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# The Preservation Project at the Archives of Vilassar de Dalt and an Exploration of the Non-adhesive Limp Vellum Structures in the Collection

The Castillo de Vilassar de Dalt occupies a strategic position in foothills above the village of the same name, overlooking the Mediterranean just twenty-six kilometers northeast of Barcelona, Spain. The central tower of this castle fortress was constructed in the 11th century and served as a defensive structure guarding against invasion and pirates attacks. Over the course of the next few centuries, it evolved through form and function into a noble mansion, passing by inheritance through several aristocratic families. In the mid 1800s, the castle came into the possession of the Marques de Santa Maria de Barbera y de la Manresana and has remained in this family ever since. The castle was designated a Spanish National Monument in 1931, and, in the 1950's, restoration of the castle was initiated by the current Marqués's father. This project continues today.

*Castillo de Vilassar de Dalt.*

*Marques and Marquessa de Santa Maria de arbera y de la Manresana.*

The Marques and Marquesa, or Ramon and Marcella, are committed to preserving the castle as well as its artifacts and furnishings. As part of the renovations project, Ramon and Marcella investigated how best to preserve the materials in the castle archive. The archival holdings, which range from the 11th to 19th centuries, record the histories, lands, and administration of the castles and palaces of several families of the Spanish and Catalan aristocracy; these materials were accumulated through marriage and inheritance and have endured wars, fires, relocations, and even renovations. Over half of the collection is

composed of nearly 1500 linear feet of paper materials tied in bundles.

Of the extraordinary 10,000 parchment documents housed in the collection, 2,000 were interspersed within the paper bundles, folded such that their information was nearly inaccessible. The remaining 8,000 parchment documents were purportedly unfolded and ironed flat by nuns during the Spanish Civil War when the castle archives were moved to a convent for safe-keeping. The over 2,000 bound volumes on the shelves of the archives represent the history of bookbinding and printing in Spain from the 13th century onward. The majority of these books are codices containing historical, legal, genealogical and financial documentation.

*Karen Pavelka. 1987*

A collection of such size and variety presents many preservation challenges. Alongside the long term goal of preserving the collection through rehousing and proper storage is the plan to make the materials accessible for research. The conservation project at the archives of Vilassar de Dalt began in 1986 under the direction of Guy Petherbridge, then professor of Conservation Studies at the School of Library and Information Service at Columbia University. The first three years of the project concentrated on building and furnishing a lab, then housing the archival collection of parchment documents, paper manuscripts and bound volumes. That work was well underway when Columbia closed it's library school in 1992 and the project went on hiatus for the next several years. In 1999, Ramon, the Marques, contacted the University of Texas at Austin and – by chance – was put in touch with Karen Pavelka, paper conservation instructor and a member of the first team to from Columbia to work at Vilassar.

Meanwhile, the castle had been completely renovated, during which time the Casita – formerly a work and living space for visiting teams of conservators -- had become the primary living space for the Marques's family. The lab workspace had been turned into a living room, and the lab furniture had been incorporated into other spaces in the castle. Most intriguingly, the standing French press stood decoratively in one of the castle's gardens. When the family returned to the castle, the room where the archive had been was now a bedroom; the room that had been planned to be the archive was now a living room, and the archive itself moved into the Marques's office (left), on the ground floor of the castle.

*Castle archives, 2004*

My former instructor, Karen, flew to Spain to re-assess the project. Earlier teams had successfully re-housed the bound volumes with bookshoes, phase boxes and drop spine boxes. Most of the flattened parchment documents had been tied between boards and placed in flat files built specifically for their storage. Most of the paper documents, however, were still tied in bundles or in the red metal boxes and there were nearly 1,500 stiffly folded parchments that were impossible to open or read.

Ramon and Karen developed a plan to accomplish the work, and each summer since 1999, a team of two students have traveled to Vilassar to continue the project, creating custom housings for the paper materials, and developing a process to humidify, flatten, and properly store the parchment documents. In 2004, my fellow student, Beth Heller and I were selected to be the next team.

We nearly completed the project to untie, process, and rehouse the paper caixes in custom boxes. Over the past few years, students have established a system not only for creating protective enclosures for the fragile paper documents but also for labeling boxes as well as mapping the collection on the shelves of the archives to preserve the grouping of the original bundles. While the bundles are not regarded as the original order of the materials, the grouping of the paper documents into tied bundles was likely for ease of transport in case of the odd civil war or storming of the castle walls. We divided our time between these paper materials and opening parchment documents. Limited supplies and equipment make for somewhat primitive working conditions, and the large backlog of parchments to be flattened dictates that work is conducted efficiently in batches. To create a simple humidification chamber, a large table is lined with Gore-tex and Tyvek, and folded parchments are placed between these materials. On top of the Gore-tex, damp strips of blotter are applied along the folded edges of the parchment, allowing the application of moisture locally. The parchment documents can then be opened gradually and safely without further damage. This method

*Karen and I untie paper caixes.*

proves both flexible and efficient, and thus far over 600 parchments have been flattened. Special enclosures are created for wax seals and their metal containers.

*Folded parchments were found throughout the collection. To open the parchments for research access, the parchment is placed between gore-tex and tyvek then damp blotters introduce humidity locally. The parchment is unfolded gradually, and scrap board is used to seal a simple humidification chamber. The parchments will then be dried and flattened under weight.*

After humidification and flattening, students examine the parchment documents and record information such as skin type, size, media other identifying characteristics. This information is stored in a database.

Working in the Archives at Vilassar has represented a unique opportunity to work with materials so rarely encountered in American collections, especially in such quantities. Armed with a digital camera and the consent of this private archives' owner, I embarked on a focused study of the unique binding structures found in this collection. From my training as a book conservator, I know limp vellum bindings through Chris Clarkson's historical studies and his modern limp vellum conservation binding as well as from the occasional item conserved for special collections; from my interest in book history, I know these bindings to be regarded as eccentric and yet often underrated because they lack decoration.

Before we tackle the binding structure of limp vellum archival bindings, let's take a look at the materials. The distinction between vellum and parchment is an age-old but subjective one. While some say that vellum is made from certain skins while parchment is made from other animals, some will argue that vellum is a higher quality of skin than parchment. For this project, I will take a very simple approach and define vellum as a book covering material and parchment as a writing material.

The process to create both parchment and vellum are the same. Unlike leather, which is tanned, vellum and parchment are prepared by soaking the in skin lime, then dehairing or dewooling via scraping, and finally drying the skin under tension. The skin can be limed and pumiced again while still taut, emphasizing the difference between the flesh side with a rougher texture and darker color from the grain side. Drying under tension stretches the fiber network of the skin, yielding a relatively inelastic, stiff, and durable material that is translucent or opaque.

The flexibility of the limp vellum's covering material provides ease of transport and handling. The majority of these are non-adhesive bindings, constructed with blank textblocks, and only rarely will one find an endsheet pasted to the covering material. This style of binding is also referred to a stationery binding, or a book constructed and sold by a stationer for recording handwritten accounts. These terms characterize many of the bindings in the Vilassar archives. These manuscripts are not books so much as they are archival records, and the limp vellum stationery binding a suitable method of collecting important information and records over a period of time (Szirmai 286). These bindings evolved from the parchment wrapper, or a discarded parchment document that was wrapped around papers to keep them together, as seen here.

*Parchment wrapper.*

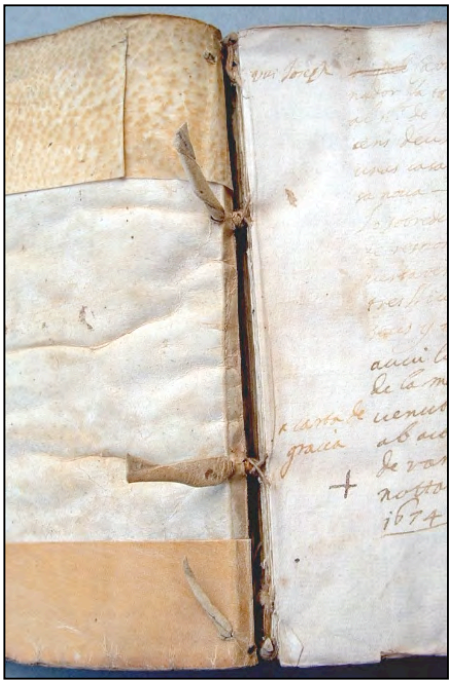
Scholars date limp vellum bindings back to the 14th century, and the earliest example in the archives at Vilassar dates to approximately 1340. Limp vellum bindings were used most popularly as account books from their inception until the mid 1600s when stiff or semi-stiff vellum bindings became popular as account books increased in size. Printed books also were often sold in limp vellum covers in the sixteenth and seventeenth century as an economical alternative to leather bindings. While this use of limp vellum on printed books decreased in popularity in the eighteenth century, late nineteenth and early twentieth century private presses such as the Doves Bindery revived the style.

*Thick sections that could quickly be sewn together.*

Limp vellum books are generally lightweight and often thin for ease of transport. The durability of vellum as a covering material that is flexible yet protective made it popular. As account ledgers or early notebooks, these bindings are easy to handle and open; however, they do have a tendency not to remain closed and thus are often equipped with ties or loop closures. The "limp" in limp vellum signifies that these structures are without boards. Boards are sometimes added under the vellum covering material to stiffen the covers and protect the shape of the book.

Current scholars of the book defend against the misconception that limp vellum bindings are "temporary and inferior work of incompetent laymen" (Szirmai 286). While I cannot deny that many of the bindings at the archives of Vilassar really are just a "few quires" quickly stitched together to create blankbooks, these bindings – though utilitarian -- are certainly not without merit. Thick sections allowed quick sewing with very few tools and no adhesives. The simplicity of the freehand sewing structures, which I will discuss next, created affordable bindings that could indeed be made by the layman. These bindings remind me of the modern spiral bound notebook. The eccentric features of the limp vellum structure mark its place in the evolution of bookbinding. Since we've discussed the materials, the history, and the nature of these bindings, I will now focus on the terminology of this structure.

Like any book, limp vellum bindings have the basic structural elements of covering material, textblock, and textblock to cover attachment. Other exterior elements include rigid backplates, tacketing, protective fore-edge flaps, and fasteners to keep the bindings secure. From an interior perspective, the text to cover attachment is generally one of three mechanical sewing techniques: sewing on raised supports, archival long stitch sewing, and primary or secondary tacketing. Also, there are usually turn-ins, tacks to hold the turn-ins in place, spine linings, or exterior decorative tacketing. The textblocks are paper, with a lively variety of watermarks.



*Laced-in sewing on single raised sewing supports*

Limp vellum bindings can be sewn by a variety of methods, but I will focus on the three sewing structures examined at Vilassar. Bindings that are sewn on raised supports are also called laced-in or laced case structures as the sewing support laces through the case attaching the textblock to the cover. Chris Clarkson's modern limp vellum conservation binding is based on this type of sewing structure. While assisting with the recovery efforts

following the 1966 flood in Florence, Clarkson was inspired by how many of these laced-in limp vellum bindings survived the flood and other "ravages of time" (Szirmai 316).

Laced-in bindings are sewn on thin alum tawed thongs that are raised from the spine. These thongs are also employed to lace the textblock to the covering material. As the thongs extend from the spine of the text, they travel through the vellum to the exterior and back inside, often tucked into the binding's turn-ins. Most of the bindings in this collection are sewn on single raised thongs at two to four sewing stations. Pasted down endsheets are rare in the limp vellum bindings in the Vilassar archives, and those examined served to provide additional textblock to case attachment as well as to keep the laced thongs in place.

Endbands, a decorative feature in modern bookbinding, serve the utilitarian purpose of providing additional support for the spine and an additional site for attachment in laced-in structures. A core, usually an alum tawed leather thong but occasionally wood, is sew on with thread at the head and tail; the extending thong is laced through the vellum covering material.

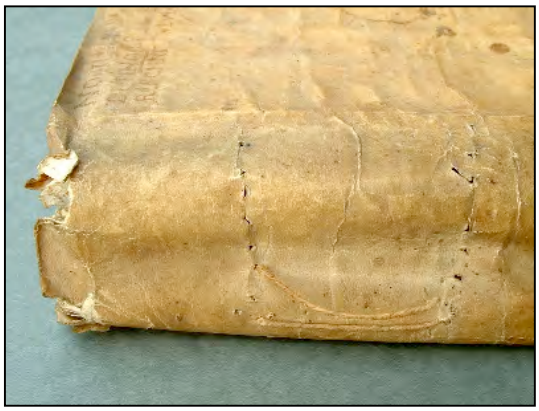
The second sewing structure is more predominant in the archive at Vilassar. Long stitch archival sewing is a very straightforward and fast style of sewing that creates a mechanical tightback attachment of the text to the covering material. The archival long stitch sewing structure has continuous sewing between the stations linking each section either independently or to one another as well as to the vellum cover.

*Several examples of archival long stitch sewing.*

Several variations of long stitch exist. These images show a style of sewing that looks similar to long stitch sewing from the spine but actually involves two independent sewing stations with the sewing traveling from inside the textblock out to the exterior spine of the covering material and back, forming a loop. This sewing structure is called primary tacketing, as its loops or tackets serve as the principal form of text to case attachment. A variation on this style uses the loops as a base for secondary sewing to attach the textblock to the vellum. This is often called secondary tacketing.

As I mentioned earlier, limp vellums bindings are as individual as the binder who constructed them and the need for which they created. Variations on the long stitch sewing theme are boundless, but these examples illustrate popular methods.

Although quite simple and quick, the long stitch style of sewing is not without its problems. Thread or thin strips of vellum will tear even the most flexible vellum covers over time, resulting loose, detached textblocks and damaged spines on the covering material. If the spine does not tear, it will often distort into a sunken or concave shape. To solve this issue, small patches of leather were employed. These are often called backplates and help support the sewing while protecting the limp vellum covering material. Backplates are generally an inch or two in length and placed a similar distance from the head and tail of the binding. Backplates on the bindings at the Vilassar archives were all thick, undecorated leather, but can be made of other rigid materials such as horn or wood. Leather backplates can also be decorated with indented lines or with geometrical shapes created by punched holes (Szirmai 299).



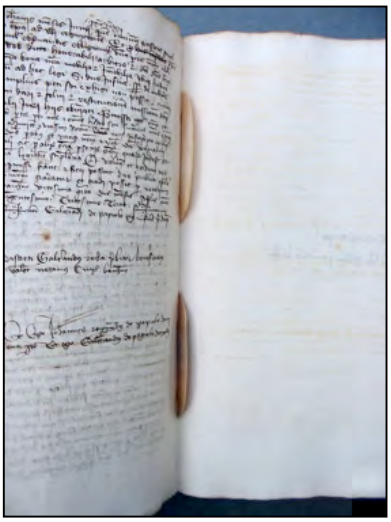
*Broken sewing and torn vellum, typical of long stich sewing without backplates.*

Tacketing can also be ornamental. Decorative tacketing on limp vellum bindings involves the lacing of alum tawed leather or strips of vellum in patterns on the exterior cover. While the bindings in the Vilassar archives have relatively simple patterns of decorative tacketing -- mainly straight lines and criss cross patterns as seen here – tacketing can be used to form Islamic inspired stars and other complicated shapes.

*Leather backplate supports sewing.*

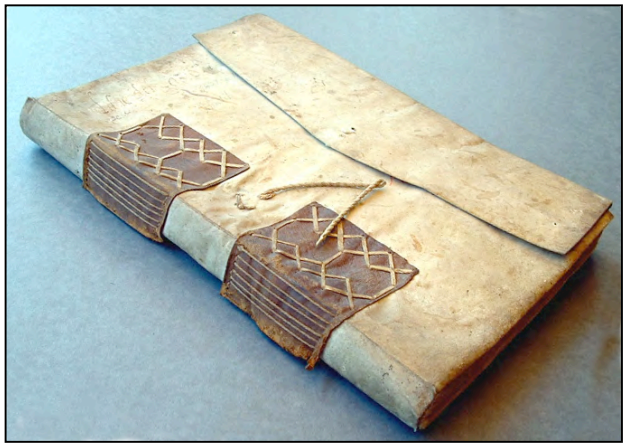
Often, narrow strips of vellum are placed into the centerfold of paper sections before sewing to protect the fold from abrasion. These protective pieces, called stays, were occasionally placed on the outside of textblock sections as well.

For a moment, let's take a step back from the sewing structures and reexamine the covering material. Vellum and parchments were expensive, so there are many examples where the covering material of a limp vellum binding is a discarded parchment manuscript. Whether these documents were considered old or unimportant at the time of their recycling, the illuminations and colorful inks heighten the eccentricity of these bindings.



*Parchment stays protect paper.*

To hold turn-ins in place without adhesives, the vellum was frequently tacked at the fore-edge corner with either twine or thin alum tawed leather strips. Limp vellum bindings in this collection are frequently without turn-ins. The variety of fasteners and ties in the collection is fascinating. Of particular note are the toggle fasteners which are tightly rolled vellum or alum tawed leather that connect to a loop on the opposite cover. The loops are either twisted twine or vellum strips.



*Top: Recycled parchment manuscript*
*Bottom: Envelope flap*

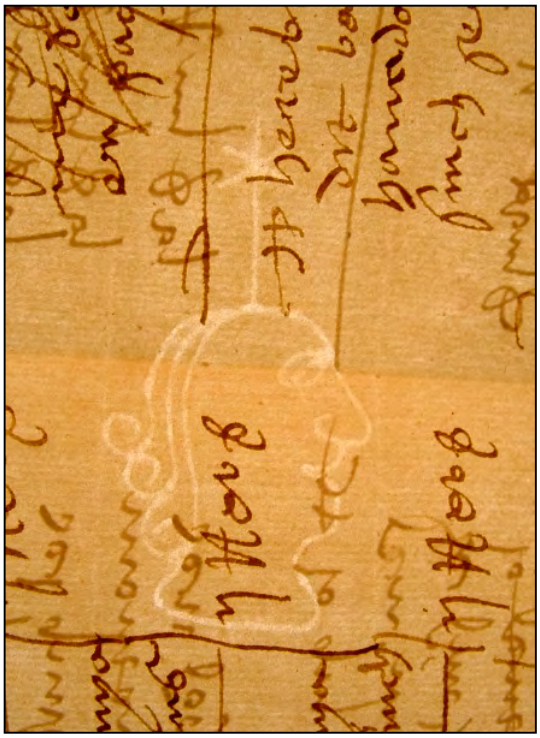
As mentioned earlier, limp vellum bindings were ideal blank books because their flat opening allowed an ease of writing. These books unfortunately were difficult to keep closed, so in addition to fasteners, ties of vellum, linen, silk, and alum tawed leather were frequently employed. A protruding flap at the fore-edge helps protect the textblock pages. Alongside fasteners and ties, the prevalence of fore-edge flaps demonstrates that these bindings contained important materials. A variance on the fore-edge flap is the envelope flap, an Islamic influenced element. Both the envelope flap and the square fore-edge flap are related to the more subtle bent edge or yapp.

Iron gall ink is the predominant media both in the archive and in the limp vellum bindings studied, on paper and parchment alike. Given the ink's corrosive tendency and the archive's uncontrolled

*Degradation of the copper-based verdigris*

environment, the condition of this media on archival materials is surprisingly good. In addition to iron gall ink, carbon black ink is another media found on paper and parchment materials. A potential project for future teams is an examination of the pigments used on the parchments and on paper in the limp vellum bindings. While the media in the limp vellum books have been protected from light and other deleterious effects, as you can see here from the degradation of the copper-based green verdigris in this fifteenth century binding, some pigments have inherent problems.

The variety of watermarks made this project very interesting. The study of watermarks is a subject area unto itself, and tracing the watermarks on paper in the archives would allow one to determine the relative date and geographical origins of the materials. Watermarking paper originated in Italy in the 13th century, when papermakers began twisting wire designs into their pulp frames. The first designs were simple, but over time the watermarks became more complicated, if not more emblematic and amusing.



Limp vellum bindings are indeed eccentric structures that vary according to their intended use. I hope that by providing this narrative through their history, use, and common architectural elements that you might see that these were a binding style. In a study of tacketed bindings, Nicolas Pickwoad advocates that although we not may know their exact place and role in the history of bookbinding and scholarship, the study and preservation of these structures is worthwhile.

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