

# Straw Sandals Catalog Entry Guide

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The purpose of this guide is to add consistency to the use of the entry form. In order to estimate relationships among sandals it is essential that consistent terminology is used for all specimens. Ideally, all descriptions of the same sandal would be identical, whatever the background and experience of the describer. We ask that you use the terminology described in this guide, even if it conflicts with your own experience and traditions.

The 38 characters of this form are not a unique set of descriptors of woven footwear. They were chosen to allow a reasonably detailed description of very different kinds of woven footwear from many different countries. Much larger and more detailed character sets are certainly possible. This set was also chosen to allow for a broad participation without the need for a textile laboratory. Only a hand magnifier and ruler are needed, although we have found that a good quality point and shoot camera with macro mode is helpful for close-up views of finer weaving patterns. We hope that this will make the entry form accessible to serious amateurs such as collectors, and to professionals such as museum staff and faculty as well as their students.

## Country of Origin

The country of origin is the country in which the footwear is assembled. Contemporary footwear is often assembled from parts made elsewhere whereas ancient shoes were usually found where they were made. If in doubt, choose “unknown origin”.

## Answer items 22 and 34 first

We suggest answering items #22 and #34 first. These items deal with the sole and upper (vamp) construction techniques. Answering those questions first speeds up filling in the form and helps to avoid incorrect initial responses about the sole or vamp which may not agree with a later selection of construction technique.

## Sole Loops and Tie Systems

### Attachment of sole to vamp

Loops and ties are not part of the upper, which includes the vamp and the quarter.

### Sole Loops

Sole loops arise from the sole and are used to hold ties to the sole. To determine the positioning of the loops divide the sole length into thirds. The front third is the toe area, the middle third is the area between the base of the little toe and the base of the ankle, and the back third is the heel. Groups of individual loops should be considered a set and should be counted as one loop.

Fig. 1 below has one back heel loop, two symmetrical heel-side loops, two symmetrical toe side-loops, and two asymmetrical toe loops.

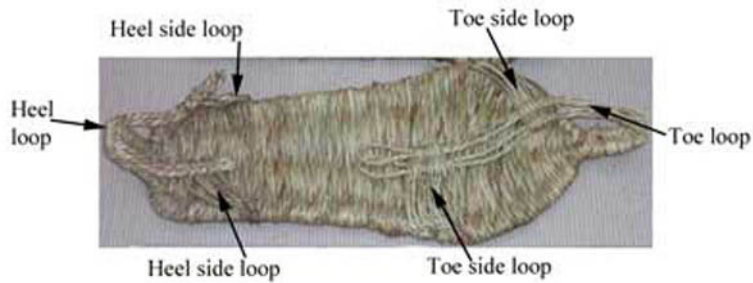


Figure 1

### Tie Systems

**The side-loop system** uses loops along the side edges of the sole. A lacing cord or tie cord that crosses over the top of the foot and passes through the side loops holds the sandal onto the foot. This system has no front toe loop or back heel loop.

**The toe-heel system** has several parts. A separate tie cord connects the toe loop(s) to an ankle or heel loop(s). Some toe-heel systems have both ankle and heel loops. This system doesn't use side loops.

**The crisscross system** is composed of a toe loop and a tie cord all in one piece that is attached to the sole at the toe. To tie the sandal onto the foot, the cords are crisscrossed, passing through side loops, and tied at the ankle. The presence of side toe loops, mid-sole loops, and heel loops, along with the crossed cords makes this a crisscross system.



Figure 2. This example has both Side-loop and Toe-heel loops and is therefore an example of a **crisscross** system



## Warp, Weft and Bundles

**Warps, wefts and bundles** are considered the basic elements from which sandals are woven. Warps are the passive elements that are fixed in place during weaving, while wefts are the active elements that are woven around warps.

**Bundles** are second passive elements that are often used in coiling as a flexible foundation element.

### Yarn ply

The term “ply” describes a unit of yarn. For woven footwear, a single-ply warp or weft is defined as one construction element.

### Yarn twist

**Twist** refers to the twisting of the functional warps, which can be one or more **ply**. A source of confusion can arise when describing the twisting of two warps or wefts that are twined. Twining is a construction technique.

## 3-ply



**Z-twist**

**S-twist**

Figure 3. Ply and twist

## Edge Finishing

**None:** Either the warps or the wefts are truncated without any finishing technique such as folding or knotting. See figure 4 below for an example of an unfinished vamp selvage.

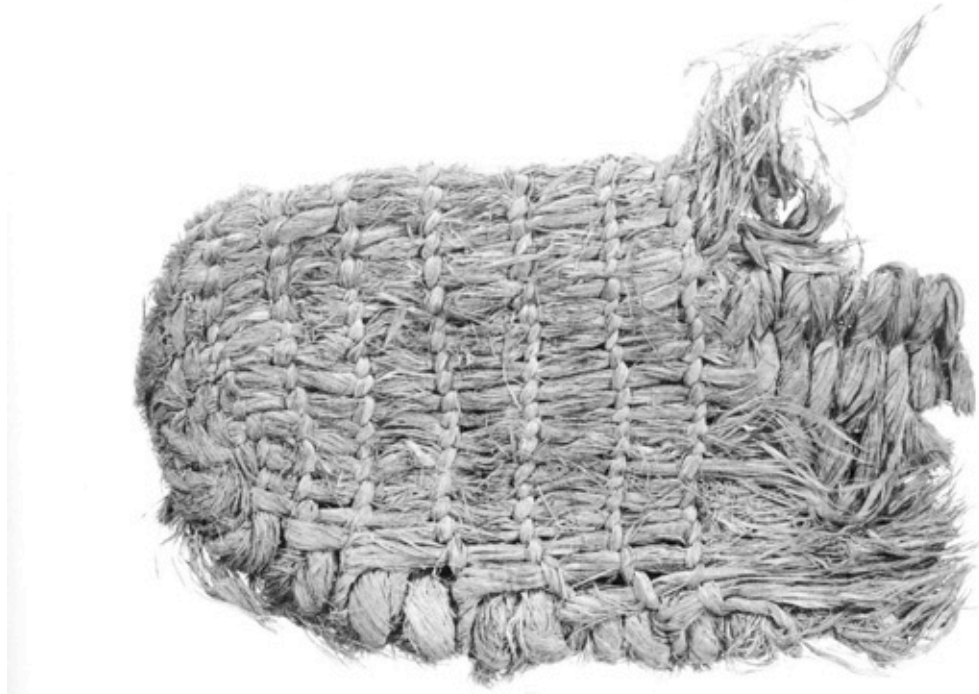


Figure 4. No finishing. From Andrews et al (1986)

**Simple:** For a side edge the wefts are folded over and woven back into the sole to create a finished selvage. See figure 5 below for an example of a finished side edge. In a front and back edge the warps are folded over and woven back into the sole in the same manner.

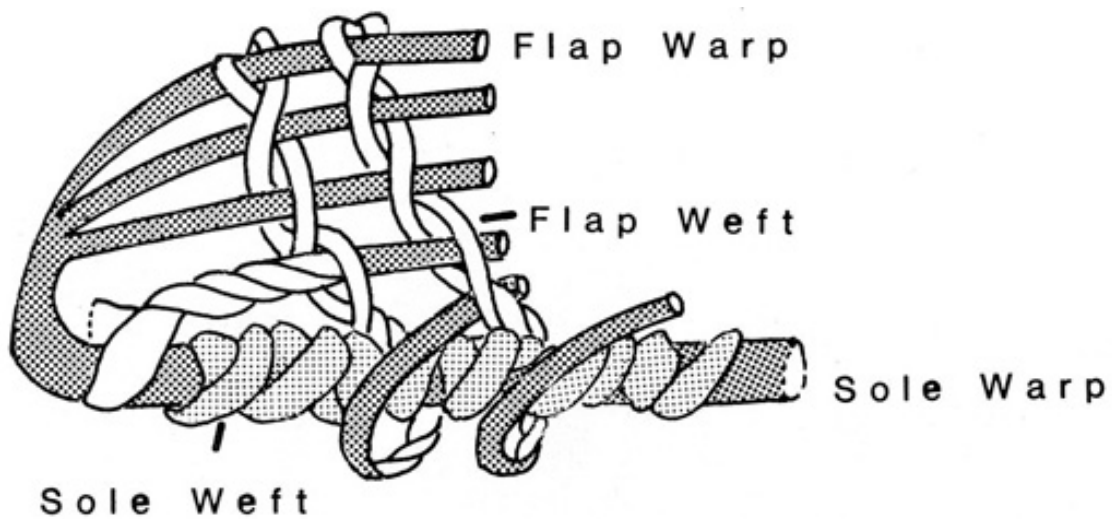


Figure 5. Simple finishing. From Andrews et al (1986)

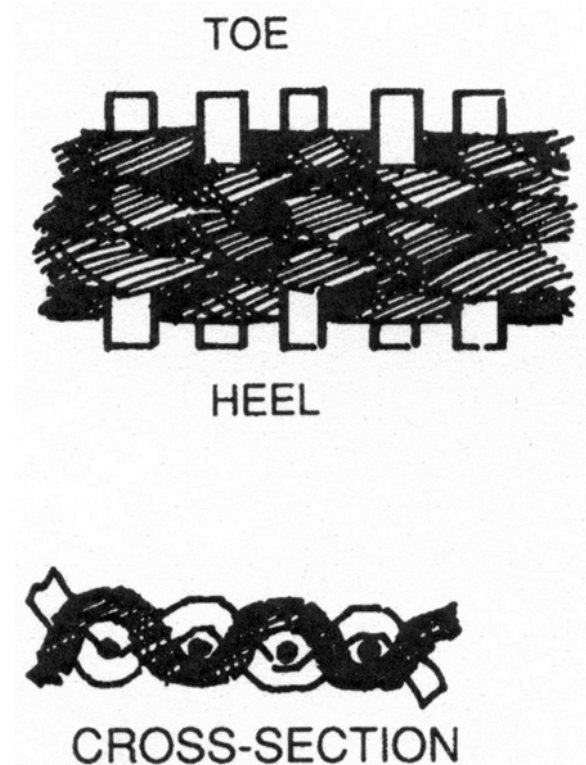
**Complex:** An added element such as cloth is woven over the warps or wefts to create a decorative or reinforced edge. See an example in the warazori sandal illustrated below.



Figure 6

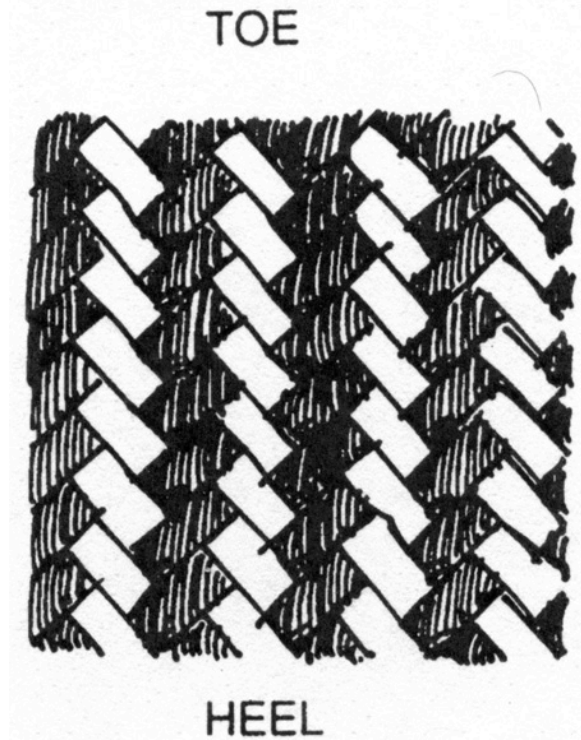
### Construction techniques

**Plain weave** is created by an over-one, under-one interlacing of two sets of elements at 90 degrees to each other. When one warp interlaces with one weft, it is called a 1 x 1 plain weave. If the warps are completely hidden by the wefts, it is called weft-faced. The reverse is also true. (See Figure 7 below) A balanced weave is one in which warps and wefts are equally spaced. (An example of plain weave is item NCn6.)



| Figure 7 Plain weave. From Deegan (1993).

**Plain braiding:** All the elements are the same, and like Deegan, we refer to them as warps. They are interlaced obliquely, meaning that they move diagonally from one edge of the sandal to the other. Plain or simple braiding is where the elements pass over each other in single intervals. In twill braiding the elements in one set pass over two or more in the other set at staggered intervals. Synonyms for twill braiding are chevron or herringbone weave.



| Figure 8 Plain Braiding. From Deegan (1993).

**Plain compact 2-strand Z-twist (or S-twist) weft-twining:** Compact means tightly packed. Twining uses pairs of wefts that are twisted around the warps. The twist can be either S-twist or Z-twist (see illustration on site). In plain twining a warp is engaged at each weft crossing.

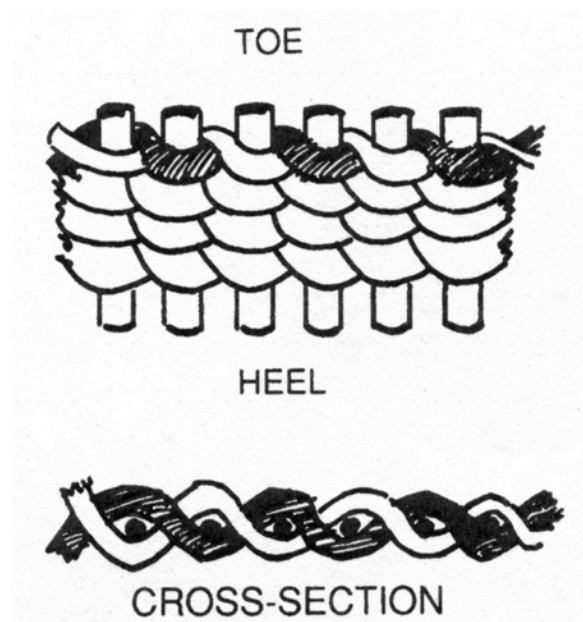


Figure 9 Plain compact. From Deegan (1993).

**Plain spaced 2-strand Z-twist (or S-twist) weft-twining** means that the weave is loose, with spaces between the wefts. (Twining and weaving are two different techniques and shouldn't be combined in the same description.)

**Complex twining** is any other style of twining that isn't plain twining.

**Coiling** is constructed by sewing a stationary or passive element called the foundation with active elements called stitches. The soles of espadrilles are a good example of coiling.



Figure 10 Coiling



### Simple looping left over right or right over left:

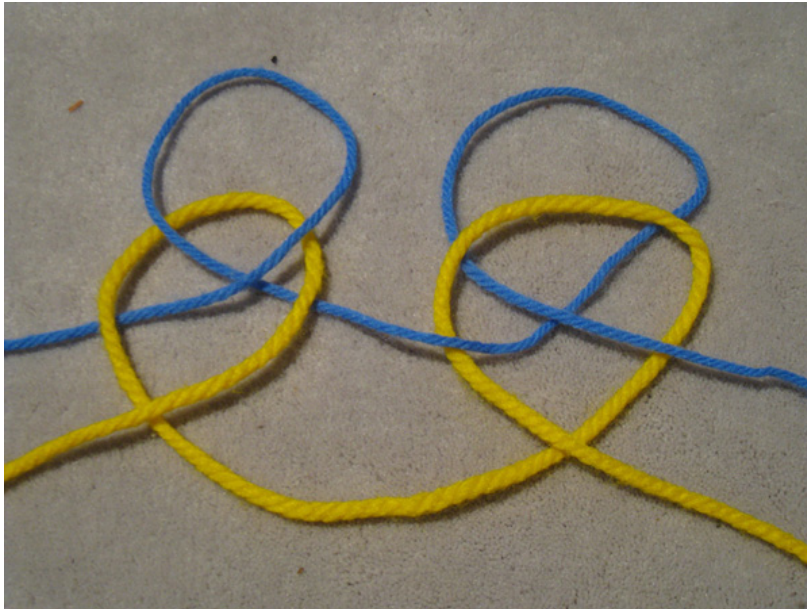


Figure 11 Simple looping

Loops are linked not only with those in the previous and succeeding rows, but also laterally with loops in the same row. In the illustration above, the yellow yarn would be linked laterally.

**Weft wrapped** is when an element is wrapped around the weft to cover it.

### Materials

Among the most important characteristics of a sandal is the set of materials used to make the sandal. However, materials are one of the most difficult characters to describe as a set of mutually exclusive character states. We separate description of the sole from the vamp materials because the sole and the vamp are often constructed of different materials.

Both the sole and the vamp may be woven, i.e. have distinguishable warp and weft elements, or they may be solid. Matters are further complicated because some sandals completely lack a vamp.

The biological source of the material may be very difficult to determine by simple observation with a hand lens. For instance, distinguishing among cotton, linen and jute fibers that make up a cord may require the use of interference microscopy and other advanced laboratory equipment.

For both the sole and the vamp there are three characters that must be considered: (1) The warp material, (2) The weft material, and (3) the solid material. If the material is woven then the warp and weft characters will apply, but the solid character will not. In that case choose "Does not apply" for the solid material. Conversely, if the material is solid

choose "Does not apply" for both the warp and the weft characters. It is not unusual for the warp and the weft to be made of different materials.

If none of the choices are applicable choose "Other"

### **The Sole**

The available character states for warp and weft are:

- Spun fibers. Cotton, silk, jute, wool, yucca that is broken down to fibers and spun into a cord, etc.
- Straw and grass of any origin
- Leaves, stems, twigs, bark, reeds, etc
- Leather cut into strips

In many cases the sole is not woven but is made of solid material including

- Leather, usually as a single shaped sheet. Moccasins, loafers, mukluks, etc often use a solid leather sole.
- Wood or pressed bamboo
- Felt. Although made of fibers felt is not woven but is made by matting, condensing and pressing fibers together.
- Synthetics include plastics, rubber and other modern materials that may be formed or molded to create the sole.

### **The Vamp**

Although most footwear includes a vamp, not all do so. The Waraji sandal, Fig. 12 below, relies entirely on a tie system to keep the sandal on the foot. It has no vamp because the tie is separable from the sandal. For this sandal "Does not apply" must be chosen for all three vamp characters.



Figure 12

In contrast another Waraji sandal, Fig. 13 below, does use a vamp - although that may not be obvious initially. The vamp is made of twisted cloth elements that are extensions of sole wefts. Fig. 13 is item JpK1 in the catalog and its complete description can be seen on its catalog page, accessible from the Catalog Display table.



Figure 13

The sole wefts in Fig. 2 are straw, the (hidden) sole warps are synthetic. Twisted cloth is incorporated into the sole as weft elements, but because they are a minor component of the sole "straw" is the sole weft material. The vamp weft material is cloth strips and the vamp warp character is "Does not apply".

The choices of materials for the vamp are the same as for the sole except that "cloth strips" is added.

### **Overall sole shape**

If the loops are placed asymmetrically, the sole is also asymmetrical.

### **References**

- Andrews RL, Adovasio JM, Carlisle RC. 1986. Perishable industries from Dirty Shame Rockshelter, Malheur County, Oregon. University of Oregon Anthropological Papers 34
- Deegan, Ann Cordy. 1993. Anasazi Fibrous Sandal Terminology. *Kiva* 59(1): 49-64.