

Puzzle Me This

Early Binding Fragments and Other Evidence
from the University of Michigan
Papyrology Collection

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Guest curator Julia Miller gratefully thanks Mary Heebner for her wonderful watercolor and Cathleen A. Baker, Pablo Alvarez, Thomas Hogarth, Brooke Adams, Sanam Arab, and Melissa Gomis for all their help in pulling this exhibit together.

All models for this exhibit were made by Julia Miller.

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Early Binding Fragments and Other Evidence from the University of Michigan Library Papyrology Collection

The purpose of this exhibit is to show binding fragments found in the University of Michigan Library Papyrology Collection, describe them, and challenge the viewer to study the fragments themselves, and imagine them as they once were, part of a valued and valuable early codex. To that end, images and models of similar surviving codices are an added part of this exhibit. The fragments appear to date from roughly the 3rd to the 9th/10th centuries, an estimate based purely on speculation and on the comparison of these fragments to more intact survivors that have been loosely dated by codicologists. The source of all of the fragments is thought to be Egypt, and it is likely that most of the bindings were made for Coptic texts.

Many of the book-cover and cartonnage fragments (*cartonnage* is the term used for book boards or the linings of leather covers formed from layers of papyrus and other materials) came to the University as part of sale lots of papyri acquired for the collection. None of the book-cover fragments in the collection appear to have any provenance connecting the covers to any of the text fragments in the collection. The book-cover and cartonnage fragments may have been added to the sale lots as a bonus with the thought that the layers of papyrus that they were made of might yield a lucky find in the form of a valuable text fragment. It was standard practice for a long time that cartonnage was delaminated in the hope of finding such texts. This kind of search is understandable, but unfortunate because many ancient book covers, once separated from their texts, were stripped of their cartonnage and then disregarded or, in some cases, were discarded.

Our attitudes are different today. We strive to develop the kind of technology that allows a researcher to study layers of inscribed material in situ, and we regard the surviving fragments of our earliest codices with a great deal of wonder and respect. There is a critical need for scholars to study early binding fragments, which number in the thousands, document their structure and decoration, and publish that information, so that collections all over the world can access this

information and, for example, locate connections between an ancient cover in Dublin and an ancient text at Duke University. It would be wonderful if owning institutions organized a crowd-sourcing project to put up images of all their ancient binding fragments for research, for comparison, and for puzzle-solving. That may be in the works!

These fragments are beautiful in their own ragged ways, and mysterious, and certainly puzzling. They are a fascinating if tiny portion of a very large and extremely important collection of papyri at the University of Michigan, and we are fortunate to have these binding fragments to study.

I would like to thank everyone associated with the Papyrology Collection at the University of Michigan Library, past and present, with special thanks to Professor Emeritus Ludwig Koenen, the late Professor Traianos Gagos, Professor Arthur Verhoogt, Dr. Nikos Litinas, Karla Vandersypen, Adam Hyatt, Brendan Haug, Monica Tsuneishi, Amber Innis, W. Graham Claytor, and Mark Armstrong, and papyrus conservator Leyla Lau-Lamb who has helped me and so many other researchers through her knowledge and conservation of papyrus in this and other papyrus collections.

Thanks also to Pablo Alvarez, Outreach Librarian & Curator in the Special Collections Library; Cathleen A. Baker, Conservation Librarian and Exhibit Conservator; and Shannon Zachary, Leyla Lau-Lamb, Marieka Kaye, and Tom Hogarth, all in the Preservation & Conservation Department.

Thanks to Randal Stegmeyer for his time, his knowledge, and his great skill in photographing the papyri and binding fragments.

Julia Miller, Guest Curator

Audubon Room

Tall Case Wall

An original watercolor painted by artist Mary Heebner in 2014, drawing inspiration from photographs of two fragments from the University of Michigan Library Papyrology Collection of what may have once been a book cover, P. Mich. Inv. 4088. The fragments are displayed in the Short Case on the bottom shelf.

Tall Case, Top Shelf, Left

P. Mich. Inv. 926, Folio 4v and 5r. A school exercise book written in the Coptic dialect of Bohairic. The source of the book is believed to be Theadelphia, and the papyrus is dated to around the 4th century. Two nearly intact sheets and one fragmented sheet survive. This fragment is accompanied by a thread bundle that appears to have a knot mixed in; the gutter or fold region of the papyrus fragment is so closely written, and riddled with holes and loss areas that it is impossible to pick out a system of sewing holes, whether through the fold or through the side. The APIS description for 926 contains an interesting discussion of fiber orientation of papyrus sheets when used for a codex. APIS is the website (<http://www.lib.umich.edu/papyrology-collection/advanced-papyrological-information-system-apis>) of a consortium of universities worldwide with papyrus collections. The site includes the records of edited and published papyri, usually accompanied by images, and is a wonderful resource for scholars. (P. Mich. Inv. 926. APIS record. Michigan.apis.3164)

P. Mich. Inv. 3992. Here is evidence of fairly consistent holes pierced in the fold area of this damaged but nearly intact sheet from a codex. P. Mich. Inv. 3992 does not have a record on APIS, indicating it has not been edited and published, nor does it appear to be presently assigned to a scholar. In a note about 3992, former University of Michigan manuscript curator Elinor Husselman indicates that the text is written in Coptic, contained several Biblical texts, and is dated to the 3rd or 4th century (Husselman, "The Collection of Papyri," 3–24).

Tall Case, Top Shelf, Center

P. Mich. Inv. 593. The inventory number 593 includes a group of papyrus leaves and fragments, 10 leaves of which are believed to comprise 20 pages of a codex known as the Wizard's Hoard. The content of the manuscript is magic and medicine, and it is believed to date from sometime between the 4th and the 6th centuries. The text description contains this qualification: "The line of demarcation between medicine and magic is, of course, not always easily drawn. Prayers, spells and substances are all applied in the same pragmatic way." The manuscript is written in Coptic in various hands with varying quality of letter formation. These two pages from the codex (pp. 9/10 and 12) show the two consistent holes pierced along the spine edge (left edge of pp. 9/10, right edge on 12) indicating an attachment system, perhaps thread or thin cord passing through the holes stabbed through the side of the text block, the thread then overcast along the spine edge. The vertical break in the middle of each leaf indicates the group of sheets was folded in half. The codex would have measured approximately 17 x 16 cm. (HxW); the almost square format is not unusual among Coptic codices. See the nearly square-format binding model accompanying P. Mich. Inv. 542.

P. Mich. Inv. 593. This textile strap is also assigned to the 593 inventory number and is approximately 70 cm. long. A note written on the general inventory list entry for 593 suggests that this textile strap may have wrapped the bundle of manuscript leaves at some point; the fold memory points in the strap match the width of the text block when the text block is folded in half vertically.

Model: Model of P. Mich. Inv. 593. The folded or single sheets of this codex may have been sewn in the overcast style demonstrated on this model, which has then been folded in half vertically, and secured with a wrapping band of woven cord to mimic the evidence seen on the original text pages. There is no evidence that 593 had a cover of any material, whether blank papyrus or leather, or that the wrapping strap was ever attached to the text block or a cover.

Tall Case, Top Shelf, Right

P. Mich. Inv. 2720 is a codex with fragments of six surviving sheets. None of the sheets are intact, though the folded sheet identified as Folio 6v and 7r retains most of its inner margin or spine area, enough to support the two tacket or sewing cords that survive in this center fold of the quire. The codex is written in Greek with two columns to a page, the lemma (premise) on the left, the gloss (interpretation) on the right. The codex is described as a *scholia minora*, or ancient commentary, on the *Illiad* of Homer, dating from the 5th or 6th century. This was a large codex; the dimensions approximately 27 by 35 cm. (HxW) when open. The surviving upper thread measures 6.5 cm. long, the lower thread 6 cm. The width of the inner margin is approximately 3.5 cm. The ends of the two threads pass through the center fold and are cleanly snipped off on the other side.

P. Mich. Inv. 607. Two leaves from a codex. Old Testament fragment of Kingdoms: 4 written in Sahidic on papyrus, this particular text not otherwise known to exist in Coptic. The fragments are believed to have come from the White Monastery in Upper Egypt, are dated to the first half of the 9th century, and measure 20.7 by 14.2 cm. (HxW). There is evidence that there were two columns of writing per page, which would make the measurements of an intact page approximately double the width noted above, or about 28 cm.

The many small holes in the spine margins of both pages of P. Mich. Inv. 607 make it difficult to tell which holes, if any, were made for attaching the sheets of this codex together. The second leaf provides an important bit of information: it retains a length of thread in the lower spine-edge portion of the fragment (on the right, bottom). The ends are neatly clipped, and even under magnification, there is no clear evidence of holes pierced for the passage of this thread to hold the quire together. Is this a tacket or sewing thread? We can only guess that it was one or the other.

Note the simple graceful paragraph marks to the left of text lines on the first page (left). A similar mark appears on the other side of P. Mich. Inv. 607[b]v, not shown here. This style of paragraph mark is

known as a coronis. Paragraph marks were used to indicate divisions of a text and have been found as early as the 4th century on Coptic manuscripts. The simple style of coronis used on this manuscript developed over time into the extremely elaborate ink-and-painted paragraph marks found on later Coptic manuscripts. The use of such marks ended or merged with the later use of enlarged capitals to begin a division of a text. (P. Mich. Inv. 607. APIS record. Michigan. apis.2636)

Tall Case, Bottom Shelf, Left

P. Mich. Inv. 4972[a]. A partial cover with a later spine repair. The cover measures approximately 18.5 by 15 cm. (HxW). The interesting elements on the outside of this upper cover include the leather spine repair, the leather lacing that attached the spine repair piece to the original cover, the holes pierced along the cover edges for attachments, now missing, and evidence of the one remaining leather loop attachment meant to catch on a button or toggle on the opposite cover, just visible on the bottom right corner of the cover as a stub end emerging from a hole. The most compelling elements are the decoration: incised lines and a cruciform cutout (the triangular shapes recall the fish-spear design of a cross barby meant to symbolize Christ). The cruciform is achieved by cutting out four triangular areas that compose the ends of crossed lines. This cutout area is backed on the inside of the leather with several pieces of parchment fitted together and large enough to back all four cutouts; study the areas in the accompanying images. The parchment pieces may have been gilded or painted on the outside to show through the cutouts, but if so, the medium has worn away.

Facsimile: Inside of the cover of 4972[a]. This shows fragments of the papyrus cartonnage and other materials that once lined the cover, a leather loop in the bottom corner, a fiber cord tacket near the base of the spine repair piece, and the leather lacing along the left edge of the spine repair piece that parallels the lacing on the right edge on the upper cover. Note the lifting edges of the parchment pieces used to back the cutouts.

Facsimile: Inside detail of a decorated leather fragment, perhaps from a book cover, that has been recycled and forms part of the cover lining. It was tooled in blind with straight and curved lines and annular dots, and accented with punched out circles that would probably have been backed by plain, gilded, or painted vellum or leather, or filled with a painted circle of leather as an inlay. There is also a bordered area with a line of horizontal slits made down the middle of the fragment that were laced with parchment strips as a contrast decoration; fragments of the lacing strips are still visible.

P. Mich. Inv. 4972[b]. This fragment is also assigned to the 4972 inventory number, but these two cover fragments, [a] and [b], do not have any apparent connection aside from possibly being acquired at the same time. The two small fragments shown with 4972[b] appear to match it much better than 4972[a]. They and the main fragment show some evidence of attachments, but the overwhelming impression is that odd bits of material, which may have been part of a binding once, were clumped together to appear to be a book cover. The accompanying note written by Charles Lamacraft, former curator of bindings at the British Museum, and stored with the two fragments, appears to describe 4972[b]. There is very little information about the acquisition of these two fragments; they are briefly mentioned in the general inventory, indicating they were acquired in the 1920s as part of a large lot of papyri.

Original note written by Lamacraft: "No 6 Coptic. 4972 Many fragments belong to a Very Ancient Manuscripts. One Binding of a Coptic manuscript with two leaves. From the Fayoum. Price £ 20— The Coptic MS is a modern production the old binding being covered with two leaves (fragments of vellum & then covered over with old leather. In the sewing remains sections of original work. The place of the missing leaves is filled with rubbish. The vellum leaves have been lifted and returned separately. C.I. Lamacraft." No record exists of the two vellum leaves he mentions; it is not clear if "returned separately" meant they were sent to the University of Michigan or someplace else. Lamacraft was a binder and restorer and probably lifted the vellum

leaves himself. As notes describing ancient bindings go, this one is pretty confusing!

Tall Case, Bottom Shelf, Center

P. Mich. Inv. 542. A piece of cartonnage that once formed a book board for a codex. When intact the board was roughly square, a typical format for Coptic codices, and the text was probably similar in size to P. Mich. Inv. 593 described on the shelf above. The cartonnage layers include some inscribed/recycled papyrus fragments, very typical. Such clumps of cartonnage are often delaminated in order to see if they contain important text fragments.

Model: Measures 14 x 13.5 cm. and illustrates a typical nearly square-format codex of leather over cartonnage boards, perhaps similar to the cover that P. Mich. Inv. 542 was once part of. The soft, somewhat lumpy contours are also typical of many of the surviving covers. The model has loop-and-toggle closures; such attachments were used on Coptic bindings that survive from as early as the 7th century. Similar closures may have been used on P. Mich. Inv. 4972[a], P. Mich. Inv. 542, and P. Mich. Inv. 7078.

P. Mich. Inv. 7078. A corner fragment of a book cover with decorated leather on one side and cartonnage on the other. The fragment was only recently assigned its inventory number, and no record of its accession has been located. The fragment measures 12.8 by 11.5 cm. and is 1 cm. thick. We cannot know if this is the upper or lower corner of the upper or lower board, but we can definitely identify the fragment as a corner of a larger, full-leather cover. The most telling evidence is the leather curving around the edge of the board just as a turn-in located on the outer corner of a board would. The other evidence that this is an outer corner is the stub ends of a leather thong visible on the leather-covered side extending from two holes pierced about 2 cm. in from the fore edge, as well as the knotted/wrapped ends of the leather thong on the inside of the fragment (see image). This leather thong could represent either a corner tacket or, more likely, a loop to catch a toggle attached to the opposite cover. Bindings with loop and toggle

closures tend to carry the loops on the lower cover with the toggles extending from the upper cover across the fore edge of the text block to catch the loops on the lower cover. See the model accompanying P. Mich. Inv. 542 for an example of loop and toggle closure.

Facsimile: Inside of P. Mich. Inv. 7078. The papyrus cartonnage forming the board included some inscribed fragments. The edge of the leather turn-in is obvious, as are the tied ends of leather that once formed an attachment loop.

Model: Tooled-leather model of 7078. Lighter-colored leather is used here to illustrate the tooling pattern on the original leather fragment, which is so dark, the pattern is hard to distinguish in this light. The scored or tooled pattern of decoration consists of multiple border lines around the board edges, and multiple lines were also tooled diagonally corner to corner, creating a saltire (or X) pattern, a very typical style of decoration on Coptic bindings.

Tall Case, Bottom Shelf, Right

P. Mich. Inv. 7077. A partial book board with most of the leather cover missing but with much of the coarse vegetable-fiber cord that was used to form its bridles still in place. Bridles are passes of thread wrapped on the spine edge of book boards to serve as catch points for sewing thread that would attach a sewn text block to the book boards, all done before the leather covering was added. One edge of the board retains its endband tie-downs; this survival tells us that this is a top or bottom edge and helps us measure the original height of the board. There are two fairly intact bridle stations visible on the cover and a third, where the cord lacing has been cut away but is still partially present. The cord bundle that extends beyond the edge of the board fragment is the fourth and final bridle. It is the survival of this fourth bridle and its extension, plus the height of the board from the first bridle to the edge with endband tie-downs, that allows us to estimate that the original height of the board was approximately 35 cm. Note that, since bridles were added to a board before the leather covering was attached, the top bridle on this fragment that sits on top

of the leather must be a repair; the original bridle is just visible beneath the fragment of leather.

Facsimile: Inside of P. Mich. Inv. 7077[a] showing the patchwork nature of the cartonnage and the different qualities of the papyrus used; the cartonnage includes inscribed papyri and also a strip of leather, slit for decorative lacing, just below the second bridle.

Box containing other cartonnage fragments assigned to P. Mich. Inv. 7077. A team composed of a papyrologist and a conservator may be able to piece these fragments back together someday.

Model of what P. Mich. Inv. 7077 may have looked like when intact; these “papyrus cartonnage” boards measure 35 x 30 cm. The boards are bridled with thread in the same style as the fragment. Text gatherings have been wrapped with parchment to suggest the original text-block material and sewn in link unsupported style. The sewn text block is attached to the bridles by extensions of the sewing thread on each side. These extensions are laced through the bridle corresponding to that sewing station, back through the sewing, back around the bridle, and then proceeding along the board edge to the next bridle-sewing station until all bridles and sewing stations are connected on both boards. An endband anchored in the boards and worked across the top of the book illustrates what the endband tie-downs visible on the 7077 fragment suggest to us.

Short Case, Top Shelf, Left

P. Mich. Inv. 1289. There are nine sizable fragments of leaves of papyri and some smaller fragments included under P. Mich. Inv. 1289; a leather cover fragment is also included in the 1289 inventory group and is discussed separately in this exhibit. The manuscript is dated to the 6th century, and according to the APIS description, the Coptic text includes the conclusion of the martyrdom of Saint Phocas in a heretofore unknown version, as well as an early version of the dying prayer of Athanasius. The description notes that the manuscript is written in heavy, square uncials with few fine lines in what is probably a version

of the Sahidic dialect of the Coptic language. According to a 1948 letter sent to T.C. Peterson from University of Michigan manuscript curator Elinor Husselman, the codex was acquired in 1923.

The APIS record continues with a lengthy description of the physical aspects of these papyri. The description indicates that the existing fragments were probably once part of a large single-quire papyrus notebook of folded sheets, which was between 27 and 33 cm. high by about 22.5 cm. wide when closed. The text was written in double columns on each page, each column approximately 7.5 cm. wide with a 1.5 cm. space between columns, and the rest was consumed by the gutter width and the outside edge margins.

This text fragment from the 1289 group shows vivid and varying binding evidence. The two leaves of the sheet were originally conjugate but are now cracked vertically along what was once the line of the fold. The binding evidence includes debris from a possible leather stay (added inside text folds to prevent the sewing from tearing through the fold); or it may be a gutter mend. A length of cord that is either a tacket (an ancient style of attachment akin to a staple) or part of a sewing thread survives within the gutter area atop the leather debris; the fold area is too damaged for us to be certain of sewing/tacketing holes through the fold. Finally, a pattern of paired holes pierced along the spine on both sides of the fold area indicate that, at some point, the folded quire was pierced through the side down its length and side-sewn with thread. The question is: If this notebook was both sewn through the fold and through the side, which system was used first? Best guess: Sewn through the fold first and then side-sewn as a repair when the folds began to break (papyrus does not like being folded and tends to split at fold points).

Three leaves of 1289 are held between two sheets of glass; the first two leaves were once joined but have split apart. The edge of a second column of text is visible on the fragment to the far left; the center margins of the two leaves that were once conjugate and the spine edge of the half sheet to the right show pairs of holes down the spine edge, evidence of probable side-sewing.

Facsimile: P. Mich. Inv. 1289[f], verso of the second P. Mich. Inv. 1289 text fragment; the dark stain in the fold/gutter area is from the leather strip on the other side.

Model: This is a folded facsimile of P. Mich. Inv. 1289 showing how a tacket works: one or more stays (folded strips of leather, as seen here, or parchment) are positioned inside the center of the quire, and the two ends of the tacket of leather, parchment, or as in this case, cord, is laced through the stay and the quire; the two ends are then tied together. It is a sturdy and easy way to hold together a single-quire book and is similar to our present-day pamphlets.

Model: This is what P. Mich. Inv. 1289 might have looked like when intact as a notebook; the folded papyri are side-sewn to illustrate the function of the pairs of holes along the spine of the original fragments. The two knotted threads on the spine fold represent the other possible attachment used on this notebook: two thread tackets passing through the quire and tied off on the outside of the spine fold.

Short Case, Top Shelf, Center

P. Mich. 1289 (partial leather cover). The fragment of leather is large, measuring 22 by 21 cm. (HxW), and very probably forms part of the cover of a codex. The type of leather is not possible to determine, though both sheepskin and goatskin were often used for book covers in Egypt during the first millennium. This leather is worn, discolored, and suffers from red rot. There appear to be very faint border lines scored or incised into the leather. A slit measuring 1 cm. appears at corresponding locations, roughly midpoint near the top and the bottom edges of the skin; it is possible that a thong, probably of leather, once occupied each of the two slits. The thongs were probably present as edge ties, and there would have been a corresponding tie on the now-missing lower cover for each tie attached to the upper cover. The cover was originally folded in half, horizontally (see the accompanying exhibit in the North Lobby that illustrates the unfolding of the leather by U-M Library conservator Leyla Lau-Lamb).

Original folder that contained the folded leather fragment assigned to P. Mich. Inv. 1289. Charles Lamacraft inscribed the folder: "Cover of Coptic Book. 13 pages stabbed & sewn. Cover although folded when received (over a number of loose fragments in addition to sewn portion) is evidently one cover of a larger book & so folded to deceive. The 3 seals and tapes which accompany the book had no connection with it. A mass of fragments not belonging in any way also in jacket with it. Some taken out & joined to larger pieces. C.I.L."

Note that Lamacraft did not identify this cover as that belonging to the 1289 text; a general note in the Papyrology inventory mentions that a folder containing a cover fragment is to be found with the 1289 fragments, but also does not identify the cover as belonging to the 1289 text. The fact is that, when you compare the size of the model of the 1289 notebook were it intact with the remnant of leather cover and the model made to show the cover intact, it is impossible to believe that the leather cover was associated with the 1289 notebook.

Facsimile: P. Mich. Inv. 1289[a], verso. This is the verso of the leather cover fragment stored with the P. Mich. Inv. 1289 text fragments. Looking at the inside of the leather fragment, there appears to be part of a turn-in on the lower edge of the cover fragment; measurements of the depth of the turn-in varying from 1.7 to 2.0 cm. Clearly, this area of the leather has a fold area, and this is evident on the outside of the cover as well. In addition, there is a clean finished-edge appearance to the papyrus lining in this area.

There is also evidence of a turn-in on the far right area of the cover where just a fragment of the cover extends beyond the main part of the leather. This area appears to correspond in location and appearance with the type of spine-area turn-in seen on other covers of this type, where a slit is made on each side of the spine area of the leather to the depth of the desired turn-in, and the turn-in is then made.

Study of the left fore-edge area of the inside of the leather cover fragment reveals that a vertical strip of folded leather was laid down to form the left "border" of the upper cover before the papyrus linings were attached to the inside of the cover. A small amount of cover

leather still protrudes beyond this vertical strip, evidence that the cover once had a flap extending from the upper cover. The strip of folded leather was added to finish the turn-in sequence for the cover, to provide a finished appearance, and to create symmetry with the lower cover turn-ins. This addition was only made on flap bindings, and in the first millennium, fore-edge flaps always extended from the upper cover on this type of binding. This allows us to assume this cover fragment is that of the upper cover of the codex.

Facsimile: P. Mich. Inv. 1289[a], recto. Detail of the chisel slit made close to the bottom of the upper cover, near the center point of the cover. The lower edge of the slit has taken a bevel from the leather strip (tie) that once occupied the slit. The strip would have tied to a corresponding strip on the bottom of the lower cover. Another set of ties would have been located on the upper edges of the cover at front and back. Look at the model of 1289 to see how the tie system worked.

Short Case, Top Shelf, Right

Model: A leather-binding model of 1289. This is what this cover fragment may have looked like when it was intact: a leather wrapper-style binding with a fore-edge flap extending from the front cover and finishing on the lower cover, top and bottom edge ties, and a wrapping band attached to the edge of the flap to hold the cover and flap in place when the book was closed.

Model: A model of another and very famous codex with a wrapper-style binding and fore-edge flap: Codex II of the Nag Hammadi codices. Codex II is famous for its contents; among other texts, it contains the most complete text of the Gospel of Thomas in existence. Earlier examples of the gospel, written in Greek, are very fragmentary. The cover of Codex II is elaborately decorated in ink and tooled lines, another feature that makes it a very special early codex binding. The cover and text of Codex II belong to the Coptic Museum in Cairo. Wrapper-style bindings such as 1289 and Codex II are believed to have been made in Egyptian monasteries as early as the 4th century,

and fragments of such bindings survive in a number of collections around the world.

Facsimile: A 1948 photograph of the Nag Hammadi codices taken when still intact. They all wear versions of the same type of leather wrapper-style cover, exemplified by the model of P. Mich. Inv. 1289.

Facsimile: A more recent photograph of some of the Nag Hammadi covers, which were detached from their texts long ago. The covers are considered extremely valuable and are often on display at the Coptic Museum, Cairo.

Short Case, Bottom Shelf, Left

P. Mich. Inv. 4088. These two fragments, composed of layers of leather, cloth, and papyrus, are clearly related to one another, but how do they fit together? Are these fragments of a book cover, or perhaps a pouch, satchel, or small case? What is the meaning of the cord lacing? Is it to finish and secure the turned-in edges of the leather? Is it a mend added to hold together a leather cover and a board lining that was delaminating and falling apart? More investigative work needs to be done on these fragments, including unfolding some areas of leather, matching the broken edges of separate leather pieces where possible, utilizing the edge contours and the linear design elements to try to make a match, and matching the fibers of the papyrus and the fabric fibers to one another. Materials that are this old and this fragile—the leather is cockled and brittle—would probably be damaged by the handling necessary to try to fit the pieces together. Another possibility is digital manipulation of the images to “fit” the fragments together.

Facsimile: P. Mich. Inv. 4088. The verso of the two fragments.

P. Mich. Inv. 553. Cartonnage fragment with inscribed parchment layer or possibly a board pastedown. The fragment of text is Coptic and is Acts: 6, written in a Fayyumic dialect. The use of recycled bits of parchment, leather, and later paper, as components of book boards, was common practice with Coptic cartonnage boards. It was

the practice on Coptic bindings to use a sheet of parchment, either plain or inscribed, as the board pastedown, or final lining of the inner side of the cover boards. These linings went edge to edge (flush with the board edges).

Facsimile: The verso of the fragment, showing layers of vertical thick strips of vegetable fiber. Although layers of recycled papyrus made up many of the ancient book boards, some had clumps of other fibers, grasses and rushes. T.C. Petersen, who studied many Coptic binding fragments, theorized that some of the later boards were composed of fiber pulp that was literally cast in a book-board shape while wet.

P. Mich. Inv. 4087. Cartonnage fragment with a sandal-shaped clump of papyrus and evidence of a thick fiber cord embedded in it, along with a fragment of inscribed papyrus. The area of the cartonnage that includes the sandal bottom (lining) has two and possibly three holes pierced in it. It is not certain if these holes were pierced as part of the sandal construction, or whether they served another purpose.

Facsimile: The verso of the fragment, showing the thick cord, the triangular intentional hole pierced through the “sandal” with clear evidence of wear around the hole, and a bit of inscribed papyrus.

Short Case, Bottom Shelf, Center

P. Mich. Inv. 612[a]. Folder 2/4. Clump of thick and fibrous cartonnage; at its thickest edge, the board measures 3 mm. There are three pierced holes visible along the left edge of the fragment; two are close together with a third several centimeters away. This was undoubtedly a large-size book cover, perhaps about the same size as P. Mich. Inv. 7077.

Facsimile: P. Mich. Inv. 612[a], verso, showing a patchwork of fiber strips. Here you see that relatively small strips of papyrus, probably off-cuts, were used to form the board layers.

P. Mich. Inv. 612[b]. Folder 4/4. Cartonnage with an inscribed papyrus layer.

Facsimile: P. Mich. Inv. 612[b], verso.

P. Mich. Inv. 612[c]. Folder 4/4. Cartonnage fragment with thread embedded in it.

Facsimile: Large piece of inscribed papyrus from the P. Mich. Inv. 612 cartonnage group.

P. Mich Inv. 4286. This small notebook contains part of Psalms 1:10–11 written in Coptic in a crude hand and is not dated. It consists of four papyrus leaves measuring roughly 11 by 8.5 cm. (HxW). It is stabbed with pairs of holes through the side along the spine edge and sewn with what appears to be a continuous thread that wraps between the two holes and then travels along the side or spine edge of the notebook and thus continues to the next pair of sewing holes. The APIS note mentions a length of thread or cord drawn up between the leaves, but the fragment is far too fragile now to open to see if such a length of thread is in place. The notebook is very damaged with losses on all edges, including the upper third of the spine edge along with the sewing thread from that area. The first leaf is broken off along the line of sewing, but it is clear that it is a clean fit when laid back in place. The writing ink is alternately dark on some pages such as the top page and faded on other pages of the notebook, including the verso of the last leaf. This fading is not surprising; the exposure to dampness and friction may have dissolved or abraded the lettering away.

This is an example of a notebook probably made by a user, rather than a stationer who produced blank books, and in fact, the APIS record mentions the possibility that the crude hand indicates that it was written for private use. The line of sewing encroaches on the writing field, which is another indication of amateur work; the text was doubtless written and then the sheets were attached together.

Facsimile: P. Mich. Inv. 4286. On the top is the verso of the first page of text, and on the bottom, the last page of the notebook. Note the contrast between the rich dark lettering on the verso of the first page, and the worn and faded lettering and damage to the last page. There

are passes of the sewing thread visible in the bottom image that clearly show a vertical anchoring stitch crossing the horizontal wrap thread.

P. Mich. Inv. 6632. At present, there is no description of 6632 in the APIS database. It is a small notebook composed of four sheets of papyrus folded in half. The content is symbols written in thick black ink, and the symbols may represent a magical incantation or it may simply be a child's plaything. The closed book measures 7 by 4.5 cm. (HxW). The notebook is held together by overcast sewing along the fold edge.

Facsimile: Left: P. Mich. Inv. 6632. Last page of the small notebook, severely damaged. Right: Page opening showing some of the symbols that occur throughout.

Short Case, Bottom Shelf, Right

P. Mich. Inv. 6592. A group of cartonnage fragments assigned to P. Mich. Inv. 6592. The inventory file record contains the following: "Fragments of bindings made from papyrus and probably originally leather covered. Origin; probably Medinet Madi." There are some inscribed papyri in the mix, several intentional holes, and some surface debris that may be leather residue.

P. Mich. Inv. 557[a]. Painted parchment fragment from a group of cartonnage fragments assigned to 557. It is not unusual for fragments of decorated leather and inscribed parchment, and later paper, to show up mixed in with layers of papyrus and other vegetable fibers in ancient book boards. This painted parchment is an example. The Revised Inventory of Coptic Papyri has this note regarding the fragment: "Fragment containing a miniature of St. Theodore the Anatolian on horseback." The fragment is blank on the verso. It was originally creased and a section was folded over; it was recently treated in the Library's Conservation Lab to unfold and flatten out the creases.

Facsimile: The painted parchment fragment before conservation treatment.

P. Mich. Inv. 557[d]. Cartonnage with an inscribed parchment layer. Compare this piece of cartonnage with P. Mich. Inv. 553, displayed two shelves to your left. The fragments are similar with regard to their inscribed parchment layers, and the quality of the cartonnage fibers (see images of the versos of both fragments).

Facsimile: P. Mich. Inv. 557[d]. Verso of the cartonnage fragment.

North Lobby

Puzzle Me This: Painted History, Conservation Plays a Role, and Other Mysteries

Case A

This exhibit is intended to introduce you to the content of and entice you to visit the complementary exhibit in the Audubon Room, *Puzzle Me This: Early Binding Fragments and Other Evidence from the University of Michigan Library Papyrology Collection*.

Both the N. Lobby and Audubon Room exhibits revolve around the often-puzzling ancient fragments that are contained in many library collections around the world: in this case, early book fragments from the 3rd to the 10th century C.E. that are in the University of Michigan's Papyrology Collection.

The fragments are puzzles because only a few of them retain enough structural and decorative information to place them accurately in time and to determine what they would have looked like when they were intact. Puzzle me this, indeed!

Painted History

This is a facsimile of artist Mary Heebner's watercolor interpretation of one of the most puzzling fragments in the Papyrology Collection: P. Mich. Inv. 4088. This view of the fragment makes it look very much like the inside of the cover of an old book, but as you can see in the images to the right (and displayed in complementary exhibit, *Puzzle*

Me This, in the Audubon Room), there is a second fragment that complicates the interpretation of this one. Heebner's original painting is on display in the Audubon Room. The leather and cartonnage fragments of P. Mich. Iv. 4088, which Heebner used as her inspiration.

Mary Heebner's workbench in her studio in Santa Barbara, California, with photographs of P. Mich. 4088 (along the left side) and her watercolor interpretations of the originals. Heebner has titled this group of paintings, the "who am I what do I say" series.

Case B

Conservation Plays a Role

The subject of this part of the exhibit is a folded fragment of a leather cover belonging to the P. Mich. Inv. 1289 group; it has rested, folded, in a container in the Papyrology Collection for almost a hundred years.

Senior Conservator Leyla Lau-Lamb of the University of Michigan Library Preservation & Conservation Department specializes in the conservation of papyri and other artifacts in the Papyrology Collection. She undertook to unfold and stabilize this leather cover fragment in Spring 2013 to facilitate research, and her work is documented here. The original cover fragment and more information about it and its original structure are in the Audubon Room exhibit.

A.P.I.S. is the website of a consortium of universities world-wide with papyrus collections (<http://www.lib.umich.edu/papyrology-collection/advanced-papyrological-information-system-apis>). The site includes records of edited and published papyri, usually accompanied by images, and is a wonderful resource for scholars. The site also has an extensive and informative link to the papyrus-conservation techniques of Lau-Lamb, whose skillful work to preserve and conserve the U-M papyri has resulted in the rehousing and treatment of a major portion of the collection, while also serving as a model and instructional aid to the custodians of other papyrus collections.

P. Mich. Inv. 1289. Although this folded piece of leather—the outside of the cover—revealed a fair amount of information in its folded state, being able to see the inside of the cover was also deemed important enough for the conservator to consider unfolding the leather.

An extended edge of the main fragment had a small folded area. Here Lau-Lamb is slightly dampening the fold area to make the leather more flexible. A very small amount of distilled water was delivered to the area with a fine-hair brush.

Lau-Lamb carefully opens the folded edge piece.

Lau-Lamb uses finger pressure to help flatten the folded edge piece. Light pressure and the warmth from our fingers is often an aid to conservators when flattening folds and creases in book materials.

Case C

Before beginning the process of opening the main fragment, Lau-Lamb gauged the flexibility of the leather by slightly lifting the upper portion, and she decided the leather was strong and flexible enough to allow unfolding.

Applying moisture with a fine-haired brush all along the fold line.

The cover lies open with the inside now fully revealed. Small weights (white rectangles, upper left) weigh down the repaired edge of the leather fragment to help the mended area dry flat. Like many early Coptic bindings, this cover was lined with layers of recycled papyrus fragments. It is evident that some of the layers lining this cover were removed, perhaps because the lining fragments were inscribed with text that was retrieved from the cover for study.

Case D

The inside of the cover; the still-damp fold line and edge area both lightly weighted as they continue to dry. Lau-Lamb continued the delicate mending operations on an edge of the cover made accessible by unfolding the leather.

Detail: Weak edge area after it was stabilized with bridge mends of thin Japanese repair paper using an archival synthetic adhesive, sodium carboxymethylcellulose (SCMC).

Detail: This is the outside of the cover; the fold area is still under weight to keep it flat during drying.

The outside of the cover fragment, completely unfolded. The dark line across the middle is where the leather was dampened to facilitate unfolding.

Case E

On the left is the outside of the leather cover fragment. It is oriented this way based on studying the meager but informative structural evidence observed on the cover. It is believed that this is the upper cover of a wrapper-style binding that had a fore-edge flap extending from the upper cover. The drawing on the right is of the upper cover and is labeled based on discussions between the conservator and the curator of the exhibit. Note the horizontal slit near the bottom of the leather cover; more information about this element and the cover fragment and its structure can be viewed in the Audubon Room exhibit.

Making drawings such as these is one way that conservators and researchers can work out how a particular binding may have worked. By identifying the cover orientation and structural elements, you can make a model of a binding, including what is absent from the original, in order to “see how it works.”

On the left is the inside of the cover after unfolding, showing the fragments of papyrus cartonnage. The drawing on the right is also labeled with orientation and structural notes. Speculation, yes, but informed speculation.

Case F

Other Mysteries I

In this and the next case are some of the other fascinating fragments associated with early book forms to be found in the University of Michigan Papyrology Collection. Most of the actual items illustrated here are displayed and more thoroughly described in the Audubon Room exhibit.

This small fragment, measuring approximately 2 x 2 inches, has a bit of sewing thread remaining. Because of the equal width of the blank area on each side of the thread, and the sharp edge of the papyrus on the right, it is possible this fragment came from a folded papyrus sheet or a group of single sheets, side sewn in from the folded or cut edge. But the truth is and will remain a puzzle....

P. Mich. Inv. 4972. On the left is a detail of the central decoration of the Coptic cover fragment pictured on the right. The cruciform decoration is composed of four triangular cut-outs through the leather; the cut out areas were then backed with pieces of parchment, originally probably painted or gilded. The cut-outs are combined with vertical and horizontal lines incised in the cover, extending the cruciform design to the entire cover. See the next case for more images.

P. Mich. Inv. 4559. A fragment of early paper, obviously a folded sheet from a codex or notebook with holes for sewing pierced in the fold or gutter area near the top of the fold.

P. Mich. Inv. 7078. This fragment is oriented to be the lower left-hand corner of a lower cover of a book. The fragment has some of its decorated leather intact, and there is evidence of a loop attachment in the form of two stubs of leather protruding from the leather on the left edge area, just in from the edge at about midpoint. Catch loops on Coptic bindings tended to be on the lower cover of books with the toggles or buttons extending from the upper cover. The image clearly shows the pattern of scored decorative lines once forming a linear border all around the cover, but in addition, multiple lines crossed the cover diagonally, corner to corner, in a saltire cross (X) style.

Case G

This is the inside of the cover of P. Mich. Inv. 4972; the outside is illustrated in the previous exhibit case. This shows the turned-in edges of the leather, part of the laced and tacketed leather spine repair piece, and part of a leather loop at the bottom corner, left, which probably is

part of a loop-and-toggle attachment system common on Coptic bindings of this period, ca. 7th/8th c. The intentional holes pierced at intervals on the top, bottom, and fore edge (left edge above) of this cover indicate two different sets of attachment systems, possibly evidence that this cover was reused at some point for a different text. The cover is not identified with any text fragments in the Papyrology Collection.

Detail: An area on the inside of P. Mich. 4972 near the top edge shows bits of papyrus cartonnage, as well as bits of decorated leather recycled into use as part of the cover lining. The triangular shape near the bottom of the image is the edge of one of the parchment pieces backing the decorative cut-out areas seen on the outside of the cover, illustrated in the previous case.

Other Mysteries II

P. Mich. Inv. 3527. This dainty little artifact is believed to have been a child's bracelet; the strips of folded papyrus forming the amulets attached to the cord probably carry standard injunctions for health, safety, and long life. Many amulets in collections of ancient materials are routinely unfolded to determine their text; it is wonderful that this bracelet is intact.

Detail of one of the papyrus rolls in the University of Michigan Library's Papyrology Collection shows how very fine and thin the papyrus of the roll is; if unrolled, this book would probably be 20-feet long, a standard roll size in antiquity. As it is, exposure to adverse environments, and quite simply, age, has made this papyrus very brittle and fragile. It may never be unrolled, and its contents may always remain a mystery.

P. Mich. Inv. 7077. The lower cover of a codex, made of papyrus cartonnage, with some bits of the leather covering still attached. The top right edge of the image shows the vertical wraps of the endband tie-downs. Along the right edge of the cover are periodic wraps of thread, four in total, that are called "bridles." After the text block of the book was sewn, it was attached into its cover by tying the book

at each sewing station to the corresponding bridle on the upper and lower boards.

Detail: This is the second bridle of P. Mich. Inv. 7077. Bridles were attached to boards (and linked to the sewn text block) before the leather covering was added. The edge of a cloth spine lining—a typical lining across the book spine and extended onto the boards—is also visible in this image lying just beneath the leather.

Case H

KM 5.2927. A general view of excavations in progress at Karanis with Expedition Director Enoch E. Peterson at left, ca. 1927. Photograph courtesy Kelsey Museum of Archaeology, University of Michigan.

A dig scene from Karanis in the Fayum region of Egypt. Archaeological sites like this yielded many ancient objects, including fragments of papyrus, parchment, and paper texts, and sometimes books, whether papyrus or parchment rolls, or codices.

The three books on display in this case are references on important early codices and are combined with images taken from them.

The Kellis Agricultural Account Book—Dakhleh Oasis Project: Monograph 7, edited by Roger S. Bagnall, 1997. Kellis is the ancient Greek name for the town of Ismant el-Kharab at Dakhleh Oasis southwest of Cairo. A dig there in 1988 unearthed two important multi-leaf wooden codices, the Kellis Agricultural Account Book (KAB), and another wooden book containing three orations of Isocrates. The KAB is considered extremely important, detailing as it does the economy of the oasis in the 4th century. One image shows the two books in situ at the dig site; the other shows wooden book boards, a chunk of wood scored and ready to be cut into small wooden tablets, and a wooden mallet.

This is the introductory volume of the multi-volume *The Facsimile Edition of the Nag Hammadi Codices* published in 1984 as a result of the editing project of the texts of the Nag Hammadi Codices funded by

the United Nations Educational, Scientific and Cultural Organization (UNESCO). These 4th-century books were found in Egypt in 1945 and are sometimes called the Gnostic Gospels. Twelve books with intact bindings and one unbound tractate were found; only eleven of the covers survive. These are single-quire books with leather wrap-per-style bindings; the leather cover fragment U-M P. Mich. Inv. 1289 was probably similar to these covers when it was intact. The images include the group of bindings photographed in 1948 before the texts were removed from the covers; the two smaller images are of the limestone escarpment where the books were found, across the Nile from the town of Nag Hammadi.

The *Catalogue of Coptic Manuscripts in the Pierpont Morgan Library* by Leo Depuydt, 1993. Depuydt presents images of a selection of text pages from the Morgan Coptic manuscripts to illustrate different writing hands, decorative devices, and at the back, some of the distinctive bindings in the collection such as M. 569 pictured on the cover of the book. Pierpont Morgan bought fifty books in 1910 that form the core of the Morgan's Coptic collection; they are believed to have come from the monastery of St. Michael in the Desert in the Fayum near the town of Hamuli. The books are mostly large and the bindings were massive; such books are called *service books* because they were written large and read during services or at meals in the monastery. A model of the boards and sewing of such a book can be seen in the Audubon Room with U-M P. Mich. Inv. 7077, a large fragment of an early book board. The image accompanying Depuydt's book shows Pierpont Morgan among a group lunching in a temple somewhere in Egypt in 1912; Morgan travelled there several times.

Thank you for coming to see this exhibition.

Check the Library's website for more information about our collections, exhibits (physical and online), and upcoming events:

www.lib.umich.edu/special-collections-library