

Care of old Maps by Joel Kovarsky

Although paper is fragile, many of these old maps have survived for years, often due to the protection afforded by being bound into old books. Some of this paper remains remarkably intact, for unusual reasons (the water source used for the paper pulp preparation could have been high in calcium carbonate, a natural buffer). Even the best of papers can be damaged by external forces, such as careless handling, poor climate, too much or too little moisture, chemical spills and numerous other misfortunes. A few simple pointers regarding the care of these items is in order.

1. PHYSICAL HANDLING: Keep your hands clean while handling, and use them both to lift the item evenly. This minimizes bending, creasing, tearing, etc. Try not to store them stacked loosely on top of one another, as molds, acid, and other materials can transfer to items in close contact. Only use archival materials (acid free preferable to buffered) for mounting and simple repairs (very simple). Even if a map has been mounted on a stiff surface, be very careful, as the mounting material may be brittle or split. If you are rolling a map, be careful not to roll it perpendicular to an existing centerfold: it should be rolled parallel to the fold. (See: [Misperceptions About White Gloves](#))

2. ENVIRONMENTAL ISSUES:

a. [Heat and Humidity](#)- Optimal temperatures are generally less than 70 F, something that is not practical in most homes. Most standard climate controls (air conditioning) are reasonably safe, allowing for personal comfort, but lack of air conditioning is a problem in warmer climates. The main problem with too much moisture is mold growth. Most air-conditioners will keep humidity below 70%, which is usually fine. Do not store valuable maps in cellars or areas left closed and unventilated for long intervals. Nor do you want to excessively dry the paper, so a baseline humidity around 40-50% is a good idea. (Note: Foxing is a very complex subject, and there is no simple solution to the problem. (See: [Study of foxing stains on paper by chemical methods...](#))

b. Light Exposure- Do not hang maps in direct sunlight, thereby avoiding both excessive heat and harmful light rays. Regular glass provides minimal ultraviolet (UV) protection, and you may need a special glass coating (glazing) that specifically provides UV protection--not just filtering. (Not every item needs to be in a specialized map room with paper conservators on call.) Rotating the location of hanging maps, perhaps on a yearly basis, may prevent defects from resulting from uneven light or temperature exposure. A much more detailed discussion is available online, via the [Northeast Document Conservation Center](#).

c. Air Pollution- It is a problem, but if you live in a heavily industrialized area, it may not be easily avoidable. As always, basic climate control helps. Not all collectors and museum can afford specialized air flow and filtration systems, nor are they always necessary.

d. Bugs- Insects (silverfish, cockroaches, woodworms, termites, etc.) can cause some problems. They prefer warm, damp, dark areas, and may prefer bleached wood-pulp papers. (Many mid to late 19th century USA maps were produced on wood-pulp paper, which is also high in lignin resulting in problems with acidity, in addition to appealing to the bugs' dietary preferences). Again, climate controlled areas, kept reasonably clean, are a good defense.

e. Acidity- The most common problem is from poorer quality 19th century papers made from wood-pulp (done to allow higher volume paper production), which is high in lignin, thus quite acidic. The other problem is from sizing with alum-rosin. Magnesium oxide sprays (such as Bookkeeper deacidification spray) have been advertised as a simple way to help correct this problem, both for small a large scale projects. A discussion of pros and cons may be seen [here](#).

3. [MATTING AND FRAMING](#) : I use professionals. Most good framers know about archival mounting, protecting both the front and back of the maps, the avoidance of trimming margins and numerous other details. Conventional glass, as noted above, provides reasonable UV and surface protection, but if there were any question about too much light exposure, use glazed glass or acrylic sheets (see LC discussion via link provided). I would avoid no-glare glass.

4. RESTORATION: Again, this is best left to professionals. Discussions of do-it-yourself approaches surface in various online discussion groups, but if you insist on this, practice on cheap stuff first. Details such as sizing, bleaching (preferably not), coloring, and paper repair require considerable skill to be done well.

5. STORAGE: I prefer, if possible, to store maps flat. Sometimes you have to keep them rolled, but try to avoid it. There are several types of archival sheathing (see below re: suppliers) that are easy to use and affordable. You can mat items, but this is often more expensive, and you still need to protect the exposed map image. Either way, the map edges are protected from repetitive handling. A metal or wooden cabinet, such as those used for storing architectural drawings, is useful. All the above climate control issues apply.

REFERENCES

1. Clapp: Curatorial care of works of art on paper. Lyons Press, New York, 1990 (later edition).
2. Cunha & Cunha: Conservation of Library Materials. A Manual and Bibliography on the Care, Repair and Restoration of Library Materials. (2 volumes- vol. 1 is the manual; vol. 2 is the bibliography). The Scarecrow Press, Metuchen (NJ), 1971.
3. Dollof and Perkinson: How to care for works of art on paper. Museum of Fine Arts, Boston, 1985 (4th edition)
4. [Rare Book Photography: An Introduction](#) This is an online discussion published by Yale University (2011), with text by Bryn Savage and photography by Bill Saco.
5. [IMCOS: Caring for Your Collection](#) There is a good bit of general information here, although the section on photography could use updating, particularly in the area of digital photography.
6. [Misperceptions About White Gloves](#) by CA Baker and R Silverman.
7. Other online sites discussing complexities of paper conservation: [AIC Resource Center](#), [Straus](#)

[Center for Conservation \(Harvard Univ. Art Museums\)](#), [Preserving Works on Paper \(Preservation, Library of Congress\)](#), [Conservation OnLine](#). The Northeast Document Conservation Center offers a large number of [Online Leaflets](#) pertaining to conservation issues. The NEDCC has an online text, [Preservation Basics for Paper and Media Collections](#).

8. Tuttle: An ounce of preservation: a guide to the care of papers and photographs. Rainbow, 1995.

9. [Conservation DistList](#) This is an online discussion list "to share technical information, news, rumour-control etc relating to the conservation of museum, library, and archive information. "

ARCHIVAL SUPPLIES

1. [Archival Products](#)

2. [University Products](#)

3. [Light Impressions](#)

4. [Blick Art Supplies](#)

5. [Gaylord.com](#)

6. [BAGS Unlimited Inc.](#) They offer archival folders and mylar sleeves.

7. [BookRepairSupply.com](#) Source for book repair supplies, including an extensive selection of erasers.

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