



Article: FLOOD AFTERMATH: THE PRESERVATION OF WATER-DAMAGED PHOTOGRAHPS

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FLOOD AFTERMATH: THE PRESERVATION OF WATER-DAMAGED PHOTOGRAPHS

By Gary E. Albright, Northeast Document Conservation Center

In the early morning on August 1st, 1985, the Frederick Law Olmsted National Historic Site in Brookline, MA discovered that one of their storage areas had been inundated by a flash flood. The Northeast Document Conservation Center was called almost immediately for advise and assistance. Among other problems there were two large file drawers (40" x 16 1/2" x 10 1/2") containing mostly photographs. One of these drawers had been partially submerged. The on-site staff removed these images from the drawer and air dried them on screens. Eventually these were brought to the center for further treatment. The second file drawer had been completely submerged. This drawer was delivered to NEDCC later in the day. Between the two drawers there were 3400 items which required treatment; approximately 85% of these were photographs, the remainder were magazine clippings and prints. The photographs included a few salted paper prints and some collodion POP images, but the majority were albumen prints, gelatin POP prints, and gelatin DOP prints.

Once the flood-submerged file drawer was delivered, emergency treatment was begun. Because they were wet, the objects inside the drawer had swollen and the drawer had to be broken to remove the photographs. Inside this drawer were approximately 1800 damp or wet images. These included 360 magazine clippings and prints, 550 mounted photographs, and 900 unmounted photographs. By the end of the day approximately 1200 of these images had been treated by the NEDCC staff. The remaining 600 images were frozen for later treatment. These were unmounted gelatin photographs which had been taken by the Olmsted firm to document their work.

Emergency treatment after the arrival of the wet photographs consisted of the following:

- 1) The photograph files of Olmsted projects were frozen.
- 2) Images were examined to make sure they could undergo aqueous treatment. Certain photographs, such as handcolored Japanese images, were separated out and placed onto screens to dry.
- 3) The remainder of the photographs were separated into small groups. Each image was checked to make sure its identification would not be lost, and then the groups were washed in warm water. Most of the photographs were sticking together, and the water bath aided greatly in their separation. Also the bath minimized water stains and helped with removal of the grime. During washing 200-300 photographs were removed from their mounts. Most of these had begun to separate as a result of the flood even before washing.

4) After bathing and separation, the images were surface cleaned and placed on screen racks to dry.

Subsequent treatments for all photographic material (both file drawers) were performed as follows:

I. Photographs securely attached to their mounts:

- Surface cleaned if needed.
- Flattened in the heat press.
- Stained images which had not been previously washed were washed where possible to attempt to reduce staining.
- Any loose areas were readhered to the mounts with 4% methyl cellulose.

II. Photographs attached to their mounts, but which were badly wrinkled:

These images had been adhered to the mounts by a band of edge. When wet, the images expanded, but couldn't expand fully because of the restriction of the tape, therefore they wrinkled.

- Removed from their mounts by bathing in acetone. This also removed the dark brown adhesive.
- Washed in water.
- Backed onto a double layer of Rising Mirage paper. The adhesive used was methyl cellulose. Any information was copied before treatment and transferred to the back of the new mount. Any labels were readhered to the front of the new mount.

Another group of these images had also been adhered at the edge but the wrinkling hadn't occurred. These were treated by washing in acetone to remove the adhesive and mount and then flattened.

III. Photographs removed from mounts during emergency treatment or photographs which had major areas of separation from their mounts:

- These were washed in water. Any images still partially attached were removed from their mounts during this procedure.
- Backed the now unmounted photographs onto a double layer of Rising Mirage paper (methyl cellulose adhesive). As before, any information was transferred to the new mounts.

IV. Early salted paper prints:

- Washed in water to remove them entirely from their mounts, from which they were already mostly separated.
- Backed with wheat starch paste onto Japanese paper.
- Flattened.

- V. Frozen photographs and other unmounted photographs:
- The frozen photographs were removed from the freezer and separated into individual folders. These, along with other unmounted photographs, were bathed in warm water.
 - Once thawed, the frozen photographs were separated from each other. After washing, all of these photographs were dried on the screen racks along with the label from the folder.
 - Once dry, the photographs were flattened in a heat press and stored in acid-free file folders. Any tears were mended with Japanese paper and wheat starch paste.

Even with the quick response of the Olmsted staff to their flood, permanent damage occurred to many of the photographs within this collection. For example, albumen prints were stained and yellowed as a result of their subjection to moisture, even though these were wet for only half a day or less. Also, albumen prints with handcoloring lost much of their intensity as a result of color transfer to adjacent materials.

Several other factors caused damage to these photographs. These are important to know about as they are the type of problem which can be avoided. The first is the importance of proper mounting. When a photograph is mounted, it is essential to use good quality materials - both mount boards and adhesives. In a flood situation poor quality adhesives or papers will bleed and stain the mount and photographs. Also, photographs should be correctly attached to the mounts. One attachment method seemed to be particularly harmful, this was the adhering of the photographs to the mounts with a band of adhesive around the four edges. Since the middle is free and the edges tacked down, the photograph will badly cockle if subjected to moisture.

This flood also demonstrated the necessity of good storage materials. Any folders, envelopes, or other materials housed with photographs should be water-fast and of good quality. Moisture can quickly cause bleeding or staining to migrate from a poor quality paper to a nearby photograph. When considering storage, avoid the use of clips, staples, etc. and don't overcrowd. When paper gets wet, it expands and the presence of these materials combined with overcrowding can cause serious depressions or gouges in the photographs. Also, metals can rust or corrode, staining the images.

Finally, it should be stressed that in spite of all of these precautions damage will occur to photographs if they get wet. The only way to avoid damage is to avoid the flood. As has been stated many times before prevention is the best alternative.