news
care of photographs
by northeast document conservation center

many factors influence the permanence of a photograph. two of the most important are proper storage materials and a safe environment. by controlling these two factors, the deterioration of a photograph collection can be greatly reduced and its longevity greatly enhanced.

environment
various aspects of the environment, such as relative humidity, temperature, air purity, and light, influence the stability of a photograph collection.

relative humidity is the single most important factor in preserving photographs from chemical deterioration. high relative humidity speeds detrimental chemical reactions, leading to much of the fading and discoloration visible in photograph collections. relative humidity should be kept below 50%; ideally it should be 35%. stable conditions are very important.

temperature control is important mostly because of its influence on relative humidity. high temperatures will speed up chemical deterioration. the recommended compromise temperature for the storage of photographs and the comfort of people is 68°F. lower temperatures are desirable, especially for color materials.

sharp fluctuations in relative humidity and temperatures should be avoided. by using folders and boxes, the effect of environmental fluctuations on the photographs can be minimized. the use of dehumidifiers and humidifiers can also be helpful. avoid attics (too hot) or basements (too damp) for storage areas. storage in an interior closet would be much better. do not hang or store photographs on exterior walls, in bathrooms, or over heat sources.

air purity is particularly crucial in a city environment. harmful chemicals as well as particulate matter can damage photographs. ideally, air should be filtered for these materials and dust should be kept to a minimum.

metal cabinets are preferred over wood because wood generates harmful gases. if wood is used, it should be sealed with polyurethane or water-based acrylic paint. keep photographs away from fresh paint fumes, plywood, cardboard, and janitorial supplies.

light can cause embrittlement, yellowing, and fading in photographs. direct sunlight is the most harmful; incandescent (tungsten) lighting is preferred to fluorescent. avoid hanging photographs where they will be exposed to direct sunlight or to fluorescent lights. ultraviolet-filtering plexiglas is recommended for use in framing any photograph which is on long-term display.

by controlling the environment and storage materials, the deterioration of a photograph collection can be greatly reduced and its longevity greatly enhanced.

storage materials
proper storage materials are essential for long-term stability of photographs and negatives. they provide much needed physical support and protection for fragile objects, and at the same time act as a barrier between the photograph and a potentially unstable environment. it is of utmost importance that storage materials be known to be unreactive to the photographic material. much damage has been done in the past through the use of reactive materials such as acidic groundwood pulp sleeves, rubber bands, paper clips, pressure-sensitive tapes, and poor.

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Quality adhesives such as rubber cement or animal glue.

Storage materials can be either paper or plastic. All photographic storage enclosures should have passed the photographic activity test to determine the materials' level of inertness. This test is specific in ANSI NAPM IT 9.16-1993 and consumers should contact suppliers to see if their products comply. The major advantages and disadvantages of paper and plastic are listed below. This list should help determine which type of enclosure to use for your particular needs.

Paper enclosures

Paper enclosures are opaque, protecting the photograph from light. However, this makes viewing difficult, since the photograph must be removed from the enclosure before it can be viewed. This increases handling and subsequent abrasion and fingerprinting of the image.

Paper enclosures are porous, protecting the photograph from the accumulation of moisture and detrimental gases. This is especially important for cellulose nitrate and early safety film negatives, since the gases generated by the deterioration of these support materials are harmful to photographic materials.

Paper enclosures are available in buffered and non-buffered stock; both should be of archival quality and non-acidic. Buffered storage enclosures are not recommended for color images, cyanotypes, or albumen prints. They are recommended for cellulose nitrate and early safety film negatives, brittle prints and prints on brittle acidic mounts.

Paper enclosures should not be made of Kraft or glassine paper as the impurities in these materials will cause deterioration of the photograph. The cardboard boxes used by retail outlets to package photographic materials should also be avoided.

Plastic Enclosures

Plastic enclosures have the great advantage of allowing an image to be viewed without removal from the enclosure, greatly reducing the chances of abrasion, scratching, or fingerprinting the photograph.

Plastic enclosures seal the object from the atmosphere. Since most chemical deterioration in a photograph is catalyzed by the presence of moisture and sulfides in air, such protection may prolong the life of the image. However, plastic enclosures can trap moisture and cause ferrotyping (sticking, with resulting shiny area) of the image under extreme conditions.

Plastic enclosures of archival quality may be made of polyester, polypropylene, or polyethylene. They should not be coated or contain plasticizers or other additives. Polyester is the most inert, dimensionally stable, and rigid of the three. It can generate static electricity which attracts dust, and it is expensive. Polyester enclosures should be either Dupont Mylar D® or ICI Melinex #516®. Polypropylene is almost as rigid as polyester when it is the untreated "oriented" -polypropylene used in sleeve formats, but is soft when it is the surface-treated polypropylene used for ring binder storage pages. The surface coating in the soft polypropylene is an unknown element, hindering the proper evaluation of this material. Polyethylene is the most easily marred, and least rigid of these plastics. High-density polyethylene is a translucent, milky plastic which is naturally slippery. Low-density polyethylene is the clear polyethylene used in ring binder storage pages. This polyethylene has incorporated antiblock and slip agents which could potentially be problematic.

Plastic enclosures made from polyvinylchloride (PVC) are unacceptable for archival photographic storage. This plastic, often referred to as "vinyl" by suppliers, is not chemically stable and will cause deterioration of a photograph over time.

The Northeast Document Conservation Center (NEDCC) announces the publication of the second edition of its manual on preservation of library and archival materials funded in part by a grant from the Institute of Museum Services (IMS). Sherelyn Ogden, NEDCC's Director of Book Conservation, developed and edited the publication. The manual consists of a series of 46 technical leaflets on collections care with the primary emphasis on prevention of deterioration of whole collections. Topics covered include preservation planning and prioritizing, the environment, emergency management, storage and handling, reformatting, and conservation procedures. Professional illustrations make the "how-to" leaflets easy to understand and use. The manual consists of a number of NEDCC's standard technical leaflets, which have been updated and expanded, as well as additional new leaflets written specifically for the publication. The 250 page manual has been produced in notebook form so that it can be updated periodically.

The purpose of the manual is to provide the basic, practical information needed to enable non-conservator staff members of libraries and archives to plan and implement sound collections care programs or to incorporate preservation principles into existing programs.

The Northeast Document Conservation Center is a nonprofit regional conservation center specializing in the treatment of paper-based materials including photographs, books, architectural drawings, maps, posters, documents, wallpaper, and art on paper. Its purpose is to provide the highest quality conservation services and to serve as a source of advice and training for institutions that hold paper-based collections.

To obtain a copy of Preservation of Library and Archival Materials: A Manual, send a check in the amount of $40.00 to NEDCC, 100 Brickstone Square, Andover, MA 01810. The cost includes $5.00 for shipping and handling within continental United States. Call NEDCC at 508-470-1010 for shipping cost to other locations.
Restoration 95 Conference Program Theme:
“Affordable Preservation: Practical Strategies for the ‘90s”

Restoration, organizers of RESTORATION, announced the formation of the Program Advisory Board in May for the 1995 event, scheduled for February 26-28, 1995 at Boston’s Hynes Convention Center. RESTORATION is the largest trade exhibition and conference in the world dedicated to the preservation of our cultural heritage. RESTORATION 93, held December 6-8 in Boston, attracted 7600 visitors who viewed the exhibits of over 250 companies, 10 of which came from abroad.

One of the main missions of RESTORATION is outreach—making the care and preservation of all aspects of our cultural heritage the primary concern to a wide audience of professionals, artisans, and tradespeople, as well as serious antique homeowners/collectors. The purpose of the conference is to inform showgoers about the latest methods, products and approaches to preservation so that they can intelligently view, compare and evaluate the many products and services displayed on the trade show floor.

At RESTORATION 95 under the theme “Affordable Preservation: Practical Strategies for the 90s,” leading experts in the field will focus on the relationship between preservation and the sometimes divergent concerns of the wider society. Since scarcity of resources—financial, environmental and otherwise—is a major factor in present-day economic life, many conference sessions will discuss how to strike an acceptable balance between aesthetic and ethical concerns to retain the integrity of cultural history and the utilization of cost-effective, historically appropriate and environmentally safe methods and materials.

The conference will feature sessions targeted specifically at the various sub-groups—architects, designers, engineers, conservators, homeowners, and collectors. In addition, the program will provide an exciting mix of cross-disciplinary case studies, roundtable discussions, hands-on workshops and practical seminars specifically designed to offer concrete tips and advice on restoration and preservation techniques and to encourage dialogue among the many and varied professions active in preservation.

In addition, the RESTORATION 95 Conference Program will include several new features designed to meet the varied educational and informational needs of its diverse audience. Several sessions will focus on specialized topics, such as twentieth century restorations, rural restorations, historic landscape treatments and regional transportation issues. The hands-on workshop track will include even more topics, such as decorative painting, gilding and textile restoration. The free-of-charge sessions on careers and training programs in preservation will be expanded, and the Association for Preservation Technology will co-sponsor several high-level, technical workshops for the trade and professionals during the two and a half days preceding RESTORATION.

Anyone interested in receiving more information about the RESTORATION 1995 conference program is urged to contact Steve Schuyler at 617-933-9655, fax 617-933-8744. Organized by RAI/EGI Exhibitions, Inc., Ten Tower Office Park, Woburn, MA 01801 USA, 617-933-9659 Fax 617-933-8744

Archival Products Focus: Archival Albums

Archival Products is pleased to offer the Archival Album. It is well constructed using .082 Lig-free™ binders board, 80# off-white 11 x 13 alkaline paper leaves with a Smyth sewn, full cloth case binding of natural cotton linen tweed and burnt sienna end bands.

The Archival Albums are available in two sizes: ¾-inch thick containing 22 leaves or one-inch thick containing 34 leaves. The albums can accommodate materials up to 8 x 10 inches either horizontally or vertically. The leaves will sustain frequent use, and the spacers allow a filled album to close flat. The album quality album components help slow the aging process that can destroy older materials. Materials will last much longer in the acid-free environment.
Report on the First Annual Books on Demand Symposium — by Gary Frost

Library binding is the ultimate “on-demand” industry. Not only is the business based on speedy turn around, but the product exemplifies manufacturing for the “ultra short run” and a “market segmentation of one.” This convergence was emphasized by Greg Campbell, president of the Library Binding Institute, as he spoke to 200 book production entrepreneurs at the Xerox/LBS Books on Demand Symposium.

The program continued with speakers on “Industry Trends in On-Demand Publishing,” “Emerging Technologies in On-Demand Book Production” and on “Emerging Technologies in On-Demand Binding,” a panel on “Adhesive Technology,” presentation on elements of production of “Custom Texts.” The second day provided concurrent workshops on “Binding Technology” and “Adhesive Technology” and on “Low Volume Book Binding.”

The heart of the symposium was the roll-out and demonstration of new equipment and systems for short run, on-demand book production. These ranged from desk-top sheet binders to a complete DocuTech installation with adhesive bind and trim accessories. The program provided many hours to gain a useful knowledge of these systems.

New equipment at Des Moines included the Xerox Challenge DocuTrim, the Mekatronics Mekabind double-fan binder, and the Otabind/ReplKover related equipment by Planax North America.

The Challenge DocuTrim, 3-cut guillotine, designed for use with copier texts, is a wonderful design that turns the machine around to provide a loading face behind the clamp and knife. A swiveling clamp positions the three edges to their cuts as activated by keyed-in instructions. The completely new Mekatronics stand-alone double fan machine looks perfect for automation of a hand running station. It is fully motorized with automatic adhesive application. It is a quiet, well built machine with excellent safety features.

The relevance of the Otabind/ReplKover binding related equipment is more in the future. A reinforced version of this proprietary binding structure, which would feature double-fan adhesion and a laminated, heavier cover, could have a major effect not only in the short run market, but in the library binding market as well. At the moment, the short-run Otabind/ReplKover equipment by Planax is not well adapted to the library bindery setting since its grinder/in-line adhesion station is inappropriate. While the Otabind represents the wave of the future in edition binding and lay-flat book construction, the adaptation of this type to double fan work is still in development.

A feature of another short-run binding system by Flesher Corporation is contact adhesive endpapers. Imaginative library binders could use these endpapers, made by LBS, to start down the track toward development of a “waterless” binding process. In short run work the contact ends would also eliminate moisture effects on thin texts.

Large market and social forces are driving the short run, books-on-demand trend. Photocopiers are at the center of this trend, providing production means to everyone and permitting widespread familiarity with capture and conversion of content and unique compilations of information. Now new binding systems are needed to permit the production of durable and elegant books from the copier “pages.”

For more information on the symposium contact Chris Guthrie or Ann Gammon at LBS Bookbinding Components, Box 1413 Des Moines, IA 50305, 1-800-247-5323.


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