TELAS DE LOS MUERTOS: RESIST-DYEING

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There are three resist-dyeing processes which are found the world over but are commonly known by their Indonesian names. One is Ikat, a process in which the warp (or less typically the weft) is bound and dyed before weaving. Another is Batik wherein a substance, such as wax, is applied to a woven cloth which is then dyed; the substance prevents dye from penetrating the cloth. Yet another process is plangi. Here, a portion of a cloth is drawn together, bound and dyed. In all these processes, some action has been taken to prevent dye from penetrating a given area of cloth or yarn. When this action is reversed (bindings or other resists removed) a pattern appears. As Jack Lenor Larsen says in the foreword to his book, The Dyer’s Art, “The marriage of thirsty cloth and liquid color produces ornament not on cloth but in it.”

In ancient Peru, ikat and batik are not commonly found. Fabrics which resemble batik may actually be painted cloths. Ikat fabrics were being done late in Pre-Columbian Peru and not very extensively (although they are not uncommon in the Andean areas today).

There are Peruvian plangi which were excavated from Paracas sites (buried early in the Christian era) and the technique is found in every later period. However the majority are from the Late Intermediate Period, just prior to the Spanish Conquest. Particularly noted for these textiles are the sites at Chancay. The Science Museum’s collection is likely from this area.

The Science Museum has twelve examples of cloths done in the plangi technique. Of these, ten are very similar. They average 40” square. They consist of two-four selvage pieces joined together. (To a casual observer, the join would go unnoticed, obscured as it is by the design.) They are in excellent condition. Some have no holes; others have only minor defects.

When these textiles came to the Museum they were half wadded, half folded and looked so delicate and fragile we were unsure how they would take our attempts to unfold them. We felt it important to store them rolled up, so flattening was essential. One part of the cloth stuck to another quite alot (see “Materials,” below), but we did succeed. We were shocked to find out what excellent condition the cloths were in. Even more impressive, one cloth we unwrapped turned out to be five nearly perfect textiles! Such is their gossamer thinness; one 40’ square textile would, if wadded up tightly, fit into a teacup.

There are two other tie-dyed cloths in the collection. One is like those just described above except it is a much thicker cloth (see Photo 1). It is a fragment of a larger cloth. This cloth and the ten described above are natural white and various shades of brown. The twelfth cloth in the collection is a small fragment (5½” x 10½”) and is deep blue with white patterning (see Photo 2).

Structure of the Fabrics

The ten similar plangi fabrics are executed in a balanced plain weave, averaging about 20 threads per inch, warp and weft. The other two textiles are firmer plain weave. In the Peruvian textile literature, one can find examples of tie-dye done in other fabric structures such as gauze.

Scaffold weaving: There are also outstanding textiles described and illustrated in the literature which are woven in what is known as “scaffold weaving.” There are not any examples in the Museum’s collection, but it is such an interesting technique that it bears mention in this series.
Apparently it was done as follows. A temporary, very widely spaced scaffold warp is set up. Weft is wrapped on it “figure 8” fashion. This discontinuous weft interlocks with neighboring wefts at design boundaries in as tapestry (see Fig. 1). When the whole design has been laid out in this manner, the loom is then taken apart and reassembled in such a way that the former weft becomes the warp. Now weft is needle-woven into the new warp. Most commonly the new discontinuous weft would interlock with neighboring wefts (see Fig. 2). In the case of cloths that were to be tie-dyed, the weft was woven with slits between adjacent areas (see Fig. 3). After weaving was completed, the scaffold warp was removed, leaving a complete cloth, with bold color areas that looked as if they were darned together (see Fig. 2). In the case of the cloth with slits, a collection of small separate cloths were created when the cloths were removed. These cloths were then tie and dyed and carefully reassembled (Fig. 4). These are some of the most aesthetically pleasing pieces to survive Pre-Columbian times. (See back cover).

Materials

All of the Science Museum’s plangi textiles are executed in cotton, probably the native *gossypium barbaeaeae*. The Latin name refers to the hairy nature of the cotton and likely accounts for the cloth’s tendency to cling to itself when two layers come in contact. In all the museum samples, the cotton is spun in the “S” direction and has a hard twist. It is used single ply. There are examples in the literature of all wool plangi fabrics, notably those involving tie-dyed scaffold weaving.

![Fig. 1](image1)

![Fig. 2](image2)

![Fig. 3](image3)

Process

Most likely the development of resist-dyeing occurred as a result of accidents in the course of routine yarn or fabric dyeing—mistaken bindings or resists applied to yarn or cloth. In addition the ancients had likely seen the results of something such as sun-fading on fabric[^2], and perhaps the potters use of negative designs.

In its more refined form the Peruvians probably executed tie-dye in the following way. First, two four selvage pieces were joined together (Fig. 5). Then the new large piece was folded in half on the diagonal. Tieing of the pattern was subsequently done through a double thickness of fabric (Fig. 6).

![Fig. 5](image4)

![Fig. 6](image5)

Design

One does not look to the typical tie-dye cloth for innovative design or color. Favorite ancient Peruvian designs—stepped fret patterns particularly—appear and reappear. Colors are typically shades of brown. The patterns are uniformed composed of squarish shapes approximately ½” across. These shapes are lined up in rows diagonally across the fabric.

Eleven of the Museum’s pieces are done in shades of brown on natural white cotton ground cloth. The other example is deep indigo blue ground with the same white shapes.

At certain angles, the design can hardly be seen, so sheer is the cloth. Viewing the piece at an angle the design appears.


Fig. 4: Drawing based on Fig. 24 in Warp-Patterned Weaves of the Andes by Ann Pollard Rowe, The Textile Museum, Washington, D.C., 1977. (p.16).

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DATES TO REMEMBER
Wednesday, November 2, 9:00 a.m. and 7:00 p.m., Working Bee for MIA Christmas Tree, Embellishments

Thursday, November 3, 1:00 p.m., November Meeting. Grete Heikes, slide lecture, "Primitive Studies."
9:00–12:00 and 5:00–9:00, "Inspiration from Nature" Workshop with Renie Adams.

Friday, November 4, 9:00–5:00, "Inspiration from Nature"

Saturday, November 12, 9:00–12:00, By-Member-For-Member Workshop, "Understanding Overshot."

Wednesday, November 16, 11:00 a.m.–8:00 p.m., Fiber Fair Check-In.

Thursday, November 17, 7:00–9:00 p.m., Pre-Sale at Fiber Fair for Guild members.

Friday, November 18, 11:00 a.m.–9:00 p.m., Fiber Fair Sale

Saturday, November 19, 10:00 a.m.–5:00 p.m., Fiber Fair 5:00–6:30 p.m., Fiber Fair Check-out
6:30–8:00 p.m., Fiber Fair Clean-up.

Week of November 20: Large items for Christmas Tree due. Items for Student Exhibit due.

Sunday, December 4, 1:00–4:00, Annual Guild Open House.

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