Technical Study and Conservation of an Apache Coiled Basket

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Introduction

This Apache coiled basket from the collection of Agua Caliente Cultural Museum (ACCM) in Palm Springs, California, was conserved as part of the course, "Ethnography and Conservation," taught by Prof. Ellen Pearlstein. Conducted in collaboration with native weavers, tribal community and museum staff from ACCM, the scope of work included:

- Literature research on the materials and construction methods of Apache basket weaving;
- Analysis of the basket's construction method and plant fiber identification;
- Condition documentation and conservation treatment to stabilize broken stitches or foundation materials.

Analysis of Coiling Technique

The basket was constructed entirely from plant materials, with a singular occurrence of a blue glass bead visible only on the exterior of the basket. The designs of human figures arranged in a two-tiered circular fashion along the wall of the basket were formed by using stitches of contrasting colors. Close coiling

The basket is made in the close-coiled technique with non-interlocking sewing stitches. The construction of the basket began with an overhand knot at the center of the flat circular disc that functions as the basket’s bottom. The center knot was made with the dark brown material, with the sewing stitches wrapped around it as the coil spirals outward; as the center expanded to the fourth row, a straw-colored plant stitch was inserted to continue the coil until the flat base was complete. The basket’s wall was made from a continuous coil. On the rim where the stitches are missing or the coil completely broken, the foundation exposed is a pale, woody splint material. On a damaged coil located at the rim reveals an intact cross-section of the foundation protected by the remaining sewing stitches wrapped around it, which shows two distinct rows.

Direction of Work & Work Surface

When viewed from both the interior and exterior, the stitches of the flat disc and the basket’s wall slant at a slight angle towards the right. A right-leaning slant indicates that the work direction moves from right to left, supported by the overlapping of light-colored stitch over the dark-colored center (red arrow). The work surface is the interior of the basket’s flat base and wall because stitches on the exterior appear more orderly than those on the interior, since the weaver’s left may create more split stitches on the non-work surface as it accidentally pierced through the preceding stitch (adovante 1977:24, 82).

Plant Fiber Identification

Adventitious plant fibers fallen from the basket were sampled for fiber identification. The gross morphology of each sample was observed using binocular microscope to establish its correspondence to extant plant materials on the basket. Transverse and longitudinal sections of the samples are mounted in dehydrated water for observation using polarized microscope (PLM) under transmitted light. Results of PLM observation show that there are three different types of plant fibers used in the construction of the Apache coiled basket.

The dark brown plant material used to create designs on the basket is devil’s claw (genus Proboscidea); cross-sections of the dark brown plant material from the basket have micro-structures similar to samples prepared from the devil’s claw in our reference collection. However, owing to the lack of published reference images, observed micro-structures cannot be clearly identified according to cell type. The material was very tough to slice, so the thickness of samples compromised the resolution of observable features in the cellular structure.

Consultation and Conservation Treatment

Conservation treatment methods and materials were determined after consulting native weavers and tribal community members, who expressed their preference for using organic materials for stabilizing loose foundation and broken stitches. Loose foundation materials were coated down with cotton threads, and broken stitches were reinforced by loops made of toned Japanese paper with wheat starch paste. This Apache basket was included in an exhibition of Native American objects from Agua Caliente Cultural Museum conserved by students from the UCLA / Getty Conservation Program during winter 2007 and 2009. Staged at UCLA’s Young Research Library, the exhibition aimed to introduce to the wider UCLA community the approaches of ethnographic conservation in which cultural, technical and analytical expertise is equally valued.

Images (from left to right): The foundation material exposed through the base of stitches at the niche, 1-mm cross section of the foundation material sampled from the basket, showing the distinctive growth rings (left); Close-up of a cross-section of the sample, showing the alternating pattern of concentric rings (middle); Close-up of a cross-section of the sample, showing transverse fiber rays (right).