



Every part of a book, document or work of art (which may include paper, cloth, leather, photographic emulsions, inks, pigments, plastics, adhesives, etc.) reacts to its environment and will deteriorate with age. This process can be slowed by storing your collection in a stable environment.

The environment is made up of four components: heat, relative humidity, light and pollutants. The ideal environment is cool, clean, dry and dimly lit. High heat, especially in combination with high relative humidity, rapidly accelerates deterioration.

### Heat

Avoid storing any collection in an area that stays very warm or experiences extreme temperature fluctuations, such as your attic or garage. As a rule, 65-70 F is best for collections.

### Relative Humidity (RH)

Library materials respond to fluctuations in relative humidity by losing and gaining moisture. It is more important to maintain a stable environment than to maintain a specific relative humidity. Evidence of fluctuating humidity damage is cockled paper, flaking or cracked photograph emulsions, warped book covers, warped or cracked vellum and parchment documents and books.

Relative humidity is related to temperature. Under normal conditions, if your room temperature is stable, the RH probably is too.

In Colorado and other arid regions the RH is naturally low. This causes some items to become brittle, but there are advantages to low (30 percent) relative humidity:

- Slower absorption of pollutants
- Less change in moisture content
- Greater stability

When moving materials from a humid environment to a dry one, acclimate them gradually. Wrap or weight books and papers to avoid warping as they dry out. Check for evidence of mold.

Learn how to care for and preserve your family treasures.

### Light

Exposure to light accelerates the deterioration of all organic materials. An object exposed to strong light for a short period will deteriorate as much as an object exposed to low light levels for a long period of time. Ultraviolet (UV) light is the most damaging; both sunlight and fluorescent light are high in UV.

In Colorado, our high altitude equals high levels of UV which are a constant concern for displayed collections as well as for people. The less direct light, the better.

- Don't display works of art on walls opposite windows. Bookshelves should not be exposed to direct sun.
- If exposure to light cannot be minimized, display facsimiles or use UV filters available\* for this purpose.

### Pollutants

In the home library, particulates (dust, crumbs, etc.) are a problem. Particulates are abrasive and attract pests such as insects and mice.

Clean dusty books before opening to prevent dust from falling inside. To dust a book:

- Hold the book tightly closed while removing it from the shelf.
- Use a cloth treated to pick up dust or a dry cleaning sponge;\* draw the cloth across the head of the book from the spine to the outside edge.
- Dust the rest of the outside of the book. Do not rub or scrub with the cloth.

Shelve books with the spine out. Books should support each other, but should not be packed tightly.

Line bookshelves with polyester (an inert, transparent plastic)\* to preclude problems caused by wood or painted shelving.

Store oversize books or documents flat.

Support the hinges of books on display to prevent strain (and possible breakage). Never display a book open to the same spot for an extended length of time.



A photocopy on archival paper is an excellent way to retain the content of a fragile document. Use the copy and tuck the original away for safekeeping.

## Emergencies

A water disaster requires an immediate response. Wet books and paper begin growing mold in less than 48 hours, and mold spreads fast.

### Remove and stabilize all wet materials

- Freeze them immediately. If the materials are precious, contact a conservator\* for advice before air drying them yourself.
- If the emergency is small and the materials are not precious, wet books can be stood on end and air dried in an open, well-ventilated area.
- Paper left to dry without restraint will wrinkle, so it must be pressed as it finishes drying.
- Controlled exposure to sunlight will kill mold spores. Segregate moldy or wet books from the rest of your collection until you are sure they are clean and dry.

### Dry and stabilize the environment

- Use fans to move the air.
- Use a wet-dry vacuum.
- Check all carpeting and flooring under heavy furniture (like bookshelves) to be sure it's dry.

Always use gloves when handling sooty and smoke damaged materials. The oils from your hands will set the soot, making it more difficult to remove later. Use a dry cleaning sponge to remove the sooty coating, following the instructions for cleaning dusty books on the preceding page.

## Digital Media

Although they are a wonderful technology for access and sharing information, digital media cannot be considered archival or permanent. Always retain the original or print out hard copy if it has importance, rather than depending only on an electronic file or disk.

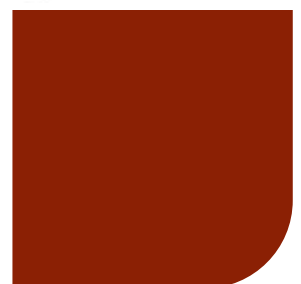
## Handling and Repair of Valuable Materials

Place fragile or valuable items in a protective enclosure to minimize exposure to light, dust, pollutants and handling, then leave them alone. Restrain any impulse to “fix it up,” which will devalue the piece.

- Don't use pressure-sensitive tapes (Scotch tape for example). These stain and embrittle paper and are very difficult to remove. Instead, wrap and store a damaged item in an acid-free enclosure\* until it can be professionally treated.
- Don't laminate (items adhered with heat to plastic). This process cannot be reversed. Encapsulation (placing an item between sheets of polyester film,\* which is then sealed at the edges), is a good archival alternative.
- Don't touch the image area (emulsion) of a photograph.

Hire an expert\* to undertake conservation procedures such as washing, deacidifying and repair of paper, rebinding, fumigation or photo restoration.

For more information on caring for your collection, refer to the materials on preservation available at the Library. They can be accessed in the JCPL catalog, [www.jeffcolibrary.org](http://www.jeffcolibrary.org) under the subject heading: “[Myra Jo Moon Memorial Preservation Reference Collection](#).” The collection is also available through Prospector and Interlibrary Loan.



## Books

### Archives and Manuscripts: Conservation

Mary L. Ritzenthaler 025.84RITZENTHALER

### The Bloomsbury Review Booklover's Guide

Patricia Jean Wagner 027.1WAGNER

*General information for the home library*

### Care and Identification of 19th-century

### Photographic Prints 771.46REILLY

James M. Reilly

### Care of Fine Books 025.7GREENFIELD

Jane Greenfield

*General information for the home library*

### Caring for your Family Treasures:

### Heritage Preservation 745.10288LONG

Richard W. Long

*Practical guide to caring for objects of value*

### Cleaning and Preserving Bindings and Related Materials Q025.7HORTON

Carolyn Horton

*Common-sense procedures for library collections*

### Guide to Collections Care 025.84 GAYLORD

*Written by conservators, includes information on storage needs of many types of collections*

### How to Save Your Stuff from a Disaster

Scott Haskins 025.84HASKINS

*Written for the home collection*

### Least Toxic Home Pest Control

Dan Stein 648.7STEIN

### The Permanence and Care of Color Photographs

Henry Wilhelm Q770.283WILHELM

### Photographs: Archival Care and Management

Mary L. Ritzenthaler 771.46RITZENTHALER

## Preservation Web Sites

American Institute for Conservation of Historic & Artistic Works (AIC) [www.conservation-us.org/](http://www.conservation-us.org/)

*Tips for caring for your collections; listings of professional conservators by region and expertise*

Preparing, Protecting, Preserving Your Family Treasures

[www.loc.gov/preserv/familytreasures/index.html](http://www.loc.gov/preserv/familytreasures/index.html)

*Instruction as well as links to comprehensive information for preparing, protecting and preserving many types of family heirlooms.*

Conservation Online (CoOL)

<http://cool.conservation-us.org/> Complete resource

Heritage Emergency National Task Force

[www.heritagepreservation.org/free/Index.html](http://www.heritagepreservation.org/free/Index.html)

*Tips for handling water-damaged valuables and cleaning family treasures*

Image Permanence Institute

[www.imagepermanenceinstitute.org/](http://www.imagepermanenceinstitute.org/)

and [www.graphicsatlas.org/](http://www.graphicsatlas.org/)

*information on the preservation of photographs and digital output.*

North East Document Conservation Center

[www.nedcc.org](http://www.nedcc.org) Complete preservation resource

Society of Rocky Mountain Archivists

[www.srmarchivists.org](http://www.srmarchivists.org)

*State and local resources, including conservators; links to national sites*

## Archival Supplies

Gaylord Archival Storage Materials

1-800-448-6160 ☒ [www.gaylord.com](http://www.gaylord.com)

Light Impressions

1-800-828-6216 ☒ [www.lightimpressionsdirect.com](http://www.lightimpressionsdirect.com)

Metal Edge

1-800-862-2228 ☒ [www.metaledgeinc.com](http://www.metaledgeinc.com)

University Products

1-800-628-1912 ☒ [www.universityproducts.com](http://www.universityproducts.com)

Vendors will send a free catalog upon request.