

Archival Products

NEWS

The Kansas Aerial Photography Initiative (KAPI)

By Linda Marston

KANSAS STATE UNIVERSITY Libraries has undertaken the Kansas Aerial Photography Initiative (KAPI). This ambitious project involves conservation, cataloging and storing nearly 65,000 historic U.S. Department of Agriculture (USDA) black and white aerial photographs of Kansas. The original high-quality photographs, dating between 1952 and 1970, provide a pictorial record of the cultural and physical features of a large portion of the state. The objective of KAPI is to ensure the availability of this unique collection for future generations of users.

Many of the photographs in the collection are marked with grease pencil, punctured by pins or staples and curled from years of improper storage. An expert paper conservator was consulted to design an appropriate process for cleaning, flattening and storing our photographs. A small but dedicated staff has been working on the labor-intensive process for the past year and a half. The remaining text describes the KAPI method for sorting, cleaning, flattening, protecting and storing the photographs.



Figure 1. Photographs are sorted by county, year, flight line and photo number.

Sorting

Photographs are sorted by county, year, flight line and photo number. (Figure 1) The sorted photographs are wrapped with archival corrugated board in non-acidic paper and placed in stacks. (Figure 2) The weight of the stacked photographs helps flatten them and make them easier to manipulate during cleaning.

Cleaning

Many of the photographs in our collection were actively used by the USDA staff resulting

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Because the emulsion layer is coated on only one side of the base or support, prints on anything except stable base material have a natural tendency to curl.



Figure 2. The weight of the stacked photographs helps flatten them and make them easier to manipulate during cleaning.

in grease pencil marks and ink on their emulsion surfaces. Because the photographs were originally stacked one atop the other, marks were transferred from the front of one photograph onto the back of the next photograph. The marks on both sides of each photograph are removed by placing the photograph on a hard surface and erasing with a soft vinyl or gum eraser. (Figure 3) A soft drafting brush is used to thoroughly remove all eraser crumbs. Cotton gloves are worn to protect both the hands of the employee and the surface of the photograph.

Once all marks are removed, the emulsion side of each photograph receives a final cleaning with a cotton pad or ball dampened with naphtha. Disposable nitrile gloves are worn and the work is completed under a fume hood. (Figure 4) This final cleaning removes any residual grease pencil or ink marks, finger prints and/or dirt. The back side of each photograph is also cleaned with naphtha if the support or base material is non-porous, resin-coated, plastic laminate, or stable base. The photographs remain in the



Figure 3. A soft drafting brush is used to thoroughly remove all eraser crumbs.



Figure 4. Disposable nitrile gloves are worn and the work is completed under a fume hood.

fume hood until completely dry which can take up to an hour. Dirty cotton pads and balls are disposed of in the trash after the naphtha has completely evaporated.

Flattening

Because the emulsion layer is coated on only one side of the base or support, prints on anything except stable base material have a natural tendency to curl. In addition, paper retains a “memory” which may also cause a photograph to revert to a curled or rolled form. The amount of curl, in any one of our photographs, varies considerably. Almost all of the photographs from the 1950s were printed on resin-coated paper and have moderate to severe curl. Many photographs from the 1960s were printed on single weight, fiber-based paper and have little or no curl. The photographs from the 1970s were printed on stable base material and have no curl.

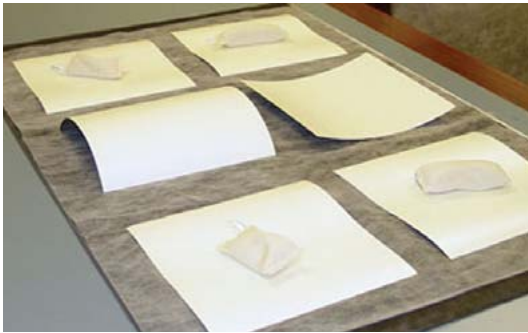


Figure 5. Since the heat press used can hold only six photographs at a time, our humidification stack is sized to hold six photographs.



Figure 6. The bottom half of the stack is constructed using a piece of blotter paper dampened with de-ionized water.

Curled photographs must be humidified before flattening to avoid cracking the emulsion layer or separating the emulsion layer from the base. The photographs are humidified in a simple humidification stack. Since the heat press used can hold only six photographs at a time, our humidification stack is sized to hold six photographs. (Figure 5)

To construct the bottom half of the stack, lay a piece of blotter paper dampened with de-ionized water on a waterproof tabletop. Place three layers of screen atop the damp blotter paper. (Figure 6) Place a single layer of Reemay or Hollytex atop the screen.

The top half of the stack is composed of the same layers placed in reverse order. A single piece of clear plastic film or mylar, large enough to extend beyond the edges of the blotter paper and create a seal on the tabletop, is placed over the stack. A piece of



Figure 7. A piece of 1/4-inch thick plexiglass, cut the same size as the blotter paper, is placed on top of the plastic film.



Figure 8. The piece of 1/4-inch thick plexiglass is held in place with weights.

1/4-inch thick plexiglass, cut the same size as the blotter paper, is placed on top of the plastic film and held in place with weights. (Figures 7 and 8)

Photographs are placed, emulsion side down, in the center of the stack between the two layers of Reemay or Hollytex. When the emulsion just begins to soften and the base or support to relax, the photographs are removed. Depending on the humidity in the room and nature of the photographs, they remain in the stack from eight to twenty-five minutes.

After humidification, the photographs are heated and pressed flat. Six humidified photographs are placed between two sheets of silicone release paper inside a non-acidic folder measuring nearly the same size as the platens of the press. When the press reaches 175°F, the folder containing the photographs

Curled photographs must be humidified before flattening to avoid cracking the emulsion layer or separating the emulsion layer from the base.

Our drying stack is constructed of archival corrugated board, blotter paper and Hollytex.



Figure 9. When the press reaches 175°F, the folder containing the photographs is placed in the pre-heated press.



Figure 10. After the photographs have been layered in the drying stack, weight is applied to the top and the stack is allowed to sit undisturbed for several hours.

is placed in the pre-heated press (Figure 9) which is then clamped closed. The heat is switched off and the press is left to cool completely, a minimum of two to three hours.

When the press has cooled completely, the folder containing the flattened photographs is removed from the press. The photographs can be prepared for storage or moved into a drying stack for additional pressing. Our drying stack is constructed of archival corrugated board, blotter paper and Hollytex. A piece of board forms the base of the stack followed by a piece of blotter paper, a piece of Hollytex, a photograph, another piece of Hollytex, another piece of blotter paper and a piece of board forming the top. The stack is approximately two inches wider than a photograph on all sides and holds twenty-four photographs. After the photographs have been layered in the drying stack, weight is applied to the top

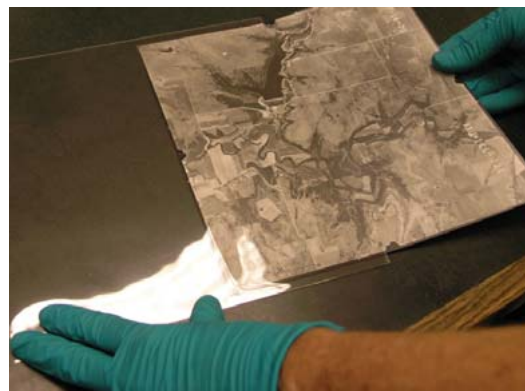


Figure 11. As soon as the photographs are removed from the press or drying stack, they are placed, individually, into inert polyester enclosures.



Figure 12. Steel cabinets coated with a baked enamel paint have been specially designed and constructed to house the KAPI photo collection.

and the stack is allowed to sit undisturbed for several hours. (Figure 10)

Protecting

As soon as the photographs are removed from the press or drying stack, they are placed, individually, into inert polyester enclosures. (Figure 11)

A polyester enclosure is approximately 1/4 to 1/2 inches wider than the photograph on each of its four sides. Since each photograph has a date, a unique county code, flight line number and individual photo number incorporated in the photograph, it is not necessary to label the outside of the polyester enclosures. The enclosed photographs are stacked in flight line and photo number order in preparation for cataloging and storing.



Figure 13. A piece of 1/4-inch clear Plexiglas, cut to fit, is placed on top of each stack of photographs to prevent sliding and add weight to prevent new curling.

Storing

Steel cabinets coated with a baked enamel paint have been specially designed and constructed to house the KAPI photo collection. Each cabinet drawer is divided into twelve compartments. (Figure 12) The interior compartments are sized to allow easy insertion and removal of the photographs which are stored horizontally in stacks of 50-75 per compartment. A piece of 1/4-inch clear Plexiglas, cut to fit the inside of each compartment, is placed on top of each stack of photographs to prevent sliding and add weight to prevent new curling. (Figure 13)

The KAPI photographs are a non-circulating collection. Patrons can view the photographs individually or stereoscopically in the library and/or make digital copies to use in remote locations. Photo mosaic index sheets for each county and year in our collection allow easy identification and retrieval of individual photographs in the collection.

Cataloging and digitizing

Once the conservation is complete, each set of county photographs with accompanying photo mosaic index is cataloged on OCLC. Digitization of the photographs is planned for the future.

Linda Marston is the KAPI Project Manager at K-State Libraries, Hale Library, Kansas State University, Manhattan, KS 66506. She can be contacted at lmарston@ksu.edu.

Regeneration of Linen Cortina Conservation Buckram

As a result of listening to your requests and needs, Archival Products is pleased to announce that we have been able to re-establish production of Linen Cortina Conservation Cloth.

This regeneration of Linen Cortina combines the traditional look of natural cloth with the advantages of coated cloth. It is manufactured with a poly-cotton base and an aqueous acrylic topcoat. The poly-cotton weave adds strength and stability to this E-grade buckram.

Used as a replacement for starch-filled buckram, the cloth is very easy to work with, remains flat and has excellent adhesion with PVA. Its linen finish decorates beautifully with stamping foil, embossing and debossing. Linen Cortina can be used for covers, conservation boxes, liners and mending.

Now available in five colors including maroon, blue, tan, black and gray. We will again provide it in 2, 3, 4, 5 and 6 inch x 40 yard rolls; or 5 to 40 yard rolls of full 54 inch width.

Specifications

65% polyester, 35% cotton base

100% aqueous acrylic top coat

8.5 pH level

.013 thickness

Breaking Strength:

Warp = 177 lbs

Fill = 74 lbs

Tear Resistance:

Warp = 2020 gms

Fill = 880 gms

Abrasion Resistance:

420 cycles

7.0 pH

Caliper: .013"

Roll width: 54"

Roll length: 40 yards

Weight per 40 yard roll: 27 lbs.

Exceeds ANSI for group E cover materials

Spiral Book Binders— Variations on a Solution

by Bill Minter

Many libraries usually have these books rebound by either double-fan adhesive binding or by over-sewing. Unfortunately, heavy paper or laminated papers are impossible to bind in this manner.

A RCHIVAL PRODUCTS NEWS published my article “Spiral Bindings in a Hard Cover: An Alternative to Rebinding” in the 1997 winter issue (volume 5, number 4) which discussed the problem of shelving books bound with plastic or metal spirals. “Since the cover is usually thin and limp, and the spiral is normally wider than the text block, the books tend to shift and stagger on the library shelf.”

The article continues with the suggestion that many libraries usually have these books rebound by either double-fan adhesive binding or by over-sewing. Unfortunately, heavy paper or laminated papers are impossible to bind in this manner. There are also many books where the spiral is an ideal method of binding, such as with music scores.

My first encounter with this situation was resolved with a simple hard cover that wrapped around the text. Another item

required something more, where the spiral was secured to the cover. The solution was to sew the spiral to the inner cloth hinge with a waxed thread or to lash the spiral to the cloth with an electrical-cable-tie.

Following that publication, a few libraries called me to make covers for them. In response, I recommended Archival Products, since they were obviously better equipped to produce the Spiral Binders more economically.

In 2003, Archival Products announced a product that was much simpler to use. The new “Spiral Book Binder” utilized a clear PETG cover with a .040 sandstone archival board for the back cover. The spiral is then secured to the cover by a strap of archival board that is riveted to the spine. The library simply inserts the spiral over the strap and secures the opposite end with a plastic rivet that is supplied— a very simple process.

A simple stainless steel wire with a loop at each end is riveted to the cover to resolve the problem of books bound with small diameter spirals.





Once the book is inserted, the opposite end of the wire loop can be secured with the standard plastic mechanism supplied by Archival Products.

Over the past few years, the Spiral Book Binder has become quite successful. Unfortunately, it did not meet the needs of every book, especially the smaller diameter spirals, such as 1/4" and 1/2".

When hearing about this, I was intrigued by the challenge and looked for an appropriate fastener whenever I was in a hardware store. After examining various types of screws, rivets and other fasteners, there seemed to be no easy way to secure the smaller spirals. Continuing to think about the problem, I even investigated fishing line leaders at one point. Then I realized that a simple stainless steel wire with a loop at each end could be riveted to the cover and resolve the problem. My next step was to develop a special bending jig for the hard stainless steel wire that is used.

Archival Products makes a cover and secures the wire loop at one end with a rivet. Once the book is inserted, the opposite end can be secured with the

standard plastic mechanism that they supply. There are other options, such as to rivet the opposite end in-house or to use another fastener that I found that does not require special tools.

One observation is that, sometimes, a sheet of acid-free corrugated board can be added to the inside of the cover to bulk-out the binder. This will give a nice, uniform, square appearance.

The Spiral Book Binder from Archival Products is now available in a variety of sizes to handle the many different books that are bound with a spiral.

Bill Minter is owner of William Minter Bookbinding & Conservation, Inc. in Woodbury, PA. He can be reached at 814-793-4020 or wminter@pennswoods.net.

Two Conservation Machines for Sale

HFE ArchiPress Vacuum

Henkovac 150 Table Model Vacuum, used slightly during consideration for our product line. Discovering a limited market, we decided not to add to our catalog.

- Strong airtight, waterproof pouches protect against acidity, atmospheric pollution, floods, fire extinguishers, damp, mold, mildew, vermin, and careless handling.
- Save 40-50% of shelf space for the same volume of documents and double capacity of shelving.
- Special vacuum sealed pouches protect contents against unauthorized access. Opening of pouches won't go unnoticed and requires the use of a machine to re-seal them.
- **Price \$3000 each (Reg. price \$5500)**

Applications

- Books / Papers
- Film / Photographs
- Museum / Archive storage
- Textiles / Objects
- Herbarium / Geological specimens
- Disaster management—storage of wet material to prevent mold growth
- Security / Closed files

Specifications

Model	Table Top
Seal Length	L 410 mm (16 1/8") and LL 2 x 410 mm (16 1/8")
Internal Width	410 mm (16 1/8")
Internal Length	370 mm (14 9/16")
Internal Height	170 mm (6 11/16")
Machine Width	520 mm (20 15/32")
Machine Length	560 mm (22 1/32")
Machine Height	475 mm (18 11/16")
Vacuum Capacity	16/(21*) m ³
Cycle Time	20–40 sec
Weight	61 kg (134.5 lbs.)

L = 1 seal length
LL = 2 seals opposite length

MiniGrip Pouches

- 1000 pouches Exterior Size
Size: 10-5/8"x16" Price: \$2.01 ea.
- 1000 pouches Exterior Size
Size: 11-3/4"x17-5/8" Price: \$2.21 ea.

For further information contact Archival Products at custserv@archival.com or 800-526-5640.

Look for the New Archival Products Catalog Coming Soon!

ARCHIVAL PRODUCTS IS currently working on a new catalog that will be printed mid-summer. The catalog will include descriptions, specifications and pricing on all of our current products as well as demonstrations of how to use the products. Archival Products enclosures are designed with the help of conservators and others in the preservation field as solutions to safely storing a variety of materials from pamphlets and sheet music to record albums and photographs. Our binders have larger rounded corners to prevent damage and optional spine scoring is a standard service at no extra charge. All materials are acid free, pH neutral and pass or exceed industry standards to ensure protecting your materials. Since 1986, we have coated our archival boards on two sides to resist moisture and offered the clear advantage of heavy .020 clear PETG fronts on pamphlet and music binders for the same price as board fronts. These products and their components are fine-tuned to meet many challenges.



A Division of Library Binding Service

LBS/Archival Products
1801 Thompson Ave.
P.O. Box 1413
Des Moines, Iowa 50306-1413
1-800-526-5640
515-262-3191
Fax 888-220-2397
custserv@archival.com

Archival Products enclosures are designed to minimize your valuable time and meet limited budgets.

Four styles of pamphlet and music binders are offered with an additional feature of installation of your supplied security strips into the binders for a nickel per strip. Our four flap and custom four flap enclosures are a great solution for many special collections. Newspaper and map folders work well for artist poster and print collections. Spiral Book Binders are a solution to troublesome spiral bound books. Hinged board covers can make a hard cover for many items especially materials over 1" thick. Our binder albums can be used for a multitude of materials with our sheet and photo protectors.

We recently were able to re-establish production of Linen Cortina Conservation Cloth and will add a new CoLibri Leonardo machine, handle bar for the CoLibri Pocket machine, new sizes of the Spiral Book Binder with wire and a 3-ring Eco Binder. The catalog will include many features that will enable you to easily make decisions about your materials.

We are continually developing new products to fulfill your preservation needs. If you have a problematic need, we would like to discuss it with you. We are ready to work with you to research and develop a solution.

Be sure to look for the new 2008-09 Archival Products Catalog of Innovative Solutions for Preservation and Conservation coming late summer.

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