

# Wundercradle: On-site Construction of Custom Exhibit Mounts

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In October 2013, two staff members from the University of Iowa Libraries' Conservation Department traveled to Grinnell College to help install an exhibition of books. Founded in 1846, the college is located in the town of Grinnell, about an hour away from Iowa City.

The exhibit took place at the Faulconer Gallery, which is the nucleus of Grinnell's Bucksbaum Center for the Arts. The Gallery holds temporary exhibitions and a permanent collection of more than 6,000 objects. It offers classroom and research learning opportunities for Grinnell's students, as well as a variety of outreach programs including lectures, readings, concerts, performances, and even yoga. The gallery is an important link between the College, the community, and the wider region.

The Gallery had never held an exhibit focused on books before, and so reached out to University of Iowa Libraries' Conservator Emeritus Gary Frost for advice and guidance. Gary in turn enlisted Conservation Technician Bill Voss and Assistant Conservator Brenna Campbell to help install the show.

The exhibit, 'From Wunderkammer to the Modern Museum, 1606-1884,' was a smaller version of an exhibit held at the Grolier Club in New York in late 2012.

Also known as cabinets of curiosities, Wunderkammern were encyclopedic collections of items representing areas of study including natural history, botany, zoology, ethnography, archaeology, and geology, as well as religious relics and antiquities. In her preface to the exhibition catalog, curator and Director of the Faulconer Gallery Lesley Wright describes this practice of collecting as "the acquisition of things as a part of the acquisition of knowledge." (Wright 2013, p. 8)

Figure 1 shows the Wunderkammer, of Italian apothecary Ferrante Imperato, from his work *Historia naturale*, originally published in Naples in 1599. Imperato and his son are depicted presenting their collection to two visitors; Wunderkammer collections were meant to be seen and



Figure 1. Engraved frontispiece of Ferrante Imperato's *Historia naturale*, second edition, Venice 1672.

admired. The room is filled with all manner of objects, displayed in cases, and hung from the walls and ceiling. The stuffed crocodile hanging from the center of the ceiling was widely imitated in later collections. Throughout their history, Wunderkammern tended to emphasize breadth over depth. In addition to providing the model and, in some cases the contents, of early museums of natural history, Wunderkammern inspired the highly successful freak shows created by American entrepreneurs such as P.T. Barnum during the 19th century.

The books in the exhibit came from the collection of Florence Fearrington, a New York investment manager who served on Grinnell's Board of Trustees from 2000-2008. Through studying and collecting shells and early books on malacology, or the study of mollusks, Ms. Fearrington became interested in the concept of the Wunderkammer. Over time, she began acquiring catalogs of the many Wunderkammern that dotted Europe during the 17th and 18th centuries. Beginning in 2012, she collaborated with Terry Belanger to document her Wunderkam-

mer books, and to work on a publication about her collection.

Lesley Wright travelled to Ms. Fearrington's home in New York City, to view her collection and select materials for the exhibit. Preliminary case layouts were mocked up at that time, and photographed. The concept of the exhibit was to trace the progression from private collections to modern museums. An annotated list of the books in the exhibit was made on-site. This list was used to plan space and materials for the exhibit.

Months later, the selected books were packed and shipped to Grinnell. Because of the number of items, and their high value, cradles were created on site in Grinnell. This decision eliminated the risks associated with transporting the books back and forth between the University of Iowa Libraries' Conservation Lab and the gallery.

Once UIowa staff arrived on site, the first day was spent unpacking the books. No condition reports existed, so brief notes on the structure, materials, and condition of each volume were made. Work tables with task lamps were set up in the gallery. Because the lighting for the exhibit had not yet been placed, adequate lighting was a bit of a challenge.

Once each book was condition checked, it was ready for a cradle. Cradles were constructed from Vivak, or polyethylene terephthalate glycol (PETG), in two weights. The sheet was scored with an awl and then folded by hand. The tools shown in Figure 2, plus a Kuttrimmer, were used to make all the cradles for this exhibit. Cradles for larger and heavier books were made out of 60 point Vivak, while smaller supports were made from 20 point sheet. Black foam core was used to construct rigid bases.



Figure 2. Tools for making custom Vivak cradles.

The foam core was not in direct contact with the materials, and was a less expensive alternative to Vivak.

Vivak cradles at the University of Iowa are generally made from left to right. First, a strip of Vivak is cut to the same height as the boards of the book to be supported. Next, the strip is scored about one inch from the left hand edge. A second score line is made at a distance from the first that will equal the height of the left side of the cradle. This distance determines the angle of opening. Next, the sheet is flipped and scored at a distance equal to the width of the front board. With the sheet still flipped, another score line equal to the width of the spine of the book is made. Next, it's time to flip the sheet back over, and score a line for the second board width. One more score line determines the height of the right hand "wedge" of the cradle, and then the sheet is trimmed to a distance of approximately one inch beyond the final

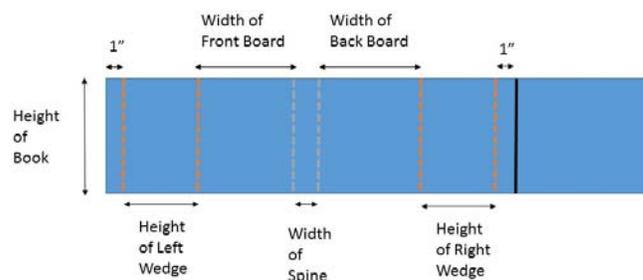


Figure 3. Placement of cuts and score lines for a basic cradle.

score line. The placement of these lines is shown in FIGURE 3.

The sheet is then folded along the score lines. It's important to note that, with the score line facing up, the Vivak should always be folded down. For most cradles, the two folds that determine the spine width are valley folds, while the rest are mountain folds. The finished product looks more or less like an M.

When making cradles in house, the sheet is simply marked rather than scored, and folded with a sheet metal brake. However this equipment is cumbersome to transport, and so the simpler scoring method is preferred for work in the gallery.

The cut and folded Vivak is attached to a rigid base of a width that is equal to the distance between the two peaks of the M (Figure 4). This ensures that the sides of the cradle form a 90 degree angle with the base. The two inch-wide tabs at the base of the M, as well as the spine, are attached to the base of the cradle with Scotch 415 double stick tape. One very simple way to create tilted

cradles is to create a base that is itself a wedge, or, depending on the weight of the book, simply a tipped over L or P (Figure 5). If a tilted cradle is going to be used, it is important to support the textblock with ledges, padding, and/or strapping. Because the cases were low,

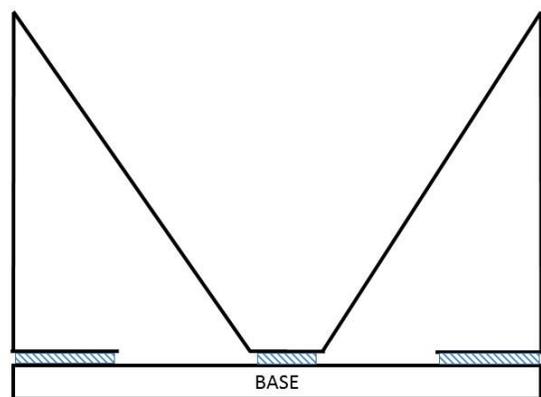


Figure 4. The completed cradle attached to its base.

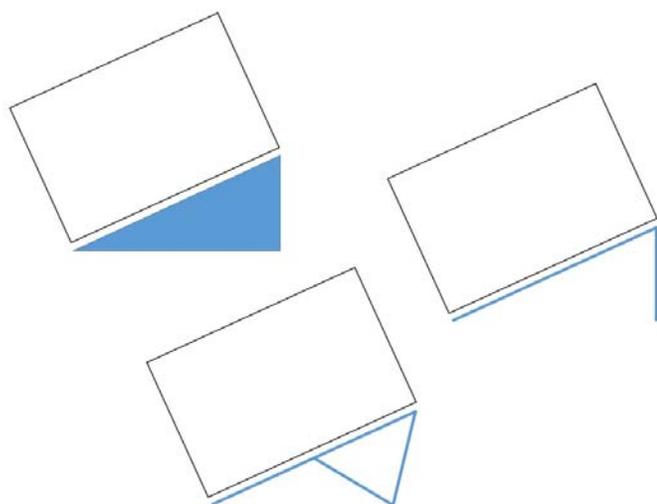


Figure 5. Options for a simple tilted cradle base.

and encouraged the viewer to look down on the books from above, tilted cradles were not used for this exhibit.

The books were secured using Benchmark polyethylene strapping material in a variety of widths. Two layers of strapping were used: a one or two inch strap to secure the boards and the weight of the text block, and a 3/16 or 3/8 inch strap to secure the display pages. Because no conservators would be on site during the exhibition, every book was strapped completely, even those that stayed open without restraint. This precaution also mitigated against fluctuations in relative humidity, as several of the books had parchment bindings.

Figure 6 shows the multiple layers of strapping used. The two inch strap is securing the board and all of the text block except the display page. The thinner strap secures the display page while minimizing visual impact. Occasionally, three separate straps were used: one for the board, one for the text block, and one for the display page. In many cases, a single strap was adequate to secure the board and the textblock together, but books with a



Figure 6. Multiple layers of strapping used to secure a book.

large square, or those that could be viewed from the side, were secured with separate straps.

Many of the books had foldouts. In some cases, these foldouts allowed for two pages to be displayed at once. Figure 7 shows both the title page and an illustration of an exercise machine for a dragon. Some of the foldouts opened along both axes, requiring additional care in handling, strapping, and support. Supports for the foldouts were made separately from the cradles, out of 20 point Vivak. The thinner material was adequate to support the single sheets, and was less disruptive to insert between the pages of the textblock. The foldouts were usually strapped once the book was placed in the case, to reduce risk of damage. The foldout shown in Figure 8 was the longest being displayed. In this case the heavier Vivak was used because the support needed to be more rigid.

Constructing mounts on-site was an interesting challenge. Altogether, two staff members spent seven working days in Grinnell. 76 of the 93 items in the exhibit were books. Cradles were constructed for each one, as well as supports for flat items displayed in the cases. Factoring in the time spent unpacking and condition checking, about 15 cradles were made each working day.

This experience provided valuable insight into the process of creating custom cradles on-site. Not having



Figure 7. Mauro Soldo, *Descrizione degl'instrumenti, delle macchine, e delle suppellettili*, Faenza 1766.



Figure 8. *The lost Golden Horn of Denmark*, foldout from Ole Worm, *De aureo serenissimi domini Christiani Quinti Danie, Norvegiae &c., Copenhagen*, 1641.

seen the books, the gallery space, or the cases, there was a limit to how much could be planned in advance. However, steps were taken to ensure an efficient workflow. First, supplies, including Vivak, were ordered by, and delivered to, Grinnell, rather than being transported from the conservation lab. The Vivak sheets were ordered in a size that would fit in the Kutrimmer, because Vivak is difficult to cut by hand. Finally, a division of labor was planned right from the beginning. As the cradle making expert, Bill Voss focused on the larger, more complex cradles, and interfaced most closely with Milton Severe, the Director of Exhibition Design. Brenna Campbell did all of the condition checking and most of the strapping, and constructed several of the smaller cradles.

One of the most important aspects of planning for this project was estimating time. Based on experience with constructing Vivak cradles in the lab, the time allotment should have been very generous. However working in a new space slowed the process down considerably. Al-

though working in the gallery was secure and convenient in that the books did not have to be transported, it meant that visitors were constantly passing by the workspace, and were very curious about the installation process. Working in the public eye was more tiring than anticipated.

The exhibit remained open through mid-December, and was very well-attended. After it closed, Bill and Brenna returned for a day to unstrap and condition check all the books before they were packed.

The Conservation Lab's contribution to this project was in keeping with the University of Iowa Libraries' role as a resource for the entire state of Iowa. Similar projects have since been undertaken at other cultural heritage institutions around the state, including mounting and installing an exhibit to celebrate the 300th anniversary of the Amana Colonies, held at the Amana Heritage Society.

Bill and Brenna also demonstrated the process of fabricating Vivak cradles and strapping books for display as part of the Iowa Conservation and Preservation Consortium annual meeting in 2014.

As one of the few centers of expertise on the care, handling, and display of books located in the state of Iowa, The University of Iowa Libraries' conservation staff is frequently called upon to meet a wide variety of needs within the larger community, including the installation of exhibits being held at other institutions. The right materials, paired with efficient workflows, allowed much of this work to be completed on-site, reducing handling and potential damage to the objects being displayed.

## CITATIONS

- Baier, R 2003. "Vivak: An Alternative to Conventional Plexiglas and Museum Board for Exhibition Mounts." *Book and Paper Annual* 22, pp. 109–110.
- Wright, L 2013. *From Wunderkammer to the Modern Museum, 1606–1884*, exhibition catalog, October 4–December 15, 2013, Falconer Gallery, Grinnell, IA.



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