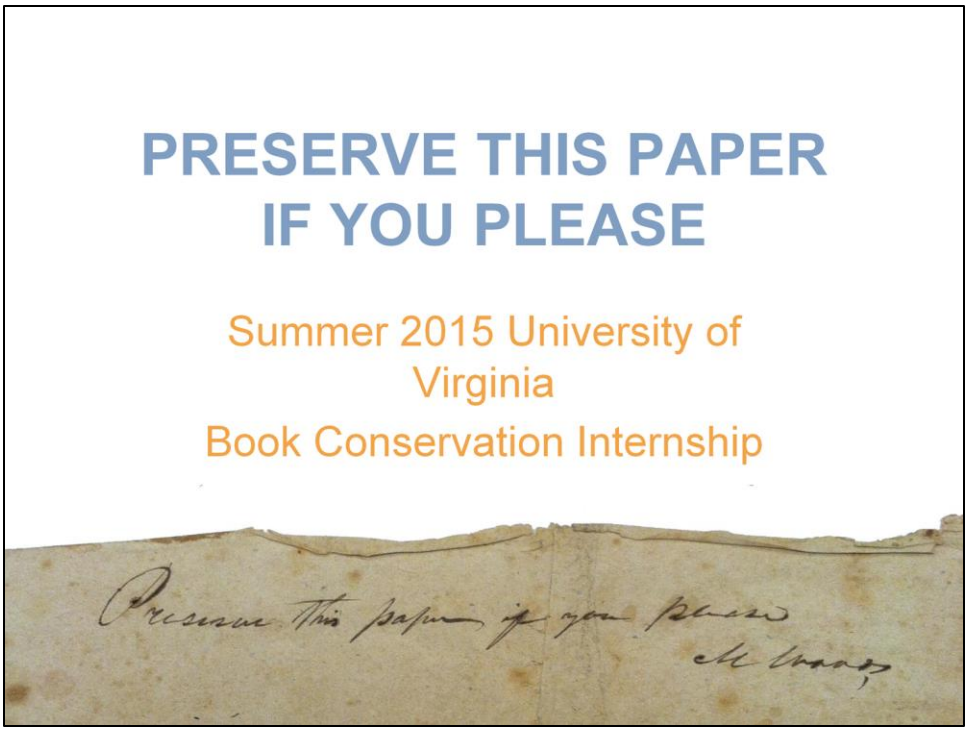
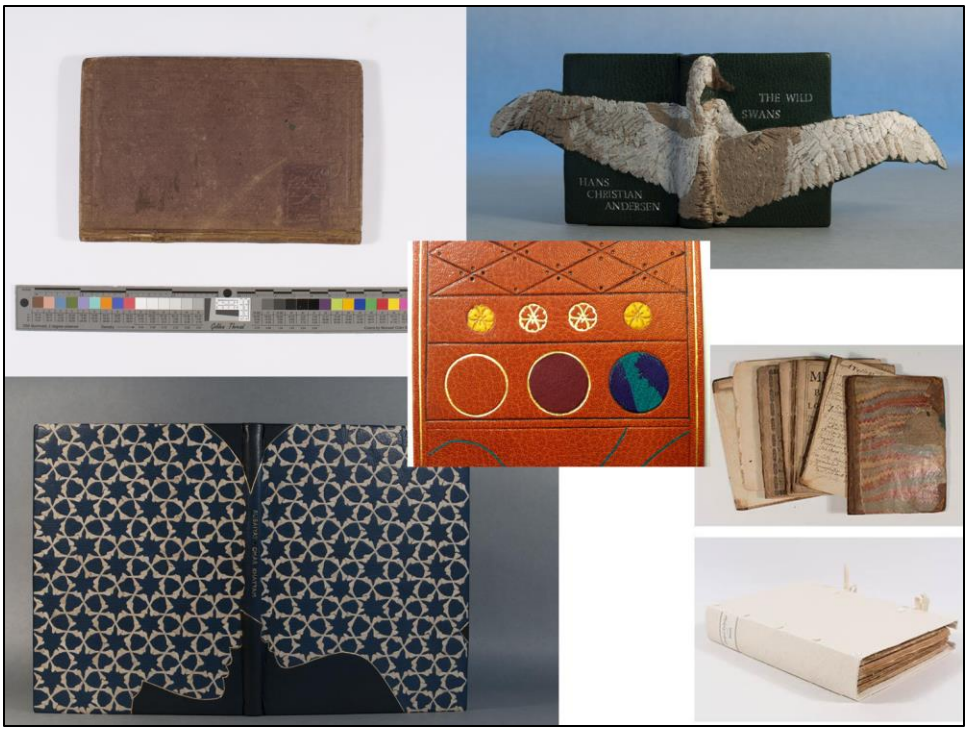


INTRO: Thank you all so much for coming to my talk this afternoon. I'm really looking forward to sharing with you the projects that I've worked on during my six weeks at the University of Virginia. I'm calling my talk "Preserve this Paper If You Please," simply because I found that message scrawled across one of the newspapers I was tasked with repairing, as you can see in this image, and thought it was a pretty special example of what we do as conservators. I was delighted to see this message from the past waiting for me as I began my work here, and did my best to fulfill the wishes of the scribe!



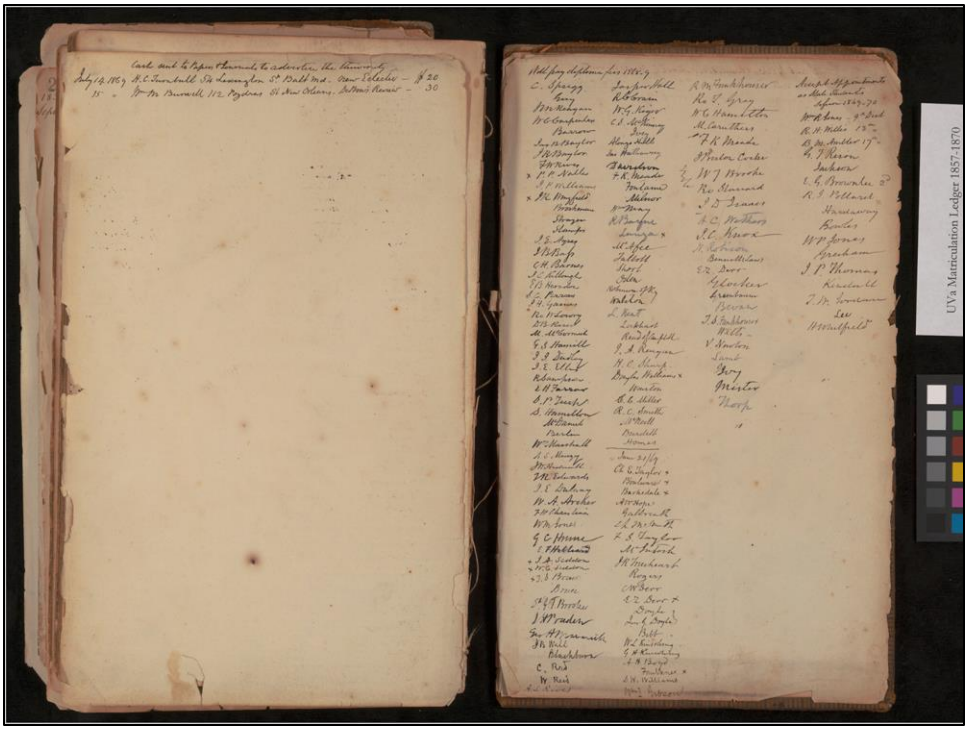
BACKGROUND: I'd like to start by letting you know a little of my own background and how I found my way to book conservation. I graduated from St. Olaf College, a small liberal arts school in Minnesota, in 2012 with a B.A. in studio art and English. While there, I played with learning simple book structures, and dreamed secretly about running away and becoming a bookbinder. After graduating, I pretended I was taking the "practical" route, by choosing to work with books in publishing and bookselling. Soon enough though I realized how much I missed working with my hands, so I began to think seriously about bookbinding and conservation as a career, which is how I found North Bennet Street School, where I recently graduated with a certificate in bookbinding. North Bennet was the perfect place for me at this stage. I was able to really study the craft of bookbinding, and simultaneously learn conservation techniques and concepts through internships and independent repair projects at school. The bookbinding program at North Bennet Street School is a two year exploration of the development of the book structure, beginning with non-adhesive Coptic structures and ending with full leather fine binding. We make models of many different structures and get to explore whatever niche interests us, whether that be design binding or conservation. However, NBSS is not a conservation training program, so, because I have decided to pursue a career in book conservation, I have had to supplement my education with various internships such as this. In addition to UVA, I have

spent time at Haverford College, Harvard's Weissman Preservation Center, and will be going on to the Newberry Library next week. Hopefully, after all is said and done, I will be able to find a permanent position as a conservation technician in an institution or conservation center.

I was eager to come to UVA because I knew that my time would be dedicated to start-to-finish treatments, and I was eager to have the opportunity to come up with treatment plans more or less on my own. The internship has exceeded my expectations, and I like to think that I came away with two very successful treatments completed, which I would like to share with you now.

MATRICULATION LEDGER: The first treatment was of volume one of the Chairman of the Faculty's Matriculation Ledger Books, used from 1857-1870. When I received the binding, I spent a lot of time trying to figure out how it was constructed, because it initially appeared to be a pretty strange structure. The flesh-side out covering is common to spring-back ledger bindings, but this is not a spring back. It was sewn on vellum tapes, which adds strength, but that doesn't seem to be this binding's primary concern given its state. The construction seemed to be like that of an on-set boards binding, which is basically the same as a case binding, but the boards are built onto the textblock, rather than being covered and attached as a separate piece, a case. But one of the points of an on-set boards construction is to have a very accurate placing of the boards, in order to achieve small, tight squares, and this book definitely did not have tight squares. In fact, another strange aspect was how inordinately huge they were, given there were even no endbands. There was also hardly, if any, spine lining, and most of the spine leather had deteriorated completely. All in all, I couldn't come up with a logical explanation for the combination of elements in this structure, but Eliza informed me that this was most likely the work of local 19th-century Charlottesville binder named Ebenezer Watts, who ran a business of making blank books of all sorts, many of which the college used for ledgers and minute books. I later took a trip to Special Collections to look at other bindings of his, and found most of them to

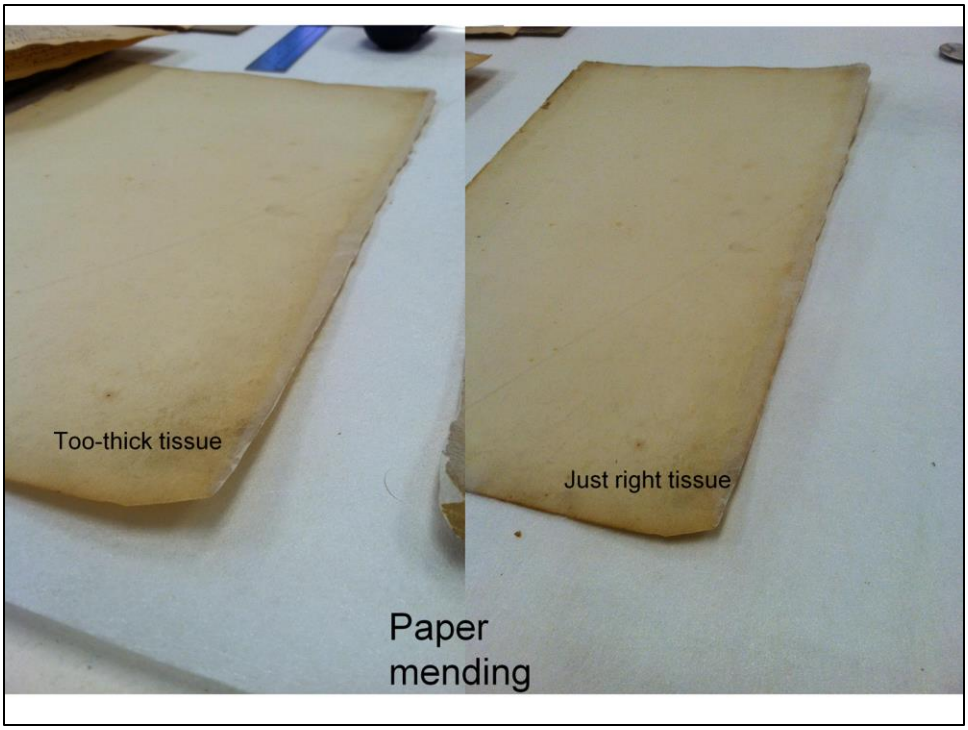
be the same “structure”, and in the same sorry state. The picture on the left is a before treatment image of the matriculation ledger, while the image on the right is a book from special collections. It illustrates nicely though the condition of many of these bindings – the boards were mostly detached, and though the velum tapes were still in good shape, the sewing was so loose that they had either been lost or were slipping out underneath the thread. On the matriculation ledger, the spine leather was gone, the boards were detached, and most of the vellum tapes had actually snapped.



The textblock itself, as you can see in this image, was dirty and heavily torn.

So what to do? After a lot of deliberation about overall strength vs. preservation of the binding's history, I decided that because the binding was so specific to the Charlottesville area, it was important that I preserve the aspects that make it so unique. So, I got to work.

The first step is pretty standard in the process of fully treating a binding. In order to disbind the textblock, I first had to clean what was left of the spine leather off, using a poultice of wheat starch paste. The image on the left is of the spine as it's being cleaned, and you can see above the spine the messy goops of spine leather and paste that I removed. My teacher at NBSS joked that paper conservators are most often former book conservators who decided they don't like getting their hands dirty. Books are messy! After the spine was cleaned, but before it fully dried, I cut the sewing thread and pulled the signatures apart from each other. I then cleaned each page of the textblock using cosmetic sponges, which remove any dirt that is sitting at the surface of the paper. As you can see from the image on the right, there was quite a bit of it!



After disbinding and surface cleaning, I began mending the pages so that they were more readable and usable. I initially chose a tissue to mend with that was a bit too heavy for the paper, and as you can see from the photo on the left, it cockled as a result of too much pull. Luckily, mending is completely reversible, so with a little deionized water, I was able to remove the too-thick tissue and re-do the mend with a much lighter choice. The photo on the right is after the re-do. The page is still cockled a bit, but I think that's just a result of the previous pull, and has since relaxed. I also mended the first and last sections with an extended hinge of heavier tissue, which I later used as the means of re-attaching the boards to the textblock. I'll talk more about mending with the next treatment.

Once the pages have been properly mended and guarded, the textblock is ready to be re-sewn. Like I said earlier, I decided to preserve as many elements of the original binding as possible, so, rather than sewing on conservation-friendly ramie bands or linen tapes, I decided to re-sew the book on vellum tapes. There is a risk of them snapping, as they did in the original binding, after years of use, but if the vellum is good, they should be strong. In my very short time in the conservation field, I've noticed a lot of pull between the desire to preserve the object as an historical artifact, with as much of its grime as intact as possible without sacrificing stability, and the want to alter objects and put them in more "conservation-friendly" bindings. I appreciate UVA's philosophy of embracing the fact that these bindings are old, are not perfect, and have history that is important to preserve.

Another choice I had to make in this repair was weather to reback the spine with layers of toned tissue, or to go ahead and use leather, which would be a more time-consuming procedure. I had the opportunity to discuss my treatment plan with Edward, and in doing so he explained to me that this was probably a volume that would see heavy use, which is an important factor in considering how I approach the repair. So, both because I was trying to preserve the original appearance of the binding and because I wanted it to be able to withstand heavy use, I decided to go ahead with the new leather on the spine. These images show the piece of new leather being pared in preparation for going on the book. Because the book was originally covered with the leather flesh side out, which is the suede side of the skin, I prepared the new leather to go on the same way. There is something a bit unnerving about a suede book, but I bit the bullet and went through with it…

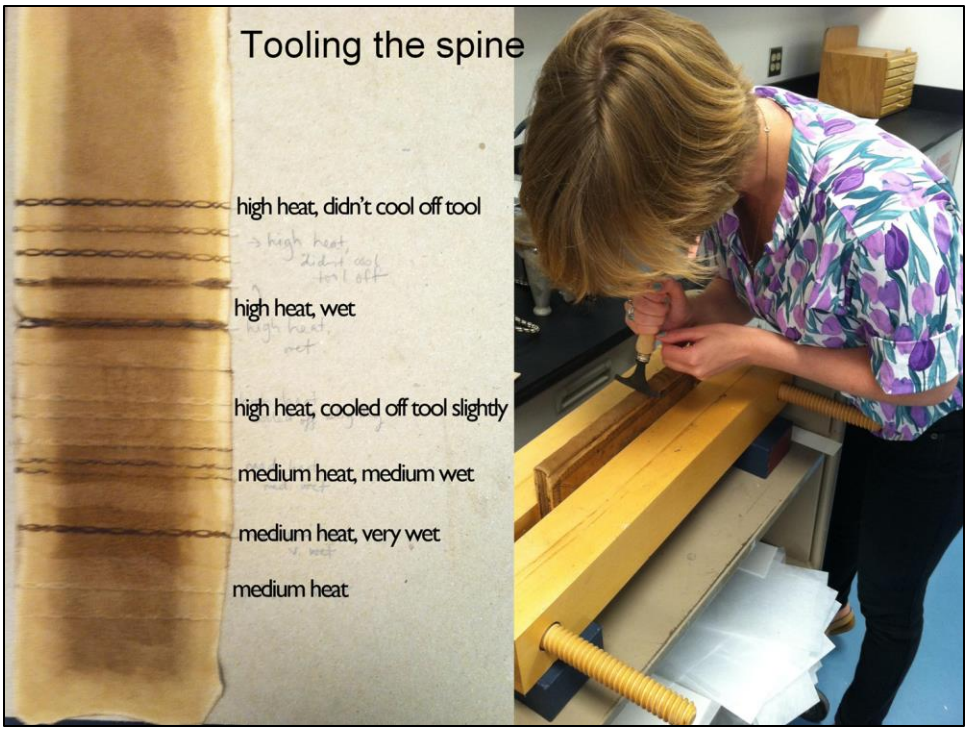
Lifting Leather Photo taken from http://huntingtonblogs.org/2014/05/knife-to-the-grindstone/

I unfortunately don't have any images of the steps in between sewing the book and covering the book, but during that time I had to make decisions about how to line the spine. I started with a layer of Okawara tissue, which is a strong Japanese tissue, adhered with wheat starch paste as a release layer, so that if the binding ever needed to be taken apart the linings could be easily removed with moisture. After the Okawara, I put on a second lining of airplane linen, which adds strength and eases the opening action.

Before the boards could be reattached, the leather on the cover nearest the spine had to be lifted back to about where the border tooling on the cover is. The paper paste down on the inside of the book had to be lifted as well. I unfortunately did not get a picture of this step on my book, but here is a picture from the Huntington Library's blog that nicely illustrates what lifting the cover leather looks like. This is done so that the new material, in this case the new spine leather and the extended tissue hinges on the text block, can be inserted underneath the old material.

After the boards had been prepped, it was time to adhere them to the textblock. First I made sure to make a small slit at the head and tail of the tissue hinges so that the new leather could be turned in. I then sized the tissue hinges with what starch paste so that they would be less flimsy when placing them under the lift. Using a small filbert brush, I applied a layer of wheat starch paste to the board under the lifted pastedown and then carefully inserted the tissue hinge. The key at this stage is placing the two boards correctly, and making sure they line up.

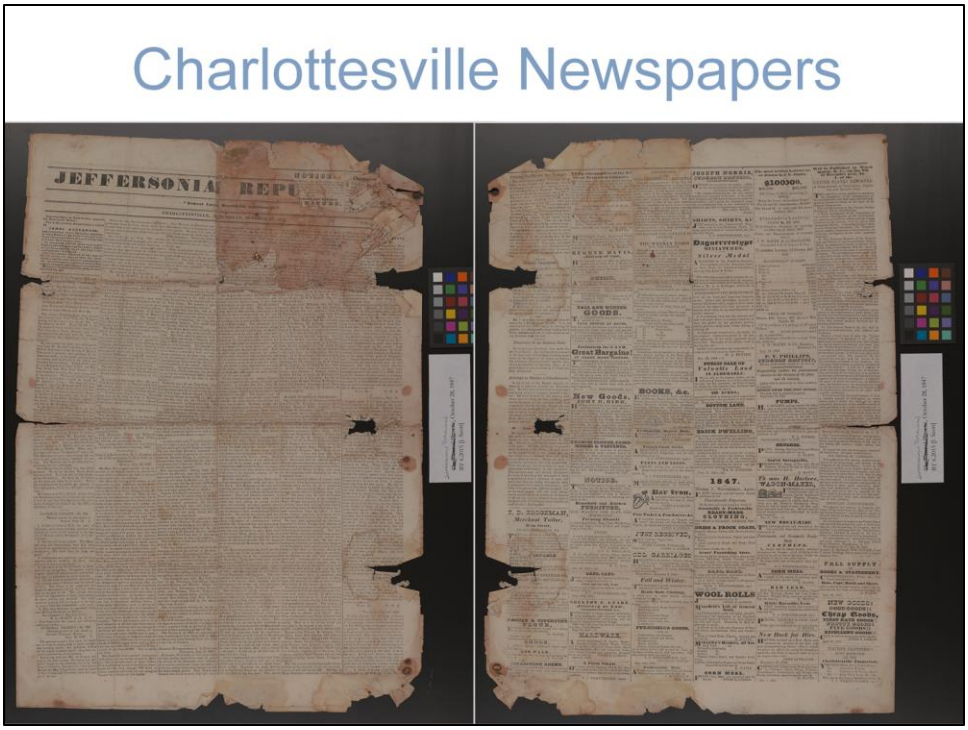
It was then time to attach the new spine leather. Normally, when covering with leather hair side out, the normal way, you first wet out the right side of the leather so that the paste can more fully penetrate and provide a stronger attachment. Because I was covering with the wrong side of the leather, however, wetting out the outside of the skin would have ruined the suede texture. To compensate, I pasted up the inside more times than I would normally to make sure that the skin had absorbed as much paste as it possibly could.



After the book was covered and spent enough time sleeping so that it was appropriately dry, I could go on to tooling the spine leather to match the original. In order to do this, I had to practice, because in order to get the very dark impression in the suede that the original binding has, you simply have to burn the leather. Sounds simple, but when you're used to getting the tool to a very specific kind of hot, wetting the leather out, and trying NOT to burn it with the tool, it goes against everything I felt I should be doing. So the image on the left was my test piece, where I tried out different amounts of heat, tried some wetting out the suede, which Eliza said wouldn't work, and it didn't, and finally was able to work up the courage to simply get the tool hot enough to basically brand this already dead beast. Country bumpkin tooling, as Eliza called it. You can see on the test strip, that the times where I tried to wet out the suede, the heat from the tool escaped beyond where the impression should have been, creating a sort of blurry effect. The water also left a mark in the suede. The times when I couldn't get the tool hot enough simply didn't make any sort of impression. Only when I used as much heat as possible, so that the room smelled of burning metal, did I get an appropriately crisp and dark brown brand.

– and that’s what the tooling looked like on the new spine leather. Appropriately funky!

After finishing the repair, I was able to make a cutaway model of the binding, which just means that portions of the binding is left open so that you can see how it was constructed. I will pass it around so you can take a look.

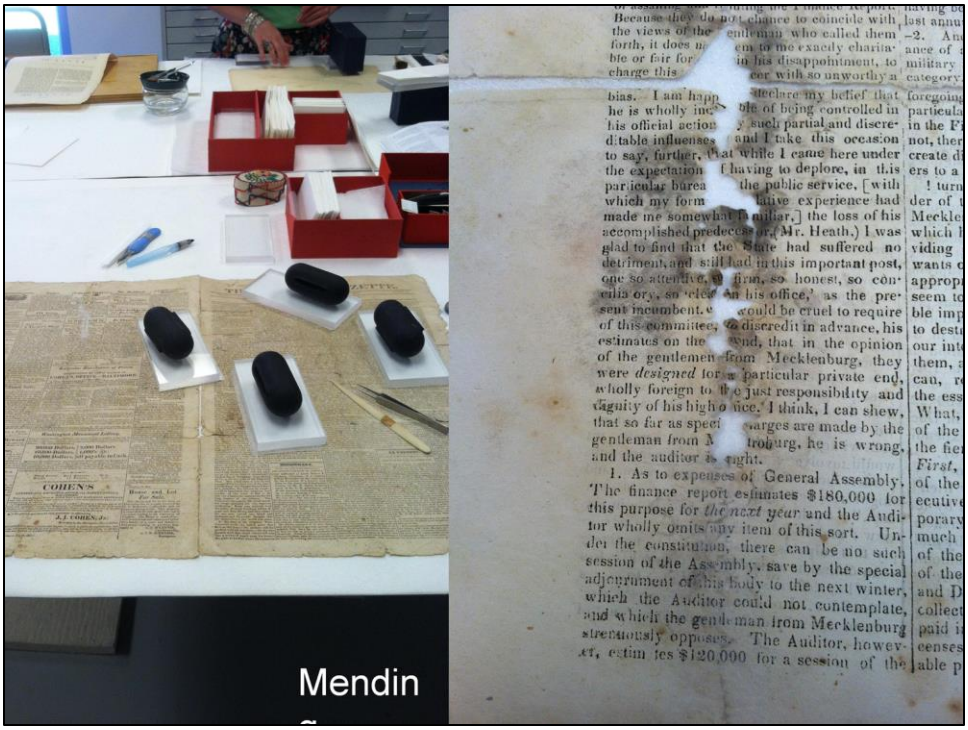


The second treatment I got to work on was a series of Charlottesville newspapers from the mid-late 19th century. The first group was a stack of unbound papers, both the Charlottesville Chronicle and the Jeffersonian Republican, that appeared to have all been saved for a specific purpose, whether that be a reference to UVA like the student riots or the death of Jefferson and Adams. The second group was a bound set of weekly editions of the Jeffersonian Republican, from 1973-1974. I started with the stack of unbound papers because it seemed more approachable, and I knew I would be able to at least completely finish treating them. The image here is of one of the unbound papers before treatment. They all looked more or less like this one—stained, crinkled, and brittle.

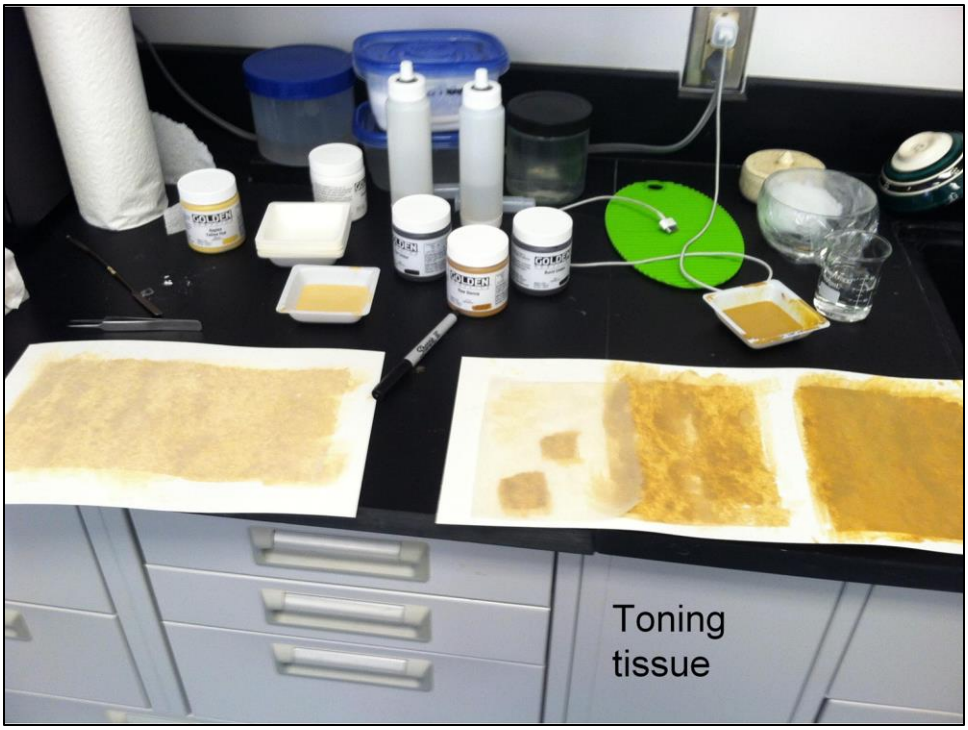
I decided to go ahead and wash everything, since washing in batches goes relatively quickly, and they were all so bent out of shape that washing would be the easiest way to get them to lie flat before mending. I started by surface cleaning all of the papers, the same way I did for the matriculation book. It's important to surface clean before washing, so that whatever dirt is loose doesn't fall into the fibers of the paper when they open up during washing. I washed six newspapers at a time. In order to wash groups of paper, you have to interleave them with a polyester called Hollytex, that prevents the papers from sticking together. The initial bath is made up only of deionized water, and I put each sheet of paper into the bath individually, spraying it with a 50/50 mix of ethanol and DI water first to allow the water to penetrate more fully in the bath. The stack of newspapers soak in the bath for 20 minutes, and then are removed and placed into a second bath of deionized water for 20 more minutes.

The tub on the left is the leftover water from the first bath, and it is yellow because it’s full of all the grime that was trapped in the paper. The second bath will be slightly less yellow, and the final bath, which is of deionized water buffered with calcium hydroxide to a pH of about 8.5, should be almost clear again.

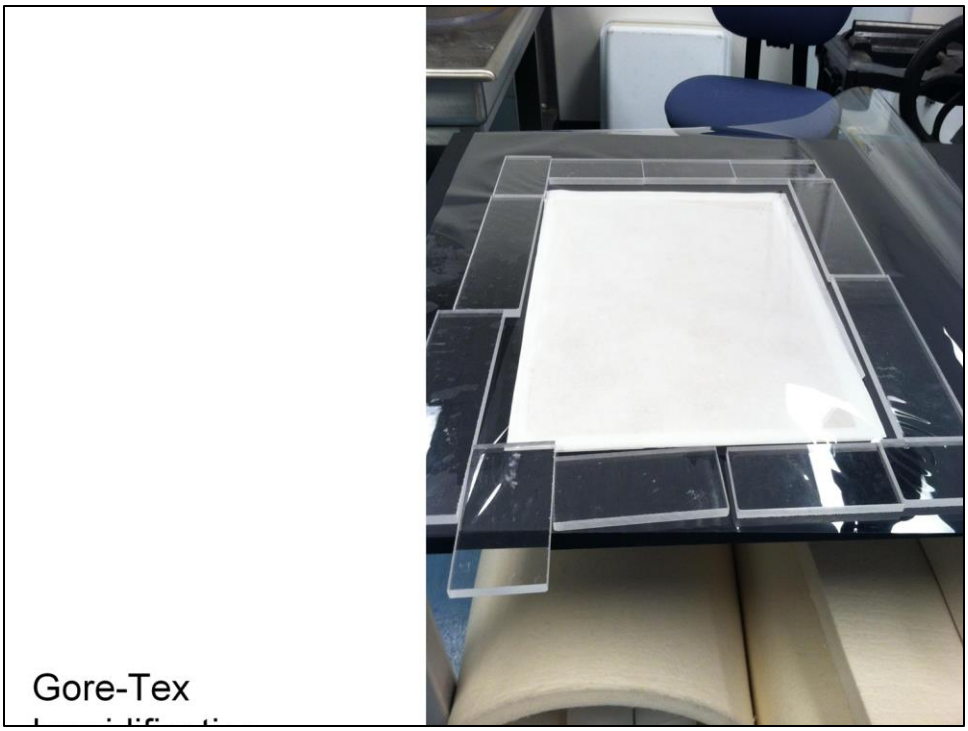
After going through all three baths, the papers were dried between remay, a thicker polyester than hollytex, and industrial felts, which soak up the moisture in the paper while also keeping them extremely flat and retaining the texture on the surface of the paper. In order to take full advantage of the washing, before putting the felts over the papers, I had to make sure that most of the creases and wrinkles were smoothed out and breaks in the paper lined up properly so that they would dry as flat as possible and the subsequent job of mending would be easy. I left the papers to dry anywhere from 6 hours to overnight, depending on how quickly I was trying to wash.



Once dry, the papers were ready to be mended. I continued to use the same thin Tengujo tissue for the mending, because it was thin enough to be mostly unobtrusive to the text, and when filling in losses in the paper with a double-thickness layer of the tissue, it more or less matched the thickness of the paper. I spent a lot of time lining up text to the best of my ability, and trying to concentrate make sure the areas of the newspaper that seemed most important were visible. On most papers it was straightforward work, but one in particular was heavily mold damaged and presented a new challenge in that I had to make sure not only to mend the tears and losses but the areas of paper weakened by the mold as well. You can see the darkened areas of mold damage on the right.



For the majority of the papers I mended, I used the Tengujo tissue as is, without altering the color at all. But there were a few that were too dark, and when I applied the tissue it stood out like a bandaid. So I decided to tone a few sheets in various stages of muddy brown to match the various hues in the darker papers. In order to do this, I mixed together some Golden Acrylics and added enough deionized water so that the paint became a very thin wash. I placed the tissue on top of a blotter, painted on the wash, and let it dry.



After mending, some of the papers became a bit cockled. This was mostly a result of the fibers shifting during the washing and drying process, and then when I attempted to line up text that had been torn, the paper no longer wanted to lie flat in that position. In order to solve the issue, I humidified the paper using a wet blotter and gore-tex to transfer the moisture slowly from the wet blotter. I placed the paper needing to be humidified on top of a dry piece of blotter, and then on top of the paper I placed the gore-tex, and then on top of that placed the wet piece of blotter. The whole thing then got encased in plastic, which was weighted down on the ends to trap in the moisture. After about 20 minutes, the paper was sufficiently damp, and I dried it between dry blotters, under weight.

This image shows the before and after of one of the sheets that I had to humidify. The difference is subtle, but it's there.

Thank you!

Jackie Scott
2015 U.Va. Library
Conservation Intern