

## Tip: Single-Day Treatment of Extremely Fractured, Varnished, Fabric-Lined Map Sections

At the New York Public Library (NYPL), there are a number of maps that were previously backed with fabric on the verso and varnished on the recto. This combination of fabric on one side and varnish on the other can sometimes cause cracks to form in the paper. For the handful of maps in the worst condition (fig. 1), pieces of the paper layer become loose and then detached. Because of the cracking and flaking of the paper layer, these maps are too fragile to wash. Once the fabric backing is removed, the result is a collection of loose pieces that cannot be moved until a new backing is applied.

Stephanie Porto described the treatment of similar maps in the 2016 *The Book and Paper Group Annual*. The following treatment is a variation that makes the best use of limited time, enabled by that fact that at some time in the past, many of the maps in NYPL's collection were cut into halves, quarters, or sixths so that the individual sections were small enough to be stored flat in drawers. The map sections vary in size, about 23 × 28 in. As a result, the sections are small enough to fit into the fume hood and on the suction table, something that would not be possible with many full-sized maps.

To prep for treatment, loose pieces for which the locations can be determined are set down using methyl cellulose or wheat starch paste. The surface is carefully surface cleaned, and the media is tested for solubility in water and ethanol.

The map section is placed between two layers of nonwoven polyester and into a shallow ethanol bath (fig. 2). The surface is blotted with wads of cotton through the nonwoven polyester.<sup>1</sup> The cotton can be squeezed out and reused. The ethanol may need to be refreshed. Eventually, the cotton will come off clean, and the map is ready to wash.

The map section is transferred facedown on the nonwoven polyester to the suction table, where two layers of damp Evolon<sup>2</sup> have already been placed. As with most suction table treatments, plastic sheeting is placed around the object to concentrate the suction. The map section is sprayed with conditioned water repeatedly for about 20 minutes. At

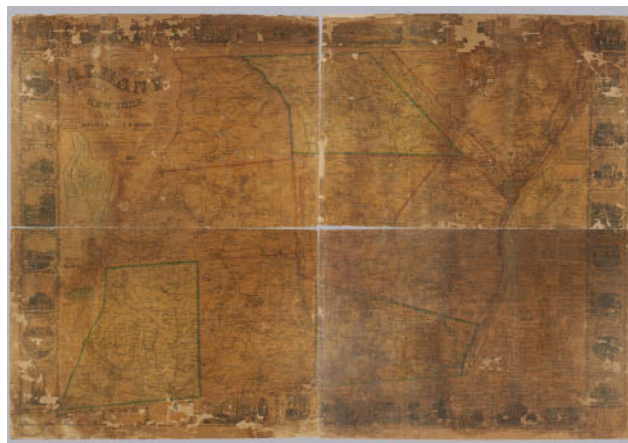


Fig. 1. Before treatment. Gould & Moore, *Map of Albany County, New York*, 1834, NYPL Map Division 16-5980.

that point, the fabric can be peeled from the verso gradually, spraying to keep the fabric damp (fig. 3).

For these maps, there are usually two or three layers of fabric and sometimes strips of paper or paper tape to peel off.



Fig. 2. Ethanol bath inside fume hood. One quarter of J.B. Beers & Co., *Kings and Queens Counties, New York*, 1886, NYPL Map Division 16-5970.

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Fig. 3. Peeling the final layer of fabric. Detail of one quarter of J.B. Beers & Co., *Kings and Queens Counties, New York*, 1886, NYPL Map Division 16-5970.

The suction holds all of the fractured map pieces in place while peeling. When all of the fabric is finally removed, old adhesive is reduced from the verso by scraping with a spatula.

Before lining, the plastic sheeting is removed from around the edges. The nonwoven polyester and two layers of Evolon

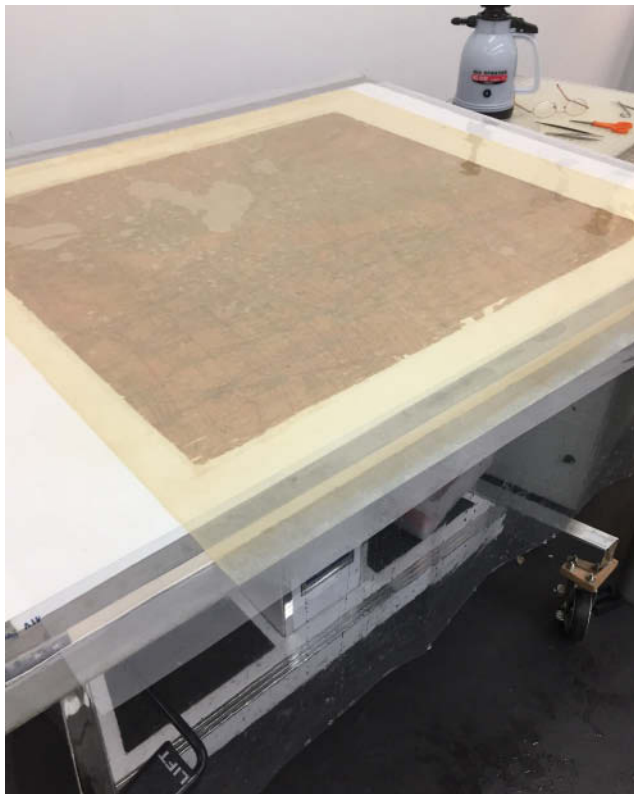


Fig. 4. Lining directly on suction table. One quarter of J.B. Beers & Co., *Kings and Queens Counties, New York*, 1886, NYPL Map Division 16-5970.



Fig. 5. After treatment. Gould & Moore, *Map of Albany County, New York*, 1834, NYPL Map Division 16-5980.

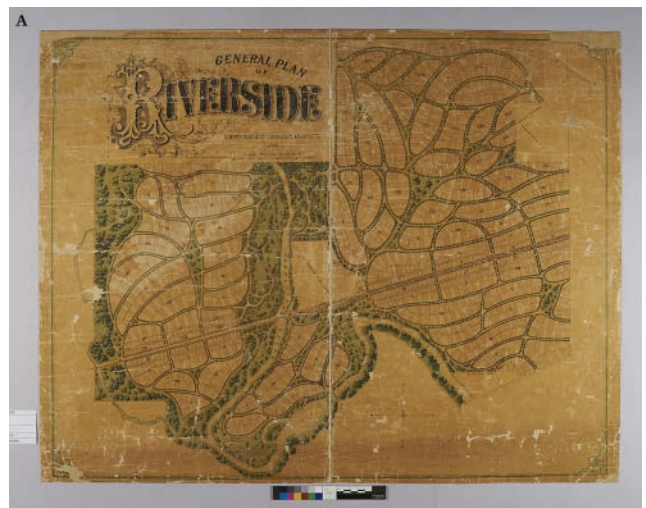


Fig. 6. (a) Before treatment and (b) after treatment. Olmstead, Vaux, & Co., *General Plan of Riverside*, 1869, NYPL Map Division 15-5830.

are left under the object on the suction table. The pasted-out lining paper is laid across the verso, applying pressure so that it fully adheres (fig. 4). Once lined, the map can safely be removed from the suction table and turned faceup so that fragments that may have shifted during treatment can be aligned, then dried for an hour or two between fresh, dry nonwoven polyester and Evolon under a weight. After an hour, the map is transferred to a blotter stack for drying. For these maps, losses are not filled and stains are not reduced so that more maps can be treated within the limited number of treatment hours allotted per year for the collection. After drying, the goals of treatment are met: the map is securely adhered to its backing and the information is more readable (figs. 5 and 6).

#### ACKNOWLEDGMENTS

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#### NOTES

1. This varnish removal method was taught to me by photograph conservator Jessica Keister, who learned it at the Conservation Center for Art and Historic Artifacts in Philadelphia.

2. At NYPL, we have been finding many uses for Evolon (Molina and Hughes 2016). We buy it in rolls and cut it to useful sizes. It can be used for many of the same things that blotter is used for, such as to line tables or drying racks, and wash or dry objects. Grace Owen-Weiss has also developed a method of toning paper by coating Evolon with acrylic paint and pressing the paper to be toned onto the Evolon. Evolon can be washed and reused, similar to Tek-Wipe. Varnish stains can be removed by soaking in ethanol. Water-based stains can be removed by soaking in hot water or placing in a washing machine.

#### REFERENCES

- Porto, S. 2016. All over the map: Bringing Buffalo's stars of cartography to light, one lining at a time. *The Book and Paper Group Annual* 35: 71–80.
- Molina, M. R., and A. Hughes. 2016. A comparative study of blotter, Evolon and Tek-Wipe as absorbent supports for paper conservation treatment. Poster presented at the Joint 44th Annual AIC Meeting and 42nd Annual CAC-ACCR Conference, Montreal, QC, Canada.

#### SOURCES OF MATERIALS

Evolon nonwoven microfiber paper  
Talas

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