

No Leafcaster? No Problem!

Using the Suction Table to Fill Large Lacunae in an Entire Volume

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Case Study

CONDITION OF ITEM

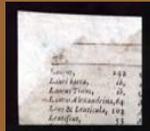
The 17th-century English herbal arrived in the lab in poor condition. Most of the text block was severely mold- and vermin-damaged. Because of the significance of the item and its poor condition, the curator and conservator agreed on a full treatment and rebinding.



Coles, William. *Adam in Eden, or, Natures Paradise; The History of Plants, Fruits, Herbs and Flowers with Their Several Names* . . . London: 1657

OPTIONS: TO MEND OR LEAFCAST?

Almost every folio needed repair in order to prevent further damage to the text block. Traditional Japanese paper and paste mending seemed overwhelming when faced with approximately 600 pages (150 folios) in poor condition. Leafcasting was a logical choice, but no leafcaster or book suction device was available. After consulting various references (see "For More Information") and testing the technique, the suction table was used for pulp filling the large lacunae.



Corner pulp fill



ADVANTAGES OF PULP FILLS

- When workflow is planned well, it can be a relatively fast treatment technique.
- The fills usually adhere well to and blend with the text paper.
- The technique may achieve a uniform surface level between pulp and text paper.
- Like Japanese paper mending, the fills should be easily reversible.

Workflow

TEST SQUARES

Pulp can be made from pure cotton linters, paper pulp, or reconstituted conservation-quality papers. The latter approach was used in this case study. A combination of four papers provided the best match.

In order to determine the best color and textural match, test squares were made from different combinations of papers.



Quantities and types of paper used to make batches of pulp for fills



Blender



Museum Services Suction Table



Beaker filled with pulp, dropper, folder, and tweezers for pulp application

EQUIPMENT

- Blender
- Suction table

SUPPLIES

- Pulp
- Thin blotter for suction table
- Thicker blotter for masking fill area
- Water sprayer
- Dropper and/or small beakers
- Teflon folder or roller
- Hollytex sheets
- Japanese *Hake* (sizing) brush

PULP FILL PROCEDURE

- Place paper on thin blotter
- Lightly mist to minimize distortion while drying
- Turn suction setting to low
- Mask areas to fill with thick blotter
- Apply pulp by dropper, by pouring, or by any other useful method
- Raise suction setting as appropriate
- Place Hollytex over paper surface
- Encourage adhesion with Teflon folder or roller
- Size paper through Hollytex
- Let paper dry a few moments
- Transfer to dry between Hollytex and thick blotters



Results

COMPLETED PROJECT

After pulp fills were completed, small edge tears were mended with Japanese paper and paste. The folios were recollated and sewn on cords. A new leather binding was created in order to preserve uncovered textual information on the inside of the front original pasteboard. A box was constructed to house the finished binding and original cover.



Treated volume with pulp fills

LESSONS LEARNED

Successes:

- Filling large lacunae is possible using the suction table and minimal supplies, although a leafcaster is still better designed for a large-scale project.
- Squares of the different papers used to make the pulp were batched in envelopes in quantities sufficient to make 12 oz. of pulp at a time. As time allowed, two or three envelopes of the paper squares were soaked overnight in water to cut down on spoiled pulp.
- Thanks to careful preparation, it took under eight minutes to complete pulp fills for each folio.

Challenges:

- Pulp must not be applied too thickly or the filled area will not be flush with the text paper. If the area of loss over many pages is consistently located in one region of the text block, the re sewn book might look lopsided in the area of fills.
- In this case study, the text was printed on cross-grain paper that wrinkled when the paper was wetted on the suction table. A lower-than-desired suction setting was used to compensate for this development.
- For very large fills, great quantities of pulp were required to achieve uniform, opaque results. This technique required trial and error to perfect.

FOR MORE INFORMATION

- American Institute for Conservation Book and Paper Group. 1994. Chapter 26: Filling of Losses. In *Paper Conservation Catalog*, 9th ed.
- Futernick, Robert. 1983. Leaf Casting on the Suction Table. *Journal of the American Institute for Conservation* 22(2): 82-91.
- Korbel, Barbara. 2001. Pulp Repairs of Tears and Losses. *Quarto: Newsletter of the Guild of Book Workers Midwest Chapter* 13(3): 6.