed part of a codex. Knowledge of ancient texts based on multiple survivals often allows paleographers to determine general format from the length and layout of a known text. The basic idea of the codex is well understood: sheets of papyrus or parchment carried information on both sides and were attached together through some means. Unfortunately, damage to surviving papyrus and parchment leaves makes it difficult to prove, in many cases, whether a gathering of single or multiple sheets was sewn or tacketed through the fold, or stab-sewn through the side. The distinction is important from a purely structural point of view since the style and craftsmanship of attachment could affect the mechanical operation of the codex and the integrity of the text. The scholar of bookbinding practice is intensely interested in dating the early use of a particular sewing style, or the use of tackets in place of sewing. Establishing

33. Emmel, Stephen. “The Christian Book in Egypt.” In *The Bible as Book: The Manuscript Tradition*. Eds. John Sharpe and Kimberly van Kampen, 35–36. London; New Castle, Del.: British Library; Oak Knoll Press, 1998).

the developmental arc of such practices is of interest to the scholars studying our cultural development and the history of technology.

The study of the early codex is generally a study of early Christian texts.³⁴ Theories have been advanced that the early Christians made a conscious decision to use the codex to differentiate themselves from the pagan tradition of papyrus roll and wooden tablet, or that early Christians realized it was cheaper to write on both sides of the papyrus or parchment, just as was already being done with notebooks. Scholars C.H. Roberts and T.C. Skeat suggested in 1983 that:

We know from Jewish sources that while the Oral Law, the Mishnah, could not be formally committed to writing, isolated decisions or rabbinic sayings might be, and were, written down either on tablets or on what the Mishnah calls ‘small private rolls’. Since Jewish children, like Gentile children, started their education on tablets and continued to use them for memoranda, these would have been familiar everyday objects. A decision quoted in the Mishnah, said to be not later than the middle of the second century, mentions three kinds of tablets, those filled with wax, those with a polished surface (like the ivory tablets of the Romans) and those of papyrus, of which, however, only the second fulfilled the ceremonial requirements. There was a large Jewish community in Antioch from Hellenistic times onwards, and tablets of the kinds just mentioned, including tablets of papyrus, would have been in common use amongst the Jews there. It is possible, therefore, that papyrus tablets were used to record the Oral Law as pronounced by Jesus, and that these tablets might have developed into a primitive form of the codex.³⁵

Perhaps scribes simply realized that the bound-leaf format was easier to use, could carry more text by being written on both sides, was easier to store, and could be more easily referenced.³⁶ Whatever the reasons for the clear change from the use of often bulky and unwieldy papyrus rolls and wooden tablets to the codex format, it must be acknowledged that the earliest surviving codices are usually religious texts, and they are usually Christian.^{37, 38}

34. The term “Christian” is a tricky one to use at this time for practitioners of the religion; we have to jettison our modern definitions of what a Christian is and remember that in antiquity there were many Christian sects, little formal leadership, and a lively theological debate about how to interpret Christianity. Viewing early Christians as a united group that would take a decision to use the codex to differentiate themselves from Jews is a difficult stretch on just about every level.

35. Roberts and Skeat, *Birth of the Codex*, 59.

36. Smith, Margaret. “The Design Relationship between the Manuscript and the Incunable.” In *A Millennium of the Book: Production, Design & Illustration in Manuscript & Print, 900–1900*. Eds. Robin Myers and Michael Harris, 31. Winchester; New Castle, Del.: St. Paul’s Bibliographies; Oak Knoll Press, 1994.

37. Roberts and Skeat, *Birth of the Codex*, 50. The two scholars argue that the papyrus roll was not as clumsy to reference as we moderns like to think. See also Emmel, “Christian Book in Egypt,” 37–38.

38. Avrin, *Scribes, Script and Books*, 120. Avrin notes that no Hebrew biblical codices have come to light that date from before the ninth or tenth century CE. In the University of Michigan Library Special Collections Research Center, there is a Pentateuch (Mich. Ms. 88) that is thought to date from

Both single-quire and multi-quire codices existed as early as the second century CE in Roman Egypt, or even earlier.³⁹ The poet Martial referred to a multi-leaved leather or parchment copy of Homer in the year 85, though he did not call it a book and clearly thought it a curiosity compared to the familiar book roll.⁴⁰ We do not have surviving covers to go along with the surviving text fragments of these earliest codices; they may not in fact have had covers as we understand the term. They may have had blank leaves at beginning and end as a protection for the written leaves; they may have had loose or attached wrappers of papyrus, leather, or parchment that have not survived. We do know that the idea of a protective blank sheet or leaf had occurred to the makers of both papyrus rolls and multi-leaved wooden tablets. In the case of Egyptian papyrus rolls, there was often a preliminary sheet of papyrus provided at the beginning of the roll, sometimes blank, sometimes a reused inscribed piece with text scraped or washed off, sometimes reinforced; the end of a roll might have a similar sheet. The Greeks methodically attached a preliminary sheet, the *protokollon*, to the beginning of their rolls.⁴¹ Wooden tablets of two or more leaves usually left the outer side of the first and last tablet unused whereas both sides of the inner leaves would be prepared by gesso or had wells carved to contain wax to carry writing.

We may never find a second-century codex with a covering intact; we may never know if what we already possess in the way of second-century texts had coverings that were discarded or destroyed at the time of discovery. Some early codex covers, undoubtedly, have been separated from their texts and survive in collections, unrecognized for what they are or without identifying information to link the covers back to the texts they once contained.

The archaeological expeditions of the late-nineteenth and early twentieth centuries often operated on a subscription system that divided the artifacts resulting from a discovery among participating institutions. Groups of artifacts and even individual texts were sometimes divided

the tenth century. It is written in Hebrew on vellum and much of it is extremely fragile. The binding does not appear to be original, though it is notable.

39. Two examples are the partial manuscripts of the *Pauline Epistles* (P. Mich. Inv. 6238, LDAB 3011) and the *Shepherd of Hermas* (P. Mich. Inv. 917) in the Papyrus Collection, University of Michigan Library.

40. Needham, Paul. *Twelve Centuries of Bookbindings, 400–1600*. New York: Pierpont Morgan Library, 1979, 4.

41. The *protokollon* was the initial sheet of a Greek roll and was commonly left blank. Usually, the horizontal fibers of the cross-layered papyrus sheets were facing up on the inside of the roll, the right edge of the LH sheet overlapping the left edge of the RH sheet. Both the horizontal fiber direction and the left-to-right overlap allowed the scribe's pen to move more easily across the papyrus in the customary left to right writing. The join points were disregarded when columns were written, and the join, known as a *kollesis*, could fall anywhere in the midst of text. In the case of the *protokollon* sheet, the fiber direction was reversed so that the horizontal direction of the fiber was on the outside. This kept the relatively fragile papyrus from fraying from the hand plucking open the roll; having the vertical fiber on the outside would have allowed fraying. Some rolls also had an *eschatokollon* sheet attached at the end of the roll. The concept of the *protokollon* as a protective element may have translated into the flap extension or wrapping bands of early codices.

among subscribers. It is entirely possible that a book cover might end up being sent to an institution that received none of the text it originally protected.⁴² In some cases, competing institutions were bidding on the same text and divided it after purchase.⁴³ The very quantity of text fragments yielded by some of the finds meant that texts, intact or in fragments, would often be warehoused and, in some cases, forgotten for decades. It is not surprising that the less-regarded artifact, the binding, could end up in a forgotten shoebox. That which has not been truly lost through destruction, however, can be found again.

The emergence of connected, online documentation projects and the extraordinary effort on the part of scholars to describe and place scanned images of primary research collections online, along with the development of deep-scan and surround-scan technologies, leave a door open to the identification of early bindings, if they survive, and linking them again with their texts. Such research resources are presently contributing to the piecing together of early manuscript fragments of papyrus or vellum or paper into a more complete document, allowing a scholar to study online disparate parts of a particular text that are held by several institutions.⁴⁴

42. A case in point could be P. Mich. Inv. 1289. The inventory number was assigned to fragments of a manuscript dating from the sixth century but was also assigned to a leather cover fragment. The cover fragment was closely studied by the author and papyrus conservator Leyla Lau-Lamb, and we found that the cover was too small to belong to the manuscript, based on the measurements arrived at by the papyrologists who have studied the manuscript. For more information about this manuscript and cover, see 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, 198–297. Ann Arbor, Mich.: The Legacy Press, 2015, specifically pages 219–222 and 226–232, and Lau-Lamb's treatment of 1289 in Appendix 2, 280–285.

43. The collection of papyrus texts at the University of Michigan Library known as the Pauline Epistles, P. Mich. Inv. 6238, LDAB 3011, are an example of this. The book was divided between the University of Michigan and the Chester Beatty Library in Dublin with thirty leaves going to Michigan and fifty-six to Dublin (Beatty Codex II, LDAB 3011). This second-century papyrus manuscript was a single-quire gathering of folded sheets showing evidence of tacketing, but like many early single-quire constructions, the sheets were separated into leaves housed between glass plates for ease of study by scholars and protection of the papyri.

44. Porcheddu, Frederick. "Reassembling the Leaves: Otto Ege and the Potential of Technology." *Manuscripta* 53, no. 1 (2009): 29–48. Otto Ege is often reviled for breaking bound manuscripts to make individual leaves available to collectors, though his stated aim was to allow more people the pleasure of owning a medieval work of art in the form of a manuscript leaf. This article describes the efforts to electronically reassemble some of the texts.

For example, the great Codex Sinaiticus is now held, in parts, in four locations: 347 leaves in the British Library, forty-three leaves in the Library of the University of Leipzig, three partial leaves in the National Library of Russia in St. Petersburg, and a dozen or more leaves in the place where it is thought to have originated, St. Catherine's Monastery in the Sinai Peninsula.

An expanding resource for sharing images and information is the Advanced Papyrological Information System (APIS), a consortium of American and European universities working to digitize their papyrus collections and make images available online. In addition, there is an invaluable section on papyrus conservation presented by conservator Leyla Lau-Lamb. Another valuable source for papyrus conservation is a share site managed by Marieka Kaye, Head of Conservation and Book Repair, as

We have no idea how widespread the manufacture of early codices was or who made them. The survival of the early examples we do possess is probably most attributable to the climate of Egypt; the survival of early artifacts of every kind of organic material tended to be in the vicinity of the desert wādis south and west of Cairo. There were doubtless many texts reposing in private and institutional hands in the relatively densely populated Nile delta region in antiquity. Undoubtedly, there were elaborately fashioned codices among them; if so they have not survived due to war and other types of disruption and destruction, the wet climate, and pests. These realities cause us to value the surviving early codices found in Egypt even more. Their survival does not prove that the codex originated in Egypt or was made only there. Nevertheless, a visit to any Egyptology room in any museum in the world reveals that all the technical and craft knowledge required to make a simple or elaborate binding existed in Egypt by the second century BCE. Every necessary skill is exhibited by the techniques used to form objects that predate the appearance of the bound codex. Papyrus- and parchment-making, leatherworking, woodworking, carving, goldsmithing, and intricate decorative sewing, combined with all manner of design skill: it was a matter of transferring what was already known to the making of the early codices. A craft such as shoemaking may have provided both inspiration and technique. All the elements that we eventually see used to decorate Coptic bindings were used in fine shoemaking in Egypt as early as the third century: gilding, cut outs, appliqué, and fine stitching.⁴⁵

That luxury books were made, in both roll and codex format, is a certainty. The survival of the fourth-century, Greek Biblical texts of Codex Vaticanus and Codex Sinaiticus, though without original covers, attests to a very high level of text production and construction. It is difficult to believe they were without suitably well designed and executed covers. It is just as likely they possessed many peers and that more bindings will turn up. The ancient papyrus codices containing Manichaean texts that were discovered in the Fayyum in 1930 further make the argument that a high level of binding skill was achieved early in the history of the codex.^{46, 47} The relative crudeness of the earliest surviving leather bindings that come to us

well as the papyrus conservator, at the University of Michigan. Questions are fielded to the web list via email exchanges: PapyrusConservation@googlegroups.com.

See Miller, "Puzzle Me This."

Sometimes just the presence of a few sewing holes can make all the difference in determining the original location of a valuable book leaf. For a fascinating story, see O'Neill, Tom. "Leonardo...or Not?" *National Geographic* 221, no. 2 (2012): 102–108.

45. Sharpe, John. *Coptic and Collage: Ancient Technique, Modern Application*. New York: Center for Book Arts, 1997, 55–56. Some of the techniques discussed here date from Pharonic times, well before the Greek conquest of Egypt in 322 BCE, and it begs the question: Who thought of the codex first, given that these skills were prevalent not only in Egypt in antiquity, but throughout Mesopotamia, and that writing on various substrates was highly developed? Also see Boudalis, Georgios. *The Codex and Crafts in Late Antiquity*. New York: Bard Graduate Center, 2018.

46. Fayyum is only one of various spellings, including Fayum, Faiyum, and Fayoum for the city and oasis region lying west of the Nile, south of Cairo.

47. Gulácsi, Zsuzsanna. *Mediaeval Manichaean Book Art: A Codicological Study of Iranian and Turkic*

from the Upper Nile region and the Fayyum may simply bear witness that they were made by individuals who borrowed their technique and materials from the saddlemaker without having his skill; the materials and mastery for luxury book work would not have reached the rural town or remote monastery.

Scholars believe that, by the fourth century CE, a host of information-storage systems co-existed: the papyrus, parchment, or leather roll, wooden and metal tablets, papyrus and parchment notebooks, single-quire papyrus codices, and multi-quire papyrus and parchment codices. The various writing formats were used by the different cultures of the Near East, which by the fourth century were united as one entity under the hegemony of the Romans. Book rolls and individual sheets of papyrus continued in use for much of the first millennium. Parchment, and later, paper rolls were in use in most book traditions for specific texts throughout the medieval period and later.

The codex was a technological advance over the book roll, and its adoption was swift and fairly comprehensive. The codex would rapidly become the information-storage system of choice throughout the Near East and northern Europe. As Christianity came to dominance throughout the Roman Empire and eventually the Byzantine Empire, the codex became more common and was doubtless carried along with missionaries, with military expeditions, and with traders. The rapid adoption of the codex by Islam in the seventh century further established the use of the structure in the Near East.

THE COPTIC BINDING TRADITION⁴⁸

The first 500 years in the history of the codex might well be described in terms of the Coptic contribution to the history of bookbinding, because the earliest known surviving codex formats appear to have originated in Egypt and dispersed from there throughout the Near East (see fn. 1).⁴⁹ These scribes and early makers of bindings established many of the most recognizable

Illuminated Book Fragments from 8th–11th Century East Central Asia. Leiden, Boston: Brill, 2005. A very few fragments believed to belong to Manichaean bindings survive; one eighth/ninth-century fragment described by Gulácsi, MIK III 6268, is a rival to or perhaps more correctly an example of the finest late-Coptic book decoration.

48. It is fair to state that the development of all of our historical book forms depended on something we could call “artisan intuition.” It is clear that craft skills were applied to needs-at-hand, whether making shoes suitable for the climate the maker lived in, or figuring out the best way to hinge tablets, sew manuscripts together, and cover wooden boards with leather. This intuition has always been at work in the making of things – inventing, innovating, and adapting.

49. Lindsay, Jennifer. “The Edfu Collection of Coptic Books.” *New Bookbinder* 21 (2001): 48. The word “Copt” is thought to derive from the Greek word *ägyptios* for Egyptian, and thus the Greeks named the Egyptians after their conquest of Egypt, without necessarily attaching a religious definition to the term. The word Copt continued to be used by successive conquerors, including the Muslims who rendered the word as *qubt*. At the time of the Muslim conquest, the Egyptian population was entirely Christian, and as some Egyptians converted to Islam, Copt came to be associated solely with members of the Egyptian Christian community. The term “Coptic” is used by present day scholars to refer to the arts and crafts of the Egyptians, Christian or non-Christian, from the fourth to twentieth century CE.

structural features of the codex by the midpoint of the first millennium CE, structural features that, in many cases, remain in use today, some described below.

Pamphlet binding

Pamphlet is another term that has been used for what amounts to single-quire codices.⁵⁰ It can be composed of one sheet folded and sewn, tacketed, or stab-sewn, or multiple sheets folded and attached together in one of these ways.

Sewing

The early bookbinders did not invent sewing, but they had the good sense to modify and apply what was already known about sewing to attach book quires together. Linked sewing, including recessed link sewing, and the practice of unsupported sewing in general all continued in use through the handmade-book era.⁵¹ Modern book-sewing machines produce unsupported sewn-through-the-fold text blocks that would look perfectly familiar to a fifth-century bookbinder. Stab-sewing may have traveled west to Assyria from East Asia and knowledge of it through its use on multi-leaf wooden or ivory books may have been brought to Egypt during the Assyrian imperial expansion of the mid-seventh century BCE, or could simply have been an independent development of the same technique in the Near East.⁵²

Tackets

Tackets of leather, parchment, and vegetable cord were also used on early bindings to attach text gatherings to covers: the ends of a narrow strip of material passed through holes pierced through folded sheets and cover and were knotted together. Tackets are an attachment technique akin to modern staples, rather than a form of sewing. They are an elegant non-adhesive method of joining materials and, being non-adhesive, have often retained their strength and flexibility after centuries in use. Tackets were probably a transfer to codex production from other trades, perhaps used in clothing, shoemaking, and other types of leather-goods production. Quire tackets were noted among text

The scholarly research on the origins and dispersal of different forms of the book has been centered on the Near East, particularly Egypt, for a long, long time. New research is coming out that is tracing the path of book formats eastward and westward. We have long assumed that book formats originated in China and India, but the links have been obscure. Scholarly research in areas that were once cut off from the rest of the world by distance, politics, and language barriers is beginning to fill in those links; the Internet is a powerful medium for rapid exchange among scholars. We are learning more every day about the early book, and collections are being mined for fragments that were once ignored as our understanding of early structural elements grows and makes the fragments comprehensible.

50. The word *pamphlet* is believed to derive from the title of a popular twelfth-century Latin poem, *Pamphilus de amor*, that enjoyed wide circulation.

51. Unsupported sewing means that only the material used for sewing (such as gut or vegetable-fiber thread) passing along and between text gatherings connects the gatherings together. Supported sewing means that the sewing thread passes around or over an added support strip made from leather, tawed skin, parchment, cloth, or a vegetable-fiber cord.

52. Regemorter, *Binding Structures*, 183.

gatherings in some of the late Coptic bindings in the Hamuli group; these were used to keep written text sections together before binding, and in some cases, the binder neglected to remove them, so they were essentially “bound in.”⁵³

Flaps and fastenings

Closure systems that both protected the text and held it closed were used on early codices, probably adapted from use on clothing, storage containers, bags, and other items. Closure systems include ties, wrapping bands, flaps, and loop and peg clasps; some, such as ties and flaps, were still in occasional use on bindings through the nineteenth century. Flaps, some with tuck “tongues” continued to be very common on diaries, almanacs, and pocket Bibles, and both flaps and ties returned to use on revivals of early styles of binding in the Arts and Crafts Movement of design and production in the late nineteenth century. Today edge closures of every type have reappeared, used among book artists.⁵⁴

Pasteboard

The makers of the earliest surviving codices reinforced leather book covers with layers of scrap papyrus often composed of both blank and inscribed fragments; this reinforcement is called cartonnage. These linings were relatively thin, and the covers remained flexible. Thicker and more rigid pasteboards were made for some Coptic bindings and board composition might include scraps of papyrus, leather, parchment, and, eventually, paper. Some of these materials were inscribed, recycled from other uses. The writing-quality papyrus found in earlier pasteboard layers was largely replaced by thick clumps of fiber in later boards, and sometimes, straw was added. The thick, multi-fiber boards found on some late Coptic books were formed by creating a wet mixture of raw vegetable fiber and recycled material, perhaps combined with a binding medium such as gesso or gum arabic. The wet mixture may then have been cast, i.e., formed in a mold into book boards.⁵⁵ The thrifty habit of recycling materials like papyrus, parchment, and leather into other bindings for uses such as linings, stays, pastedowns, and for making book boards was a practice that continued right through the hand-bookbinding era and into the early days of machine-made books.⁵⁶

53. Szirmai, J.A. *The Archaeology of Medieval Bookbinding*. Aldershot, U.K.: Ashgate Press, 1999, 33–34.

54. Foster, Louise L. “The Nineteenth-Century American Pocket Diary.” In *Suave Mechanicals: Essays on the History of Bookbinding*. Vol. 3. Ed. Julia Miller, 280–299. Ann Arbor, Mich.: The Legacy Press, 2016, and Aikenhead, Lydia. “Pictures in Your Pocket: A History of the American Tintype Album.” In *Suave Mechanicals: Essays on the History of Bookbinding*. Vol. 5. Ed. Julia Miller, 2–29. Ann Arbor, Mich.: The Legacy Press, 2019.

55. Petersen, *Coptic Bookbindings*, 38–45.

56. Jutzi, Karen. “A Late Coptic Binding with Bridled Leather Boards.” In *Suave Mechanicals: Essays on the History of Bookbinding*. Vol. 6. Ed. Julia Miller, 168–191. Ann Arbor, Mich.: The Legacy Press, 2020.

Wooden boards

The use of wooden boards on some Coptic bindings, structurally more protective than pasteboard, was doubtless inspired by the long familiarity with the making and use of wooden tablets to write upon. The indigenous woods of Egypt in ancient times included acacia, tamarisk, sycamore, jujube, and willow; acacia is one of the woods known to have been used for early wooden book covers. Imported woods included box, cedar, ebony, and pine; cedar was used for some wooden tablets and for book covers in Ethiopia.

Cover structure

One of the most interesting products of the early bookbinders, similar in some ways to the case binding we are so familiar with today, is the component cover, where the parts of a cover are assembled, attached to one another, and then attached to a sewn text.⁵⁷ Some structures that can be considered similar to later seventeenth-century, lapped-component bindings were the covers, and sometimes cover fragments, found on a small group of bindings that survive from the fourth to sixth century. The nine (or more) books making up this distinct book family are identified by Sharpe as early Egyptian, pre-seventh century, multi-quire parchment manuscripts sewn through the fold, with wooden boards, leather spines, and wrapping bands with bone peg closures.⁵⁸ The covers are thought to have been made off the book and joined to the sewn text by the attachment of the leather spine to the back of the book and by pasting down spine lining extensions and parchment endleaves to the inside of the boards. We cannot be certain of the cover-to-text attachment style of all of these nine early bindings because almost all of them were found in a fragmented state, or they suffered structural damage from later intervention.

Decoration

The decorative motifs of the surviving Coptic codices from the first millennium can be related back to themes employed in contemporary woven textile materials and on luxury leather items,

57. These covers are not, strictly speaking, case bindings, though they could qualify as proto-case bindings; but they also differ from other Near Eastern cover-to-text attachment styles, such as the sewn-board binding, in which the boards are sewn along with the text block or attached to a sewn text block by means of looping thread from the sewing station around corresponding hinging loops on the boards.

58. Sharpe, John. "The Earliest Bindings with Wooden Board Covers: The Coptic Contribution to Binding Construction." *Preprints, International Conference on Conservation and Restoration of Archive and Library Material (ERICE)* 2 (1996): 381–400. There is some question whether there are nine or ten of these bindings; Szirmai lists nine with wooden-board covers, but neglects to list Geneva-Coligny/P. Bodmer XIX which also has a wooden-board cover, though whether original to the text it was found with is questioned. I believe it is safe to assume there are many more early books that will show up over time with wooden covers. A case in point is the 2005 find near Qurna (Al Qarnah, various spellings) of three manuscripts dating from the seventh/eighth and ninth/tenth century, one with wooden boards and a parchment text, and two with leather covers and papyrus texts. To date, the Qurna wood-board binding is not counted among the earlier wooden bindings discussed here.

such as clothing, shoes, and bags. Decoration on the earliest surviving leather bindings is relatively simple compared to the elaborate decoration found on some late-Coptic codices, but the methods used for decoration remained the same.

Decoration of bindings included blind tooling to make lines that divided covers into compartments, to fill areas on the cover, or to make borders and cruciforms. Such tooling was accomplished through the exertion of hand pressure using tools made of bone, metal, or wood on dampened leather. Individual, small, decorative stamps were used to make repeating patterns that might combine geometric designs, rosettes, a variety of concentric circle and dot patterns, as well as animal figures. There is evidence that several of the late Coptic bindings among the Edfu group, discussed later in this chapter, were decorated with figure stamps depicting birds and what appear to be horned goats or rams.⁵⁹ Other techniques, such as painted and gilded leather, contrast lacing with vellum, pen-and-ink decoration, and cut out or lattice-work areas backed with colored or gilded parchment, were used in conjunction with blind tooling to create breathtaking cover designs. Every one of the techniques used to decorate Coptic bindings has continued in use periodically through the history of bookbinding decoration and are reappearing on many modern-day, book-art bindings.

The structures and decorative styles descending to us from this earliest era of bookbinding are documented through the survival of single items or small groups of bindings, and, in numerous cases, by fragments of bindings that were found during the archaeological excavations of the past one hundred years and have come to light recently. Some of the future discoveries may also be a matter of excavating our own storage rooms for forgotten items. We may never truly know how many items were originally found during excavations in the nineteenth and early twentieth centuries, since book fragments may have been thoughtlessly destroyed at discovery or may have disappeared into private hands, but we are indeed fortunate to have some surviving bindings and texts available for study.

COPTIC BINDING TYPOLOGY

Nag Hammadi Codices

One of the most important single discovery of early Coptic bindings, to date, is the group of single-quire codices known variously as the Nag Hammadi codices (NHC), the Nag Hammadi Library, or the Gnostic Gospels, found in 1945.⁶⁰ The codices are believed to date from the mid-fourth century CE. Evidence in the form of place names in cartonnage linings from the covers has been found that connect the origin of several of the books to the Nag Hammadi region.⁶¹

59. Hobson, G.D. "Some Early Bindings and Binders' Tools." *Library* 19 (1939): 209–211.

60. The group of texts most commonly known as the Nag Hammadi codices are also referred to as the Gnostic Gospels, though the texts are considered to derive from a number of philosophical lines of thought, including what is perceived as main stream Christianity for the time and not just Gnosticism. The texts are believed to have been written by members of Coptic Christian communities, but the author does not wish to suggest that early Coptic Christians were by definition, Gnostics.

61. The earliest scholarly work on the Nag Hammadi was the illustrated article published soon after the discovery: Doresse, Jean and Togo Mina. "Nouveaux Texts Gnostiques Coptes Découverts en Haute-

These large books were found in an urn buried in the escarpment of the Jabal al-Tarif by villagers from the nearby town of Nag Hammadi (Fig. 1.3). The Nag Hammadi group originally included twelve leather-bound books and one unbound tractate. One of the books, Codex XII, disappeared just after discovery and most of the text is thought to have been burned as fuel in a courtyard oven; only fragments of the text from Codex XII survive, and nothing remains of the cover. The surviving eleven leather covers, originally found attached to their texts, are all semi-limp, wrapper-style bindings. The group includes several distinct subsets of covers that share distinctive structural elements. Overall, these “simple” covers taken together include a surprising variety of structural elements.⁶² The basic format, however, is that of a semi-limp wrapper, each cover lined with papyrus cartonnage, most including some inscribed fragments. Nine of the covers have, or show evidence of having, a flap extending from the upper cover and finishing on the lower cover.

Each cover was attached to a single quire of from twenty to forty sheets of inscribed papyrus that began as a stack, was folded in half, and tacketed into the cover.^{63, 64} Ten of the wrappers have top- and bottom-edge ties, and most of the covers show clear evidence of a wrapping band extending from the fore edge of the upper cover or flap. There is debate about whether Codex I, Codex II, and Codex XI had wrapping bands; the assumption is that they did, but the attachment area is so damaged or riddled with holes that it cannot be stated with certainty.⁶⁵

Egypte: La Bibliothèque de Chenoboskion.” *Vigiliae Christianae* 3 (1949): 129–141. Berthe van Regemortier wrote about the discovery and focused on Codex II, illustrating it with photographs and drawings; see the Bibliography for additional sources on the NHC.

62. The fate of the Nag Hammadi codices – leather covers removed, their cartonnage layers stripped away in the search for significant text fragments, and quires separated into single sheets housed between sheets of Plexiglas – has served as a horror story for conservators for years. The fact that we not only know what happened to the NHC but also that the covers and attachment pieces have been preserved and reunited for study is entirely due to the careful intervention of biblical scholar James Robinson, who led the UNESCO editing project team in the 1970s and who personally saw to it that the bindings of the Nag Hammadi were as well documented as the texts. See Robinson, James, et al., eds. *The Facsimile Edition of the Nag Hammadi Codices*. Leiden: E.J. Brill, 1972–1977. Also Miller, Julia with Pamela Spitzmueller. “A Gift from the Desert: A Report on the Nag Hammadi Codices.” In Miller, Julia. *Meeting by Accident: Selected Historical Bindings*. Ann Arbor, Mich.: The Legacy Press, 2017, 420–589.

63. There is evidence in the form of multiple stay-and-tacket attachments surviving with the cover of Codex I to indicate that this book had two or three quires instead of one.

64. The use of tackets appears to have been common on early single-quire codices; it is a term that has only recently gained wide usage, even among bookbinders. Scholars writing about early structures have often used the term sewing or stitch when referring to a tacket style of attachment.

65. Robinson, James M. “The Construction of the Nag Hammadi Codices.” *Essays on The Nag Hammadi Texts in Honour of Pahor Labib* 21 (1975): 170–180. After personal examination of the Nag Hammadi covers, with the exception of Codex VI which was not available for examination, I agree with Robinson’s careful and meticulous assessment.

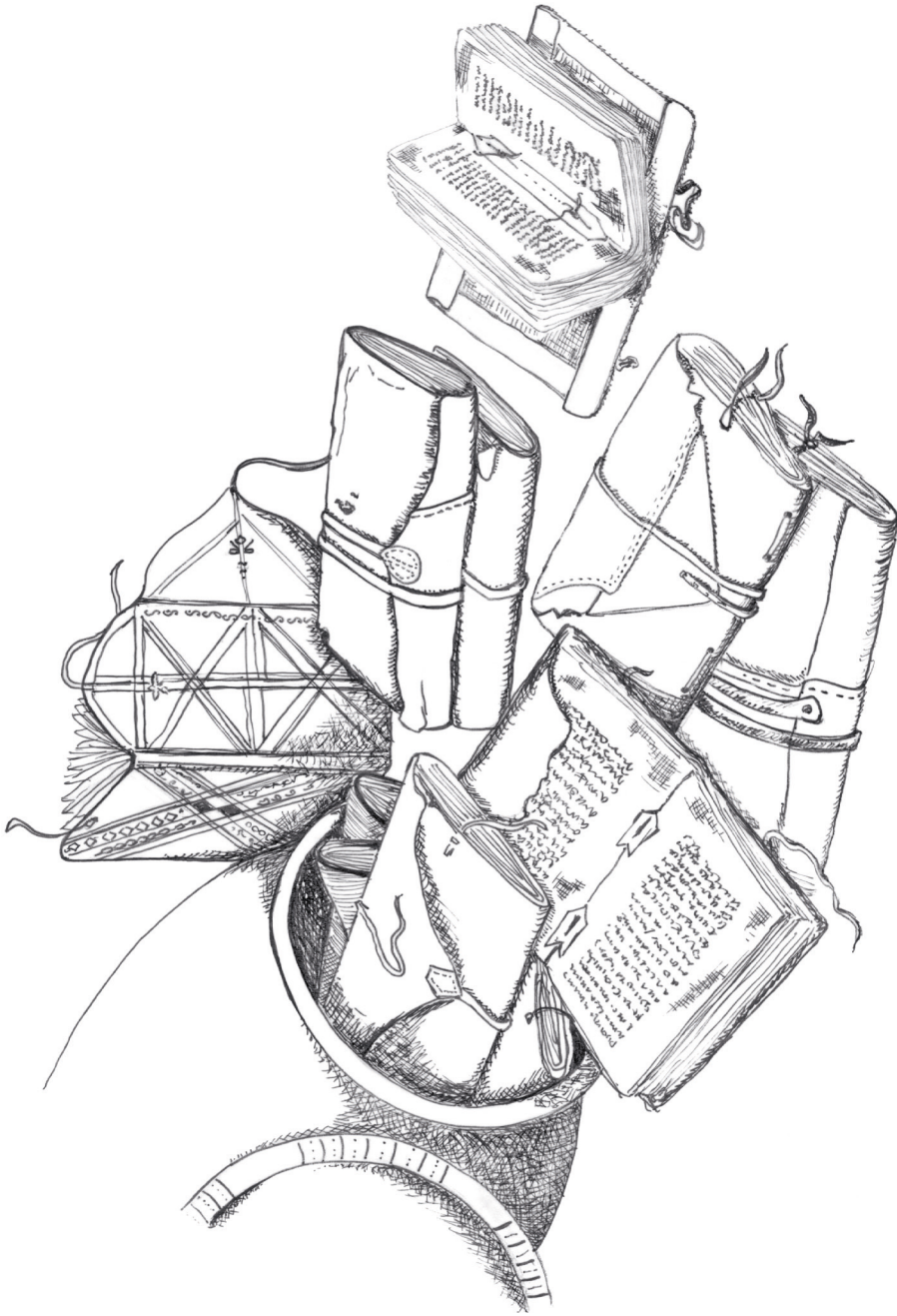


Fig. 1.3. Nag Hammadi codices emerging from large urn; left, terracotta bowl used to close urn. Surviving covers differ in numerous ways but share two characteristics: they are leather and were lined with papyrus cartonnage. Drawing by Pamela Spitzmueller.