# The Painted Mummy Bundles of Ocucaje (Peru) 

Cabezas falsas para bultos de momia fueron comunes en el Perúdesde los tiempos de Tiahuanaco hasta la Conquista. Las máscaras son hechas de tela, madera, metal y plumas, y representan una cabeza o una cara, en lugar de la del muerto, que naturalmente está cubierta con las envolturas del bulto. Los ejemplos de cabezas falsas conocidos de ser los más tempranos son los del Período Medio de Paracas, desde este sitio de Ocucaje. Estas máscaras, tan únicas, son de tela de algodón con tejido simple y con diseño pintado de caras y de seres mitológicos. Solamente el sitio de Ocucaje parece producir tales máscaras, ninguna está relatada de otro sitio del Período de Paracas.

In Peru the dead were commonly flexed and wrapped in yards of material for burial. The resulting" mummy bundles", as they are often called, were usually about three to four feet high and drum to cylinder-shaped. Perhaps in an attempt to make them resemble their contents, they were often equipped with false heads. False heads for mummy bundles are common in the Tiahuanaco and post-Tiahuanaco periods of the Central and South Coast. These Iater masks are made of wood, metal, and feathers, as well as cloth, and represent a head or face - a substitute for (though obviously not a portrait of) that of the deceased, which is, of course, covered by the wrappings of the bundle. Central Coast masks made of cloth are usually shaped like a pillow case, meant to be stuffed with unspun cotton or other material.

Ocucaje mummy bundle masks are quite different from any others in Peru. They consist of a rectangular or trapezoidal piece of plain-weave cotton cloth with three finished selvages. The warps are left unwoven for a distance at least equaling and usually exceeding the length of the woven portion and terminate withone or more loomstrings or heading cords. The unwoven warps turned to the back, together with a layer of unspun cotton, formed a padding for the mask, which was sewn to the mummy bundle. The design occasionally consisted of a face, but moreoften was one of a series of full-figure representations of what appear to be deities or mythological beings (King 1974). The colors used are browns, gray, and pinks to reds. All appear to be earth pigments. Dawson (1979) reports shellfish dye (purple) and green and blue in Ocucaje masks, but none that I have examined has any of these colors.

Dawson (1979) notes that not all Ocucaje burials have masks and suggests that they may occur only on male burials. In 1957 I witnessed the excavation of a mummy bundle at Ocucaje that had no mask. Unfortunately, the sex of the body was not noted, though I suspect it was indeed female.

A collection made on the Hacienda Ocucaje in the Ica Valley (Figs. 1, 2) by Pablo Soldi in the 1950's which now resides in the Textile Museum, Washington, DC, and the American Museum of Natural History, New York, NY, contains 59 of these masks.

Interestingly, all masks with known provenience appear to be from Ocucaje. Of the ten published examples (Bird and Bellinger 1954: Pls. 79, 80; Lothrop, Foshag, and Mahler 1959:Pl. 140 left; von Gagern 1961; and Kroeber 1944 : Pl. 12) only two have provenience, and they are from Ocucaje. Hundreds of these masks have been found in recent years, but to date none is known to come from another site. None has been reported from the Necropolis or Cavernas, or from such other Paracas Period sites as Cerrillos, Jahuay, or Yauca. Rumors persist that masks have been found at sites, perhaps Callango, but neither I nor any of my informants have any confirmation of this.

There are five masks in the collection of the "Niedersächsisches Landesmuseum", Hannover, Germany, collected between 1871 and 1903. Though there is no data on their provenience, their collector is known to have dug at Ocucaje (von Gagern 1961). Von Gagern (1961) has speculated that the stylistic differences in the five Hannover masks indicate that they came from different sites, and he allocates only one to Ocucaje. This, however, is not consistent with the evidence. Among the 59 specimens in the Soldi collection with known Ocucaje provenience are examples of every style illustrated by von Gagern and others besides. It is possible, even probable, that some temporal differences exist, but they are probably not great.

In addition to the Soldi collection masks from Ocucaje, I have studied an additional 26 masks with no provenience (although most of these were almost certainly also originally collected by Soldi). The numbers used in this article
are the numbers originally assigned to the Soldi collection before it was divided between the Textile Museum and the American Museum of Natural History. A correlation of these numbers with the final catalogue numbers appears in Table 2.

The masks are considerable interest from both a design standpoint and a technical one. The plain-weave often ( $24 \%$ of those studied) has paired or multiple wefts (see Table 1), and tends to be warp-faced. The woven portion is painted, freehand, with a face or full figure in earth colors. Although the colors. Although the colors have not been analyzed, at least some of them appear to be pigments rather than dyes. Shades of red and brown predominate. In the collection there are five complete specimens (Nos. 20, 63, 107/108, 148, and 410) in which, as a rule, the warps are divided into two groups and bunched at each side of or wrapped around a doughnut-shaped "pillow" of unspun cotton. The "pillow" is held in the doughnut form by spaced wrappings of cotton cord. Sometimes two cotton and thread-wrapped sections of cane are attached to the back of the pillow, A narrow turban band is sometimes also wrapped around the pillow; Number 20 has two such bands, one of looping (King 1968:377) and one made from an embroidered border (Fig. 3). Masks often have a layer of unspun cotton backing them (Fig. 3b).

Two of the five complete specimens (Nos. 107/108 and 148) are complete to the extent of having feather ornaments. The first of these ( $107 / 108$ ) has two masks, one hungover theother, a feather headdress in the form of a fox mask (No. 109), and a close-knotted turban band (No.110). The cotton pillow, with the turban band and the unwoven warps of the masks wrapped around it, was apparently perched on the apex of the mummy bundle, so that the masks hung down the front. The feather headdress was wrapped around the construction just above the masks. The second of these complete constructions (Nos.144148) was similar, except that two cotton pillows, one slightly larger than the other, were piled pyramid style on the apex of the mummy bundle. A complementary warp-patterned turban band (No. 145) was wrapped around the lower pillow; a tapestry turban band ( $N o .144$ ) was wrapped to and one-half times around the pillow and up over the top of the stacked pillows. The mask hung down the front, and a feather fox-mask headdress (No. 147) was fastened above the mask.

Usually, however, the mask constructions were not so elaborate. The mask portion fell over the pillow and covered it, and the whole construction was stitched to the mummy-bundle wrapping. The lacing cords used to fasten the masks to the wrappings are often virtually intact (Fig. 4a-c). None has been photographed in place. Wallace (personal communication) noted that he observed a mask" whipped loosely" to the mummy bundle. One of the Hannover specimens is preserved virtually intact, with the mummy wrappings still attached (von Gagern 1961: Fig. 1). In this instance, the two groups of unwoven warps hang down on either side of the mask like hair.

Masks aresometimes found in museum collections with the unwoven warps cut to form a fringe several centimeters long. This was probably done by dealers who saw no reason to preserve the unwoven portion.

The painted designs on the masks can be divided roughly into two main groups: those which depict only faces (Fig. 4 g , i), and those which have full figures painted on them (Fig. 4a-f). One might also distinguish a third group of extremely aberrant forms - including some which are barely recognizable and look as though they had been painted by small children (Fig. 2h) - but on the whole even these fall into one of the two main divisions. The face-type masks seem, in general, to be earlier in style, often having very Chavinoid elements. They usually have a broad red band painted around the margin of the mask. Interestingly, these masks often have multiple wefts; 15 of the 20 masks with multiple wefts are of the face type, while only eight face-type masks have single wefts. The full-figure masks usually depict some of the same mythological or deity figures found in the embroidered borders of Ocucaje textiles (Fig. 5), which at least appear to fall into 11 types with variations (King 1972). Only five of these beings appear in the full-figure masks.

Dawson (1979) regards the masks as portraying a single individual, the "Oculate Being" (Menzel et al. 1964:171f., 196 ff., 239-244). My own research (King n.d.; 1974) suggests otherwise. Dawson (1979) does, however, admit to "baffling diversity" in the depiction of the figures. He suggests that "each individual artist followed his own fancy," though for the most part Ocucaje art is rigidly controlled by tradition. He has also suggested that "they were prepardehastily and not by specialists." Haste must surely have played a part in their construction since they were exclusively funerary, but only a few appear to me to have been incompetently rendered (eg. Fig. 2h).

One of the masks (No. 401) has a full figure on one side, and what seems to be just a face painted on theother. On closer examination, however, it appears that the artist began the figure on one side of the mask too far down in the space so that he only had room for the head. He apparently turned the mask over and then began again on the other side. At any rate, the face and the full figure are of the same type.

Although great variation exists in the utilization of the elements which make up the motifs and in the rendering of the designs, the masks are remarkably standardized.

In my original study (King n.d.) I considered the masks to fall into two time periods: the face mask into Sawyer's (1961) Early Paracas Phase II and the full figures into Middle Paracas Phase III. On reconsideration, this seems to be too great a split and I will yield to Dawson's (1979) assessment that they belong in the Menzel, Rowe, and Dawson (1964) Ocucaje Phases 9 and 10, which date to 200 B.C. and 100 B.C. respectively.

Their closest parallels in Peruvian culture are the so-called "funerary tablets" or"ceremonial shields" from the Late Periods at Ancón and other Central Coast sites. These are small plain-weave rectangles, varying considerably insize, which are mounted on reed frameworks and which were apparently stuck in the ground around mummy bundles. Painted on them in reds and grays are standing human figures and other designs. These Ancón-painted cloths do not serve as mummy-bundle masks, and in fact good examples of both wood and cloth masks occur in the same time level. These tablets seem to be primarily associated with Chancay black-on-white pottery and hence would date from ca. A.D. 1400. Although they could not be mistaken from Ocucaje masks by anyone really familiar with either group, their superficial resemblance is remarkable. Obviously, with some 1700 years' separation in time, the Ancón tablets cannot be derived from the Ocucaje masks. There is, however, one possible explanation. The Ancón area does have definite Chavinoid levels. It is barely conceivable that this type of painted textile was a Chavín trait and that the Ancón examples are a survival of the prototype. This leaves us only with the considerable problem of why no Chavinoid or intermediate forms occur in the Ancón area. The possibility cannot be discounted, however, until more work is done in Chavinoid and intermediate period coastal sites.

No Chavín prototypes have been found, but Chavín textiles are extremely rare. Both the Chavinoid appearance of the face-motif masks and the similarity of the Ancón grave tablets suggests a Chavin origin for the Ocucaje mask.

The restriction of the painted masks to the site of Ocucaje cannot be satisfactorily explained. As noted earlier, none appear on Cavernas, Necropolis, or early Nazca burials. With all the exact correspondence of artifacts found at Cavernas and Ocucaje, it seems incredible that masks should come from only one of the two sites. Paracas Period sites are, however, still being discovered, and eventually this problem, too, may be resolved.

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## FIGURES

Fig. 1: Map of the South Coast of Peru.
Fig. 2: Map of the Hacienda Ocucaje.
Fig. 3: A complete mummy-bundle mask construction (No. 20) with two turban bands wrapped around cotton doughnut-shaped pillow. (Textile Museum, Washington, DC.).
a: face.
b: reverse, showing cotton padding.
Fig. 4: Painted cloth mummy bundle masks. (Photographs by Junius, Bird Courtesy of American Museum of Natural History).
a: full-figure type (No. 392 ).
b: full-figure type (No. 63).
c: full-figure type (No. 399).
d: variant full-figure type (No. 429).
e: variant full-figure type (No. 433).
f: variant full-figure type (No. 436).
g: face type (No. 209).
h : undeterminable figure (No. 435).
i : face type (No. 424).
Fig. 5: Mythological beings. (Textile Museum, Washington, DC.).
a: Type I, embroidery (No. 315).
b: Type Ia, embroidery (No. 949).
c: Type II, embroidery (No. 494).
d: Type IIa, complementary-warp patterning (No. 465a).
e: Type III, supplementary-weft patterning (No. 161).
f: Type IIIa, embroidery (No. 439).
g: Type IV, embroidery (No. 472).
h: Type IVa, complementary-warp patterning (No. 465b).
i : Type IVb, complementary-warp patterning (No. 466c).
j: Type V, embroidery (No. 443).
k: Type VI, embroidery (No. 443 ). Height 14.2 cm .
1: Type VII, embroidery (No. 443).
m: Type VII, complementary-warp patterning (No. 245a).
n : Type IX, embroidery (No. 453).
o: Type X, complementary-warp patterning (No. 465a).
p: Type XI, complementary-warp patterning (No. 466b).
Table 1:Technical Data on the Painted Mummy Bundle Masks.
Table 2:Correlation of Soldi Collection numbers with Textile Museum (TM) and American Museum of Natural History (AMNH) numbers.



Fig. 2

a


Fig. 3


Fig. 4


Fig. 4a


Fig. 4b


Fig. 4c



Fig. 4 e


Fig. 4 f


Fig. $4 g$


Fig. 4h


Fig. 4 i


Fig. 5

| NO. | WARP |  |  |  | WEFT |  |  | COUNT per cm. | WEAVE | HEADING | DESIGN |  | $\begin{aligned} & \text { PAINT } \\ & \text { COLORS } \end{aligned}$ | CONDITION |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | FIBER | SPIN | LENGTH |  | FIBER | SPIN | WIDTH* |  |  |  | $\begin{aligned} & \text { DESCRIP- } \\ & \text { TION } \end{aligned}$ | FIGURE TYPE |  |  |
|  |  |  | WOVEN | UNWOVEN |  |  |  |  |  |  |  |  |  |  |
| 20 | natural cotion | $\wedge$ | 29 cm . | ? ${ }^{1}$ | natural cotton | $\wedge$ | 28 cm . | $12 \times 5$ | pred. <br> wp.faced | $3 \mathrm{~N} /{ }^{7}$ | standing figure | 701 (?) | tan, brown, dk. brown | complete** |
| 63 | natural cotion | $\wedge$ | 21 cm . | 46 cm | nalural colton | $\wedge$ | 21.5 cm . | $16 \times 4$ | $\begin{aligned} & \text { warp- } \\ & \text { taced } \end{aligned}$ | $3{ }^{3} / 2 N^{3}$ | standing figure | VII | brown, dk. brown, salmon | complete** |
| 107 | natural colton | $\wedge$ | 31.5 | $?^{\dagger}$ | natural cotion | $\wedge$ | 45 | $11 \times 7$ | relatively bolanced | $3 \mathrm{~N}^{3}$ ? | standing figure | IX | 2 tans | complete** |
| 108 | natural cotton | $\wedge$ | 31.6 | ? ${ }^{\prime}$ | natural colton | $\wedge$ | 47 | $15 \times 7$ | pred. wp faced | $3 \mathrm{~N}^{3}$ ? | stonding figure | VIITor IX | 2 browns | complete ** |
| 148 | natural cotton | $\wedge$ | 22 | ? ${ }^{1}$ | natural cotton | $\wedge$ | 27 | $20 \times 5$ | warp- <br> faced | $3 \mathrm{~N}^{3}$ ? | standing figure | VIII (?) | 2 browns | complete** |
| 160 | natural colton | $\wedge$ | 24.2 | 19.5 inc. | natural cotton | $\wedge \wedge$ | 20.5 | $20 \times 5$ | warp- | 2Na/pone | standing figure | VIII | $\begin{array}{\|c\|} \hline \text { tan, dk. } \\ \text { brown, salmon } \\ \hline \end{array}$ | $\begin{gathered} \text { poor } \\ \text { incomplete } \\ \hline \end{gathered}$ |
| 195 | natural cotton | $\wedge$ | 28 cm . | 60 cm . | nafural cotton | $\wedge$ | 35 | $20 \times 4$ | $\begin{aligned} & \text { warp- } \\ & \text { faced } \end{aligned}$ | $3 N / 2 N$ | standing figure | VII | ton, dk. brown, salmon | complete |
| 209 | natural cotton | $\wedge$ | 50 cm . | 31.5 cm . | natural cotton | $\wedge \wedge$ | 28.3 | $9 \times 6$ | relotively balanced | $3 \stackrel{4}{N / 3 N}$ | tace | - | solmon, blue | complete |
| 255 | natural cotion | $\wedge$ | 25.6 | 54 | natural cotton | ////// | 28 | $24 \times 4$ | $\begin{array}{\|c\|} \hline \text { ribbed } \\ \text { wp.foced } \\ \hline \end{array}$ | $3 \mathrm{~N}^{5} /$ gone | face | - | $\begin{gathered} \tan , 1 t . \\ \text { rose, rose } \end{gathered}$ | complete except for upper heading |
| 259 | natural cotton | $\wedge$ | 24.3 | 8 inc. | nalural colton | $\wedge$ | 29 | $12 \times 6$ | $\begin{array}{\|c\|} \hline \text { pred. } \\ \text { wp.faced } \\ \hline \end{array}$ | $3 \mathrm{~N}^{3} /$ gone | standing figure | VII | brown, 2 tons | incomplete unwoven warp |
| 299 | natural colton | $\wedge$ | 36.9 | 65 | natural colton | $\wedge$ | 36/34 | $12 \times 6$ | pred. wp foced | $3 \mathrm{~N}^{3} / 1 \mathrm{~N}^{3}$ | stonding figure | VIII | brown, 2 tans | complete |
| 307 | natural colton | $\wedge$ | 36.8 | 17.9 inc. | natural cotton | $\wedge$ | 39.4 | $14 \times 8$ | $\begin{gathered} \text { pred. } \\ \text { wp faced } \end{gathered}$ | $3{ }^{3} /$ gone | slanding figure | IX (P) | brown ? | incomplete |
| 311 | natural colton | $\wedge$ | 18 | 31 | natural cotton | /// | 17 | $14 \times 5$ | $\begin{gathered} \text { pred. } \\ \text { wp.faced } \\ \hline \end{gathered}$ | $3 N^{3} /$ gone | face | - | brown, salmon, tan? | complete except for upper heoding |
| 313 | natural cotton | $\wedge$ | 22.5 inc . | - | natural cotton | $\wedge$ | 25.5 | $10 \times 9$ | bolanced | $3{ }^{3} /$ gone | face | - | brown, green | incomplete |
| 392 | natural cotton | $\wedge$ | 20.5 | 33.7 | natural cotton | $\wedge$ | 19.7 | $16 \times 4$ | waced | $3 \mathrm{~N}^{3} / 2 \mathrm{~N}^{3}$ | slanding figure | VI(?) | brown, dk brown, salmon | complete** |
| 393 | natural cotton | $\wedge$ | 27.7 | 63.5 | natural colton | $\wedge$ | 29.2/205 | $16 \times 4$ | warpfaced | $3 N^{3} / 1 N^{3}$ | stunding fiqure | VIII | ton, salmon, red? | complete |
| 394 | natural cotton | $\wedge$ | 23.5 | 49 | natural cotton | $\wedge$ | 23.5/21.5 | $16 \times 5$ | $\begin{aligned} & \text { warp- } \\ & \text { faced } \end{aligned}$ | $3 \stackrel{4}{N / 1 N}$ | standing figure | VIII | $\begin{gathered} \text { brown, rose } \\ \text { gray, tan } \end{gathered}$ | complete |
| 395 | natural cotton | $\wedge$ | 21 | 34.7 | natural cotion | $\wedge$ | 20.5/21 5 | $16 \times 5$ | $\begin{aligned} & \text { warp- } \\ & \text { faced } \end{aligned}$ | $3 \mathrm{~N}^{3} / 2 \mathrm{~N}^{3}$ | standing figure | VII(?) | gray, brown, salmon | complete |
| 396 | natural cotton | $\wedge$ | 25.2 | 27.3 | nalurai cotton | $\wedge$ | 20.3/21 | $14 \times 4$ | worp- faced | $3 \mathrm{~N}^{3} / 1 \mathrm{~N}^{3}$ | stonding figure | VIINor IX | tan, brown, salmen, gray? | complete |
| 397 | nalural cotton | $\wedge$ | 23.2 | 2.5 inc. | natural colton | $\wedge$ | 18/18.5 | $20 \times 4$ | $\begin{aligned} & \text { warp- } \\ & \text { faced } \end{aligned}$ | $3 \mathrm{~N}^{3} / \mathrm{gone}$ | standing figure | VII | brown, ton, gray, salmon | incomplete |
| 398 | notural cotton | $\wedge$ | 27 | 26 | natural collon | $\wedge$ | 23.5 | $16 \times 3$ | warpfaced | $2 N^{3} / 2 N^{3}$ | standing figure | VII | brown, gray, salmon | complete |
| 399 | natural cotton | $\wedge$ | 21 | 22 | nalural colton | $\wedge$ | 19/14.5 | $16 \times 8$ | $\begin{aligned} & \text { worp- } \\ & \text { foced } \end{aligned}$ | 3N/2N | standing figure | VIII | $\begin{aligned} & \text { groy, } \\ & \text { brown, solmon? } \end{aligned}$ | complete |
| 400 | natural cotton | $\wedge$ | 27.5 | 47 | natural cotton | $\wedge$ | 25 | $18 \times 5$ | waced | $2 N^{3} / 1 N^{3}$ | standing fiqure | VI(?) | rose, brown, ton | complete |
| 401 | natural cotton | $\wedge$ | 32.5 | 32.5 | nalural cotton | // | 27 | $18 \times 5$ | $\begin{aligned} & \text { warp- } \\ & \text { faced } \end{aligned}$ | $3 \mathrm{~N}^{3} 11 \mathrm{~N}^{3}$ | standing figure | VIII | $\begin{gathered} \text { brown, } \\ \text { salmon. gray } \end{gathered}$ | complete |
| 402 | notural coltion | $\wedge$ | 26.5 | 36 | natural cotton | $\wedge$ | 23.7/26 | $16 \times 5$ | warpfaced | $3 \stackrel{4}{N / 1}{ }^{(1)}$ | stonding figure | IVb | brown, salmon, gray, tan | complete |
| 403 | natural cotton | $\wedge$ | 22.9 | 34 | natural cotton | $\wedge$ | 22/21 | $20 \times 5$ | warpfaced | $3 \mathrm{~N}^{3} / 2 \mathrm{~N}^{3}$ | stonding figure | VIII | brown, tan solmon | complete |
| 404 | natural colton | $\wedge$ | 25.5 | 44.5 | natural cotion | $\wedge$ | 27 | $14 \times 5$ | warp- <br> faced | $3 \mathrm{~N}^{3} \cdot \mathrm{~N}^{3}$ | standing figure | IX | dk. brown, 2 browns, ton | complete |
| 405 | natural collon | $\wedge$ | 29 | 39 | nafural colton | $\wedge$ | 23.5/26 | $16 \times 5$ | $\begin{aligned} & \text { warp- } \\ & \text { faced } \end{aligned}$ | $3 N^{3} / 2 N^{3}$ | standing figure | VII | brown, tan, salmon | complete |
| 406 | natural colton | $\wedge$ | 16 | 29 | natural colton | $\wedge$ | 17.2/16.5 | $22 \times 5$ | $\begin{aligned} & \text { warp- } \\ & \text { faced } \end{aligned}$ | $2 \mathrm{~N}^{3} 1 \mathrm{~N}^{3}$ | standing figure | IX | brown, salmon, gray | complete |
| 407 | natural colton | $\wedge$ | 17 | 39 | natural cotton | $\wedge$ | 19 | $16 \times 4$ | warplaced | $3 \mathrm{~N}^{3} / 2 \mathrm{~N}^{3}$ | standing figure | VII | brown, salmon, tan | $\begin{aligned} & \text { some missing } \\ & \text { warps } \end{aligned}$ |
| 408 | natural colion | $\wedge$ | 23.2 | 44.5 | natural cotton | $\wedge$ | 22/18.5 | $18 \times 4$ | waced | $3 \mathrm{~N}^{3}$ none | standing figure | IVb | brown, solmon, dk gray | complete |
| 409 | natural colton | $\wedge$ | 24.5 | 59.7 | notural cotton | $\wedge$ | 28.2 | $18 \times 5$ | warpraced | $3 N^{3} / 2 N^{3}$ | standing figure | VII | brown, 2 tons | complete |
| 410 | natural cotton | $\wedge$ | 21 | ? ${ }^{1}$ | natural cotton | $\wedge$ | 21/20.3 | $16 \times 6$ | warplaced | $3 N^{3} / 2 N^{3}$ | standing figure | VII | $\begin{aligned} & \hline \text { brown, red, } \\ & 2 \text { tans } \end{aligned}$ | complete** |
| 411 | natural cotton | $\wedge$ | 21.7 | 32 | natural cotton | A (?) | $21.7 / 20.5$ | $16 \times 7$ | $\begin{aligned} & \text { worp- } \\ & \text { flaced } \end{aligned}$ | $2 N^{3} / 2 N^{3}$ | standing figure | VI | brown, tan? | some missing warps |
| 412 | naturai cotton | $\wedge$ | 26.5 | 36 | natural cotton | $\wedge$ | 21.5 | $16 \times 4$ | $\begin{aligned} & \text { warp- } \\ & \text { foced } \end{aligned}$ | $3 N^{3} / 2 N^{3}$ | standing figure | VIII | $\begin{gathered} \text { dk, brown, } \\ \text { brown, salmon } \\ \hline \end{gathered}$ | complete |
| 413 | notural cotton | $\wedge$ | 25.5 | 36.3 | natural cotton | $\wedge$ | 27.5 | $13 \times 7$ | $\begin{gathered} \text { pred. } \\ \text { wp faced } \end{gathered}$ | $3{ }^{3} / 2 N^{3}$ | standing figure | VII | brown, tan | complete |
| 415 | naturai cotton | $\wedge$ | 248 | 69 | natural cotton | $\wedge$ | 251/269 | $12-14 \times 7$ | $\begin{aligned} & \text { pred. } \\ & \text { wp.faced } \\ & \hline \end{aligned}$ | $3 \mathrm{~N}^{3} 1 \mathrm{~N}^{3}$ | standing figure | VII(?) | brown, ton | complete |
| 416 | natural cotton | $\wedge$ | 25 | 40 | natural cotton | $\wedge$ | 25.5 | $11 \times 7$ | relatively balanced | $3 \mathrm{~N}^{3} / 1 \mathrm{~N}^{3}$ | standing figure | VII | $\begin{aligned} & 2 \text { browns, } \\ & \text { ton } \end{aligned}$ | complete |
| 417 | nalural cotton | $\wedge$ | 28.1 | 61 | natural cotlon | $\wedge$ | 30.5/28 | $9-12 \times 5$ | $\begin{aligned} & \text { pred. } \\ & \text { wo faced } \\ & \hline \end{aligned}$ | $3 N^{3} 1 N^{3}$ | standing figure | VII | $\begin{aligned} & \text { brown, } \\ & 3 \text { tans } \end{aligned}$ | complete |
| 418 | natural cotion | $\wedge$ | 37 | 51 | nafural colton | $\wedge$ | 36 | $13 \times 6$ | warpfaced | $3 \mathrm{~N}^{3} 1 \mathrm{~N}^{3}$ | standing figure | VII | brown, dk. brown, tan | complete |
| 419 | natural colton | $\wedge$ | 24 | 21 | natural collon | /// | 21.5 | $16 \times 4$ | warp- | $3 \mathrm{~N} / 1 \mathrm{~N}$ | slanding figure | IX (?) | brown, ton | complete |
| 420 | natural cotion | $\wedge$ | 17.7 inc. | - | natura! collon | //// | 22 | $14 \times 7$ | ribbed, pred wp. foced | $2 N /$ gone | face | - | brown, solmon | incomplete |
| 421 | natural cotron | $\wedge$ | 24 | 6 inc. | natural cotton | $\wedge$ | 18/17.2 | $18 \times 4$ | $\begin{aligned} & \text { worp- } \\ & \text { faced } \end{aligned}$ | $3 N^{3}$ ?/gone | face | - | rose, brown, gray-ton | poor, complete |

Table 1

| NO. | WARP |  |  |  | WEFT |  |  | COUNT | WEAVE | HEADING | DESIGN |  | $\begin{aligned} & \text { PAINT } \\ & \text { COLORS } \end{aligned}$ | CONDITION |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | FIBER | SPIN | LENGTH |  | FIBER | SPIN | WIDTH* |  |  |  | DESCR | GU |  |  |
|  |  |  | WOVEN | UNWOVEN |  |  |  |  |  |  | TION | TYPE |  |  |
| 422 | natural cotton | へ | 25 | 31.5 | natural colton | $\wedge$ | 20.2 | $14 \times 5$ | $\begin{aligned} & \text { warp- } \\ & \text { faced } \end{aligned}$ | $3{ }^{4} / 1 N^{4}$ | face | - | brown, groy, salmon | poor, complete |
| 423 | natural cotton | $\wedge$ | 22 | 21 | natural cotton | $\wedge$ | 28.8 | $18 \times 6$ | warpfaced | $3 \mathrm{~N}^{3} / 2 \mathrm{~N}^{3}$ | face | - | brown, solmon | poor,complete |
| 424 | natural cotton | $\wedge$ | 23.5 | 7 inc . | natural cotton | $\wedge \wedge$ | 23.5/21 | $14 \times 7$ | pred. wp.faced | $3{ }^{3} /$ gone | face | - | brown, tan solmon, rose? | incomplete |
| 425 | natural cotton | $\wedge$ | 24.7 | 46.3 | natural cotton | $\wedge / /$ | 25 | 22-28×5 | ribbed wp faced | $3 \mathrm{~N} / 3 \mathrm{~N}^{3}$ | face | - | brown, salnon | poor,complete |
| 426 | natural cotton | $\wedge$ | 22.5 | 46.4 | natural cotton | $\wedge$ | 36/32.5 | $17 \times 6$ | waro- <br> faced | $3{ }^{4} / 2 \stackrel{4}{N}$ | face | - | salmon, brown, green | complete |
| 427 | natural colton | $\wedge$ | 45.5 | 54 | natural cotton | //I/I// | 44.7inc/35.5 | $11-15 \times 5$ | ribbed, pred. wp foced | $3 \stackrel{4}{N} / 2 \stackrel{4}{N}^{\sim}$ | face | - | ton, salmon | poor, complete |
| 428 | natural cotton | $\wedge$ | 25.5 | 46.5 | natural cotton | $\wedge$ | 26/23.8 | $12 \times 6$ | $\begin{gathered} \text { pred } \\ \text { wp.faced } \\ \hline \end{gathered}$ | $2 N^{3} / 1 N^{3}$ | standing figure | VIII (?) | $\begin{gathered} 2 \text { or } 3 \\ \text { tans } \end{gathered}$ | complete |
| 429 | natural cotton | $\wedge$ | 26.8 | 53 | natural cotton | $\wedge$ | 34/32.5 | $12 \times 7$ | pred. wp.faced | $3 N^{3} / 2 N^{3}$ | standing fiqure | deviant | brown, 2 tans | complete |
| 430 | natural cotton | $\wedge$ | 24.2 | 43.5 | natural cotton | $\wedge$ | 32.3 | $12 \times 6$ | pred. wp. faced | $2 N^{3} / 1 N^{3}$ | standing figure | VI | brown, ton | poor, complete |
| 431 | natural cotton | $\wedge$ | 24.5 | 5.5 inc. | natural cotion | //I | 21.5/20 | $14-16 \times 4$ | warp- <br> faced | $3 \mathrm{~N}^{3}$ gone | face | VIII | ton, salmon, brown? | incomplete |
| 432 | natural cotton | $\wedge$ | 29.4 | 104 | natural cotton | $\wedge$ | 26 | $10 \times 7$ | relatively balonced | $3 N / 2 N$ | standing figure | VIII | brown, 2 tans | complete |
| 433 | natural cotton | $\wedge$ | 29.5 | 70 | natural cotton | $\wedge$ | 30/28.5 | $11-16 \times 6$ | $\begin{gathered} \text { pred. } \\ \text { wp. faced } \\ \hline \end{gathered}$ | $3 \mathrm{~N}^{3} /$ none | figure | deviont | $\begin{aligned} & \text { brown, } \\ & 2 \text { tons, } \end{aligned}$ | complete |
| 434 | natura! colton | $\wedge$ | 20 | 48.5 | natural cotton | $\wedge$ | 19.5/17.7 | $14-18 \times 7$ | warpfoced | 3 ${ }^{3}$ ? $/$ none | stonding figure | VII | ton | complete |
| 435 | natural cotton | $\wedge$ | 22.2 | 47.5 | natural cotton | $\wedge$ | 20.7/18 | 32×3-4 | ribbed wp faced | $3 N^{3} / 1 N^{3}$ | $\begin{array}{\|l} \text { barely } \\ \text { recognizoble } \\ \text { figure } \end{array}$ figure | $?^{+}$ | 2 tans | complete |
| 436 | natural cotton | $\wedge$ | 26.1 | 42.5 | natural cotton | $\wedge$ | 31 | $11 \times 7$ | relatively balanced | $3 \mathrm{~N}^{3} 11 \mathrm{~N}^{3}$ | standing figure | IVb(?) | 2 tans | complete |
| 437 | notural cotton | $\wedge$ | 32.8 | 56 | natural cotton | $\wedge$ | 32 | $10 \times 4$ | pred. <br> wp.faced | $3 N^{3} 3 / 1 \begin{gathered}3 \\ \end{gathered}$ | stọnding figure | ? ${ }^{+}$ | ton, ? | poor, complete |
| 91.318 | natural cotion | $\wedge$ | 23 | cut | natural cotton | /// | 20.3 | $16 \times 4$ | warpfaced | $3 N^{3}$ ?/gone | standing fiqure | IX | brown, tan, salmon, gray | unwoven warps cuf |
| 91.427 | natural coltion | $\wedge$ | 23.5 | cut | natural cotton | $\wedge$ | 24.5/235 | $12 \times 6$ | pred. wp.faced | $3{ }^{3}$ ?/gone | stonding figure | VII | $\begin{aligned} & \text { brown, } \\ & 3 \text { tans } \end{aligned}$ | unwoven warps cut |
| $\begin{gathered} 1960.12 .12 \\ a \\ \hline \end{gathered}$ | naiural cotton | $\wedge$ | 30.5 | 13.5 inc. | nafural cotton | $\wedge$ | 26.5 | $16 \times 6$ | $\begin{aligned} & \text { warp- } \\ & \text { faced } \end{aligned}$ | $3 N^{3} /$ gone | standing figure | VII | $\begin{aligned} & \text { brown, ton, } \\ & \text { gray -ton } \end{aligned}$ | incomplete |
| b | natural cotton | $\wedge$ | 17.1 | 20.5 inc. | natural colton | /// | 13 | $18 \times 3$ | warpfaced | 2(3N)/gone | face | - | red, dk. tan | incomplete |
| c | natural cotton | $\wedge$ | 21 | 34 inc. | natural cotton | $\wedge$ | 26 | $20 \times 6$ | warpfaced | $3 N^{3}$ gane | standing figure | VIII | brown, tan | incomplete |
| d | not a 2 color plied color plied cotfon | $\wedge$ | 21.7 | 39 | natural cotton | $\wedge \Lambda$ | 26/23.2 | $22 \times 3$ | $\begin{aligned} & \text { warp- } \\ & \text { faced } \end{aligned}$ | $2 N / 1 N$ | standing figure | EIII(?) | dk. brown, tan, rose ? | poor, complete |
| e | natural cotton | $\wedge$ | 18.2 | 20 | natural cotton | $\Lambda$ | 17.7/15.1 | $11 \times 5$ | pred. wp faced | $3 N^{3} / 2 N^{3}$ | face | - | brown, rose, ton | complete |
| $f$ | natural cotton | $\wedge$ | 21.4 | 2.5 inc. | natural cotton | $\wedge \Lambda$ | 195ina/ 16.5 inc . | $13 \times 6$ | pred. wp. faced | $2 \stackrel{p}{N} /$ gone | face | - | brown, red? | incomplete |
| g | natural colton | $\wedge$ | 22 | 23.5 | natural cotton | $\wedge$ | 20 | $18 \times 6$ | warpfaced | $3 N^{4} ? / 1 N^{4}$ | face | - | red, brown, gray-tan | some worps missing |
| n | natural cotton | ${ }_{3}$ | 22.1 | 36 | natural collon | $1 / 1 / 1 / l^{\text {? }}$ | 20.2 inc | $12 \times 3$ | pred. wp.faced | $2 N / 1 ?$ | face | - | brown, rose, gray-tan | complete |
| i |  | $\wedge$ | 2.4 .8 | 16 inc. | ñatural cotton | $\wedge$ | 28 | $16 \times 5$ | warp- | $3{ }^{3} /$ gone | standing figure | VII | brown 2 tans | incomplete |
| j | natural cotton | $\wedge$ | 31 | 37 | natural cotton | 入and/ | 33.7/31.7 | $8 \times 6$ | pred. wp.faced | $3 \mathrm{~N}^{3} 11 \mathrm{~N}^{3}$ | standing figure | VII | brown, tan, gray | complete |
| k | natural cotton | $\wedge$ | 26 | 6.7 inc. | natural cotton | $\wedge$ | $24 \mathrm{inc} / 225$ | $18 \times 5$ | warpfaced | $3{ }^{3} /$ gone | standing figure | VIII(?) | brown, tan, salmon | incomplete |
| 1 | natural cotton | $\wedge$ | 21.5 | 5 inc. | natural cotton | $\wedge$ | 22.5 | $18 \times 5$ | warpfaced | $3 \stackrel{?}{N} / \text { gone }$ | standing figure | VIII | $\begin{aligned} & 2 \text { tans, } \\ & \text { it rose, } \end{aligned}$ | incomplete |
| IT | natural cotion | $\wedge$ | 17.5 | 5.5 inc , | natural cotton | $\wedge$ | 17.5 inc/15 | $14 \times 5$ | $\begin{array}{c\|} \text { pred. } \\ \text { wp. faced } \\ \hline \end{array}$ | $2 \stackrel{2}{N} /$ gone | face | - | brown, red | incomplete |
| n | natural cotton | $\wedge$ | 21.6 | 27 | natural cotion | $\wedge$ | 21.2 | $12 \times 6$ | pred. wo.faced | $3{ }^{3} /$ gone | standing figure | VIII(?) | $\begin{gathered} \text { dk. gray } \\ 2 \text { rans, salmon } \end{gathered}$ | nearly complete |
| 0 | natural cotton | $\wedge$ | 20.6 | Binc. | natural cotton | $\wedge$ | 16.7 | $20 \times 5$ | warpfaced | $3 N^{3} /$ gone | face | - | solmon, <br> It. brown | incomplete |
| $\rho$ | $\begin{array}{\|c} \text { brown 8 } \\ \text { 2-color plied } \\ \text { colton } \\ \hline \end{array}$ | $\wedge$ | 28 | 19 inc. | brown cotton | $\wedge$ | 30.5/29.5 | $10 \times 5$ | $\begin{array}{\|c\|} \hline \text { pred. } \\ \text { wo. faced } \\ \hline \end{array}$ | $3{ }^{3} /$ gone | standing figure | VI | dk. brown, brown? | incomplete |
| AI57.76 | natural cotton | $\wedge$ | 23.5 | 47 | nafural cotton | $\wedge$ | 21.7 | $13 \times 7$ | $\begin{gathered} \text { pred. } \\ \text { wp.faced } \\ \hline \end{gathered}$ | $3 N^{3} / 2 N^{3}$ | standing figure | ? ${ }^{+}$ | salmon, lan, brown | complete |
| AI57.77 | natural collon | $\wedge$ | 20.5 | 17.5 inc. | natural cotton | // | 20.3 | $24 \times 3$ | ribbed wp faced | $2 \mathrm{~N} / \mathrm{gone}$ | face | - | ton, red | incomplete |
| A157.282 | natural cotton | $\wedge$ | 28.5 | 38 inc. | natural cotton | $/ / / / / /$ | 24 | $20 \times 5$ | warpfaced | $3{ }^{3}$ ?/gone | face | - | rose, ton | incomplete |
| Bliss 342 | natural cotton | $\wedge$ | 25.4 | 41,9 | nafufal cotton | $\wedge$ | 31/25.9 | $13 \times 5-6$ | pred. wp. faced | $3 \mathrm{~N} / 1 \mathrm{~N}$ | standing fiqure | VII | brown, 2 tans | complete |
| Priv. Coll. | natural cotton | $\wedge$ | 20.3 | 33 | natural cotton | //I | 22.5 | $20 \times 5$ | $\begin{aligned} & \text { warp- } \\ & \text { faced } \end{aligned}$ | $3 N^{3} / 2 N^{3}$ | face | - | tan, rose | complete |
| Priv. Coll. | natural cotton | $\wedge$ | 22.5 | 3 cut | natural colton | $\wedge$ | 23.5 | $14 \times 5$ | pred. wp.faced | $\begin{aligned} & 3 N_{1}, 1 \text { pr. } \\ & \text { qone } \end{aligned}$ | standing figure | IX | red, brown, It brown, tan | incomplete |
| Priv. Coll. | natural colton | $\wedge$ | 24 | 6.8cut | natural cotton | $\wedge$ | 23.3 | $16 \times 3$ | warptaced | $3 \sim^{3}$ M/pone | sianding figure | VIII | dk. brown, brown, rose | incomplete |
| Priv. Coll. | $\begin{aligned} & \text { natural } \\ & \text { cotton } \\ & \hline \end{aligned}$ | $\wedge$ | 16.7 | 31.3 | natural cotton | $\wedge$ | 15.4/14.1 | $16 \times 8$ | pred. wp faced | $3 \mathrm{~N}^{3} / 2 \mathrm{~N}^{3}$ | stonding figure | VII(?) | ton, rese | complete |

*if 2 figures are given, the 1 st is bottom, the 2 nd top.

* these pieces have at least some of the original padding, etc. In some coses not all meosurements could be made.
${ }^{\dagger}$ informotion not available or determinable


## TABLE 2

Correlation of Soldi Collection numbers with Textile Museum (TM) and American Museum of Natural History (AMNH) numbers

## Soldi

20
63
107
108
148
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195
209
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307
311
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TM 91.857A
TM 91.865
AMNH 41.2/6008
AMNH 41.2/6009
TM 91.890 A
TM 91.896
TM 91.900
91.904

TM 91.918
AMNH 41.2/6073
AMNH 41.2/6088
TM 91.940
TM 91.943
TM 91.945
TM 91.957
TM 91.958
TM 91.959
TM 91.960
TM 91.961
TM 91.962
TM 91.964
TM 91.965
TM 91.966
TM 91.967
AMNH 41.2/6130
TM 91.968
TM 91.969
TM 91.970
TM 91.971
Soldi
408 TM 91.972
409 TM 91.973
$410 \quad$ AMNH 41.2/6131
411 TM 91.974
412 TM 91.975
413 TM 91.976
415 TM 91.977
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AMNH 41.2/6132
TM 91.978
TM 91.979
TM 91.980
TM 91.981
AMNH 41.2/6133
TM 91.982
TM 91.983
TM 91.984
TM 91.985
AMNH 41.2/6134
TM 91.986
TM 91.987
TM 91.988
TM 91.989
TM 91.990
TM 91.991
TM 91.992
TM 91.993
TM 91.994
TM 91.995
TM 91.996

