



Conserve O Gram

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Storage Supports For Basket Collections

Historic baskets are particularly susceptible to physical damage. As baskets age, they become increasingly vulnerable to damage from mishandling, from lack of support, or from long-term pressure on weak or damaged areas or unusually-shaped bases. It is an essential part of preventive conservation to provide these fragile objects with the physical support and protection they require.

Many appropriate storage systems have been devised to contain and support baskets safely. This *Conserve O Gram* presents one well planned and tested approach employed as part of a basketry storage project at the University of California at Davis (referred to as Davis below). The system was developed by the project's conservator for a large Native American basket collection used primarily for research. The storage supports developed for the project are described in an article published in 1988 in the *Journal of the American Institute for Conservation*, Vol. 27, No. 2, pp. 87-99.

The containers described in this *Conserve O Gram* consist of custom boxes or trays and fabric ring supports constructed to contain and cushion baskets. A variety of other supports for specific storage problems are described in the original article.¹

Introduction

The main criteria established for the Davis project were:

1. To store baskets in their original position of use whenever possible because their inherent engineering is often the best guide for proper storage position;
2. To identify the strongest portions of the basket and to design supports that take advantage of those areas;

3. To allow visual access to important technical and decorative features of the basket;
4. To facilitate handling, access, and easy replacement of the basket on the shelves;
5. To use archivally sound materials.

As the Davis collection is used solely for research, individual boxes legibly numbered are required to minimize handling of the baskets.

Boxes

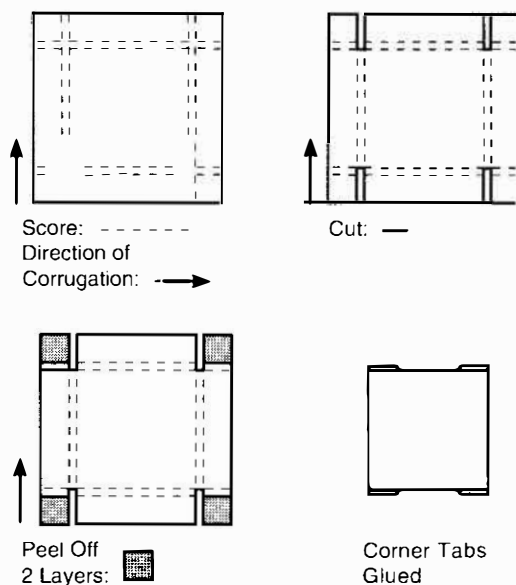
There does not seem to be a universal rule to help determine the ideal box size for a basket. If shelf space were not the primary consideration, box design should ensure ease and safety in handling.

In general, the base dimensions of boxes for small and average sized baskets should be slightly larger than the largest horizontal dimension of the basket. Box design should ensure a safe distance between baskets and facilitate monitoring for insects and debris. The height of the boxes may vary but should cover the depth of the ring support or padding and help prevent baskets from toppling.

For large, heavier baskets, a box that comfortably cradles the base and also encompasses the support, if one is needed, is less vulnerable to mishaps than a box that exceeds the largest horizontal dimension of the basket.

Box Construction

Three-ply, buffered, corrugated cardboard is used in the construction of all boxes regardless of size. It provides the necessary strength and rigidity even for large boxes.



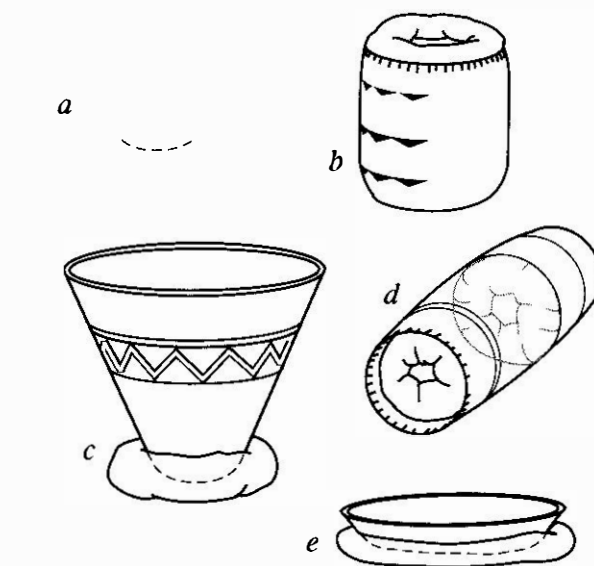
Boxes are made of one piece of corrugated cardboard which is scored to make it possible to fold the sides up. Extensions of the side edges are peeled down to the bottom layer of paper and these become tabs which are glued to the adjacent sides to form the corners. PVA emulsion CM Bond M-2 works well in gluing the corners, especially when clothespins are used to hold the joins together until they dry.²

Standard boxes are made with 1½"-high sides, while others are designed to enclose special support forms of many different shapes and heights. The larger customized boxes are more appropriately called support stands. Although the dimensions vary greatly, the materials and method of construction are the same for all.

The Ring-Shaped Support

This type of support is used on the greatest number of baskets in the Davis collection. The

ring consists of a cotton knit fabric tube that is tightly stuffed with polyester fiber fill. The ends of the tube are joined to form a ring which is individually fitted to each basket. It can be used in a variety of ways.



The ring-shaped support cradles baskets with rounded bases (*a*), such as food bowls, cooking baskets, winnowers, sieves, and many food-gathering containers that ordinarily rest on one spot causing the basket to distort and eventually break. The ring is designed to distribute the weight of the basket over as large an area as possible. It encircles the base of a round-bottomed basket, holding it upright just above the bottom of the box.

A tightly stuffed ring shape can also be used as an insert in deformed basket openings (*b*), to counteract the tendency to distort. This technique is successful only with baskets constructed of supple materials.

A ring-shaped support of large size can serve to increase the circumference of a *tippy* base (*c*), as when baskets have disproportionately small bases compared to their height and to the width of the opening.

Stuffed rings can be used as inserts in soft-walled bags (i.e., sallybags) that have a tendency to flatten and develop creases at both sides (d).

Rings formed from lightly stuffed tubes of a small cross-sectional diameter can encircle and support the weakened rims of basket trays (e).

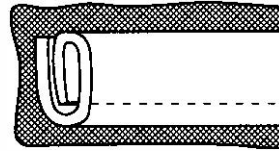
The examples above show that this type of support can be readily adapted to many needs. It is important to keep in mind that the diameter of the ring, the tightness of the stuffing, and the individual fit to each basket are all extremely important in achieving an appropriate support. A ring that is too small, causing the basket to sit on top of the ring, is not nearly so effective as a ring that is fitted to cradle the basket and keep its base slightly above the bottom of the box. A ring that is too large, and consequently does not lift the basket off its base, may allow it to list.

Construction of Ring-Shaped Supports

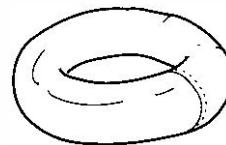
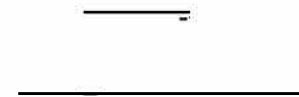
Simply sewing a tube and then stuffing it produces a lumpy tube of uneven consistency that does not provide uniform support. The guidelines that follow are for constructing a stuffed ring with a smooth and uniformly consistent surface. While the ring used in the example is of medium density, the same procedure can be used to create rings of different diameters and rigidity. These elements must be adjusted, of course, to support the many different basket sizes and shapes. All ring supports are constructed out of the same materials: 100% cotton knit fabric and 1" thick polyester fiber fill (batting). Cotton knit fabric is used rather than woven fabric to take advantage of its ability to stretch, resulting in fewer folds.

Example. Place a 7"-wide strip of cotton knit fabric (cut across the grain for maximum stretch) on a table surface. To be least wasteful, the length is determined by the width of the bolt of the cotton fabric. Center over this an 18"-wide piece of polyester batting the same length as the

cotton fabric. Fold the batting lengthwise into thirds (now 6" wide), and roll the layers into a tight roll which is held in place by pinning the



Cotton Knit Fabric: [stippled box]
Polyester Fiber Fill: [white box]



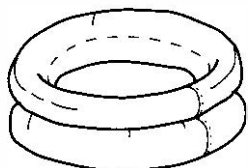
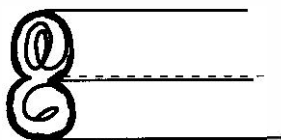
cotton knit fabric around the batting. The raw edges of the cotton are brought together and pinned, tightening the roll after each pin is inserted to get it in shape for the next pinning. This is the most critical step in adjusting the resulting rigidity of the ring. The pinned edge is

then sewn on a sewing machine using long stitches and a zipper foot and leaving a half-inch or more seam allowance.

To fit the ring support, place it around the basket and pull the ends together until the basket base floats just above the table surface. Cut the stuffed tube 1" larger than needed, then peel the cotton knit fabric back at one end and cut off the extra 1" of stuffing. This results in an overlapping portion of cotton knit that facilitates a smooth join of the two ends. It is important to sew the two ends of the stuffing together very securely, before sewing the cotton knit cover with an overlapping seam. If this is not done, the stuffing pulls apart, causing a gap inside the covering.

Tubes of various diameters are achieved by increasing or decreasing the width of cotton knit fabric covering. The density of the stuffing is controlled by the width or amount of the polyester batting.

Sometimes a ring which is tall and narrow in cross-section (rather than simply round) is required. This is really much easier to construct. The batting is folded as above, but not rolled. The cotton covering is folded around the batting and the raw edges are not seamed together, but rather over-lapped in the center of the band. This is held in place with pins and machine sewn through all layers, resulting in a figure-eight cross section.



Materials³

- 3-ply acid-free, buffered corrugated cardboard, single wall (approximately 1/8" thick)
- PVA emulsion CM Bond M-2
- 100% cotton knit fabric
- Polyester fiber fill in 1" thick sheets
- Sewing machine, needles, undyed thread, artist brush

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NPS Notes

1. The Davis project was carried out by the conservator with the assistance of trained students and volunteers. If special questions arise regarding these recommended techniques or their application, consult a conservator before proceeding.
2. To construct the box, deeply score the cardboard by cutting either two parallel lines 1/8" apart and peeling off the top layer of cardboard between, or one deep line with a tool such as a 1/8" wide screwdriver to permit accurate folding.
3. Purchasing materials

Cardboard and PVA emulsion CM Bond M-2 are available from archival and conservation suppliers.

Polyester fiber fill and cotton knit fabric are available from local fabric stores. Always request cotton knit fabric that does not contain optical brightener additives.

The Davis project was performed under a grant from the National Science Foundation. For a description of the overall Davis project, see Suzanne Griset, "Preventative Conservation Measures for an Ethnographic Collection," *International Journal of Museum Management and Curatorship*, Vol. 5 (1986): 371-382.

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