PreColumbian Textile Conference VII

Jornadas de Textiles PreColombinos VII

Centre for Textile Research
University of Copenhagen 2016

Lena Bjerregaard and Ann Peters, editors

Textile fragment from Cueva de la Candelaria, cortesey of INAH.
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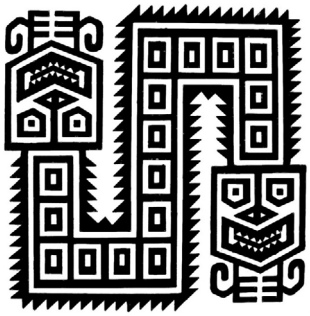

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Cover image: Textile fragment from Cueva de la Candelaria, cortesey of INAH.
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Title page image, chapter 20, fig. 28: Imagen divina dual, textil Paracas, Lavalle "Tejidos milenarios del Peru", 1999, pp.166/167, dibujo Uwe Carlson. This page, chapter 20, fig. 15: Rosto felínico, objeto en oro de la colección de Dumbarton Oaks, "Andean Art at Dumbarton Oaks", 1996, p. 67, dibujo Uwe Carlson.

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Conservation, reconstruction, analyses

Introduction

From May 31st to June 4th, 2016, the 7th International European conference on pre-Columbian textiles was held in Copenhagen. The conference was sponsored by Queen Margrethe and Prince Henriks Fundation, by Carlsbergfondet and FKK in the Ministery of Research and Education in Denmark. It was hosted by the Centre for Textile Research, Saxo Institute, University of Copenhagen and organized by Lena Bjerregaard, assistant researcher at CTR.

The European conference on pre-Columbian textiles was founded in 1999 by Dr. Victòria Solanilla, who organized the first five international meetings with support from the Universitat Autònoma de Barcelona and Institut Català de Cooperació Iberoamericana, as well as the Museu Textil de Terrassa. Five volumes of papers from these conferences (*Actas* de las Jornadas Internacionales de Textiles Precolombinos I – V) have been published by the Universitat Autònoma de Barcelona, Departament d'Art, from 2000 to 2011.

The 6th conference, VI Colloque International sur les Textiles Amérindiens (2013), was organized by Sophie Desrosiers (École des Hautes Études en Sciences Sociales) and Paz Nuñez (Musée du Quai Branly) and held at the Musée du Quai Branly in Paris. Papers from this conference were published online in the journal *Nuevo Mundo / Mundos Nuevos* in two sections: Textiles amerindios. Investigaciones recientes: del presente al pasado y viceversa / Amerindian Textiles. Recent Studies : from Present to Past and Conversely; Amerindian Textiles. Crossed Perspectives on Colors / Textiles amerindios. Diferentes perspectivas sobre los colores. The essays can be read online at: https://nuevomundo.revues.org/68800.

The location of each European conference on pre-Columbian textiles depends on the initiative of both individual organizers and hosting institutions. The 7th meeting was held in Copenhagen, hosted by the Center for Textile Research. From the 34 papers presented at the Copenhagen conference between May 31st and June 3rd, 2016, a selection were further developed by their authors and constitute the 24 articles presented in this volume.

While the Jornadas have always included papers on textile practices from throughout the Americas, the Pre-Columbian Textile Conference VII for the first time has invited scholars representing national and international projects to talk about archaeological textile finds in Mexico. Ancient textile finds are relatively unusual in Mexico due to diverse climatic conditions not ideal for their preservation, but cave finds recovered throughout the 20th century have been preserved in regional museums and more recently conserved in the national conservation laboratory. This volume unites seven original articles on pre-Columbian textiles from Mexico, which compare information on 20th century finds first described by Alba Guadelupe Mastache with that from previously unpublished finds and recently discovered contexts.

A unique chapter presents the technical analysis and replication of a pre-Columbian tunic recovered in a cave site in Arizona, at the northern margins of the Mesoamerican interaction sphere.

Thirteen articles on archaeological textiles from the central Andes include analysis of both textile assemblages preserved in museum collections and those recovered during recent fieldwork in archaeological sites of the Andean desert coast. These include textile assemblages representing the Initial and Formative Periods, Paracas and Nasca contexts, the Middle Horizon, diverse late Intermediate Period assemblages and emblematic Inca garments.

It has been an exciting and very interesting process to edit these articles, and the editors thank all the authors for their fine, pleasurable and inspiring collaborations.

April 1, 2017
Lena Bjerregaard and Ann Peters

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Mesoamerican Archaeological Textiles: An Overview of Materials, Techniques, and Contexts

Laura Filloy Nadal

Museo Nacional de Antropología, INAH, Mexico

Abstract
In Mesoamerica, unlike the Andean area, there are few instances when climatic conditions allow the preservation of the organic raw materials constituting ancient fabrics. Examples of such textiles conserved in Mexican museums are quite limited, thus even the tiniest fragments recovered in archaeological contexts greatly augment our understanding of ancient weaving technologies and their use in Mesoamerican societies. Most of the surviving fabrics come from dry caves in northern Mexico, but in recent days the exploration of relatively inaccessible rock shelters in southern Mexico has led to the recovery of additional textiles from early times that are associated with funerary contexts and has expanded the corpus of fabrics woven on backstrap as well as horizontal and stationary looms. The tradition of cremating the dead occasioned the carbonization of clothing during rituals prior to inhumation, and painstaking conservation processes begun after excavation have enabled the analysis of manufacturing techniques and the various weaves employed. Written sources from the fifteenth and sixteenth centuries reveal the iconographic and chromatic richness of the fabrics produced around the time that the Spaniards first arrived and the great variety of pigments and dyes used to color them. The development of several archaeometric analytical techniques that require only miniscule samples have enabled us to confirm the use of indigo (*Indigofera suffiticosa*), cochineal (*Dactylopius coccus*) or *achiote* (*Bixa orellana*), in archaeological fabrics. This paper will examine the techniques and materials employed by Mesoamerican peoples in examples conserved in the collections of Mexico's Instituto Nacional de Antropología e Historia, which come from various contexts such as dry caves, flooded soils, and ritual cremations.

Textiles arqueológicos mesoamericanos: Una visión panorámica sobre materiales, técnicas y contextos

Resumen
En Mesoamérica, a diferencia del área andina, son muy pocas las ocasiones en que las condiciones climáticas permiten la preservación de los materiales orgánicos que constituyen la materia prima base de los tejidos antiguos. El muestrario de textiles arqueológicos que se conserva en los museos mexicanos es realmente limitado y, por ello, cada mínimo fragmento recuperado del contexto arqueológico tiene gran importancia para el conocimiento de las tecnologías antiguas del tejido y para el uso que tenían entre las sociedades mesoamericanas. La mayor parte de los tejidos se han conservado en cuevas secas del norte de México, pero en últimas fechas la exploración de abrigos rocosos de difícil acceso en sur del país ha permitido el rescate de nuevos textiles asociados a contextos funerarios y rituales de épocas tempranas; ampliando el corpus de lienzos tejidos en telar de cintura, pero también en telar de estacas. La tradición de cremar a los difuntos permitió la carbonización de la indumentaria durante el ritual previo a su inhumación; los cuidadosos procesos de conservación emprendidos tras su excavación han hecho posible el análisis de la técnica de manufactura y los ligamentos empleados durante su creación. Las fuentes escrita de los siglos XV y XVI, dan fe de la riqueza iconográfica y cromática de los tejidos que se producían a la llegada de los españoles y de la gran variedad de tintes y colorantes que eran empleados para teñir y pintar los lienzos. Gracias al desarrollo de distintas técnicas arqueometrías de análisis, que requieren de mínimas cantidades de muestra, se ha podido corroborar el uso del Índigo (*Indigofera suffiticosa*), la grana cochinilla (*Dactylopius coccus*) o el achiote (*Bixa orellana*) en los tejidos arqueológicos. En el presente trabajo, haremos un recorrido de las técnicas y materiales utilizados por los pueblos mesoamericanos, en los ejemplares conservados en los acervos del Instituto Nacional de Antropología e Historia de México, que provienen de contextos tan diversos como las cuevas secas, los suelos anegados o los conjuntos rituales cremados.

1 Introduction

Mesoamerica, unlike the Andean area, offers very few instances of climatic conditions that allow for the preservation of the organic raw materials in ancient fabrics. Examples of such textiles conserved in Mexican museums are quite limited, thus even the tiniest fragments recovered in archaeological contexts greatly augment our understanding of ancient weaving technologies and their use in Mesoamerican societies.

The vast territory that constitutes present-day Mexico is characterized by exceptional cultural diversity and a biodiversity in which soils, ecosystems, climates, and elevations greatly differ between the northern and southern areas. Although the development of flora and fauna is determined by ecological variables, textile production depends on the management of resources, which among other activities involves the gathering and cultivation of plants. The Mesoamerican area and northern Mexico contain various native plants whose fibers can be used to make textiles. The agaves and yuccas of the Agavoideae family have a wide distribution throughout Mexico (García Mendoza 1998); the varieties employed in textile production include *Agave sisalana*, *Agave lechuguilla*, *Agave zapupe*, *Yucca carnerosana*, *Yucca treculeana*, and *Samuela carnerosana* (Sayer 1985; Vargas Ramos 2011), along with the use of some grass fibers (e.g., *Panicum* aff. *bulbosum*, cf. Vargas Ramos 2011:80).[1] In addition, three species of cotton were cultivated in Mesoamerican territory, including white (*Gossypium hirsutum*), and brown (*Gossipium mexicanum*).

Many indirect sources reveal that fabrics of various quality, texture, and appearance were made in ancient Mexico, including gauzes and lightweight fabrics in the Maya area, and brocaded, painted, and woven textiles in Central Mexico.[2] We also know the kinds of male and female garments that were in vogue in different regions and times. We have even seen garments made with complex techniques such as curved weaving, where the yarns are manipulated on a backstrap loom to create curved ends or borders (figs. 1 and 2). This effect is achieved by using part of the warp as a weft, and when the two webs are joined they produce a gentle curve (Stresser-Péan 2012). This technique, apparently unknown outside Mesoamerica, is still used today by indigenous communities in Hidalgo, Puebla, and Veracruz (Stresser-Péan 2012) (fig. 3). Sources from the fifteenth and sixteenth centuries also inform us about the chromatic richness of the fabrics produced around the time the Spaniards first arrived, as well as the great variety of pigments and dyes used to color them (see, for example, the *Codex Mendoza*, *Codex Azcatitlan*, *Codex Ixtlilxochitl*, the *Florentine Codex*, and the *Lienzo de Tlaxcala*).

The organic material remains of pre-Hispanic Mesoamerican textile production, however, are extremely rare. The amount of extant archaeological textiles is minimal and only in exceptional cases are complete pieces found. Most of the surviving fabrics come from dry caves in northern Mexico (Mastache 2006:86), but the recent exploration of relatively inaccessible rock shelters in southern Mexico has led to the recovery of additional textiles from early times. Unfortunately, these contexts are quite fragile and have continuously fallen prey to looting, thus the recovered textiles often lack data for situating them culturally and chronologically (Mastache 1971; 1996:18 and 2005:86).

Another conservation issue stems from the funerary practices that led to their deposition. Most of the recovered textiles were associated with such contexts, because clothing was an important part of the paraphernalia accompanying the deceased and in the ritual preparation of the body. The tradition of cremating the dead occasioned the carbonization of clothing during mortuary rituals prior to inhumation, in which not only the deceased was burned, but also all of the items that would serve him or her in the afterlife.

1. O'Neale (1948:113) noted the identification of Indian hemp (*Apocynum cannabinum* L.) in a collection of textiles from Chihuahua at the University of California, Berkeley; also, Mirambell and Sánchez Martínez (1986) mention another kind of hemp (*Cannabis sativa*), Mastache (2006:86) the use of *tzitzicaztli (Urtica caracasana),* and Rodríguez Vallejo (1976) the so-called tree cotton.

2. In this regard, the large corpus of figurines from Isla de Jaina, Campeche, have allowed the identification of various types of fabrics and garments worn by women and men of the Classic period, while the frescoes in Building 1 of the North Acropolis at Calakmul are an exceptional testament of the use of colorful lightweight textiles in female clothing in the Early Classic period around 400 BC. Pictographs in the *Codex Mendoza* (1992) reveal a large variety of profusely decorated fabrics and textiles that circulated throughout the Mexica empire during the sixteenth century, while the accompanying Spanish glosses supply information about their quality, for example, if they were made of fine white cotton, brown cotton, or even some kind of agave fiber (Anawalt 1990; Berdan and Anawalt 1997).

Figs. 1–2. Clay figurines from Xochitécatl, Tlaxcala. Epiclassic period (650–900 AD). Photos: Archivo Digital de las Colecciones del Museo Nacional de Antropología, underwritten by the Instituto Nacional de Antropología e Historia and the Canon Corporation. Courtesy of MNA-INAH.

Figs. 3a–3b. *Quechquemitl* manufactured on a backstrap loom using the "curved weave" technique. Santa Ana Hueytlalpan, Hidalgo. Collection: Claude Stresser Péan. Photo: Archivo Digital de las Colecciones del Museo Nacional de Antropología, underwritten by the Instituto Nacional de Antropología e Historia and the Canon Corporation. Courtesy of MNA-INAH.

Fig. 4. Archaeological textile adorned with small copper bells. Sala de las Culturas de Occidente de México, MNA. Photo: Archivo Digital de las Colecciones del Museo Nacional de Antropología, underwritten by the Instituto Nacional de Antropología e Historia and the Canon Corporation. Courtesy MNA-INAH.

In some cases, however, these same cultural practices have led to the conservation of fabrics. For example, the Sacred Cenote of Chichén Itzá, a large karst sinkhole filled with water, has yielded six hundred or more fragments with several combinations of techniques, including plain weave, brocade, gauzes, warp float, tapestry, twill, openwork, supplementary wefts, and embroidery, which were subjected to low intensity pyrolysis that led to their carbonization (Mahler 1992). Textiles associated with copper also were preserved because this element inhibited the growth of microorganisms (Cronyn 2001; Mastache 2006:86) (fig. 4).

A map (fig. 5) first published by Guadalupe Mastache (1996) shows the sites where most of the archaeological textiles within the present territory of Mexico have been found. Dry caves predominate, followed by contexts in which copper is present, but cases of conservation also have been recorded in aqueous environments or because of pseudomorphic replacement (Mastache 1996). In what follows, this essay will examine the techniques and materials employed by pre-Hispanic peoples in examples conserved in the collections of Mexico's Instituto Nacional de Antropología e Historia (National Institute of Anthropology and History, INAH), which come from contexts such as dry caves, inundated soils, and ritual cremations.

INAH's Museo Nacional de Antropología (National Museum of Anthropology, MNA) in Mexico City has around seventy-two thousand artifacts from throughout Mexico dating from approximately two thousand years before Christ to the sixteenth century of our era. About ten percent of these pieces are on permanent exhibition and the rest are in storage. The number of textiles exhibited in the national museum, however, is less than twenty, and are displayed in five of its halls.[3] The corpus in storage

3. These halls include the Sala del Preclásico en el Altiplano Central (Preclassic Central Highlands), Sala Mexica, Sala de las Culturas de Occidente (Cultures of Western Mexico), Sala Maya, and Sala de las Culturas del Norte (Cultures of Northern Mexico); also, some textiles dating from the colonial period are found in the Sala de las Culturas de Oaxaca (Cultures of Oaxaca).

Fig. 5. Map of Mexican archaeological sites were pre-Hispanic textiles have been found. *Cueva* = cave; *Quemado* = burned; *Conservado por cobre* = preserved by copper; *Otras condiciones* = other conditions; *Medio acuoso* = aqueous environments; *Impresiones* = pseudomorphic replacement. Illustration by Magda Juárez, with information from Guadalupe Mastache (1996:23). Courtesy of *Arqueología Mexicana* and Editorial Raíces.

Fig. 6. Archeological textile from Cueva El Gallo, Morelos. Sala del Preclásico en el Altiplano Central. Photo: Archivo Digital de las Colecciones del Museo Nacional de Antropología, underwritten by the Instituto Nacional de Antropología e Historia and the Canon Corporation. Courtesy of MNA-INAH.

is also not very large with about 110 specimens, bringing the total to around 130 pre-Hispanic examples conserved at the museum.[4] This is not surprising when you consider some of the difficulties of preservation outlined above. Until ten years ago, the museum was the destination *par excellence* of archaeological materials recovered from throughout the country, thus the textiles in its charge continue to be of primary importance.

In order to show the diversity of materials and technologies used during the pre-Hispanic period for making textiles, this essay shall examine several examples in terms of their place of origin, date, constituent elements, and manufacturing techniques. These will include textiles in the MNA, as well as some in research collections and fragments that may eventually come under the museum's care (fig. 6). Wherever possible, information about the context in which they were found shall also be provided. This study, however, will not address the rich pre-Hispanic textiles from the Mixtec-Zapotec,[5] Maya,[6] and Zoque-speaking areas, such as those from Cueva del Lazo, Chiapas, which Domenici and Sánchez Valenzuela magnificently have presented elsewhere in this volume.

2 The Corpus of Pre-Hispanic Textiles in the Collections of Mexico's Instituto Nacional de Antropología e Historia

The oldest textiles in the MNA come from cultures that inhabited the Central Highlands during the Preclassic period. In her chapter in this volume, Patricia Ochoa Castillo, curator of the Sala del Preclásico en el Altiplano Central (Hall of the Preclassic Central Highlands), discusses an exceptional early example recovered at Cueva El Gallo, which was produced using a simple weave with interlocked warp

4. Of the roughly seventy-two thousand pre-Hispanic artifacts in the MNA's collection, 7,860 are on permanent display. Among the textiles, only twenty are exhibited, while about 110 are kept in storage (personal communication, Miguel Zinden Montalvo, MNA Technical Subdirector, May 2016).

5. In the present-day state of Oaxaca, textiles have been recovered from Cueva de la Sierra Mixteca, Cueva de Ejutla (see fig. 5 and Lozano Vega 1999), and archaeological sites such as Monte Albán, Yagul, Zaachila, and Guiengola (Mastache 1996:23; King 1979:268; see also the map in fig. 5, this chapter). Unfortunately, we do not know the provenance of a set of miniature garments (two huipiles and a quechqueme) from three caves in the Mixteca Alta (Johnson 1966–1967).

6. The largest collection of textiles from the Maya area comes from the Sacred Cenote at Chichén Itzá, Yucatán. Textile fragments have also been found in Mayapán, Yucatán, which were preserved by the presence of copper in the archaeological context (Mastache 1996:23; see also the map in fig. 5, this chapter), including one with warp floats (Mahler 1962).

Figs. 7a–8b. Textile fragments from the *Cueva El Gallo* (no. 208b-292). Plain weave taffeta with a warp bands alternating different shades of ocre and supplementary yarns dyed blue. Photo: courtesy José Luis Alvarado, SLAA-CAN-INAH.

technique, and, red and brown shade yarns (fig. 7) (Ochoa Castillo and Román Torres, this volume). I, in turn, shall mention two other fragments from the same site, which employ blue yarns. Excavation in the dry cave known in the Ticumán-Morelos region as Cueva El Gallo began in 1992 (Sánchez Martínez and Alvarado n.d.a, n.d.b; Sánchez Martínez *et al.* 2005) (Map/fig. 5). The system of three large galleries and seven chambers had a surprising accumulation of organic materials in a magnificent state of conservation, including a funerary bundle containing the remains of an infant, pitchers, feathers, maize, and seeds, along with mats, sandals, cords, and baskets made of hard fibers (Sánchez Martínez and Alvarado n.d.c), and around fifty-five textile fragments, ranging between 10 centimeters and 1 meter long (García Lascurain et al. 1993; Filloy Nadal 1994; Miranda Ham and Sánchez Valenzuela 1996; Ocampo Plasencia 2004: Sánchez Martínez *et al.* 2005:6; Govea Martínez 2005; Santillán Bueyes 2010; Vargas Ramos 2011). The site dates from the Middle Preclassic (455 BC–AD 355) (Vargas Ramos 2011). During exploratory work, a very stable microclimate was observed with temperatures at around 19 degrees Celsius and between 55 and 65 percent relative humidity, in addition to an environment of total darkness with a slight exchange of outside air (García Lascurain et al. 1993; Román Torres 1992) and a pH of around 7.5 (Martínez and Hatchondo 1992). This combination of conditions promoted the preservation of the organic material.

The textiles were made from several local plant materials, including fibers from agaves, bark, and leaves, in addition to cotton. Most of the El Gallo textiles consist of a plain weave taffeta with a warp face (plain weave warp-faced fabric, see Emery 1966:76), although there are isolated cases of basket and mat weaves (paired warps and wefts; see Emery 1966: 87) (Vargas Ramos 2011; Muerza Avendaño 2003; Govea Martínez 2005; Villanueva Camarena 2006; López Arguelles 2006).[7] Some fragments in the corpus have designs, such as warp bands made with alternating ocher, brown, and blue tones (García Lascurain et al. 1993; Filloy Nadal 1994; Ocampo Plasencia 2004; Sánchez Martínez *et al.* 2005:24; Cruz Flores and Noval Vidal, 2005). Only three of the fabrics have a more complex decoration in which a brocade technique was used.[8] In these cases, designs were woven on a backstrap loom by introducing additional weft yarns that "float" over two, three, or more warp yarns. The supplementary yarns were dyed blue or red (Filloy Nadal 1994; Ocampo Plasencia 2004). This elaborate type of fabric reveals the early use of a complex textile technology in Central Mexico from the Preclassic period.

7. 76% of the textile corpus was made with plain weave taffeta with a warp face; 9% taletón 2:1; 6% brocade and 9% with decoration (Sánchez Martínez et al. 2005:16).

8. One more fragment (no. 483-496) combines a plain weave with small holes to create the decoration (Sánchez Martínez et al. 2005:24 and 28).

Figs. 8a, 8b–9. Textile fragments from Cueva de la Candelaria, Coahuila (fourteenth–fifteenth century). Sala de las Culturas del Norte, MNA. Photos: Archivo Digital de las Colecciones del Museo Nacional de Antropología, underwritten by the Instituto Nacional de Antropología e Historia and the Canon Corporation. Courtesy of MNA–INAH.

Textiles from northern Mexico are the largest group in the Mexican archaeological corpus.[9] They all come from caves located north of the Tropic of Cancer where the climate is very dry with little precipitation. The largest collection in the museum is from Cueva de la Candelaria, Coahuila, a deposit explored during the mid twentieth century in the famous Laguna Region (Map/fig. 5). This system of caves yielded one hundred individuals, many of whom were wrapped in fabrics forming mortuary bundles, along with organic materials such as seeds, feathers, durable fiber objects, and numerous textiles (Johnson 1977). Apparently, Cueva de la Candelaria had a long occupation of nearly two hundred years, from the thirteenth to the fifteenth century of our era.

The abundance of textiles salvaged from the cave and their magnificent state of conservation make this discovery one of the most important for understanding the cultures of northern Mexico. As for the fibers used to make the fabrics, only one textile fragment was made with cotton fiber, while the rest were manufactured from various yucca and agave species (Johnson 1977). In both cases, the fibers were hand-spun on the thigh without any other implement. Most are simple weaves, including a knotless netting technique using several colored yarns (probably vegetable dyed) to create a large variety of patterns and effects (figs. 8a-8b, and 9). The Candelaria textile group was magnificently studied in a publication by Irmgard Weitlaner-Johnson in 1977, which

9. Textiles have been also recovered in archeological deposits from Casas Grandes-Paquimé, Chihuahua (made with cotton, Miranda and Sánchez, 1992), Cueva de la Sierra de Chihuahua (Mastache 1996:23); Cueva del Romero, Tamaulipas (agave fibers, Sánchez Gándara, 2001); Cueva Sonora (Mastache 1996:23); Cueva de la Paila (García-Alonso Alba n.d.), Cueva Espantosa, Cueva Coyote and Cerro San Lorenzo all of them at Cuahuila (Mastache 1996:23); to mention some.

Fig. 10. Archaeological textile. Probably from the Laguna Region, Mexico. ENCRYM-INAH. Photo: Archivo Digital de las Colecciones del Museo Nacional de Antropología, underwritten by the Instituto Nacional de Antropología e Historia and the Canon Corporation. Courtesy of MNA-INAH).

enriched our view about the nomadic groups that inhabited northern Mexico.

Let us now turn to another textile that comes from the same Laguna Region (fig. 10). In this case, we have no contextual information because it is an example of a looted piece that was later recovered. It is a large textile, 93 by 97 centimeters, made up of four long pieces of cloth joined together with a running stitch (García-Alonso and González Hurtado 2005:5–6). Because of its design and dimensions, it could not have been woven on a backstrap loom, rather it must have been done on a horizontal ground or fixed loom, similar to what the Rarámuri or Tarahumara use today (fig. 11). We know from the material associated with it that the cloth was manufactured in pre-Hispanic times. Thick double yarns made of fibers from a *Yucca* species and *Agave lechuguilla* dyed in yellow to orange hues with carotenoids were used (García-Alonso and González Hurtado 2005:14, 16). The warp yarns (two S-plied ends with a Z-twist) are a cream color, orange, and dark brown. The weft yarns (single-ply

Fig. 11. *Paisaje del Norte de México* (Northern Mexico Landscape), 1964. Mural by Adolfo Mexiac. Museo Nacional de Antropología. Photo by Paola Ruisánchez and Arturo Egea, Proyecto de Conservación y Restauración de Obra Moderna y Contemporánea del MNA-INAH.

Z-twist) are thinner and reddish in color. It has an intertwined weave that forms a geometric, rhombus pattern design.

The fabric must have been made by lifting the warp yarns, by hand, in order to thread the weft yarns (García-Alonso and González Hurtado 2005:18). In INAH's Escuela Nacional de Conservación, Restauración y Museografía "Manuel del Castillo Negrete" (National School of Conservation, Restoration, and Museography, ENCRYM) a replica of the textile was made in order to understand the technique, in which the warp was prepared in alternating red and white bands The rhombus motifs were achieved by diagonally intertwining the warps. To maintain the direction of the yarn, secondary sticks were used to orient each of the warp bands, then the weave was generated by running the weft yarn to the height of the intersections (García-Alonso and González Hurtado 2005:18). To date, this is the only Mexican textile found that uses this complex weaving technique.

The next example probably was recovered in the so-called Cueva de la Ánimas, in Durango, in the southern part of the Laguna Region, and was donated to the museum in 1996 (fig. 12 and Map/fig. 5).[10] It is the best known example of weft-wrap openwork, a technique that apparently originated in pre-Hispanic Mesoamerica and combines a plain weave with small holes to form the decoration (fig. 13). These small holes, however, are not made by unraveling the fabric; rather, one or more weft yarns are wrapped around a group of warp yarns to create openings in the cloth. This technique demands great skill and finger manipulation from the weaver.

The Ánimas textile was studied in a publication by Irmgard Weitlaner Johnson in 1976 and restored in the Conservation section of the MNA. It consists of two rectangular pieces of cloth that were woven on a backstrap loom, constructed on a plain-weave ground, and sewn together lengthwise with a running stitch, yielding a total width of about 43 centimeters. The textile is incomplete and its maximum dimension is 82 centimeters. The fabric is woven from single-ply Z-twist cotton yarns. It is a magnificent example of weft-wrap openwork where the looped edges show a series of four yarns, or shots, working together as a unit and then continue in a plain weave. In this case the wrapping of the weft was done entirely with finger work. It has four variants of the weft-wrap technique, which are combined with the plain weave to produce the openwork geometric designs. The design elements include narrow lines of consecutive holes, which

10. Also in Durango, pre-Hispanic textiles have been recovered at Cueva del Maguey (Muerza Avendaño 2015) and Cueva Zape Chico (see map in fig. 5, this chapter).

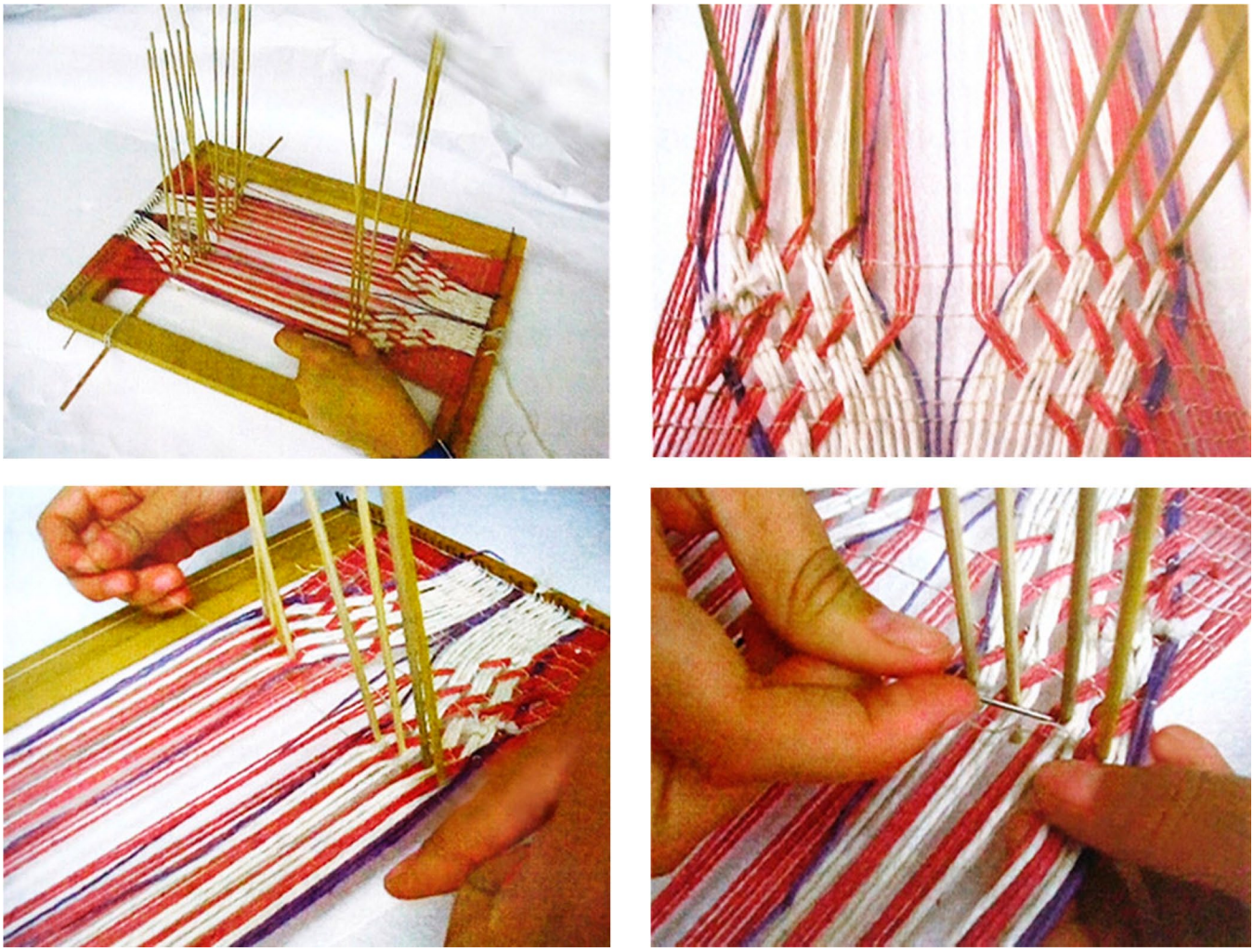


Fig. 12. Replica of the textile from the Laguna Region made by students, ENCRYM-INAH. Photo courtesy of Amaranta González Hurtado.

form zigzags, vertical or horizontal parallel lines, and frets. More than half of the Ánimas textile's surface is covered by patterning (figs. 13–18). The four variants are: 1) a plain hole pattern based on a unit of four wefts, utilized to make the long horizontal lines and the horizontal zigzag lines; 2) a hole pattern with a double warp, used for making the long vertical and zigzag lines; 3) a long slit hole, only present on the left piece of cloth and slightly larger than the previous two variants; and 4) an allover hole pattern, only present in the left piece of cloth, used for the stepped diagonals, rectangles, and hooked crosses. This archeological textile has an unusual finish along one of the selvages (fig. 17a). Each web has a series of tabs, which are separately woven and then stitched to the border, but form an integral part of the fabric (Johnson 1976; Ritter Miravete 2015a).

The last example to be examined from northern Mexico was associated with a mummified child from Cueva de la Ventana in Chihuahua (Mansilla *et al.* 2008). The cave is located in the Sierra Madre Occidental, a mountain range that crosses northern Mexico. The terrain is steep, which causes the temperature to vary according to altitude and latitude, although a warm dry climate prevails. The interior of the caves is usually very stable. The mummified body was partially covered by a textile with a braided feather (fig. 19). The base yarn is composed of two ends with a half Z-twist, apparently of a leaf fiber whose analysis is ongoing (Ritter Miravete 2015b). It is a mesh or simple linking weave. For the decoration, two kinds of feathers were used. A layer of down surely for warmth was covered with slightly iridescent larger feathers as a decorative element (fig. 20). The feathers were wrapped by coiling the *calamus* on the thread, but also a looping technique was used in which the feather was bent over itself to create a loop around the passive thread (figs. 21a and 21b).

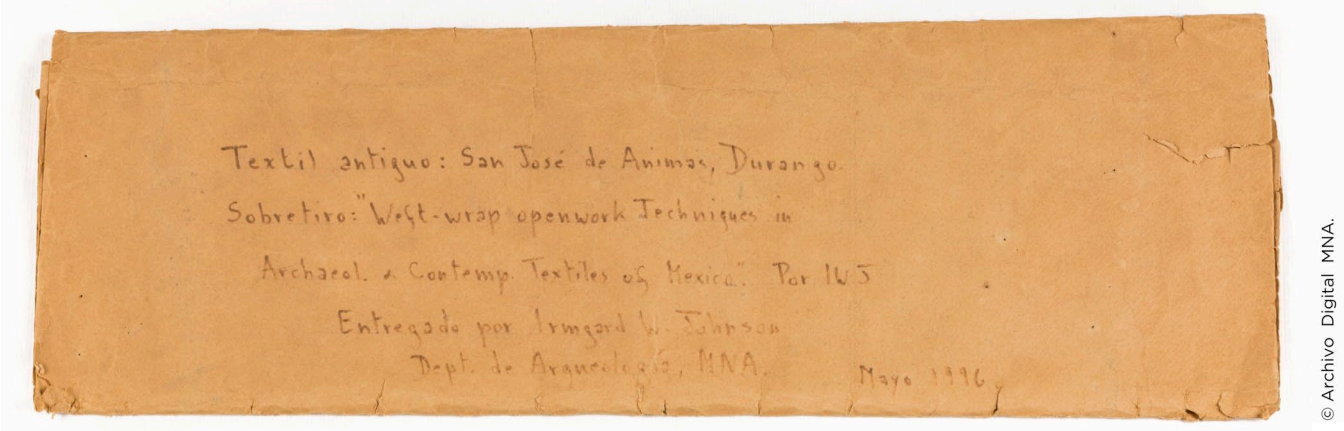


Fig. 13. The looted textile said to be from Cueva de la Ánimas, Durango, Laguna Region, delivered to the MNA in 1996. Photo: Archivo Digital de las Colecciones del Museo Nacional de Antropología, underwritten by the Instituto Nacional de Antropología e Historia and the Canon Corporation. Courtesy of MNA-INAH).

Figs. 14–19. The so-called Ánimas textile. Photo: Archivo Digital de las Colecciones del Museo Nacional de Antropología, underwritten by the Instituto Nacional de Antropología e Historia and the Canon Corporation. Courtesy of MNA-INAH). Drawings by Karla Gabriela Palacios, Laboratorio de Conservación, MNA.
Fig. 14.

Although the use of feather-covered clothing is well documented in sixteenth-century pictographic sources (see, for example, Nezahualcoyotl dressed as a warrior in the *Codex Ixtlixochitl* 1976:106r), the textile accompanying the mummified child is the only example that has survived to this day.

Fig. 15.

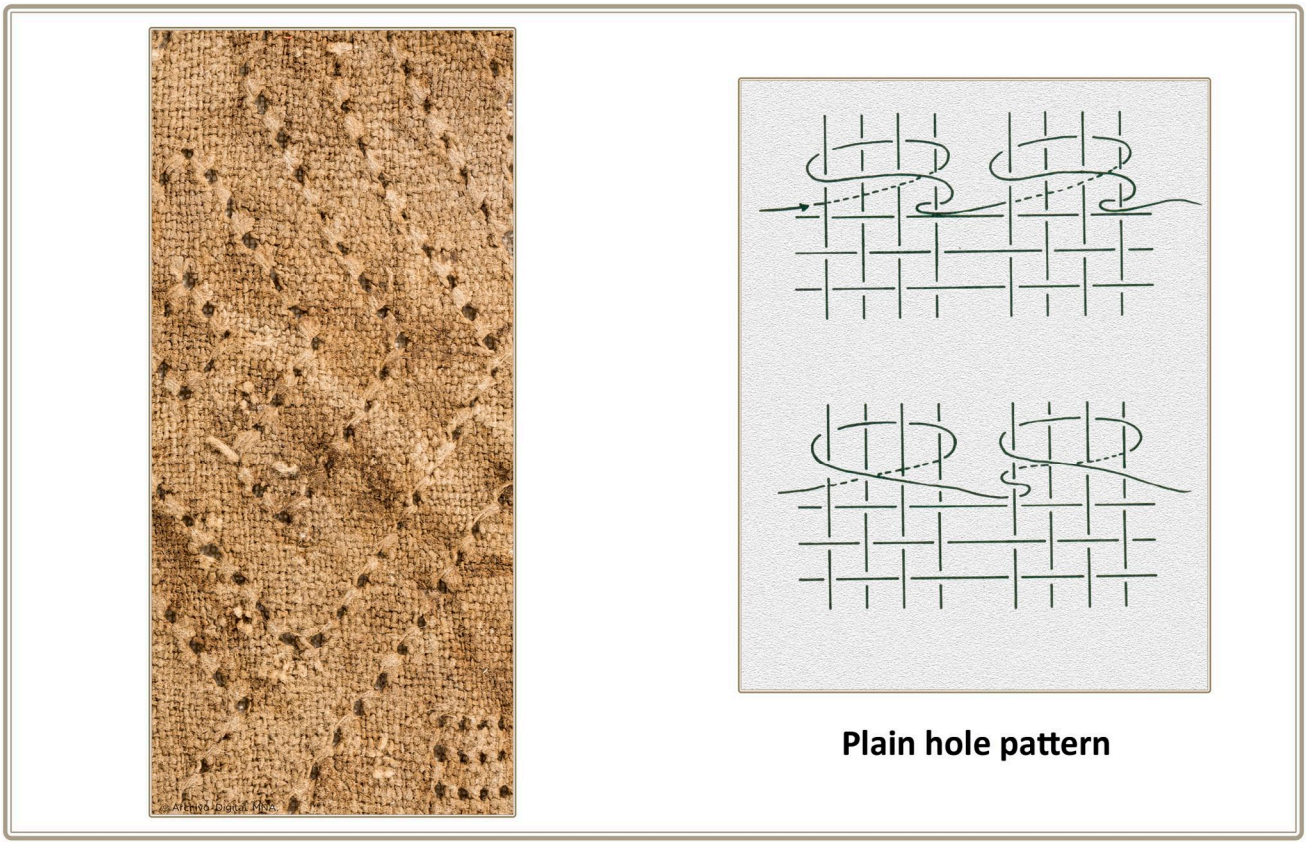


Fig. 16.

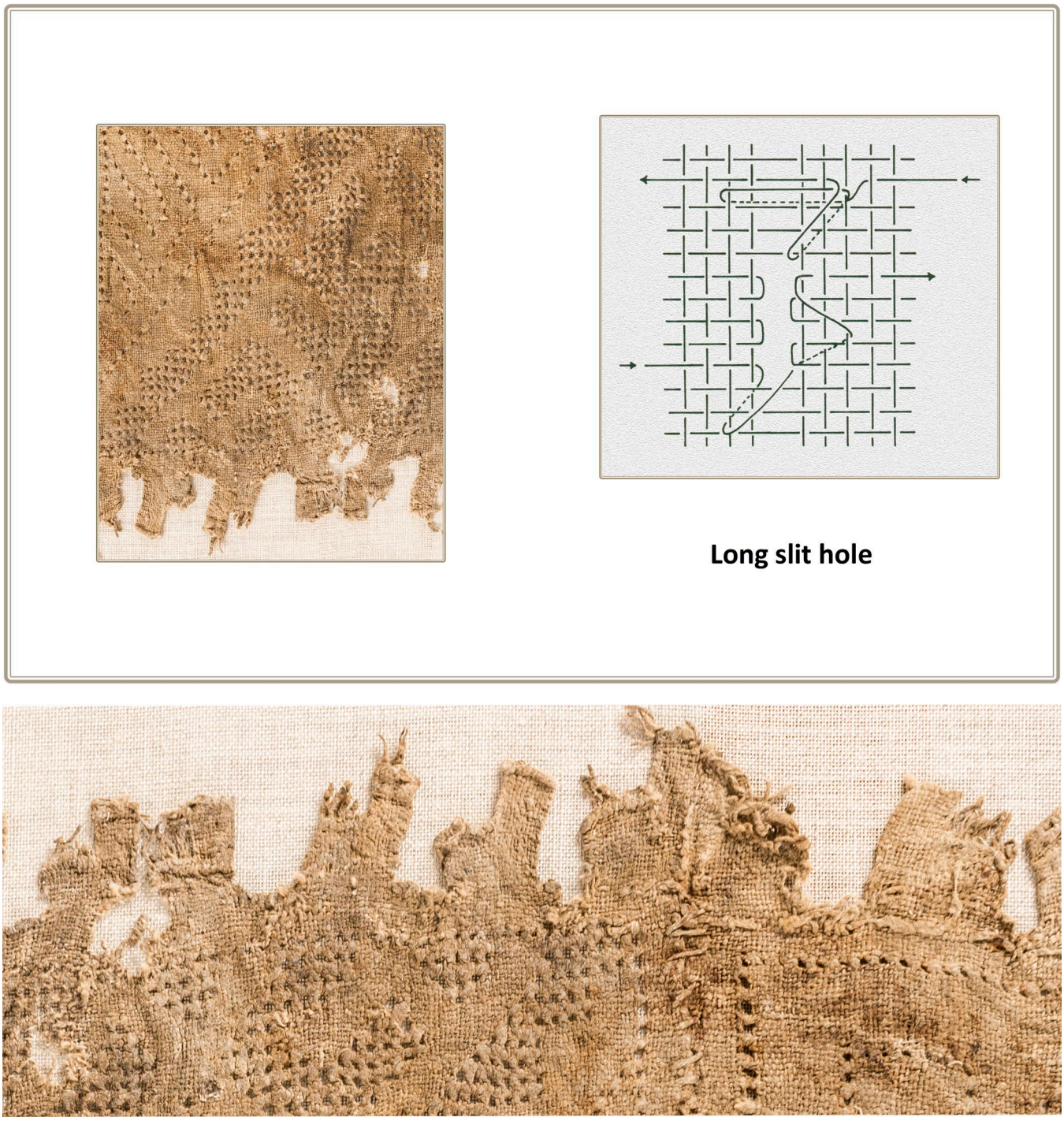
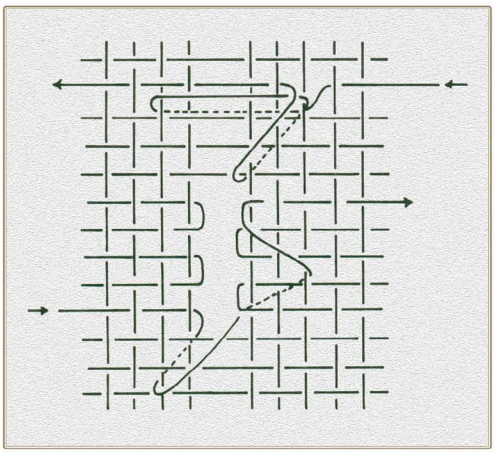


Fig. 17.

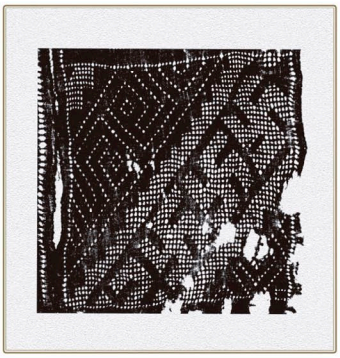
The MNA's Sala de las Culturas de Occidente (Hall of Cultures of Western Mexico) exhibits one of the most richly colored examples in the museum's collection. It is a fragment from the Chilapa area in Guerrero found during the archaeological excavations of 1968 (figs. 22 and 5) (dated AD 1200-1400).[11] It is probably a woman's blouse made on a backstrap loom with cotton yarn spun with a spindle. It consists of two pieces of cloth measuring 46 by 106 centimeters, although it is incomplete. The huipil combines three techniques: 1) the body

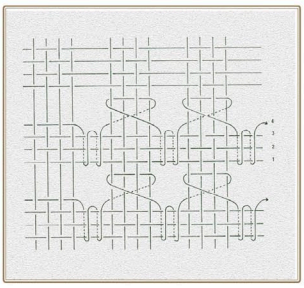
11. Other archaeological textiles have been recovered in the Guerrero area from caves at Campo Morado, Cueva de Oxtotitlan, and Cueva Atzcala (King 1979:273; Sánchez Ruvalcaba 2009; see also Elizabeth Jiménez, this volume).



Long slit hole

Fig. 18.





All-over hole pattern

Fig. 19.

Fig. 20. Mummy no. IV. Dirección de Antropología Física del INAH (DAF-INAH) collection. Photo: Archivo Digital de las Colecciones del Museo Nacional de Antropología, underwritten by the Instituto Nacional de Antropología e Historia and the Canon Corporation. Courtesy of MNA-INAH.

of the fabric is made with a *taleton w*eave (plain weave with paired warp yarns and single weft yarn) combined with bands of gauze composed of hematite-painted cotton (fig. 23);[12] 2) the lower polychrome band was woven separately and joined to the body with a running stitch (fig. 24); and 3) it is a supplementary weft brocade on a plain weave in the form of a step-fret, and has hare or rabbit hair spun separately with a cotton thread interwoven into the fabric (Johnson 1967; Franco 1967:174). Johnson (1967:161) noted that the blue yarn was dyed with indigo.[13]

The lower section of the Chilapa textile is similar to the border on two magnificent colonial examples: a fragment (HUI0513) in the Madeline Humm Collection at the Museo Textil de Oaxaca (Textile Museum of Oaxaca) (fig. 25), and a garment misnamed the "Huipil de La Malinche" (fig.26). All of them employed the brocade technique, supplementary wefts, and braided rabbit hair and down feathers.[14] White and brown cotton yarns were used, along with delicate *Agave lechuguilla* fibers.

Let us now turn to the textiles manufactured during the Postclassic period in Central Mexico. In the MNA's Sala Mexica (Mexica Hall), two types of textiles predominate. The first group consists of fabrics that have been preserved by the process of carbonization that occurred during a funerary ritual (fig. 27). I will not go into

12. Apparently the fabric was painted with a red (iron oxide) pigment after the cloth was finished, as the insides of the yarns are still white (Johnson 1967:154–155).

13. Specific studies in order to characterize it, however, have not been conducted.

14. See the work of Renée Riedler (2015:333–334), which carefully explains the technique employed by the Mexica artisans to knot the feather. Héctor Meneses Lozano (2008), in turn, has discussed various aspects of the techniques used in New Spain to attach feathers. See also Román Torres and García-Alonso 2014.

Fig. 21. Detail. Layer of down covered with slightly iridescent larger feathers as a decorative element. Mummy no. IV. DAF-INAH collection. Photo: Archivo Digital de las Colecciones del Museo Nacional de Antropología, underwritten by the Instituto Nacional de Antropología e Historia and the Canon Corporation. Courtesy of MNA-INAH.

Figs. 22a–22b. Looping technique, where the feather was bent over itself to create a loop around the passive thread. Mummy no. IV. DAF-INAH collection. Photo: María Olvido Moreno Guzmán, Proyecto de Tecnología Antigua, Laboratorio de Conservación, MNA-INAH. Courtesy MNA-INAH.

Fig. 23. Textile fragment from the Chilapa area in Guerrero. Sala de las Culturas de Occidente, MNA. Photo: Archivo Digital de las Colecciones del Museo Nacional de Antropología, underwritten by the Instituto Nacional de Antropología e Historia and the Canon Corporation. Courtesy of MNA-INAH.

Figs. 24–25. Detail. Textile fragment from the Chilapa area in Guerrero. Sala de las Culturas de Occidente, MNA. Photo: Archivo Digital de las Colecciones del Museo Nacional de Antropología, underwritten by the Instituto Nacional de Antropología e Historia and the Canon Corporation. Courtesy of MNA-INAH.

detail about these simple or brocade fabrics, similar to the pieces discussed by Leonardo López Luján and Salvador Guilliem Arroyo in this volume. The second type involves plain weaves with decorations painted on the finished fabric, illustrated by the following two examples. The first, in the MNA collection, is a square piece of unbalanced plain weave fabric with wrapped coiling border work and a simple fringe made by twisting the warp yarns (fig. 28). The motif on this bi-colored textile was painted after weaving, as there is differential staining on the yarns, and the penetration of the colorant, which is a black carbon pigment whose binder has not been identified, is not homogenous.[15]

The second textile was discovered within the Aztec sacred precinct in Offering 102 at the bottom of the stairway of the Templo Mayor, and is now in the Templo Mayor Museum. The deposit dates from 1486 and was found inside a stone box perfectly sealed with a thick layer of a lime and sand mixture, which impeded the passage of light and air into the offering (Gallardo Parrodi 2006:558, 560; González González 2010). The context was very stable with a high moisture content from groundwater seepage, and a temperature of around 17 degrees Celsius; while copper artifacts also present surely had an antifungal effect. This small deposit yielded seeds, wood, countless bark paper objects, and four textiles (Barrera *et al.* 2001), including a magnificent *xicolli*, a fringed sleeveless male jacket tied at the front, with two pieces of cloth joined at the sides with a longitudinal seam along the back (fig.29).

The jacket was woven with cotton yarn and the border was made with a very thin agave fiber (Gallardo Parrodi 2011). Like the previous case, it was painted with a black carbon pigment with an unidentified binder. The complex design was produced symmetrically on the two pieces of cloth, thus a stencil possibly was used to replicate the freehand motifs. Also recovered was a mantle with a balanced plain weave made of white cotton yarns, whose border has alternating sections dyed green (Gallardo Parrodi 2011).

15. Johnson (1970, in King 1979:274) mentions that this textile could have come from Tenancingo, Estado de México.

Fig. 25.

Fig. 26. "Madeline's" Tlàmachtēntli (huipil fragment), seventeenth–eighteenth century. Col. Madeline Humm de Mollet / Donation: Francisco Toledo to the Museo Textil de Oaxaca. Photo: Jorge López, courtesy Museo Textil de Oaxaca.

The body of the textile is sewn with thick agave yarns where we see a series of knots (fig. 30), each of which likely held a feather. This system was commonly used to attach feathers on Aztec shields (Riedler 2015) (fig. 31). Although the microenvironmental conditions of Offering 102 were adequate for preserving cellulose structures, they were not for the keratin of the feathers.

The final Aztec example (Textile C-158-8) to be described here was also found in the center of Mexico City, apparently during the excavations of the Ciudadela

Fig. 27. The so-called Huipil de La Malinche. Nahua, from the Puebla-Tlaxcala region, eighteenth century. Subdirección de Etnografía, MNA. Photo: Archivo Digital de las Colecciones del Museo Nacional de Antropología, underwritten by the Instituto Nacional de Antropología e Historia and the Canon Corporation. Courtesy of MNA-INAH.

Group (Poncelis 2016). It appeared during an archaeological salvage operation, thus we do not have any information about the context in which it was found. It likely was buried in a waterlogged environment or with abundant water in a clayish soil, typical of a lacustrine context. Accelerator Mass Spectroscopy (AMS) yielded a date of around 1470 (Poncelis 2016:12 and 87). It consists of two rectangular pieces of cloth joined on one side with a vertical running stitch of thin agave fiber (fig.32). It is a plain weave taffeta (1 warp yarn for each weft yarn; or balanced plain weave, see Emery 1966:76) made on a backstrap loom using hand-spun cotton yarn. One of the pieces of cloth was dyed separately using the plangi or resist dyeing technique—the only known example of this found thus far in the Basin of Mexico. The brown background has white rhombus and circle designs with a heterogeneous brown spot at the center, while the general design forms diagonal lines. The use of rabbit hair as a decoration on the cloth was identified with an optical microscope (Poncelis 2016).

The chromatography of the thin layer revealed the use of a colorant rich in tannins, probably extracted from the bark of a tree (Poncelis 2016). For example, a similar dye is produced by soaking mahogany bark. In this case, the dyeing occurs through photooxidation without having to use mordants, and was done after the pieces of cloth were completely finished. The sections not wished to be dyed are tied before immersing the fabric in the dyebath. The penetration of the colorant in each area is unique, which produces differential dyeing.

This fabric is very interesting, for only one other example of the plangi technique has been found in Mesoamerica, at Cueva de don Bonfilio in the Tehuacan Region of Puebla (Mastache 1974) (Map/fig. 5). This textile was made with a *taletón* weave (paired warp yarns and single weft yarns) using white cotton yarn (Mastache 1974:253). It consists of eight woven bands dyed separately and sewn together lengthwise with a brown thread. The bands were dyed with indigo in two shades of green and blue; the tie-dyed motifs are

Fig. 28. Fragment of charred textile recovered in Mexico City. Sala Mexica, MNA. Photo: Archivo Digital de las Colecciones del Museo Nacional de Antropología, underwritten by the Instituto Nacional de Antropología e Historia and the Canon Corporation. Courtesy of MNA-INAH.

irregular white circles with a spot in the center that stands out against the blue and green background (Mastache 1974:251, 256, 261). The resist dyeing technique seems to have been in vogue in the fifteenth century among the Mexica and Mixtec nobility, for depictions of blue mantles with a pattern similar to the Ciudadela fragment are common.[16] Again, the combination and magnitude of deterioration agents in Mesoamerica has limited the preservation of fabrics whose use is well documented in indirect sources.

Finally, three isolated cases also merit attention, for they are extraordinary examples of the pre-Hispanic use of painted decoration. The first is a small huipil or child's blouse from Cueva del Buen Abrigo in Coahuila, in

16. In the 1930s, the plangi technique was still being used by Otomí weavers in Hidalgo to make shawls (Davis 1991:14).

Fig. 29. *Servilleta*-type textile. Balanced weave with freehand decoration. Sala Mexica, MNA. Photo: Archivo Digital de las Colecciones del Museo Nacional de Antropología, underwritten by the Instituto Nacional de Antropología e Historia and the Canon Corporation. Courtesy of MNA-INAH.

Fig. 30. A *Xicolli*, or ceremonial *chaleco* jacket, recovered in Offering 102 at the Templo Mayor. Cotton textile. Courtesy of Lourdes Gallardo Parrodi. Photo by Estudio Zabé.

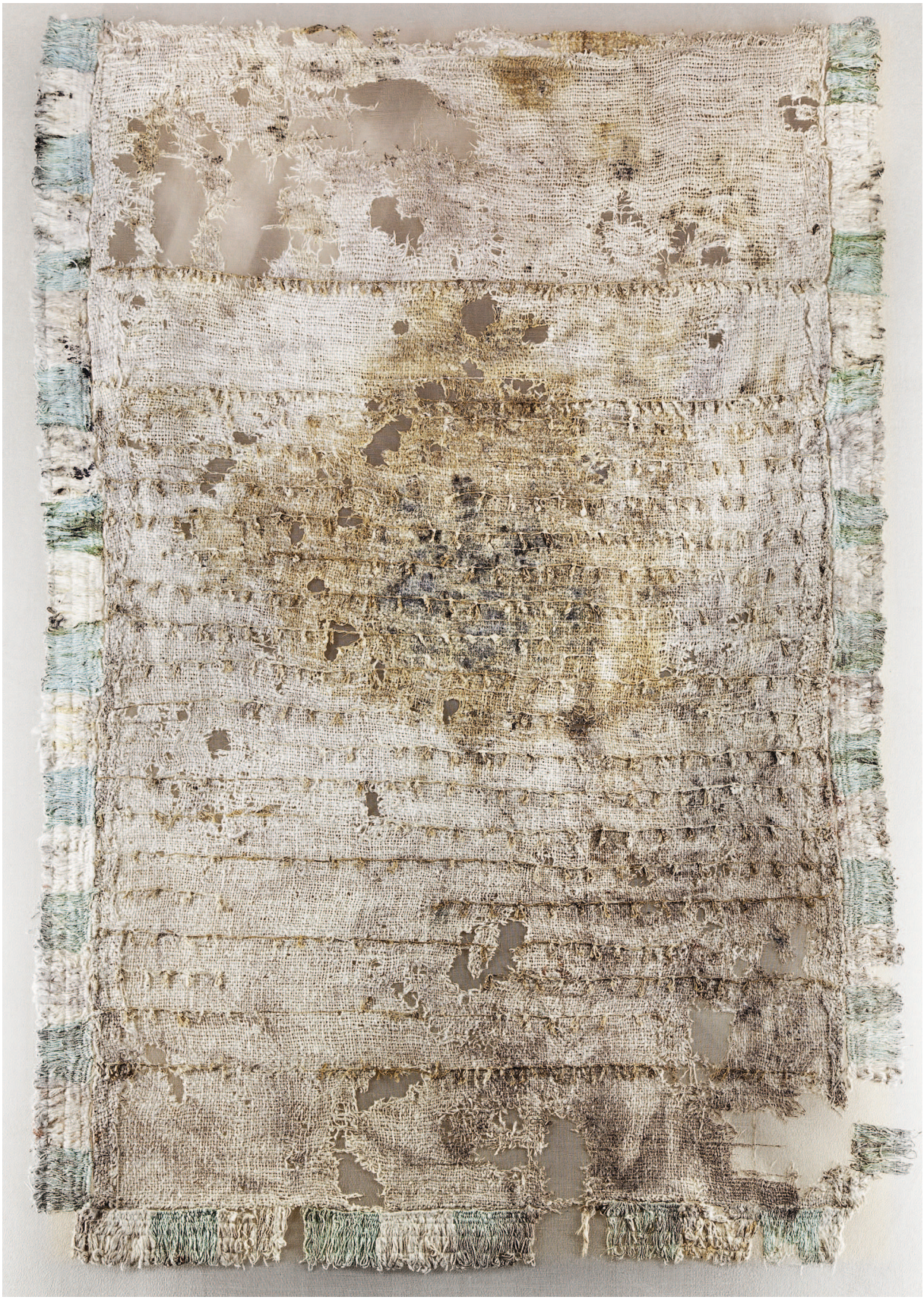


Fig. 31. *Mantle*, from Offering 102 at the Templo Mayor. Balanced weave with agave fiber. Courtesy of Lourdes Gallardo Parrodi. Photo by Estudio Zabé.

Fig. 32. Detail. Feather rim, net of threads intertwined and knotted with feathers. *Chimalli* shield, sixteenth century. Museo Nacional de Historia, INAH. Photo by Omar Dumaine.

Fig. 33. Cotton textile employing the plangi or resist dyeing technique. Basin of Mexico, Postclassic period. INAH. Photo: Archivo Digital de las Colecciones del Museo Nacional de Antropología, underwritten by the Instituto Nacional de Antropología e Historia and the Canon Corporation. Courtesy of MNA-INAH.

Fig. 34. Child's blouse from Cueva del Buen Abrigo, Coahuila, Laguna Region. Sala de las Culturas del Norte, MNA. Photo: Archivo Digital de las Colecciones del Museo Nacional de Antropología, underwritten by the Instituto Nacional de Antropología e Historia and the Canon Corporation. Courtesy of MNA-INAH.

the aforementioned Laguna Region (fig.33). It is a plain weave with *Agave lechuguilla* yarn of varying width. The motifs were painted freehand after the cloth was finished, with black carbon and red hematite pigments whose binders have not been identified. The second comes from Cueva de Chiptic in Chiapas and consists of three fragments of taffeta weave (balanced plain weave, see Emery 1966:76) joined together with long stitches (Johnson 1954) (Map/fig. 5, photo, upper right-hand corner).[17] One of the most important aspects of this fabric was the use of two techniques to create the designs. Apparently, batik, another resist dyeing technique, was used along with freehand painting (Johnson 1954:140). In this case, animal based dyes were used, namely, red cochineal from the insect *Dactylopius coccus* and purple from the sea snail *Plicopurpura pansa*, along with plant

17. It is interesting to note that the fragments recovered in the 1940s from a cave near Rancho Cieneguilla, Chiapas, also were woven in taffeta. The sheets, made on a backstrap loom, were joined together with a whipping stitch (O'Neale 1942).

dyes for the black, brown, yellow, and blue motifs (Johnson 1954:141–144).

The third example corresponds to the textiles recovered from Cueva de la Garrafa, located in the municipality of Siltepec, Chiapas (Landa Abrego *et al.* 1988) (Map/fig. 5, photo, lower right-hand corner). The corpus consists of four small pieces of white cotton fabric (*taletón* weave), three pieces of brown cotton fabric (*taletón* weave, (paired warp yarns and single weft yarns), a child's huipil with traces of blue yarn (made on a backstrap loom with gauze, taffeta (balance plain weave, see Emery 1966:76), *taletón* (paired warp yarns and single weft yarns), and semi-basket weaves (plane weave with paired warps or wefts, see Emery 1966:77, and three polychrome pieces (Herrera Gutiérrez *et al.* 1988), including two cotton fabrics (*taletón* weave (paired warp yarns and single weft yarns), decorated with bands. Prominent in the corpus are two garments whose hand-painted decoration is complex (fig. 5): a spectacular cotton shirt (*taletón* weave, (paired warp yarns and single weft yarns), painted green, ocher, blue, dark brown, and black hues (Herrera Gutiérrez *et al.* 1988:35), and a sheet (named in nahuatl *tilma*) of white cotton (*taletón* weave, (paired warp yarns and single weft yarns)), painted freehand with a palette dominated by brown, ocher, green, blue, red, and yellow.[18]

3 Conclusions

Based on the preceding examples and brief pass through the INAH collections, the following basic conclusions may be formulated:

1) Within the territory of present-day Mexico, instances of climatic conditions adequate for the preservation of organic materials are rare and limited to contexts such as dry caves, or burial matrices that contain copper or a high water content.
2) Cultural practices such as cremation was a factor in the deterioration or disappearance of fabrics, but also allowed their preservation when charred (paradigmatic cases include the Sacred Cenote at Chichén Itzá, the Casa de las Águilas of Tenochtitlan, and the Templo Mayor of Tlatelolco).
3) Based on this corpus, we can say that the fibers used for weaving in Mesoamerica and northern Mexico are all of plant origin. Three types of cotton and various kinds of agaves and yuccas have been identified, which yielded yarns or threads of different qualities, textures, and colors ranging from white to brown. Albeit to a lesser degree, the use of leaf (epiphytes), grass, and even bark fibers (fig.34) has been identified through biological microscopy, enlarging the catalogue of materials used in the production of textiles in pre-Hispanic times.
4) Generally, the yarns or threads were made with a spindle and wheel, but also some leaf fibers were hand-spun on the thigh.
5) In the manufacture of yarns, one type of fiber or a mixture of various species could be used. The use of cotton and agave yarns to make textiles was recorded in sixteenth-century pictographic and ethnohistorical documents. Likewise, textiles manufactured with either fiber have been recovered at several archaeological sites. In recent days, cotton and agave yarns have been detected in a single fabric (for example, at Cueva El Gallo in Morelos and Cueva El Lazo in Chiapas), which provides new insights into the textile technology of Mesoamerican peoples from the Middle Preclassic period in Central Mexico and the Early Classic period in the Zoque area.

Fibers used for weaving in Mesoamerica and the North of Mexico

Leaf fibers (epiphytes)	Leaf fibers (agaves)	Leaf fibers (yucca)	Seed fibers (cotton)	Bark fibers	Stem fibers (graminea)
Tilandsia sp	*Agave agustifolia*	*Yucca carnerosana*	*Gossypium sp*	*Guazama ulmifolia*	*Panicum sp*
	Agave inaquidens	*Yucca treculeana*	*Gossypium hirsutum*		*Panicum affbulbosum*
	Agave lechugilla	*Yucca samuela*	*Gossypium mexicanum*		
	Agave dasylirioides				
	Agave funkiana				
	Agave sisalana				
	Agave zapupe				

Fig. 34. Table. Principal fibers used for waving in Mesoamerica and the North of Mexico (archaeometric data from textiles mentioned by: García Mendoza, 1989; Muerza Avendaño, 2003; Govea Martínez, 2005; Cruz Flores and Noval Vidal, 2005; García Alonso Alba and Gonzalez Hurtado, 2005; Villanueva Camarena, 2006; López Arguelles, 2006; García Lascurain, et. al; Vargas Ramos, 2011; Gallardo Parrodi, 2011; Poncelis, 2016; García Alonso Alba, N. d.).

18. At list five more cotton textiles from Cueva de la Garrafa are conserved at the Regional Museum-INAH, Tuxtla Gutiérrez, Chiapas (Rojas Muñoz 2001; Ruiz Hernández 2002).

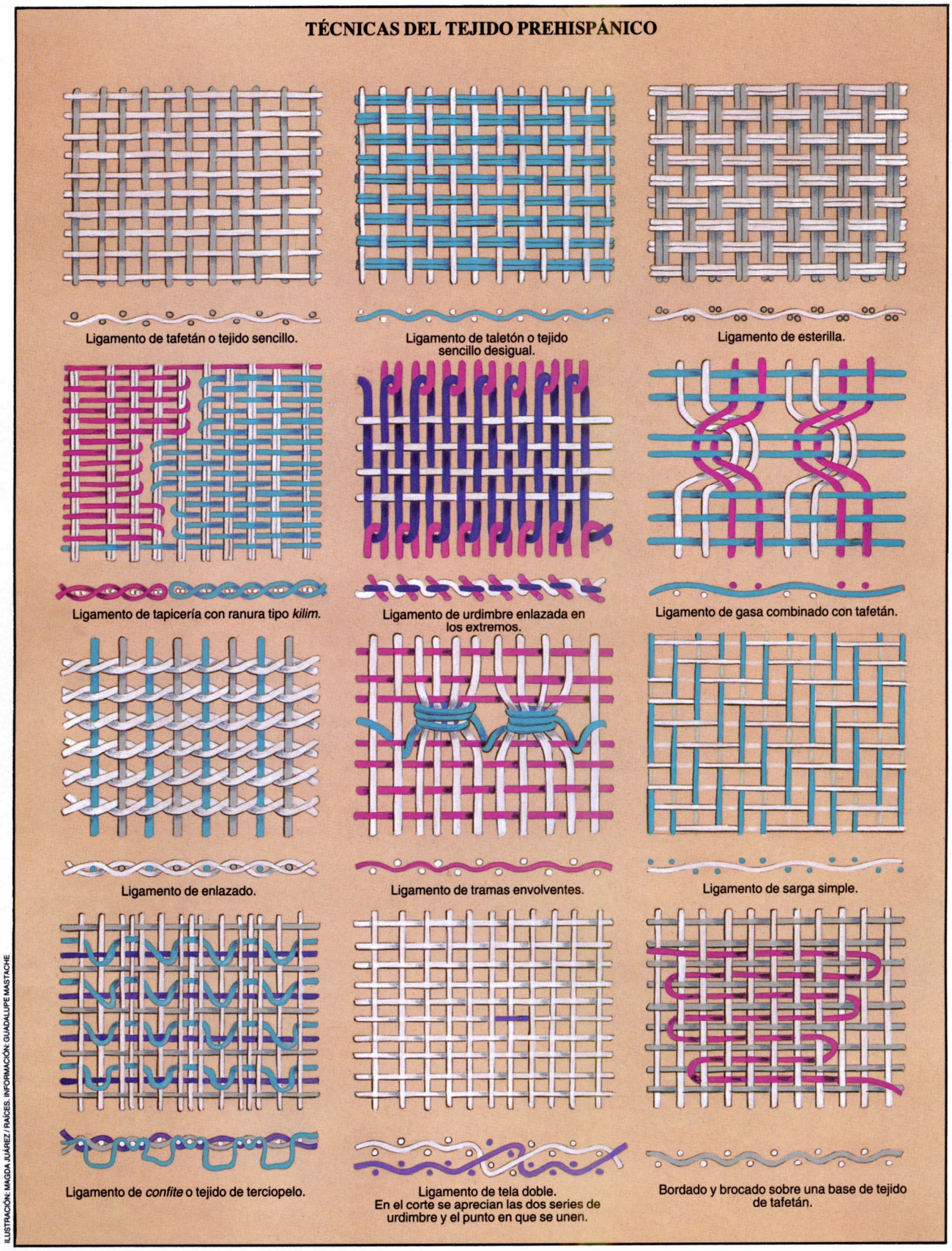


Fig. 35. Pre-Hispanic weaving techniques. Illustration by Magda Juárez, with information from Guadalupe Mastache (1996:24). Courtesy of *Arqueología Mexicana* and Editorial Raíces.

6) Most of the fabrics were made on a backstrap loom, but we also have an archaeological example that we assume was made on a horizontal ground or fixed loom.
7) In Mesoamerica and northern Mexico there is archaeological evidence of at least fifteen different weaving techniques (Mastache 2005:87) (some of them shown in fig. 35).[19] Plain weaves predominate, but more sophisticated techniques such as gauzes, brocades, and wrapped wefts have also been recorded (fig. 36). The lower frequency of more elaborate weaves may be due to their use in the production of more exclusive garments.
8) In most of the cases, dyeing was done after weaving, but supplementary wefts and floats of different colored yarns were also used to create brocade designs. Decorations were also embroidered.
9) At least three techniques were used to add decorative color once the cloth was finished: freehand painting with liquid media, and two types of resist dyeing—plangi and batik.
10) With regard to colorants, archaeometric analysis has identified pigments made from iron or carbon, plant extracts such as carotenoids (most likely *axiote*, *Bixa orellana*),[20] tannins, and indigo (*Indigofera suffiticosa*),[21] and from the animals cochineal (*Dactylopius coccus*) and a purple sea snail (*Plicopurpura pansa*).
11) Feathers and rabbit hair have been identified as ornamental elements.

Thus we have reached the end of this brief account of textiles recovered in different archaeological contexts and manufactured over the course of three thousand years in the vast territory of present-day Mexico. All of the examples presented here are under the care of Mexico's Instituto Nacional de Antropología e Historia.

Acknowledgments — I would like to thank Lena Bjerregaard and Jesper Nielsen for organizing the symposium where this work was first presented; Ann H. Peters for reading the text and for her comments; the people and institutions who provided photographs that appear in this essay, including Claude Stresser-Péan; Amaranta González Hurtado; Rocío Muiños Barro, Paola Ruisánches, Arturo Egea, Gabriela Palacios, María Ritter Miravete, María Olvido Moreno Guzmán, Vannesa Fonseca and the digitization team at the Museo Nacional de Antropología (INAH); Enrique Vela and *Arqueología Mexicana*; Héctor Meneses and the Museo Textil de Oaxaca; Lourdes Gallardo and Estudio Zabé; Verónica Kuhliger and Omar Dumaine of the Museo Nacional de Historia (INAH); Julia Poncelis and Lilián García-Alonso Alba of ENCRYM; José Luis Alvarado of SLAA-INAH. Mariana López Filloy for organizing the information in the graphics; and Scott Sessions for translating this essay into English.

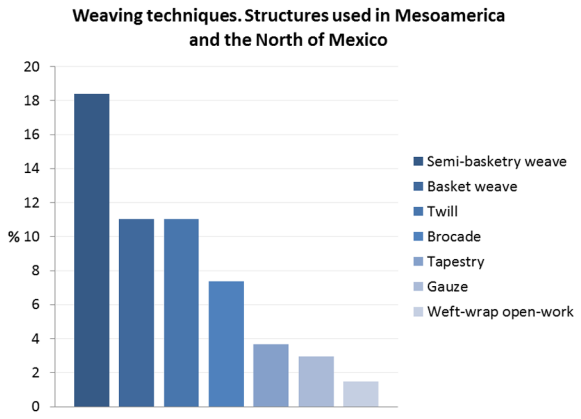


Fig. 36. Graphic showing the principal weaving techniques identified in the archaeological textiles from the Instituto Nacional de Antropología e Historia de México collection. Mariana López Filloy.

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19. Some of the techniques recorded for pre-Hispanic Mesoamerica include plain weave ("warp oriented" taffeta), taletón, semi-basket weave, basket weave, twill, brocade, tapestry, gauze (simple and complex), weft-wrap openwork, warp or weft float patterning, knotless netting, and double weave.

20. See Domenici and Sánchez Valenzuela in this volume.

21. Since the 1940s it has been possible to identify the use of indigo in textiles from Mesoamerica and Northern Mexico (see, for example, Kasha 1948).

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2

Urdimbres enlazadas de Mesoamérica. Textil de la Cueva del Gallo, Morelos, México

Patricia Ochoa Castillo* & Rosa Lorena Román Torres**

Resumen

Los ejemplos de textiles arqueológicos que se encuentran en la República mexicana son muy escasos debido entre otras cosas al suelo húmedo. Los hallazgos de textiles arqueológicos son considerados casi milagros de la arqueología y de la conservación, tal es el caso de la colección de textiles de la Cueva del Gallo, en Ticumán Morelos, México.

El objeto de este trabajo es la contextualización y análisis textil de un lienzo completo encontrado en esta cueva en 1991 elaborado con urdimbres enlazadas, teñido con azul índigo o añil y grana cochinilla, que dio inicio al Proyecto Arqueológico de Ticumán (PAT) en el 2002.

Los objetivos de este trabajo son: 1) dar a conocer a la comunidad especializada los resultados de investigación y análisis a los que se sometió la pieza durante su tratamiento de conservación 2) mostrar la contextualización del textil dentro del periodo del preclásico tardío (800 a.C.-100 d.C.) dentro de Mesoamérica y la ubicación del tejido 3) mostrar las líneas de investigación que se generaron durante el proceso de conservación.

Palabras clave: Preclásico tardío, Mesoamérica, Textil, urdimbres enlazadas, grana cochinilla, añil

Linked warps in Mesoamerica. The Gallo Cave Textile, Morelos, Mexico

Abstract

The examples of archeological textiles found in Mexican territory are very few, due to the humid soil, among other things. The archeological textile findings are considered almost miracles of archeology and of artifact conservation, as in the case of the textile collection in the Gallo Cave, in Ticuman, Morelos, Mexico.

The object of this work is the contextualization and textile analysis of a complete cloth found in this cave in 1991. It was made in discontinuous *warps,* dyed with *indigo* and *cochineal,* and led to the founding of the Archeological Project of Ticuman in 2002.

The intentions of this work are first, to share with the community of specialists results of the research and analysis to which the piece was subject during its conservation treatment. Second, to provide the context of this textile within the Late Preclassic period (800 b.C.-100 a.C.) in Mesoamerica and its location, and finally, demostrate the lines of research generated during the processes of conservation and analysis.

Keywords: Late Preclassic, Mesoamerica, Textile, discontinuous warps, indigo and cochineal

En el municipio de Yautepec, en el actual estado de Morelos, en México, se recuperó de manera fortuita, en una cueva, un textil que fue entregado al Museo Nacional de Antropología para su custodia. Esto dio inicio a excavaciones por parte de investigadores del INAH por la relevancia de tal hallazgo, ya que no es común encontrar materiales orgánicos prehispánicos, solo en casos como éste en que las condiciones del terreno los preservaron. Los materiales arqueológicos y

* Patricia Ochoa Castillo. Subdirección de Arqueología, Museo Nacional de Antropología, I.N.A.H., Secretaria de Cultura, México. Arqueóloga por la Escuela Nacional de Antropología e Historia, Maestra en Antropología por la Universidad Nacional Autónoma de México y Doctora en Estudios Mesoamericanos por la Facultad de Filosofía y Letras, de la Universidad Nacional Autónoma de México. Curadora de las Colecciones Preclásicas del Museo Nacional de Antropología.

** Rosa Lorena Román Torres. ENCRyM. I.N.A.H., Secretaría de Cultura, México. Es licenciada en restauración de bienes muebles por la Escuela Nacional de Conservación, Restauración y Museografía "Manuel del Castillo Negrete" del INAH. Desde el año de 1982 ha trabajado en la conservación y restauración de textiles en el INAH. De 1992 a la fecha es la coordinadora y profesora titular del Seminario taller de Conservación de Textiles.

Fig. 1. Textil Cueva del Gallo. Créditos Fotográficos: Archivo Digital de las Colecciones del Museo Nacional de Antropología. INAH-CANON

botánicos hallados corresponden al Preclásico medio y tardío (800 a.C.-100 d.C.). La presencia de este textil de forma rectangular, que muestra un diseño geométrico a base de rombos y líneas sobre un fondo en dos colores, es un hecho único ya que es uno de los más antiguos y mejor preservados de Mesoamérica (Fig. 1).

Para el presente trabajo, se aborda el estudio del textil de Cueva del Gallo, el primero encontrado en este sitio a principios de la década de 1990, y su estudio está enfocado a su importancia dentro de lo que significa en el conocimiento de las culturas preclásicas, la técnica de tejido y teñido que son evidencia material de la presencia de enlazado de urdimbres y tramas, un incipiente bordado y teñido con colorantes naturales, que indican un alto desarrollo en el arte de tejer (Johnson,1977: 151).

Como antes se mencionó, este textil se destaca por su buena conservación, y su antigüedad, además de ser el primer hallazgo de este tipo para la historia prehispánica de Mesoamérica, ya que, la evidencia material de las culturas preclásicas se concentra, principalmente en objetos hechos en barro, que es una de sus características de este periodo. Es hasta este hallazgo en que se tiene la primera evidencia de materiales orgánicos y en este caso particularmente de un textil.

Un breve panorama del periodo Preclásico

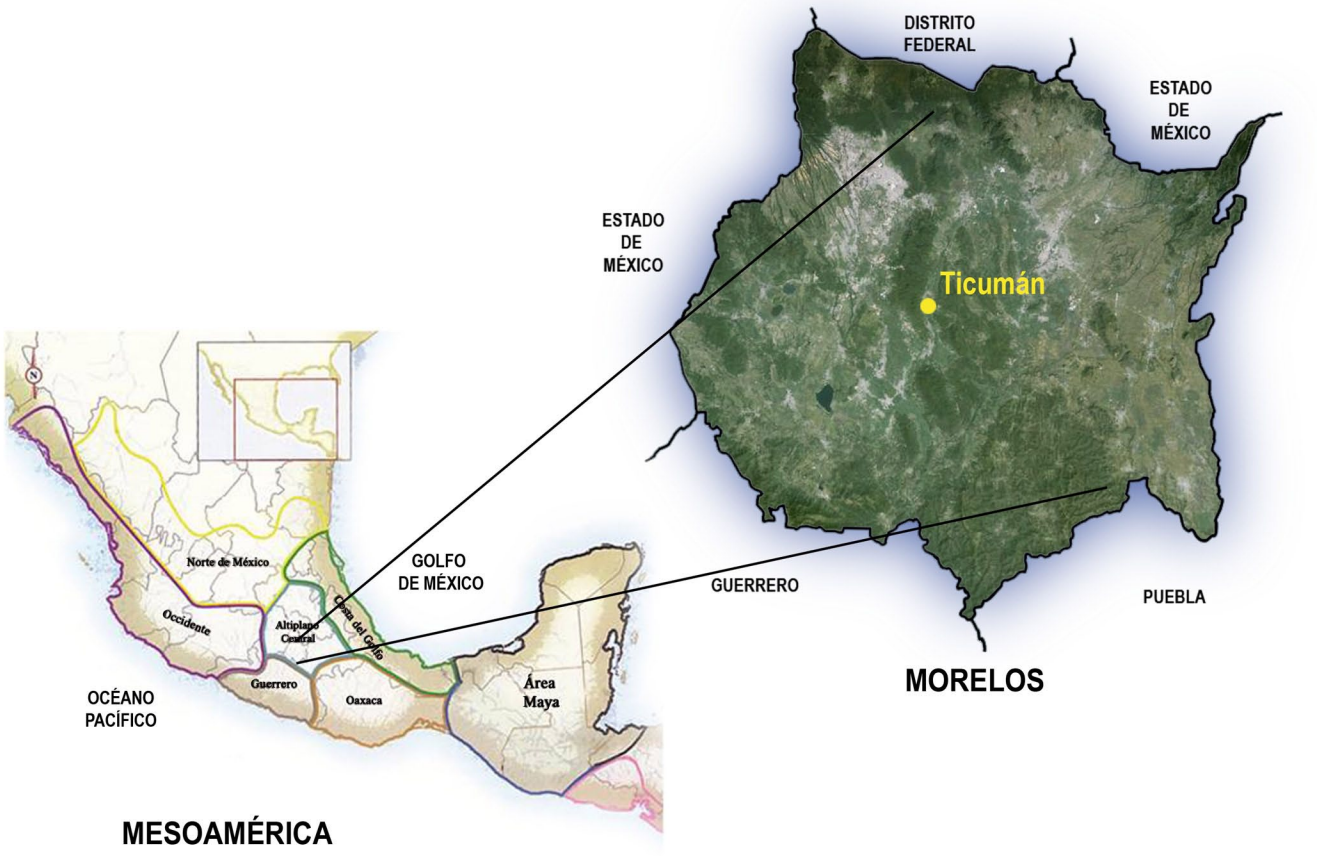
El Preclásico es el periodo más largo y el primero de la historia prehispánica y comprende de 2300 años a.C.-100 d.C., implicando un tiempo de formación y de gran complejidad. Su característica principal es el sedentarismo basado en una economía mixta, principalmente agrícola, que aunado con la producción cerámica constituyen elementos comunes a toda Mesoamérica. La cerámica revolucionó su modo de vida, ya que con ella se hicieron vasijas para el uso diario: cocinar, almacenar y servir alimentos, además de diversos implementos, así como en objetos utilizados en sus ceremonias religiosas y como ofrenda a los muertos.

Destaca, en este periodo, la elaboración de figurillas modeladas delicadamente en barro. Las representaciones femeninas, las más abundantes, muestran las características sexuales de la mujer por lo que se les ha relacionado al culto a la fertilidad de la tierra o materna ya que, además, fueron halladas principalmente en lo que pudieron haber sido campos de cultivo.

Con el correr del tiempo y como consecuencia de una economía autosuficiente, del desarrollo de la tecnología y de una amplia red de intercambio que incluía: materias primas, mercancías e ideas, que es un motor para que la sociedad se fuera haciendo más compleja. Hacia el final del periodo se aprecia, en evidencias materiales, el inicio de la estratificación social. El desarrollo de redes de intercambio de mercancías y de conocimientos estimuló y unificó creencias; el evento más importante entre 1200 a 600 a.C. es el desarrollo de la cultura Olmeca del sur de Veracruz y el norte de Tabasco, cuyas manifestaciones se aprecian en gran parte de Mesoamérica, especialmente en el Altiplano Central.

Más tarde en el Preclásico Superior 600 a.C.- 100 d.C., con el aumento de población y de aldeas, que desarrollan para convertirse en centros ceremoniales; surge la arquitectura, se inicia el templo como centro de reunión y de intercambio comercial. Asociado a estos centros rectores surge la figura del sacerdote, que adquiere control sobre la sociedad y es el encargado de dirigir el culto a las deidades, las que empezaron a ser representadas con atributos reconocibles como Huehuetéotl, dios del fuego, que aparece como un hombre viejo, sentado, que lleva un brasero sujeto a la espalda, así como algunos botellones que presentan sobre el cuello y el cuerpo rasgos que identifican la representación temprana de Tláloc, dios de la lluvia.

Cuicuilco, en el sur de la cuenca de México, adquiere una gran importancia como el más importante centro sociopolítico con la primera arquitectura cívico-religiosa en la Cuenca de México. En este sitio se construyó un basamento circular formado por cuatro cuerpos, el primero cubierto por la lava de la erupción del Xitle, hacia el año 100 a.C. La población se estima, alcanzó 20,000 habitantes concentrada en un área de 400 hectáreas. Las relaciones a larga distancia con grupos y regiones alejadas del Centro se manifiestan en



Mapa 1. Mesoamérica, el Altiplano Central y el Municipio de Ticumán, Morelos

cerámica y algunas figurillas, en las que se ve una clara influencia de Chupícuaro, Guanajuato, hacia esta época tardía del Preclásico.

Las actividades mágicas y rituales son un punto de partida en el desarrollo religioso de Mesoamérica, y es durante los primeros tiempos del Preclásico en que se aprecian actividades de tipo shamánico, en comunidades aldeanas, como fue en Tlatilco, uno de los sitios más importantes del Preclásico, en particular en el Centro de México y donde las evidencias materiales son relevantes. Para etapas tardías del Preclásico, destaca el culto a las montañas y al agua contenida en ellas, con recipientes ceremoniales en forma de ollas antropomorfas. Pero también es muy importante el culto a las cuevas, que es de una gran complejidad ideológica (Martínez del Río, 1953; Heyden, 1898; Ayala Falcón, 2010, entre una amplia bibliografía).

En resumen, se puede decir que el preclásico es el tiempo que marca la cristalización, de un largo proceso de adelantos tecnológicos, económicos y sociales que darán paso a culturas como es la teotihuacana. Los elementos que definen este período, fueron tomando características propias en las diferentes regiones del territorio mesoamericano, y así se fueron distinguiendo áreas con desarrollos propios, de los cuales la del Altiplano Central fue una de las más importantes en la época prehispánica.

El Altiplano Central, que es el área de donde proviene este hallazgo, queda comprendido dentro del marco formado por la Sierra Madre Occidental, la Sierra Madre Oriental y, al sur, la Cordillera Transversal Volcánica, que corre de oeste a este. Esta área, en donde se dieron muy tempranas manifestaciones de vida humana, está conformada por un paisaje muy accidentado, con mesetas, cuencas cerradas y valles separados por montañas con alturas que exceden en general los 2 000 metros sobre el nivel del mar. El área incluye los actuales estados de México, Distrito Federal, Morelos, Tlaxcala, Puebla y el sur de Hidalgo. En el Altiplano, se encuentran también las cabeceras de algunos de los sistemas fluviales más importantes de Mesoamérica, como el Panuco en la zona de Hidalgo y el Balsas en Puebla-Tlaxcala (Mapa 1).

Cueva del Gallo y de la Chagüera

El Proyecto Arqueobotánico Ticumán, en el estado de Morelos, tiene "... como antecedente las labores de rescate arqueológico realizadas por investigadores del INAH en la cueva del Gallo en 1992 (Sánchez, *et al.,* 1993), con base en el hallazgo fortuito hecho por un grupo de espeléologos, quienes rescataron de esta cueva un textil en excelente estado de conservación" (Sánchez, Alvarado y Morett, 1998: 81). Los hallazgos fueron ricos en materiales orgánicos, únicos sobre todo para la época. Se exploró un bulto mortuorio e infinidad de restos destacando textiles, cordeles, cestería, un contenedor laqueado y semillas, entre otros muchos objetos.

Posteriormente se trabajó también la cueva de la Chagüera, tanto por su proximidad física, sino también por su aparente sincronismo e identidad en el patrón funerario. Es así que durante 1994 y 1995 las excavaciones se concentraron en la cueva de la Chagüera y en 1996 se realizó una nueva temporada de trabajo en la cueva del Gallo (Sánchez, Alvarado y Morett, 1998: 81; Morett, Pelz, Sánchez y Alvarado, 1999). El Proyecto Arqueobotánico Ticumán (PAT) que surge en 1994 tiene muchas posibilidades de investigación como resultado de las exploraciones, pero en lo que respecta a los textiles, es una de las mejores colecciones de fragmentos textiles, cordelería y cestería de Mesoamérica. En el trabajo de Vargas Ramos (2011), se concentra el estudio textil y de fibras de una gran parte de la colección de las dos cuevas.

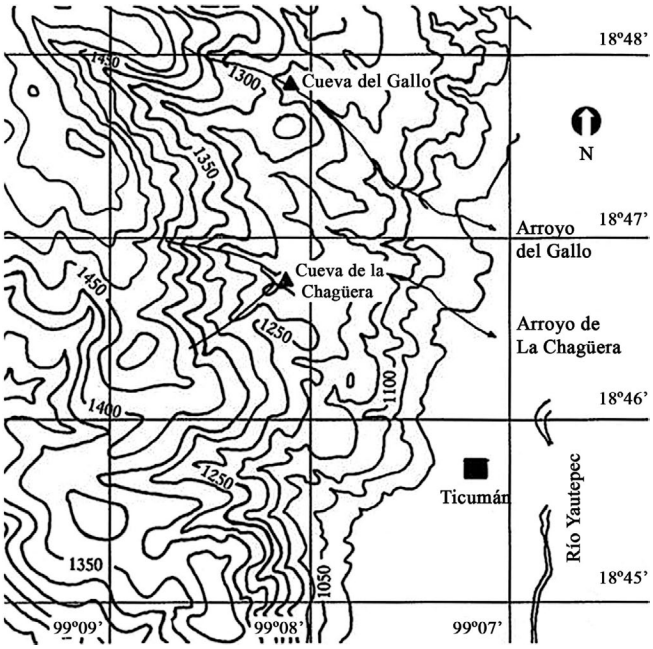
Localización geográfica

"Las cuevas del Gallo y la Chagüera se localizan al noroeste del poblado de Ticumán en el municipio de Tlaltizapán, estado de Morelos (Mapa 2). La distancia entre ellas es de un kilómetro y su altitud sobre el nivel del mar es de 950 m" (Sánchez, Alvarado y Morett, 1998: 82). El clima es cálido subhúmedo (Aw"o(w)(e), con lluvias en verano y poca oscilación térmica (García, 1981: 148, en Sánchez, Alvarado y Morett, 1998: 82). La vegetación es de selva baja caducifolia (Miranda y Hernández, 1963: 36, en Sánchez, Alvarado y Morett, 1998: 82).

Textil de Cueva del Gallo

Este textil de excelente calidad se encuentra en exhibición en la Sala del Preclásico del Altiplano Central, del Museo Nacional de Antropología, del Instituto Nacional de Antropología e Historia, con el N° Catálogo: 1-11671 y N° de Inventario: 10-0595275.

Descripción formal: Lienzo rectangular de 97 centímetros de largo por 20.5 centímetros de ancho, que muestra un



Mapa 2. Localización de las Cuevas del Gallo y la Chagüera en el estado de Morelos, México (Sánchez, Alvarado y Morett, 1998: 82)

diseño geométrico, a base de rombos y líneas horizontales en color rojo óxido sobre un fondo de tejido sencillo color azul verdoso.

Materia prima

Después del análisis macroscópico y la observación de los cortes longitudinales en el microscópico óptico Leica 2000 a 100x aumentos, (elaborado por Técnica en Química Industrial López Méndez Luz Esperanza en Colaboración del Químico Ignacio Castillo González y Rosa Lorena Román Torres) en el Laboratorio de la Escuela Nacional de Conservación, Restauración y Museografía "Manuel del Castillo Negrete" del INAH (fig. 3) es posible decir que el lienzo está elaborado con fibra celulósica o vegetal de la especie *Guazuma ulmifolia* (Cuaulote) (Vargas, 2011: 77). Una de las fibras más usadas para la elaboración de hilos en los textiles de la Colección de la Cueva del Gallo que se llevó a cabo mediante el análisis comparativo con muestras de referencias en la zona de Ticumán (Vargas, 2011).

El colorante usado en el fondo azul verdoso (fig. 2), después de ser analizado por análisis microquímicos y cromatografía de capa fina en el Laboratorio de investigación de la ENCRyM, dio positivo para índigo, *Indigofera suffruticosa*, el colorante azul más importante de México que se hacía de una planta indigoide, nativa de las Américas (Wallert,A.,1997: 60); en el color rojo óxido de los rombos y listas horizontales, se determinó presencia de ácido carmínico, es decir grana cochinilla *Dactylopius coccus*, insecto

Fig. 2. Detalle de rombo y líneas horizontales. Fotografía Patricia Ochoa

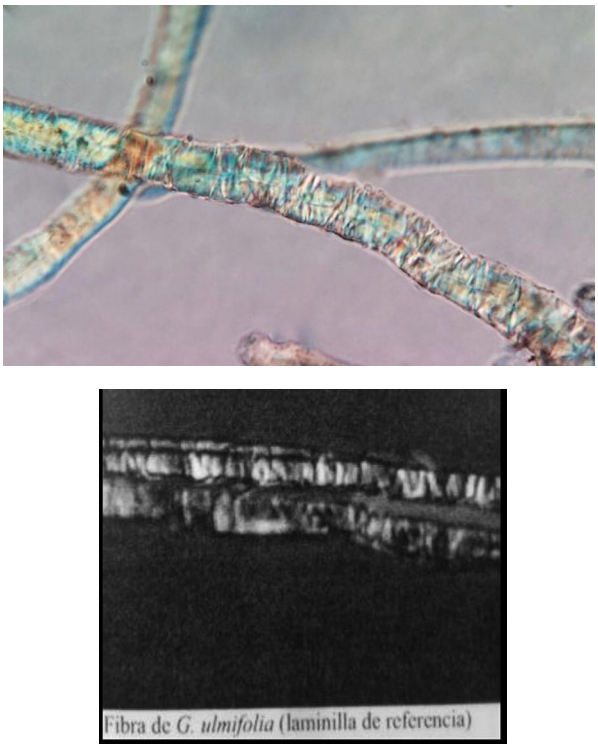


Fig. 3. Imagen microscópica 100x de la fibra (M2) del textil de la Cueva del Gallo del MNA; las fibras pertenecen a la especia *Guazuma ulmofilia* (Cuaulote). Fibra de la imagen de referencia (Vargas, 2011: 77)

parásito de los nopales y tunas, en náhuatl se le llama *nocheztli,* palabra compuesta por *nochtli,* y *eztli,* por sangre, que indica el color (Wallert, A., 1997: 60).

Técnicas de hilado

Es probable que las fibras del tejido estén hiladas a mano con malacate de origen prehispánico, en un solo cabo con torsión fuerte y dirección de torsión en "z" (fig. 4). Los hilos que enmarcan los rombos están formados por tres cabos

Fig. 4. Fotografía tomada con microscopio digital Dinolite del Laboratorio de Conservación del Museo Nacional de Antropología, Rest. Claudia Blas Rojas

Fig. 5. Detalle de los orillos finales donde se aprecia la cabecera o juntura. Esta imagen prueba que es un textil completo y no un fragmento. Fotografía Patricia Ochoa

con las mismas características de fibra e hilado que en el resto del tejido.

Técnicas de tejido

La pieza se tejió en el telar de cintura, típicamente mesoamericano. Esto es evidente porque en el tejido se pueden observar orillos laterales, orillos finales sencillos, donde se muestra claramente el " cierre o juntura", que es la zona del textil que se encuentra entre la parte final del tejido y la orilla denominada cabecera, y se denota por las irregularidades en el tejido (Mastache de Escobar, 1971: 60).

Los hilos de la urdimbre de los cabezales, tienen una área de menos de un centímetro sin tejer y se doblan para volver al tejido, como si los *enjulios* [que son dos barras de madera o palos sobre los cuales se fijan los hilos de la urdimbre con diferentes tipos de amarres], se hubieran retirado al terminar de tejer el textil, lo que indica que es una

Fig. 6. Ligamento de Taletón. Fotografía tomada con microscopio digital Dinolite del Laboratorio de Conservación del Museo Nacional de Antropología, Rest. Claudia Blas Rojas. Microscopio estereoscópico MNA

Fig. 7. Tramas flotantes horizontales. Fotografía Patricia Ochoa

Fig. 8. a) Enlazado de Urdimbre; b)Enlazado de Trama. Fotografía tomada con microscopio digital Dinolite del Laboratorio de Conservación del Museo Nacional de Antropología, Rest. Claudia Blas Rojas. Microscopio estereoscópico MNA

pieza completa y no un fragmento (fig.5). Este tejido es un ejemplo característico de los tejidos mesoamericanos, que se ha perfeccionado a lo largo de los siglos y que es común incluso en nuestros días en diferentes comunidades de la República Mexicana.

Este textil, a pesar de su antigüedad muestra ya algunos de los ligamentos característicos de los textiles mesoamericanos:

Tejido de Fondo: Para tejer la tela de fondo, se usó el ligamento de taletón donde dos hilos de urdimbre pasan por encima y por debajo de un hilo de trama (2:1)(Johnson, 1993) (Fig. 6).

Tramas flotantes: Elaboradas a base de bastas, forman las líneas horizontales que dividen el lienzo y cubren el cambio de color del segundo segmento de los hilos de la tela de fondo (Fig. 7). Las Bastas son hilos de urdimbre o trama que pasan por encima de dos o más hilos de la trama o de la urdimbre respectivamente, antes de ligar en forma regular. Se emplean para formar diseños (Johnson, 1993).

Enlazado de Urdimbre: Uno de los aspectos más interesantes del tejido de la pieza, es el Enlazado de Urdimbre en dos maneras, la primera, para cubrir el cambio de tono de hilos en el tejido de fondo y la otra, para formar los tres rombos irregulares de color rojo óxido (Fig. 1).

La técnica de enlazado de urdimbre, Irmgard Johnson, la identificó en una banda de la Colección de textiles de la Cueva de la Candelaria (Johnson, 1977), y menciona que: "únicamente he podido encontrar una sola referencia acerca de éste tipo de técnica de enlazado de urdimbre. Los indios Conibo de la región de Ucayali, de la parte superior del río Amazonas" (Johnson, 1977:74-151). Alejandro de Ávila Blomberg, menciona que ésta estructura de tejido aparece en muchos textiles arqueológicos de la costa de Perú.

Enlazado de Trama: Para tejer los rombos color rojo óxido, se utilizó el enlazado de trama, equivalente a uno de los tres tipos de Tapicería (De Ávila, Blomberg, Alejandro, Comunicación personal) (Fig. 8).

Fig. 9. Remiendo en uno de los rombos. Fotografía Patricia Ochoa

Fig. 10. Detalles del remiendo en uno de los rombos. Fotografía tomada con microscopio digital Dinolite del Laboratorio de Conservación del Museo Nacional de Antropología, Rest. Claudia Blas Rojas. Microscopio estereoscópico MNA

Fig. 11. Caja de palma (contenedor de agujas de magüey). Fotografías proporcionadas por José Luis Alvarado, al STCRT-ENCRyM 2012. INAH. SC

Remiendo: Otro de los aspectos interesantes de la pieza es la probable técnica de bordado o remiendo a punto cruzado (Nueva Enciclopedia de Labores Femeninas, 1967:217) que refuerza las uniones y cubre los bordes de 2 rombos (Fig.1).

En la Cueva de la Chagüera ubicada junto a la Cueva del Gallo en Ticumán, Morelos, se encontró una cesta elaborada con palma (Corona Cadena, 2012), que de acuerdo a los especialistas de la Subdirección de Servicios Académicos del INAH, el M. en C. José Luis Alvarado y el Biólogo Fernando Sánchez Martínez, contenía agujas de magüey posiblemente utilizadas para coser o bordar, si entendemos como bordado labrar sobre tela con hilo y aguja. El bordado no fue una técnica frecuente en los tejidos mesoamericanos anteriores a la llegada de los españoles. En el tejido no se aprecia un patrón de bordado, solo a manera de remiendo. Los hilos que se utilizaron para enmarcar los rombos, están sujetos con los hilos de la tela. Todos los hilos están hilados con la misma técnica que los usados para el tejido. Los hilos que se utilizaron para enmarcar los rombos, están tejidos en el telar de cintura.

Fig. 12. Figurilla femenina procedente de Tlatilco, estado de México

Fig. 13. Figurilla posiblemente femenina procedente de Tlatilco, estado de México

Otras evidencias del trabajo del textil

El hablar de manera específica de las figurillas, es importante ya que en ellas se muestra muchas de las actividades y costumbres de la vida de esta época y son fuente de información relevante en el conocimiento de estas culturas. En particular para el presente trabajo porque en ellas se muestra la forma en que la gente se adornaba, además de las costumbres culturales en el cuerpo como fue la deformación craneana, la mutilación dentaria y la pintura facial y corporal. También se muestran con peinados complicados, adornos en el pelo, ornamentos: collares, orejeras, brazaletes, pectorales. Pero también se aprecia cómo se cubrían el cuerpo.

En los primeros tiempos, las figurillas se muestran desnudas, tal es el caso de la figurilla más antigua encontrada en Mesoamérica, en el sitio de Zohapilco, en Tlapacoya, en el lago de Chalco y que marca el inicio de las sociedades tempranas: 2300 a.C. Esta pequeña figurilla de forma de fuste cilíndrico sin brazos, sin boca y con el vientre protuberante y no presenta vestimenta. Como ésta, las figurillas que comenzaron a aparecer en los contextos arqueológicos más antiguos tampoco presentaban vestimenta.

Pero aproximadamente en 1200 a.C. empiezan a presentarse con indumentaria. Generalmente las representaciones femeninas presentan el torso desnudo mostrando los senos, pero muchas de ellas llevan faldillas (Fig. 12), algunas otras muestran un tipo de banda en la cintura y en especial esta figurilla lleva cubierta parte de la cabeza, además de una especie de bolsa (Fig. 13). En cambio, las representaciones masculinas siempre se presentan con maxtlatl o braguero, y algunos con chalecos (Fig. 14).

Como vemos en estas pequeñas esculturas en barro, se hace patente el uso de indumentaria en estos grupos y que pudo haber estado elaborada con algún tipo de fibra o pieles, lo que con seguridad podemos saber es que se usaron materiales perecederos. Pero ya antes del hallazgo de estos textiles de la Cueva del Gallo y la Chagüera, ya podíamos inferir el trabajo de los textiles a través de otras evidencias dentro de la cultura material. Se trata del instrumental utilizado para la elaboración de textiles: malacates, pequeños cajetes bailadores, punzones y agujas de hueso. Todos estos corresponden cronológicamente al Preclásico medio (1200-600 a.C.).

Fig. 14. Figurilla masculina procedente del Centro de México

Consideraciones finales

El textil de Cueva del Gallo, el primero encontrado para este periodo temprano, aunque no fue recuperado de la mejor manera ya que fue extraído de su contexto arqueológico, representa un ejemplar único, tanto por su buen estado de conservación, por su antigüedad, por la excelencia de las técnicas de tejido y, por ser el único estudiado con estas técnicas en México.

A lo largo del Proyecto Arqueológico Ticumán (PAT) se recuperaron textiles, fragmentos de tejido, cestería y cordelería entre otros, que están relacionados de un contexto funerario, asociados a bultos mortuorios, relacionado a un ritual de cuevas. La función del textil en referencia no es fácil de saber, ya que por sus dimensiones no pudo haberse usado como vestimenta: tilma, maxtlatl, xicolli, etc., aunque por su forma y su tamaño es probable que sea una bolsa o morral.

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Fig. 1. N° Cat. 1-11671 y N° Inv. 10-595275
Fig. 12. N° Cat. 1-2496 y N° Inv. 10-77642
Fig. 13. N° Cat. 1-2170 y N° Inv. 10-47373
Fig. 14. N° Cat. 1-2164 y N° Inv. 10-47367

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Edición Fotográfica: D.G. Mabel A. Huamani Martínez
Fig. 2: XCVI/8-4-3
XCVIII/8-4-3
Image by Proyecto de Digitalización de las colecciones del Museo Nacional de Antropología, INAH-Canon. Reproducción autorizada por el Instituto Nacional De Antropología e Historia, México.

3

Los textiles procedentes del actual estado de Guerrero, México: una revisión a su estudio desde la perspectiva arqueológica y etnohistórica

Elizabeth Jiménez García
*Instituto Nacional de Antropología e Historia, México/Centro INAH Guerrero**

Resumen
En cuevas del actual estado de Guerrero, México, se han encontrado diversos objetos orgánicos como calabazos, cordeles, guaraches, madera, semillas y hojas. Asimismo, se han recuperado fragmentos de textiles que fueron elaborados con distintas técnicas, pigmentos y texturas que dan cuenta de una especialización e intensa actividad económica en tiempos prehispánicos.

En el México antiguo los textiles tuvieron múltiples funciones. Fueron muy utilizados como indumentaria de nobles y dioses, formaron parte de rituales y cubrieron objetos sagrados que se guardaron celosamente en templos, palacios y casas de los señores. También tapizaron paredes y se les colocó como doseles, tapetes, colchas, manteles y servilletas. Los textiles eran indicadores de prestigio y jerarquía, sobre todo los elaborados en algodón, ya fueran bordados o pintados. Se usaban en fiestas, ceremonias, matrimonios y posiblemente en rituales de enterramiento. Su valor era tal que se les empleó como un medio de cambio en transacciones comerciales.

El presente trabajo se divide en tres partes. Primero daremos un panorama general de los textiles arqueológicos que se han recuperado en el actual estado de Guerrero. Después hablaremos de los materiales procedentes de la región centro-norte de Guerrero, es decir, de cuevas al norte del río Balsas por el rumbo de Teloloapan, Iguala y Cocula. Por último, veremos elaborados diseños de algunos textiles de esta región y su semejanza con telas que la provincia tributaria de Tepecoacuilco debía enviar a México-Tenochtitlan y que fueron representadas en la *Matrícula de Tributos* y *Códice Mendocino* del siglo XVI.

Palabras clave: textiles prehispánicos, textiles de Guerrero, textiles en cuevas

The textiles from the State of Guerrero: a survey from an archaeological and ethnohistoric perspective

Abstract
Pre-Columbian organic objects like gourds, rope, sandals, wood, seeds and leaves have been found in caves in the state of Guerrero, Mexico. Moreover, fragments of textiles manufactured in various techniques, dyes and textures have been recovered, which suggest an intensive degree of specialization and economic activity in pre-Columbian times.

In ancient Mexico the textiles had multiple functions. They were much used as clothing by the nobility and the gods, they were part of rituals, and they covered sacred objects that were kept in the temples, palaces and the houses of the nobility. They also covered walls and were used as canopies, mats, bedspreads, mantles and scarves. The textiles indicated prestige and hierarchy, especially the finer cotton textiles, which were embroidered or painted. They were used in fiestas, ceremonies, weddings and probably also funeral rituals. Their value was so great that they were also used as a means of exchange in commercial transactions.

This paper is divided in three parts. First I give a general overview of the textiles excavated in Guerrero. Then, I discuss the objects from the northern central region of Guerrero, i.e. from caves north of the river Balsas around Teloloapan, Iguala and Cocula. Finally, I discuss the elaborate designs on the textiles of this region and their likeness to the textiles given by the tributary province of Yepecoacuilco to Mexico-Tenochtitlan, that were represented in *Matrícula de Tributos* y *Códice Mendocino* from the XVI century.

Keywords: pre-Hispanic textiles, Guerrero textiles, textiles in caves

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* Elizabeth Jiménez García es arqueóloga egresada de la Escuela Nacional de Antropología e Historia del INAH y doctora en Estudios Mesoamericanos por la Facultad de Filosofía y Letras de la UNAM. Actualmente es investigadora del INAH. Se ha dedic]ado a la arqueología del estado de Guerrero, a códices de la Montaña de Guerrero y a la iconografía de la escultura de Tula en el estado de Hidalgo. Su reciente investigación se ha centrado en la nobleza indígena de Tlapa de los siglos XVI, XVII y XVIII.

Introducción

Los textiles son evidencias arqueológicas importantes para comprender a los pueblos mesoamericanos como al resto de las poblaciones. Fueron fundamentales para las antiguas sociedades, pues además de tener un uso práctico, se emplearon en distintos ámbitos de la vida social, religiosa y económica de muchas poblaciones. Se utilizaron para vestir, para cubrir objetos sagrados, para comerciarlos, e incluso como símbolo de estatus o prestigio. Ante sus múltiples usos y funciones, los textiles deben ser estudiados de manera integral, como lo empezamos a hacer en este breve trabajo.

En términos generales, hablaremos de los textiles arqueológicos que se han recuperado en el actual estado de Guerrero (Figura 1), una extensa área donde se asentaron y desarrollaron diferentes culturas por más de dos mil años.[1] Nos referiremos sobre todo a los materiales de la región del Bajo Balsas porque proceden de asentamientos humanos excavados, y a los que se recuperaron en cuevas en la parte centro-norte de Guerrero. Compararemos los materiales de ambas áreas y revisaremos lo que dicen las fuentes documentales del siglo XVI sobre las poblaciones que conformaron las provincias tributarias[2] de Tepecoacuilco y Cihuatlán, y el área intermedia entre ambas.

Procedencia y características generales de los materiales

Diversos fragmentos de textiles arqueológicos han sido recuperados sobre todo en la parte norte y poniente del actual estado de Guerrero (Mapa 1). Su preservación en entierros ha sido posible por estar en contacto con objetos de cobre, o por encontrarse en ambientes estables como las cuevas. Estos materiales presentan distintas técnicas de tejido y fueron confeccionados con fibras de maguey y/o algodón, con aplicaciones en algunas ocasiones con pelo de conejo o liebre. Es posible que algunos de ellos incluso hayan estado decorados con cascabeles de cobre o botones de concha. Por su asociación con objetos hechos de cobre y con material cerámico, estos textiles tienen una temporalidad entre el año 800 y 1520 después de Cristo.

1 Chilapa

En una cueva de la región de Chilapa, "buscadores de tesoros" hallaron dentro de una olla tres fragmentos de textil

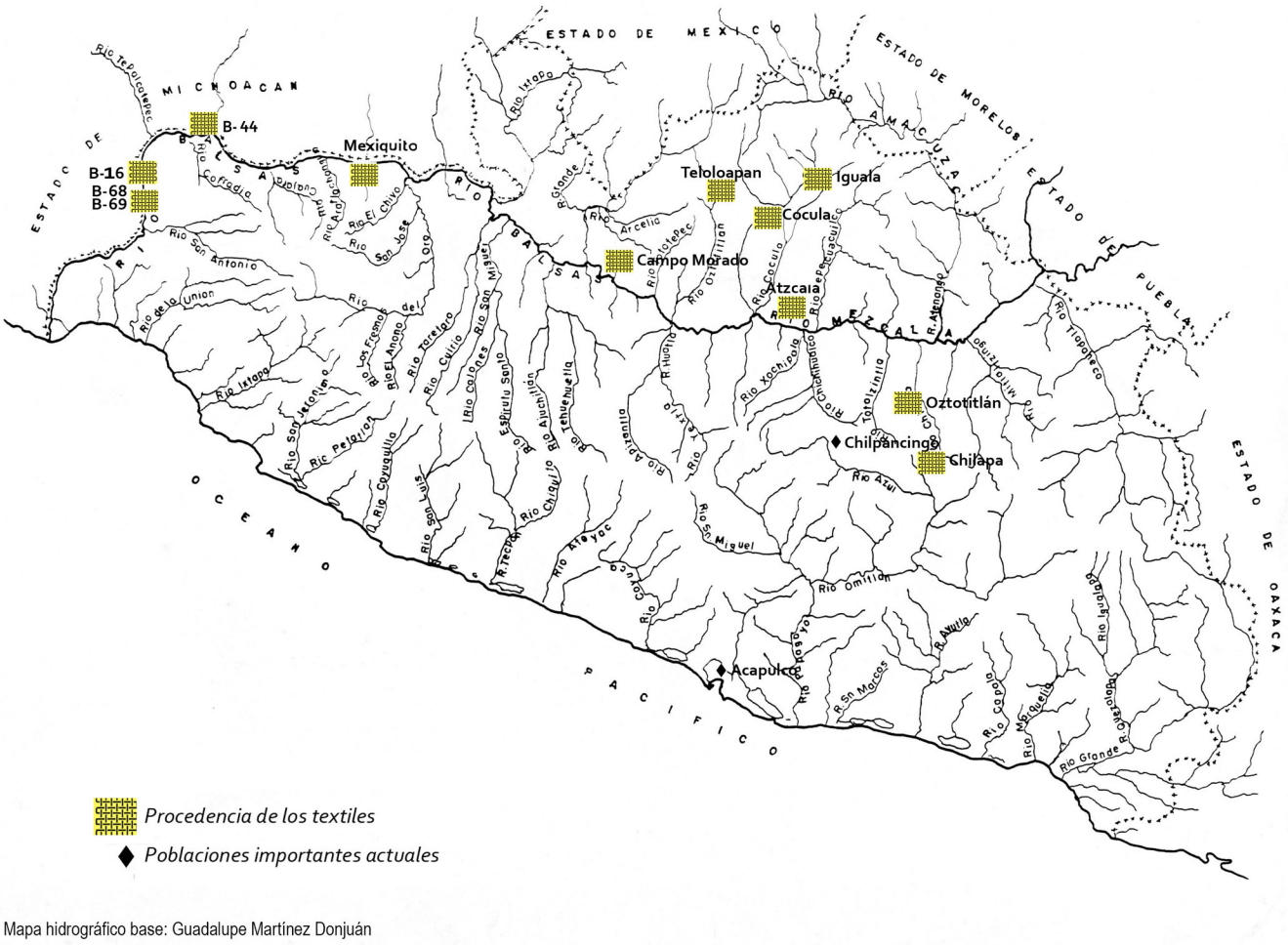
Figura 1. Áreas donde se han encontrado textiles prehispánicos, estado de Guerrero, México. (Mapas tomados de: https://commons.wikimedia.org/w/index.php?curid=15994625 ; https://es.wikipedia.org/wiki/Regiones_de_Guerrero#/media/File:Mapa_guerrero.gif con modificaciones)

de una misma prenda, y una franja decorada con caracoles. Los fragmentos indicaban que la pieza había sido hecha con hilos de algodón y pelo de conejo. Era una prenda de vestir para persona adulta que se componía de dos lienzos rectangulares, formando un *huipilli* o *xicolli*[3] (Johnson, 1967:151). El tejido básico fue ornamentado por una combinación de brocado y gasa y embellecido con pelo de conejo y liebre. La parte principal de la prenda es roja y una banda multicolor decoraba al menos uno de los bordes (Johnson, 1967:150-151). Después de ser tejida, fue teñida con un pigmento de óxido de hierro (Johnson, 1967:155).

La franja, con aspecto de fleco, fue hecha de urdimbres entrelazadas y adornada con caracoles de mar (*Marginellidae, Prunum ass. apicinum Menke*), que son del Golfo de México aunque pueden existir en el Océano Pacífico (Johnson, 1967:160, 171). A diferencia del anterior, los hilos de la banda fueron teñidos antes de ser tendidos en el telar y es posible que el color azul sea añil[4] (Johnson, 1967:161).

La prenda mayor es de manufactura prehispánica, probablemente del Posclásico Tardío, una pieza de lujo tal vez llevado en vida por un noble (Johnson, 1967:161, 164). Irmgard Johnson indica que pudo ser el *huipilli* usado por una mujer, o el *xicolli* de un señor noble, sacerdote o danzante, como se observa en los códices mixtecos, donde muchos individuos usan *xicolli* de color rojo con una banda inferior (Johnson, 1967:170).

1. Agradezco la edición digital de todas las imágenes a Aarón Arboleyda Castro.
2. Los topónimos o nombres de lugar que aparecen agrupados en cada lámina, han sido considerados por varios investigadores como una provincia, entre ellos, Robert H. Barlow.
3. De ancho la prenda mide 82 cm, pero no se puede saber la medida que tuvo de largo total, aunque tenía más de 78 cm (Johnson, 1967:151).
4. El color azul podía obtenerse de plantas del género *Indigofera*, cuyas hojas producen una sustancia colorante llamada índigo (Mastache, 1971:20).



Mapa hidrográfico base: Guadalupe Martínez Donjuán

Mapa 1. Textiles arqueológicos en el estado de Guerrero. (dibujo de Elizabeth Jiménez G.)

2 Oztotitlán

En la gruta norte de la cueva de Oztotitlán,[5] al norte de Chilapa, David Grove encontró tres fragmentos de tejidos al parecer del periodo Posclásico. Uno corresponde a una faja con tejido labrado de urdimbre similar a algunos ejemplares del Infiernillo,[6] Mexiquito y Teloloapan; los otros dos fragmentos parecen ser parte de una misma pieza, pues ambos fueron hechos con fibra vegetal burda, probablemente de ixtle o fibra de maguey (Johnson y Mastache, 2002:449). El ixtle (henequén) fue la fibra obtenida de algunos agaves, plantas propias de regiones semiáridas (Sepúlveda, 1991:113).

3 Campo Morado

En la cuenca del río Balsas, al sureste de Arcelia, también en una cueva se recuperaron fragmentos de algodón que estuvieron en contacto con cascabeles de cobre (Johnson, 1967:171). Los cascabeles presentaban diferentes tamaños y formas (incluso efigies) y algunos de ellos tenían escrupulillo,[7] así como cuentas de cobre tubulares en hebra de algodón (Johnson, 1971, Table 2). Las técnicas muestran dos variantes de tejido sencillo y un tipo único de tejido labrado de urdimbre, distinta a las del Infiernillo (Johnson, 1967:171). Había algodón sin hilar, hilado, y cordaje con múltiples

5. David Grove identificó estos murales como pertenecientes a la época Olmeca (http://www.famsi.org/spanish/research/grove/index.html#top)

6. En el curso de este trabajo utilizamos varios nombres para referirnos a una misma área: “Infiernillo” por tener ese nombre la presa hidroeléctrica, “Bajo Balsas” por ser la parte más cercana a la desembocadura del río Balsas hacia el mar, y “Tierra Caliente” porque así se llama esa región político-geográfica. Los tres términos se han usado indistintamente por diversos investigadores pero se refieren a la misma área que colinda con el actual estado de Michoacán.

7. Grano de metal u otra materia, que se pone dentro del cascabel para que suene (*Diccionario de la Real Academia Española*, http://dle.rae.es/?id=GKqLKNz).

capas (Johnson, 1971, Table 2). También se encontró un anillo de cobre (3 cm de diámetro) que preservó ropa de algodón (Johnson, 1971, fig.13).

4 Atzcala

En otra parte del río Balsas, en el sector que llaman río Mezcala, en cuevas de Atzcala se recuperaron diversos objetos que incluían textiles. También había pequeñas sandalias votivas hechas de fibras, un tejido con flecos e hilos teñidos de azul, un fragmento de tejido en telar con bordado en azul, un "atado sagrado", dos tejidos miniatura con cuatro orillas y una pequeña prenda de vestir tipo chaqueta. Algunas de las sandalias estaban amarradas en pares y adornadas con cuentas de piedra verde. Telas miniatura[8] de tejido sencillo envolvían pequeños bultos ceremoniales (Johnson y Mastache, 2002:444-445); uno de los cuales conservaba su amarre con hoja de palma (Johnson, 1971, Table 2).

La prenda de vestir es una chaqueta miniatura[9] con aberturas para los brazos, sin cuello ni mangas y abierta al frente. Johnson y Mastache (2002:446-447) señalan que no fue elaborada en telar de cintura, ya que las urdimbres sin hilar se mantienen unidas mediante hileras de tramas enlazadas. Aunque no lo especifican, considero que se confeccionó alternando las tramas con las urdimbres sobre una superficie plana. Es posible que haya sido utilizada por un niño que no pertenecía a la nobleza o en algún ritual por personas de pocos recursos, ya que fue hecha con cordeles de fibra de agave, o bien se tuvo la intención de realizarla precisamente con esos materiales para alguna ceremonia por ahora desconocida.

Estos textiles son un ejemplo de piezas elaboradas con fibras diversas que no incluyen algodón. Los fragmentos elaborados en telar de cintura fueron todos de fibras de líber, y el más interesante tiene un diseño bordado con hilos de color azul que parece representar una greca escalonada o *xicalcoliuhqui*[10] (Johnson y Mastache, 2002:445). La mayoría de estos objetos parecen ser ofrendas votivas que se colocaron dentro de las cuevas por motivos religiosos, mortuorios o curativos (Johnson y Mastache, 2002:444).

5 Mexiquito

En una cueva de Mexiquito, al oeste de Zirándaro, se obtuvieron fragmentos de textiles y objetos de cobre. La mayoría fueron elaborados con algodón y sólo dos fragmentos combinaban algodón y fibras de líber. Diez fragmentos preservados por contacto con cascabeles de cobre fueron tejidos de tafetán[11] y taletón,[12] algunos de ellos con la urdimbre y trama muy abiertos y otros muy cerrados. De estos últimos, se observan telas con la urdimbre "tan cerrada que cubre completamente la trama, produciendo un efecto de acordonado muy característico" (Johnson y Mastache, 2002:450).

6 Teloloapan-Iguala-Cocula

Al norte del río Balsas, en el sector de Mezcala, un conjunto numeroso de material orgánico compuesto por textiles, fragmentos de madera de telar de cintura, huaraches, etc., fue obtenido en varias cuevas entre las poblaciones de Teloloapan, Iguala y Cocula.[13] Los textiles, que requirieron trabajos de limpieza y restauración, aún no han sido estudiados, sin embargo, un análisis inicial permitió detectar ligamentos como tafetanes, taletones, gasas y brocados, así como el uso de hilos en colores café, verde, azul y rojo. Más de la mitad de los textiles fueron elaborados con fibras de algodón, el resto con fibras de agave, y otros por definir (González y Sánchez, 2002:475, 480).

7 Infiernillo o Bajo Balsas

A diferencia de los materiales anteriores, que fueron encontrados en cuevas y obtenidos por "buscadores de tesoros", los de la región del Infiernillo[14] se recuperaron gracias a excavaciones arqueológicas realizadas en la confluencia del río Tepalcatepec (estado de Michoacán) con el río Balsas entre los estados de Guerrero y Michoacán.

De los 104 sitios arqueológicos localizados en esta región de la cuenca del río Balsas, que también se llama Bajo Balsas, se practicaron excavaciones en 19 sitios, en los cuales se encontraron 282 entierros (González C., 1979:26; Suárez D.,

8. Tienen sus cuatro orillas y son de forma cuadrada, de 12 cm X 12 cm (Johnson y Mastache, 2002:445).

9. Tiene 21.5 cm de largo y 25 cm de ancho extendida (Johnson y Mastache, 2002:445).

10. *Xical-coliuhqui*, palabra náhuatl compuesta por: *xicalli* "vaso de calabaza", *coliuhqui* "cosa torcida o acostada" (Molina, 1992:24r, 158v).

11. Tafetán, llamado también "tejido plano" o "tejido sencillo": un solo hilo de trama cruza un hilo de urdimbre (Mastache, 1971:43-44).

12. Taletón o "tejido plano desigual" o "tejido sencillo desigual": dos o más hilos de trama cruzan un hilo de urdimbre, o bien, dos o más hilos de urdimbre son cruzados por un hilo de trama (Mastache, 1971:44).

13. Entre 1960 y 1990 un habitante de Iguala recolectó una gran cantidad de materiales que encontró en distintas cuevas situadas en los alrededores de Teloloapan, Iguala y Cocula. Además de textiles, había maíz, distintas semillas, cortezas de árboles, calabazos naturales pintados, cordeles, guaraches votivos y fragmentos de madera, entre otros (Jiménez G., 2002).

14. Se llevó a cabo un Salvamento arqueológico en el año 1964 donde se construiría la Presa "Morelos" o Presa del Infiernillo para generar energía eléctrica. El área inundada fue de 345 km2 (González C., 1979:9, 26).

1977:82). En estos lugares excavados, se detectaron entierros que tenían objetos de metal y de concha, otros entierros que contenían tanto textiles como metales, y otros entierros donde había objetos de metal pero sin textiles (González C., 1979:26, 98).

Por la importancia de los materiales excavados, de las características de los sitios, y por la asociación de los textiles con otros objetos, hablaremos más de esta región que se le denomina Infiernillo o Presa del Infiernillo.

De un total de 289 entierros explorados sólo aparecieron restos de textiles en 9 entierros (3.11%). El elemento fundamental para situar cronológicamente el material analizado fue su asociación con los objetos de cobre que permitieron su conservación, y la temporalidad establecida para la aparición de la metalurgia en el área mesoamericana es para un periodo posterior al año 900 después de Cristo (d.C.), aunque pudiera ser anterior a esa fecha (Mastache, 1971:102). Sólo se tiene fecha de Carbono-14 para un sitio (1220 d.C.) de donde procede una pieza de textil (Mastache, 1971:102). De acuerdo con la especialista en metales, Dorothy Hosler (1994:263-268 y cuadro 11), los cascabeles, aros, agujas y pinzas de sitios excavados en el Infiernillo, corresponden a un periodo tecnológico que se desarrolló entre los años 800 y 1520 d.C.

En todos los tejidos (trama y urdimbre) fueron empleadas exclusivamente fibras de algodón (*Gossypium sp.*) pero en ningún caso fue posible determinar la especie utilizada, aunque al menos hubo dos variedades distintas: algodón blanco y café, éste último usado especialmente con fines decorativos, y en una pieza textil los diseños se hicieron con fibras duras sin hilar del género *Agave* (Mastache, 1971:63).

El conjunto de materiales, que fueron estudiados por Guadalupe Mastache (1971), estuvo conformado por sólo 36 piezas, sin embargo la variedad de los ligamentos registrados es muy grande, ya que aparecieron 6 tipos diferentes, además de las técnicas de brocado y bordado. Los de mayor frecuencia fueron el taletón y el tafetán (telas llanas), o sea, las formas de entrelace más simples y de más amplia distribución en Mesoamérica y norte de México. Aparecieron también otros ligamentos mucho más complejos como damasco[15] (o labrado de urdimbre), satín y tela doble, cuya presencia pone de manifiesto el alto grado de desarrollo que esta región había alcanzado en la técnica del tejido (Mastache, 1971:103). Los fragmentos de satín son hasta la fecha la única evidencia de que esta técnica era conocida en época prehispánica en el área mesoamericana. Las muestras de damasco, satín y tela doble, en especial estas últimas fueron elaboradas, sin duda alguna, por tejedores muy hábiles y experimentados, pues además de que su manufactura requiere de complicados procesos de urdido y tejido, la técnica de elaboración de esas piezas es excelente (Mastache, 1971:103). Posiblemente los ejemplares tuvieron una función fundamentalmente funeraria (Mastache, 1971:104).

Los colores que aparecen en los fragmentos de textil son rojo y café. El análisis químico indicó que el color rojo se obtuvo de un pigmento de hierro, probablemente hematita (Mastache, 1971:83), y las fibras de color café son del algodón natural que tienen esa tonalidad. Recordemos que la prenda de Chilapa también fue decorada con pigmento rojo, por lo que en ambas regiones parece haber sido común el uso de algún tipo de tierra en la confección de textiles, como las piedras amarillas que tributaba la provincia de Tlalcozautitlán a los mexicas, que era "una especie de tierra amarilla que puesta al fuego toma al punto un color rojo" (Anderson, 1963:77, quien cita al médico e historiador del rey Felipe II, Francisco Hernández).

Áreas propicias para el cultivo del algodón

Como hemos visto, en la mayoría de los sitios mencionados se recuperaron textiles hechos con fibras de algodón, indicio de que en nuestra área de estudio el algodón pudo ser utilizado y cultivado no sólo en el Posclásico sino también en épocas más remotas. Se ha determinado que el algodón *Gossypium hirsutum* es originario del sur de México, Chiapas y norte de Guatemala, por lo que olmecas, mayas, mixtecas y zapotecas se desenvolvieron en áreas geográficas con clima adecuado para el desarrollo del algodón (Rodríguez, 1976:12).

Los algodonales en el México antiguo corresponden al *Gossypium hirsutum*, localizados en regiones cálidas con temperaturas alrededor de 32 grados centígrados y con una precipitación pluvial de 500 a 1000 mm. La humedad de la planta podía ser mantenida por medio de irrigación o por estar cercana a la humedad de los ríos (Mohar, 1993:142), además, las condiciones climáticas permitieron sembrar el algodón en la costa del Océano Pacífico, en ciertas áreas de ríos que desembocan en el río Balsas, y en determinados lugares de la propia cuenca del Balsas.

En época prehispánica también se trabajó el algodón *coyoichcatl* o algodón leonado (*Gossypium microcarpium*) pero ninguna de las dos variedades (*G. hirsutum*, *G. microcarpium*) se cultivó en el altiplano mexicano (Sepúlveda, 1991:111). Ambos fueron sembrados en numerosos puntos del actual estado de Guerrero, donde el clima cálido lo permitía y el agua abundaba como se observa en el mapa

15. El término "damasco" y todos los demás utilizados en este trabajo, fueron tomados de Irmgard Johnson y Guadalupe Mastache. Es indispensable un re-estudio que posibilite el uso de una terminología estructural a nivel mundial.

hidrográfico (ver Mapa 1). En el Posclásico, el algodón parece haber sido tan abundante que también se utilizó para reparar objetos, como se observa en los hilos (Alvarado, 2006) con que se remendaron algunos tecomates que fueron pintados con serpientes emplumadas y que proceden de la región de Teloloapan-Iguala-Cocula.

El algodón (*Gossypium hirsutum*) fue utilizado en el Valle de Tehuacán (estado de Puebla) aproximadamente desde el año 5,000 antes de Cristo (a.C.), sin embargo, no hay tejidos elaborados con algodón sino a partir de 900-200 a.C. en ese mismo lugar (Mastache, 1971:98). Las excavaciones arqueológicas permiten saber que el algodón se utilizó desde épocas muy tempranas (400 a.C.-220 d.C.) aunque posiblemente con poca demanda, como lo señalan los fragmentos encontrados en las cuevas El Gallo y La Chagüera, en el Valle de Morelos, posiblemente de uso ritual envolviendo bultos sagrados depositados en cuevas (Vargas, 2011:82-87).

El algodón fue uno de los cultivos más importantes en la Cuenca del río Balsas, obteniéndose en el Balsas Medio y Bajo Balsas en las riberas de los ríos por el sistema de humedales (Armillas, 1949). El nombre de una población ejemplifica ese tipo de cultivo, pues al norte del río Balsas, en plena región de Tierra Caliente, el nombre antiguo de Cutzamala era *Tamácuaro* (en Purhépecha), "lugar de humedales" (Armillas, 1949:96).

En la segunda mitad del siglo XVI, las *Relaciones Geográficas* registraron que el algodón aún se sembraba en Cutzamala (región Tierra Caliente cercana a Michoacán), Ichcateopan, Ichcapaneca e Ixcapuzalco (los tres situados al suroeste de Taxco), así como en Iguala y Poliutla (Rodríguez, 1976:73), es decir, en áreas cálidas que se ubican al norte del río Balsas. En cambio, en regiones menos cálidas el algodón se sembraba en menor cantidad, como lo indica la *Relación geográfica de Chilapan* escrita en 1582: "En toda esta provincia se da poco algodón" (Acuña, 1985 a:111).

Nombres en náhuatl que incluyen el término *íchcatl*, "algodón", indica que en época prehispánica algunas poblaciones se caracterizaron por tener actividades directamente relacionadas con el algodón, ya fuera como lugares de culto, o como lugares de producción o comercio. Como ejemplo podemos mencionar dos actuales poblados que llevan el mismo nombre de Ichcateopan, uno localizado en el municipio Ixcateopan de Cuauhtémoc en la parte norte de Guerrero cerca de Taxco, y el otro en la región de la Montaña, municipio de Ixcateopan próximo a Tlapa de Comonfort.

Pocos años después de la conquista española, los propios conquistadores que se convirtieron en encomenderos, pidieron telas y ropa de algodón como parte importante en sus tributos. Lo exigieron de los lugares donde anteriormente se sembraba y/o se elaboraban telas hechas con fibras de algodón. Por ejemplo, en 1538 los indígenas de Cutzamala debían entregar a su encomendero 12 cargas[16] de ropa grande y 12 cargas de mantas de ropa mediana cada 80 días, así como 600 mantillas "de esclavos" además de otros tributos que incluían alimentos. Los indígenas de ese pueblo debían sembrar alimentos como frijol y chile, y también algodón, todo para las minas que tenía el encomendero (González de Cossío, 1952:158). Por su parte, los indígenas de Zumpango (junto a Chilpancingo) antes de 1555 estaban obligados a sembrar varios productos, entre ellos, una sementera (campo de cultivo) de algodón de 200 brazas[17] de largo y 100 de ancho. En ese año, después de moderar su carga tributaria por la mortandad indígena y exceso de los tributos, se ordenó disminuirles la entrega antes obligada, de 80 enaguas, 80 camisas y 40 mantas y 40 mástiles[18] que eran obligados a dar cada 120 días (González de Cossío, 1952:654).

Tributos de textiles en tiempos mexicas

La nobleza indígena del Centro de México usaba de manera exclusiva prendas de algodón, y dado que éste no se producía en el Altiplano, surgía la necesidad de obtenerlo por algún medio y éste sería la conquista de territorios que pudiesen tributarlo y elaborarlo (Mohar, 1987:376). Hasta la conquista española (1521), 27 provincias abastecieron de mantas de algodón a México-Tenochtitlan: cada 80 días recibía 32,400 de ellas (Sepúlveda, 1991:111). Las provincias que aportaron un mayor número estuvieron situadas en las antiguas regiones productoras de algodón: la costa del Golfo de México (Cuetlaxtlan, Tzicóac y Tochpan), la región centronorte y costa grande del estado de Guerrero (Tepecoacuilco y Cihuatlan), y una tercera región comprendía parte del estado de Morelos, el sur de Puebla y el suroeste del estado de Oaxaca (Cuauhnáhuac, Huaxtépec y Coaixtlahuaca) (Sepúlveda, 1991:111).

Los textiles que sabemos eran elaborados con algodón provenían de los actuales estados de Morelos, Guerrero, Oaxaca y Veracruz, lo que nos permite suponer, dado su clima y corroborándolo con fuentes, que el algodón se produjese en las zonas de donde se tributaban mantas de este material (Mohar, 1987:375).

16. Cada carga contenía 20 mantas (Mohar, 1993:145).

17. Braza: medida de longitud, generalmente empleada por los marinos, equivalente a unos 168 centímetros (Acuña, 1985 b:450). Esta medida de terreno varía con respecto a la medida de telas.

18. Mastil: mastel; aztequismo derivado de *maxtli*, "faja, taparrabos" (Acuña, 1986:298).

Si vemos las áreas potenciales en el actual estado de Guerrero donde se sembraba algodón y ubicamos los lugares donde se hallaron materiales arqueológicos hechos con fibras de ese material, podemos decir que el algodón formó parte importante de la economía de las poblaciones asentadas en esos lugares (Mapa 2).

En tiempos mexicas, todas las poblaciones sujetas a México-Tenochtitlan que se localizaban en el ahora estado de Guerrero entregaban mantas y ropa como tributo, entre otros productos. La provincia de Tepecoacuilco destacaba por el envío de cinco tipos de mantas y ropa para mujer, en tanto que la provincia de Cihuatlán entregaba dos tipos de mantas y sobre todo, algodón en greña o sin hilar (Mohar, 1987, pp. 179, 189).

La provincia de Cihuatlán, que incluía 12 poblaciones sujetas, entregaba a México-Tenochtitlan[19] 2,400 mantas quachtli y 1,600 mantas amarilllas (Sepúlveda, 1991:139). Cihuatlán era y es una comarca fértil y caliente, que se extiende entre la desembocadura del río Balsas (límites de Michoacán y Guerrero) y una porción costera del Océano Pacífico. La provincia de Cihuatlán entregaba 400 fardos de algodón café (*Coyoichcatl*) (Mohar, 1987:310).

Tepecoacuilco era la principal población y centro de poder indígena que controlaba a otras 14 poblaciones; entre ellas se encontraban Chilapa, Iguala (Yohuallan), Cocula y Teloloapan. De estos lugares es de donde proceden algunos de los textiles arqueológicos. Tepecoacuilco entregaba 1,600 mantas quachtli, 400 mantas delgadas, 400 mantas rayadas, 400 labradas y 400 colchas (Sepúlveda, 1991:139).

Todas las provincias que tributaban a México-Tenochtitlan, enviaban mantas de algodón, de ixtle y de íczotl o izote, así como indumentaria (Sepúlveda, 1991:111). El íczotl es una planta silvestre que comprende varias especies del género *Yucca*, muy común en las tierras áridas y montañosas de la altiplanicie del norte de México, en la zona montañosa de Guerrero y de Oaxaca, y en el Valle del Mezquital (Sepúlveda, 1991:114). Entre las provincias tributarias que elaboraban mantas de ixtle y de íczotl, se encontraba la provincia de Tlachco o Tlaxco [Taxco] en la parte norte del actual estado de Guerrero (Sepúlveda, 1991:139). En varias partes del centro y norte de Guerrero también había textiles hechos de ixtle, pero en pocas cantidades. Los vestigios arqueológicos indican que en la parte centro y norte de Guerrero sí se elaboraban mantas de ixtle para la población local, tal vez para la gente que no tenía recursos para adquirir prendas de algodón. El hecho que no se tributara a los mexicas no significaba que no se elaboraran, y sí se hacían, como lo demuestra el hallazgo de restos de textil hechos con este tipo de fibras.

Los textiles, prendas para vestir y de uso sagrado

En época prehispánica, el uso de ropas de algodón parece haber sido privilegio de las élites indígenas, en tanto que el resto de la población debió vestir prendas hechas con otras fibras vegetales, o bien, telas burdas de algodón. Los hombres generalmente usaban taparrabos (*máxtlatl*) y una manta (*tilmatli*). Las mujeres vestían falda (*cueitl*), una faja en la cintura (*nelpiloni*) y una especie de camisa o *huipil* (Johnson, 2005:9).

Entre los mexicas, la nobleza indígena era consumidora exclusiva de los textiles de algodón, ya que su uso estaba restringido por disposiciones del mismo *tlatoani*[20] Moctezuma II, usando el resto de los indígenas telas hechas con fibras de ixtle, es decir, de agave o maguey (Mohar, 1993:146-147). Las mantas blancas tal vez fueron de uso diario de los indígenas pertenecientes a los estratos medios de la sociedad, como los artesanos y comerciantes (Sepúlveda, 1991:112).

Las telas de algodón también tuvieron un uso sagrado, por ejemplo, para vestir a las deidades o para hacer bultos sagrados. El algodón sin hilar también debió formar parte de la indumentaria de los dioses, colocándolas sobre todo en la cabeza y en las orejas. Y en los rituales, se utilizaron para pedir la lluvia, donde el algodón representaba las nubes.

Los materiales arqueológicos recuperados en el estado de Guerrero, permiten conocer parte de las costumbres que tuvieron diversos grupos indígenas en dos regiones: el Bajo Balsas que se ubica en la Tierra Caliente y el centro-norte o lo que fuera la provincia tributaria de Tepecoacuilco.

La región Bajo Balsas y la provincia de Tepecoacuilco

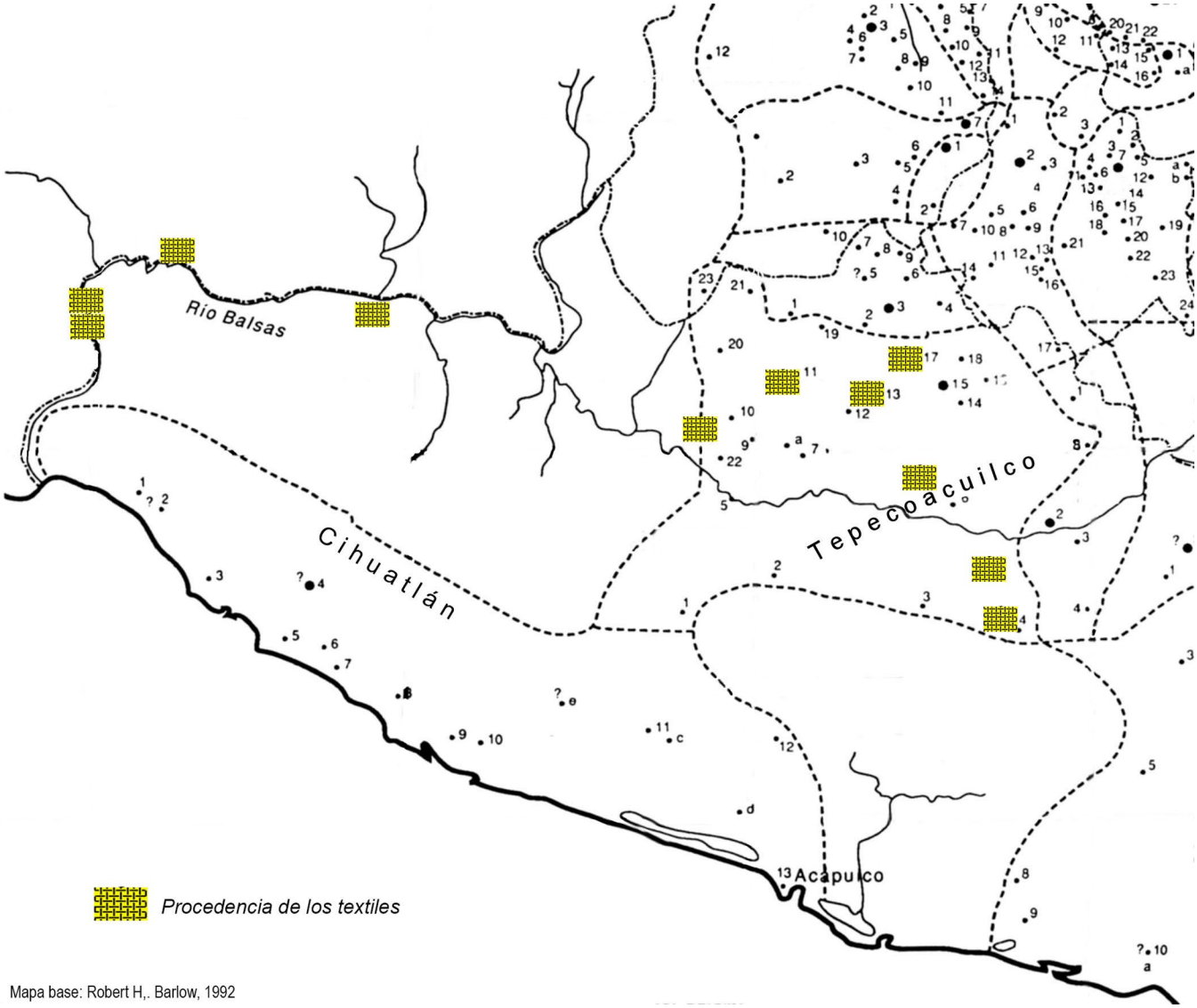
Los textiles, que son una parte de lo que produjeron las sociedades prehispánicas, deben ser estudiados de manera integral con el resto de los materiales asociados. A continuación presentamos los datos que ofrecen los textiles y otros objetos arqueológicos que formaron parte del mismo contexto, así como información de fuentes documentales que nos permiten tener una visión un poco más amplia sobre algunos grupos de poblaciones que habitaron lo que ahora es el estado de Guerrero.

a) Bajo Balsas

En esta parte del río Balsas, de 104 sitios arqueológicos registrados se excavaron 19, y de éstos en cuatro (números B-68, B-69, B-16 y B-44) se recuperaron textiles como parte del ajuar funerario de varios individuos. La mayoría de los textiles procede de 7 entierros del sitio B-68 y también casi

19. Para las dos provincias de Tepecoacuilco y Cihuatlán, la *Matrícula de Tributos* señala la entrega cada 80 días, y el *Códice Mendocino* dos veces al año (Mohar, 1987:179-192).

20. *Tlatoani*, palabra náhuatl que significa "el que habla o gran señor" (Molina, 1992:140v), es decir, el que habla dando órdenes, el que manda, el que gobierna. Título que se daba a los gobernantes del Centro de México en tiempos mexicas.



Mapa 2. Provincia tributaria de Tepecoacuilco. (dibujo de Elizabeth Jiménez G.)

todos los objetos de concha y cobre (Mastache, 1971:63). Los personajes ahí enterrados no sólo tenían ropas de algodón, sino también otros objetos de lujo, lo que nos sugiere que formaron parte de las élites locales. De ellos, destaca el Entierro H (sitio B-68, estructura 8), donde se excavaron precisamente dos vasos trípodes de ónix o tecali[21] decorados con estuco en colores rojo, amarillo y azul (Díaz O., 1990:111), que no aparecieron en los otros sitios excavados (Mastache, 1971:63) (Figura 2).

Los cuatro sitios mencionados fueron importantes centros de población, al parecer centros ceremoniales. El sitio B-16 tenía más de 22 estructuras, el sitio B-44 más de 129 estructuras, el sitio B-68 más de 70 estructuras, y el sitio B-69 más de 34 estructuras. En el sitio B-68, donde se encontró la mayor cantidad de textiles como ya se señaló, se registraron 34 estructuras rectangulares y 34 estructuras circulares (González C., 1979, figs. 12 y 13), lo que sugiere que pudieron ser yácatas, como las de la cultura purhépecha de Michoacán.

Las ropas de los personajes parecen haber estado adornadas con aplicaciones de concha. Una colección de 316 "botones" de concha *Spondylus* procede del Infiernillo o Bajo Balsas. De ellos, 311 "botones" se encontraron en un mismo sitio, el B-68, y sólo 5 se hallaron en el sitio B-44 (Suárez D., 1977:58). Las piezas de 6 mm de diámetro en promedio, tenían una perforación que permitía que pasara un cordón o hilo (que en algunos casos se conservó) para ser cosidos y unidos a la tela. De acuerdo con Lourdes Suárez (1977:58), especialista en el estudio de objetos arqueológicos de concha, estas piezas no debieron usarse para abotonar sino para

21. Uno de estos vasos mide 26 centímetros de alto y 15.5 centímetros de diámetro (Díaz O., 1990:111).

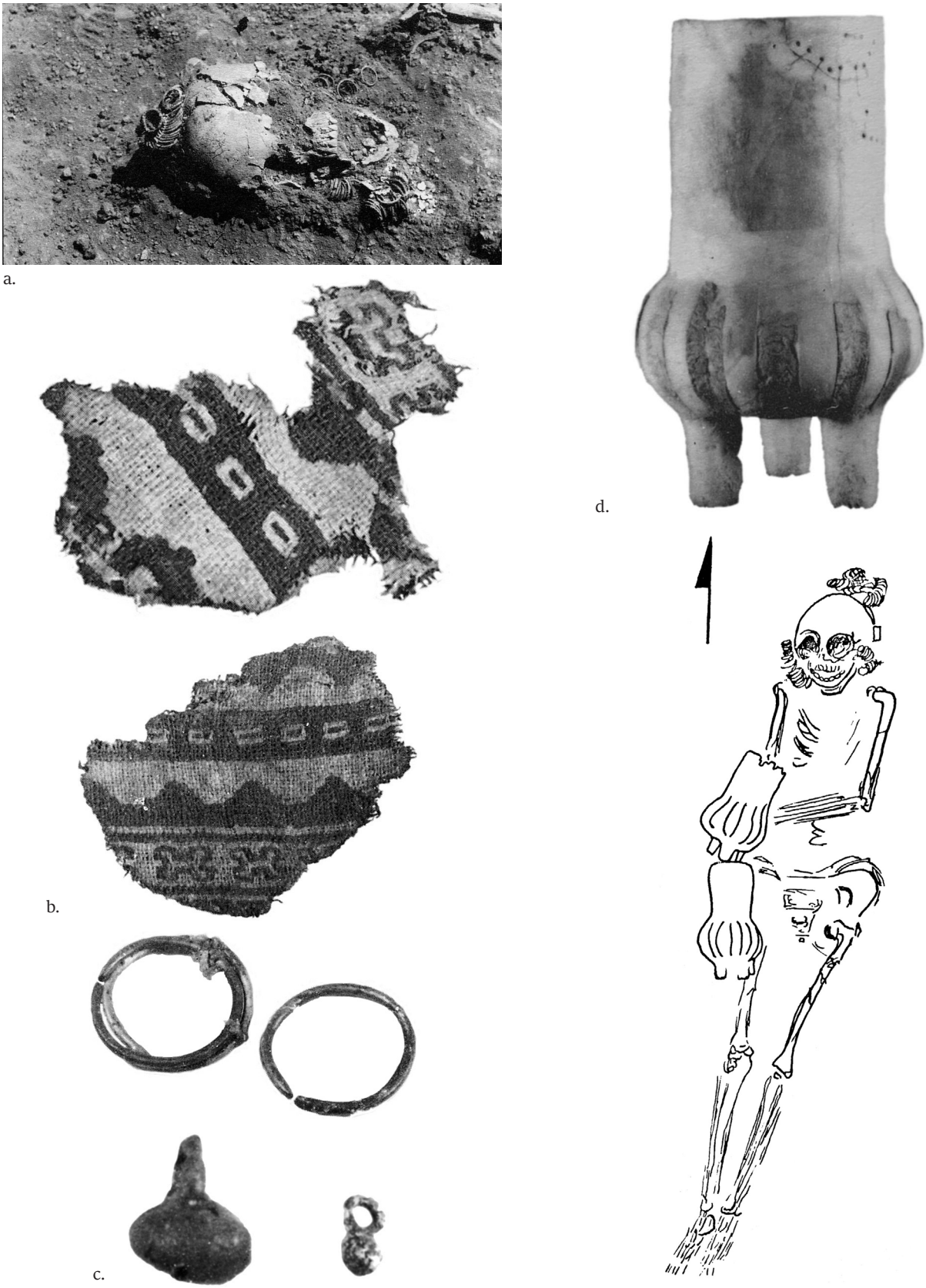


Figura 2. Ajuar funerario de un individuo en el sitio B-68 (Entierro H, estructura 8). Presa El Infiernillo o región del Bajo Balsas. a) Detalle del entierro que muestra la cabeza del personaje; b) Textiles de algodón de doble vista, con diseños geométricos en color rojo y blanco; c) aros y cascabeles de cobre; d) vaso trípode de ónix o tecali (Imágenes modificadas a partir de: Mastache, 1971, fig.20; Johnson y Mastache, 2002, fig.14; Díaz O., 1990:111, 246, 251, 261).

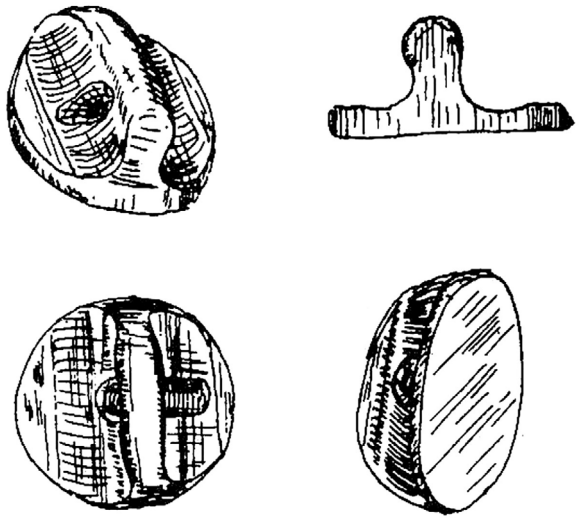


Figura 3. Objetos hechos de conchas marinas. Presa El Infiernillo o región del Bajo Balsas. "Botones" que posiblemente decoraron ropas de algodón, aunque también pudieron conformar pectorales, unidos con hilos en una especie de red (Dibujos esquemáticos tomados de: Suárez, 1977, lámina 84).

ornamentar telas (Figura 3). Por mi parte, sugiero que esos "botones" integraron algún tipo de pectoral o pechero, donde los hilos formaron una especie de red para sostener las piezas.

En el sitio B-68 se encontró toda la colección de cuentas (excepto las esféricas esgrafiadas) y en este sitio aparecen exclusivamente 8 de los 19 grupos establecidos de concha, por lo que se deduce que éste fue un lugar en que las ofrendas acompañaban a individuos de importante categoría social, política o religiosa, a los que se destinaban cuentas de manufactura especial y exclusiva. Y debido a que no se encontraron en entierros de ninguno de los otros sitios, pensamos que fue éste el lugar de más alto linaje y centro regente de una gran zona del Balsas, o bien un sitio muy especializado en la industria de la concha, quizá por su mayor cercanía a la costa (con respecto a los otros sitios excavados), o bien que participaba de otra cultura (Suárez D., 1977:71).

Los textiles de estos sitios sólo fueron utilizados por personajes de alto rango, posiblemente gobernantes, sacerdotes o guerreros, dada su asociación no sólo con materiales suntuosos hechos de cobre o de concha, sino porque ahí también se encontró un par de agarraderas de átlatl votivo que procede del sitio B-68 (Suárez D., 1977:81).

El sitio B-44, que tuvo una temporalidad del año 1200 d.C. por Carbono 14 (Suárez D., 1977:82), sugiere que los otros sitios con textiles y objetos similares hechos de cobre y concha, habrían sido contemporáneos. Los entierros de personajes de la élite, señalan que el algodón fue uno de los objetos más preciados en el periodo Posclásico (1200-1500 d.C.) y posiblemente de épocas anteriores, junto con las conchas y caracoles marinos, el cobre y otros objetos especiales como las vasijas de ónix o tecali.

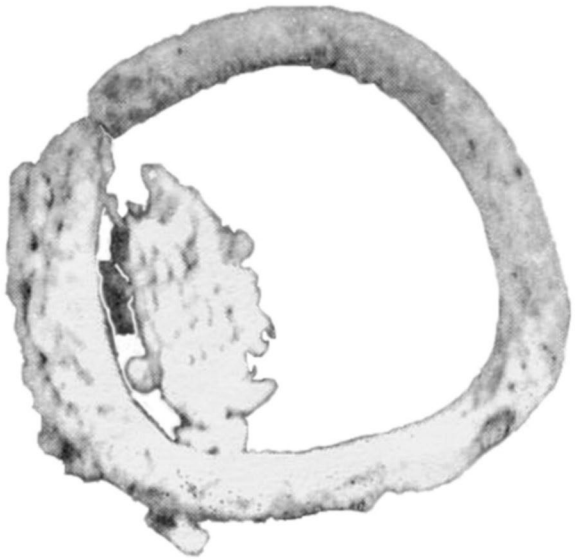
Sobre todo en el sitio B-68 se encontraron materiales cerámicos asociados a Apatzingán (estado de Michoacán) y el sitio B-16 asociado con el Centro de México, por sus materiales estilo Mazapa/Coyotlatelco; las cerámicas de ambos sitios son del Posclásico Temprano (Müller, 1979, láminas XIII, XIV, XV). Por la naturaleza de los materiales hechos de cobre, por la decoración y formas de la cerámica, así como por la temporalidad de uno de los sitios, podemos decir que los materiales excavados y posiblemente también la arquitectura, corresponden a una ocupación del Posclásico Temprano, entre los años 1200 y 1520 d.C. En este sector del río Balsas, que es parte de la región Tierra Caliente, parecen haber convivido antiguos grupos nahuas (no mexicas) con purhépechas.

b) Provincia de Tepecoacuilco

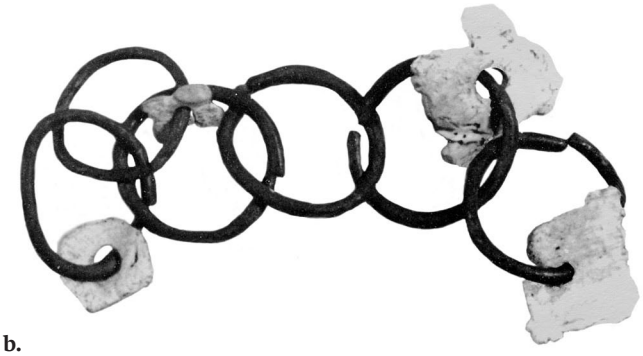
En la parte central y norte del estado de Guerrero, muchos textiles se han encontrado asociados a objetos de cobre (Figura 4), lo que ha permitido su conservación y además nos refiere una temporalidad del Posclásico. A diferencia de los del grupo anterior, éstos han sido encontrados sobre todo en cuevas y por personas ajenas al quehacer arqueológico. A pesar de que carecemos de información sobre su contexto y ubicación original, algunas empezamos a identificarlas con telas decoradas que se representaron en la *Matrícula de Tributos* y *Códice Mendocino*, documentos pictográficos que fueron realizados a mediados del siglo XVI (Castillo Farreras, 1991; Rojas, 1995).

En estos códices, se encuentra una lámina o folio que contiene 14 poblados encabezados por Tepecoacuilco, y corresponde a lo que diversos investigadores han denominado como "provincia tributaria" sujeta a México-Tenochtitlan (Figura 5). Como lo mencionamos anteriormente, entre esas poblaciones se encontraban Chilapa, Iguala, Cocula y Teloloapan, de donde proceden textiles arqueológicos. Si vemos la extensión que tenía la provincia de Tepecoacuilco (Barlow, 1992, mapa), los sitios de Oztotitlán, Atzcala y Campo Morado también formaban parte de dicha provincia (Mapa 2).

Aunque es difícil precisar cuáles de los 14 poblados de Tepecoacuilco eran los que elaboraban las mantas, existe una gran similitud en los diseños de los materiales arqueológicos con las figuras que representan las mantas y ropas tributadas. Como ya lo hemos señalado al principio, varios de estos textiles se conservaron por su contacto con el cobre, y por lo tanto, corresponden al Posclásico. Esto nos hace proponer que dichos materiales hayan sido contemporáneos con la etapa mexica, es decir, cuando esos 14 poblados, encabezados por Tepecoacuilco, tributaban a los mexicas. En la *Matrícula de Tributos* (Castillo Farreras, 1991:69), se escribieron los nombres con que los indígenas conocían los diseños: *Cacamoliuhqui, Tlipapatlahuac* y *Nacazminqui.*



a.



b.

c.

Figura 4. Objetos manufacturados en cobre. a) aro con restos de textil procedente del sitio Mexiquito; b) aros con pendientes de concha; c) aros con un cascabel de cobre, Presa El Infiernillo o región del Bajo Balsas. (Imágenes modificadas a partir de: Díaz O., 1990: 250, 251, 253).

Figura 5. Mantas y ropa que tributaba la Provincia de Tepecoacuilco. *Matrícula de Tributos,* lámina 17 (Imágenes modificadas a partir de: Castillo Farreras, 1991:69).

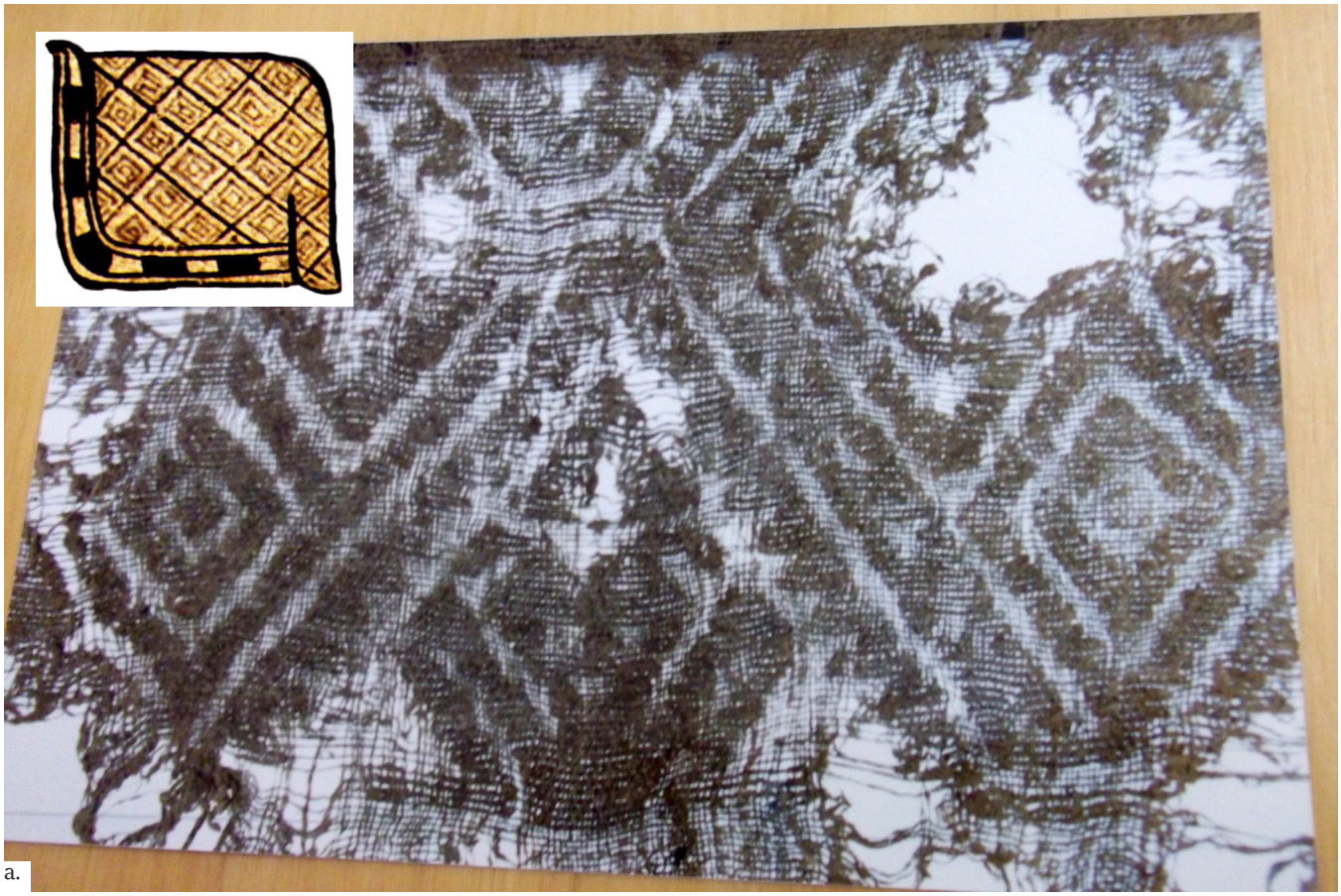


Figura 6. Diseños en mantas de la *Matrícula de Tributos* (izquierda) y en textiles/objetos prehispánicos. a), b) fragmentos de textil del área de Teloloapan-Iguala-Cocula, el primero con técnica de brocado y el segundo sin determinar; c) detalle de cabeza de serpiente emplumada pintada en un calabazo natural (dibujo de Elizabeth Jiménez G., 2006); d) textil de Chilapa con el diseño de *xicalcoliuhqui* (dibujo de Elizabeth Jiménez G.), combinación de brocado y gasa con pelo de conejo o liebre.

Cacamoliuhqui:[22] El dibujo en los códices, muestra una tela blanca con diseños de rombos. La anotación "mantas colchadas" en el *Códice Mendocino* le hizo proponer a Luz María Mohar (1987:179, 367) que se trataba de mantas acolchadas elaboradas de algodón, con un borde que alternaba partes negras y blancas. En su *Diccionario de la lengua náhuatl o mexicana,* Rémi Siméon (2004:55) señala que *Cacamoliuhqui* era un cobertor para cama u otro objeto semejante. Sin embargo, vemos que la pieza de textil que procede de la región entre Teloloapan, Iguala y Cocula (Jiménez G., 2002), es muy semejante al diseño de este tipo de manta (Figura 6-a), y además, es blanca, por lo que es muy posible que esos fragmentos arqueológicos correspondan a las mantas que se representaron en los códices.

A estas mantas y a las siguientes, les fueron dibujados dos dedos, lo que significa que medían dos brazas[23] (Mohar, 2002:509), es decir, cada pieza de manta tendría más de tres metros de largo. A diferencia de otras mantas representadas en la *Matrícula de Tributos* y *Códice Mendocino*, que tienen un hueso y su lectura es *iczotilmatli* o manta de izote (Mohar, 2002:509), los textiles de la lámina de Tepecoacuilco parecen haber sido hechos de algodón y no de izote.

Tlipapatlahuac:[24] Son mantas con rayas verticales negras paralelas sobre fondo blanco; lo variable entre ellas es que las rayas algunas veces son más gruesas o más juntas una línea con la otra, pero todas rayadas, señala Luz María Mohar (1987:366). Entre los materiales de los mismos lugares arriba mencionados, también observamos un fragmento de textil que podría corresponder a las mantas rayadas representadas en la *Matrícula de Tributos* y *Códice Mendocino* (Figura 6-b).

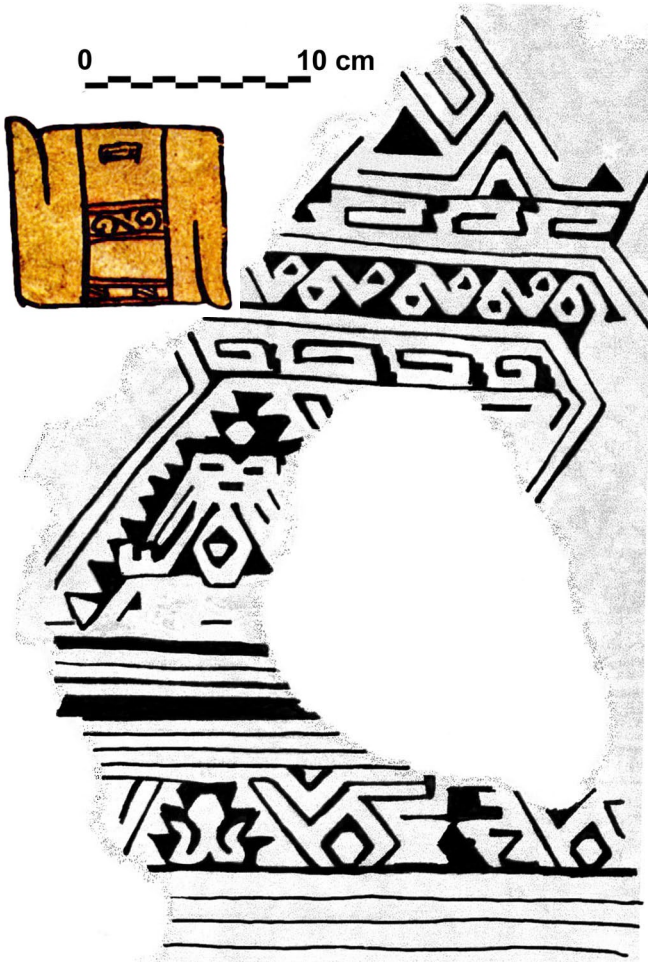
22. *Cacamoliuhqui*: "colcha para cubrir la cama o cosa semejante" (Molina, 1992:10v).

23. En el año 1551, dos brazas castellanas correspondían a una vara indígena, aproximadamente 3.34 metros (Martínez, 1984:81).

24. *Tli-papatlahuac*, palabra náhuatl compuesta por: *tliltic* "negro" y *pahpatlahuac* "algo amplio o ancho" (*Diccionario de la lengua náhuatl clásica*, s/f).

c.

b.



d.

Nacazminqui:[25] Esta manta presenta un diseño muy elaborado en colores rojo y blanco, con una franja negra en un extremo, lo que parece indicar que el resto de la manta era negra (Mohar, 1987:364-365). El diseño principal es la cabeza de una serpiente emplumada con una vírgula que sale de sus fauces; la orilla tiene un diseño de círculos blancos con un pequeño rectángulo rojo llamado *tenixyo*, "ojos en el borde" (Garibay, 1985:946). Entre los textiles de Teloloapan, Iguala y Cocula se ha identificado el cuerpo de una serpiente (Figura 6-c) que ejemplifica cómo pudo ser el diseño. Sin embargo, la figura de la serpiente en los códices se parece más a las serpientes pintadas en calabazos prehispánicos que proceden de la misma región. Elizabeth Jiménez (2006) ha propuesto que estos calabazos de manufactura prehispánica, con diseños en amarillo sobre fondo rojo, sean los que también se presentan en la lámina de Tepecoacuilco. Las figuras del calabazo ejemplifican los diseños que pudieron decorar este tipo de mantas.

Huipiles: Junto a las telas anteriores, se encuentra un huipil decorado con dos franjas con diseños en blanco y rojo. La franja que iba a la altura del pecho tiene un diseño de *xicalcoliuhqui*, es decir, dos espirales unidas o grecas escalonadas. La prenda de Chilapa (Franco, 1967), que tiene diseños complicados, presenta ese diseño de *xicalcoliuhqui* (Figura 6-d). El huipil de Chilapa se presenta sólo como ejemplo para mostrar las ricas prendas que se elaboraban en época prehispánica en esa parte de lo que ahora es el estado de Guerrero.

Intercambio de bienes entre distintas poblaciones

El algodón, los textiles, y objetos de cobre y concha entre otros bienes, circularon como bienes de lujo entre la costa de Guerrero y el Centro de México. La provincia de Cihuatlán, en la costa, en tiempos mexicas producía grandes cantidades de algodón café y seguramente con él los indígenas elaboraban sus propias prendas. Los pueblos de la costa obtenían conchas de mar y las traficaban hacia el Infiernillo, Tierra Caliente y Tepecoacuilco. En la provincia de Cihuatlan se hablaban distintas lenguas: tepuzteco, cuitlateco y tarasco (Vélez, 1998, fig. 19; Sepúlveda, 1991:143).

Por su parte, los pueblos de la provincia de Tepecoacuilco también tenían sembradíos de algodón en muchos ríos que desembocaban al Balsas y en las partes cálidas sobre el río Balsas. El algodón blanco parece haber sido el de mayor demanda y producción en esta parte. También se sembraba el algodón café, como lo indican los textiles procedentes de Teloloapan-Iguala-Cocula. El algodón, los textiles y objetos de cobre eran sus principales bienes de comercio.

En el siglo XVI la población de la región centro y norte de Guerrero era diversa. En la provincia de Tepecoacuilco se hablaba cohuixca (un náhuatl antiguo), chontal, matlame, tuxteco, cuitlateco, tepuzteco y náhuatl-mexica (Vélez, 1998, figs. 25, 29, 30; Sepúlveda, 1991:143). En 1569, los pueblos de Iguala, Tepecoacuilco y Atzcala (estancia sujeta a Tepecoacuilco), se encontraban en la provincia que los indígenas locales decían era *Cuixca* [cohuixca] (Aviña, 1976). En ese mismo año, Iguala tenía cinco estancias sujetas, de las cuales la mitad de sus pobladores eran chontales (Aviña, 1976:96-97).

La parte intermedia entre Cihuatlán y Tepecoacuilco a lo largo del cauce del río Balsas, era una tierra caliente, por eso la región recibió ese nombre y ahí, a semejanza de las otras dos provincias, el algodón debió sembrarse en grandes cantidades. Los pueblos situados en el Bajo Balsas se encontraban en un paso estratégico hacia el mar o hacia las áreas montañosas. Esta área, donde incluimos a Mexiquito, debió ser controlada sobre todo por élites purhépechas y posiblemente también por antiguos nahuas del Posclásico como lo parecen indicar los materiales cerámicos, entre los años 1200 y 1520 d.C. En una convivencia de distintos grupos, se comerciaba con la sal, la concha, el pescado y el cobre.

Durante el Posclásico y posiblemente desde etapas anteriores, el algodón y los textiles debieron formar parte importante en la economía de los pueblos de la costa, del río Balsas y de Tepecoacuilco. La variedad en técnicas y diseños, señala que estos pueblos se especializaron en la realización de textiles.

Las tres áreas que hemos tratado en este trabajo, estuvieron relacionadas por el comercio. Debieron tener caminos en común que seguían los indígenas que transportaban lo que comerciaban y tributaban entre la costa y el Centro de México. Como provincia tributaria, Tepecoacuilco enviaba a México-Tenochtitlan mantas del algodón y hachuelas de cobre, entre otros productos (Mohar, 1987, tabla 17, mapa 5-a). A su vez, Cihuatlán entregaba algodón café o *coyoichcatl* y conchas de mar (Mohar, 1987, mapa 3-b, c).

El hallazgo de cascabeles de cobre en el sitio Campo Morado, y de cascabeles, aros, agujas y pinzas también de cobre en el Infiernillo, son prueba del interés no sólo por los textiles sino también por el cobre, ambos como bienes de prestigio para las élites. El cobre de la parte norte de Guerrero circulaba hacia los pueblos de Cihuatlán en la costa, y de aquí, salían las conchas de mar, que luego se trabajaban

25. *Nacaz-minqui*, de *nacaztli* "oreja" y *miqui* "morir" (Molina, 1992:56v, 62v). A mediados del siglo XVI el escribano que anotó la glosa parece haber desconocido el nombre de la manta (*Diccionario de la lengua náhuatl clásica*, s/f).

juntos para hacer aros de cobre con pendientes de concha, o bien, placas y botones de concha para adornar los vestidos, así como pequeños cascabeles que iban cosidos a cordeles y telas.

Los aros de cobre iban engarzados uno con otro formando como una especie de cadena y en cada aro había algún pendiente que podía ser de concha, de piedra o de otro material. Eran collares y no iban cosidos a la ropa. Estos aros se han encontrado en el Infiernillo (Bajo Balsas) y en Campo Morado (Balsas Medio) (Figura 4).

El Bajo Balsas no sólo tuvo contacto con la costa y el Centro de México, sino también con grupos purhépechas de Michoacán, donde también se ha encontrado ropa de algodón preservada por contacto con objetos de cobre en: Apatzingán, Tzintzuntzan y Cojumatlán entre 1300 y 1500 d.C. (Johnson, 1971, Table 2).

Conclusiones

En los materiales procedentes del Bajo Balsas se observan varias características: uso exclusivo de algodón, hilos formados por un solo cabo con torsión Z y presencia de bandas de urdimbre. En cuanto a los ligamentos aparecen además del tafetán, taletón y esterilla, otros más complejos como damasco, tela doble, satín y las técnicas de brocado y bordado (Mastache, 1971:89). El hecho de que el tafetán y el taletón sean las técnicas más frecuentes y de más amplia distribución, revela que los tejidos con estos ligamentos eran empleados para confeccionar la mayor parte de prendas que constituían la indumentaria de uso común, mientras que la poca frecuencia de los ligamentos más elaborados permite suponer que, seguramente por su misma complejidad, estaban reservados para la elaboración de prendas más exclusivas, muchas de ellas, tal vez de carácter ornamental, utilizadas por grupos de cierta jerarquía tanto económica como social (Mastache, 1971:105).

Una amplia variedad de diseños y técnicas de tejido que ya habían registrado Irmgard Johnson y Alba Guadalupe Mastache hace ya varios años para lo que ahora es el actual estado de Guerrero, podrá ser mejor conocido al estudiarse los nuevos materiales que están en espera de ser atendidos. Nos referimos a los procedentes de Teloloapan-Iguala-Cocula, por lo que en este trabajo la información que proporcionamos es parcial. La identificación preliminar de varias técnicas de tejido entre ellos tafetán, taletón, gasa y brocado, así como el uso de distintos colores y fibras en su manufactura (González y Sánchez, 2002), nos indica que tendremos la oportunidad de conocer más a profundidad la especialización que tuvieron los antiguos pobladores de esta región.

La diversidad de técnicas y diseños señala la existencia de artesanos dedicados por completo a su elaboración, que a su vez formaron parte de una compleja estructura social. Los textiles no sólo proporcionaron abrigo al cuerpo, sino fueron creados porque podían tener un alto valor económico. Las élites locales de cada región debieron estar a cargo de la producción y comercio de los textiles, hechos muchos de ellos de algodón. En época prehispánica, su siembra debió estar a cargo de los hombres, y el hilado y los tejidos, por parte de las mujeres., como podemos deducirlo del registro que hiciera el obispo de Tlaxcala, fray Alonso de la Mota y Escobar (González J., 1985:111) cuando en un recorrido que hiciera por varios pueblos de la Costa Chica (al Este de Acapulco) entre 1610 y 1611, en San Luis Acatlán el cacique del lugar le regaló un "pabellón de algodón que sus hijas habían tejido". Para el Centro de México, Bernardino de Sahagún (1985:561) había observado a mediados del siglo XVI que uno de los oficios principales de las mujeres era hilar y tejer.[26]

Aunque las evidencias con que contamos señalan una temporalidad entre los años 1200 y 1520 d.C., es muy posible que la elaboración especializada de los textiles haya iniciado desde el periodo Clásico (años 200-800 d.C.), cuando Teotihuacán era la principal población del Centro de México que demandaba recursos. Esto podría explicar, en parte, la existencia de objetos cerámicos y arquitectura con influencia teotihuacana en las mismas áreas donde se han encontrado textiles del Posclásico. Para Luz María Mohar (1993:141), en el siglo II el algodón ya era de gran demanda entre los teotihuacanos.

Como hemos visto, algunos textiles arqueológicos encontrados en el área de lo que fuera la provincia de Tepecoacuilco parecen estar representados en la *Matrícula de Tributos* y *Códice Mendocino*, y es posible que los mexicas hayan pedido textiles de tributo a las poblaciones que tradicionalmente ya producían ese tipo de prendas. Ahora sabemos que una de las mantas representadas en los códices, se elaboró con la técnica de brocado.

Con la revisión de datos arqueológicos y etnohistóricos, nos hemos acercado a un aspecto de las culturas indígenas que se desarrollaron en la parte sur de lo que llamamos Mesoamérica. Los textiles, junto con objetos de concha y de cobre, fueron de los bienes más apreciados por las élites indígenas locales durante el periodo Posclásico, entre los años 1200 y 1520 después de Cristo.

26. Cuando nacía una niña, la partera enterraba su ombligo junto al hogar: "Decían que ésta era señal que la niña no saldría de casa; solamente había de vivir en casa; no convenía que fuese a alguna parte [...] significaba que había de tener cuidado de hacer la bebida y la comida, y las vestiduras, como mantas, etc., y que su oficio ha de ser hilar y tejer" (Sahagún, 1985:385).

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4

Classic Textiles from Cueva del Lazo (Chiapas, Mexico): Archaeological context and conservation issues

Davide Domenici and Gloria Martha Sánchez Valenzuela[1]

Abstract

The excavation of Cueva del Lazo, a cave on the cliffs of the Río La Venta River canyon in the Zoque region of Western Chiapas (Mexico), led to the discovery of a complex Late Classic post-sacrificial context where eleven children were buried wrapped in textile bundles. The environmental conditions of the dry cave allowed an extraordinary preservation of perishable materials including textiles, cordages, botanical remains, etc.

In the first part of the paper we provide a brief introduction to the archaeology of the Selva El Ocote, as well as a description and interpretation of the Cueva del Lazo archaeological context. The second part of the text is devoted to a detailed description of manufacture techniques and of the conservation process to which the textiles were submitted. In the concluding section some comparisons with modern Zoque textiles and future research venues are commented.

Keywords: Textiles, Mesoamerica, Zoque, Classic period, Conservation

Textiles Clásicos de Cueva del Lazo (Chiapas, México): Contexto arqueológico y temas de conservación

Resumen

La excavación de la Cueva del Lazo, ubicada en la paredes del cañón del Río La Venta en la región Zoque del occidente de Chiapas (México), llevó al descubrimiento de un contexto post-sacrificial del Clásico tardío en donde se hallaron once niños envueltos en bultos textiles. Las condiciones climáticas de la cueva permitieron una extraordinaria preservación de materiales perecederos como son textiles, cuerdas y restos macrobotánicos.

En la primera parte del texto se ofrece una breve introducción a la arqueología de la Selva El Ocote, así como una descripción e interpretación del contexto arqueológico de la Cueva del Lazo. La segunda parte del texto está dedicada a una detallada descripción de las técnicas de manufactura y del proceso de conservación al cual se sometieron los textiles. En el párrafo de conclusiones se presentan algunas comparaciones con ejemplos de textilería zoque moderna, así como algunas propuestas para futuras líneas de investigación.

Palabras clave: Textiles, Mesoamérica, Zoque, Periodo Clásico, Conservación

1 Introduction

Cueva del Lazo (Ocozocoautla, Chiapas) is located in the Selva El Ocote, a tropical forest that extends along the middle course of the La Venta River, in an area that has been mostly inhabited by Zoque-speaking groups in pre-Hispanic times (figs. 1, 2). The dry cave, excavated in 1997 by the Río La Venta Archaeological Project under the direction of Giuseppe Orefici and Thomas A. Lee, contained a Late Classic archaeological context characterized by the exceptional preservation of perishable materials, including the remains of the bundled burials of 11 children.

Having assumed the direction of the project, together with Thomas A. Lee in 1999[2], Davide Domenici also assumed the responsibility of the description and preservation of the cave's materials and of the organization of specific analyses[3],

1. Davide Domenici (Department of History and Cultures, University of Bologna, Italy) wrote paragraphs 1-3 and 5-7 of the present paper; Gloria Martha Sánchez Valenzuela (Coordinación Nacional de Conservación del Patrimonio Cultural, Instituto Nacional de Antropología e Historia, México) wrote paragraph 4.

2. Since 1999, the Río La Venta Archaeological project has been directed by Davide Domenici and Thomas A. Lee Whiting and organized by the La Venta Exploring Team (Italy), the University of Bologna (Italy) and the Universidad de Ciencias y Artes de Chiapas (Mexico). Since 2002, the Project has been partly financed by the Italian Ministero degli Affari Esteri e della Cooperazione.

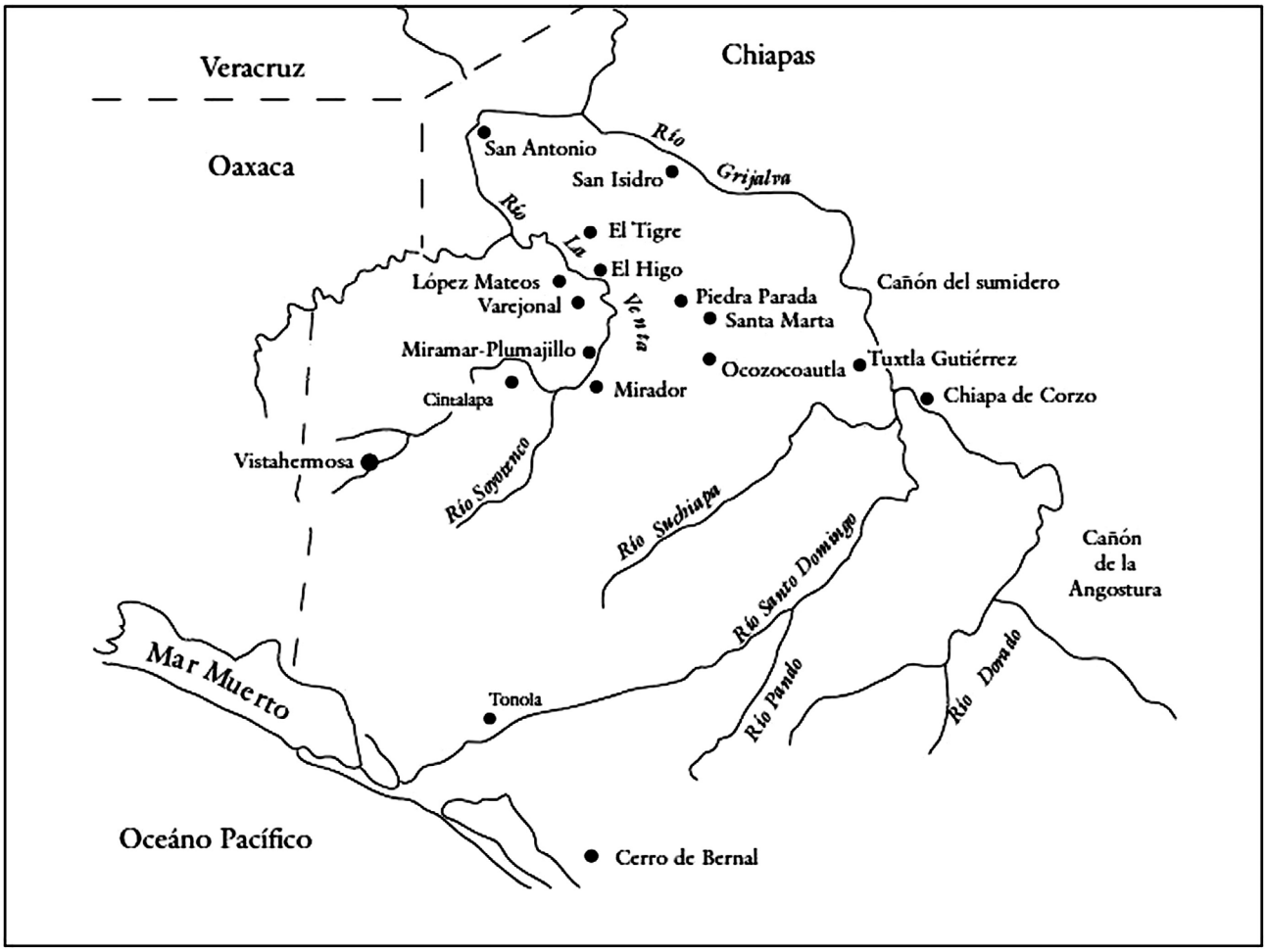


Fig. 1. Map of the Río La Venta region in Western Chiapas, with main archaeological sites (Map by Río La Venta Archaeological Project).

as well as of a reinterpretation of the whole Cueva del Lazo archaeological context, previously described only in a brief article by Orefici itself (Orefici 1999). This reinterpretation was based on the available data proceeding from Orefici's original report (Orefici 1998), from some photos of the excavation that Orefici kindly provided us, as well as by the subsequent analysis of the material carried out under Domenici's direction of the project. It was in this phase that the textiles were sent to the *Coordinación Nacional de Conservación del Patrimonio Cultural*, *Instituto Nacional de Antropología e Historia*, where Gloria Martha Sánchez Valenzuela coordinated their technical studies and conservation process (Sánchez 2011)[4].

In the first part of this paper we provide a brief introduction to the archaeology of the Selva El Ocote, as well as a description and interpretation of the Cueva del Lazo archaeological context. The subsequent section is more specifically devoted to the textiles found in the cave, providing a description of their manufacture techniques and of the conservation process to which they were submitted. In the concluding section, some preliminary observations on possible venues for further research are briefly commented.

2 The Archaeological context

A hypogean ritual tradition in Western Chiapas

As a result of the research carried out by the Rio La Venta Archaeological Project (PARLV) we know that the El

3. Vera Tiesler and Andrea Cucina carried out the bioanthropological analysis of the skeletal remains (Tiesler and Cucina 2005, Tiesler, Suzuki and Keb 2010), Clara Paz Bautista analysed malacological materials (Paz Bautista 2011), Monica Farneti carried out a preliminary analysis of the textiles (Farneti 2004), while Davide Domenici carried out the artefacts' inventory and analysis (Domenici 2003). A preliminary bioanthropological analysis (Drusini 1999) and the paleobotanical analysis (Piacenza 2001) had been previously carried out during Orefici's direction of the project.

4. The Conservation process of the textiles has been partly financed by the Italian Ministero degli Affari Esteri and by the La Venta Exploring Team.

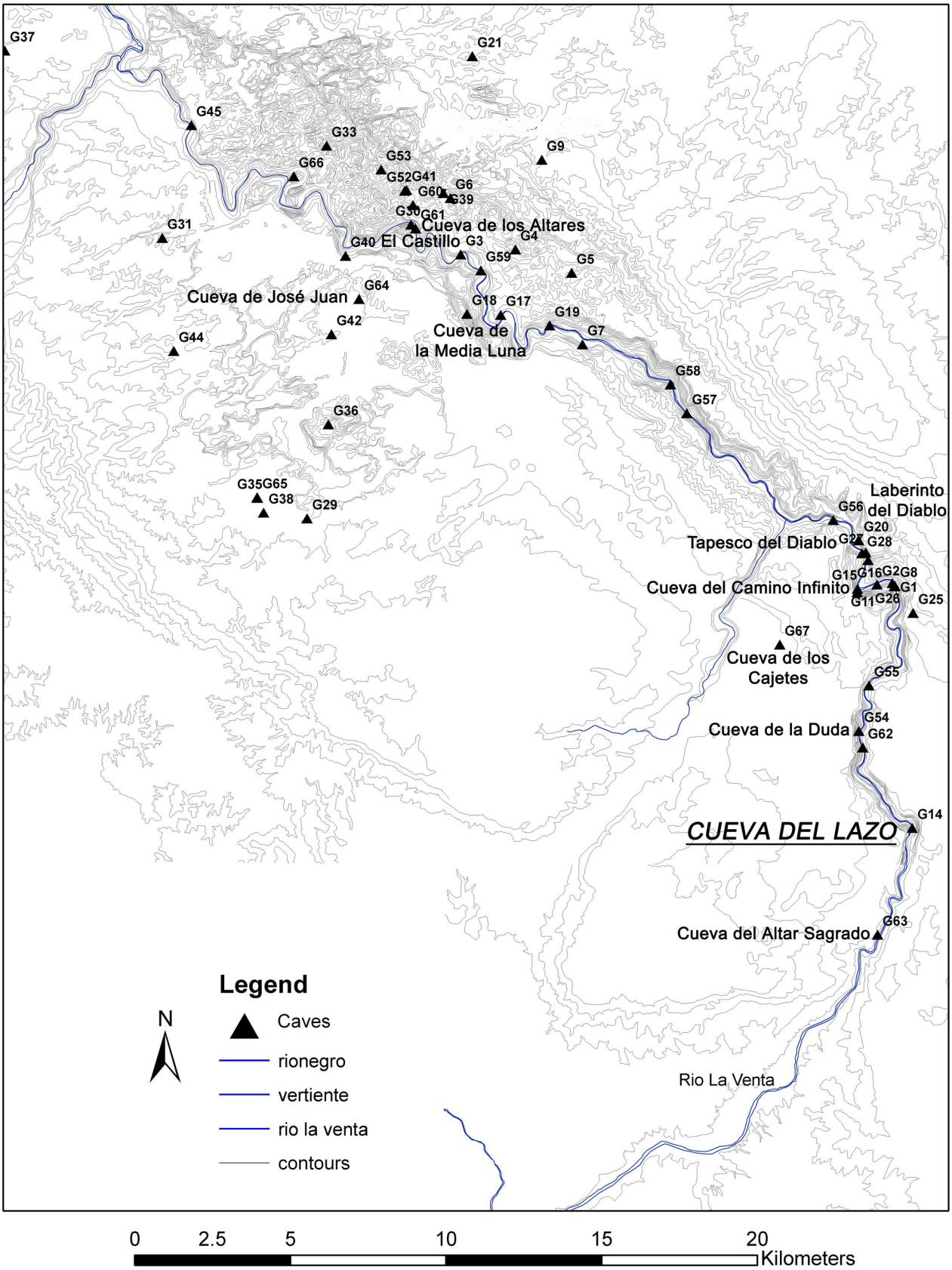


Fig. 2. Map of the Middle Río La Venta region with main archaeological sites (Map by Nicoletta Maestri, Río La Venta Archaeological Project).

Fig. 3. Aereal view of the karstified landscape of the El Ocote jungle (photo by Paolo Petrignani, Río La Venta Archaeological Project).

Ocote area had two main occupation phases, respectively dated to the Late-Terminal Classic (ca. AD 600-1000) and to the Late Postclassic (ca. 1250-1500); in addition, evidence has been found of a long and continuous tradition of ritual use of caves, spanning from the Middle Preclassic to the Late Postclassic (300 BC - AD 1500)[5]. Such a long ritual tradition was due to the highly karstified local landscape, dotted by an extraordinary amount of small mountains, amazing caves, and underground bodies of water (fig. 3). Being a place where the Mesoamerican sacred geography was so graphically reproduced, the El Ocote limestone massif was thus perceived as an appropriate place to establish various forms of ritual communication with the extra-human forces associated with fertility and the watery interior of Earth.

In extreme synthesis, from the Late Preclassic to the end of the Early Classic Period, when no permanent settlements were located in the area, the local caves – usually those easily accessible in the forest – were used by peoples coming from the neighbouring valleys in order to deposit mostly massive offerings of hundreds of differentially fired black ware bowls (fig. 4).

Fig. 4. Early Classic massive offering in Cueva de José Juan (photo by Davide Domenici, Río La Venta Archaeological Project).

5. For information regarding the researches carried out by the Rio La Venta Archaeological Project, see Domenici 2009; Domenici and Lee 2012; Domenici, Campiani, Maestri and Zurla 2013; for more detailed descriptions about the local hypogean ritual tradition and more specific bibliographic references, see Domenici 2010; Domenici and Pongetti 2012.

Fig. 5. Example of Late-Terminal Classic stone-masonry architecture from the site of El Tigre (photo by Davide Domenici, Río La Venta Archaeological Project).

The beginning of the Late Classic period was marked by the first colonization of the area, as reflected by a florescence sites with of stone-masonry architecture (fig. 5) and the widespread diffusion of Fine Orange pottery that suddenly replaced the old Olmec-derived black ware tradition. The occupation of the previously uninhabited area caused a radical change in the preferential location of ritual caves. Since the Late Classic, in fact, Zoquean peoples of El Ocote began to use caves located on the canyon cliffs, only reachable by climbing or walking along the narrow ledges that run along the canyon's walls (fig. 6). In general terms, there was an apparent preference for dry caves, where pottery offerings, mainly represented by Fine Orange bowls and plates of the local Mechung phase (600-900 d.C.) continued to be deposited, often near salient speleothems or in alcoves of the cave walls (fig. 7).

After the abandonment of the area at the end of the Terminal Classic Period, a second colonization wave occurred in Postclassic times, apparently by Zoquean groups escaping from the Chiapanec intrusion in Western Chiapas. Clear evidences of Postclassic ritual activities are scanty, but most of the abundant rock art examples in the canyon possibly date to this last phase of the pre-Hispanic occupation of El Ocote.

Historical and ethnographical information shows that the El Ocote area was known among local Zoque groups as an especially sacred area, home of the nahuales and that is was called Norte Ipstek, "The Twenty Houses of the North", or "The Twenty Houses of the Rain", a toponym closely matching the current name of the El Ocote mountain range, "Sierra de Veinte Casas".

Cueva del Lazo: A description[6]

Cueva del Lazo, located on the north cliff of the Río La Venta canyon at 250 m above the river, is actually a small

6. More in-depth descriptions and interpretations of the archaeological context of Cueva del Lazo, as well as images of the non-textile materials there excavated, can be found in Domenici et al. 2007; Domenici 2013, 2014.

Fig. 6. View of the Río La Venta canyon cliffs (photo by Davide Domenici, Río La Venta Archaeological Project).

Fig. 7. Late-Terminal Classic offering in Cueva de los Altares (photo by Luca Sgamellotti, Río La Venta Archaeological Project).

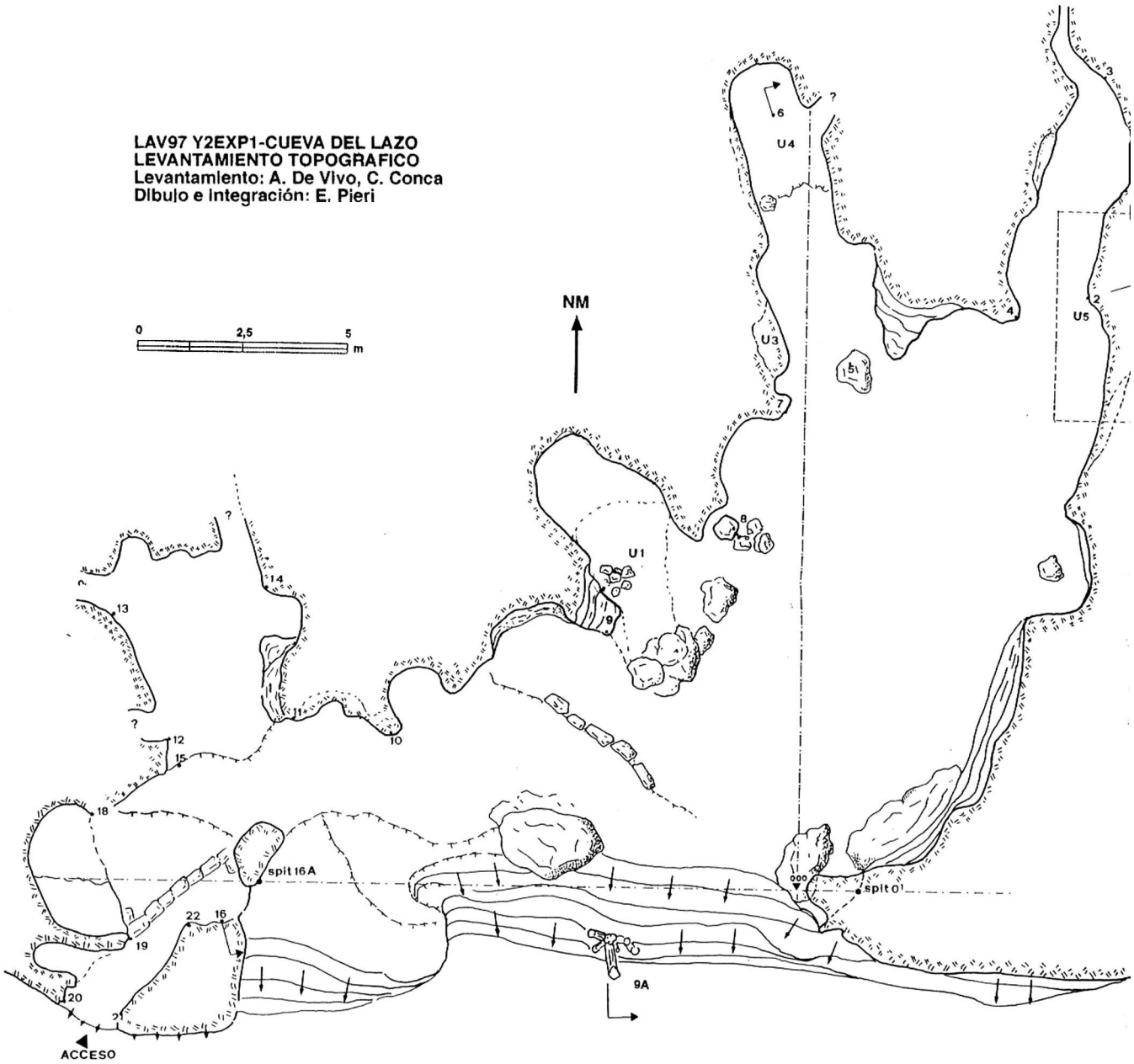


Fig. 8. Map of Cueva del Lazo (map by Elvina Pieri Orefici, Río La Venta Archaeological Project).

space, approximately 15 m deep, covering an area of roughly 170 m^2. On the sides of the main chamber are three alcoves (corresponding to excavation units 1, 4 and 5), where the most remarkable finds were made; the alcoves containing the bundled burials are located in the deeper and darker area of the cave (fig. 8).

The excavation of Unit 1 uncovered the remains of a hearth, over 200 *jute* (*Pachychilus* sp.) shells, fragments of three coarse paste cooking *ollas* and an hemispherical bowl, two *yahuales* (rounded implements made up of twisted rushes in order to support concave-bottomed *ollas*), a partially burnt tobacco cigar, human coprolites, textile fragments, a perforated seed bead, and two grey obsidian prismatic blades. Macrobotanical remains included corncobs (*Zea mays*), squash (*Cucurbita* sp.), *anona* (*Annona* sp.), *jocote* (*Spondias purpurea*), *coyol* (*Acrocomia mexicana*), *tempisque* (*Mastichendron capiri*) and *totoposte* (*Licania arborea*) (Piacenza 2000). Almost all of the non-coarse paste ceramic fragments were of Fine Orange ware (Tuma Orange) typical of the local Late-Terminal Classic Period. Unit 1 also contained three perforated circles of dry gourd incised with bird images (fig. 9).

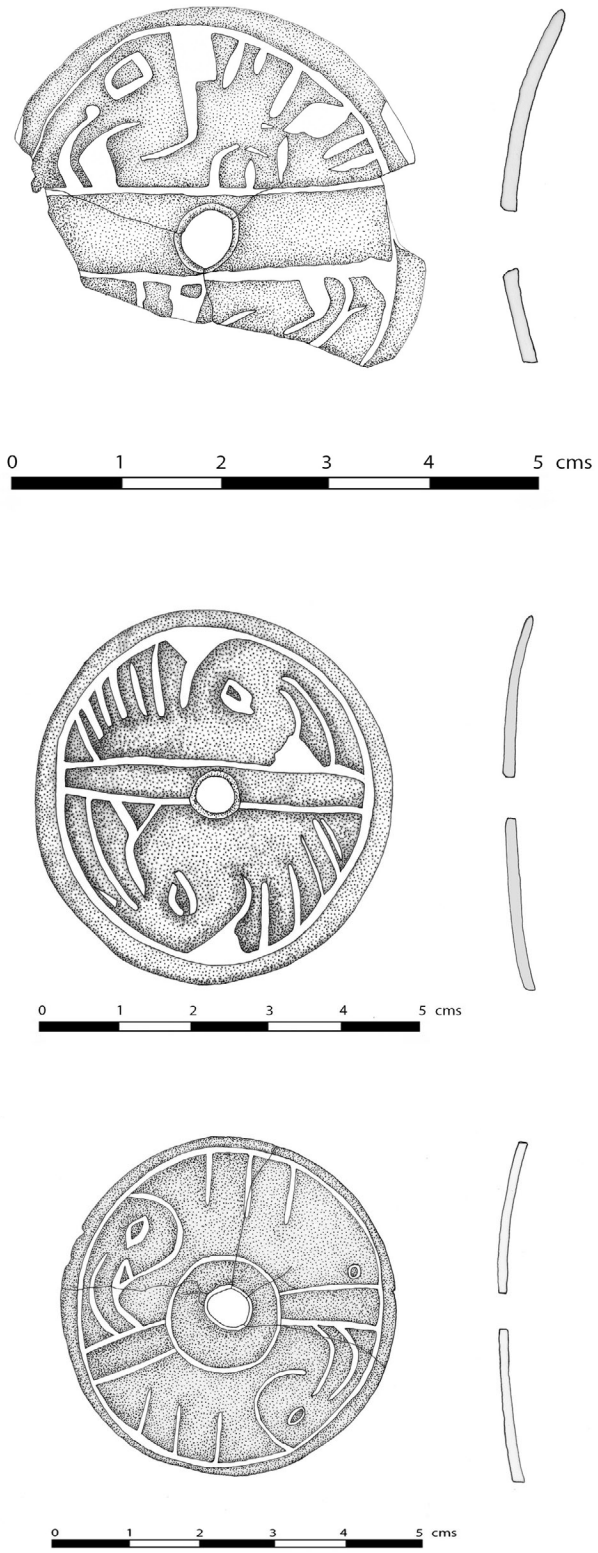


Fig. 9. Perforated circles of dry gourd incised with bird images, from Unit 1 (drawing by Cristina Pongetti, Río La Venta Archaeological Project).

In Unit 4, in the northwestern alcove, the remains of a child burial (Burial 2) were found inside an intrusive pit excavated into an earlier floor. The pit was filled with earth and grass, while the alcove access was enclosed by a semicircular row of stones. The child, between four and six years old (Tiesler and Cucina 2005: 9), was originally wrapped in a textile bundle whose fragments were found nearby. The remains of the burial were resting over a grass circle tied with grass fibers. In proximity to the burial were a partially burnt tobacco cigar, a fragment of an incised and painted gourd, a fragment of a polished and perforated *Spondylus princeps* valve, a small ring of vegetal fibers, a green obsidian prismatic blade, human coprolites, and macrobotanical remains including maize (*Zea mays*), beans (*Phaseolus* sp.), *chile* (*Capsicum* sp.), *jocote* (*Spondias purpurea*), gourd (*Cucurbita* sp.), *tempisque* (*Mastichendron capiri*), *mamey* (*Mammea americana*), *anona* (*Annona* sp.) and *totoposte* (*Licania arborea*) (Piacenza 2000). Two of the textiles fragments associated to Burial 2 show some kind of decoration, one of them with a motif depicting architectonical features (see below, fig. 45) In the outer part of the enclosing row of stones, the poorly preserved remains of the burial of a six to eighteen month old child (Burial 1B) were associated with small textile fragments and fibre cords, obviously the remains of another burial bundle.

Unit 5, within the northeastern alcove, contained the richest remains. An intrusive pit measuring approximately 3 x 2 m had been excavated in antiquity through an earlier stuccoed floor, and was partially covered on its southern side by a thick layer of grass. The intrusive pit was filled with earth containing typical Late-Terminal Classic Mechung pottery fragments, and a huge quantity of macrobotanical remains including maize (*Zea mays*), beans (*Phaseolus* sp.), gourd (*Cucurbita* sp.), *jocote* (*Spondias purpurea*), *tempisque* (*Mastichendron capiri*), *mamey* (*Mammea americana*), avocado (*Persea americana*), and *anona* (*Annona* sp.). The maize was found in the form of dry cobs (totalling 1265 g) and analysis showed that their grains had been eaten when tender, and had probably been boiled (Piacenza 2000: 28).

At the level of the grass covering rested a bone awl, a deer antler, a partially burnt tobacco cigar (fig. 10), a fragment of a vegetal fibre child's sandal, a small wooden zoomorphic sculpture (fig. 11), a mat fragment, and small, child-size bracelet composed of an S-plied cord, seven bird-bone tubular beads, and three stone beads (fig. 12). In addition, an interesting item was a stone plaque with a still unidentified resinous coating holding six small reptile (lizard?) teeth, probably used as a scarification or bloodletting tool (fig. 13). The pit also contained human coprolites (Montes de Paz and Linares Villanueva 2015).

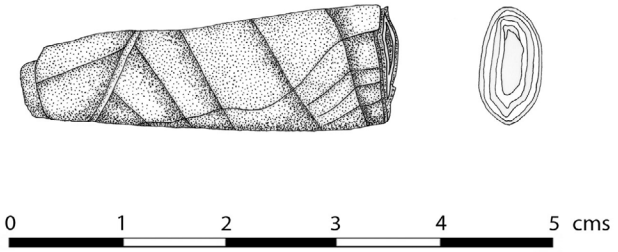


Fig. 10. Partially burnt tobacco cigar from Unit 5 (drawing by Cristina Pongetti, Río La Venta Archaeological Project).

The pit excavation revealed a group of children in very different states of preservation. The excavation began in the area not covered by the grass cap, where five very superficial and badly disturbed burials were found (1A, 3, 4, 5A and 5B).

Burial 1A corresponds to the highly incomplete remains of a 1 to 2 year old child, whose cranium presented tabular oblique modification. Fragments of textiles and fibre cords indicated the existence of a burial bundle.

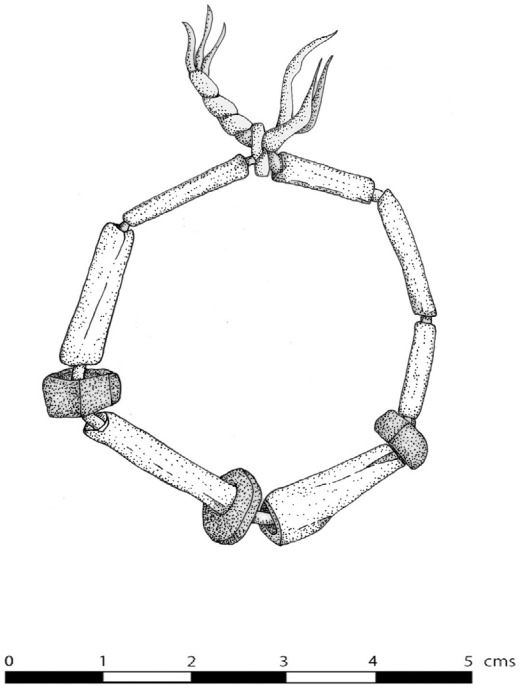


Fig. 12. Bracelet from Unit 5 (drawing by Cristina Pongetti, Río La Venta Archaeological Project).

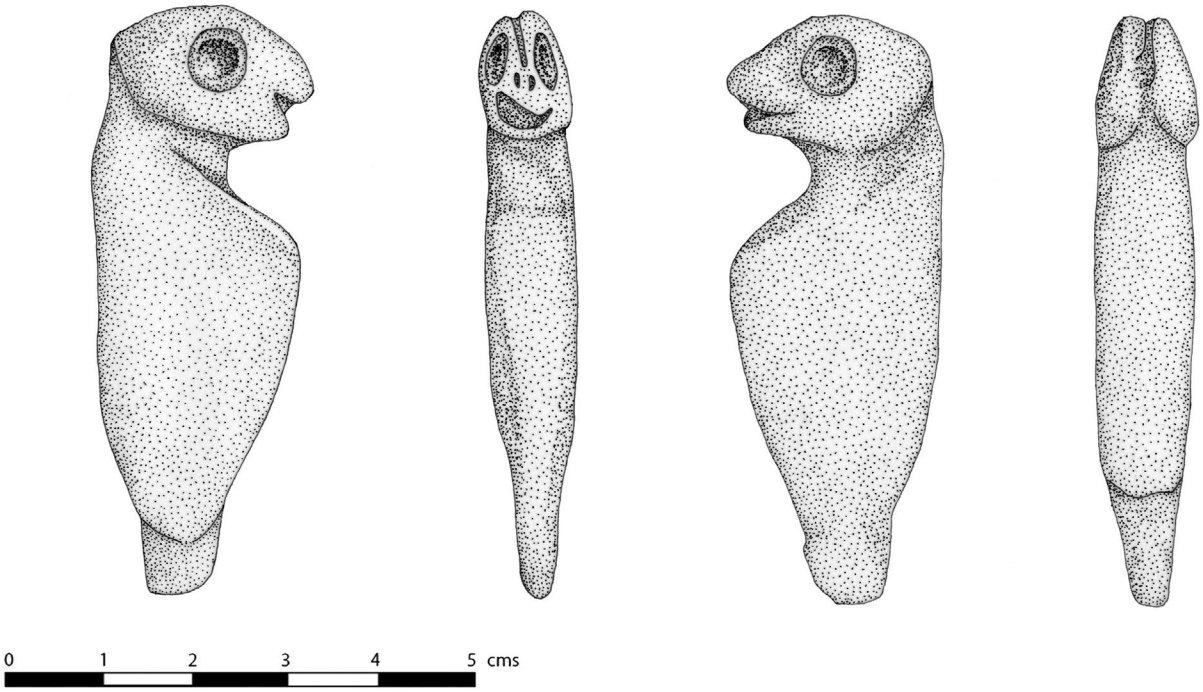


Fig. 11. Wooden zoomorphic sculpture from Unit 5 (drawing by Cristina Pongetti, Río La Venta Archaeological Project).

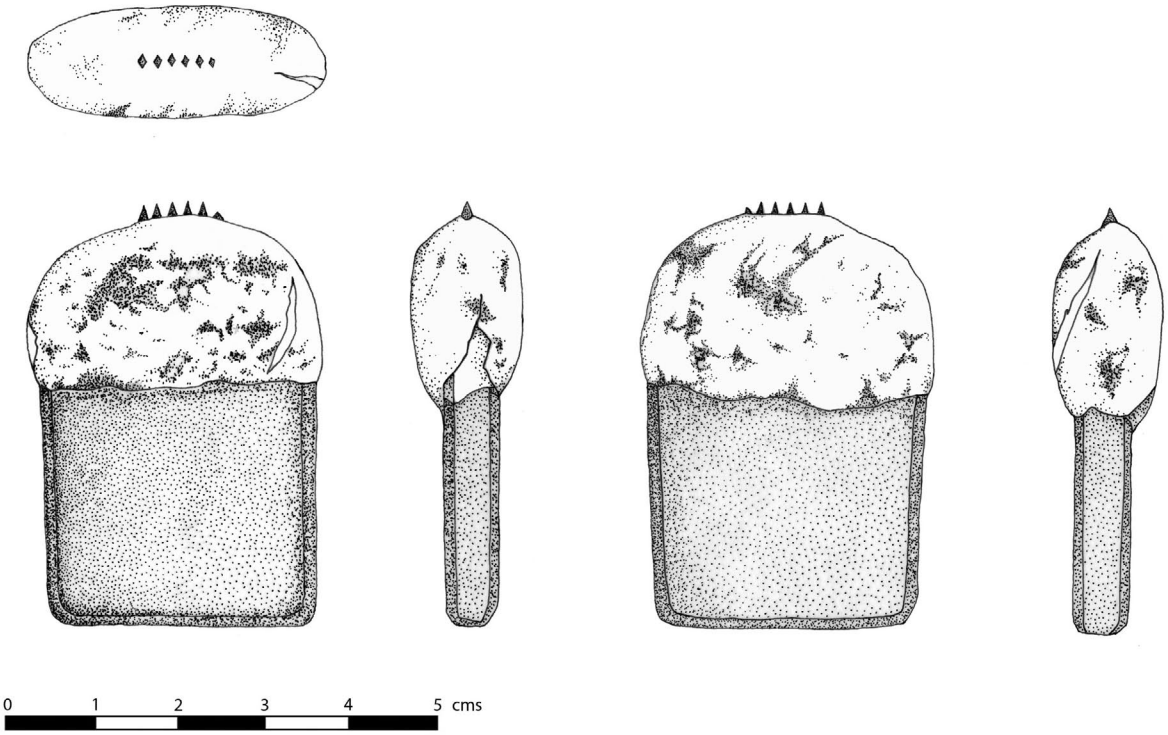


Fig. 13. Scarification or bloodletting tool from Unit 5 (drawing by Cristina Pongetti, Río La Venta Archaeological Project).

Burial 3 contained the remains of a 12-18 month old child. The burial was in close proximity to vegetal remains and was associated with a very fine mat with fringed edge (fig. 14) and fragments of two knotted brown textiles, one of them with geometric decoration (see below, fig. 43).

The highly perturbed Burial 5A consists of the skull and mandible of a 3 to 4 year old child, with evidence of tabular oblique modification. Associated fragments of textiles show that the body had been originally bundled.

Burial 5B comprised approximately 90% of the skeleton of a 5 to 6 year old child. The cranium was absent, while the mandible was *in situ*. The skeleton was partially wrapped in a textile formed by three cream-colored bands sewn together, almost identical to the one associated to Burial 5A. The child was originally placed in a seated position, with flexed arms and legs.

Burial 4 was composed of approximately 90% of the skeleton of a 1 to 2 year old child. The remains of cotton textiles nearby the skeleton, obviously part of its burial bundle, contained human coprolites.

The grass cap on the southern side of the pit was then removed and two underlying burials (6 and 7) were found.

Burial 6 was composed of approximately 90% of the skeleton of a 1 year old child, including the mandible but not the skull. The burial was bundled and the child was wearing a cotton turban, found in the vicinities.

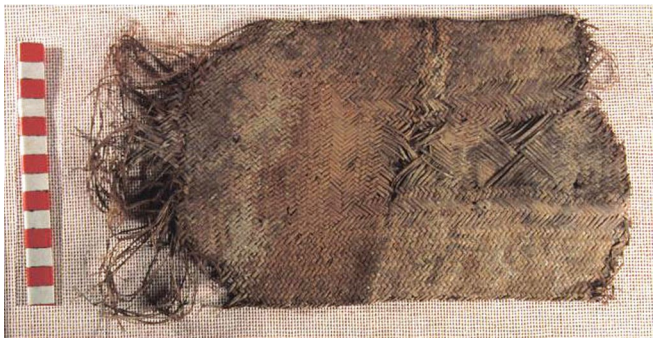


Fig. 14. Mat with fringed edge from Unit 5 (photo by Davide Domenici, Río La Venta Archaeological Project).

Burial 7 was composed of 95% of the skeleton of an 18 month to 3 year old child, whose cranium shows tabular oblique modification in its intermediate form. Bones were partially wrapped in a textile and associated to a bracelet composed of an S-plied cord and a tubular shell (*Spondylus princeps*) bead (fig. 15; Paz Bautista 2011).

North of these two burials, in an area originally not covered by the grass, two other individuals (Burials 8 and 9) were found. Burial 8 contained 95% of the skeleton of a six month to 1 year old child, whose cranium shows tabular oblique modification in its pseudo-rounded form. A necklace composed of an S-plied cord attached to a subrectangular shell pendant (*Pinctada mazatlanica*) (Paz Bautista 2011) was associated to the burial (fig. 16).

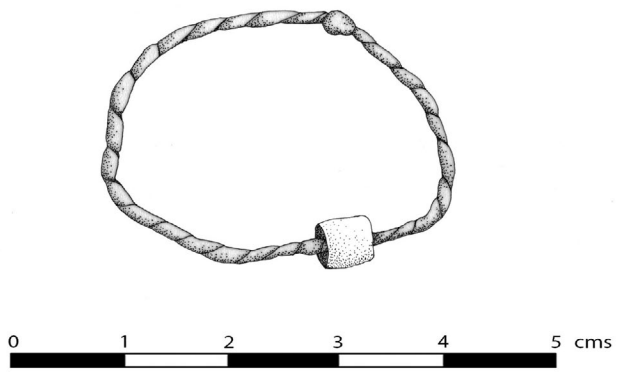


Fig. 15. Bracelet associated to Burial 7, Unit 5 (drawing by Cristina Pongetti, Río La Venta Archaeological Project).

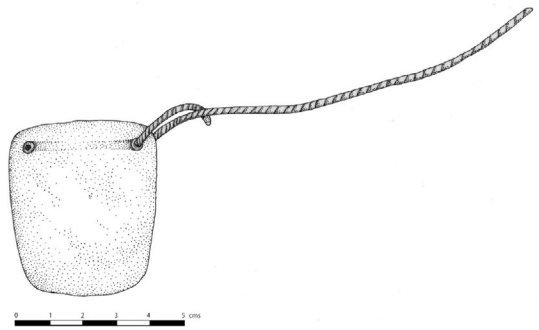


Fig. 16. Necklace associated to Burial 8, Unit 5 (drawing by Cristina Pongetti, Río La Venta Archaeological Project).

Finally, Burial 9 consisted of the still bundled body of a child – it was the best preserved bundle in the cave – with remains of a turban (see below, figs. 38-42). The bundle, resting on a sediment layer covering a grass circle, was composed by two different textiles and was associated with a hemispherical dried gourd (*jícara*) containing a corncob (whose grain had been eaten when tender). On of the textiles show a geometrical decoration (see fig. 42). The bone remains made up of 90% of the skeleton of a 1 to 2 year old child, which included the mandible but not the skull. The child wore a necklace almost identical to the one found in Burial 8 (fig. 17).

South of burials 8 and 9 two big textiles were found, maybe originally part of one of the two bundles.

The characteristics of the burials in Unit 5 suggest that they were placed into the intrusive pit on different occasions, leading to various acts of re-excavation and re-filling of the pit that caused the disturbance of the earlier burials,

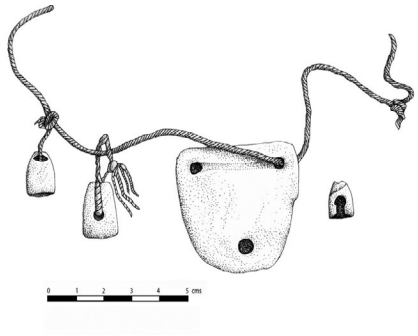


Fig. 17. Necklace associated to Burial 9, Unit 5 (drawing by Cristina Pongetti, Río La Venta Archaeological Project).

whose bundles were often completely destroyed, thus explaining the very fragmentary conditions of most textile remains and the lack of skulls in otherwise well preserved burials. Such repeated use of the deposit is further supported by the AMS dating of the textiles (see below), distributed in a time span of over two centuries. The superficial remains of previously displaced burials later suffered additional disturbance by animals that left their traces on the surface of the bones. A similar situation appears in Unit 4, where Burial 1B was probably disturbed during the disposal of Burial 2. The spatial pairing of Burials 6-7 and 8-9, as well the similarity between the necklaces of these last two, suggest that in these two cases the children could have been buried in pairs.

Though there is no direct evidence of *perimortem* trauma on the skeletons, various elements of the context are consistent with archaeologically and historically documented sacrificial behaviour, suggesting that the archaeological context of Cueva del Lazo could be described as a post-sacrificial deposit.[7] A first one is the age of the children, all of them under six years old (eight of them under two), obviously not matching to a normal death curve and suggesting some form of cultural selection. Moreover, paleopathological evidence identified by on the bones of most individuals (such as *cribra orbitalia* and porotic hyperostosis) points to a lifelong history of stress resulting from weaning, food deficiency, and infections (Tiesler and Cucina 2005: 18). Similar stress indicators were commonly noted among other sacrificed children in Mesoamerica.

The location of the burials in a cave is obviously another meaningful trait, since local caves were used as places of offering deposition for almost two thousand years. From this perspective, it is interesting to note that the Cueva del Lazo child burials were located in cave alcoves, that is in places usually devoted to offering deposition and probably

7. Iron oxides particles identified on some textiles (see below) could proceed from blood stains, thus suggesting some kind of sacrifice involving blood shedding, such as throat silting. Admittedly, the evidence is too weak to make it a strong case.

perceived as transitional spaces, as shown by their role in the various Chicomoztoc-like Mesoamerican caves. Interestingly, two of the bundled corpses (Burials 2 and 9) were located on top grass circles and both the burial pits in Unit 4 and 5 had grass coverings. As shown by G. Olivier (2006), in Aztec rituals the grass (*zácatl*) had a specific telluric symbolic significance and was used as an earthly base for offerings; moreover, the grass circles strongly resemble those used as bases of the *tzoalli* children-mountains "sacrificed" during the Aztec festival of Tepeílhuitl, as described by Bernardino de Sahagún. If the vertical stratigraphy of the burial pit in Cueva del Lazo reflects the syntactical sequence of ritual action, the deposition of the grass circles would have constituted the first act of the construction of a layered ritual deposit, sealed with a grass covering as in an earthly matrix.

Even more significant is the fact that children in Cueva del Lazo were buried together with a huge amount of food remains: maize, squash, beans, chile, *anona*, *jocote*, *mamey*, *coyol*, *tempisque* and *totoposte*, among others. The presence of tender maize, apparently partly consumed *in situ*, is interesting because, apart from fitting with the "green", "unripe" semantic sphere, it suggests some form of "first fruit" offering. This evidence must be connected with that coming from Unit 1, where the presence of over 200 *jute* (*Pachylicus* sp.) shells with broken tips indicating their use as food, together with a hearth and cooking pottery remains, suggest the preparation and consumption of a soup or broth.

The elements so far summarized seem to characterize the Cueva del Lazo interments as a cyclically renewed ritual deposit involving the offering of a complex set of "green", unripe, elements. These elements fit closely within the Mesoamerican practice of child sacrifices as transformative processes of mutual consumption/exchange with water-earth-fertility gods. Admittedly, a similar meaning could have been associated with a special funerary treatment, but traits such as the suggested interment of some of the children in pairs could be viewed as strong evidence in favour of the sacrifice hypothesis, since dual sacrifices of children are mentioned in several colonial sources. In sum, even with due caution, contextual evidence strongly suggests that Cueva del Lazo functioned in Late Classic times as a ritual space devoted to the performance of cyclical child sacrifice in which the bundled corpses of children were deposited as offerings to the food-laden interior of mountains, the abode of the gods of rain and fertility.

3 Perishable materials' technical analysis and conservation issues

Research and conservation strategies

In Mesoamerica, archaeological contexts characterized by environmental conditions allowing the preservation of perishable materials are extremely rare, so that the corpus of known pre-Hispanic textiles is extremely reduced (see Filloy Nadal, this volume); even more reduced is the corpus of specimens still preserving their original shape and dimensions. For this reasons, the perishable materials proceeding from Cueva del Lazo are unique both in terms of quantity and general state of preservation. In fact, the materials recovered in the cave and then transferred to the *Coordinación Nacional de Conservación del Patrimonio Cultural* include unspun fibres, yarns, hard fiber textiles such as mats, ropes, and a huge variety of soft fibres textile fragments, some of them almost complete. We counted at least 68 textile fragments, a few of them preserving more than 50% of its original extension and thus providing precious information about manufacture techniques, proportions, and function. Twelve of them stand out for their uniqueness: two turbans, a burial bundle, a ritual bundle, a mantle composed of various sewn clothes, a strip, a net, three embroidered textiles, and two orange-dyed ones.

Due to the high number of specimens submitted to conservation treatment, in the following lines we will only resume the general process, stressing some specific method used in particular instances.

In general terms, the employed methodology included the following steps:

A. Evaluation and diagnosis of the state of preservation of the specimens.
B. Photographic record before, during, and after every process, at times with transmitted and oblique light.
C. Sampling and analysis of warp and weft yarns.
D. Dyes identification
E. Dating of sampled textiles.
F. Conservation process
G. Mounting and storage

Fibres identification

The identification of the fibres (fig. 18) has been carried out on 112 samples, whose observation with a biological microscope gave the following results: 36% cotton, 6% agave, and 58% a combination of cotton and agave. The high percentage of textiles composed of a combination of cotton and agave (fig. 19) is quite unusual in the known pre-Hispanic corpus; the combination of different fibres could have been

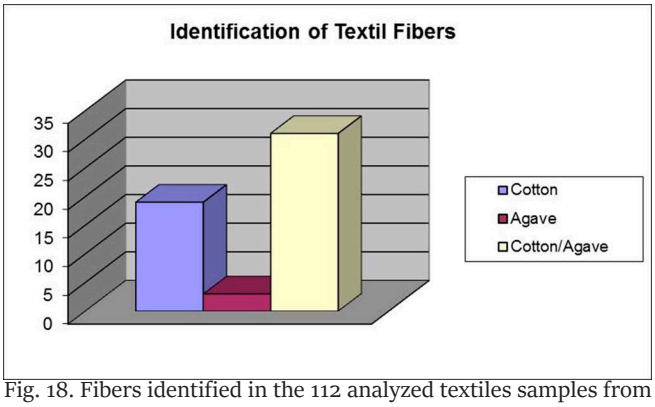


Fig. 18. Fibers identified in the 112 analyzed textiles samples from Cueva del Lazo (Gloria Martha Sánchez, CNCPC-INAH).

aimed at reducing costs or at providing more strength or a specific texture to the cloth. Central Mexican early colonial sources refer that the use of cotton garments was restricted to the nobles, while agave fibres were used for commoners' cloths. In this sense, it is interesting to note that in our sample most of the textiles composed of pure agave or of a mixture of cotton and agave textiles are plain and undyed, while the decorated textiles (both with brocade or dyeing) are made of pure cotton.

Type of weaving

Most of the 55 analysed textiles, that is 88% of the collection, showed a simple plain weave, or taffeta (1 warp yarn for each weft yarn), technique. 14.5% showed a *taletón* type (2 warp yarns for each weft yarn), while only two textiles showed a combination of the two types; only one specimen was woven with warps and wefts used in pairs, the basket weave technique (fig. 20).

Type of decoration

The analysed corpus showed a great diversity of decorative techniques, such as brocade, kilim, gauze, multiple warps, and dyed yarns (figs. 21-27).

Dyes identification

The analysis of the fibres showed that they were dyed with two different colours: blue, and orange, while blackish and brownish areas are the product of the decomposition of organic matter and, maybe, of blood stains. The dyes identification, by means of Scanning Electron Microscope (SEM) and Energy Dispersive X-ray Spectrometry (EDS), was carried out by Gustavo Martínez on six fiber samples (Table 1).

M1 showed to be dyed with indigo (*Indigofera suffruticosa*), while the adhering brown particles are iron oxides; the red particles adhering on the undyed M2 are also iron

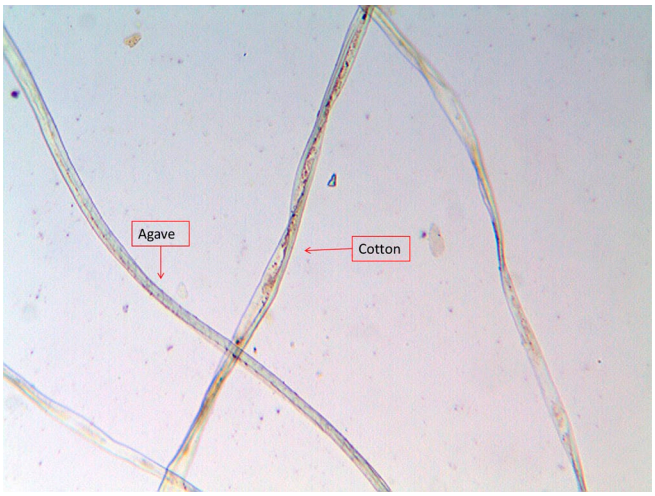


Fig. 19. Cotton and agave fibers from specimen 59-05/06 seen at biological microscope 40X (Gloria Martha Sánchez, CNCPC-INAH).

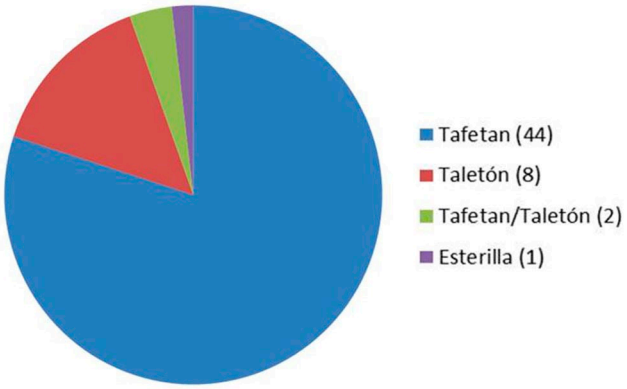


Fig. 20. Weaving techniques identified in the Cueva del Lazo textile corpus (Gloria Martha Sánchez, CNCPC-INAH).

oxides, maybe blood stains; M3 is dyed with a carotenoid, most probably achiote or annatto (*Bixa orellana*) while the adhering particles are iron oxides, calcium sulphates (gypsum) and earth deriving from the excavation sediment; M4 is dyed with indigo, while the adhering brown particles are iron oxides; M5 showed a high carbon content (47.79141843% of total weight), probably deriving from the corpse decomposition since it is not evenly distributed on the fiber; M6 is an undyed cotton fiber containing small amounts of silicon oxide, reddish iron oxide, white calcium sulphate and clay.

Sample dating

Four fibre samples were submitted to AMS (Accelerator Mass Spectrometry) dating, carried out by BETA ANALYTIC INC., in order to obtain absolute dates that could be compared with the dating of the archaeological context based

Table 1. Samples of fibres submitted to Scanning Electron Microscope (SEM) and Energy Dispersive X-ray Spectrometry (EDS) for dye identification (Gloria Martha Sánchez, Fototeca CNCPC-INAH).

Sample number	Sample	Photo
M1 60-11-06	Blue cotton fiber with small brown particles adhering to it.	
M2 60-35-06	Light brown cotton fiber with small red particles adhering to it.	
M3 60-05-06	Undyed cotton fiber with orange/ochre particles adhering on it.	
M4 60-25-06	Plaited, cotton fiber with blue dye on some areas.	
M5 60-11-06	Dark cotton fiber treated with methocel. Some black areas could be due to the putrefaction of the bundled corpse.	
M6 60-30-06	Undyed cotton fiber with small red stains.	

on ceramic types, assigned to the local Late-Terminal Classic Mechung phase (AD 600-1000). The four samples were taken from representative specimens of the collection (Table 2), that is, an orange dyed textile, two turbans, and textile decorated with the combined techniques of *taletón* and multiple threads, a unique technique that could suggest a different temporality of the specimen.

The dating provided the results presented in Table 3.

All the obtained dates squarely fall within range (1120-1370 +/- 40 BP) fully compatible with the temporality assigned to the Late-Terminal Classic Mechung phase (AD 600-1000) proposed on the base of pottery sequence.

State of preservation of the collection

Despite the general exceptional conditions of perishable materials from Cueva del Lazo, a specific diagnostic revealed physical, chemical and biological alterations affecting the integrity of the specimens. These alterations occurred both during the centuries in which they remained into the cave as well as during the excavation and the subsequent storage prior to the beginning of the conservation work. Being part of mortuary bundles, the textiles stayed in contact with substances deriving form the decomposition of the bodies; moreover, the sequential excavation and refilling of

Table 2. Samples submitted to AMS dating (Gloria Martha Sánchez, Fototeca CNCPC-INAH).

N	Sample	Photo
1.	60-35/06 252 LAV97 Y2 EXP1 N16 02 02/09/97 TAL W N-1	
2.	60-06/06 18 LAV97 Y2 EXP1 N13/14 E7/8 ESQUELETO6	
3.	60-22/06 INT 31 LAV 97 Y2 EXP 1 N16 E8-9 FARDO B ESQ 9 CAPA A/B	
4.	60-05/06 2 LAV97 Y2 EXP1 N15-E6 CAPA SUPERIOR ASOCIADO A ESQ.1	

the burial pit in ancient times, as well as the activity of animals, caused mechanical alterations of the specimens. Consequences of all these factors can be observed in specimens whose dried fibres show signs of progressive disaggregation.

Conservation

The conservation process included several different steps:

1) Photographic record, carried out before, during, and after the conservation. In some cases photos with transmitted light, grazing light and UV light were taken.

2) The specimens were inventoried and catalogued when they entered the CNCPC, assigning a progressive entry number that was added to the original key assigned during excavation.

3) Filling of a clinic sheet for every specimen, recording main characteristics, preservation conditions, etc. in order to obtain a general diagnostic of the whole collection and to plan further conservation actions.

4) Mechanical cleaning of earth particles deposited on the surface of the specimens; the cleaning was carried out with soft brushes and low-power micro-vacuum cleaner on specimens protected by a tight nylon net permitting the extraction of the earth particles but not that of textile fragments.

5) Physico-chemical cleaning, aimed at removing elements adhering to the specimen surface, carried out by means of solvents that induce the suspension, solubilisation, or elimination of the adhering materials. In this case, a surfactant diluted in water gave excellent results. During the cleaning process, the specimens were protected between two basted nylon nets in order to avoid any movement or deformation.

Table 3. Sample treatment, dating procedures and results.

Sample Data	Measured Radiocarbon Age	$^{13}C/^{12}C$ Ratio	Conventional Radiocarbon Age(*)
Beta - 285873 SAMPLE : 1 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (textile): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 650 to 780 (Cal BP 1300 to 1170)	1300 +/- 40 BP	-25.3 0/00	1300 +/- 40 BP
Beta - 285874 SAMPLE : 2 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (textile): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 680 to 890 (Cal BP 1270 to 1060)	1190 +/- 40 BP	-22.5 0/00	1230 +/- 40 BP
Beta - 285875 SAMPLE : 3 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (textile): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 610 to 690 (Cal BP 1340 to 1260)	1320 +/- 40 BP	-22.0 0/00	1370 +/- 40 BP
Beta - 285876 SAMPLE : 4 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (textile): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 810 to 1010 (Cal BP 1140 to 940)	1110 +/- 40 BP	-24.2 0/00	1120 +/- 40 BP

6) Flexibilization and consolidation. Since most of the textiles showed signs of dryness inducing structural weakness that impeded proper manipulation, it was necessary to submit them to a treatment aimed at providing strength and stability. For this purpose, the specimens were treated with a combination of three different polymers: rice amid (1%) and methylcelulose (0.2%) as consolidants and low molecular weight polyethylene glycol 200 (20%) as flexibilizer. Since the complete submersion and the subsequent drying of the specimens could have induced changes in the textiles' texture, the polymers were sprinkled on them, obtaining satisfactory results.

7) Relocation of warp and weft yarns. Since most specimens are small fragments, many yarns appeared out of place, so that we took advantage of the humidification process to relocate the yarns in their original positions, avoiding their loss and giving the specimens their original shape.

8) Auxiliary support. The creation of an auxiliary support has been necessary both for manipulation and storage of four specific specimens and for public display of those selected to be exhibited in the Museo de los Altos de Chiapas, in San Cristobal.
   a) A textile of huge dimensions (59-05/06) (fig. 28), which was mounted in a red cedar frame in order to help its manipulation and preservation. The textile was sewn (with cotton yarns) on a movable boiled cotton panel, dyed with a neutral colour and attached to the wooden frame by means of Velcro, in order to permit its removal and transportation to the Museum, where it is today on exhibit.
   b) Specimen 60-05/06-A (fig. 29) was divided in two parts that were joined onto a raw silk cushion in order to restore the original shape and to allow the visibility of the brocade decoration. The process required to remove the ancient yarn used to sew the textile

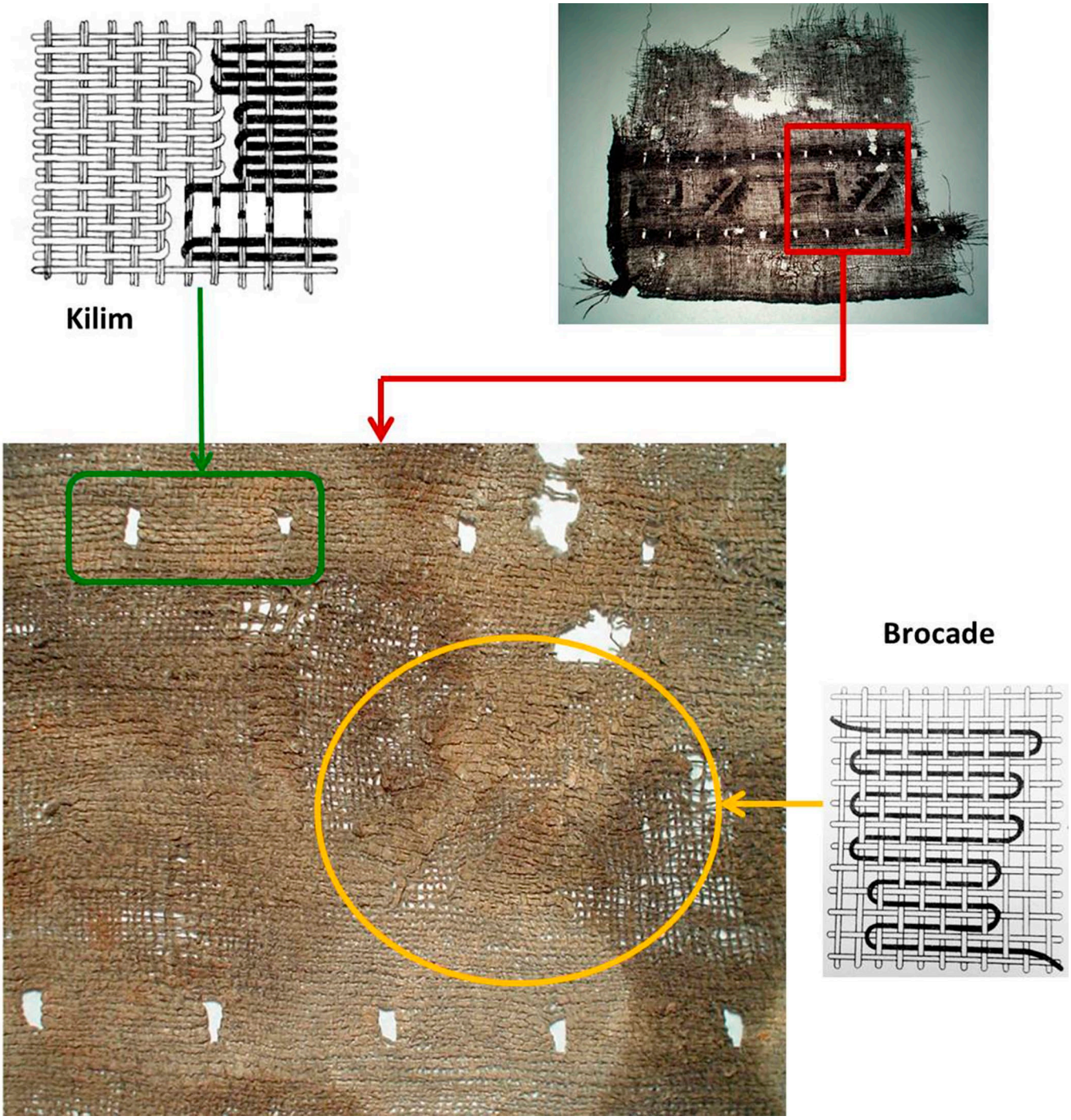
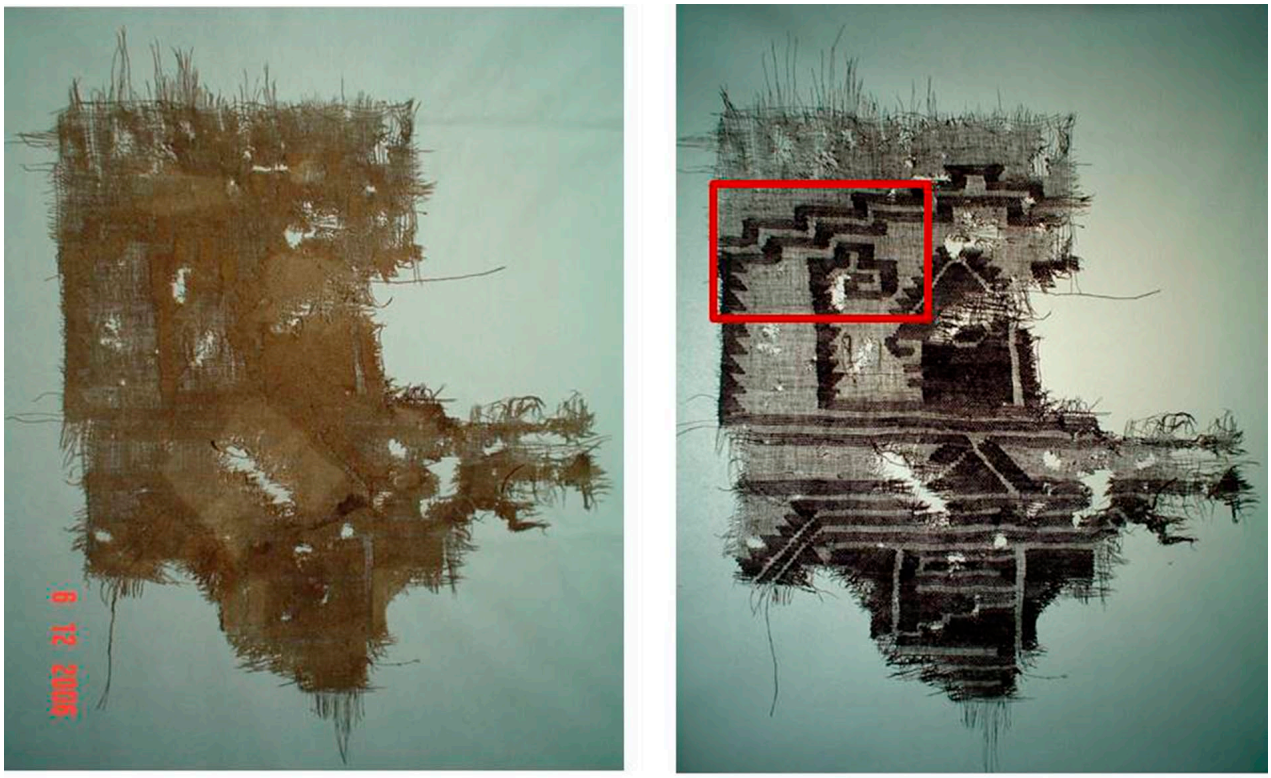


Fig. 21. Types of decoration: brocade and kilim techniques on specimen 59-01/06 (Fototeca CNCPC-INAH).

margins, in order to extend, clean, and relocate its yarns. Then the specimen was mounted and resewn (with the original yarn and following the original sewing pattern) on the raw silk crepeline cushion, sustained by a support composed by an ethafoam® surface, covered with Tyvek ® in order to make the decoration visible. Where the original sewing yarn was lost, it was integrated with a silk yarn in order to make it distinguishable from the original one.

c) Specimen 60-01/06 (fig. 30), an annatto-dyed cotton textile, was originally enrolled over a palm rope. It was necessary to separate the two elements to extend the textile and to submit it to the usual cleaning and consolidation treatment. Then the textile was mounted on a dyed silk crepeline and relocated around the consolidated palm rope.

d) All the specimens selected for being exhibited in the Museo de los Altos de Chiapas were mounted on a silk



Brocade

Fig. 22. Brocaded decoration on specimen 59-03/06 (Fototeca CNCPC-INAH).

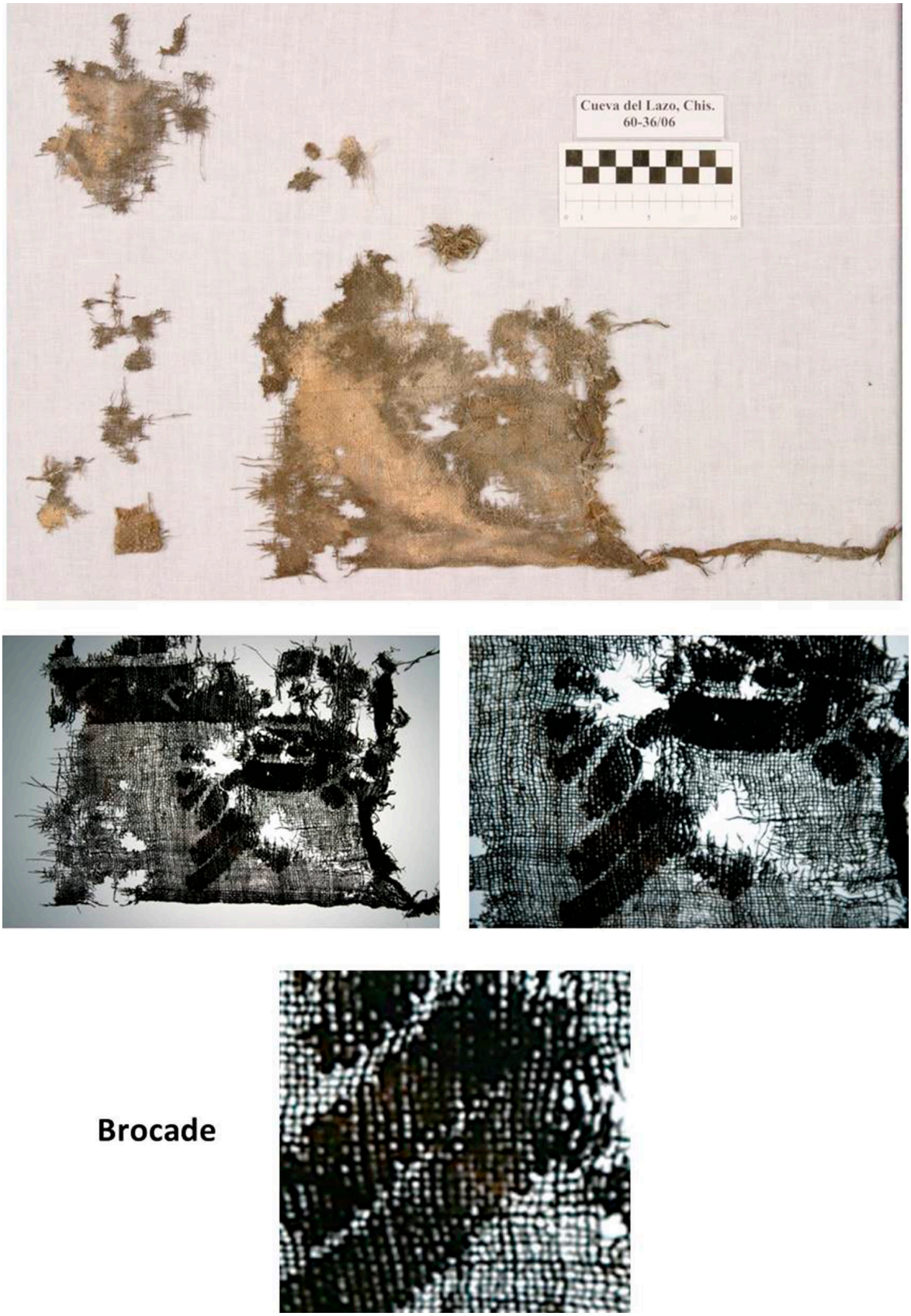


Fig. 23. Brocaded decoration on specimen 60-36/06 (Fototeca CNCPC-INAH).

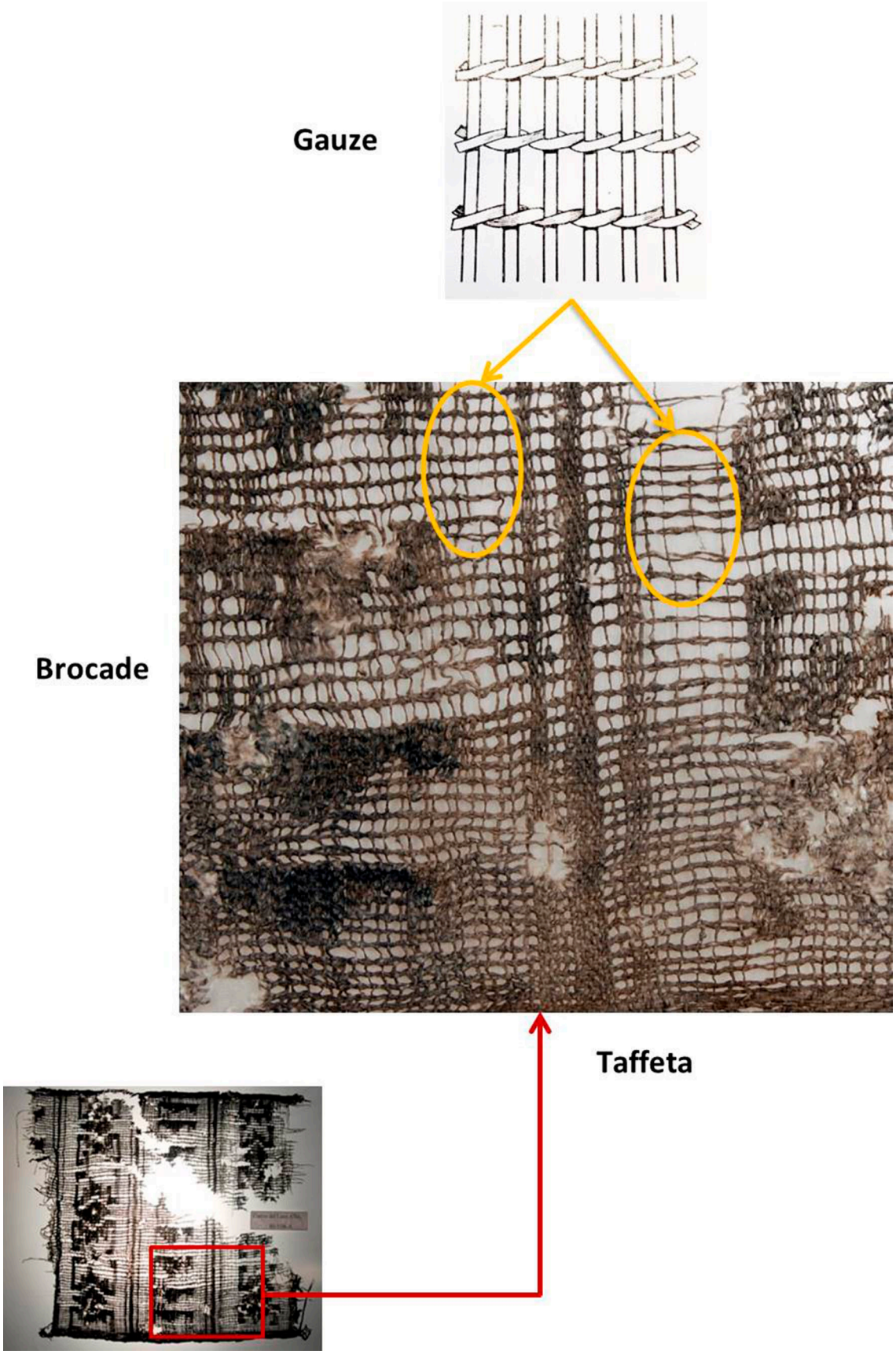


Fig. 24. Gauze, brocade, and taffeta techniques on specimen 60-05/06-A (Fototeca CNCPC-INAH).

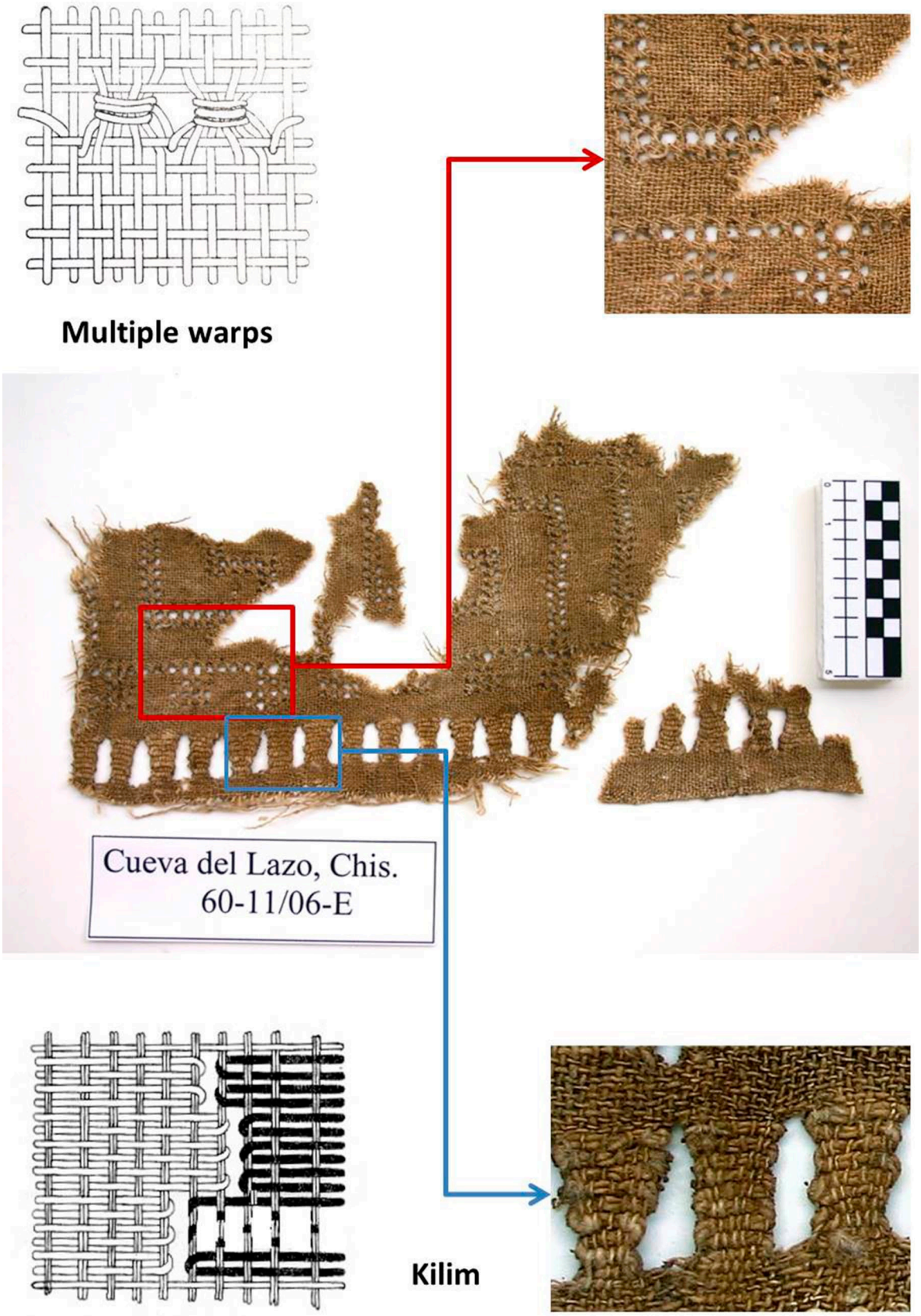


Fig. 25. Multiple warps and kilim techniques on specimen 60-11/06-E (Fototeca CNCPC-INAH).

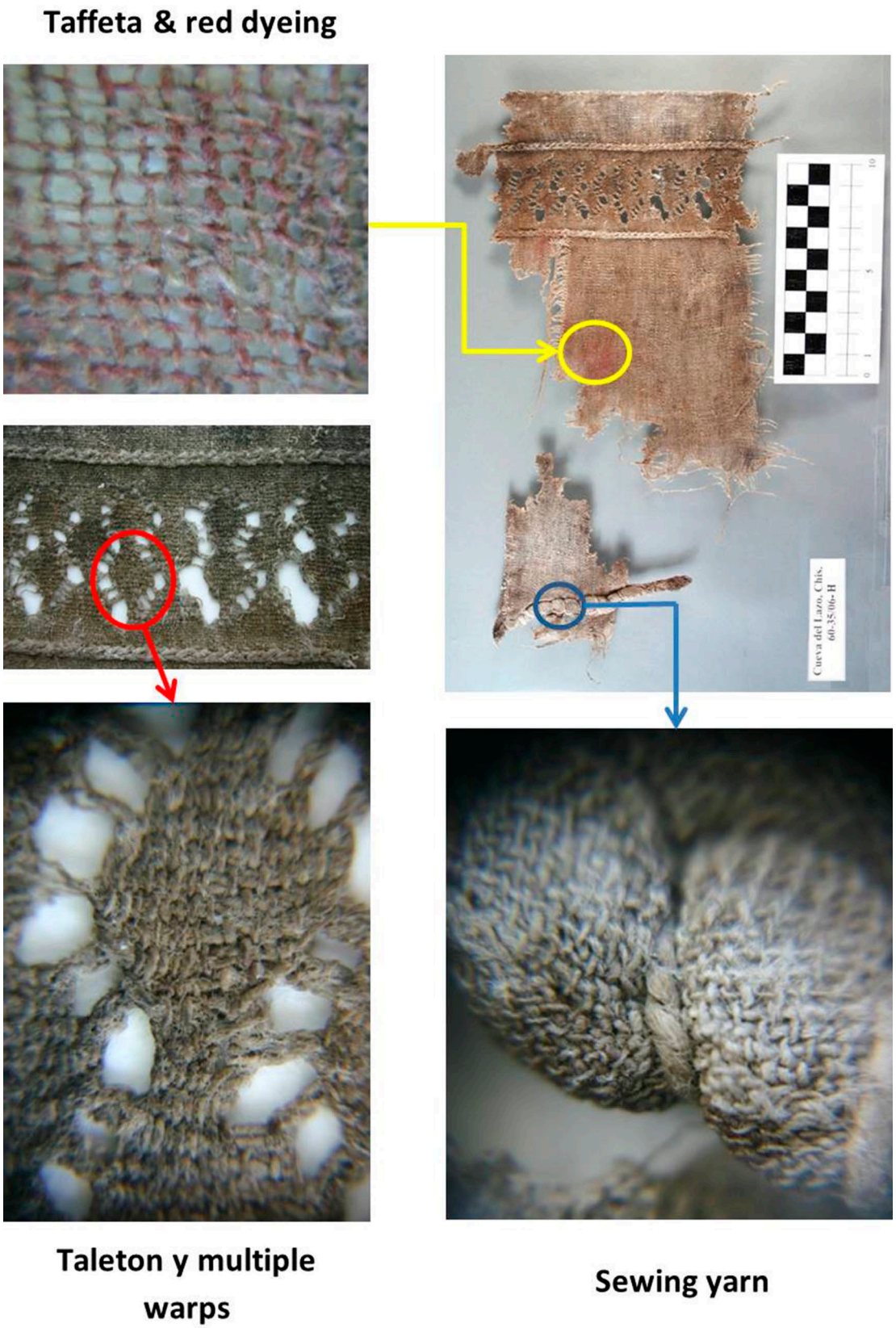


Fig. 26. Taffeta, red dyeing, taletón and multiple warps decorations on specimen 60-35/06 H (Fototeca CNCPC-INAH).

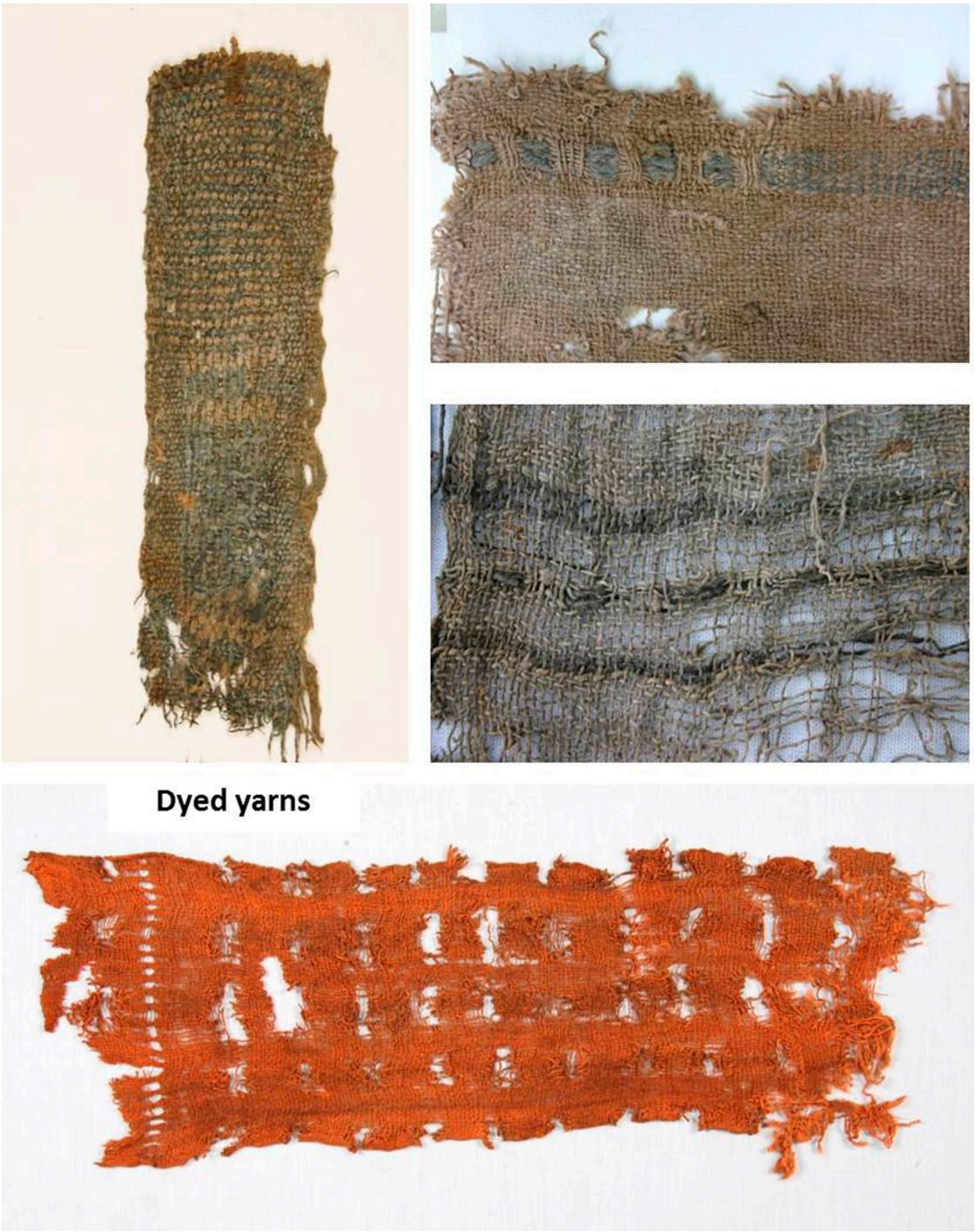


Fig. 27. Different examples of use of differently dyed yarns (Fototeca CNCPC-INAH).

crepeline tensed in red cedar frames through which light can pass, in order to make their brocaded decoration visible when present (fig. 31). The undecorated specimens were put in a frame on whose back a white cotton mantle was mounted with Velcro in order to enhance their visibility, to reduce the dust accumulation and to allow future cleaning.

9) Storage. Most of the textiles (except specimen 59-05/06, mounted in a frame, and specimens 60-05/06-A - 60-01/06, stored in independent polypropylene boxes) were located in black polypropylene folders, internally lined with a cotton cloth and provided with an identification tag. Such folders allow easy storage and manipulation, avoiding the need to touch the specimens.

Fig. 28. Different phases of the conservation process of specimen 59-05/06 (Fototeca CNCPC-INAH).

Fig. 29. Different phases of conservation process of specimen 60-05/06-A, from original conditions to final exhibition in the Museo de los Altos de Chiapas (Fototeca CNCPC-INAH).

Fig. 30. Final exhibition of specimen 60-01/06, an annatto-dyed textile enrolled over a palm rope (Fototeca CNCPC-INAH).

Fig. 31. Examples of two specimens mounted on silk crepeline within cedar frames in order to be exhibited in the Museo de los Altos de Chiapas (Fototeca CNCPC-INAH).

Fig. 32. Mechanical cleaning process of textiles from the mortuary bundle 60-02/06 (Fototeca CNCPC-INAH).

Three specific specimens required a specialized treatment:

a) Mortuary bundle (60-02/06) (fig. 32). The mortuary bundle of Burial 8 had been stored together with an earth block from the excavation. It required a careful cleaning following the method described above, allowing the recuperation of three different textile fragments, two of them parts of the bundle itself. Two of the textiles (one of them from the bundle) were submitted to the usual cleaning and consolidating process and were mounted in the red cedar frames as described above. The first (60-02/06 A), not pertaining to the bundle, is a fragment of a band, with side borders (fig. 33). The second one, pertaining to the bundle (60-02/06 B), was a mantle composed of four different textiles sewn together, highly affected by the decomposition of the bundled corpse (fig. 34): it was mounted in the same way adopted for the abovementioned large textile 59-05/06.

The third fragment (60-02/06 C) was especially interesting, since it corresponded to the upper part of the bundle, covering the head of the children and being tied around the neck (fig. 35). After the usual cleaning and consolidation process, carried out

Fig. 33. Cleaning, yarns relocation and storage in polypropylene folder of specimen 60-02/06 A (Fototeca CNCPC-INAH).

Fig. 34. Final mounting in frame of specimen 60-02/06 B (Fototeca CNCPC-INAH).

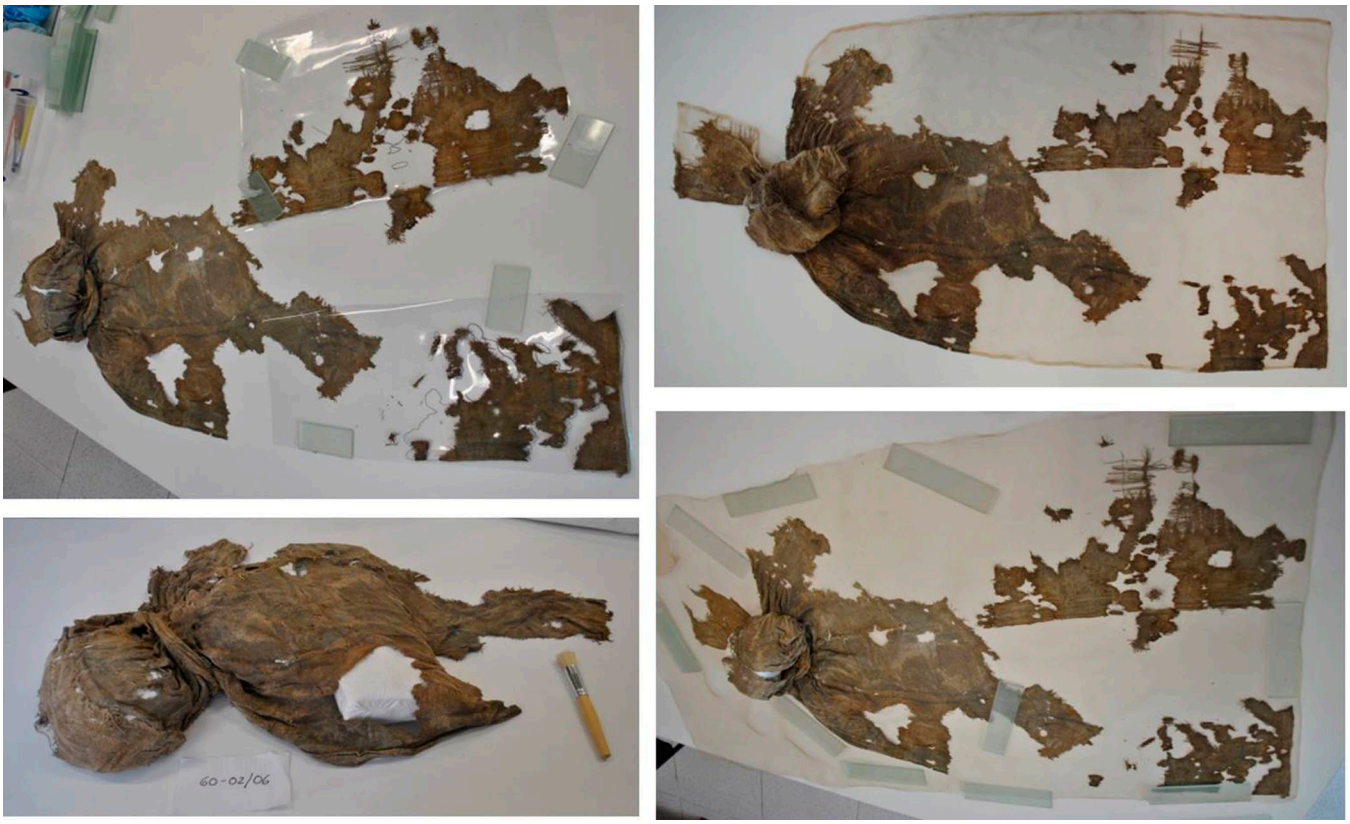


Fig. 35. Conservation process of specimen 60-02/06 C, involving mounting of dyed silk crepeline (Fototeca CNCPC-INAH).

avoiding any deformation of the original shape, we decided to sew it on a dyed silk crepeline providing strength to the specimen and then to mount it on a support that could show its original function as part of a funerary bundle. So, an ethafoam® structure covered by an elastic cotton cloth, resembling the shape of a child's body was prepared (fig. 36) and the textile was mounted over it (fig. 37). We also devised an acrylic base for its eventual exhibition in the future. At the moment, nevertheless, the bundle is stored in a polypropylene box, protected by a Tyvek® bag and held in place by ethafoam bars avoiding movements of the specimen within the box.

b) Turbans. The two turbans had lost most of their original shape during post-excavation storage (fig. 38), so that a special cleaning process was carried out in order to minimize further deformations (fig. 39), using a special vacuum cleaner, a mixture of water and alcohol 1:1. After the usual flexibilization and conservation treatment by means of the abovementioned polymers, once the fibres had recuperated strength and flexibility, the turbans were sewn with dyed silk threads in order to avoid the loss of broken fragments. Four nylon supports were used to maintain the turban's shape and the specimens were further were sprinkled four times with a solution of klucel at 1% in alcohol (allowing fast evaporation). Then a resin *Ren Paste 177* support was prepared in order to maintain the original shape; during the preparation of the resin support the turbans were protected with an egapack plastic film, later removed (fig. 40). Finally, a head-shaped base (fig. 41) was prepared in order to properly transport and store the turbans without further deformation. For public display, the turbans could be mounted on a more realistic head-shaped support.

4 Conclusions

The textiles' corpus from Cueva del Lazo is by far the richest group of Classic textiles ever found in Mesoamerica. Its uniqueness relies on various elements such as its dimensions, its exceptional state of preservation, its possible procedance from a post-sacrificial context and, last but not least, its origin from one of the least known regions of ancient Mesoamerica, that is, the Zoquean region of Western Chiapas. The reconstruction and reinterpretation of the original Cueva del Lazo archaeological context, as well as the proper conservation process and exhibition of some of the textiles, have been the first two, fundamental, steps in the study of such a unique textile corpus. Much more can be

Fig. 36. The ethafoam® structure in the shape of a child's body, covered by an elastic cotton cloth (Fototeca CNCPC-INAH).

Fig. 37. Mounting of specimen 60-02/06 C on the ethafoam® structure (Fototeca CNCPC-INAH).

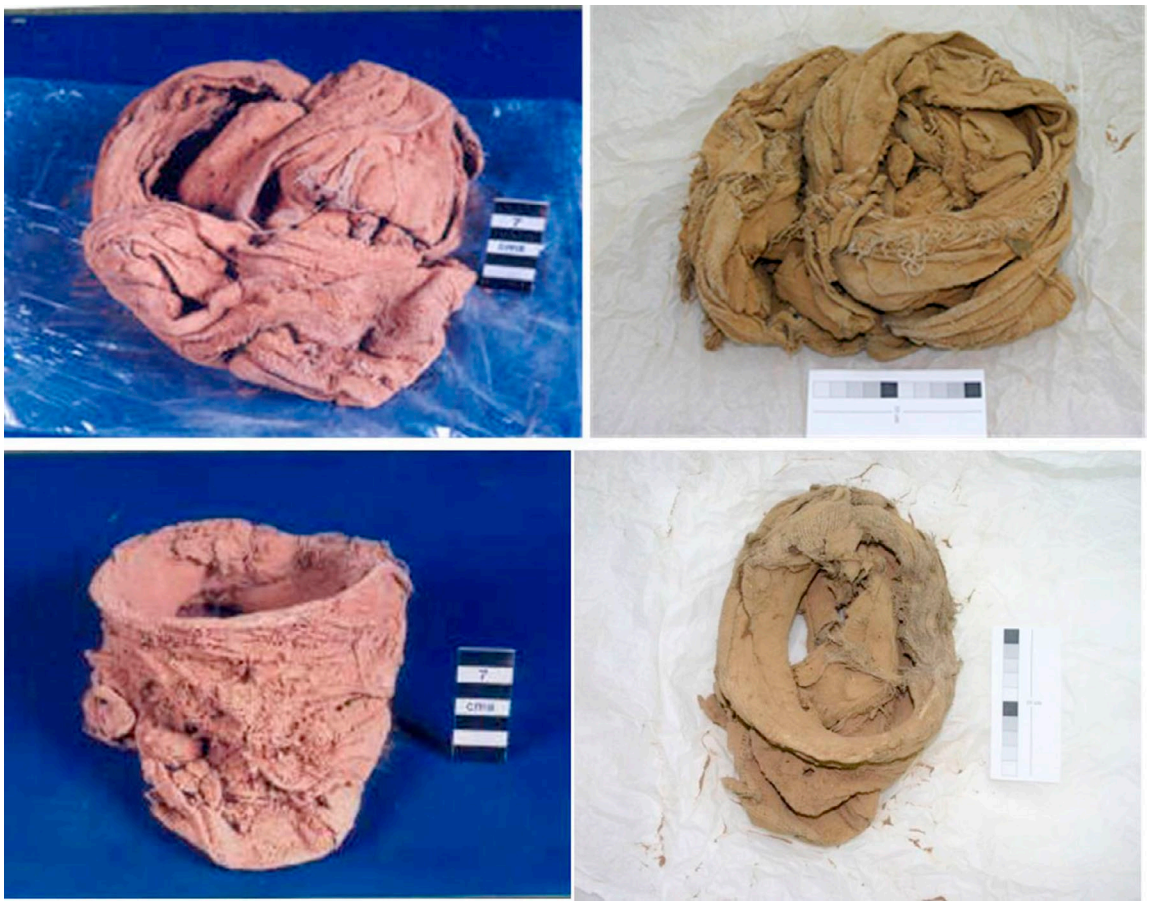


Fig. 38. Conditions of the two turbans when first stored after excavation (left) and prior to our conservation treatment (right) (Fototeca CNCPC-INAH).

Fig. 39. Different phases of the cleaning and consolidation process of one of the turbans (Fototeca CNCPC-INAH).

Fig. 40. Preparation of the resin support for the turban (Fototeca CNCPC-INAH).

Fig. 41. The consolidated turban mounted on a head-shaped support for handling and storage (Fototeca CNCPC-INAH).

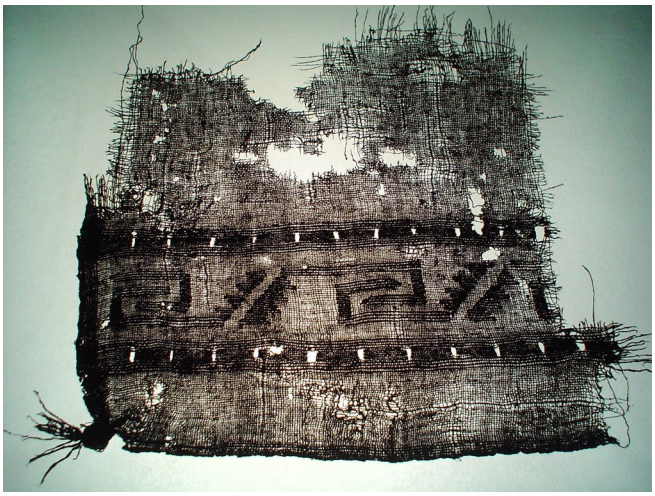


Fig. 42. Specimen 50-1/06 from Burial 9, decorated with xicalcoliuhqui or stepped-frets motifs (Fototeca CNCPC-INAH).

done in the future, and we want to conclude this paper with some brief comments on possible further research lines.

We still not have carried out an in-depth iconographical analysis of the textiles' decorative motifs, but some initial suggestions are in order. A fragment from Burial 9 is decorated by two horizontal bands containing a series of interlocking stepped frets, or *xicalcoliuhqui* (fig. 42). This widespread Mesoamerican symbol, probably representing sectioned conch shells, is generally assumed to allude to watery and wind symbolism. Its use as a decorative motive on garments is witnessed by various pre-Hispanic and colonial examples, such as various individuals on Mixtec codices, the Ix-Chel Goddess as represented on Codex Madrid, two of the aztec mantles depicted on Codex Magliabechiano, one of the Tlaxcallan women on the Lienzo de Tlaxcala, as well as from contemporary indigenous textiles.

The same interlocking stepped frets motif appears on another textile from Cueva del Lazo Burial 3 (fig. 43), contained inside two horizontal bands, whose outer parts are decorated with motifs resembling stepped mountains. The central part of the textile shows a complex, and strangely asimmetric motif of unknown meaning.

Another textile deriving from the unusual "pyramid-like" bundle (fig. 44) shows three parallel bands: while the central one contains elusive, maybe zoomorphic elements, the side-bands contain toad-like motifs. Toads were ususally associated to rain and the watery underworld in ancient Mesoamerica (as well as to caves in modern Tzotzil lore), and their use as decoration on garments is witnessed by the famous Yaxchilan Lintel 26, as well as by various contemporary Maya textiles. Obviously, the presence of symbols related with the water and the underworld, such as stepped frets, mountains and toads, seems to be coherent with their

Fig. 43. Specimen 59-7/06 from Burial 3, decorated with xicalcoliuhqui motifs, stepped "mountains" and an unidentified central motif (Fototeca CNCPC-INAH).

use on textiles used during hypogean sacrificial pratices probably related with the petitioning of rain and fertility.

One beautiful textile from Burial 2 (fig. 45) shows the images of what seem to be two different buildings with span roofs. The upper one, faced by a fret-like motif, could even represent an anthropomorphic profile, but such interpretation is far from being secure. Interestingly, the elements protruding from the façade, as well as the geomteric panel on the façade of the lower building, show some resemblance with the geometrical friezes decorating the façades of monumental buildings in coeval Late Classic sites in Selva El Ocote.

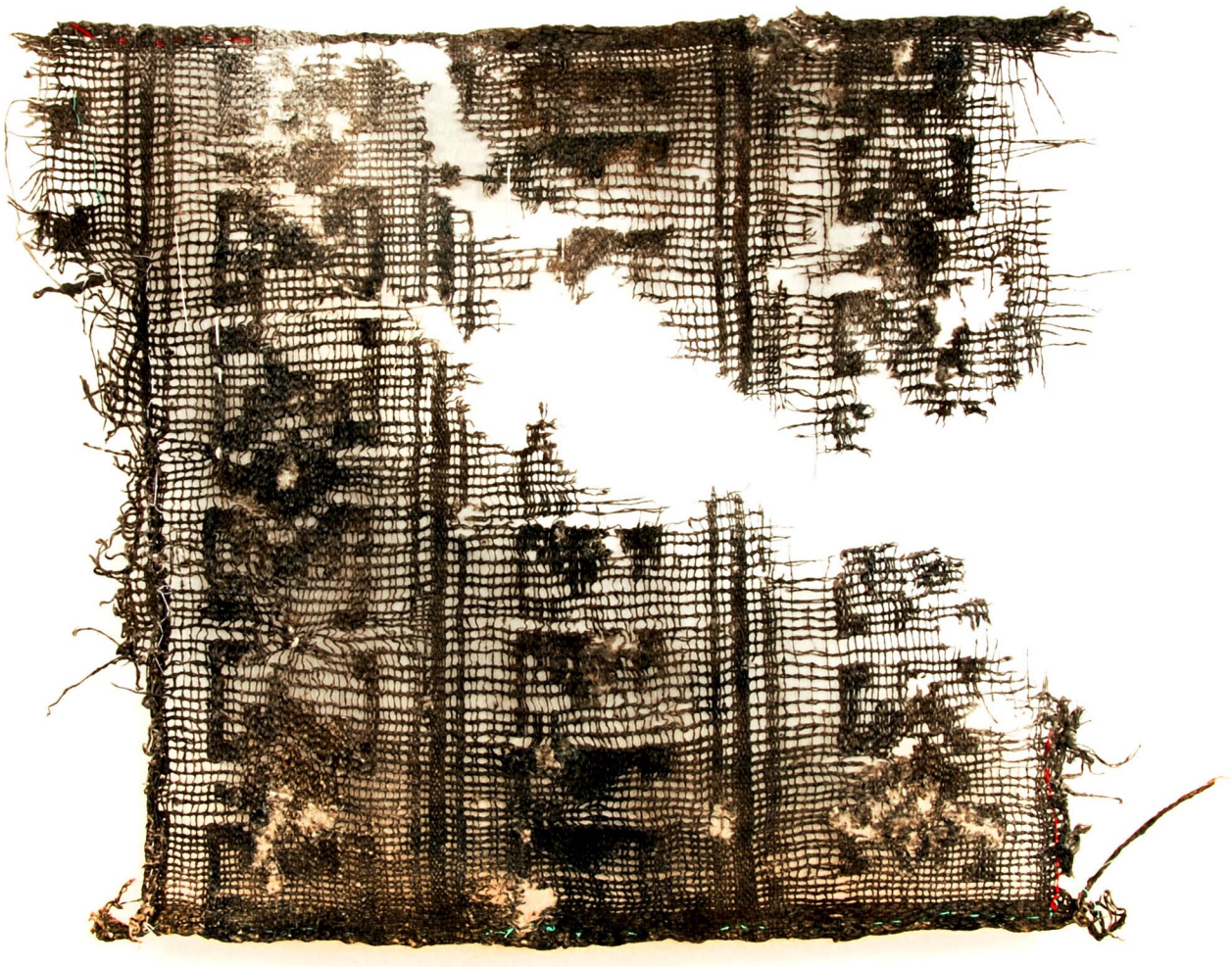


Fig. 44. Specimen 60-5/06-A with brocaded decoration representing toads (outer bands) and unidentified, maybe zoomorphic motifs (central band) (Fototeca CNCPC-INAH).

An especially intriguing problem regards the "piramid-like" small bundle shown before (fig. 46), whose function still eludes us. Anyway, it is worth noting that its shape closely resembles that of two equally enigmatic fibre objects found in the Cueva de Ejutla, another important pre-Hispanic ritual cave in Oaxaca (Moser 1975).

The quality of the texiles found in Cueva del Lazo, in a context not characterized by the presence of luxurious objects, is a good evidence of the skills of the ancient Zoque weavers. Actually, the quality of Zoque textiles must have been reknown at least in Postclassic Mesoamerica, as suggested by the fact that, according to Codex Mendoza, the Zoque-Popoluca province of Tochtepec was the one providing the highest amount of textiles to the Aztec imperial capital. A positive appreciation of Zoquean textile production in colonial times was expressed by authors such as Thomas Gage, who mentioned their being famous for their high quality silk and for the production of cochineal dye, the best in the Americas (Cordry and Cordry 1988: 139).

Modern Zoque weaving has been studied in 1940 by Donald and Dorothy Cordry (Cordry and Cordry 1988), who described several interesting technical aspects that, even if not exclusive of the Zoque region, are worthy to be mentioned here. Beside the use of cotton, the authors recorded the use of palm fiber and *ixtli* or agave, stating that agave fibre of especially good quality was produced in the Chimalapas area, in a region neigbouring selva El Ocote; they also described how the *huipiles de tapar*, that is the "false" huipils used by women to cover their heads, were composed by three different cotton bands sewn together (Cordry and Cordry 1988: 126), as we saw in a Cueva del Lazo mantle. As for the modes of decoration, the Cordrys witnessed the ample use of indigo, cultivated in the Suchiapa region (Cordry and Cordry 1988: 120, 138, 168) and described three main techniques used in the Zoque region: if the brocaded plain weave is not represented in Cueva del Lazo, embroidery and gauze are instead present. Especially intersting is the case of the gauze, or lace, also attested in the Cueva del Lazo corpus,

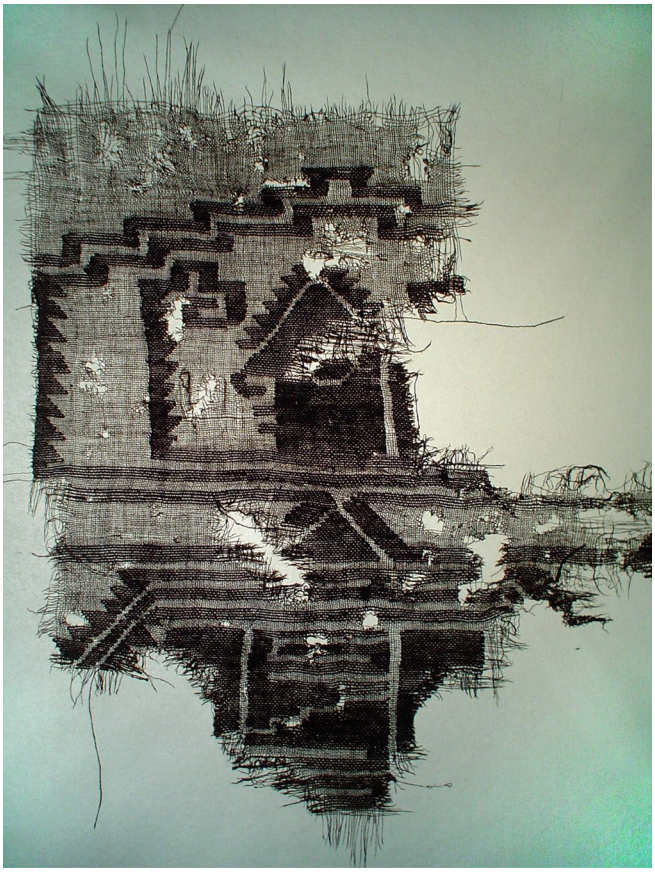


Fig. 45. Textile 50-1/06 from Burial 2 with brocaded decoration representing architectonical features (photo by Paolo Petrignani, Río La Venta Archaeological Project).

because according to the Cordrys it was an especially important technique in the Zoque region, locally known with the name of *renque*, a term of unknown etymology that could derive from the Spanish *renquear*, or "to limp", alluding to the interruption of the normal textile pattern (Cordry and Cordry 1988: 165-166). According to Thomas Lee, renque would be one of the fundamental concepts of Zoque aesthetics, both ancient and modern (Lee 2003).

Without any intent to trace too strict a continuity, we can nevertheless say that if the archaeological remains of ancient ritual activities in Selva El Ocote do represent the precolonial origin of the modern Zoque perception of Norte Ipstek as an especially sacred area, the Cueva del Lazo textiles represent a unique and exceptional evidence of the antiquity of the renown colonial and modern Zoque weaving tradition.

Acknowledgments

We would like to thank Lena Bjerregaard for the organization of the wonderful conference where our paper was presented, as well as Jesper Nielsen for making our participation possible. Many thanks also to Laura Filloy, who gave important advices both at the conference and when reading a draft of the present paper, and to the photographer Julio César Martínez Bronimann for helping with the photos. Finally, we want to thank our institutions, the University of Bologna (Italy) and the Coordinación Nacional de Conservación del Patrimonio Cultural, Instituto Nacional de Antropología e Historia (Mexico), as well as the Associazione La Venta and the Italian Ministero degli Affari Esteri e della Cooperazione Culturale for contributing to the conservation of the textile corpus from Cueva del Lazo.

Fig. 46. The pyramidal "bundle" 60-5/06-A (Fototeca CNCPC-INAH).

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5

Textiles y otros materiales arqueológicos del Valle de Tehuacán, México, en los Museos Reales de Arte e Historia (MRAH), Bruselas [1]

Julia Montoya[2]

Resumen

En este trabajo se presenta una colección de materiales arqueológicos que provienen de dos cuevas no localizadas del Valle de Tehuacán, estado de Puebla, México. Los materiales datan del período posclásico (1250-1521) y pertenecen a las culturas mixteca y azteca. La colección se conserva en los Museos Reales de Arte e Historia, MRAH, de Bruselas, Bélgica. Incluye entre otros, objetos de madera con mosaico, cerámica, restos humanos, esteras, plantas, textiles de algodón, sandalias y ofrendas de papel amate, entre las cuales, tres fueron teñidas con la técnica de reserva conocida como *plangi*. Hasta la fecha la colección no ha sido estudiada.

Se hace una descripción general de las piezas, principalmente de los tejidos, las ofrendas de papel amate y las sandalias, así como los materiales, técnicas y colores empleados en su manufactura, y se hace un bosquejo del contexto cultural y religioso dentro del cual podría ubicarse su uso. Para ello se consultó la bibliografía especializada y las crónicas coloniales.

Palabras clave: Cuevas Valle Tehuacán, culturas mixteca y azteca, textiles, papel amate, *plangi*

Textiles and other archaeological materials from the Tehuacán Valley, Mexico at the Royal Museums for Art and History (MRAH), Brussels

Abstract

A collection of archeological materials coming from two non-localized caves in the Tehuacán Valley in the State of Puebla, Mexico, is preserved at the Royal Museums of Art and History, MRAH, in Brussels, Belgium. These materials date from the post-classic period (1250-1521) and belong to the Mixtec and Aztec cultures. The collection includes among others, wooden objects with mosaic work, ceramics, human remains, matting, cotton textiles, sandals, plants and offerings made from bark cloth; three among them were dyed using the tie-dye technique or *plangi*. These artefacts were up to now not studied.

A general description of the objects was made focusing on the textiles, the bark cloth offerings and the sandals. The materials and techniques used as well as the colors applied during their manufacture were described. The cultural and religious context in which these materials could be situated was also outlined. This analysis was based on the specialized bibliography and the colonial chronicles.

Keywords: Caves Tehuacán Valley, Mixtec and Aztec cultures, textiles, bark cloth, *plangi*

I. Introducción

Los materiales perecederos como textiles, papel o plantas provenientes de contextos arqueológicos en Mesoamérica son sumamente escasos pues las condiciones climatológicas no favorecen su conservación. Existen sin embargo otros factores, como las prácticas funerarias, que pudieron haber contribuido a su destrucción.[3] Se trata por lo general de

1. Trabajo presentado en "*Pre-Columbian Textiles International Conference*", Centre for Textile Research (CTR), University of Copenhagen. 2016.

2. Investigadora independiente, Guatemala-Bélgica. julia.montoya@gmail.com

3. En el México prehispánico los difuntos se amortajaban en forma de bultos mortuorios, se incineraban y después se enterraban los restos que quedaban (Códice Magliabechiano p. 132-139; Códice Florentino, Libro III, capítulos 1 y 2).

Fig. 1. Ubicación del Valle de Tehuacán en el Estado de Puebla, México

piezas o fragmentos muy pequeños y diversos que se han considerado poco interesantes para la arqueología y, en muchos casos, de aquellos que pudieron ser rescatados y que se conservan esparcidos en museos de todo el mundo se desconoce su existencia. A pesar de que en el pasado se les ha prestado poca atención, consideramos que son una evidencia muy valiosa para el estudio de las antiguas culturas, pues ilustran varios aspectos de la vida cotidiana, las fiestas, las prácticas rituales y las técnicas y materias que se emplearon en su fabricación.

En este trabajo se presenta un conjunto de materiales que ingresó a la colección de las Américas de los Museos Reales de Arte e Historia (MRAH) de Bruselas en el mes de febrero de 1968. Fue adquirido en Bruselas en una galería especializada en arte precolombino de Mesoamérica. La colección incluye, entre otros, objetos de madera con mosaico, cerámica, restos humanos, esteras, tejidos de algodón, sandalias, ofrendas de papel amate, plantas, semillas y copal. De acuerdo con las fichas de registro, la colección proviene de dos cuevas en el Valle de Tehuacán, Estado de Puebla, pero su ubicación exacta se desconoce. La primera cueva está registrada como "Tumba I" y la segunda como "Cueva del Tigre", y según Michel Graulich (citado en las fichas de registro), los depósitos datan del período posclásico tardío (1250-1520) y conciernen a la culturas mixteca y azteca (Fig. 1).

Durante una visita al MRAH en el año 2008 se tuvo conocimiento de la existencia de textiles en esta colección, los cuales no se habían estudiado hasta entonces. En el año 2010, durante las V Jornadas Internacionales de Textiles Precolombinos en Barcelona, se presentaron estos textiles y se hizo una descripción general de los mismos. En mayo del 2016 se tomaron fotografías de los otros objetos y materiales, esta vez con el propósito de estudiar la colección completa.

II. Objetivos

Este estudio tiene como objetivos principales: primero, dar a conocer la colección completa; segundo, hacer una descripción general de las piezas, enfocando principalmente los tejidos, las ofrendas de papel amate y las sandalias, así como de los materiales, las técnicas y los colores empleados en su manufactura, y tercero, esbozar el contexto cultural y religioso dentro del cual podría situarse el uso de estos materiales. Para este estudio se consultó la bibliografía especializada, así como las crónicas coloniales, y para el análisis de

los textiles nos basamos también en la experiencia personal en el tejido y el uso del telar de cintura.

Algunos temas se explorarán en el futuro con mayor profundidad y hacemos énfasis en que la colección completa amerita un estudio más especializado, en el que participen expertos en diferentes disciplinas.

III. Marco teórico general: las cuevas en Mesoamérica

La única certeza sobre el origen de la colección del MRAH es que ésta proviene de dos cuevas, cuyo contexto original se perdió al extraerlos de las mismas, y antes de iniciar la descripción de la muestra seleccionada, se considera necesario hacer una introducción general sobre el contexto religioso y ritual de las cuevas en Mesoamérica. Para ello se hace un breve resumen de algunas ideas expuestas en la bibliografía relacionada con hallazgos arqueológicos en cuevas, que pueden contribuir a ubicar esta colección dentro de un marco hipotético.

Las cuevas como contextos funerarios y rituales

Sabemos que desde el período formativo hasta el presente, las cuevas han sido consideradas como lugares de acceso al inframundo. Entre los nahuas era conocido como Tlalocan, lugar de riqueza, y como la morada de los dioses que guardan y controlan las fuerzas vitales y los elementos naturales como el agua y el viento; también se les considera como lugares de transformación y renacimiento.[4] Las evidencias arqueológicas provenientes de estos espacios confirman que las cuevas también son lugares de contacto entre los humanos, sus dioses y sus antepasados, el cual se establece mediante acciones rituales recurrentes, en las que se adora, se ofrenda y se pide favores a estas entidades. Su uso ha sido constante a través del tiempo y llegaron a convertirse en sitios importantes de peregrinaje. Las ofrendas se depositan como una súplica y como símbolos propiciatorios. "La asociación de símbolos esenciales como plantas, semillas de maíz y segmentos humanos encontrados en las oquedades de las cuevas, no son sino elementos de un mismo código relacionado con las potencias germinales que alimentan a los seres humanos, y que deben nutrirse cíclicamente a través de la repetición del ritual y la renovación de la ofrenda" (Martínez, Morett y Viñas, 2008:218).

1 Prácticas funerarias

Las cuevas también se usaron como depósitos funerarios. En ellas se ha recuperado un gran número de entierros, primarios y secundarios. Se creía que depositando en ellas a los difuntos, "se les colocaba en la entrada del lugar al que les correspondía ir", es decir, al Mictlan, el lugar de la muerte (Vargas Ramos, 2011:98).

Sobre las prácticas funerarias encontramos algunas descripciones minuciosamente ilustradas en el Códice Magliabechiano. El texto en la página anterior al folio 68 (Fig. 2 a) dice que: "*Cuando un mercader moría, lo quemaban y enterraban con sus pertenencias y lo demás lo ponían alrededor: su piel de 'tigre', sus plumas, sus alimentos, sus joyas de oro y sus cuentas de jade*." El texto que precede al folio 69 (Fig. 2 b) dice que: *"Cuando algún mancebo moría, le ponían tamales y frijoles para que llevase consigo, y una carga de papel atada como penacho, si lo tenía, al que llamaban* 'amatl'*, para que con todo* [esto] *fuese a recibir al señor del Omictlan"* (Códice Magliabechiano, f. 68 y 69. FAMSI/Codices).

En el Códice Florentino, Sahagún dice: "[...] *Y llegando los difuntos ante el diablo Mictlantecuhtli, ofrecían y presentábanle los papeles que llevaban, manojos de teas* [astillas de madera de pino, *ocotl*], *cañas y perfumes, hilo flojo de algodón, hilo colorado, una manta, un* maxtli*, las naguas y camisas. Y todo hato* [bulto con ropa] *de mujer defuncta que dexaba en el mundo, todo lo tenían envuelto desde que se muría. A los ochenta días lo quemaban, y lo mismo hacían al cabo del año, y a los dos, a los tres y a los cuatro años. Entonces se acababan y cumplían los obsequios. Decían que todas las ofrendas que hacían por los difuntos iban delante de Mictlantecuhtli*." Más adelante continua: "[...] *después de haber amortajado al defuncto con los dichos aparejos de papeles y otras cosas.* [...] *y de* [haberlo] *quemado, cogían la ceniza y carbón y huesos del defuncto y derramaban agua encima* [...] *y hacían un hoyo redondo y lo enterraban. Y esto hacían ansí en el enterramiento de los nobles como de la gente baxa. Y ponían los huesos dentro de un jarro o olla con una piedra verde que se llama* chalchíhuitl*, y lo enterraban en una cámara de su casa, y cada día daban y ponían ofrendas en el lugar donde estaban enterrados los huesos del defuncto"* (Sahagún, 1988:221) (Fig. 2 c).

La práctica de incinerar a los muertos descrita en los códices mencionados, puede ser una de las razones por las cuales en Mesoamérica es difícil encontrar prendas de vestir completas en los contextos funerarios. Sin embargo, la costumbre de renovar periódicamente las ofrendas a los difuntos o depositar ofrendas para las deidades durante los ritos

4. Ver López-Austin, Alfredo. 1994. Tamoanchan y Tlalocan, capítulo IV. El autor hace un análisis extenso sobre el Tlalocan en la concepción de los antiguos nahuas.

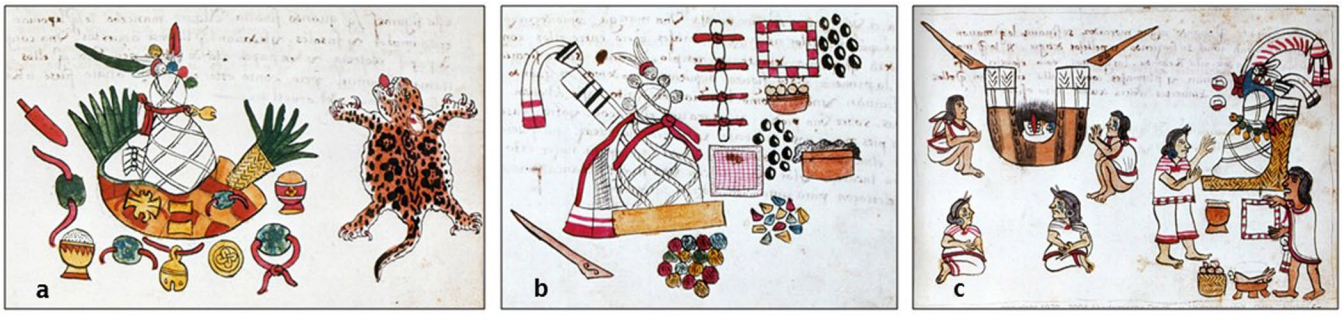

Fig. 2. Ilustraciones de bultos mortuorios y de las ofrendas a los difuntos. Códice Magliabecchiano, folios 68, 69 y 67. FAMSI/Codices

petitorios, quizás pueda explicar la presencia de pequeños textiles, objetos de papel y plantas en las cuevas, a veces intactos o con evidencias de uso ritual que han podido rescatarse, tales como los objetos y materiales del MRAH que se describen más adelante.

2 Veneración de deidades y ancestros: los bultos sagrados

Aparte de los entierros humanos, pueden encontrarse también grupos de objetos bien definidos que fueron dejados como ofrenda y en los que puede apreciarse una clara intencionalidad en su agrupación. Dichos objetos tienen características propias o adquiridas por el contexto en el cual se encuentran. Muestran por lo general evidencias de actividad ritual efectuada en torno a ellos, como restos de ceniza o copal quemado, cerámica 'matada'[5], o derramamiento de sangre. Estos depósitos son conocidos como 'caches' o 'escondrijos' y es muy probable que los objetos pudieron haber estado 'contenidos' en algún envoltorio o 'bulto' que no perduró en el tiempo. El término 'cache', precedido de una intención 'dedicatoria' o 'votiva', se asigna a una variedad de ofrendas encontradas aparte de los entierros humanos, aunque no necesariamente carecen de restos óseos. Entre los materiales frecuentemente recuperados en estos caches sobresalen, entre otros: navajas de pedernal u obsidiana; jadeíta, conchas, espinas de maguey y de mantarraya; cuerdas, y a veces, huesos humanos y de animales; hematita y pirita; copal y restos orgánicos como cenizas, resinas, semillas, pastos, etc. (Coe, 1959:77; Becker, 1992:186-187, citados en Vargas Ramos, 2011:104).

Se distinguen cuatro tipos de bultos sagrados: a) *bultos mortuorios* (contienen cuerpos de gobernantes, sacerdotes o ancestros amortajados); b) *bultos de poder* (contienen los dioses patronos o, restos de sus ancestros o sus insignias que legitiman el poder o linaje de quienes los poseen); c) *bultos medicinales* (contienen insignias y amuletos de sacerdotes, chamanes y curanderos, así como objetos de adivinación; y d) *bultos rituales* (contienen elementos y objetos propios de una celebración ritual). Los dos primeros, a) y b), son las formas que con mayor frecuencia pueden identificarse en las fuentes históricas. Aunque tienen connotaciones diferentes, estos bultos conciernen básicamente a la veneración de los antepasados. En las ilustraciones de algunos códices, se observa que los *bultos mortuorios* están ricamente adornados y su deposición va acompañada de ofrendas que han de servirle al difunto en su viaje en el mundo de los muertos (Fig. 2 a - c). Los *bultos de poder* se describen o se ilustran en muchos manuscritos históricos, ya sea documentos indígenas escritos con caracteres latinos o crónicas de frailes o conquistadores (Vargas Ramos, 2011:106-107).[6]

En los códices de la región de La Mixteca se han identificado figuras de diversos bultos sagrados asociados con deidades. Estos bultos, conocidos entre los nahuas como *tlaquimilolli*, contenían básicamente las insignias de un dios, 'su nombre', 'su esencia' o 'su sustancia', por lo que el culto a ellos se hacía principalmente a través de las imágenes guardadas en estos envoltorios. No obstante, los bultos sagrados no solo representaban a los dioses, sino también lo divino y lo sagrado en general, ya fueran elementos de autosacrificio, instrumentos para encender el fuego y otros objetos. Cual fuese su contenido, estos envoltorios eran tratados siempre con solemnidad (Vargas Ramos, 2011:110-111).

Entre los maya-t'zutujil de Santiago Atitlán, Guatemala, la veneración de los bultos sagrados ha sobrevivido hasta el presente. Éstos son guardados celosamente en las cofradías,

5. Objetos rituales intencionalmente quebrados o rotos.

6. En el área maya se encuentran referencias a los *bultos de poder* en el Popol Vuh, los Anales de los Cakchiqueles, las Memorias de Totonicapán, El Título de Totonicapán y el Chilam Balam de Tizimín (Ayala, 2002:51, citado en Vargas Ramos, p. 107). De igual manera, son mencionados o ilustrados en las fuentes del área central de México como: el Mapa de Cuauhtinchan No. 2, el Códice Borgia, el Códice Vaticano B, el Códice Boturini, el Códice Azcatitlan, el Códice Zouche-Nuttall y el Códice Selden, entre otros (Olivier, 1995:281-284, citado en Vargas Ramos, p. 107).

Fig. 3. Objetos de madera con mosaico de turquesa, piedra serpentina o pintura; cuchillo de pedernal, ojos de nácar y cobre, objetos varios : colmillo y caracol. Forman parte del depósito de la Cueva del Tigre. Colección MRAH, Bruselas. Fotos J. Montoya

y están bajo los cuidados del '*nabeysil*' (su guardián). El bulto más conocido y respetado es el llamado 'Martín', en la cofradía de San Juan (Ver Carlsen, 2003:138-155; Christenson, 2005:91-96).

Objetos provenientes de la Cueva del Tigre: ¿elementos de un bulto sagrado?

Las piezas que se muestran en la figura 3 (ver también el Apéndice 2, cuadro 4) no se incluyeron en este estudio. En vista de la importancia que la veneración de bultos sagrados tiene en Mesoamérica y tomando en cuenta las descripciones anteriores sobre el tipo de objetos contenidos en ellos, parece que los objetos del MRAH pudieron haber formado parte de alguno de los tipos de bultos antes mencionados. Se considera necesario profundizar su estudio y consultar las investigaciones realizadas hasta el presente (Fig. 3).[7]

IV. Contexto cultural-religioso y descripción general de los objetos y materiales

Ritos agrícolas: el culto a Tláloc – Cocijo, dioses de la lluvia

1 Ofrendas de plantas, semillas, copal y otras materias preciosas

Dentro de las actividades rituales más recurrentes en cuevas se encuentran las vinculadas con la fertilidad de la tierra. Entre las deidades que habitan en estos espacios sobresale Tláloc como la principal deidad del agua, aunque entre los nahuas también era visto como el dios de los cerros y las montañas. A él se le atribuyen las lluvias benéficas que hacen brotar, crecer y florecer los árboles y las plantas. Sin embargo, también se le atribuyen los fenómenos nocivos, como las tormentas, vientos fuertes, heladas y tempestades, que constituyen una constante amenaza para la agricultura de temporada. De allí que las ceremonias de petición de lluvia se hacen en las cuevas, las cimas de los montes o en los manantiales (Broda, 2004:276; Manzanilla, 1994:60, citados en Vargas Ramos, 2011:99).

Durante más de tres milenios el maíz ha jugado el papel central en la cosmovisión y susbsistencia de los mesoamericanos. El uso de plantas y semillas ha sido omnipresente en todas las celebraciones relacionadas con el calendario y los ritos agrícolas en Mesoamérica, especialmente las relacionados con el cultivo del maíz. Bernardino de Sahagún relata que durante la fiesta del mes IV Huei tozoztli, "[...] *Los mancebos iban a los maizales y traían unas cañas de maíz y otras yerbas que llamaban* mecóatl*, y las muchachas vírgenes llevaban al templo de Chicomecóatl las mazorcas que tenían guardadas para semilla, para que allí se hiciesen benditas.* [...] *Echaban sobre las mazorcas gotas de aceite de* ulli. *Envolvíanlas en papeles.* [...] *Después que habían llevado al templo las mazorcas, volvíanlas a sus casas. Echábanlas en el hondón de la troxe* [troja o granero]. *Decían que era el corazón de la troxe, y en el tiempo del sembrar sacábanlas para sembrar*" (Sahagún, 1988: 113-115) (Fig. 4).

Sobre el copal Sahagún dice que "[...] *la ofrenda del incienso que usaban estos mexicanos y todos los de Nueva España era una goma blanca que llaman* copalli." Y sobre la fiesta del VI mes Etzalcualiztli dice que "[...] *los sacerdotes llevaban unos pedazos de copal hechos a manera de panes de azúcar, en forma piramidal.* [...] *Ofrecían incienso en los templos de noche y de día, a ciertas horas. Incensaban*

7. En su estudio sobre los bultos sagrados titulado *Interacting with the ñuhus* (2016, inédito), Davide Domenici muestra la máscara de madera con mosaico de piedra serpentina (Fig. 3) que pertenece a la colección que se conserva en el MRAH (Comunicación personal, junio 2016).

Fig. 4. Ofrendas de maíz depositadas durante los ritos en honor a Tláloc: a) hombre vestido como la deidad durante la fiesta Etzalcualiztli. Códice Magliabecchiano, f. 22r, FAMSI/Codices; b) ofrendas de cañas y mazorcas de maíz frente al templo de Chicomecóatl y Cintéutl durante la fiesta Huei tozoztli. Códice Florentino, 1979, libro 2, capítulo 23:82

con unos incensarios hechos de barro cocido. [...] *Cogían con él brasas del fogón y luego echaban copal sobre las brasas, y luego iban delante de la estatua del dios y levantaban el incensario hacia las cuatro partes del mundo, ofreciendo aquel incienso. Y también incensaban a la estatua"* (Sahagún, 1988: 189; 127).

El copal blanco se obtiene de los árboles del género *Bursera* mediante una incisión en la corteza, y la resina blanca que emana se solidifica al ser recolectada. El copal negro es la resina que emana del árbol debido a picaduras de insectos y se recolecta a principios de año. El uso del copal se asociaba directamente con Tláloc y Chalchiuhtlicue, las fuerzas del agua y la vegetación (Montúfar, 2007).[8]

La forma de la pieza identificada en las fichas de registro como 'un cono de copal' (AAM. 68-12-70) (Fig. 5) responde a la descripción de Sahagún, pero solamente un análisis de laboratorio puede confirmar si se trata de copal y de qué variedad.

De las semillas (AAM.68-12-73), la mayoría tiene un color café-rojizo, y parece tratarse del frijol ayocote (*Phaseolus coccineus*),[9] que conjuntamente con las cañas de maíz con mazorcas (AAM.68-12-63 y 64), pueden considerarse como evidencia material de ritos en honor de los dioses arriba mencionados. La presencia de un brasero o urna con la efigie de Cocijo (dios de la lluvia de los zapotecos) (AAM.68-12-5), así como el cono de copal en este contexto, sugiere que se trata de ofrendas depositadas durante ritos propiciatorios de lluvia (Fig. 5).

De las ofrendas de plantas provenientes de la "Tumba I" (ver también Apéndice 1: cuadro 2), se han seleccionado algunas que llaman la atención por la forma en que fueron presentadas. Algunas están envueltas en lienzo de corteza, otras hilvanadas en forma de guirnaldas, o trenzadas en forma de anillos (Fig. 6). En las piezas A.AM 68-12-59 y 60 las plantas están sujetas con un suave lienzo de corteza, pero el que sujeta las plantas de la pieza A.AM 68-12-67 es más áspero y grueso; se trata posiblemente de la corteza de la palma de soyate (*Brahea calcarea*).[10] A pesar del tiempo transcurrido desde que fueron depositadas en la cueva, estas ofrendas se conservan en perfecto estado y aún pueden apreciarse sus cualidades estéticas.

Otras materias preciosas como el jade, la piedra serpentina y la turquesa se incluían también en los fardos sagrados; éstos eran muy apreciados por los mesoamericanos por su color verde-azul, y se les asociaba con el maíz, el agua, el cielo, la vegetación y la vida misma (Miller y

8. Aurora Montúfar, comunicación personal, agosto 2016.

9. Elizabeth Jiménez, comunicación personal, agosto 2016.

10. Se utiliza en algunos lugares del sur de México para hacer *cuaxtles*. Son unos tapetes gruesos y suaves que se colocan debajo de la silla de montar animales de carga para amortiguar los golpes y el peso. También en la región Centro del Estado de Guerrero, los 'tlacololeros' los emplean durante sus danzas; los llevan debajo de sus trajes para protegerse de los golpes que intencionalmente se dan, como parte de rituales propiciatorios y de agradecimiento relacionados con la siembra y la cosecha. Elizabeth Jiménez, comunicación personal, agosto 2016.

Fig. 5. Objetos provenientes de la Tumba I : a) urna/ brasero con efigie de Cocijo; b) cono de copal (?); c) mazorca; d) cañas de maíz con mazorcas; e) semillas varias. Colección MRAH, Bruselas. Fotos J. Montoya

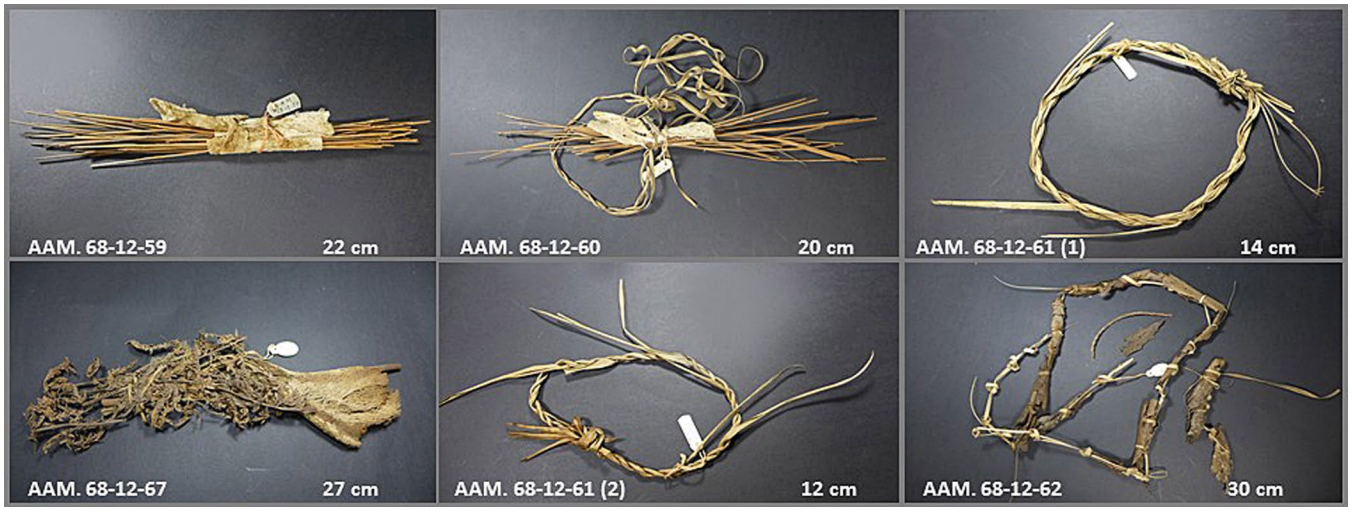

Fig. 6. Ofrendas de plantas diversas halladas en la Tumba I. Colección MRAH, Bruselas. Fotos J. Montoya

Taube, 1993:102). Sahagún los describe de la siguiente manera: "*Hay otro género de piedras que se llama* quetzalchalchíhuitl, *porque es muy verde. Lábranse estas piedras, unas redondas y agujereadas, y otras largas y rollizas.* [...] *Son verdes mezcladas con blanco y no transparentes. Úsanlas mucho los principales, trayéndolas a las muñecas atadas en hilo. Y aquello es señal de que es persona noble; a los macehuales no era lícito llevarlas.*" Además dice, "*Sobre las turquesas finas y otras piedras preciosas o* Teuxihuitl, *que quiere decir "turquesa de los dioses", la cual a ninguno era lícito tenerla o usarla, sino que había de ser ofrecida o dedicada a los dioses. Son raras y preciosas; tráenlas de lejos.*" (Sahagún, 1988: 789; 790).

Junto con los braseros con la efigie de Tláloc y Cocijo de la colección del MRAH, también se encuentran pequeños objetos fabricados con materias preciosas como el nácar, concha, jade, piedra serpentina, turquesa y silex, también considerados como atributos de las deidades de la lluvia (Fig. 7).

La pieza AAM 68-10-29 es un pequeño brasero con forma zoomorfa que presenta características físicas similares a las de un sapo. Estos animales están relacionados con el culto al agua y el dios Tláloc. La vida y metamorfosis sucesiva de estos anfibios, desde criaturas acuáticas vegetarianas hasta transformarse en tetrapodos carnívoros nocturnos, así como su fertilidad legendaria, les otorgaron un importante lugar en el universo simbólico de Mesoamérica. Las propiedades psicoactivas del veneno de las glándulas del *Bufo marinus* (bufotenina), contribuyen a otorgarle este rol simbólico (Furst, 1981:150).

Fig. 7. Urnas o braseros con las efigies de Cocijo, Tláloc y con forma zoomorfa; cuentas de jade, una anteojera de madera con mosaico de turquesa y dos figurillas de piedra serpentina con razgos antropomorfos (tipo hacha). Colección MRAH, Bruselas. Fotos J. Montoya

2 Ofrendas de lienzo o lámina de corteza ('papel amate')

El 'papel amate', del náhuatl *ámatl*, es un soporte flexible, opaco, formado por fibras vegetales no hiladas ni tejidas, y aunque se le llama 'papel', tiene características distintas de las del papel común (que se fabrica a partir de una mezcla de fibras en suspensión). También se utiliza el término "papeles indígenas" o "papeles nativos" para definir estos soportes que fueron utilizados en Mesoamérica. Dentro de esta denominación se encuentran: a) el papel amate, obtenido de la corteza interna de árboles o arbustos de los géneros *Ficus* y *Morus*, del árbol de hule (*Castilloa Elastica*) y de la palma de *izótl* (*Yucca sp.*); y b) el papel de maguey, obtenido de fibras de agaváceas (*Agave Americana*) que es más adecuado para escribir.

Para fabricar el papel amate se cortan las cortezas de los árboles y se dejan macerar en los ríos o arroyos durante la noche. Luego se separa la corteza externa de la interna. Una vez limpia, las tiras de fibras se extienden sobre una superficie plana, unas sobre otras, formando una malla y se aplastan con un machacador de piedra estriado hasta obtener una lámina delgada, que después se seca al sol. Es similar a la tela de corteza o *bark cloth* empleada en el Pacífico sur, cuyo color varía entre el marrón claro y el amarillo paja (González Tirado y Cruz Chagoyán, 2013:10-13; López Binnqüist, 2003:81-83; López, Quintana-Isaías y Vander Meeren, 2009:11-15) (Fig.8).

El papel de cortezas no es muy apto para la escritura pues se trata de un lienzo fibroso, bastante transparente y suave. Por el contrario, es posible dibujar o pintar sobre éste y también se puede teñir. Consideramos que un término más adecuado para denominar este material sería 'lienzo o lámina de corteza', el cual se usará de aquí en adelante para referirnos al 'papel amate'. Aunque no se cuenta con un análisis de fibras, puede ser posible que, por las características que presentan, las piezas de la colección del MRAH fueron elaboradas con cortezas de algunos de los géneros antes mencionados.

El papel amate se utilizó intensamente en México a principios del siglo XVI, cuando los aztecas dominaban gran parte del territorio mesoamericano. Tenochtitlán, cuya población se estimaba en 300,000 habitantes y con una compleja estructura social, recibía una grande y variada cantidad

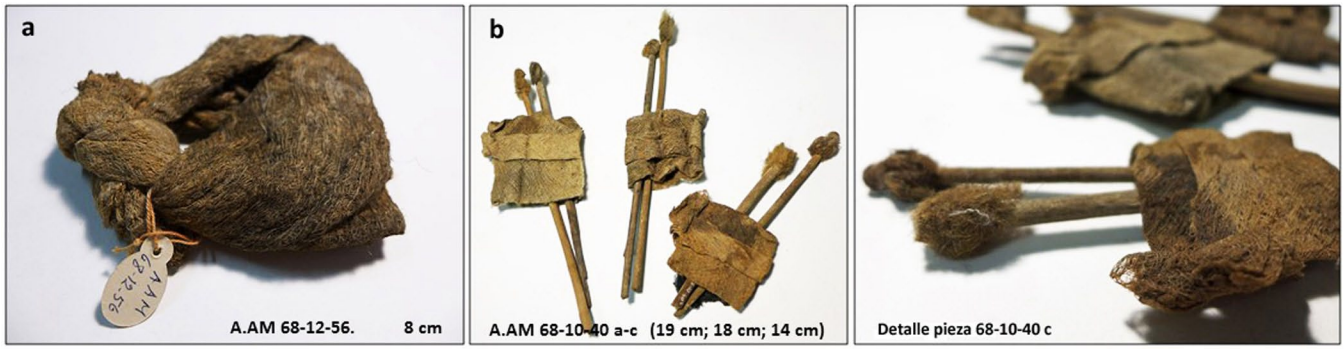

Fig. 8. Ofrendas hechas con lienzo de corteza: a) pulsera, rodillera o ajorca; b) tres pares de varillas de madera envueltas con lienzo. Posiblemente representen 'antorchas votivas' miniatura[11]. Colección MRAH, Bruselas. Fotos J. Montoya

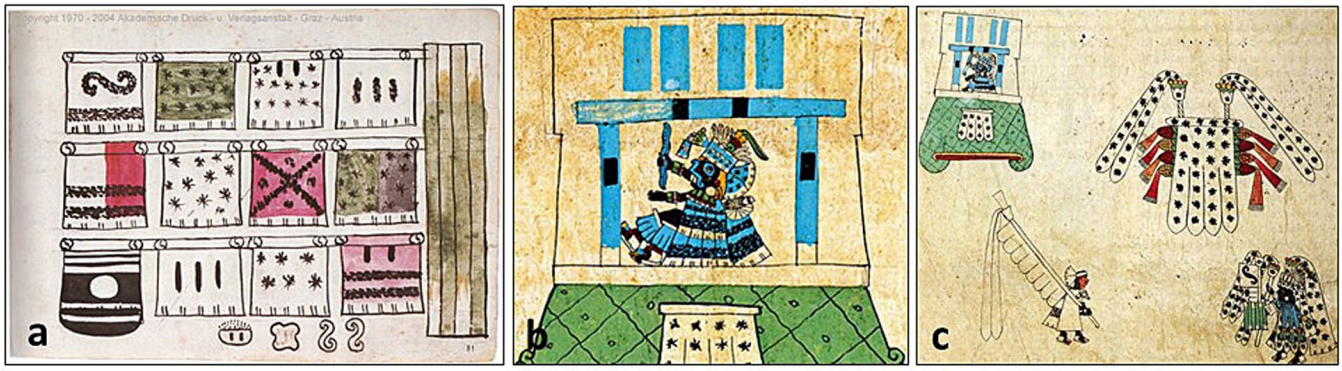

Figura 9. Papeles rituales. a) banderas con marcas negras que representan o*lli*. Códice Magliabechiano, p. 163, FAMSI/Codices; b) Tláloc en su templo vestido con papeles; c) estandartes y *amatetéuitl* goteados con o*lli* usados durante la fiesta Tepeihuitl al comienzo de la cosecha del maíz. También se ofrendaban mazorcas frente al templo de Tláloc. Códice Borbónico, p.30, FAMSI/Codices

de productos a través de los mercados y de la recolección de tributo proveniente de las poblaciones subyugadas. Entre los artículos más importantes se encontraban el copal, el hule y el papel, que además de utilizarse en la manufactura de libros (códices), se utilizaba para elaborar gran cantidad de objetos y prendas de vestir para uso ritual y de uso diario, así como insignias, báculos, banderas, bolsas rituales, coronas, brazaletes, ajorcas, tocados y estolas (Fig. 8 y Fig. 9).

La gente común en Mesoamérica podía usar solamente prendas de vestir elaboradas con fibras de agave, como el *ixtle* o el henequén, o de papel de cortezas o de tallos de plantas (líber). Debemos recordar que el uso del algodón era exclusivo para los miembros de la élite, los sacerdotes, los mercaderes y los guerreros. El lienzo de corteza era aun utilizado en los años 1980-90 por los lacandones de la selva de Chiapas para elaborar prendas rituales como el *xicul*, que se puede observar en la publicación *Mexican Textiles* (Sayer,1985:77; 127; 183).

El calendario azteca, dividido en 18 meses con sus respectivos dioses, marcaba cientos de ceremonias que variaban de mes en mes. Se organizaban grandes celebraciones y sacrificios en las cuales el papel ocupó un lugar central y se usó en grandes cantidades; también se ofrendaba en altares de cuevas, en lagunas, montes y otros lugares sagrados. Según lo establecían los sacerdotes, en cada fiesta se utilizaban diferentes tipos de papel; el papel de maguey, más duro y resistente, se destinaba posiblemente para fabricar adornos o estructuras voluminosas que eran destruidas durante el ritual.

El Códice Florentino y Los Primeros Memoriales, así como el Códice Borbónico y el Códice Magliabechiano ilustran minuciosamente los *amatetéuitl* que se ofrendaban durante las fiestas. Éstos eran papeles recortados en forma de bandera o en forma de trapecio, goteados o pintados con o*lli* (hule derretido) y otros colores, para representar los símbolos característicos de cada deidad, que después se quemaban durante los ritos. El o*lli* era el predilecto para las ofrendas debido a la densa nube de humo negro que produce al quemarse (Fig. 9). Este tema se explora con mayor detalle en la sección 4.

La indumentaria de los dioses era complicada y exuberante, frecuentemente contenía papel y plumas. En la

11. Elizabeth Jiménez, comunicación personal, agosto 2016. Ver también Vargas Ramos, 2011:110.

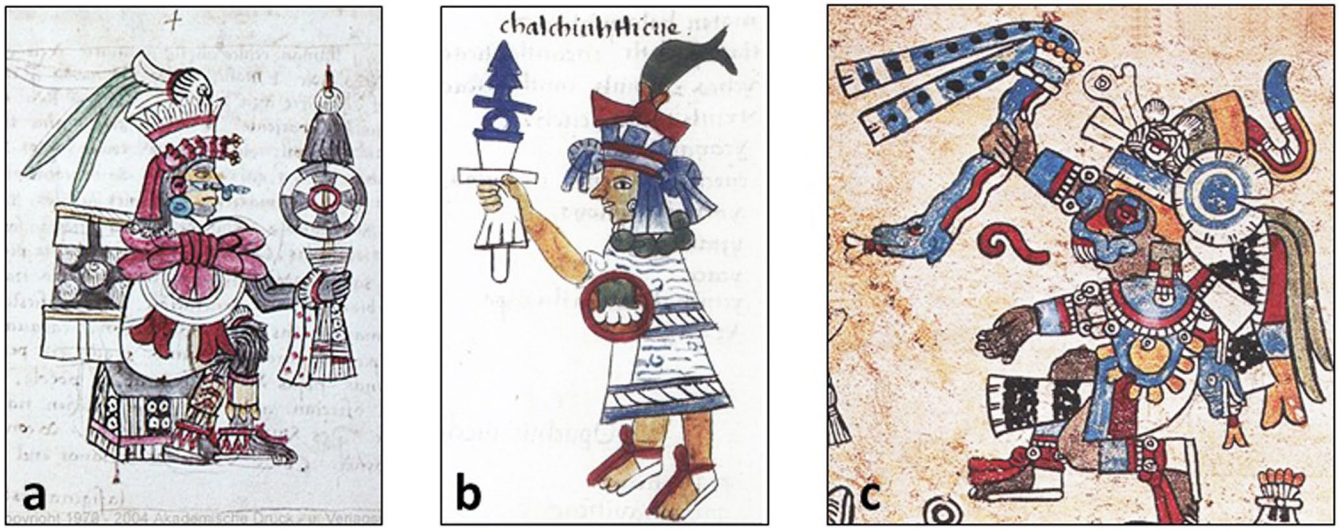

Figura 10. Atavíos de dioses elaborados con papel amate. a) Tezcatepocatl, Códice Magliabechiano, p. 67, FAMSI/Codices; b) Chalchiuhtlicue, Primeros Memoriales, DG 037162, Biblioteca Digital Mexicana; c) Tláloc, Códice Borbónico, p.5 (detalle), FAMSI/Codices

representación de Tláloc en el Códice Borbónico (Fig. 9 b), éste aparece sentado dentro de su templo sobre un cerro, frente al cual se observa un *amatetéuitl*. Tláloc está vestido y adornado con papeles pintados y goteados de hule. El cuerpo y el rostro están pintados de negro y lleva un tocado de plumas de garza y un abanico de papel plegado, característico de las deidades del agua y de los montes. Un magnífico ejemplo es el tocado de Tláloc de la ofrenda 102 encontrada en el Templo Mayor de Tenochtitlán (ver en López Luján y Chávez Balderas, 2010:315; Matos Moctezuma, 2014, *Arqueología Mexicana*, ed. esp. 56:58-59).

Los atavíos de los dioses, así como de los esclavos o prisioneros que iban a ser sacrificados durante las fiestas en su honor, también se elaboraban con papel. Se les vestía y adornaba de la misma manera que la deidad y llevaban en la mano bastones o báculos revestidos de papeles goteados de *olli* (Fig. 10 y Fig. 11).

Esta etapa, de mucha importancia en la historia del papel prehispánico, cambió drásticamente a partir de la llegada de los españoles. Los libros de carácter religioso o divinatorio fueron destruidos y por consiguiente el papel, como elemento ritual, quedó también prohibido "*por usarse en aquellos ritos extraños y espantosos*" (López Binnqüist, 1992:31-66).

Entre los objetos de lienzo de corteza que se conservan en el MRAH, sobresalen algunos por la manera en que fueron fabricados y porque muestran dibujos y/o rayas pintadas de color negro. Se trata de 18 fragmentos de bastones o banderolas de formas diversas, y la mayor parte está montada sobre finas armaduras de caña o madera; en 7 de ellas se observa solamente la estructura; las otras conservan fragmentos de lienzo. La colección incluye además una banda angosta, un lienzo teñido de negro y dos con rayas negras, un brazalete y una tira de lienzo con manchas rojas (ver Apéndice 1: cuadro 3).

Entre las ofrendas de lienzo montadas sobre armaduras, sobresalen los objetos redondos que muestran la figura de una hélice (Fig. 11). Según las fichas de registro, ésta es el símbolo característico de Quetzalcoatl – Eécatl, dios del viento, precursor de las lluvias. En las fotos se observa también la estructura interior de las ofrendas (A.AM 68-12-31 y A.AM 68-12-52). Es posible que los báculos de los individuos que personificaban a los dioses antes de ser sacrificados fueran fabricados de esta manera.

Bernardino de Sahagún dice que el que hacía el banquete de los mercaderes en Tochtépec, "... *primero visitaba al dios de los mercaderes, barría su templo y echaba petates delante de la imagen de Yiacatecuhctli.* [...] *y desataba el manojo de báculos que llevaba y los ponía delante del dios, tantos báculos había como esclavos que había de matar. Los componía con papeles y los cubría con mantas, unas que se llaman* coyoichcatilmatle tetecomayo [de algodón café o *coyoichcatl*] *con flecos de pluma puestas en las orillas. Esto ponían delante de la imagen para que así conociesen el atavío con que habrían de vestir a los que había de matar. Y todo aquello significaba que el convite había de ser muy costoso*" (Sahagún, 1988:567).

El culto al agua, la tierra y la fertilidad forman el núcleo de la religión mesoamericana, siendo el control del tiempo y de los fenómenos naturales la mayor preocupación para a la sobrevivencia de las sociedades agrarias. La producción del excedente requiere de la posibilidad de medir el tiempo, y sobre todo, de ejercer control sobre los fenómenos meteorológicos y así planear las actividades agrícolas.

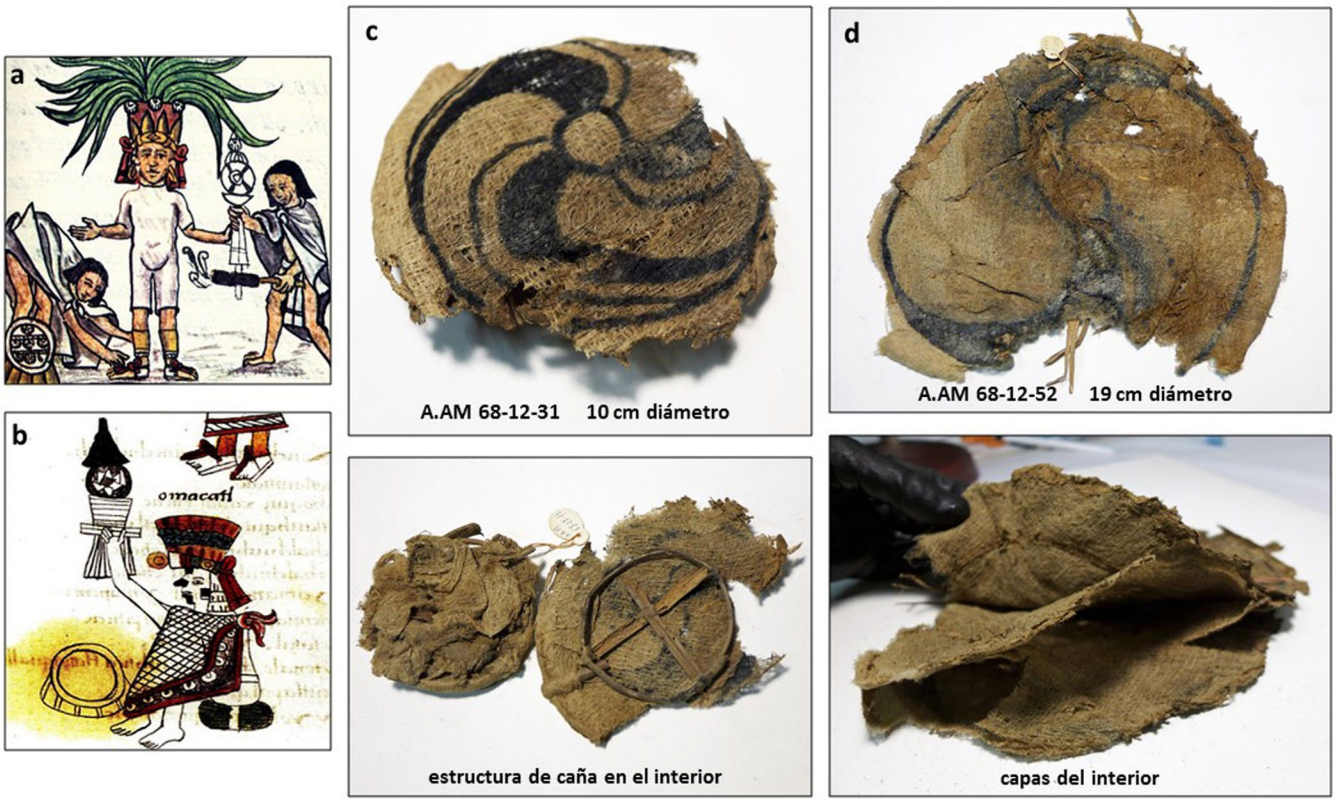

Fig. 11. Forma en que vestían y adornaban a los esclavos que iban a sacrificar y el báculo que llevaban: a) Códice Florentino (1979: libro 2, f.85); b) Primeros Memoriales; c y d) piezas redondas de lienzo de corteza con figuras de hélice de color negro aplicadas con pincel. Colección MRAH. Fotos J. Montoya

Fig. 12. Tláloc vestido con sus papeles goteados de *olli*. a) Códice Magliabechiano, p. 89. FAMSI/Codices; b y c) piezas de lienzo montadas sobre estructuras de caña con dibujos de color negro aplicados con pincel. Colección MRAH. Fotos J. Montoya

Desde tiempos inmemoriales se estableció una estrecha relación entre los humanos y los dioses proveedores. Por consiguiente, la agricultura se entrelaza con los rituales dedicados a pedir por el buen crecimiento del maíz y agradecer las cosechas (Broda, 1997:51; Fierro, 2004:346, citados en Vargas Ramos, 2011:105).

Las piezas A.AM 68-12-33 (a y b) hacen referencia a la lluvia y tienen una forma similar a la de las gotas que se observan en la lámina de la izquierda. La pieza A.AM 68-12-51 muestra un círculo que hace referencia a las anteojeras características de Tláloc (Fig. 12).

En el monumento 1 de Chalcatzingo[12] (Fig. 13 a), se observa un personaje sentado en el interior de una cueva sobre un trono que muestra un símbolo de **S** acostada que

12. Estado de Morelos, México. El asentamiento data de 1500 a.C., pero los monumentos datan entre 700 y 500 a.C. (Grove, 2000:277).

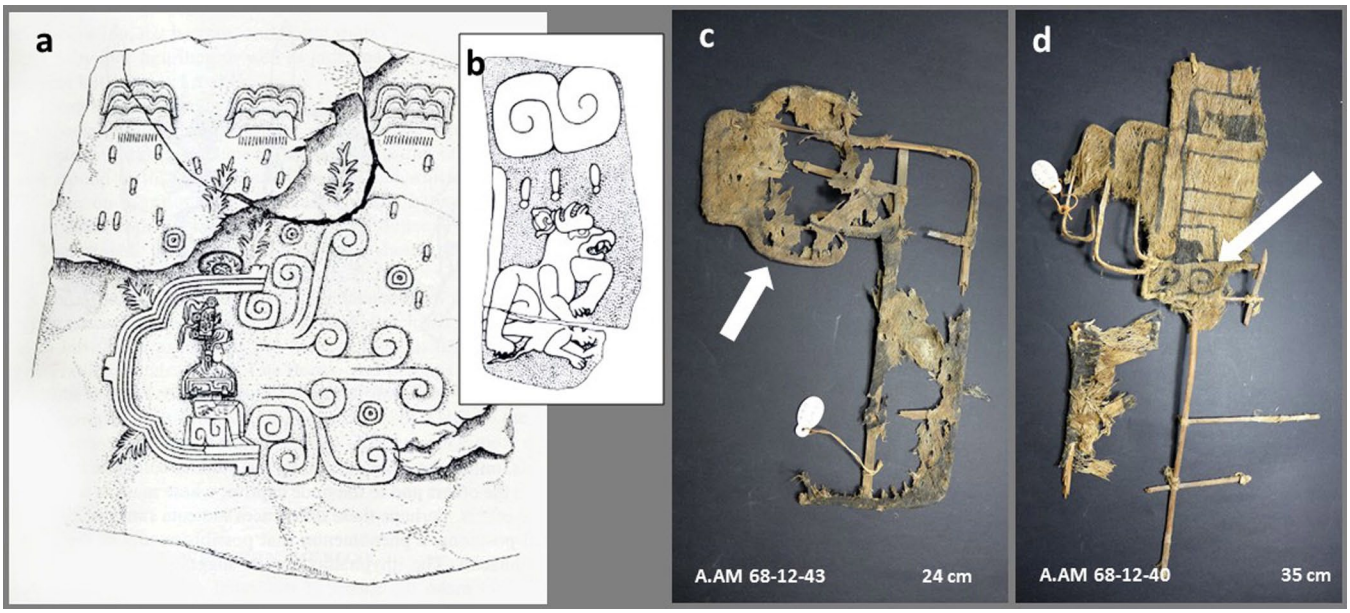

Fig. 13. Monumentos 1 y 31 de Chalcatzingo, Morelos. Período Formativo Medio (a y b). Dibujos: a) M. Coe, tomado de (Bernal, 1969:139); b) K. Taube, tomado de (The Olmec World, 1995: 101, fig. 24c.); c y d: piezas de lienzo de corteza sobre estructuras de caña, con dibujos en negro aplicados con pincel. Colección MRAH. Fotos J. Montoya

Fig. 14. Tira de papel ritual (lienzo de corteza) con manchas de sangre. Colección MRAH. Fotos J. Montoya

representa las nubes, y en los brazos sostiene una barra con el mismo símbolo. Las volutas que emergen de la cavidad simbolizan el viento y las nubes, la energía o la fuerza vital acumulada en este recinto. La entrada de la cueva está ilustrada con una media figura cuadrifolia.[13] En la ofrenda A.AM 68-12-43 se observa un motivo cuadrifoliado (Fig. 13 c).

Sobre la imagen del personaje central (Fig. 13 a), se aprecian nubes en tres niveles de las que caen gotas de lluvia sobre las tres plantas abajo (Grove, 1994:167-169). El monumento 31 de Chalcatzingo ilustra un felino desgarrando una víctima humana; arriba del animal se observa la figura prominente de una **S** acostada y tres gotas de lluvia (Fig. 13 b). En la ofrenda A.AM 68-12-40 se observa también este motivo (Fig. 13 d).

El propósito temático de las imágenes sobre los monumentos descritos es demostrar que la figura humana central es la que a través de una acción ritual nutre la lluvia (Reilly III, 1994:252).

En la fig. 14 se observa una tira de lienzo de corteza con manchas rojas, que según la ficha de registro son gotas de sangre. La presencia de sangre en esta ofrenda, que podría sugerir indicios de sacrificio humano o de animales,

13. El motivo también se encuentra representado de frente en el monumento 9 de Chalcatzingo en el que se observa un monstruo zoomorfo, que simboliza la tierra. Tiene las fauces abiertas que simbolizan el portal del inframundo.

Fig. 15. Lienzos de corteza teñidos con la técnica de teñido por reserva por medio de ataduras, conocida como '*plangi*'. Colección MRAH. Fotos J. Montoya

Fig. 16. Tira de corteza teñida con la técnica de teñido por reserva, '*plangi*'. A la derecha se muestra enrollada Colección MRAH. Fotos J. Montoya

confirma su rol votivo. Esta posibilidad fue reforzada por los hallazgos arqueológicos de Frederick Peterson en los años 1960 en las cuevas de la región de Jalpan (Querétaro), donde descubrió unas tiras de papel de corteza amarradas que mostraban manchas de sangre y de copal.[14] Los nahuas actuales llaman a estos paquetes de tiras de papel *ocopisole* y los totonacos *talacachin*. Estas ofrendas no cobran vida ni poder sino hasta después de haber sido incensadas y bañadas con sangre por el especialista ritual (Stresser-Pèan, C. 2011:160-161).

3 Ofrendas de lienzo de corteza teñidas

Es por la escasa evidencia material, casi inexistente en Mesoamérica, de textiles decorados por medio de técnicas de teñido por reserva, como el '*plangi*', el '*ikat*' y el '*batik*', que los lienzos de corteza del MRAH que se describen a continuación adquieren relevancia, a pesar de su sencillez.

Guadalupe Mastache (1996:17-25 y 2005:23) señaló que la única evidencia arqueológica del uso del '*plangi*' en México, es un tejido de algodón proveniente de la Cueva de Don Bonfilio en el estado de Puebla. El *plangi* se practicaba en los años 1950 en la región de Cadereita, Querétaro y sin duda, se trata de una tradición ancestral.[15] Y con relación a la técnica '*batik*', la única evidencia arqueológica que hasta la fecha se conoce es una de las tres partes que componen un textil de algodón proveniente de la Cueva Chiptic en Chiapas, estudiada por Irmgard Weitlaner Johnson (1954:137-148).

Las piezas de lienzo de corteza A.AM 68-12-28 y A.AM 68-12-68 (Fig. 15) y la A.AM 68-12-26 (Fig. 16) presentan rayas de color negro, tal como las que describe Bernardino de Sahagún en sus manuscritos. A diferencia de las ofrendas de las figuras 11 y 12 descritas anteriormente, éstas fueron teñidas con un tinte negro. En la pieza A.AM 68-12-28 la delineación de las rayas es muy precisa y 'limpia' ya que la tinta no se 'corre' en las fibras del lienzo, y, aunque

14. En 1981, en la cueva de Xochipila (Xicotepec, Puebla), y en 1998, en la región de Coacuila, se recuperaron numerosas ofrendas similares.

15. Ver un ejemplar extraordinario, propiedad del Musée du Quai Branly, en Stresser Pèan, C. 2011:243.

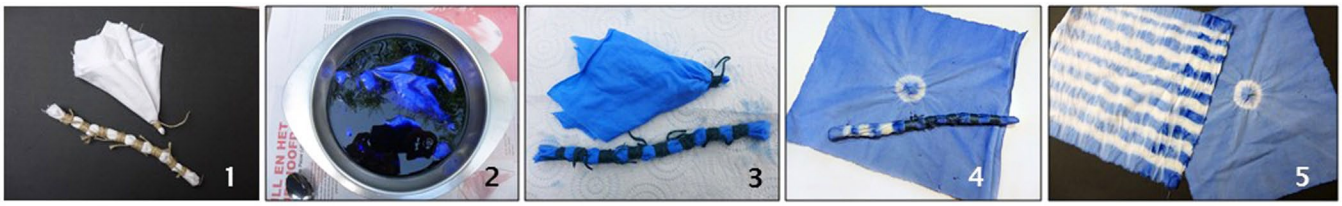

Fig. 17. Manera de obtener rayas y círculos en una tela mediante el teñido por reserva por medio de ataduras, o '*plangi*'. 1. Amarrado; 2. Teñido; 3. Secado; 4. Eliminación de ataduras; 5. Resultado. Prueba y fotos por J. Montoya

las rayas forman un zigzag irregular, algunos picos se repiten en imagen de espejo. En la pieza A.AM 68-12-68 la orilla derecha aún está enrollada, lo que indica que antes de teñirla, la pieza fue enrollada y amarrada para obtener rayas. Sobre ella se observa una pestaña negra con un círculo claro y el centro negro; fue teñida independientemente y el círculo que muestra es también indicador de que la decoración de las tres piezas se logró con una técnica de teñido por reserva usando ataduras, conocida como '*plangi*'. Para ilustrar el procedimiento de amarrado y teñido para lograr rayas y círculos se hizo una prueba con una tela de algodón, y aunque se utilizó un material diferente al soporte de lienzo, los dibujos obtenidos sobre la tela son similares (Fig. 17).

4 El color negro

Por los relatos de algunos cronistas, especialmente de Sahagún, sabemos que el 'aceite de *ulli*' era el material por excelencia para salpicar o pintar los papeles riuales, debido a su color negro y al humo que producía al quemarlo. Emilie Carreón Blaine en su libro "El *olli* en la plástica mexica" (2006), hace un análisis exhaustivo sobre la definición y usos del hule en el siglo XVI. Señala que además de usarlo para fabricar pelotas para el juego de pelota, se empleaba en muchos otros aspectos de la vida cotidiana, y que éste tenía gran importancia en la vida ritual como material destinado a ofrenda. Para los nahuas el hule era simbólico, chorreado sobre los papeles, o pintado en las mejillas y sienes de las víctimas y de los dioses. Al quemarlo su humo se incorporaba a los rituales como incienso y simbolizaba 'nubes de agua'(Thompson, 1952:7), o 'porque atraía las nubes cargadas de lluvia' (Aguilera, 1985:139). Las gotas de hule también 'representaban las lágrimas de los tlaloques, o bien las gotas de lluvia' (Filloy, 2002:92-93), citados en Carreón Blaine (2006: 102-3).

Los antiguos cronistas llamaron al color negro '*ule*', '*olli*' o 'ulli' y explicaron que éste era hule derretido. Sin embargo, Carreón Blaine advierte que en algunos de los objetos utilizados en el ritual vivo, el material que siempre se había identificado como hule no lo era. "No son aplicaciones (gotas reales) del hule, sino que están pintadas con diversos materiales de color negro que representan el *olli*-hule" (2006:11). La palabra *olli* no necesariamente remite al hule, sino también a otros materiales de color negro. Las crónicas también mencionan el uso del chapopote.[16] Aunque el *olli* y el *chapopotli* son materiales diferentes, uno es vegetal y el otro mineral, al quemarse o derretirse se comportan de la misma manera y poseen las mismas características, lo que explica por qué en los objetos rituales el uno podía ser sustituido por el otro" (Carreón Blaine, 2006:66-67). En vista de lo anterior y del tema que nos ocupa en este estudio, debe tomarse en cuenta que tanto el hule como el chapopote no son aptos para teñir: son en cierta medida adhesivos y no son solubles en agua. Esto nos obliga a considerar otras fuentes para teñir lienzo de corteza.

Se sabe que existen otras substancias vegetales para lograr el color negro. Uno de ellos es el 'negro de humo', también conocido como hollín, un carbón impuro, finamente pulverizado, que produce el humo de maderas resinosas como el pino y se deposita en las chimeneas domésticas. Los cronistas Francisco Hernández y Fernández de Oviedo explican cómo obtenían el hollín los aztecas para hacer una tinta negra llamada *ocotlilli*. "*Con humo de astillas de cualquier pino (ócotl en la lengua nativa y de donde la tinta toma el nombre), que dentro de vasijas cerradas se (condensaba) en pelotillas, las cuales arrancadas luego se vendían en los mercados.*" Y Toribio de Benavente precisa "*que con aquel tizne se* [acostumbraban] *entiznar y parar negros*" (Hernández, 1959:II, 409; Fernández de Oviedo, 1992:I,177-78 y Benavente-Motolinía, 1988:104, citados en Roquero, 2006:36). ¿Se refiere el último a la pintura facial y a los tatuajes?

16. C*hapopotli*, es el bitumen o asfalto, un género de mineral. Se produce en el interior de la tierra y es producto del refinamiento por procesos geológicos de depósitos de petróleo. Forma vetas en rocas o bien forma mantos y yacimientos subterráneos que brotan a la superficie de la tierra. Era abundante en la costa del Atlántico y en el Golfo de México (Carreón Blaine, 2006:66-67).

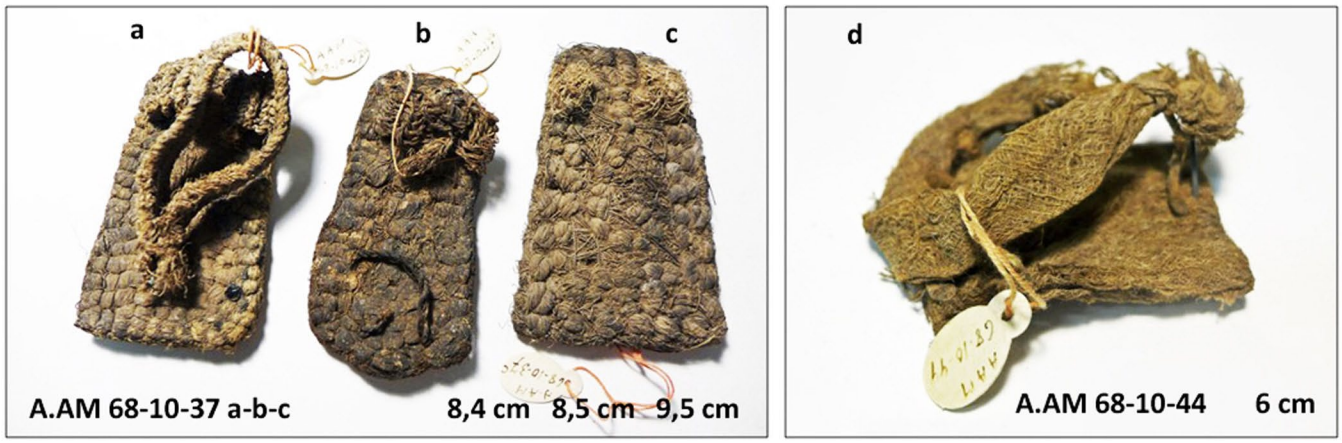

Fig. 18. Sandalias miniatura: a-c) elaboradas posiblemente con fibras de agave trenzadas; d) está elaborada con lienzo de corteza. Colección MRAH, Bruselas. Fotos J. Montoya

Fernández de Oviedo aclara esta interrogante con una descripción precisa del uso del polvo negro para aplicar los tatuajes. Dice así: "*Y el efeto para que es aqueste polvo, es para herrar* [marcar] *indios por esclavos con aquella invención que a sus amos les paresce* [tatuajes]. [...] *La manera de usar es cortando con unas navajuelas de pedernal la cara o brazo que quieren herrar, sotilmente entre cuero e carne, e lo cortado polvorizado con este humo, así, fresca la cortadura, e por cima embarrarlo con el humo;* [...] *e queda la pintura negra e muy buena, e es perpetua la pintura para los días que vive el que así es herrado*" (Fernández de Oviedo, 1992:I,177-78, citado en Roquero, 2006:36). Refiriéndose a la misma tinta, Bernardino de Sahagún agrega lo siguiente: "[...] *estos naturales hacen tinta del humo de las teas, y es tinta bien fina. Llámanla* tlilli ócotl. *Tienen para hacerlo unos vasos que llaman* tlilcomalli *en que se hacen, que son a manera de alquitaras* [alambiques]. *Vale para muchas tintas para escribir, y para medicinas que las mezclan con muchas cosas*". También menciona otros dos tintes de color negro y describe la manera en que los nahuas los preparaban. Sobre el primero dice: "*Hay en esta tierra un árbol grande de madera colorada o* huitzcuáhuitl ['palo del Brasil', *Caesalpina echinata*]. *Deste madero,* [...] *májanlo, y remójanlo en agua, tiñe el agua, hácela colorada.* [...]*Y para hacerle tinta negra mézclanle aceche* [caparrosa, sulfato nativo de cobre, hierro o zinc] *llamado* tlalíyac*, y con otros materiales negros que revuelven con el agua hácese muy negra, y tiñen con ella los cueros de venado que son negros*." Sobre el segundo colorante, dice que "*Hay un fruto de un árbol* [...] nacazcólotl. *Usase este fructo para con él y con aquella tierra que se llama* tlalíyac *o aceche, y con cáscaras de granadas, y con goma que llaman* mizquicopalli [copal o resina de mezquite[17]], *se hace muy buena tinta para escrebir*" (Sahagún, 1988: 798).

Es muy probable que el tinte utilizado para teñir o dibujar sobre el lienzo con el que se fabricaron los objetos del MRAH antes descritos, sea el negro de humo de madera de pino, *ocotlilli*, por ser el que más llamó la atención de los cronistas y que motivó las detalladas descripciones sobre su preparación y usos. Sin embargo, solamente un análisis químico puede confirmar o desechar esta hipótesis.

5 Sandalias

Por las detalladas descripciones de Sahagún y otros cronistas, sabemos que los niños que eran sacrificados en los santuarios de los cerros como ofrenda a Tláloc, eran vestidos con ricos atavíos y llevaban sandalias '*muy labradas y curiosas*". Las 4 sandalias miniatura, sin pareja o evidencia de uso, que se observan en la figura 18, nos hacen pensar que éstas podrían ser una indicación del sacrificio de niños en los contextos de las cuevas. Sin embargo, otros hallazgos en el Valle de Tehuacán arrojan otra posibilidad para interpretar su uso.

En 1967, Robert Mac Neish encontró en la cueva de Coxcatlán seis sandalias miniatura elaboradas con lienzo de corteza que no presentaban señales de uso. Reportó que fue informado por los trabajadores de la excavación, que "*los especialistas rituales aún ofrendaban sandalias en las cuevas*" (Stresser Pèan, C. 2011:160). Desde principios del siglo pasado, se observó esta práctica entre los huicholes. El investigador Lumholtz ilustró en 1902 una vara con ofrendas en la cual se amarraron dos sandalias miniatura (Lumholtz, 1902, vol. II, p. 212, citado en Stresser-Pèan, C. 2011:160). En otras excavaciones los investigadores Sánchez Martínez,

17. Árbol mimosáceo americano, gomoso, del género *Prosopis*.

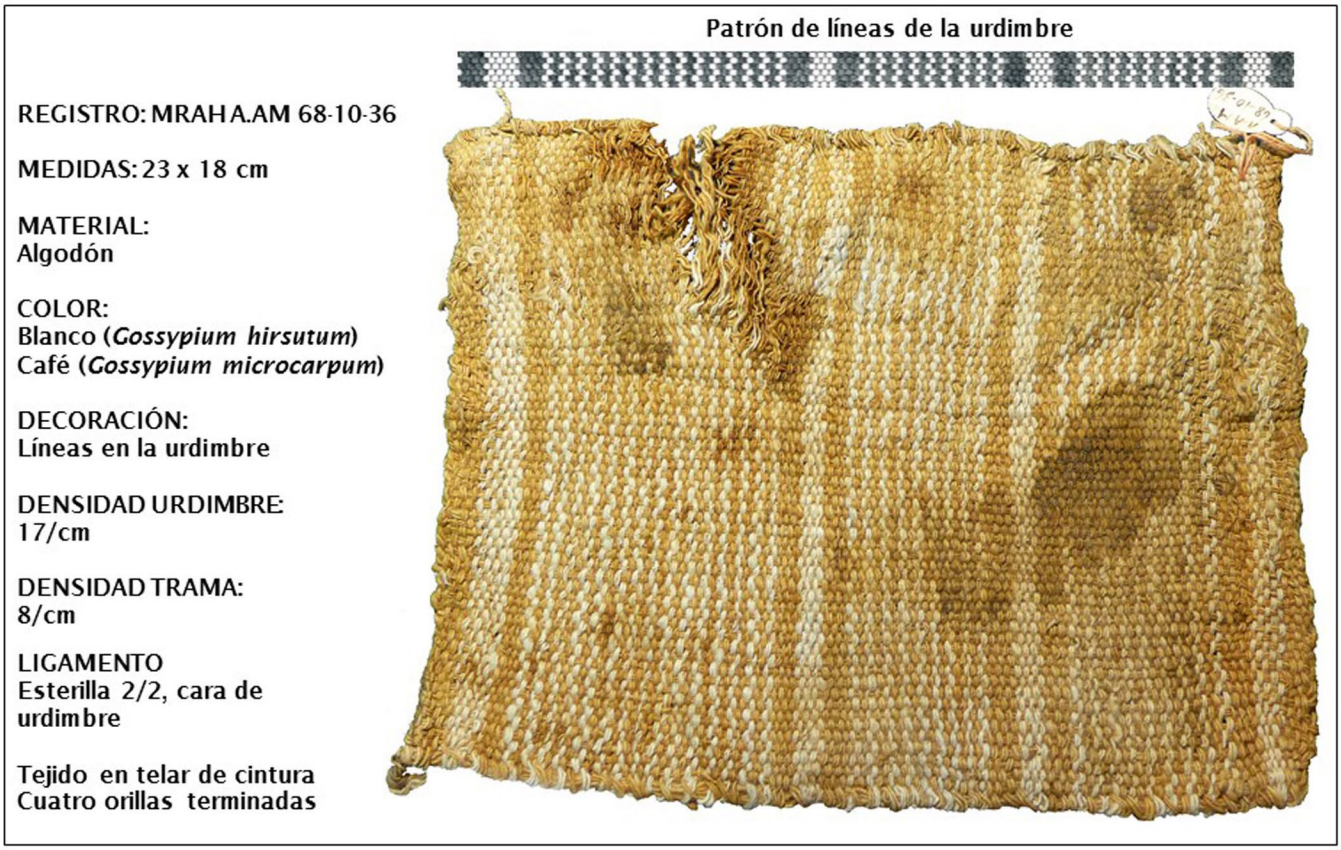

Fig. 19. Tejido de algodón de dos colores, A.AM 68-10-36. Colección MRAH, Bruselas. Foto y dibujo J. Montoya.

Alvarado y Morett Altatorre (1998:81-89 y 2000:103-115, citados en Stresser Pèan, C. 2011:160), llegaron a las mismas conclusiones sobre el rol que las sandalias miniatura cumplen, como ofrendas votivas.

Entre los aztecas, a los difuntos se les proveía de lo necesario para su viaje al otro mundo. En las tumbas se depositaban sus prendas de vestir, sus insignias personales, instrumentos de trabajo y sus alimentos. Los indígenas actuales, así como sus antepasados, creen que el inframundo es un reflejo del mundo de los vivos, y las sandalias simbolizan el trayecto que el hombre debe recorrer para ameritar el contacto con lo divino. Por los antecedentes anteriores, se propone que las piezas A.AM 68-10-37 a-c y la A.AM 68-10-44 (Fig.18), son ofrendas para los difuntos, para ayudarles a cumplir su misión en la vida posterior.

6 Textiles

En el depósito de la Tumba I se encontró un fragmento de tejido de algodón con rayas de color blanco y café similar al que proviene de la Cueva del Tigre que se describe a continuación; la pieza fue cortada por la mitad, está muy dañada y presenta evidencias de uso ritual; no se describe en este artículo. El número de registro es A.AM 68-12-30 (ver Apéndice 1, cuadro 1).

Textil 1, A.AM 68-10-36: La pieza más grande de los tres textiles que provienen de la Cueva del Tigre está tejida con hilos de algodón natural blanco y café, más conocido como *coyohixcatl* o *coyuchi* (color de coyote) (Fig. 19). Las hebras presentan una torsión irregular, característica del hilado a mano. La urdimbre fue planificada previamente con el propósito de obtener líneas de dos colores como única decoración; se preparó combinando hebras blancas y cafés en pares, que se urdieron juntas.[18] En la misma figura se observa el patrón de color que muestra la urdimbre.

La pieza fue tejida con el telar de cintura; el ligamento empleado es el de esterilla 2/2, con cara de urdimbre, que permite tejer más rápido. La característica más importante de esta sencilla pieza es que tiene las cuatro orillas terminadas. En la parte superior se observa que la densidad del tejido es menor, propio de las piezas tejidas con este tipo de

18. Confirmado por Nora Chalmet, comunicación personal, mayo 2016.

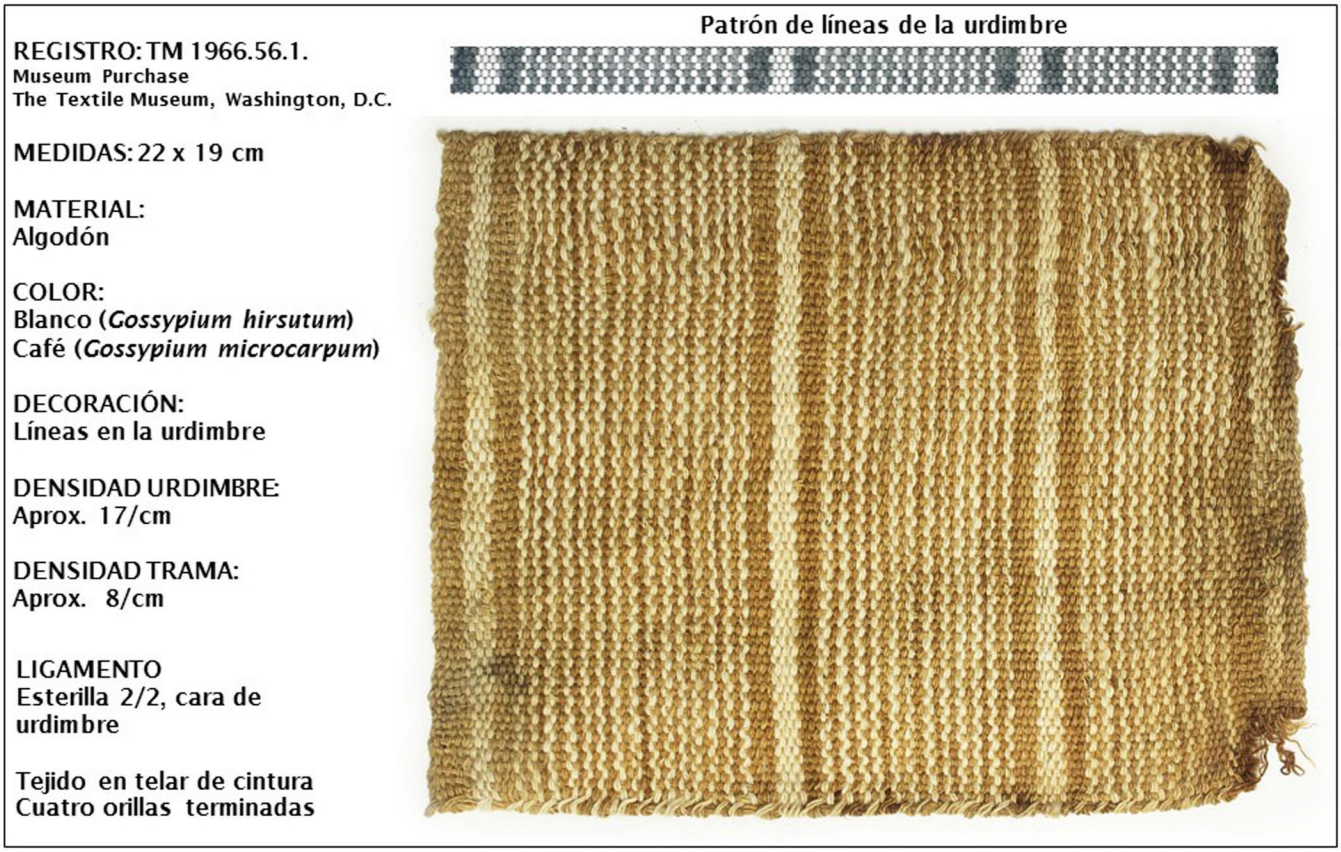

Fig. 20. Tejido de algodón de dos colores, TTM 1966.56.1, Museum purchase. Foto autorizada por The Textile Museum, Washington D.C. Dibujo: J. Montoya

telar, pues la pieza se termina de tejer con aguja para obtener las cuatro orillas terminadas. La pieza muestra manchas con color y textura similares a las de la tira de lienzo de corteza de la figura 14.

Existe un tejido muy similar que se conserva en el Textile Museum de Washington, D.C. (Fig. 20). En las fichas de registro se menciona que fue adquirido en 1966 y que proviene de una cueva en el sur del Valle de Tehuacán pero no se especifica la localidad.[19] Además de este tejido, la colección de Washington incluye otros materiales similares a los de la colección de Bruselas, la cual proviene de la misma región, período y contexto arqueológico. La similitud entre ambas colecciones es notable.

Mary Elizabeth King estudió este tejido y la descripción que hace corresponde con la nuestra (1979:272-73) (Fig. 20). Esto nos motivó a hacer una comparación entre ambos tejidos. A primera vista sobresaltan las características comunes: las medidas, ambas fueron tejidas con algodón natural blanco y café, usando el ligamento de esterilla 2/2, el diseño es el mismo, el patrón de líneas en la urdimbre casi no difiere en el número de hilos, y ambas muestran una franja con menor densidad de tejido en la parte superior.

Considerando que ambas piezas se encontraron dentro de un contexto funerario, nos parece razonable sugerir que éstas cumplieron la misma función simbólica que las sandalias miniatura, y que podrían representar la manta del difunto para cubrirse durante su viaje en el otro mundo. En las ilustraciones de la figura 2 (b y c) pueden observarse pequeñas mantas colocadas frente a los bultos mortuorios. Otro ejemplo del uso de tejidos miniatura como ofrendas votivas fue ilustrado por Carl Lumholtz a principios del siglo XX. Se trata de una pequeña manta (16 cm) ensartada en un *tsikuri*,[20] depositada por una tejedora huichol para pedir buena suerte con sus tejidos (Sayer, 1985:164).

Los textiles descritos también pueden haber tenido un rol similar al de las servilletas ceremoniales en las que se envuelven objetos sagrados, velas e incienso para depositar en los altares. En la Cueva del Lazo, en Chiapas, se recuperó

19. Ann P. Rowe, comunicación personal, abril 2013.

20. *Tsikuri* ('ojo de Dios') : ofrenda compuesta por dos varillas que forman una cruz y en el centro tiene un rombo hecho con lana de colores.

REGISTRO: MRAH A.AM 68-10-38

MEDIDAS: 20 X 16 cm (7,5 + 7,0 cm)

MATERIAL: desconocido
Ortiga de agua, o *chichicaxtle* (*Urtica caracasana*)?

COLOR:
Café claro

DECORACIÓN:
Hilos de trama múltiples para un efecto 'nervado'

DENSIDAD DE URDIMBRE:
22/cm (hilos sencillos)

DENSIDAD DE TRAMA:
9/cm (hilos sencillos + hilos múltiples)

TORSIÓN:
Urdimbre Z, muy fuerte

LIGAMENTOS:
Tejido sencillo o tafetán 1/1, cara de urdimbre
+
Taletón o semi-sencillo, 1/2, 1/3

Tejido en el telar de cintura

Fig. 21. Tejido compuesto de dos bandas cosidas por un lado. A.AM 68-10-38. Colección MRAH, Bruselas. Foto J. Montoya

un textil rectangular de pequeñas dimensiones que data del período clásico tardío, cuyas orillas fueron cosidas para formar un 'paquetito' en forma piramidal, que contiene algodón crudo y se le considera como un bulto ritual.[21]

Por los argumentos y ejemplos anteriores podría sugerirse que las piezas textiles conservadas en el MRAH y en el TM se utilizaron como ofrendas simbólicas para los muertos o para las deidades, o como envoltorios para objetos y/o materias sagradas. Las manchas que muestran ambas piezas, especialmente la pieza A.AM 68-10-36, son evidencia de uso ritual.

Textil 2, A.AM 68-10-38: La segunda pieza en la colección está compuesta por dos bandas cosidas por un lado, posiblemente para formar una pequeña bolsa (Fig. 21). Fueron tejidas simultáneamente pues aún conservan el hilo que fue utilizado para amarrar la urdimbre a la barra inferior del telar. Tiene flecos formados por el resto de la urdimbre que no se tejió. Todo indica que la pieza, no fue terminada.

Se desconoce el material utilizado en su manufactura. En las fichas de registro está mencionado 'algodón natural de color café claro'; sin embargo el color y la textura son diferentes al algodón café o coyuchi, y la tela, aunque suave al tacto, tiene una consistencia más áspera. Los finos hilos muestran una torsión Z muy apretada, regular y son fuertes, como puede apreciarse en la figura 22. Posiblemente se trate de una fibra del tallo o del líber de plantas como la ortiga de agua, *Urtica caracasana* o *chichicaxtle*. En Tehuacán se ha encontrado evidencia material de hilo fabricado con estas plantas, además del algodón blanco y café, de fibras de canabáceas como el cáñamo y de los agaves como el sisal o henequén (Smith y Kerr,1968:354-58).

El ligamento empleado para tejer es el de tafetán o tejido sencillo 1/1, con un ligero efecto de cara de urdimbre, combinado con el taletón o tejido semi-sencillo 1/2, 1/3, para

21. El artefacto se describe en el artículo de Davide Domenici y Gloria Martha Sánchez titulado Classic Textiles from Cueva del Lazo (Chiapas, Mexico), en este volumen, fig. 29.

Fig. 22. Tejido compuesto de dos bandas cosidas por un lado, A.AM 68-10-38 (detalles). Colección MRAH, Bruselas. Fotos J. Montoya

lograr una textura 'nervada' en el sentido de la trama, como único elemento decorativo (Fig. 22). En el reverso de la pieza se observa un hilo de urdimbre 'flotante'; esto sucede frecuentemente cuando se tiene una alta densidad en la urdimbre y por lo general estos errores pasan desapercibidos al tejedor, por encontrarse siempre en el reverso del tejido.

Textil 3, A.AM 68-10-39: El próximo textil está compuesto de 6 tejidos diferentes que se encontraron superpuestos. Por la apariencia, el color y los ligamentos empleados en su manufactura, dan la impresión de que formaron una sola pieza. Ingresaron al museo en esa forma (como una unidad).[22] Las fichas de registro la describen como un "fragmento de tejido grueso azul-púrpura, formando un 'montoncito' en forma de disco, con un diámetro aproximado de 6 cm" (Fig. 23).

Las 6 piezas fueron tejidas individualmente y, aunque están muy dañadas, puede verse que las cuatro orillas fueron terminadas. La primera es de color púrpura y las otras azul claro con blanco. No se sabe que colorantes fueron utilizados para teñirlas. Posiblemente se usó el púrpura del caracol *Patula pansa* y el índigo o *Indigofera suffruticosa* o la sacatinta o *Jacobinia spicigera*. Sin embargo, también hay que considerar que en varios estados del centro de México se utilizan ciertas flores para lograr el azul celeste, como la *Cuscuta americana* y la *Commelina coelestis* (Mastache, 2005:24), pero solamente mediante el análisis químico se pueden identificar los colorantes usados.

Los primeros dos tejidos (1 y 2), están tejidos con la técnica de esterilla 2/2, en igual proporción. La densidad del tejido es de 4,6 hilos/cm. La cara superior del primero está decolorada, mientras que el reverso muestra un color púrpura intenso. El color azul celeste de la segunda pieza es similar en ambas caras (Fig. 24).

Las próximas cuatro piezas (3 a 6) fueron tejidas con la técnica de tafetán o tejido sencillo 1/1, utilizando 1 hilo compuesto de dos hebras, tanto en la urdimbre como en la trama. La baja densidad del tejido, entre 1 y 2 hilos/ cm, les da la apariencia de una red, que se considera poco adecuada para usar en prendas de vestir. Presentan un color azul claro y en las últimas tres piezas (4 a 6), se observan algunos hilos de color blanco.

Por la forma cuadrangular y las dimensiones de las 6 piezas, que varían alrededor de los 8 x 8 cm, se descarta el uso del telar de cintura para tejerlos. Proponemos que fueron tejidas en un pequeño marco, tal como se observa en el dibujo de la figura 24.

En un principio no fue posible llegar a una conclusión sobre el patrón de colores, debido al desgaste de los hilos y por faltar gran parte de las orillas. Cuando se tuvo conocimiento de que entre los textiles conservados en el Textile Museum de Washington se encontraban 2 piezas con características similares a las de las últimas cuatro piezas de la figura 24 (dimensiones, material, densidad, color y ligamento) y con las orillas completas, pudimos esclarecer algunos aspectos con respecto al patrón de colores en las piezas del MRAH. En las dos piezas de Washington, catalogadas como TM 1978.28.36 y 37, se observa un patrón decorativo que combina hilos blancos y azules tanto en la urdimbre

22. Confirmado por la galería de arte precolombino donde el museo adquirió la colección. Comunicación personal, marzo 2013.

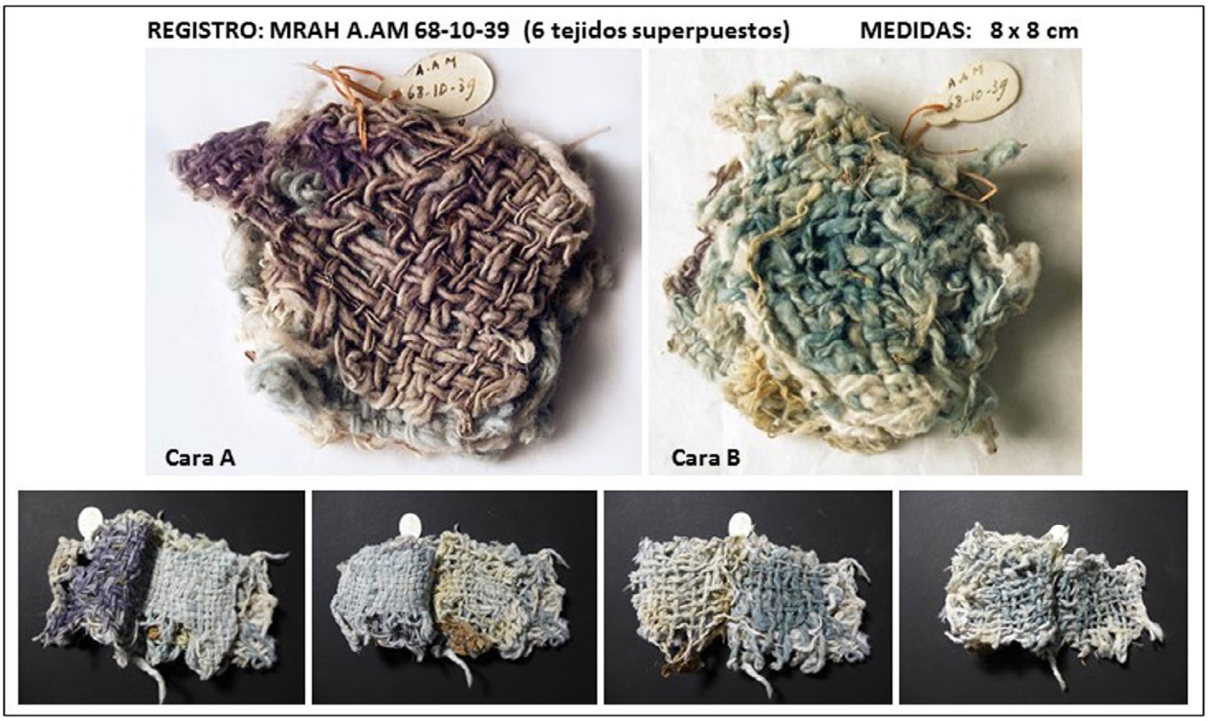

Fig. 23. Pieza de algodón compuesta por 6 tejidos diferentes, A.AM 68-10-39, tal como ingresó al museo. a) derecho; b) revés. Colección MRAH, Bruselas. Fotos J. Montoya

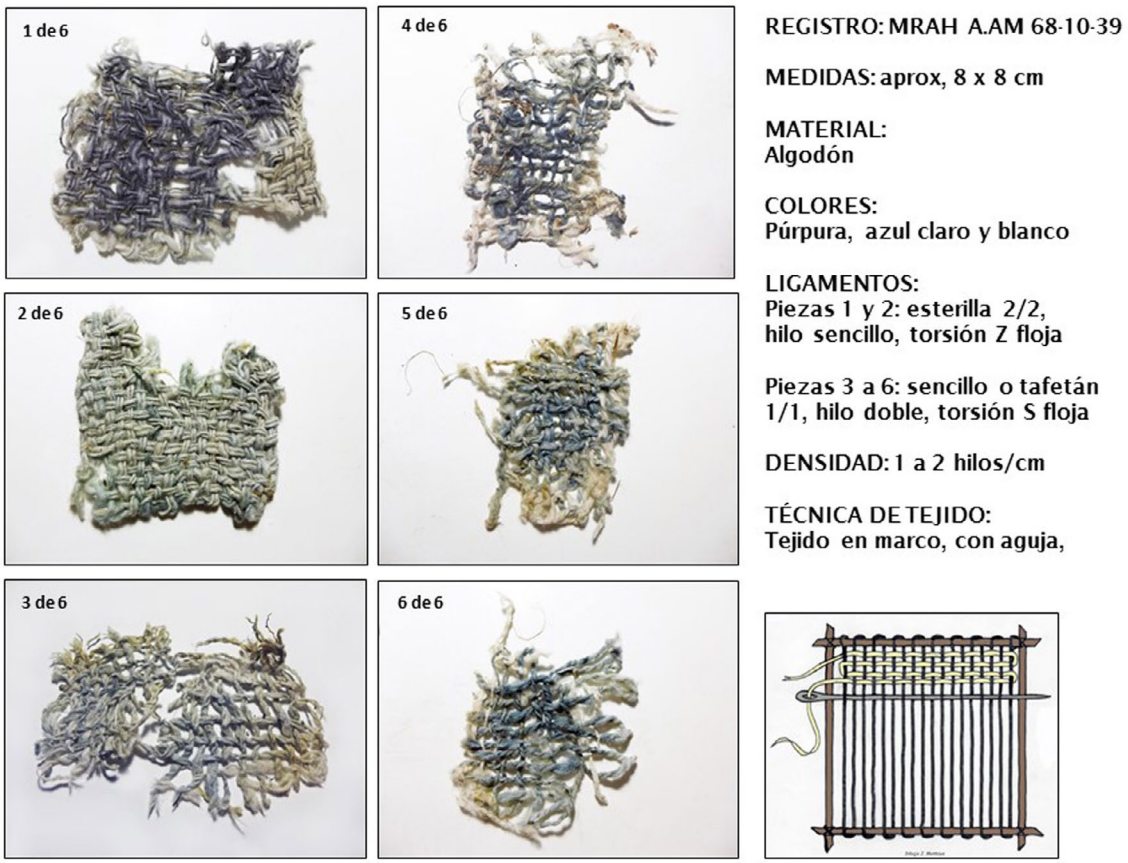

Fig. 24. Tejidos que componen la pieza A.AM 68-10-39. Colección MRAH, Bruselas. Fotos y dibujo J. Montoya

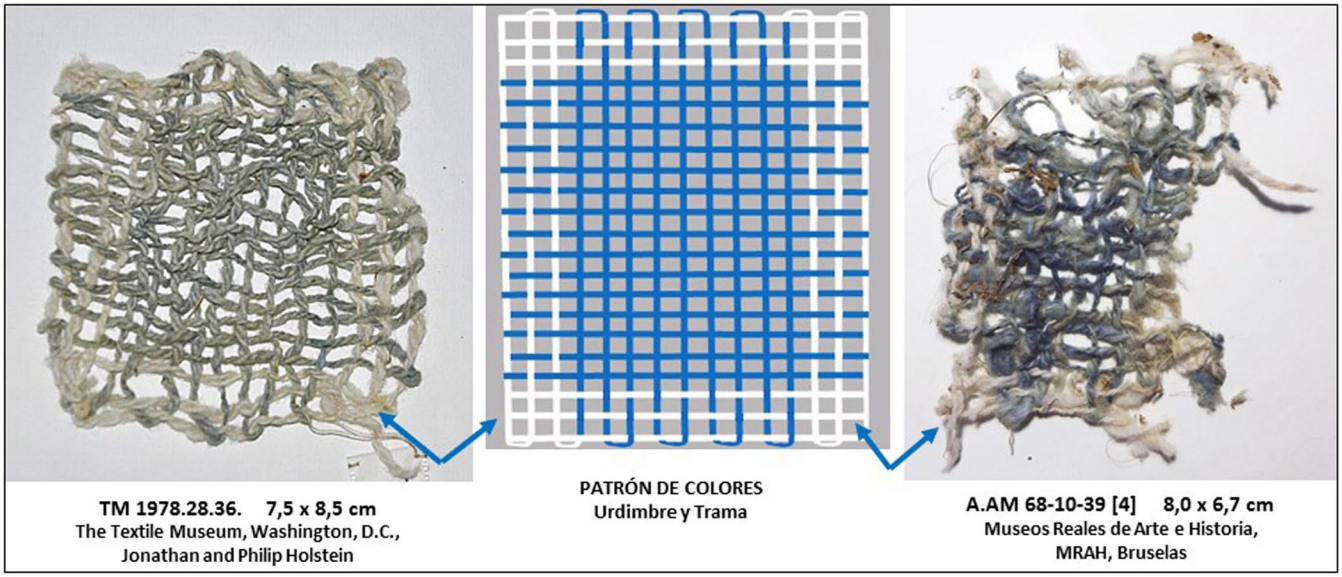

Fig. 25. Comparación y patrón de colores de las piezas TTM 1978.28.36 y A.AM 68-10-39. Colección y fotos: a) The Textile Museum, Washington, D.C. Gift of Jonathan and Phillip Holstein, foto autorizada por TTM; b) MRAH, Bruselas, foto y dibujo J. Montoya

como en la trama (Fig. 25 a). Basándonos en la pieza TM 1978.28.36, se elaboró un esquema de que ilustra el color y la interacción de los hilos (Fig. 25 b).

Este esquema sirvió de guía para buscar e identificar un patrón de color en las piezas 4, 5 y 6 del MRAH. En la pieza 4 se pueden observar 3 hilos blancos en la urdimbre del lado izquierdo y 3 hilos blancos de la trama en la parte inferior, que al entrecruzarse, forman una esquina de color blanco. Esto confirma que hubo una planificación previa para montar la urdimbre en el marco, y que las tramas también siguen un orden previamente determinado.

¿Cuál fue el uso que se dio a estos 6 tejidos? ¿Fue intencional la colocación superpuesta con que ingresaron al museo y se trata de un fragmento de una prenda gruesa o acolchada? Nunca lo sabremos. Pero basándonos en la bibliografía, podemos indagar sobre su posible uso, tanto como prenda de vestir (o una parte de ella), o su uso en forma individual como piezas separadas.

Si estos tejidos se colocaron intencionalmente uno sobre otro para lograr una prenda acolchada, posiblemente se podrían relacionar con la 'armadura' de algodón o *ixcahuipilli*, que usaban los guerreros para protegerse de las flechas. Sin embargo, si se toman en cuenta las descripciones conocidas de los cronistas, el *ixcahuipilli* se fabricada con algodón en bulto, no hilado, que se colocaba entre dos telas (Anawalt, 1981:39; 137-139). No se encontraron referencias que apoyen la hipótesis contraria, es decir, que se utilizaran tejidos de algodón superpuestos. Además, si se considera que los tejidos de algodón, particularmente cuando se han teñido con púrpura y azul, eran escasos, elitarios y muy preciados, es poco probable que se hubieran utilizado como 'relleno' en la fabricación de *ixcahuipiles*, cuya demanda era grande debida a los constantes conflictos bélicos. Resulta más plausible suponer que para ésto se haya utilizado el algodón en bulto y el pochote (algodón de ceiba).

Al igual que las sandalias miniatura y los tejidos antes comentados, estas 6 pequeñas piezas fueron posiblemente representaciones simbólicas de mantas de algodón. La fabricación de prendas de vestir miniaturizadas para usos rituales aún se practica en ciertos lugares de México y Guatemala, para vestir pequeñas imágenes de santos o como ofrenda. Al respecto, Cloë Sayer señala que en Atla (comunidad nahua de la Sierra de Puebla), se tenía la costumbre de ofrendar prendas miniaturizadas al pie de un cerro con pinturas rupestres.[23] Se refiere también a un caso en la comunidad Otomí de San Pablito, donde el curandero tenía un baúl con papeles de amate recortados, entre los cuales se encontraban dos figuras de papel vestidas con prendas miniaturizadas, que representaban la Madre Tierra y su esposo.[24] Otros ejemplos conocidos son tres huipiles miniatura provenientes de La Mixteca y uno de Coahuila, que forman parte de la colección de Irmgard W. Johnson, reportados por Mastache (1996:20).

23. Sayer, 1985:163

24. Cloë Sayer, comunicación personal, julio 2016.

Las piezas para ofrendar eran posiblemente manufacturadas en grandes cantidades por artesanos especializados, que se vendían en los mercados locales, tal como es el caso de los papeles rituales, y muchos productos más. El algodón en Mesoamérica tenía un alto valor de cambio, equiparable al del cacao y de las plumas. Pequeños tejidos de algodón, de determinado tamaño, llamados *patí* en Yucatán, se usaban como moneda o se permutaban en los mercados, y eran el principal artículo de tributo (Mejía de Rodas, 1997:11).

V. Conclusiones

Aunque la colección proveniente del Valle de Tehuacán que se conserva en el MRAH fue extraída de su contexto arqueológico original, perdiéndose para siempre la información precisa de su contenido y su intencionalidad, fue una suerte que las piezas estudiadas ingresaran al museo conjuntamente con los otros objetos y materiales que fueron depositados en estas dos cuevas. Esto brindó una oportunidad excepcional para esbozar el contexto original de dichas cuevas, aunque de manera parcial, y poder ubicar el uso y el rol que tuvieron durante los ritos dedicados a las deidades o en los ritos funerarios. A la vez, estos objetos pueden compararse con las piezas de otras colecciones que han sido recuperadas en depósitos arqueológicos no saqueados y que se han estudiado científicamente.

Los objetos, plantas y materiales descritos en este trabajo son posiblemente ofrendas depositadas en las cuevas, que adquirieron su significado y su razón de ser al ser tratadas por los especialistas rituales, de acuerdo con los códigos propios de cada rito y cada deidad. Se identificaron dos temas principales dentro de los que pudieron tener un rol como: a) ofrendas votivas relacionadas con el culto a Tláloc/Cocijo, las deidades de la lluvia y la fertilidad; b) como ofrendas simbólicas para los difuntos. No se descarta la posibilidad de que formaron parte del contenido de envoltorios sagrados, tales como los *bultos funerarios* y los *bultos de poder*.

La similaridad extraordinaria entre los textiles del MRAH y los del Textile Museum de Washington, que provienen de la misma región pero de diferentes depósitos arqueológicos, puede quizás atribuirse a que estos objetos fueron fabricados en grandes cantidades para satisfacer la demanda que tenían, y que eran vendidos o permutados en extensas áreas de Mesoamérica. Quizás estos aspectos puedan explicar la similaridad que muestran algunas de las piezas recuperadas en sitios arqueológicos geográficamente dispersos, e igualmente dispersos en los museos del mundo.

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Apéndice 1
(Cuadros 1-3)

Cuadro 1

Contenido del depósito "TUMBA I". Colección MRAH, Bruselas. Fotos J. Montoya
De izquierda – derecha y de arriba – abajo:
1 brasero con la efigie de Cocijo; 1 cono de copal (?); 1 pequeña hacha antropomorfa de piedra serpentina clara; 7 cuentas de jade; 1 cuenco; 1 figurilla antropomorfa de piedra serpentina oscura; 5 anteojeras/orejeras de madera con mosaico de turquesa; 1 objeto ovalado de cerámica; 13 pelotillas de material desconocido; 1 fragmento de estera; 5 máscaras de madera fragmentadas con trazas de pintura; 1 pequeño objeto de madera con mosaico; 1 objeto ovalado de cerámica rojiza; fragmentos de 3 cuerdas; 1 fragmento de tejido de algodón con rayas blanco y café; 3 cráneos humanos (uno completo); 1 mandíbula inferior y un fragmento de estera.

Cuadro 2

Contenido del depósito "TUMBA I". Colección MRAH, Bruselas. Fotos J. Montoya

De arriba – abajo y de izquierda – derecha:

17 ofrendas de plantas varias, compuestas en forma de manojos, ramilletes, guirnaldas, anillos o trenzadas, de las cuales 2 están sujetas con fino lienzo de corteza y 1 con corteza de palma; 2 tallos de maíz con mazorcas; 2 ramas de palma; 1 mazorca; 1 ramita de encino con 1 bellota; semillas varias (1 de maíz y las otras son de frijol de varias clases) y 3 semillas/cascabeles de *ayoyotl*.

Cuadro 3

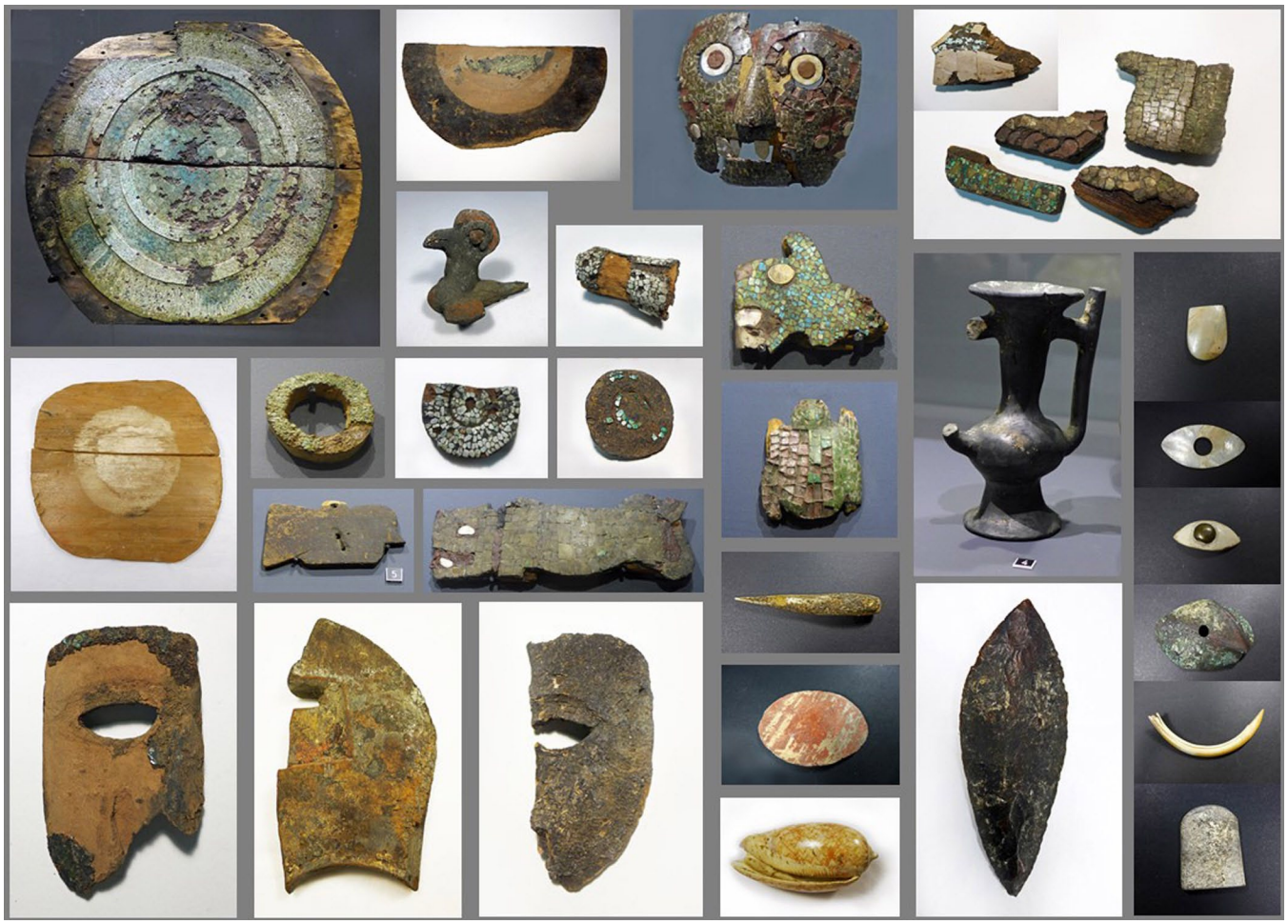
Contenido del depósito "TUMBA I". Colección MRAH, Bruselas. Fotos J. Montoya

De arriba – abajo y de izquierda – derecha:

1 banda de lienzo con rayas negras; 2 objetos redondos de lienzo con motivos de hélice de color negro aplicados con pincel; 2 lienzos de corteza con rayas negras y un círculo, teñidas con la técnica de teñido por reserva por ataduras (*plangi*); 1 fragmento de lienzo con dibujos en negro, aplicados con pincel; 1 lienzo teñido con color negro; 1 brazalete o ajorca de lienzo; 1 fragmento de lienzo con restos de cuerdas; 1 tira de lienzo claro con manchas de sangre; 16 objetos (o fragmentos) de lienzo montado sobre estructuras de caña, que muestran líneas o dibujos de color negro aplicados con pincel, en 7 de ellos sólo se observa la estructura; 1 fragmento de lienzo con rayas negras aplicadas con pincel.

Apéndice 2
(Cuadros 4 -5)

Cuadro 4



Contenido del depósito "CUEVA DEL TIGRE". Colección MRAH, Bruselas. Fotos J. Montoya

De izquierda – derecha y de arriba – abajo:

1 escudo de madera con mosaico de turquesa; medio escudo de madera con restos de mosaico de turquesa; 1 máscara de madera con mosaico de piedra serpentina y otras materias; 5 fragmentos de madera con mosaico de turquesa y piedra serpentina; 1 silbato con forma de ave; 1 objeto de madera y mosaico; 1 anteojera y 2 orejeras sin pareja con mosaico de turquesa; 4 figuras de animales de madera con mosaico de turquesa o piedra serpentina (cabeza de jaguar, tortuga o rana, cuerpo de un felino y ave sin mosaico); 1 pequeño cántaro de cerámica plomiza (*plumbate*) sin un asa; 1 diente y dos ojos de conchanácar; 1 punzón de hueso; 1 ojo de cobre; fragmentos de 3 máscaras de madera, la primera con restos de mosaico de turquesa; 1 placa ovalada de cerámica con pintura roja; 1 cuchillo de pedernal (sílex); 1 colmillo de animal desconocido; 1 caracol y 1 placa de piedra tallada lisa.

Cuadro 5

Contenido del depósito "CUEVA DEL TIGRE". Colección MRAH, Bruselas. Fotos J. Montoya

De izquierda – derecha y de arriba – abajo:

1 brasero con efigie de Cocijo; 1 brasero con efigie de Tláloc; 1 pequeño brasero con forma zoomorfa (¿un sapo?); 1 pequeño cuenco trípode; 3 adornos (o fragmentos) fabricados con lienzo y otros materiales; 1 sandalia miniatura de lienzo de corteza; 3 sandalias miniatura de fibras de agave trenzadas, sin pareja; 3 ofrendas elaboradas con varillas de madera en pares y envueltas con lienzo; 1 cesta tejida; 1 cesta en espiral; 1 tejido de algodón de color blanco y café con líneas en la urdimbre, tiene 4 lados terminados; 1 tejido de material desconocido, formado por dos bandas; y 1 pieza formada por 6 tejidos de algodón superpuestos, de color púrpura y azul claro.

6

The World on a Whorl: Considerations on Aztec Spindle Whorl Iconography

Jesper Nielsen

Institute for Cross-Cultural and Regional Studies, University of Copenhagen, jnielsen@hum.ku.dk

Abstract
An unpublished collection of Aztec (Late Postclassic central Mexico, ca. 1400-1520) spindle whorls (totaling 33 items) with rich iconographic embellishment is the focus of this paper, which will discuss a set of recurring iconographic themes, such as the 'sun disk', 'eagles', 'jade disks or chalchihuites' and 'cloud-scrolls', on the whorls. Previous treatments of spindle whorl imagery have tended to regard such motifs merely as decoration, but here I suggest that the repertoire at hand indicate a limited scope of motifs that share some cosmological and religious significance. In a broader perspective these observations point to the potential mythological underpinnings of activities such as spinning and weaving – which on the surface and from a modern, Western standpoint may seem rather mundane.

Keywords: Aztec, Late Postclassic, Mexico, spindle whorls, iconography, sun, cosmology

El mundo en un malacate: Algunas consideraciones sobre la iconografía de los malacates aztecas

Resumen
En este artículo se analiza a fondo la ornamentación iconográfica de una colección inédita de 33 malacates aztecas (Postclásico tardío, centro de México, ca. 1400-1520). Aquí se discutirá una serie de temas iconográficos que a menudo aparecen en los malacates, tales como el 'disco solar', 'águilas', 'discos de jade' o 'chalchihuites', así como las 'volutas en forma de nube'. En estudios previos, los motivos representados en los malacates se habían considerado solamente como mera decoración, sin embargo, en este estudio se sugiere que el conjunto de malacates bajo escrutinio contiene un conjunto de motivos bien delimitado, cuyo significado es tanto cosmológico como religioso. Desde una perspectiva más amplia, estas observaciones denotan los fundamentos mitológicos potenciales de las actividades del hilado y del tejido, las cuales –a primera vista y desde una perspectiva occidental moderna— podrían parecer relativamente mundanas.

Palabras claves: Azteca, Posclásico tardío, México, malacates, iconografía, el sol, cosmología

> "In Aztec assemblages there is no category of artifact that is as significant for male identity as spindle whorls are for female identity" (Brumfiel 2001: 75)

In this brief article I discuss a category of artefacts related to the production process of textiles, namely spindle whorls. I present the preliminary results of my research on an unpublished collection of Aztec spindle whorls, or, more correctly, the Early to Late Postclassic period of highland central Mexico (A.D. 1400-1520), totalling 32 items. Several of these are embellished with iconographic motifs of high quality, and it is some of the recurring iconographic themes that will be the focus of this contribution, among them, the 'sun disk', 'raptorial birds', 'jade disks or *chalchihuites*' and 'cloud-scrolls'. Previous discussions of spindle whorls have generally tended to neglect such motifs, perhaps regarding them merely as decoration (see, however Brumfiel 2007, 2008), but here I suggest that the repertoire at hand indicate a limited scope of motifs that share cosmological and religious significance. Furthermore, these observations point to the mythological underpinnings of daily activities such

Fig. 1. The private collection of central Mexican archaeological objects, mainly Aztec spindle whorls, Classic period figurine heads from Teotihuacan, and a few pieces of obsidian from New Zealand (photo: Jesper Nielsen).

as spinning and weaving which on the surface, and from a modern, Western standpoint, may at first glance seem rather mundane.

Little is known about the exact provenience of the whorls which came into my possession in 2011. I received them as a gift from Professor emerita in History of Religions Tove Tybjerg, who had in turn recieved them from another colleague (Merethe Sundby-Sørensen) some 20 years earlier. Apparently they had first been presented to Arild Hvidtfeldt (1915-1999), one of the founders of the Department of American Indian Languages and Cultures at the University of Copenhagen (see Nielsen & Fritz Hansen 2008: 35-37), by an unknown Dane who had spent time in central Mexico. The whorls came in a long, shallow box for Christmas decoration, nested in old, cotton wool (Fig. 1). A few Teotihuacan figurine heads and pieces of obsidian were present as well. A hand-written note explains that the obsidian pieces derive not from Mexico, but from New Zealand. The figurine heads have holes drilled into them, presumably because a previous owner had them put on a string along with the whorls. Remnants of gipsum or a kind of glue or their back of the whorls also suggest, that for a time they were mounted on a board. In spite of the rather rough treatment, and in spite of the fact that we can not say precisely where the whorls come from as any contextual data is missing, there can be little doubt that they derive from 15th -16th century central Mexican highlands, and more specifically, in all likelihood the Valley of Mexico. The distinct Aztec iconography and the quality of the imagery leave little doubt about this.

Fig. 2. *a)* Aztec woman spinning cotton (*Codex Mendoza*, fol. 68r) and *b)* Illustration from Bernardino de Sahagún's *Códice Florentino* (Book 8, fol. 31v) depicting various tools used in spinning and weaving, including *malacatl* 'spindle and whorl'.

Spinning and Weaving in Aztec Culture

Even though we are fortunate enough to have examples of Aztec textiles preserved (see Filloy, this volume; López Luján, this volume), the archaeological evidence of textile production not only from the Postclassic Aztec, but from pre-Columbian Mesoamerica in general, is best documented by the ceramic spindle whorls and ceramic spinning bowls that, in contrast to the textiles themselves, the weave and other implements, have survived the centuries since the conquest. It is well-known that spinning, weaving and textile production played an enormous socio-economic role in Late Postclassic central Mexico, and several researchers have discussed this in detail drawing extensively on early Colonial sources (e.g., Smith and Hirth 1988; McCafferty and McCafferty 1991; Brumfiel 2001: 66-67), stressing women's role in maintaining a constant production and exchange of cotton and textiles. Significantly, textiles were of central importance in the tribute system, in particular finely woven capes or *mantas* (see Berdan and Anawalt 1992), and as noted by Frances Berdan: "Textiles predominated in the tribute lists, being paid in great quantities" (Berdan 1996: 124-125). Similarly, early Colonial sources like the *Codex Mendoza* (Fig. 2a) relate how closely the act of spinning and weaving was associated with women, showing how, at their naming-ceremony, infant girls were presented with weaving implements including a spinning whorl, a spinning bowl and the batten (Brumfiel 2008). In his magnificent *Historia General de Nueva España* (known as the *Florentine Codex*) the Franciscan friar Bernardino de Sahagún quoted an Aztec advice directed towards the young women: "[a]pply thyself well to the really womanly task, the spindle whorl, the weaving stick" (Dibble and Anderson 1969: 96) (Fig. 2b). Spinning and weaving continued to be a prime female activity after the conquest, including among the nobility. Thus, a painting the *Anales de Tepeaca* (c. 1645) shows Nahua women (Fig. 3), standing next to their husbands, who are dressed European-style, busy with their spindles and whorls (Horcasitas and Bittmann Simons 1974: Fig. XXVIII).

The Nawatl term for the spindle and the whorl was *malacatl,* a word composed of the verb *malina* 'to twist' and the noun *acatl* 'cane or reed' (Smith and Hirth 1988: 349; see also Molina 2008 [1571]: 51v). It is interesting to note that the act of twisting and turning of an object by hand to produce something valuable, be it cotton or fire, is also characteristic of the drilling of a New Fire, a highly ritualized event celebrated every 52 years, securing the birth of new sun and a new world era (e.g., Anderson & Dibble 1953; Smith & Elson 2001). As we shall see, several spindles whorls have sun imagery on them, perhaps relating the two activities and cosmological responsibility divided between the sexes. In

Fig. 3. Nahua couples as represented in *Anales de Tepeaca* (c. 1645, fol. 22r) with women clad in native *huipiles* and skirts busy spinning cotton, their men dressed in fashionable European clothes (after Horcasitas and Bittmann Simons 1974).

the realm of the gods and supernatural beings, the goddess Tlazolteotl-Ixcuina ('Lady Cotton') was often shown with spindles, whorls and unspun cotton adorning her hair or incorporated into her headdress (Figs. 4a-b), and Thelma Sullivan described her as "the model noblewoman, the Great Spinner and Weaver of the Fabric of Life" (Sullivan 1982: 14). Sullivan also discussed the sexual symbolism of spinning and weaving, an aspect shared with another goddess, Xochiquetzal ('Flower-Feather'), who was associated with love and lust, but at the same time served as the patroness of weavers. These latter observations show quite clearly that spinning and weaving was regarded and represented as an activity permeated by religious meanings.

Aztec Spindle Whorls and Their Iconography

Spindle whorls is a relatively common artefact in Aztec archaeological excavations (Brumfiel 2001), and can be grouped into two categories: large ones for spinning agave fiber and smaller ones (typically measuring between 23-31

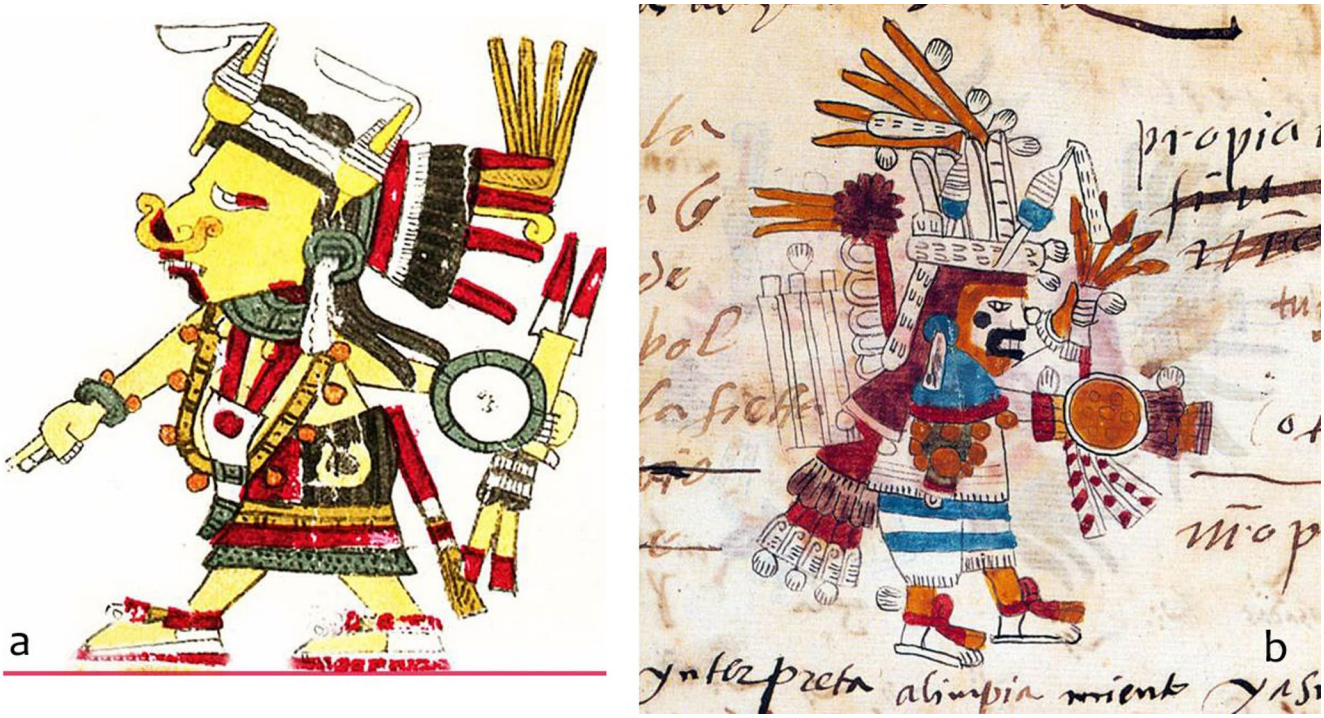


Fig. 4. The female deity Tlazolteotl-Ixcuina with spindles, whorls and cotton in her headdress. *a) Codex Borgia*, p. 55 and *b) Codex Telleriano-Remensis*, fol. 3r.

mm in diameter) for spinning cotton (Parsons 1972; Smith 2016: 41). The execution and elaboration of the whorls vary considerably; some are plain while others have molded decorations. The diameter of the whorls in the Copenhagen collection range from a minimum of 25 mm to a maximum of 35 mm, and with an average diameter of 29,5 mm, indicate a fine, tightly spun cotton thread and hence a higher-quality cloth as the final product (Brumfiel 2001: 70). With their very elaborate iconographic motifs, they are most probably elite objects. As observed by Elizabeth Brumfiel (2001: 71):

> ”The decorative attributes of spindle whorls may indicate the attachment of women to their identities as cloth producers. In many regions of the world, the decorated artifacts serve as sources of gender identity and gender claims to power [...] Sharisse and Geoffrey McCafferty suggest that spindle whorl in Postclassic Central Mexico bore elaborately painted, molded, or incised decorations because they were an important means of communicating female identity and power”.

Brumfiel notes that in the sample of 96 whorls from her excavations at the Aztec site of Xaltocan (in the northern end of the Valley of Mexico), in more than half of the cases, the surface of the whorl is: ”divided into four or eight parts which might refer to cardinal and intercardinal directions” (Brumfiel 2008: 37) suggesting a cosmological symbolism, as well as an association with the movement of the sun. Other motifs from Xaltocan include flowers, vultures, frogs, a crocodile (the so-called *cipactli*-monster) and a feathered serpent. Brumfiel grouped the majority of the motifs into four thematic clusters which are related to: 1) solar energy, 2) spatial and temporal ordering of the cosmos, 3) the creation of that order and 4) cyclical movement (Brumfiel 2008: 37). Based on this she goes on to suggest that the Aztec concept of *tonalli*, referring to ’heat or an creative energy’, was intimately linked with the spinning process, and cites examples that suggests that this also count for other kinds of craft production. Brumfiel further notes: ”Huichol women offer sacrifices to the sun in order to acquire the force that allows them to produce high-quality textile” (Brumfiel 2008: 40). The semantic overlap between the sun’s diurnal cycle and the act of spinning may thus be approached and understood through phenomena and concepts like: Warmth, movement, energy and creation.

Iconographic Motifs in the Copenhagen Collection

The whorls with clearly identifiable motifs in the Copenhagen collection (Fig. 5) can be placed in three main groups. The first of these are the sun disks, which Brumfiel also discussed (Brumfiel 2008, 2007), and two of the whorls are embellished with the rays of the sun, confirming the presence of this striking motif on whorls (Fig. 6a-b).

The second group show birds, three eagles (Fig.7a-c), two of which were quite possibly made from the same

Fig. 5. A selection of the whorls in the Copenhagen collection (photo: Christophe Helmke).

mold, and what appears to be a hummingbird (Fig. 7d). The numbers "2" and "1" can be discerned with the eagles, and could well refer to dates in the ritual 260-day calendar, the *tonalpohualli* (Boone 2007: 15-17) (Fig. 8a-b). The 15th day in the sequence of twenty days signs is thus named *quauhtli* 'eagle'. Common to both eagles and hummingbirds are their relation to the sun: the eagle as one of the mythological creatures intimately linked to the creation of the sun as well as its continued existence, e.g., by way of the eagle warriors and the *cuauhxicalli* ('eagle-vessel') associated with human heart sacrifices and eagle warriors (see Taube 2009); and the hummingbird as a reference to the nectar-sucking birds into which dead warriors were transformed when joining the Sun God in his heavenly realm (e.g., Nielsen 2017).

Fig. 6. The two whorls with the sun disk motif (photo: Christophe Helmke).

Fig. 7. Whorls with eagles (a-c) and hummingbird (d)(photo: Christophe Helmke).

Fig. 8. Whorl with eagle and the numeral '1' on the right side of the raptor's head)(photo: Christophe Helmke, drawing: Jesper Nielsen).

One of the whorls, although badly worn, display the heads of a crocodilian-like creature known as *cipactli* which corresponds to the first day in the 260-day calendar, and as such it is as related to the beginning of time, cycles and ordered life. Finally, a group of whorls are decorated with cloud- and wave-like scrolls, and others with concentric circles known as *chalchihuites*, that is, the jade disks which in Aztec iconography connote preciousness and abundance (Fig. 9). Together, these motifs may symbolize either the misty, watery and heavenly or, primordial, female environment that, along with the male Sun, made the first creation possible, or they may, in a more general

Fig. 9. Whorls with cloud-like motifs and *chalchihuites* (photo: Christophe Helmke).

ways refer to fertility, abundance, productivity and success in creative labours.

There is a significant correspondance between the motifs in the Copenhagen collection and those described and analyzed by Brumfiel. Yet, if we are to achieve a better understanding of the significance and distribution of the whorl motifs, a larger, encompassing corpus will have to be assembled. A first and important step in such an endeavour will have to be to have additional whorls from excavations and museum collections published or accessible online.

The World on a Whorl: Conclusions

What may come as a surprise, is that some of the recurring motifs on these apparently somewhat humble domestic artefacts are in fact identical to the iconographic themes on the most impressive state-level monumental pieces of art known from Tenochtitlan, the capital city of the Mexica. Thus, eagles and eagle-warriors are frequently represented in reliefs or in sculptures, and the sun disk reappears in spectacular ways on the famous Calendar Stone and the Tizoc Stone (e.g., Townsend 1979: 43-70; Villela and Miller 2010) (Fig. 10a-b).

However, the similarities between these enormous public sculptures and the diminutive spinning whorls go beyond the sun imagery they display. The impressive circular stones, often with a hole or depression in their center, were in all likelihood used in human sacrifices, which were performed partly to secure the continuous maintenance of the cosmos and the sun's cycle. As Cecelia Klein observed: "When the Aztecs wished to sacrifice a captive during their equinocial

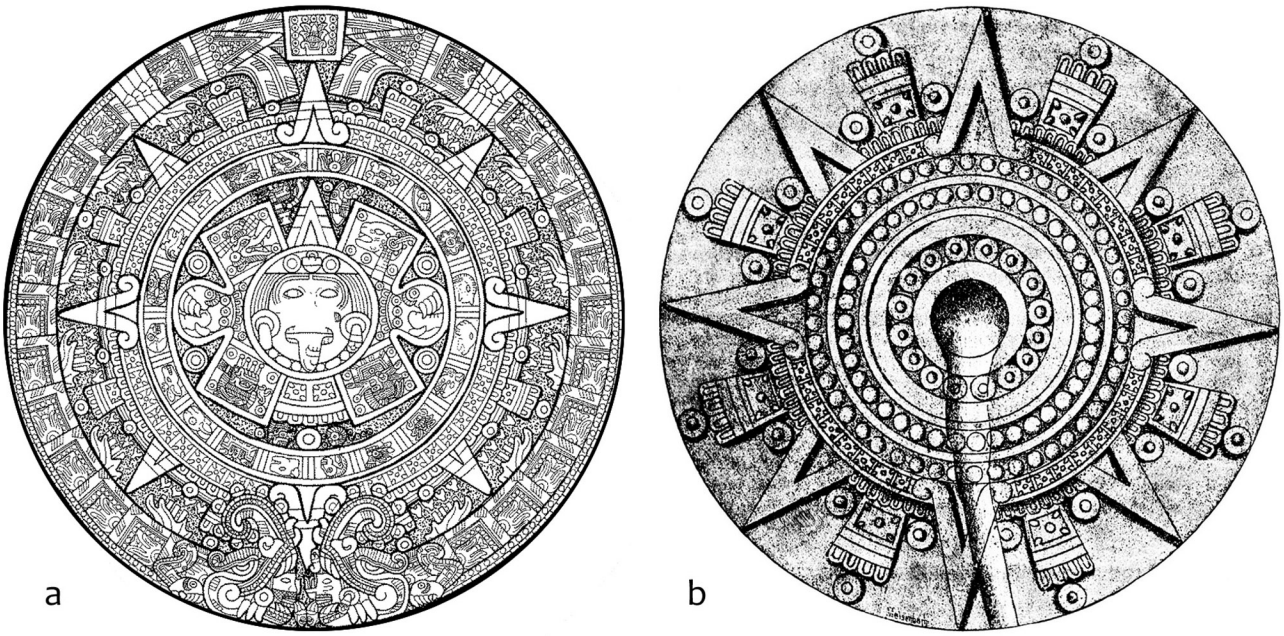


Fig. 10. Monumental sun disks, known as *temalacatl*: a) the Calendar Stone and b) the Tizoc Stone (adapted from Villela and Miller 2010: 239; MacCurdy 1910).

month Tlacaxipehualiztli, they tied him to a rope emanating from a flat, round stone called *temalacatl*, or "stone spindle" (Klein 1982: 17). An image from the *Codex Magliabechiano* (fol. 30r) shows a fully armed jaguar-warrior approaching a captive tied to the *temalacatl*, and interestingly the sacrificial victim is covered in cotton balls and his sword, or *macuahuitl* has no obsidian blades like that of his opponent – but only cotton (Nuttall 1983 [1903]: 18) (Fig. 11). Clearly, there seems to be a semantic overlap or metaphorical relationship between the act of spinning and sacrificing. In other words, the sacrificial sun-stones can be interpreted and compared to a giant spindle whorl, being instrumental in the efforts of securing heat, movement and energy to the cosmos.

When viewed in this perspective, Aztec women's daily, continuous occupation with spinning and weaving was not separate from the male warrior's cosmological responsibilities in terms of maintaining the surrounding society. Indeed, they shared some of the same fundamental concepts and expressions and dealt with similar concerns (Brumfiel 2008: 40), thus linking, or complementing, the act of spinning and weaving (alongside the metaphoric battle of pregnancy and childbirth) with the obligations of the men and their primary role as warriors (see also discussion in Clendinnen 1991: 153-173). Spinning, in a very literal sense, was also about making the world go around: Women spun and wove the cosmos, thereby continuously recreated the

Fig.11. Aztec jaguar-warrior and sacrificial victim tied to a *temalacatl* (*Codex Magliabechiano*, (fol. 30r).

world (Klein 1982; Sullivan 1982: 30), just as blood and heart sacrifices did.

We see this succinctly expressed by the artist who painted and wrote the *Codex Cospi*, where on page 25 we see Xochiquetzal (Fig. 12), the luscious patroness of weavers, and although she is seated according to the normal conventions, she is portrayed in a warrior's position, holding a shield in the arm, and the other raised as if to hurl off a dart with an atlatl – but – replacing the weapons are her weaving implements.

Fig. 12. Xochiquetzal shown as spinner, weaver and female warrior (*Codex Cospi*, p. 25).

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Mexica Textiles: Archaeological Remains from the Sacred Precincts of Tenochtitlan and Tlatelolco[1]

Leonardo López Luján[2] and Salvador Guilliem Arroyo[3]

Abstract

In contrast with the rich written and iconographical data from the fifteenth and sixteenth centuries concerning Mexica textiles, discoveries of such materials in archaeological contexts in Mexico City are quite rare. This paucity is reflected in our archaeological collections, in spite of the fact that the imperial Mexica capital received in tribute and trade copious amounts of unprocessed cotton, thread, cord, fabric, and clothing, and that the sister cities, Tenochtitlan and Tlatelolco, were bustling centers of textile production. The few Mexica examples extant today are in poor condition and have survived thanks to being carbonized during rituals prior to their burial and then interred in flood-prone environments with copper artifacts which inhibited the proliferation of microorganisms.

This paper will examine the most important textile discoveries made in the Instituto Nacional de Antropología e Historia's Templo Mayor and Tlatelolco Projects. After describing the procedures for archaeological recovery and subsequent conservation treatments, we will analyze the technology of these objects as well as their functions and meanings in the ritual contexts in which they were buried. Special emphasis will focus on the remains of elite garments woven with fine cotton thread adorned with gold brocade and pendants.

Keywords: Mesoamerica, Basin of Mexico, Mexica empire, Tenochtitlan, Tlatelolco, offerings, charred textiles, cotton

Textiles mexicas: Vestigios arqueológicos de los recintos sagrados de Tenochtitlan y Tlatelolco

Resumen

En contraste con la rica información escrita e iconográfica de los siglos XV y XVI referente a los textiles de la civilización mexica, el hallazgo de este tipo de materiales en contextos arqueológicos de la Ciudad de México es un acontecimiento poco frecuente. Esto se refleja en la pobreza de nuestras colecciones arqueológicas, a pesar de que la capital del imperio mexica recibía por vías tributarias y comerciales volúmenes gigantescos de algodón sin procesar, hilos, cordeles, telas y prendas de vestir, y de que las ciudades hermanas de Tenochtitlan y Tlatelolco eran activos centros de producción de tejidos. Los raros textiles mexicas que se conocen en la actualidad se encuentran en pésimo estado de conservación. Lograron llegar hasta nuestros días gracias a que fueron carbonizados durante el ritual previo a su enterramiento, amén de quedar sepultados en un ambiente anegado y con artefactos de cobre que inhibieron la proliferación de microorganismos.

En esta ponencia examinaremos los descubrimientos más importantes de textiles realizados por el Proyecto Templo Mayor y el Proyecto Tlatelolco del Instituto Nacional de Antropología e Historia. Describiremos los procedimientos seguidos para su recuperación arqueológica y los tratamientos posteriores de conservación. Haremos igualmente un estudio de la tecnología, así como de las funciones y significados de estos objetos en el contexto ritual en que fueron sepultados. Pondremos especial énfasis en los restos de vestimentas nobiliarias tejidas con finos hilos de algodón y decoradas con brocados y pendientes de lámina de oro.

Palabras clave: Mesoamérica, Cuenca de México, imperio mexica, Tenochtitlan, Tlatelolco, ofrendas, textiles carbonizados, algodón

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2. Director of the Proyecto Templo Mayor, Instituto Nacional de Antropología e Historia, Mexico City.

3. Director of the Proyecto Tlatelolco, Instituto Nacional de Antropología e Historia, Mexico City.

Introduction

In October 2015, the senior author of this paper attended a conference on archaeometry organised by the Museo del Oro in Bogotá, Colombia. The topic of this presentation was Mexica goldworking, specifically the gold artefacts that we have uncovered in the ruins of the Templo Mayor of Tenochtitlan. I felt embarrassed when I had to admit in this spectacular museum, where every floor, every hall, every display case is replete with exquisite pieces made of the yellow metal, that in thirty-eight years of excavations we were only able to find half a kilogram of the stuff and that all of the Mexica gold objects—as scarce as they are modest—fit in both of my hands (see López Luján and Ruvalcaba 2015).

In my defence, I said then that metallurgy and goldworking were introduced to Mesoamerica from South America around 800 CE, and that Andean civilisations had begun to develop these technologies two thousand years earlier. I also mentioned that Mexico was a country that is very poor in superficial sources of pure gold, reflected in the existence of only one display case devoted to the metal in the Mexica Hall at the National Museum of Anthropology and two more cases in the Museo de Templo Mayor, unlike the vast holdings of museums in Bogotá, Quito, Lima, and La Paz.

Today, I come before you, again, with that same embarrassed feeling. As you can tell from the programme of this *2016 International Conference on Pre-Columbian Textiles*, the archaeologist Salvador Guilliem and I are going to present a research on Mexica textiles discovered in the sacred precincts of Tlatelolco and Tenochtitlan (Figure 1). In this contribution, you will be surprised by the ostensible poverty of our archaeological collections, especially in comparison with the spectacular Peruvian textiles that have been analysed here during the first three days of the conference. We must clarify, however, that, unlike Mexica gold, the scarcity and modesty of our textiles is not explained by a relatively late development of spinning and weaving technology in Mesoamerica or because the cultivation of plants such as agave and cotton was only practiced in a few regions (see Anawalt 1981; Stresser-Péan 2012). On the contrary, the archaeological evidence of these practices goes back to at least 1500 BCE and extends throughout this cultural area (Anawalt 2000: 205-207, 213). Rather, the dearth of textiles made by the Mexica and other Mesoamerican peoples in our collections is strictly due to conservation issues (Mastache 1968: 7-8; Anawalt 1981: 3-5; 2000: 205, 214; Sayer 1985: 15-69; Filloy Nadal in this volume). As other colleagues of mine in this session will explain, environments that favour textile preservation, such as deserts, dry caves, and permafrost, are relatively rare in Mesoamerica.

Mexica Charred Textiles

By charred textiles, we are referring to two sets of textiles that have managed to survive from the fifteenth century to the present because of a process known as *carbonisation*, in these cases resulting from specific ritual activity. Carbonisation is defined as the reduction of an organic substance into carbon by means of pyrolysis, that is, a thermochemical decomposition at elevated temperatures in the absence of oxygen (Miksicek 1987: 219-221; Sease 1987: 63-64; Wild 1988: 7-12; Mirambell and Sánchez 1986: 81-82; Jones *et al.* 2007: 9, 15). This process is observed, for example, when the combustion (or burning) of an organic material is suddenly interrupted when buried, immersed in water, or placed in an airtight container, thus preventing its full conversion into ash. Sometimes the materials that survive have lain in the edge of a pyre, or been protected by some other solid object.

In textiles, the carbonised fibres lose the water they originally contained and contract. Consequently, the intercellular spaces become closed, their density decreases, and their biochemical resistance increases as the organic products that feed the many microorganisms present in the environment disappear. Charred textiles also become insoluble and inert to chemical reactions in normal acidic or alkaline conditions.

As for the textiles found in Tlatelolco and Tenochtitlan that will be discussed in a moment, they not only were buried quickly when they were burned, but they were also put into a matrix of compact fine clay, with little free oxygen dissolved in water, a relative humidity greater than 70 per cent, total darkness, neutral pH, a constant temperature of around 10 degrees Celsius, and numerous copper artefacts whose corrosion acted as a sterilizing agent because of its fungicidal and bactericidal properties (Vázquez del Mercado 2000: 79).

Another crucial factor in the survival of these textiles was the work of the experienced conservators on our excavation team. We have to remember that charred fabrics use to be black, slag-like, brittle, and hard; its fragments are often very small and confusingly like charcoal. Thus, conservators' timely intervention prevented the sudden removal of the textiles from the burial matrix and their subsequent deterioration from exposure to new conditions of humidity, temperature, and light. The textiles were washed in a distilled water and neutral soap solution, softened with glycerine in alcohol, and, finally, after drying, were consolidated in a mixture of methocel and propylene glycol (Vázquez del Mercado 2000: 80-83, 110; García Lascuráin 2012).

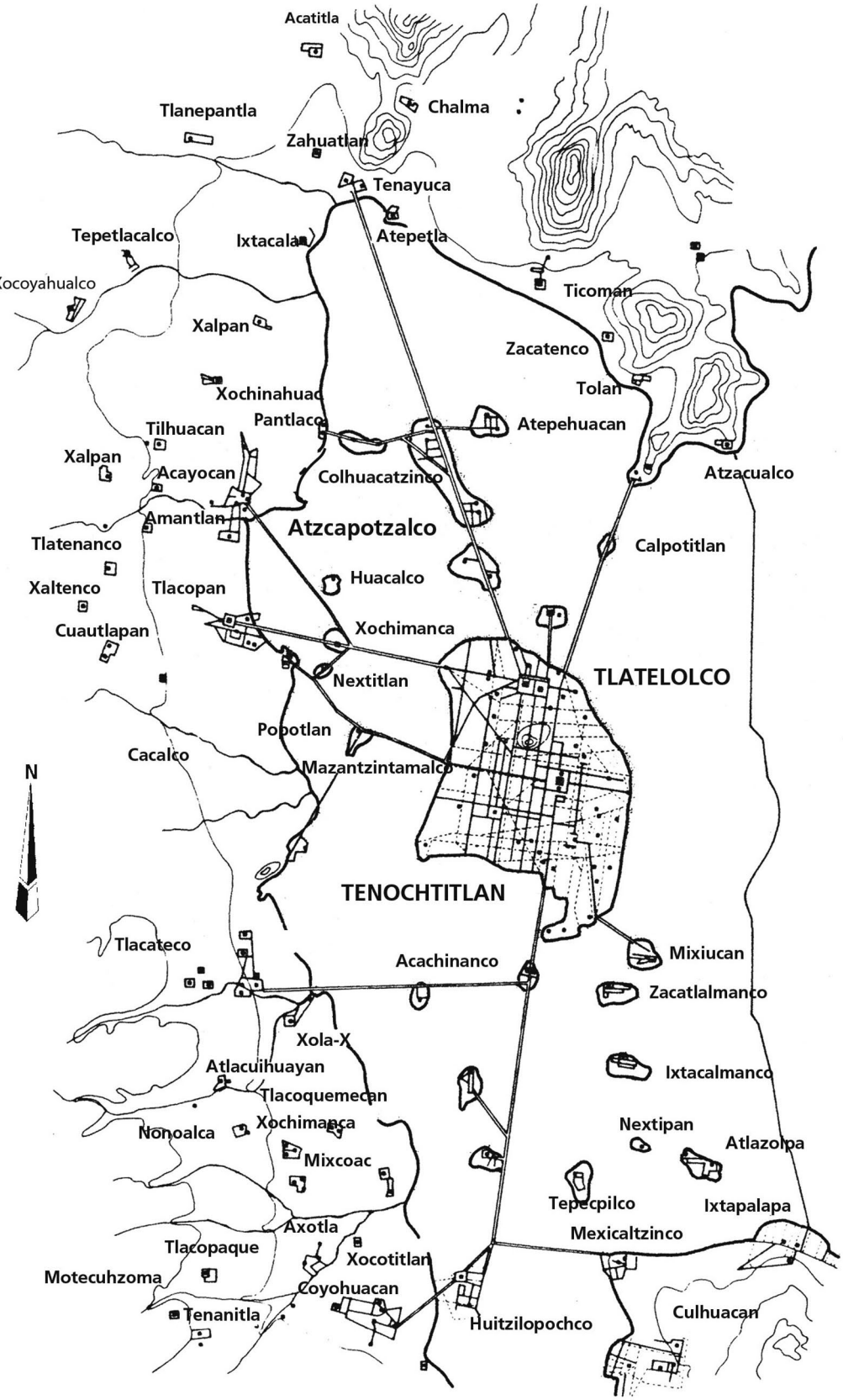

Figure 1. The Tenochtitlan-Tlatelolco island in Lake Texcoco, Basin of Mexico. Drawing Fernando Carrizosa, courtesy Proyecto Templo Mayor.

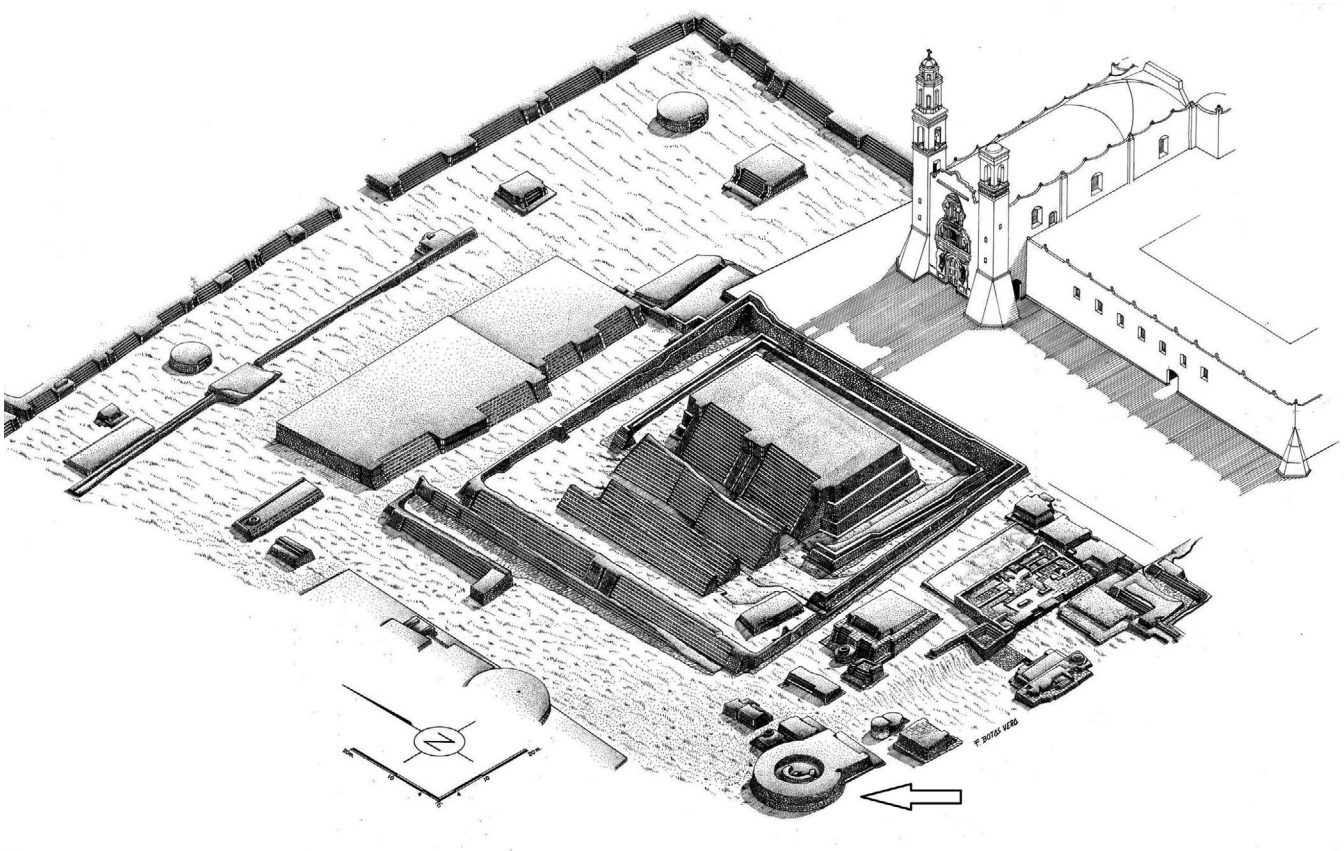

Figure 2. Sacred precinct of Tlatelolco, Tlatelolco Archaeological Zone, Mexico City. Location of Temple R. Drawing by Fernando Botas and Salvador Guilliem Arroyo, courtesy Proyecto Tlatelolco.

The Sacrificed Girl at Tlatelolco

Our analysis of Mexica textiles and their archaeological contexts takes us first to the Tlatelolco Archaeological Zone, north of the centre of modern-day Mexico City (Figure 2). On the southwest corner of this spacious area open to sightseers is a round temple, today known as Temple R (Guilliem 1989: 79-96). In pre-Hispanic times this temple was dedicated to the cult of Ehecatl, an aspect of the god Quetzalcoatl, or Feathered Serpent, associated with the breath of living beings and the winds that bring clouds bearing rain to the agricultural fields (Figure 3). Between 1987 and 1989, archaeologist Salvador Guilliem explored the eastern facade of this temple in search of offerings. In a long, 3- by 12-metre trench he excavated at the foot of the platform, below the level of the plaza floor, he found a total of 41 sacrificed individuals, including 30 children (Guilliem 1999: 97-142; 2008: 13-14; Román and Chávez 2006). Apparently, this ritual deposit is the result of a ceremony that took place around 1454, when a terrible four-year drought affected the inhabitants of the Basin of Mexico. According to various historical sources, the situation was so desperate that the Mexica tried to appease the fury of the rain gods by making numerous offerings and sacrificing many children (Guilliem 1999: 207-226; 2008: 29-31).

In the sacred precinct of Tlatelolco, archaeologists found many of the sacrificed children inside large round ceramic pots, while others lay next to the remains of youths and adults at the bottom of the ritual deposit. All of the children were accompanied by many kinds of offerings totalling 2,058 objects. Prominent among them were seashells, copper bells, obsidian blades, blue pigment, and animal bones, as well as ceramic vessels and figurines.

Near the southern end of the trench next to the Temple of Ehecatl platform, an assemblage called Offering 5 was found which is especially relevant to the topic at hand (Figure 4). It was composed of three sacrificial victims, all infants (Guilliem 1999: 112-114; 2008: 18-21). Burial 11 was a boy found in foetal position inside a round pot covered with an *apaxtle*, or earthenware basin. Burial 22 also contained a boy in a round pot, but much smaller, which had been cremated *in situ*. Burial 12, on the other hand, had a three-year-old girl. Her decapitated body had been placed in a seated position at the bottom of the deposit with tucked feet and arms crossed and resting on her knees. On her neck was a string of black beads and a long plate. Above this was the girl's

Figure 3. Basalt image of the wind god Ehecatl found at the foot of Temple R. Photograph by Salvador Guilliem Arroyo, courtesy Proyecto Tlatelolco.

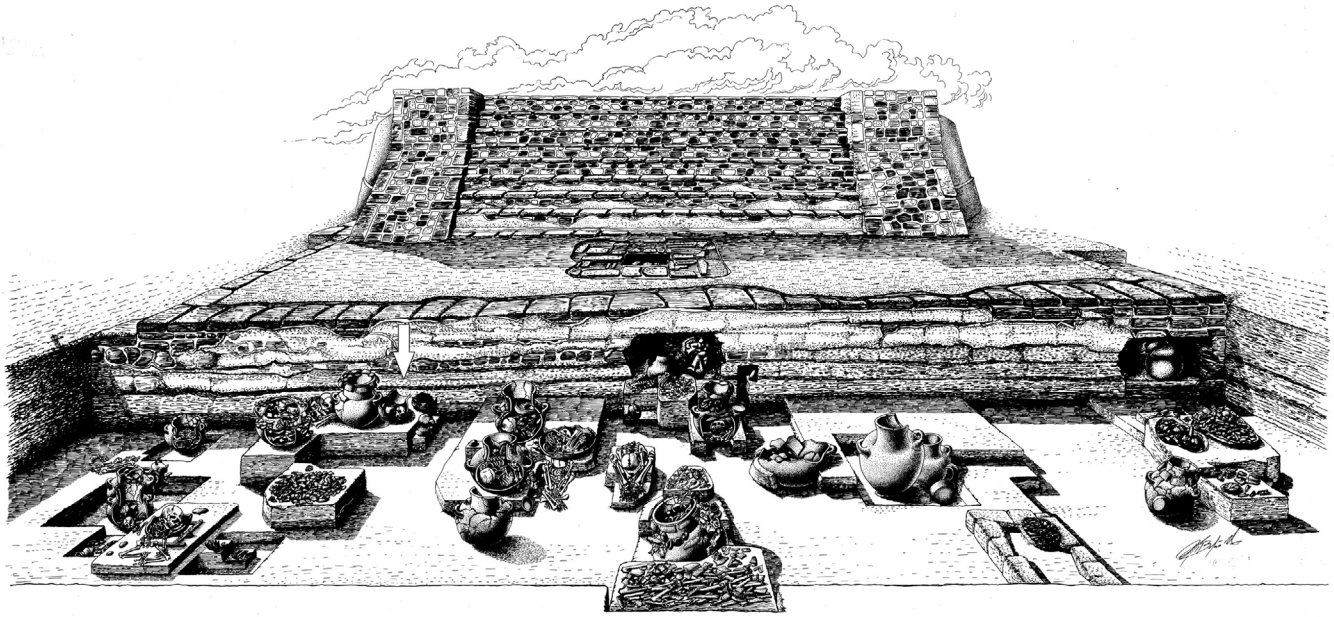

Figure 4. Archaeological trench excavated in front of Temple R, location of Offering 5. Drawing by Fernando Botas and Salvador Guilliem Arroyo, courtesy Proyecto Tlatelolco.

Figure 5. Offering 5, excavation process of the basket. Photograph by Salvador Guilliem Arroyo, courtesy Proyecto Tlatelolco.

severed head covered by a tripod bowl and then a basket filled with charred textiles topped by an inverted *apaxtle*.

In the process of recovering the offerings, the basket was extracted in a single block and taken to the lab to conduct a careful microexcavation and a detailed three-dimensional inventory (Figure 5). The basket measured 18 centimetres high and approximately 20 centimetres in diameter (Guilliem 2008: 21-27). Although the wicker had completely degraded, it clearly had been woven in a diagonal pattern. The basket contained several figurines that had been intentionally broken, including an image of Quetzalcoatl, another of a female deity, a dog, and an opossum with a baby on her back (Figures 6-8). There was also a small serpent carved out of antler, a seashell, king vulture bones, tubers, maize kernels, and chilli, tomatillo, amaranth, and chia seeds.

Particularly interesting were two sets of spinning and weaving implements found inside the basket. The first set had five small *malacates*, or lightweight ceramic whorls, including one that still had the remains of its wooden spindle; a tiny spinning bowl depicting the god Ehecatl's wind jewel (Figure 9); and the remains of a gourd vessel that contained the clay used to smooth the fingers while spinning. The second set had a bone needle, a maguey spine, three prismatic obsidian blades, part of a bone *machete* or large batten, and the remains of sticks from a backstrap loom.

The Textiles at Tlatelolco

These spinning and weaving implements were wrapped together with 42 charred textile fragments of six different categories (García Lascuráin 2012):[4]

1) Four fragments of a taffeta or balanced plain weave fabric with brocades or weft-float patterning in the form of small bands, which seem to be the remains of a *quechquemitl*, or shoulder shawl or neck cape (Figure 10).
2) Four fragments of a basket weave fabric (two weft yarns that cross one warp yarn), including two with kilim-type openings for the neck, which are possibly the remains of a small *huipilli*, or blouse.
3) Eight fragments of a basket weave and twill fabric that forms a rhombic design.
4) A long piece of fabric with a simple taffeta or balanced plain weave, measuring 33 by 160 centimetres, which may have been a *cueitl*, or long skirt or petticoat.

4. Other Tlatelolcan charred textiles have been discovered in the past (see Weitlaner Johnson 1956; Mastache 1968: 8; Gonzalez Quintero 1988; Guilliem 2008: 14-17).

Figure 6. Ceramic figurine representing creation god Quetzalcoatl ("Feathered Serpent"). Photograph by Salvador Guilliem Arroyo, courtesy Proyecto Tlatelolco.

Figure 7. Ceramic figurine representing a female deity. Photograph by Salvador Guilliem Arroyo, courtesy Proyecto Tlatelolco.

Figure 8. Ceramic figurine representing an oposum with a baby on her back. Photograph by Salvador Guilliem Arroyo, courtesy Proyecto Tlatelolco.

5) Four fragments of twill fabric associated with a cord, which probably was a small satchel.
6) Various cord fragments.

In relation to the basket and its charred contents, we should remember that the lives of women in Mexica times essentially revolved around textile production. Thus, the Franciscan friar Bernardino Sahagún's native informants mention that newborn girls in their presentation ceremony were given the *par excellence* female toolkit, including "The spinning whorl, the batten, the reed basket, the spinning bowl, the skeins, the shuttle, her little skirt, her little blouse" (Sahagún 1989: 670). And, when women died, this same set of instruments was burned in the funerary pyre so that the deceased could continue to use them in the afterlife. In light of this, we can certainly understand why a basket of burnt fabric was placed on the sacrificed girl at Tlatelolco's Temple of the Wind God.

Figure 9. Ceramic spinning bowl depicting the god Ehecatl's wind jewel. Photograph by Salvador Guilliem Arroyo, courtesy Proyecto Tlatelolco.

The Cremated Dignitary at Tenochtitlan

Now we must leave Tlatelolco and go 2 kilometres southeast to the Archaeological Zone of the Templo Mayor, in the heart of the ancient island city of Tenochtitlan (Figure 11). Here a team directed by Leonardo López Luján recovered another collection of charred textiles, although in this case the context was not the sacrifice of infants, but rather the interment of an adult. This burial was discovered during explorations of the building known as the Casa de las Águilas, or House of Eagles (López Luján and Mercado 1996; López Luján 2006). This unique architectural complex is distinguished by its prime location just 15 meters north of the Templo Mayor and by its rich decoration in the "Neo-Toltec" style. In the last two field seasons, we exhumed from its interior various ceramic sculptures that represented semi-defleshed beings and personages dressed in eagle outfits, as well as mural paintings in the pre-Hispanic codex style, benches with polychrome relieves, and sumptuous offerings.

This burial was found on the exterior of the third construction phase of the House of Eagles, an enlargement that dates to the last two decades of the fifteenth century, that is, the reign of Ahuitzotl (Román and López Luján 1999; López Luján 2006, 1: 244-251). The inhumation ceremony was conducted at the foot of the stairway that accessed the east wing of the building where the Mexica had dug three small cylindrical cavities about 50 centimetres in diameter (Figure 12). Each of them served to house a ceramic funerary urn, as well as part of the mortal remains of one individual and a rich offering.

This three-part ritual deposit contained the cremated skeletal remains of a man, a dog, a jaguar, a golden eagle, and a hawk. There also were other objects made of ceramic, obsidian, flint, basalt, greenstone, turquoise, gold, copper, bronze, pyrite, bone, seashell, copal, cotton, and palm. This assemblage totalled 101 complete pieces and 350 fragments.

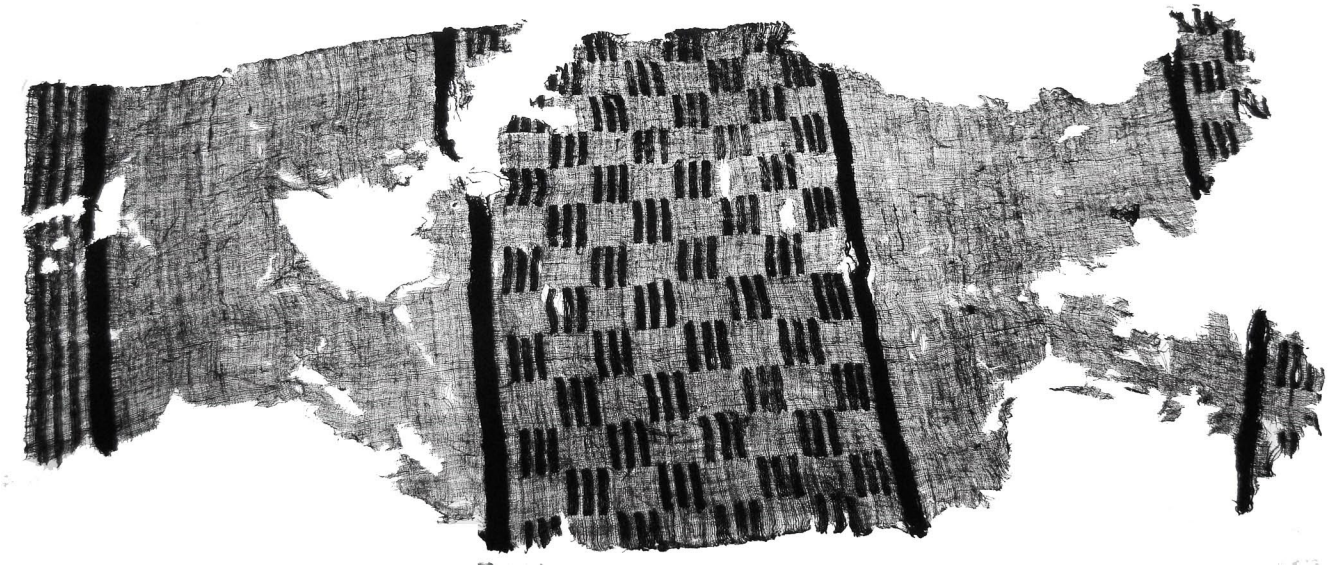

Figure 10. A *quechquemitl* or shoulder shawl (balanced plain weave). Photograph by Salvador Guilliem Arroyo, courtesy Proyecto Templo Mayor.

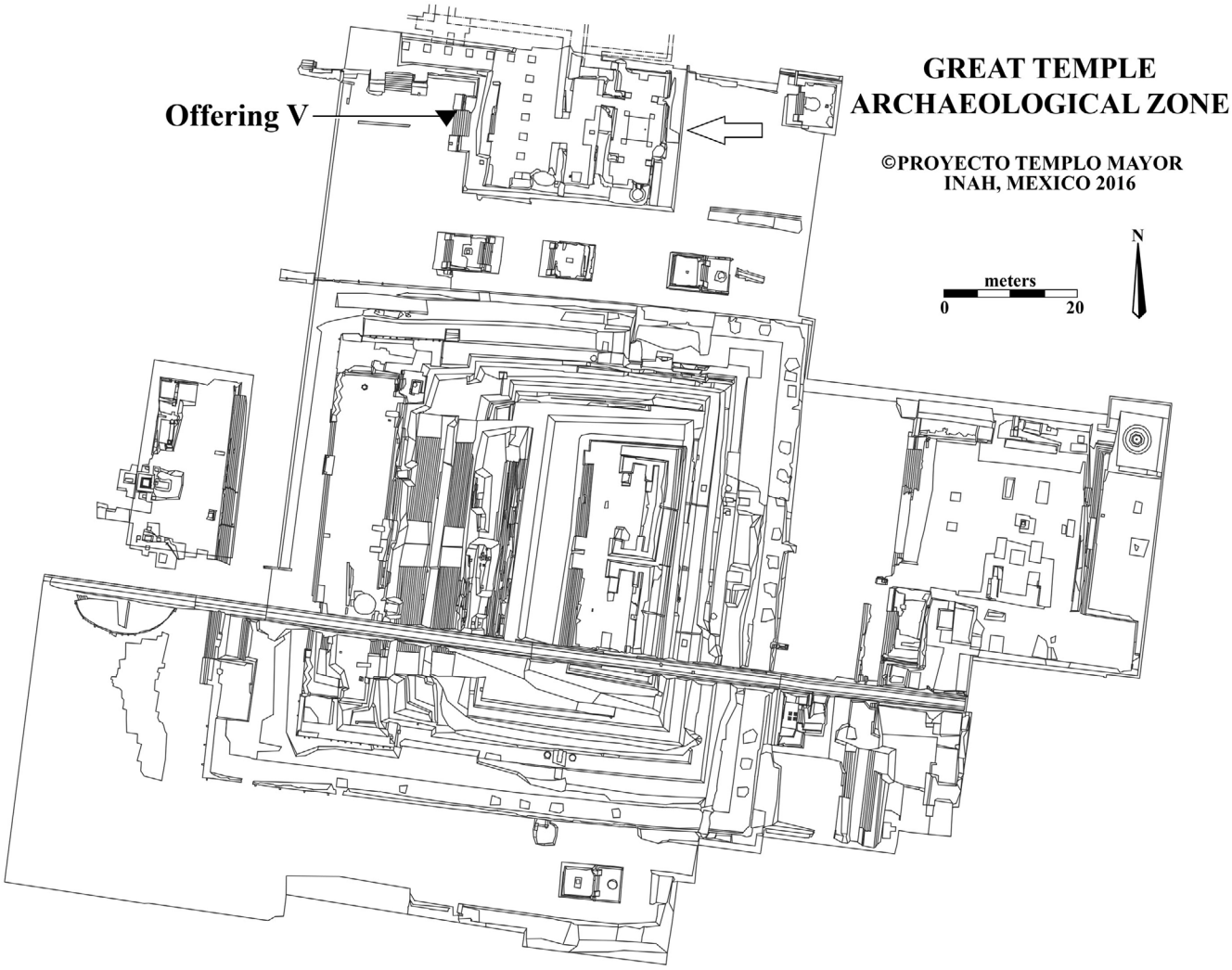

Figure 11. Sacred precinct of Tenochtitlan, Great Temple Archaeological Zone, Mexico City. Location of the House of Eagles. Drawing by Michelle De Anda Rogel, courtesy Proyecto Templo Mayor.

Without a doubt, the most impressive objects were three beautiful ceramic vessels—each from very different periods—which the Mexica used as funerary urns (López Luján et al. 2000; López Luján 2006, 1: 132-140). The oldest of the three is a vase that dates back to the Late Classic and whose exterior surface depicts the famous butterfly-personage in Teotihuacan iconography. The next oldest is an effigy pot depicting the head of an old man produced in the Basin of Mexico during the Early Postclassic. The third is a polychrome bottle from the Late Postclassic that has an elaborate decoration of precious beads, flowers, hearts, and step-fret motifs.

Although the bones had been purposely broken and burned for many hours, we were able to determine that they all belonged to the same adult male. They were mixed together with a rich mortuary array containing some greenstone and obsidian beads, miniature obsidian and flint projectile points, obsidian and basalt sceptres shaped like maces, and palm cord. Equally significant were the many fragments of charred cotton textiles, gold laminate pendants possibly sewn on the fabrics, copper pins, and turquoise mosaics.

Following Mexica tradition, the mortuary bundle of this individual underwent an initial burning to remove his body's soft tissues. After this cremation, the fresh bones and the partially burnt offerings were fractured with a stone axe and twisted by hand. This made the second burning more effective, which took place five days later according to historical sources, and reached an estimated temperature of 950 degrees Celsius (Román and López Luján 1999: 38-39; López Luján 2006, 1: 246).

In a subsequent step in the ceremony, part of the remains from the pyre was brought to the foot of the main stairway of the House of Eagles for its interment inside the three

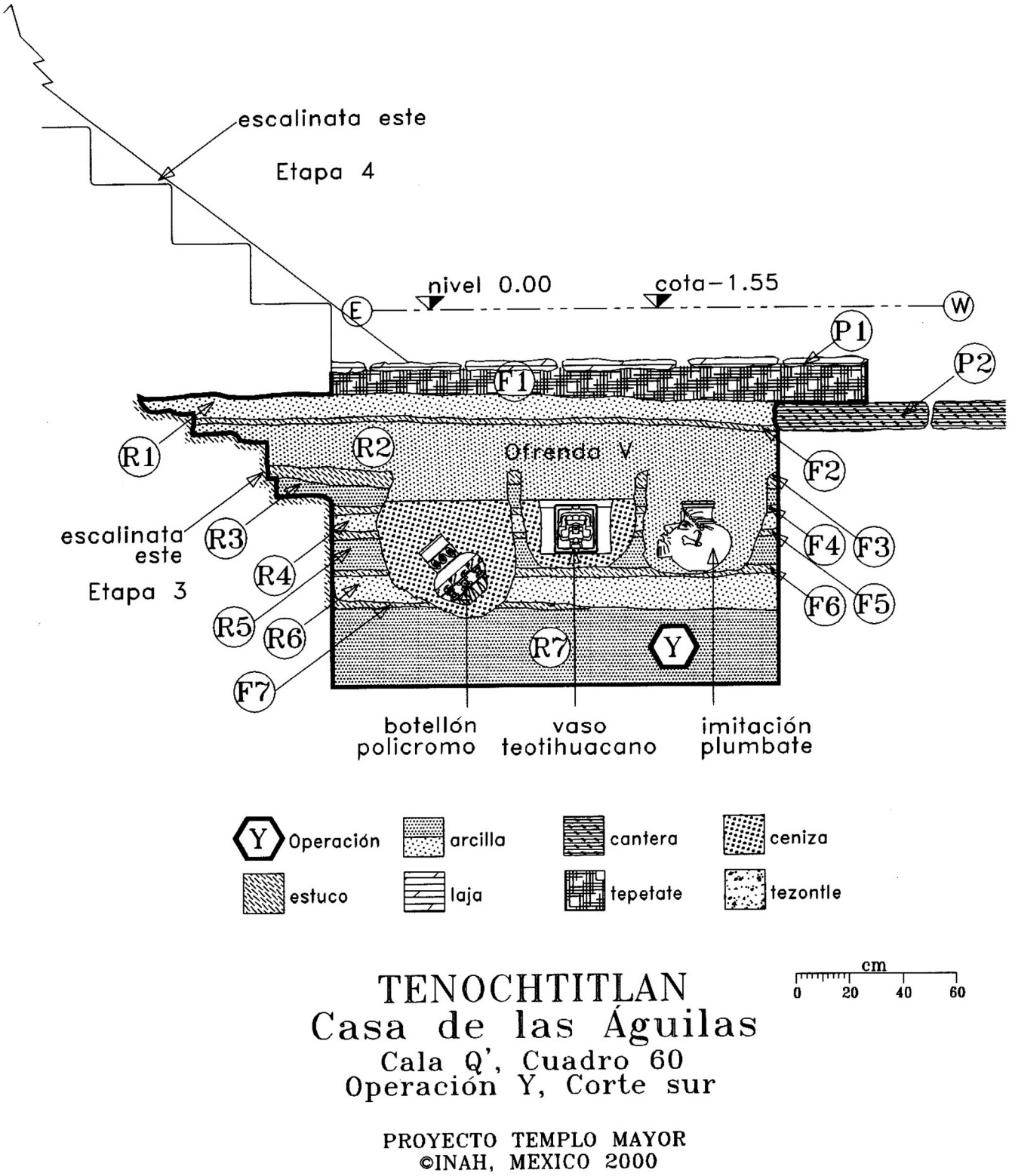

Figure 12. House of Eagles, East-West Section of Offering V. Drawing by Fernando Carrizosa, courtesy Proyecto Templo Mayor.

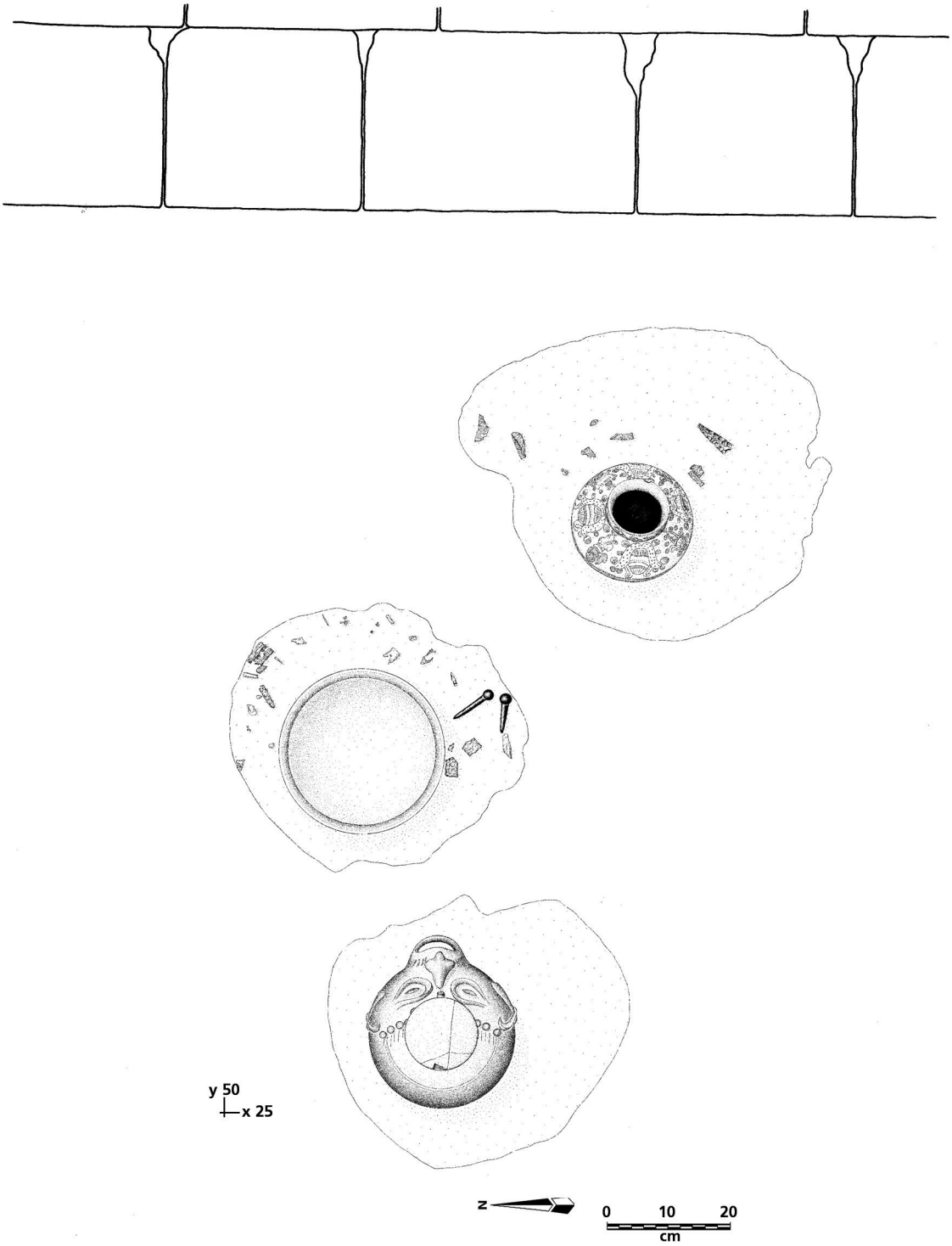

Figure 13. Offering V, excavation level 1. Drawing by Fernando Carrizosa, courtesy Proyecto Templo Mayor.

cavities we just described (Figure 13). These remains consisted of an amorphous mixture of ash, bone, small complete artefacts, and pieces of larger ones. Our inventory, however, suggests that many fragments of both the skeleton and the objects that made up the offerings are missing. This could be due either to many of the pieces being reduced to ashes in one or both of the two burnings, or to certain remains having had a different destination than the burial; for example, they could have been discarded, delivered to relatives, or ritually ingested.

As for the inhumation rite, we were able to distinguish three consecutive stages. In the first stage, 95 per cent of the large bone fragments were separated from the mixture in an incandescent state. Part of the incandescent mixture was immediately deposited at the bottom of the cavity to the east and into the polychrome bottle. Then the bottle was put inside the cavity and covered with more of the incandescent mixture. This produced burns on the cavity wall and on the interior and exterior surfaces of the bottle. In the second stage, this same action was repeated in the central cavity with the Teotihuacan vase. This time, the mixture had already cooled, so that the cavity wall and vessel were not burnt. The third stage involved depositing 95 per cent of the larger bone fragments, cold ash, and copper pins inside the effigy pot, and then placing it in the cavity to west. Apparently, this exhausted the mixture, for the cavity had to be topped off with clay. After the ceremony concluded, the three cavities were definitively covered with earth and with the slabs that had previously been removed from the plaza floor.

The Textiles at Tenochtitlan

The 96 fragments of this collection of cotton (*Gossypium hirsutum*) textiles exhibit common characteristics in terms of textile manufacturing techniques. On the one hand, we have yarns from basic weave fabrics, which are all composed of a single strand with a 30-degree Z-twist. On the other hand, we found yarns in the supplementary weave and selvedges made up of two strands with a 45-degree S-twist. Finally we have fragments of cord consisting of two strands with an S-twist.

The most important variations in our collection fall into the following five categories of cotton textiles based on their weaving technique (Vázquez del Mercado 2000: 84-110; López Luján 2006, 1: 211-214):

1) 15 fragments of basket weave (Figure 14a). The technique followed in the production of the basic weave is an unbalanced plain weave and consists of two weft yarns that cross one warp yarn. The fabric density per square centimetre is 15 warp yarns by 8 double weft yarns.
2) 27 fragments of taffeta or balanced plain weave with a brocade or weft-float patterning in the shape of a cross or a zigzag (Figures 14b, 15-18). A basic technique is used, that is, a plain weave in which one weft yarn crosses one warp yarn. The fabric density per square centimetre is 15 to 18 warp yarns by 15 to 18 weft yarns. In this type we identified two kinds of supplementary weave. The first consists of a simple brocade where one weft yarn crosses one warp yarn, which was produced at the same time as the taffeta or balanced plain weave by inserting an additional weft yarn. In two cases we observed a zigzag motif. The second kind has a brocade that involves 8 warp yarns. The weave passes the first three in a simple manner (one weft yarn crossing one warp yarn), then it "floats" over three warp yarns and ends by simply crossing two more warp yarns. This brocade or weft-float patterning is in the shape of a cross.
3) 23 fragments of taffeta or balanced plain weave with a brocade in the form of a step-fret pattern. Like the previous type, these follow the basic taffeta or balanced plain weave technique. The fabric density per square centimetre is 15 to 16 warp yarns by 15 weft yarns. The balanced

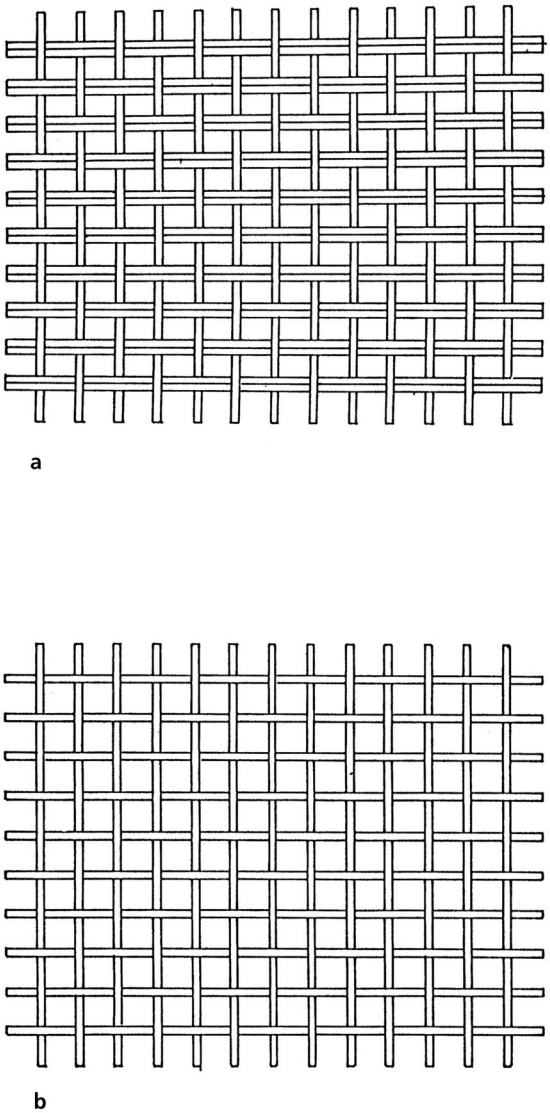

Figure 14. Offering V's charred textiles: a) Basket weave; b) balanced plain weave. Drawing by Fernando Carrizosa, courtesy Proyecto Templo Mayor.

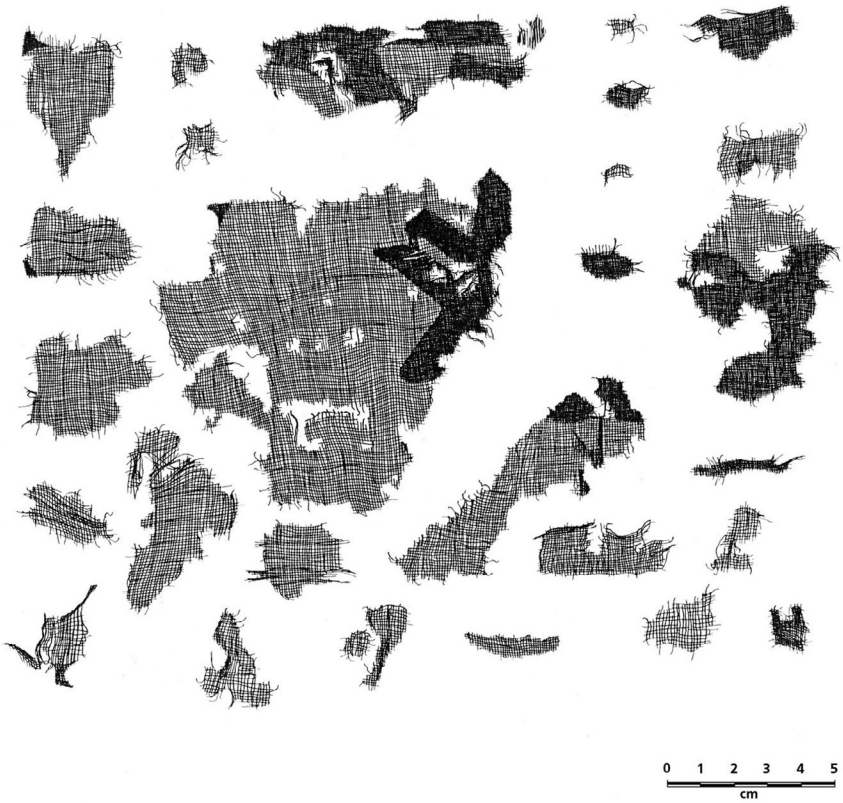

Figure 15. Balanced plain weave with cross brocades. Drawing by Fernando Carrizosa, courtesy Proyecto Templo Mayor.

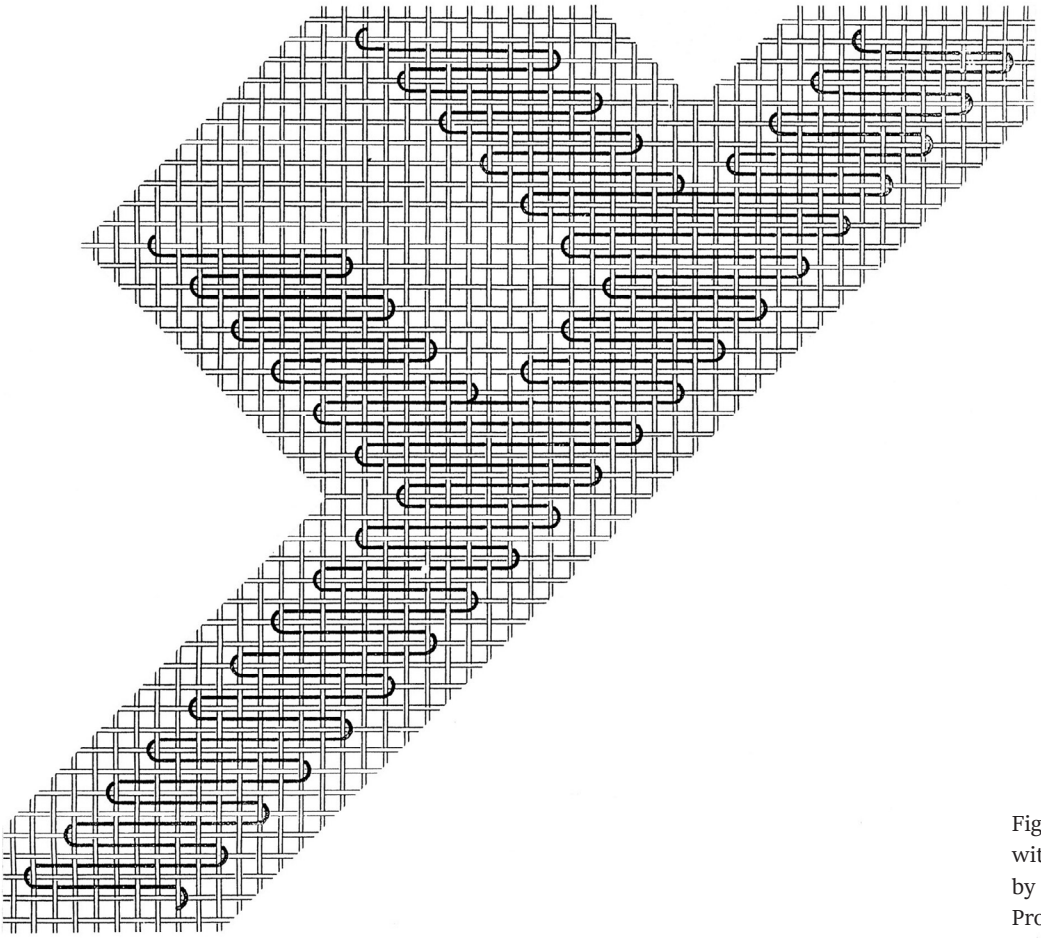

Figure 16. Balanced plain weave with cross brocades. Drawing by Fernando Carrizosa, courtesy Proyecto Templo Mayor.

Figure 17. Balanced plain weave with zigzag brocades. Drawing by Fernando Carrizosa, courtesy Proyecto Templo Mayor.

plain weave has a simple brocade or weft-float patterning as a supplementary weave. In this case the weft yarn is double and thicker than the basic weave. This brocade forms motifs of bands and zigzags that make up a step-fret pattern.

4) 15 fragments of selvedge (Figure 19). The fabric density per square centimetre is 8 to 12 warp yarns by 8 to 10 weft yarns. Subtype 1 consists of a lateral selvedge where the weft yarns extend 0.5 centimetres beyond the base fabric to form weft-fringes. Subtype 2 combines a lateral selvedge and a notched decoration. Each notch is composed of a group of 12 yarns. Subtype 3 is constituted by bands with two lateral selvedges, which are made up of four warp yarns and have a plain weave

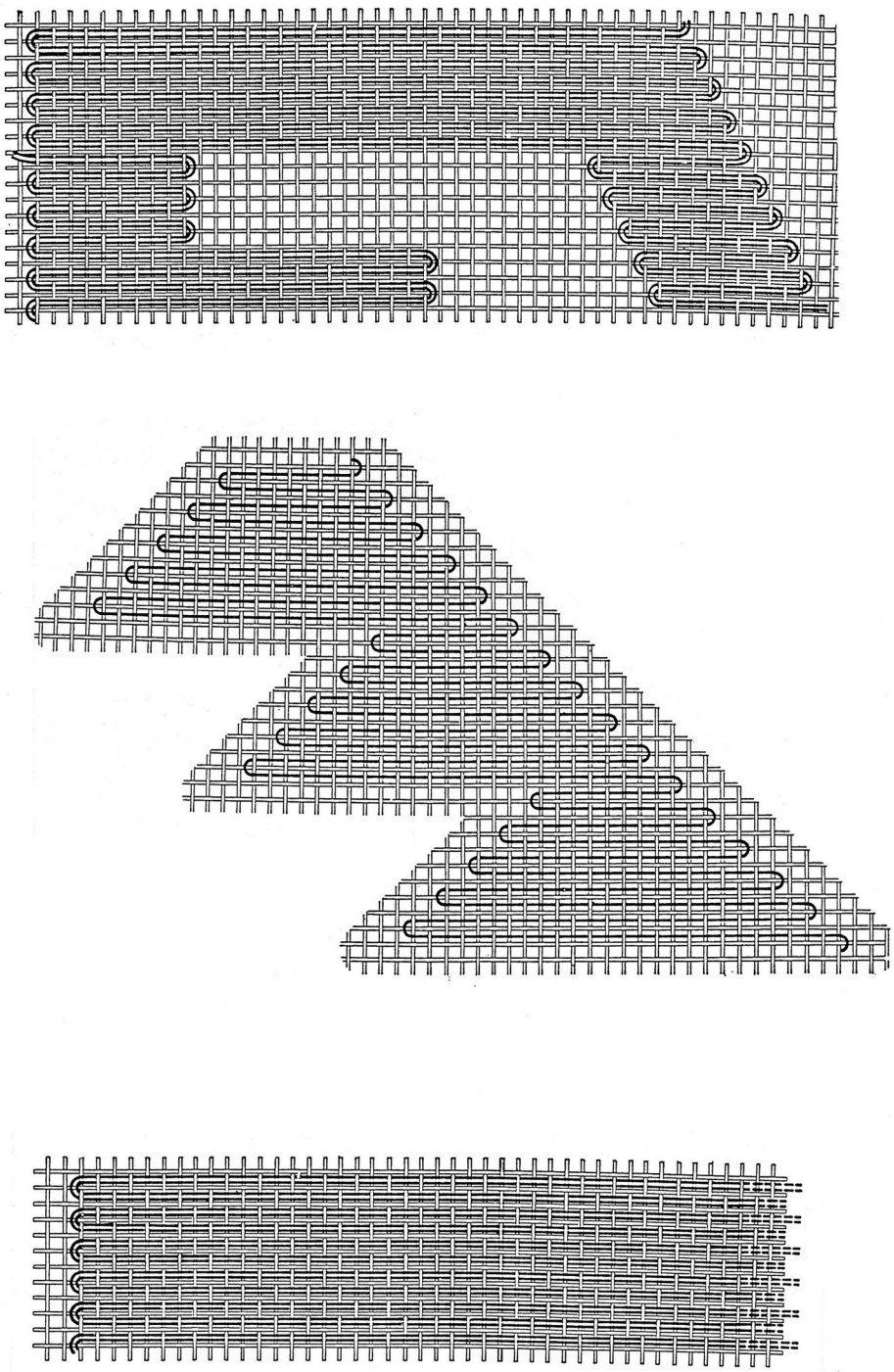

Figure 18. Balanced plain weave with zigzag brocades. Drawing by Fernando Carrizosa, courtesy Proyecto Templo Mayor.

with a weft face. The centre is a warp work. Finally, Subtype 4 consists of bands with two lateral selvedges made up of four warp yarns and have a plain weave with a warp face. The centre is a special work that we were not able to identify.

5) 16 fragments of cotton cord (Figure 20). Apparently they formed part of the same element. Each fragment is composed of two strands of S-twisted fibres. We should also mention another 16 cord fragments, but these are stiff palm fibres of the species *Brahea dulcis*. All of these fragments are from a single strand of Z-twisted fibres. The function of these cords escapes us, although they might have been used to fasten the hypothetical mortuary bundle of the cremated person.

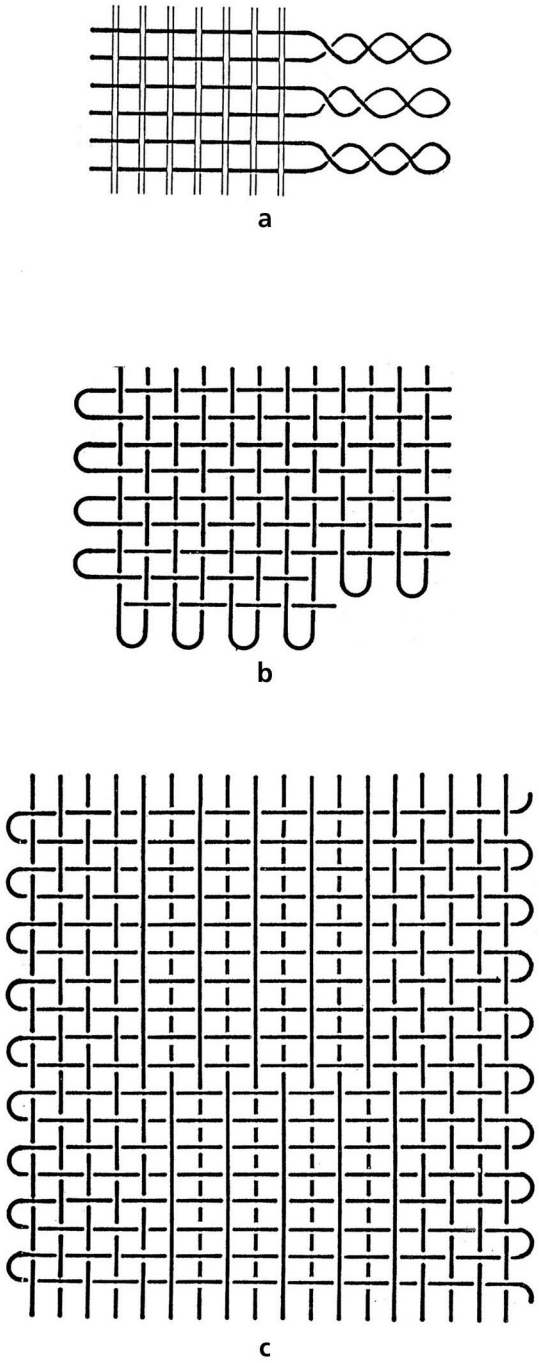

Figure 19. Three different types of selvedge. Drawing by Fernando Carrizosa, courtesy Proyecto Templo Mayor.

The process of carbonisation that permitted the conservation of the cotton and palm objects in our collection prevented us from determining if they were white or if they had been woven from one or more colours. Today they are reddish-yellow or utterly black. Nevertheless, the brocades, as well as indigenous pictographs, lead us to suspect that at least the decorative elements were a colour other than white (see Mastache 1968: 17, 39).

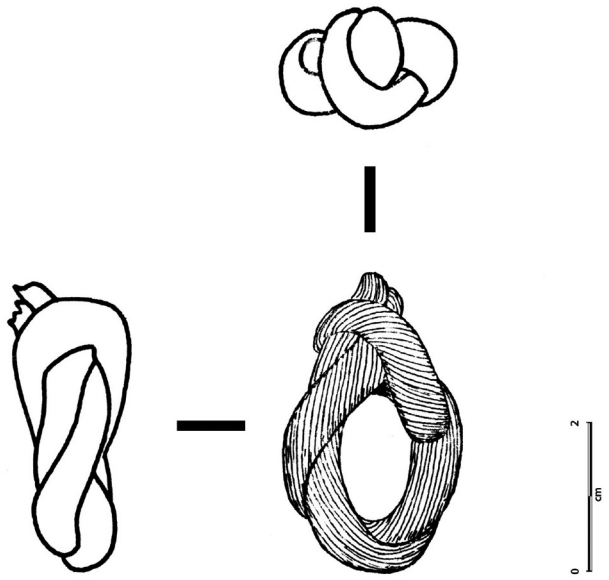

Figure 20. Cord fragments. Drawing by Fernando Carrizosa, courtesy Proyecto Templo Mayor.

Although they make up an important set, the fragments recovered from the burial are so small that it is impossible to reconstruct their original forms and thus determine their function with certainty. Nevertheless, some indications would support the notion that, before they were ritually burnt, they were worn as noble attire. The technological analysis suggests that the 80 textile fragments formed part of at least three different garments: two made of taffeta or balanced plain weave and one of basket weave. These garments not only were made of soft and very fine cotton yarns, they were also densely woven and decorated with beautiful, perhaps multicoloured, brocades. As we said earlier, these fabrics were probably enriched with small gold laminate pendants. As for the associated materials, these fabrics and cords may have formed part of the interred person's clothing, an offering made in his honour, or the mortuary bundle in which his corpse was wrapped.

Moreover, elements such as cotton and the brocades suggest the elevated status of the interred person (see Fernández 1965: 148-152; Anawalt 1980). It is well known that in the Postclassic societies of Central Mexico, each person was obligated to wear clothing appropriate to his or her station. At this time, dress involved a complex code that implicitly conveyed one's rank, occupation, and ethnic affiliation. But as Patricia Anawalt (1980: 42-43; 1981: 15-21; 1985: 5) has pointed out, the differences generally were not reflected in the form of attire, but rather in the materials and quality of its manufacture. In this regard, we should remember that multicolour cotton textiles were reserved for the exclusive use of the nobility. According to sumptuary laws,

commoners could not wear them under pain of death. In addition, they were prohibited from wearing their cape below the knee or knotted in front instead of over the right shoulder. We should also remember that uncooperative nobles, lords who refused to pay tribute, and captains beaten terribly in battle, were punished by disallowing them to wear cotton.

From the data presented thus far, some basic conclusions may be formulated. Since the corpse was cremated with the remains of a dog, and a greenstone bead was found inside the deceased's mouth, it is clear that this person died a *tlalmiquiztli*, or natural death. The incineration rite had the purpose of liberating the *teyolia*, one of the body's three main animistic entities, so that he could begin his journey to the World of the Dead. On the other hand, it is necessary to emphasise his high status in Mexica society, attested by the richness of his mortuary offering as well as his interment within the sacred precinct of the imperial capital. Unfortunately, we lack sufficient elements to discern if this individual was a *tecuhtli* lord or a high-ranking warrior. We can only say that he was not a king, for the historical sources tell us that the uppermost Mexica dignitaries were buried in the Templo Mayor or in a building just to the west called the *Cuauhxicalco* (López Luján 2005: 172-183; 2006, 1: 251-253; López Austin and López Luján 2009: 338-341, 403-407).

The Provenance of the Raw Material, Yarns, and Fabrics

Before concluding, we should mention that the origin of the archaeological fabrics and cords analyzed in this presentation can be found anywhere in the Mexica empire—including the cities of Tlatelolco and Tenochtitlan—as well as in the independent domains of the Mexica's enemies, as can be inferred from the sixteenth-century historical sources (Fernández 1965: 143-144; Anawalt 1980: 38-42). Cotton was cultivated in very diverse regions of Mesoamerica. Prominent among them is the hot land of the coast of the Gulf of Mexico, as well as the present-day Mexican states of Morelos, Puebla, Guerrero, and Oaxaca, in addition to other areas located in Sinaloa, Nayarit, Jalisco, Colima, Michoacán, Chiapas, and Yucatán (Rodríguez 1976: 70-84).

Unspun cotton could be processed where it was cultivated or it could be sent in tribute or trade to manufacturing centres that did not grow the plant. This is clear from Friar Bernardino de Sahagún's texts that speak of the existence, presumably in Tlatelolco, of vendors of cotton bolls (Sahagún 1989: 616). The best known data in this respect, however, come from the *Matrícula de Tributos* (1991: 18, 26, 31, 32) and the *Codex Mendoza* (1992: 38r, 48r, 53r, 54r) which note that the provinces of Cihuatlan—on the Pacific coast—and Tzicoac, Atlan, and Cuauhtochco—on the Gulf—paid their tribute obligations in bundles of unspun cotton.

Centres of textile production were found everywhere in Mesoamerica. The pictographic and written sources, including the two codices just mentioned, indicate that, with few exceptions, all of the imperial regional capitals produced and sent cotton cloth to Tenochtitlan, and that some of them also provided articles of clothing in tribute (Rodríguez 1976: 37-51). At the same time, yarns, cloth, and clothing were imported from many different regions and sold in large quantities in the market of Tlatelolco (Cortés 1994: 63; Díaz del Castillo 1950: 176; Sahagún 1989: 531, 538-539, 610-611). Archaeological data likewise confirm this. Mary Parsons (1972: 65, 71), for example, calculates that a third of all the *malacates* found superficially in the regions of Teotihuacan and Texcoco were used exclusively for spinning cotton. This means that these areas, unfit for growing the plant, somehow acquired the raw fibres, spun them, and probably wove them as well. She goes on to propose that, since cotton fabric was limited to the nobility and not so important in the Teotihuacan Valley, the bulk of its production was paid in tribute to Tetzcoco, the regional capital. Thus, in short, cotton textiles were made throughout Mesoamerica, and clearly Tlatelolco and Tenochtitlan were among the main manufacturing centres (and consumers) at that time.

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8

Andean Textile Traditions: Material Knowledge and Culture, Part 1

Elena Phipps

Abstract
The development of rich and complex Andean textile traditions spanned millennia, in concert with the development of cultures that utilized textiles as a primary form of expression and communication. Understanding the importance of textiles in the Andean world, we can examine elements of their genesis and look at the trajectory from the earliest developments of fiber-made items to the extraordinarily complex and specific processes of textile making, such as warp-wrapping and discontinuous warp and weft weaving. These processes are examined in the context of the relationship between textiles and the sacred, highlighting the significance and agency of cloth in part through the creation of the unique methods of their construction, which constitute systems of knowledge underscored in the material and materiality of the media.

Keywords: textile traditions, agency of cloth, materiality, textile processes, weaving, textile structures, sacred textiles, warp-wrapping, discontinuous warp and weft

Tradiciones Textiles Andinas: Conocimiento Material y Cultura, Parte 1

Resumen
El desarrollo de las ricas y complejas tradiciones textiles andinas sucedió durante milenios, paralelo al desarrollo de las culturas que utilizaban los textiles como una forma principal de expresión y de comunicación. Al entender la importancia de los textiles en el mundo andino, se puede examinar elementos de su génesis y ver la trayectoria desde los primeros desarrollos de objetos creados con fibra a los procesos extraordinariamente complejos y específicos de creación textil, tales como la envoltura de urdimbres y el tejido de tramas y urdimbres discontinuos. Estos procesos son examinados en el contexto de la relación entre los textiles y el sagrado, iluminando el significado y la agencia de las telas en parte mediante la creación de los métodos únicos de su construcción, los que constituyen sistemas de conocimiento subrayado en el material y la materialidad del medio.

Palabras clave: Tradiciones textiles; agencia de tela, materialidad, procesos de producción textil, tejer, estructura textil, tejidos sagrados, envoltura de urdimbres, trama y urdimbres discontinuos.

Introduction[1]

In 2012 I was in Los Angeles during a special event: the installation of the artwork by Michael Heizer called *Levitated Mass* in the Los Angeles County Museum of Art. The finished work consists of a huge 340 ton rock suspended over a subterranean walkway.[2] [Fig. 1a] Its installation entailed the transportation of the megalith from its quarry, located approximately 100 miles outside of the city. Because of its size, this required a highly engineered rig which was 300 feet long and contained over 200 wheels custom designed to safely suspend and transport the precious rock. [Fig. 1b]

The journey took place over the course of 8 nights traversing a convoluted route through the streets of the city

1. This publication represents a condensed and abbreviation version of the paper originally presented at the conference. Part II is forthcoming.
2. Levitated Mass. Michael Heizer (United States, California, Berkeley, born 1944) . 2012. Sculpture. Diorite granite and concrete.35 × 456 × 21 2/3 ft. (10.67 × 138.98 × 6.6 m) Weight: 340 Tons. Transportation made possible by Hanjin Shipping Holdings Co., Ltd. (M.2011.35) See LACMA website for further. http://collections.lacma.org/node/424258.

and proceeded through the nights like a sacred procession, cheered on by hundreds of people who came out at midnight to witness its passing. With a budget of over one million US dollars for this moving process, what I loved the most—apart from the medieval spectacle of it all--was the fact that with all of the high tech engineering and planning that took place, in order to move this rock, the first steps in its preparation --according to Michael Govan, Director of LACMA—was to 'swaddle it in "high-thread- count Egyptian cotton sheets."[3] That the sheets were "Egyptian" cotton in modern day terms means, in fact that it was long-stapled Pima cotton, *Gossypium barbadense*, whose origin, of course, is Peru. A nice detail as an entrée into our discussion of materiality and Andean textile traditions.

But in the broader picture—whether for works of art or the ancestors of a civilization— the wrapping of precious objects—including rocks-- in textiles is an ancient global practice, and one that is particularly active in the Andes. An

Fig. 1a Michael Heizer *Levitated Mass, 2012*. LACMA. Photo: www.LACMA.org

Fig. 1b Transporting the rock to the museum. Photo: Monica Almeida, New York Times, March 10, 2012

3. "It was Michael Heizer who wanted to protect it from scratches, he was treating it very carefully. So he proposed that it be shrinkwrapped. It's swaddled in high-thread-count Egyptian cotton sheets, placed between the wood blocks and the rock so as it's moved it's cushioned even further. "Michael Govan, Director of LACMA. http://latimesblogs.latimes.com/culturemonster/2012/03/lacmas-michael-govan-talks-about-his-new-rock-star.html The use of Egyptian cotton sheets was confirmed by the Vice Director of LACMA (Nancy Thomas, personal communication, email, 4/2016) though questioned by the artist's assistant, per email communication 6/2016.

Fig. 2. Stone, (meteorite?) with red pigment, found wrapped in cotton cloth. El Paraiso (occupied ca. 2000 B.C.). Centro de Investigaciones de Zonas Aridas laboratory in Lima. Universidad Nacional Agraria. Photo: courtesy Jeffrey Quilter.

early example of this was the discovery of an oddly shaped rock—considered potentially to be a meteorite-- from the ancient site of El Paraiso, ca 2000 B.C.. The rock, found in a wall during the excavation by F. Engel in the 1950s, was painted with red pigment and covered in cotton cloth. Gourd bowls with offerings of food were found next to the wrapped stone.[4] [Fig. 2.]

In the Andes even today, we can see the wrapping of stones, for example in the annual pilgrimage to El Señor de Quyllu-rit'i—the Lord of Pure Snow—where men dressed as 'bears' *ukuku* ascend to the glacier to collect pieces of ice and in the process reach a special rock that is covered with cloth.[5] [Fig. 3] The wrapping or dressing of stones was a practice documented since early Colonial times, by Spanish chroniclers as well as indigenous reports on Inca ritual activities where certain stones or rocky outcroppings in the landscape—*wak'as*—had special meaning.[6] Cristóbal de Albornoz (ca 1530-1583) an obsessed cleric, determined to "extirpate idolatry" in the 16th century systematically listed and described the wak'as in the Cuzco area, section by section, following along the pathways of the *ceque* lines. "Uscovilca is the Wak'a of the Ananchancas Indians. It is a stone dressed in the manner of an Indian."[7] [Fig. 4.]

The relations between people and wak'as constituted a complex set of interactions and the social agency of special places and things was expressed in the material world through offerings of food, coca leaves, and chicha (alcohol).[8] Guaman Poma de Ayala—noted for his 400 page illustrated letter to the Spanish King written in the end of the 16th century—the original manuscript resides in the Royal Library, in Copenhagen—tells us that Mango Capac the first mythical Inca king began the practice of the worship of the *wak'as* (sometimes spelled huacas) or sacred things along with that of the sun and moon.[9] Other objects were also considered *wak'as* or sacred or containing power, and were

4. Email communication Jeffrey Quilter to Elena Phipps May 17, 2016. "The photograph was taken in 1976 by me at the Centro de Investigaciones de Zonas Aridas laboratory in Lima. It is part of the Universidad Nacional Agraria. Note that the photo of the stone is slightly out of focus. That was true of the original slide and I can't do much about it. I also don't have a scale in the photo but the stone was very heavy and is approximately 60 cm or so in height. You can clearly see the red pigment on it. I believe that Engel claimed that it was a meteorite but I don't know if anyone has ever confirmed that."

5. Steele, Paul R. and Catherine Allen. *Handbook of Inca Mythology* . Santa Barbara: ABC-CLIO, 2004. (p. 242 re ukuku bear Qoyllur Rit'i). Also see Bruce Mannheim and Guillermo Salas Carreño. Wak'as: Entifications of the Andean Sacred In Tamara L. Bray, ed. *The Archaeology of Wak'as: Explorations of the Sacred in the Pre-Columbian Andes*. University Press of Colorado. (2015) Stable URL: http://www.jstor.org/stable/j.ctt13ohkws.7

6. Bernabe Cobo's list of huacas in Bernabe Cobo [1653] *Inca Religion and Customs* Austin, University of Texas Press, 1990, (book 13 chapters 13-16) pp 51-84. See also Tamara L. Bray, ed. *The Archaeology of Wak'as: Explorations of the Sacred in the Pre-Columbian Andes*. University Press of Colorado. (2015).

7. Pierre Duviols. Un inedit de Cristobal de Albornoz: La Instruccion para descubrir todas las guacas del Piru y sus camayos y haziendas. *Journal de la Societe de Americanistes* Vol 51 t.1. 1967. Pp 7-37 [Stone dressed like an Indian. p.28.]

8. Mannheim and Salas Carreño. Wak'as (2015), above.

9. Guaman Poma de Ayala GKS 2232 4º: Guaman Poma, Nueva corónica y buen gobierno (1615) "Y este Ynga ydeficó Curi Cancha, templo del sol. Comensó a adorar el sol y luna y dixo que era su padre. Y tenía suxeto todo el Cuzco cin lo de fuera y no tubo guerra ni batalla, cino ganó con engaño y encantamiento, ydúlatras. Con suertes del demonio comensó a mochar [adorar] uacas ýdulos." Folio 87. Royal Library, Denmark. http://www.kb.dk/permalink/2006/poma/86/en/text/?open=id2970453

Fig. 3. Ikuku (bear-man) near summit of Qullor Riti, (Peru) near large stone covered with textiles. Photo: courtesy Mieszko Stanislawski (www.MieszkoStanislawski.com)

described by Polo Ondegardo in the 16th century (d.1575), such as certain special corn cobs identified as *zaramama* that were wrapped in cloth mantles or dressed in women's garments.[10] Dressing *wak'as* as well as other important objects, animals, and sites was part of the ontology of the Andean world and signals their 'personhood.'[11] Weaving clothing for *wak'as* was the job of groups of specialized artisans who prepared *cumbi*—the fine cloth of the Inca—for ceremonial sacrifice. One such group of specialists, the *pilco llama camayo* were royal weavers who were dedicated to making textiles for llamas, and notably the red blankets[12] for the specially bred white *napa* llamas of the Inca king.[13]

The Inca created many special textiles—sometimes woven to the size and shape for the wrapping of their intended ritual object—small figurines made of gold, silver and spondylus shell that are wrapped—or dressed—in textiles, which contributes to their value as offerings to Yllapa, god of lightening, in the high altitude sacrificial burials[14]. [Fig. 5] The figurines-- were specially dressed in garments according to established affiliations, recognizable through their specific sets of colors. The miniature garments were modeled after the aesthetic and technical features of those worn by the Coyas and special Inca cloistered women of the Acclas—as seen in comparison with the full sized — and we might say

10. And other objects were also considered *huacas* or sacred or containing power, and were described by Polo Ondegardo in the 16th century (died 1575), such as certain special corn cobs identified as *zaramama* that were wrapped in cloth mantles. Polo de Ondegardo described selection of well-grown corn cob, ceremoniously placed in small container wrapped with a lliclla. ZARAMAMA. Another kind of Zaramama was made of cornstalks, dressed in skirt, with "lillja and topo" [lliclla and tupu—the Andean dress pin]. Sabine MacCormack *Religion of the Inca.* Princeton: Princeton University Press 1991. Pp. 179-180.

11. See Mannheim and Salas, 2015 above.

12. Murua (ca. 1611) 1987 p. 385

13. Napa llama: see Flores Ochoa, J. 1978. Taxonomies Animales. *Annales* 5-6, pp 1006-16. Also S. MacCormack *Religion in the Andes*. P. 171-175. On red blankets for llamas see Tom Cummins Cat.8 p 137 in E. Phipps and J Hecht *Colonial Andes,2004*.

14. See J. Reinhard and Cerrutti,. *Investigaciones Arqueológicas en el Volcán Llullaillaco*. Ediciones Universidad Católica de Salta, Argentina, 2000; J. Reinhard and C. Cerrutti *Inca Rituals And Sacred Mountains A Study of the World's Highest Archaeological Sites*. Los Angeles: UCLA Cotsen Institute for Archaeology Press, 2010. Also Phipps in *Colonial Andes* Cat numbers 1 and 2, pp. 128-130.

Fig. 4. Dressed *wak'a* - a sacred stone. Colquencha, Bolivia, 1988. Photo Courtesy Johan Reinhard.

Fig. 5. Miniature Dressed Inka female figurine. Early 16th c. Inka period. Museo de Tucume. Peru Photo: D. Giannoni.

oversized- dresses.[15] [Fig. 6.] Wrapped in their garments, the bundles themselves were in addition, wrapped in even more and more outer layers—as can be seen in the bundled and wrapped bodies of Capacocha females, such as one from the burials at Ancongata, in Salta that was buried with an outer layer that surprisingly, included a male tunic laid on top of the bundle prior to burial.[16]

Textiles, in the form of clothing of course was part of wrapping the body of individuals. This was done in various moments of life and death. At the time of burial, wrapping took place: in some cases—presumably for special individuals--at times, they were disinterred, removed from the burial to be re-wrapped with further offerings- a practice we know took place as early as the time of the Paracas burials, at least as early as around 150 BCE.[17]

Sometimes however, cloth in and of itself was subjected to burial—as seen in the so-called Great Cloth Burial at Cahuachi, in the Nasca Valley where sometime during around 200 A. D, a single enormous textile, estimated to be at least 18 ' wide as one loom width x 200 feet long, (50-60 m) was folded layer upon layer upon itself and buried in a trench [30 meters long x 1.2 deep x 1.4 m.wide .] .[18] Apart from two small ceramic shards, no other artifacts were found in the clean fill used for this cloth burial. As William Duncan Strong, the archaeologist who uncovered this in the 1950s noted in his journal: "no tomb, no necropolis. Damn!".[19] [Fig. 7]

15. See Ann Rowe, 1997. Inca Weaving and Costume. Textile Museum Journal 14 (1995-96) pp. 5-54. Also Phipps *Colonial Andes* Cat.3 and 4. Pp 130-134.
16. See Reinhard and Cerrutti, 2000 pg. 96-99
17. See for example, Anne Paul "Radiocarbon dates for Paracas" in Anne Paul, ed. Paracas Art and Architecture: object and context of South Coastal Peru. Iowa City: University of Iowa Press, 2019. Pp. 1-34.
18. Phipps, Elena, "The Great Cloth Burial at Cahuachi, Nasca Valley, Peru" (1996). *Textile Society of America Symposium Proceedings.* Paper 871. http://digitalcommons.unl.edu/tsaconf/871
19. Duncan Strong's journal is part of the Cahuachi collection held in the Department of Anthropology, Columbia University, New York.

Fig. 6. Inka Coya Dress. Peru ca. 1530. Camelid hair and cotton. 168c 240 cm. Museo Nacional de Colombia. Inv. No. 085282. Photo ©Museo Nacional de Colombia. Juan Carnilo Segura

Fig. 7. Photo. Excavation of the "great cloth burial', Cahuachi, Nasca Valley, Peru. Sept 1, 1952. William Duncan Strong Archives, Columbia Univ. Anthropology Dept. New York.

While the enigmatic Cahuachi cloth may be interpreted as having had meaning in its former 'life' prior to burial under the ground-- sometimes the agency of cloth functions as a mediator, on top of the ground, for example, as a 'mesa' establishing the sacred surface or precinct or location of ritual actions.[20] [Fig. 8]

And sometimes the cloth of ritual action is itself wrapped in cloth. As we see in the Aymara *q'epi* bundle preserved and honored by a local community.[21] The bundle holds and protects the garments—tunics and mantles—worn once a year during a religious ceremony. Kept by the local town officials, the bundle itself may be given offerings. [Fig. 9] The ceremonial use of these garments has roots at least as far back as five or more centuries, as we can see from the ceramic figure found in Parati near Lake Titicaca that date back to the 10th century A.D.[22]

All of these examples demonstrate one aspect of the function of textiles in the Andean world—especially in active relation to ritual and ceremony. In some cases, the textiles were produced especially for that act—such as the miniature garments woven to size and shape for the silver or gold capacocha figurines. In other cases, textiles produced for other

20. Zorn, Elayne. Textiles in Herders' Ritual Bundles of Macusani, Peru. In Ann Rowe ed. *J. Bird Conference on Andean Textiles* 1986 pp. 289-307; Tschopik, Harry. The Aymara of Chuchuito. VOl 1. Magic. Vol 44 part 2, *Anthropological Papers of the American Museum of Natural History*, 1951. p. 95 description of ritual mesa.

21. L. Edleson and A. Tracht *Aymara Weavings: Ceremonial Textiles of Colonial and Nineteenth Century Bolivia*. Washington D.C.: Smithsonian Institution Press, 1983. See also Christina Bubba. Memoria ritual: los rituals a los vestidos de María Titiqhawa, Juana Palla y otros fundadores de los ayylu de Coroma, in Théres Bouysse-Cassagne, ed. *Saberes y memoria en los Andes in memorium Thierry Saignes.* Paris: Institute des Hautes Ĕtudes de l'Amerérique Latine, 1997 pp. 377- 400.

22. Antti Korpisaari, Jédu A. Sagárnaga Meneses and Riikka Väisänen *Archaeological Excavations on the Island of Pariti, Bolivia: New Light on the Tiwanaku Period in the Lake Titikaka Region.* Barnardsville: Boundary End Archaeology Research Center. 2010.

Fig. 8. *Señal q'epi* to mark male and female alpacas. *Misa 'unkhuña* atop folded costal. Camelid *unkhuña* with corn and coca. All paraphernalia sits on top of *q'epiña* . After E. Zorn. Textiles in Herders Ritual Bundles of Macusani, Peru, 1986. In Ann Rowe ed. *J. Bird Conference on Andean Textiles* 1986 pp. 289-307.

Fig. 9. Ceremonial *q'epi* bundle Coroma. 1978. The wrapping cloth contained folded ritual tunics and mantles. Photo: after Adelson, L. and A. Tracht, *Aymara Weavings* Washington D.C., Smithsonian Institution, 1986.

functions serve in new contexts, because of their physical qualities—such as their potential softness and flexibility to be folded or tied, their color, design and aesthetic components, and their association with human activities.

This primary relationship between the textile and the other object—whether stone wak'a or ritual *illa*s (stone animal figurines) or the human body—is one of protection and interface—between qualities of hard and soft, and concepts of earth and air, exposure and enclosure. The textile mediates these elements and has agency, so much so that Albornoz instructed priests who were in the process of removing "idolatry" from the Andes to take and then burn "all precious textiles and specifically the 'bestidos de cumbe' because if the textiles had touched the wak'as, then the people could re-create their wak'as elsewhere." [23] In other words, the textiles themselves carried with them the sacrality of the specific wak'a.

In examining textiles in this way, a question develops—where does this agency of textiles come from? Does it come from the specifics of how they are made? From the materials, the formulation of the yarns and weave structures, in the articulation of the design, in their use and context or in their materiality – that is, the cultural associations that interconnect technical traditions with conceptual constructs? I would propose that it is in all of the above, and would like to explore the issue by examining several examples where I think that we can get a glimpse of this interface between materials and materiality, where the process of making textiles, in and of themselves conveys meaning. This is something perhaps related to what Penny Dransart refers to as "productive knowledge."[24] To examine this issue, the following presents four examples—they represent a range of time periods from some of the earliest manifestations to the Colonial era—and are points on a continuum, and not by any means the whole story.

Example 1: Adding color to textiles: Huaca Prieta warp wrapping

The harnessing of materials—the fibers and colorants—used to make textiles takes place in the early periods of Andean history. These include the use of plant fibers to create the matting and cordage such as that found in the Guitarrero Cave dating to around 8000 B.C.[25], and domestication of cotton that takes place at least by around 3500 B.C in the

23. "... in his instructions for destroying wak'as, Albornoz (ibid.:196) advises would-be extirpators to seize first and then burn all precious textiles (specifically, *bestidos de cumbe*), for if any of the textiles touched wak'as (things he terms relics), devotees could readily re-create their wak'as elsewhere" Carolyn Dean, Men Who Would Be Rocks: The Inka Wank'a. In. Tamara L. Bray Ed. *The Archaeology of Wak'as: Explorations of the Sacred in the Pre-Columbian Andes.* University Press of Colorado. (2015) p. 224. Stable URL: http://www.jstor.org/stable/j.ctt13ohkws.11

24. See P. Dransart Thoughts on productive knowledge in Andean weaving with discontinuous warp and weft. In Denise Y. Arnold with Penelope Dransart (eds) *Textiles, technical practice and power in the Andes*. London: Archetype Press, 2014. Pp. 216-232.

25. Adovasio. Complex IIa (8600-8000 B.C.) Guitarrero Cave – cordage, plant fiber and cotton?

North Coast.[26] The earliest usage of animal hair is more difficult for us to trace in textile production due to the adverse preservation conditions of the highland regions, presumably its origin—though there is evidence of the use of Camelid fibers in the far south coast in association with Chinchorro mummies by at least approx 3000 B.C[27] and extensive use by Quiani peoples by 1000 B.C.[28] Color and the discoveries and experimentation with the preparation of color for fibers is another revolutionary occurrence.

Red pigments appear to be among the earliest colorant for cotton fibers and were also primary colorants associated with ritual spaces. We know of iron oxide mines in Chile in use from around 7000-4000 B.C. during the Archaic period (9000-6000 BP)[29] and red pigment grinding stones were discovered in El Paraiso in the Chillon Valley, Peru, active in 2000 B.C.E. (See Fig. 2.) [30] Mineral pigments, such as iron oxides and ochres as well as red lead and cinnabar, were important source of color for early cotton textiles—though few extant examples have been tested and identified. [31]

Cotton is a fiber that does not dye easily with organic colorants, unlike camelid hair which takes more easily to colors from the many plant and animal sources.[32] So it is understandable that early experimentation with color begins with the use of earth pigments—long associated with ceremonial activity-- worked into the cotton fibers along with some organic tannins. And with the addition of color, new ways of expression in textiles develops.

William Conklin almost forty years ago wrote an article entitled "The Revolutionary Weaving Inventions of the Early Horizon."[33] In it he explores some of the earliest textile constructions, from sites such as La Galgada and Huaca Prieta, noting, as had others before him, the development of

Fig. 10. AMNH. Plain weave cloth with tapestry section. Supe. Peru. Ca. 1800 B.C.(?) American Museum of Natural History, NY, 41.2/5517. Photo: author, courtesy AMNH.

a change of textile constructions from looping and twining to weaving, and the invention of several techniques in the Initial Period and Early Horizon (that is from around 2500 B.C.E through approx 200 B.C.E) that would become key parts of the evolution of Andean textile traditions.[34] These include the establishment of standardized loom widths, and the use of heddles for weaving, as well as the use of discontinuous wefts to create tapestry, originally as inserted sections within a larger plainweave cloth [Fig. 10] and the development of doublecloth and its subsequent triplecloth variations, among others.

From the early examples of textiles with designs, we can see that each one coincides with the powerful iconic and

26. Cotton : see Michael Moseley Maritime Foundations of Andean Preceramic; Tom D. Dillehay, Jack Rossen, Thomas C. Andres, David E. Williams Preceramic Adoption of Peanut, Squash, and Cotton in Northern Peru *Science* 316, (2007) pp.1890-1893.

27. Oakland, Amy, "The String or Grass Skirt; an Ancient Garment in the Southern Andes" (2008). Textile Society of America Symposium Proceedings. Paper 120. http://digitalcommons.unl.edu/tsaconf/120 ; also Cassman, Vicki; Odegaard, Nancy; and Arriaza, Bernardo, "Chinchorro Twined Shrouds" (2008). Textile Society of America Symposium Proceedings. Paper 86. http://digitalcommons.unl.edu/tsaconf/86

28. Arriazi Bernardo, Standen, Vivien G., Vicki Cassman, and Calogero Santoro. Chapter 3. Chinchorro Cultures: pioneers of the coast of the Atacama Desert. P. 48 in H. Silverman and Willaim Isbell *Handbook of South American Archaeology*. Springer 2008. (pp. 45-58).

29. Victoria Castro Prehispanic Cultures in the Atacama Desert: a Pacific Coast view. In Sanz, Nuria, Arriaza, Bernardo T., Standen, Vivien G. *The Chinchorro culture: a comparative perspective, the archaeology of the earliest human mummification.* UNESCO pub 2015. P.11-34.

30. Stanish, Charles The Origin of State Societies in South America *Annual Review of Anthropology*, Vol. 30 (2001), pp. 41-64 (p. 46). Stable URL: http://www.jstor.org/stable/3069208 Quilter, J. 1985. Architecture and Chronology at El Paraíso, Peru. *Journal of Field Archaeology* 12:279-297. And according to Engel, who excavated the site "Inside the structure was a large globular stone covered with red pigment and wrapped in cotton cloth." Next to the wrapped stone was an offering of food in a gourd bowl.

31. Phipps, E. *Cochineal Red: the Art History of a Color*. New York: Metropolitan Museum of Art 2010.

32. See E. Phipps Textile Colors and Colorants in the Andes. In Gerhard Wolf, Joseph Connors and Louis Waldman, eds. *Colors between Two Worlds.* Villa I Tatti, Florence. Harvard University Press, Cambridge. Pp. 256-280. 2012 .

33. William Conklin. The Revolutionary Weaving Inventions Of The Early Horizon, *Ñawpa Pacha: Journal of Andean Archaeology*. No. 16 (1978), pp. 1-12

34. See also S. J. Doyon-Bernard From Twining to Triple Cloth: Experimentation and Innovation in Ancient Peruvian Weaving(ca. 5000-400 B.C.) *American Antiquity*, Vol. 55, No. 1 (Jan., 1990), pp. 68-87 Stable URL: http://www.jstor.org/stable/281493

Fig.11a. Plainweave textile with warp wrapping. Huaca Prieta, ca 2500-1800 B.C. American Museum of Natural History, NY. 41.2/3493. Photo: author, courtesy AMNH.

Fig. 11b. Detail.

symbolic imagery of the period including raptors, caymen, double-headed birds, nesting imagery of snakes within birds, etc. Wanting to construct images of significant power within the woven cloth, weavers needed to creatively work to achieve methods appropriate for their materials. The example from the Cupisnique level of Huaca Prieta excavated by Junius Bird in the 1950s provides us with a glimpse into this creative process at a very early stage. The coloring of cotton with mineral pigments enabled the early weavers to construct their designs within the structure of the cloth. [Fig. 11a+b]

Here we see this achieved through the coloring of masses of fibers (not spun into yarns) that were then wrapped around the warp yarns, during the weaving process. This was an efficient use of precious colorants, though extremely time consuming for the weaver. At its core, this technique is a creative solution to the impulse to create fluid designs, rendered within the grid of the woven fabric. In this case of the fragment from Huaca Prieta, because of its fragmentary nature, it is difficult to see the design concept—but we can see the surface effect—where the fiber is wrapped not only at the visible level of the thickly worked areas, but in fact over much of the entire surface.

In another example from the same site, again, while the design of this fragment cannot really be read, we can see its design approach and style—through the formation of blocks of color standing in relief contrasted to recessed narrow furrows outlining the design that do not have the added colored fiber and rather use the basic plain weave structure. [Fig. 12] This is reminiscent of the aesthetic of the stone carvings that we see in the temples of the period, notably at Chavin de Huantar.[35] This association between the stone carving and textile design construction may be more discernible in the tapestry woven example belonging to the Museo Amano, from the Casma Valley—where clear differentiation between areas of design in relief, though constructed in a different technique, but in a similar style. [36] With access to colors, and possibly access to animal hair fibers, a new color palette can be achieved.

The mobility of textiles enables the spread of technical inspirations and we see a few examples of the wrapped fiber method preserved in the south coast—thousands of kilometers away from the center of the religious cult –the site of Chavin, in the north. These examples from the period perhaps had likely been transported from the north, but their aesthetic process brings not only the intellectual concepts and potential deification of composite religious icons in the style of the north, but may have also served as an inspirational model for local artisans.

35. For example, see Richard Burger *Chavin and the Origins of Andean Civilization* . London: Thames and Hudson, 1992.

36. Kajitani, Nobuko. Textiles of the Andes. *Senshoku No Bi (Textile Art)* 20 (Fall): 9-96. 1982.(especially fig. 5)

Fig. 12. Detail: Plain weave with warp wrapped red pigment-colored fibers. Huaca Prieta ca. 1800 B.C. American Museum of Natural History, New York. 41.2/3570a,b. Photo: author, courtesy AMNH.

The technique of warp-wrapping that had emerged in the early Initial period originating from the north resurfaces in the South Coast almost a thousand years later. It is present in a few extraordinary textiles, such as the well known Early Nasca textile in the Brooklyn Museum, (referred to commonly as "The Paracas Textiles") with elaborately worked three-dimensional cross-looped borders, where the field of the textile is constructed in the warp-wrapping technique.[37] [Fig. 13] That it comes from a region whose weavers already had an extraordinary grasp on textile techniques— from cross looping, double and triplecloth, complex gauze weave, tapestry, embroidery-- yet chose this one for a few textiles of rare importance, is significant. In addition the abundance of available camelid hair and the wide range of dyes for colors of all types that appears to have been part of the palette of elite networks of artisans makes one wonder why this archaic technique was used for these particular textiles? For example, we may consider that the impulse for the early development in the Chavin-inspired cotton textiles came in part from the absence of colorants, and perhaps the precious nature of the colorants themselves—associated with temple structures and ritual—that saturated the fibers for constructing these sacred images. But in these later examples—of which there are only a few-- clearly, access to color is not an issue. Rather how color is incorporated into the making of certain special designs is the predominant question.

Example 2: Nasca Discontinuous Warp and Weft

The extraordinary textile from the Museum of Fine Arts Boston [Fig. 14] is woven with discontinuous warps and wefts—where each color area is created with warps and wefts of the same color. The innovation of using this technique enables the creation of a lightweight, potentially sheer textile, that is identical front and back with areas of pure color—equal in warp and weft. But this comes at a price to the weaver: the time and skill required to set up the color changes in the warps, and the weaving of defined areas of discrete color—generally without the aid of heddles, and likely at least begun and completed with needles rather than shuttles of any kind. These all mean that the weaver needs to engage to the fullest and be devoted in the process of the design and textile creation.

It is difficult to trace the development of the use of this technique—associated perhaps with the late phases of Paracas and early phases of Nasca culture. Certainly it is here that we see the extensive use of the method, and, interestingly--in its most complex form, at a very early moment of technological development. Ann Rowe, in her seminal article on the subject in 1978, notes that some of the earliest pieces may be from Ocucaje—which seems to have been a cauldron of creative development in the early period. [38]

Discontinuous warp and weft textiles created with areas of pure color——may have developed out of the experience of doublecloth: where two sets of warps and two sets of wefts interlace.

This solves the problem of pure color areas, but there, the resulting textile has weight and depth and limited in color palette. And the designs are strictly confined to the woven grid.[39]

Unlike some of the exceptional Nasca examples with complex and curvilinear polychrome designs—such as the

37. Brooklyn Museum accession number 38.121. See https://www.brooklynmuseum.org/opencollection/objects/48296/Mantle_The_Paracas_Textile/

38. Rowe, Ann. Interlocking Warp and Weft in the Nasca 2 Style. Textile Museum Journal, 1973, Vol III (3) Pp 67-78.

39. To see examples of various types of discontinuous warp and weft textiles see Phipps *The Four-Selvaged Peruvian Cloth*. Fowler Museum 2013.

Fig. 13. Rare ceremonial textile with 396 colored units of warp-wrapping and embroidered edging. Nasca Period ca. 100 B.C.- 200 A.D.. Fowler Museum, Los Angeles. X86.2925.

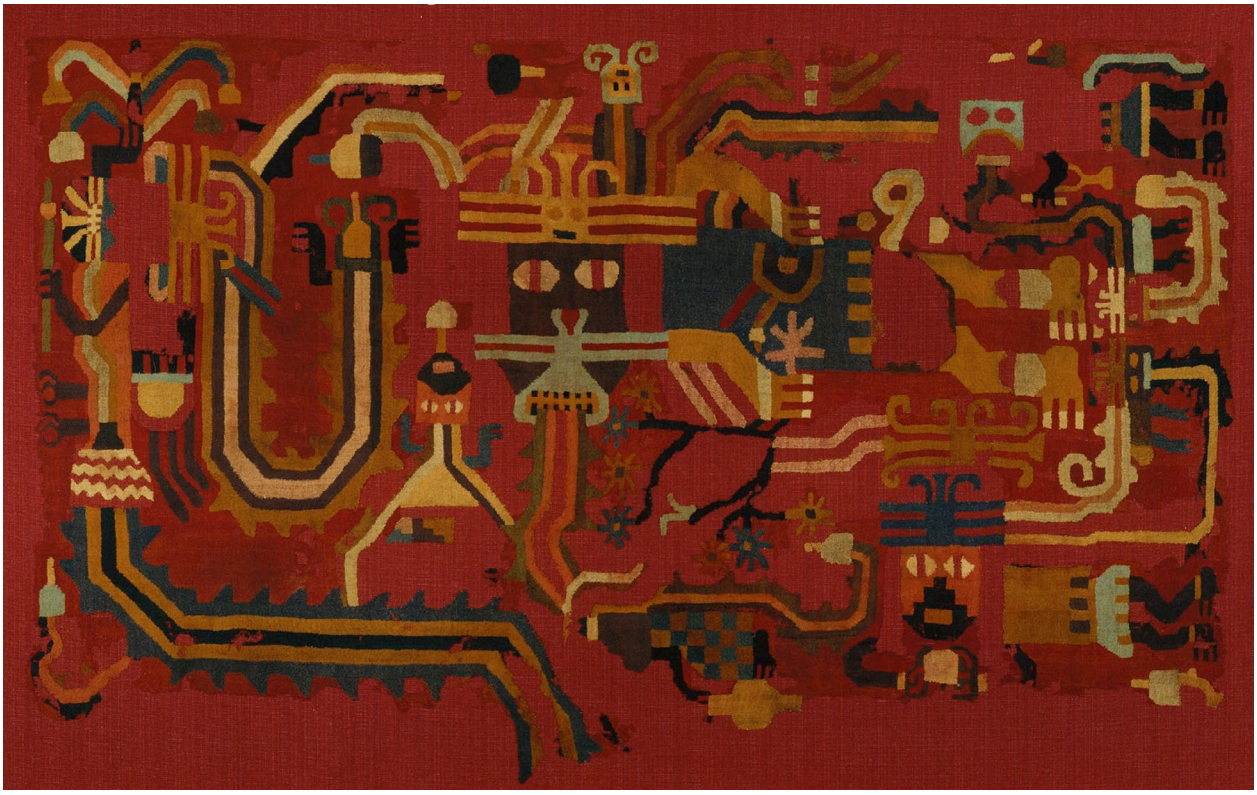

Fig. 14 Detail 1: Fragments of a Hanging. Camelid hair plain weave, discontinuous warp and weft. Peru. Paracas-Nasca transition. Early Intermediate Period. About A.D. 200. Museum of Fine Arts, Boston. Edwin E. Jack Fund 67.313 a-d. Photograph ©2017 Museum of Fine Arts, Boston

Fig.15. John Cohen photograph: setting up a discontinuous warp in Q'ero, Peru, 1970s. Courtesy John Cohen.

Fig. 16. Detail (2) MFA Boston (see Fig. 14, above)

beautiful piece from the Musee de L'homme with its delicate curvilinear style.[40] Or the extraordinary examples in the Boston Museum (see Fig. 14) and the Brooklyn Museum.

The technique itself was constructed in many formats-- sheer and balanced plain weave, as well as warp-predominate, and warp-faced plain weave—with or without patterning and with or without discontinuous wefts. The proliferation of this most unusual technique in such far-reaching variations is one of these almost unexplainable Andean phenomena.[41] The creation of these textiles—apart from their conceptualization-- begins with the warping process which was fundamental to the design creation.

How these textiles were constructed is only partially understood. Contemporary highland weavers persist in the weaving of warp-faced and warp-patterned examples, using what is generally referred to as a "six stake loom" so beautifully documented by John Cohen in his film from the 1970s.[42] Color changes in the warp can take place at the central bar secured to the additional two stakes. [Fig. 15] A few archaeological examples have been preserved that retain multiple scaffolding elements required to maintain the warp tension for weaving more complex designs-- either with cords or sticks.[43] One rare unwoven warp with its pattern established using rigid canes is preserved in the Royal Museum, Brussels.[44]

Unlike the majority of examples of discontinuous warp that use a rectilinear grid pattern—large or small, the rare—and early-- examples that use curvilinear designs, and on a very small scale—as I have shown from Brooklyn and MFA, Boston as well as Musee de l'Homme is less understood: but required something more flexible for the artist to achieve their images.

I had the extraordinary opportunity more than 30 years ago to examine close up the Brooklyn Museum example under magnification, and was able to see remnants of a very

40. Former Musee de l'Homme accession number 68.7.7

41. In 1983, when I wrote my Master's thesis on the subject I tried to examine and identify the many variations of the technique—looking at the range of examples in time and space. Phipps, E Discontinuous Warp in Andean Textiles. Columbia University, MA thesis. (unpublished.) 1983.

42. John Cohen book (with cd's of the film). *Past Present Peru*. Steidl, 2013.

43. See for example, Strelow, Renate. Gewebe mit Unterbrochenen Ketten aus dem Vorspanischen Peru. (Pre-Hispanic Textiles with Discontinuous Warp). Berlin: Staatliche Museen-Preussischer Kulturbesitz, 1996.

44. See E. Phipps. MA Thesis, *Discontinuous Warp and Weft in Peruvian Weaving*. Columbia University 1982.

Fig. 17a. Trapezoidal shirt. Camelid hair, warp-faced plain weave with discontinuous warps at shoulder stripe. 12-14th c? Centro Malqui, Ilo, Peru. Photo: Yutaka Yoshi.

fine fiber – not identified but likely a stiff, vegetal fiber—that appears to be forming a fine set of scaffolding elements—perhaps even a grid upon which the warps and wefts would have been introduced with needles. The development from a technical perspective is one thing--but the motivation and values that is implied, is another.

We cannot really understand WHY this system was developed, and WHY it was so important to create textiles with 'pure' color areas, that were reversible front and back, that were sometimes created to depict important mythological and/or iconic religious imagery and at other times more abstract elements using this technique. To help address this issue, however, I would like to examine an example of another piece from the far south coast, from hundreds of years later, which I think sheds some light onto the subject in a basic way. [Fig. 17] The piece is a striped "camisa" from Ilo, near Moquegua in the south coast of Peru and is the type of garment associated with this region (as far south as Arica in Northern Chile.)[45] It was woven in a trapezoidal shape during likely around the Late Intermediate Period, ca. 12-14th c. The creation of the trapezoidal shape is a very interesting subject, but has been

45. Minkes, Wynne, "Warp the Loom – Wrap the Dead Trapezoid shaped textiles from the Chiribaya culture, South Peru, AD 900-1375" (2008). Textile Society of America Symposium Proceedings. Paper 232. http://digitalcommons.unl.edu/tsaconf/232

Fig. 17b. Detail of shoulderline.

Fig. 18. Aymara ritual tunic. 19th c? (Private Collection)

discussed elsewhere.[46] For the present discussion, the focus is on the two outer stripes and the color change that occurs at the shoulderline, the blue stripe that is on the front, becomes a red stripe at the back.[47] It's a little detail, but one, just like all other discontinuous warp textiles, requires additional planning in the set up of the warp. And my question is WHY? What is so important about red and blue—in this case—that a weaver will go through this effort to create this change of color?

Perhaps three or four hundred years later, in the highlands of Bolivia, which if one examines the cultures of the region that may in fact be somehow not too distantly related, we can see this same phenomena in the ceremonial tunics of the Aymara people [Fig. 18]. And while again, we have no explanation for this, somehow the association and transposition of these two colors—red and blue—were of sufficient significance that a whole weaving tradition is adapted in order to produce it. In this case, however, we know again, from Colonial documents, such as the early 16th century dictionaries, among others, that red and blue garments were part of the coming of age ceremony of Paucar Uaray, and the first hair cutting rituals. These "sucullu" garments as they were called, consisted of—for males, blue with some red, and for females, red, with some blue.[48]

There is so much to examine in this relationship between cloth and garments associated with sacred activities in the Andes. We can see that their materials and colors form an integral part of their use and meaning. The agency of cloth generated in the context of their materiality warrants further study: this present paper can only begin to touch the surface of these issues.[49]

46. E. Phipps 2009 Woven to Shape: a Pre-Columbian trapezoidal tunic from the South Central Andes in the Metropolitan Museum of Art." *In Proceedings*: *Textiles as Cultural Expressions: 11th Biennial Symposium Textile Society of America* 2008. Electronic Omnipress. (7 un-numbered pages). http://digitalcommons.unl.edu/tsaconf/126

47. See also Dransart 2000 : 130–131, 144. Dransart , P. 2000 . 'Vestirse en los períodos tardíos del centro-sur peruano.' In *Actas de la I Jornada Internacional sobre Textiles Precolombinos*, Solanilla Demestre , V. (ed.): 127–153 . Barcelona : Grupd ' Estudis Precolombins. Dransart, P. and Wolfe, H. 2011. *Textiles from the Andes*. Fabric Folios. London: British Museum Press.

48. See E Phipps. *Sucullu* garments, *Colonial Andes* Cat number 89. pp 273-276. Also Phipps, pg.71, 73 Woven Documents: color, design and cultural origins of the textiles in the Getty Murúa (pp 65-84) in *Manuscript Cultures of Colonial Mexico and Peru: New Questions and Approaches* edited by Thomas B. F. Cummins, Emily Engel, Barbara Anderson, Juan Ossio. Los Angeles, Getty Publications. 2013. See fol 238 [240] GKS 2232: Guaman Poma, Nueva coronica y buen gobierno (1615) Det Kongelige Bibliotek, http://www.kb.dk/permalink/2006/poma/240/en/text/?open=id2974245

49. The second part of the original presentation for this conference will be published in a forthcoming essay.

9

Introduction into the history of the textile collection at the Ethnological Museum Berlin

Beatrix Hoffmann, Bonn/Berlin

Abstract

When the Ethnological Museum at Berlin was founded, it counted already with several hundred pieces from South America. Only a minor part them belonged to pre-Columbian cultures from the Andes. While most of these pieces were ceramics almost no ancient fabrics could be found in the collection. This reflected the collector's interests focusing on objects made of ceramic, stone or metal and on human remains. Consequently, the first pieces of fabric reached the museum at Berlin as parts of mummy cloths. This did not change until 1879, when the collection of Reiss and Stübel was acquired for the museum. It was the result of the comprehensive saving of all finds from their archaeological excavation activities in Ancón. At the same time, this material has to be considered the foundation of Berlin's famous textile collection.

The paper traces the development of this collection from its early years until the major acquisitions in the early 20thcentury. It is suggested that the establishment of textile research as an own branch of Andean archaeology was closely linked to this collection.

Keywords: collection history, textiles, Ethnological Museum Berlin, Macedo, Gretzer

Introducción a la historia de la colección textil en el Museo Etnológico de Berlín

Resumen

Cuando se fundó el Museo Etnológico en Berlín, ya contaba con cientos de piezas procedentes de Sudamérica. Solamente una minoría pertenecía a las culturas pre-Columbinas de la región Andina. Mientras la mayoría de estas piezas eran de cerámica, no habían textiles antiguos en la colección. Este reflejaba el interés de los coleccionistas, que se enfocaba en objetos fabricados en cerámica, piedra o metal, y en los restos humanos. Consecuentemente, las primeras piezas textiles llegaban al museo en Berlín como parte de las envolturas de momias. Esto no cambió hasta 1879, cuando se adquirió la colección de Reiss y Stübel para el museo. Era el resultado de la conservación comprensiva de todos los hallazgos de sus actividades de excavación arqueológica en Ancón. A la vez, este material se debe considerar el fundamento de la famosa colección textil de Berlín.

El ensayo traza el desarrollo de esta colección, desde sus primeros años hasta las adquisiciones mayores en el inicio del siglo XX. Se sugiere que el establecimiento de las investigaciones textiles como un campo propio de la arqueología andina ha sido ligado fuertemente a esta colección.

Palabras claves: la historia de colecciones, textiles, Museo Etnológico de Berlín, Macedo, Gretzer

> *"But the most important [things] for our knowledge about the cultural situation of the indigenous population are the woven textiles, which indicate a high level of development of these Indians." (Wilhelm Reiss 1879: 294).*

Ancient textiles from the Central Andes and adjacent coastal regions to the north and south possess an immeasurable relevancy for the research on pre-Columbian cultures of this area and the reconstruction of their history. Today, the research on pre-Columbian textiles forms its own branch of Andean archaeology. The development of this research field is closely linked to the pre-Columbian collections of the Ethnological Museum Berlin (EMB), the former Royal Museum of Ethnography (Königliches Museum für Völkerkunde Berlin, KMfVB). Their origins date back to the very early years of the museum in late 19th century and are based on some pieces send to the museum in 1874 and mainly on the

archaeological material that Wilhelm Reiss (1838-1908) and Alphons Stübel (1835-1904) assembled during their excavations at Ancón in 1874/75. Adolf Bastian (1826-1905), the first director of the KMfVB purchased this material in 1879, only some years after the museum's foundation in 1873. The new acquisition raised the number of textiles considerably and turned the museum into one of the most important holders of ancient Peruvian textiles at that time. Until today the museum holds this position, as it still possesses one of the worldwide most important textile collections from the central Andes outside of Peru.

Since the museum continued to purchase archaeological collections from Peru until well into the 20th century, the textile collection grew constantly and became an important research basis. The comparatively easy accessibility of this material at the KMfVB might have been a main reason why the first analytic texts about pre-Columbian fabrics were published out of this museum (Schmidt 1908, 1910, Seler 1916). The fruitful combination of a research basis, scientific expertise, and publication facilities led to the initiation of a new research field: the analysis of pre-Columbian textiles and the use of the results as a source for the reconstruction of the Andean prehistory.

Roots of the collection of Peruvian antiquities at Berlin

When the KMfVB was founded in late December of 1873[1] it started already with a small South-American collection of some 700 ethnographic and archaeological pieces. Formerly these ethnographic objects belonged to the *Royal Prussian Art Chamber at Berlin* (Königlich-Preussische Kunstkammer in Berlin), and were exhibited at the *New Museum* since 1856 (Bolz 2007: 183), while the museum itself was completed and officially opened only in 1859. The *Royal Art Chamber* received the first Peruvian ethnographic and archaeological objects in 1829. Leopold Freiherr von Ledebur (1799-1877), the curator of the *Royal Prussian Art Chamber* acquired them from the *Princess Luise*, a ship of the Prussian Society of Maritime Commerce (Preussische Seehandelsgesellschaft). Until 1850, the South-American collection stayed very small – it comprised for instance only 25 objects from Peru, at least ten of them were pre-Columbian ceramics, and there were no textiles.. This small number of pre-Columbian pieces from Peru at Berlin's collection is quite striking, since we know about a lively scene of antiquitiy collectors in Peru at the latest from the mid-19th century on (Gänger 2015). Nevertheless the growth of the collection in Berlin did not speed up for more than 20 years. Only in 1872, when Adolf Bastian was already in his third year working as Ledebur's assistent (Bolz 2007: 185) and responsible for the ethnographic collection, two considerably larger collections of Peruvian antiquities were acquired for the *Royal Prussian Art Chamber*. The acquisition became possible thanks to the engagement of the German Consul in Callao/Peru, Theodor von Bunsen (1832-1892). He mediated the selling of the collection[2] gathered by Otto Antonio Heredia and he encouraged the German Consul in Arica/Tacna (Peru), Carl Eulert, to sell his private collection to the museum in Berlin as well. These two collections are the first ones, which contained several pieces of pre-Columbian textiles, because they included not only a naked mummy from Licerra near Arica (VA 462) but also three dressed mummies: from Carabella (VA 403), Chincha Alta (VA 404, fig. 1) and Chancay (VA 405). These three mummies belonged to Heredia's collection, while the one from Arica was collected by Eulert. These fabrics are among the first samples of pre-Columbian textiles that reached Berlin and became integrated into the museum's collection. In the same year, two other pieces of pre-Columbian textiles entered the museum: one was a piece of textile from Macabí island and the other one was a *chuspa* or coca-bag from a burial ground near Arica. Both were acquired from the Christy collection at London by exchange – a collecting practice very common among ethnographic museums well into the 20th century (cf. Hoffmann 2010, 2012).

The number of the objects belonging to different material categories, like ceramic, stone or metal, indicate that textiles were not in the focus of collectors but rather an addition to the mummy bundles or finds of human remains. Ceramics made up the largest part of the early Peruvian collection, even though humain remains were considered to be the most important part of pre-Columbian archaeological collections at this time. As the inventory of Heredia's and Eulert's collection shows, both start with a mummy. Early publications on Peruvian antiquities also reflect this preference and, for instance, begin their illustrations with human remains (cf. Tschudi and Rivero 1851, Reiss and Stübel 1880-1887).[3] Obviously, at this time – the years before the foundation of the ethnological museum at Berlin – , mummies had still a strong aura of exotism and rareness. In the 19th century,

1. The exact date of the Royal order to create an ethnological museum was the 27th December 1873. It took another 13 years to construct a seperate building, so actually the Royal Museum of Ethnography Berlin came into life only in December 1886 (Westphal-Hellbusch 1973: 14).

2. Cf. E 771/1872 (SMB-EM, Acta betr. d. Erwerbg. Amerika. Vol. 2.).

3. To be exact: Reiss and Stübel give first an impression of Ancón's landscape, but the figures of their archaeologica finds start with human remains.

Fig. 1. A female mummy from Chincha Alta, Peru (VA 404, coll. Heredia). The textiles wrapped around the mummy belong to the earliest, which became integrated into the ethnographic collections of the Royal Prussian Art Chamber in 1872, the founding stock of the current Ethnological Museum in Berlin. Photo: Staatliche Museen zu Berlin – Ethnologisches Museum, Waltraut Schneider-Schütz.

the majority of the mummies stored or shown in European museums or otherwise publicly accessible places, like for instance pharmacies, came from Egypt (cf. eg. Bernschneider-Reif 2007: 201ff). The exotic aura of the mummies could be seen as reminiscent of an object category called *mirabilia* (Laube 2015: 184), which basicly shaped the European *Chamber of Curiosities* („Wunderkammer") and the related production of knowledge.

The great importance attached to mummies becomes also apparent from José Mariano Macedos (1823-1894) correspondence with Bastian, who had asked him for detailed information on the provenience of the quipus of his collection (VA 4319 a-c). Macedo explained, that they have been found attached to a mummy, which was sold to the owner of a store selling ready-made clothes in Lima: *„El manojo de quipus que figura en la colección fue encontrado en una huaca de Ancón formando parte de los adornos de una momia o más bien dicho entre pecho y brazo de la momia. El grupo de quipus fue solo parte de un gran manojo de Quipus que con la momia he habia vendido al dueño de la tienda de ropa hecha[...]."* [4] Although Macedo went to the shop owner immediately after he had learned about the mummy's delivery, he could not acquire it because it was already reserved for somebody else. From the correspondence it is unclear, if Macedo wanted to acquire the mummy because of its rarity or out of a sense of completeness and contextalization for his *quipus*. But concerning the largely decontextualized caracter of his collection, we may consider the exotism as the reason for his desire. Most parts of the pre-Columbian collection in today's Ethnological Museum Berlin are largely de-contextualized. There is only one important exception: the collection of Reiss and Stübel.

Formation of a textile collection at the Königliches Museum für Völkerkunde, Berlin

The two German geographers and "scientific travelers" Reiss and Stübel explored the South American continent between 1868 and 1876. According to Meyer (1905: 64) their travels through the Andes have been the: *"The most profoundly prepared, most fruitful cientific journey of the the whole history of American discovery"* (translation by author). Reiss and Stübel arrived in Lima in October 1874. They could not immediately continue their journey to the Amazon as it was planned, because Stübel became sick (Reiss 1921: 148). Therefore, they moved to Ancón some 42 km north of the capital and stayed there several months - until February or even March of 1875.[5] By then Ancón was small fishing village, which only some years before had been transformed into a sea resort – after the railroad connection to Lima was opened in 1870.[6]

For a long time, Ancón and its surroundings had been known to grave diggers, or robbers, (*huaqueros*) as an

4. Letter from M.J. Macedo to A. Bastian, London, 10th May 1882. (E 453/82, SMB-EM, Acta betr. d. Erwerbg. d. Slg. Macedo).

5. Stübel wrote a letter from Ancón in late February 1875 (Hönsch 1994: 34) and Reiss mentioned in a letter, they had left Lima at the 25th of March 1875 (Reiss 1921: 150).

6. http://ferrocarrilesdelperu.blogspot.de/2013/01/ferrocarril-lima-ancon-chancay-huaral.html (20th of September 2016).

ancient burial place. According to Bastian (1878: 51), the *huaqueros* exploited the site occasionally, basically in search for precious metal. In the course of the constructions for the railroad, numerous pre-Columbian burials were opened and the place became famous among antiquarians, collectors, travelers and scientists as a mayor archaeological site. So, when Reiss and Stübel went there, it was only a short while after Ancón had become known for it's ancient cemetery. After they had visited the site and had seen a burial's rich interior containing household effects and extraordinary clothing (see Hönsch 1994: 34, citing a letter from Stübel to his family), the two scientists decided to use their prolonged stay for an archaeological excavation.

According to Stübel, they based their excavation concept on the aim to collect: *"...all things, which could characterize the cultural level ("Kulturstufe") of these indigenous people from South America."* (translation by author).[7] With this methodological approach they did pioneering work in practical archaeology. As Riviale (2000: 342) pointed out, in the era before Reiss and Stübel excavated at Ancón it was not common for archaeological excavations in South America to save all the discovered material of human origin: *"... la idea de recolectar la totalidad de objetos presentos en una tumba no debía tomar forma solo a fines del siglo XIX. Entre los primeros, Reiss y Stübel emprendieron la tarea de describir sistemáticamente el material hallado en las tumbas excavadas en Ancon en 1874/75.".*

In addition to their innovative methodological approach, Reiss and Stübel were also the first scientists who put a strong focus on pre-Columbian textiles and made their existence known to a larger scientific community by publishing their excavation finds between 1880 and 1887 in three large volumes under the title: *"Das Todtenfeld von Ancón"*. Before this publication, only a few other books, as for instance the *„Antigüedades peruanas"* by Johann Jacob von Tschudi and Mariano Eduardo de Rivero (1851) and *"Perou et Bolivie"* by Charles Wiener (1880) depicted textiles in a limited number. These two publications reflect the first steps toward the recognition of textiles as a mayor source of archaeological knowledge, while their scientific value was still quite restricted. The folio by Tschudi and Rivero depicts textiles only on two pages, while Wiener's book reproduces quite a lot of textiles but has severe inaccuracies relating to their provenance, according to Reiss and Stübel (1880-1887: n.p.).

The two scientists recognized not only the beauty of the ancient textiles (Reiss 1879, Stübel 1888), but also their enormous scientific value, and made their awareness public. So, in July 1879, when Reiss gave a lecture about Ancón's burial traditions at the Anthropological Society of Berlin (Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte, BGAEU) he underlined explicitly the special value of pre-Columbian textiles. Reiss referred to the fabrics as *"most important for the knowledge on the culture of the Indian population"* (1879: 294). Consequently, Reiss and Stübel put a mayor focus on the depiction of fabrics in their magnificent publication of the excavation finds. The entire second volume plus some pages of the first and the third volume of the three folios are dedicated to fabrics: in total more than 235 single pieces were depicted, which was almost half of those recovered (figs. 2-4). The associated texts are very detailed descriptions of the reproduced pieces, comprising information about the material, the manufacturing technique, the designs and colors. They make this the first comprehensive publication on pre-Columbian textiles deriving from a specific archaeological site, in contrast to Wiener's book, which contains only selected examples for the mentioned sites. At the same time, Reiss and Stübels publication was in general the first large scale publication on a scientific excavation in Peru, which itself was the first in all South America (cf. Haas 1986: 7, Horkheimer 1965: 48, Rowe 1959: 3). For this reason, not only the excavation itself but also the archaeological finds had and still have an enormous scientific value.

Since Reiss and Stübel sought to recover all finds of the excavated graves and since most of the burials were wrapped into numerous pieces of textiles, their collection comprised a large number. In total, the collection sold to Berlin counted 462 textiles, plus 120 bags and 20 grave tablets (fig. 5), which was about a quarter of the whole collection. Furthermore, it comprised 39 false heads made of fabric, 48 pieces of thread, rope and string, several pieces of headgear and feather work and some 33 nets (Haas 1986: 68f). When this collection of about 2000 pieces[8] was acquired for the KMfVB, it did not only increase the pre-Columbian collection considerably but actually constituted the core of it's famous and outstanding textile collection, a status which lasts until now. In connection with the publication of almost half of the textile collection, we might consider the work of Reiss and Stübel as the origin of research on pre-Columbian textiles and as the starting point of its development as a branch of Andean archaeology. During the subsequent years, we see a growing number of scientific works on pre-Columbian textiles. Most of these early papers, manuscripts and later also parts of books based on the textile

7. Letter A. Stübel to his family from Ancón, 26th February 1875 (cf. Hönsch 1994: 34).

8. It is difficult to give an exact number of the pieces: Haas (1986: 69) mentions 2284 pieces, according to the inventory the collection comprises 1.714 numbers and 1.942 single objects.

Fig. 2. Fragment of an *uncu* (Reiss and Stübel, 1880-1887: Vol. 2, Tafel 47).

Fig. 3. Fragments of textiles with different patterns (Reiss and Stübel, 1880-1887: Vol. 2, Tafel 54).

Fig. 4. Different bags (Reiss and Stübel, 1880-1887: Vol. 2, Tafel 73).

Fig. 5. Grave tablets, textile pieces painted with black and red, stretched above a frame made of cane. The tablets were associated with the mummy bundles, either sticking in the cloths or next to it in the ground (Reiss and Stübel, 1880-1887: Vol. 1, Tafel 33a).

collection of the Ethnological Museum Berlin include also material collected by Reiss and Stübel. One of the first publications is a paper by Stübel from 1888 about design development in pre-Columbian textiles. In the same year Max Uhle[9] (1856-1944) described and analyzed 21 textiles collected by Stübel at Ancón and Arica. In this still unpublished manuscript, Uhle referred several times to the textiles of the Ancón collection at Berlin.

When Adolf Bastian aquired the Reis and Stübel collection for "his" museum at Berlin, he already knew of it's scientific relevance and outstanding value. Bastian visited Ancón in July 1875 (Bastian 1878: 50f) - only some months after Reiss and Stübel had finished their excavations there and had left Lima on the 25th of March (Reiss 1921: 150). Bastian received a short impression of the digging activities at the prehistorc burial place. He mentioned in his travel report „*Die Culturländer des Alten America*" (1878), that *huaqueros* also dug at Ancón and brought their finds to Lima. These peddlers[10] – as Bastian called them (1878: 48) – split the collections and separated the interesting pieces from all the other objects in order to offer them for sale. So because the collection of Reiss and Stübel contained all the finds from the graves, the excavation had a scientific perspective and according to Bastian's value, was highly important and precious.

Bastian himself stayed in Ancón only one night. Nevertheless he used this stay to rapidly conduct a small excavation at the necropolis (Fischer 2007: 193). But, in constrast to the official purpose of his journey to South America Bastian's primary concern was not to form thoroughly collections by himself (e.g. by own excavations or by purchase from the market or even from *huaqueros*). Rather, he promoted his idea of an ethnological museum as an „*Universal Archive of Humanity*" (Fischer et. al. 2007) among prospective stake holders and supporters, who would defend German interests and for collectors in order to acquire their collections or at least parts of them. While he met with German representatives, entrepreneurs or scientists in search for information about important places to go to or people to meet, he encouraged them at the same time to collect themselfes for the KMfVB. Bastian also tried to inspire German consuls to support his activities, by informing him about collections for sale or convincing owners to sell their collections to Berlin.

In relation to the duration of Bastian's nine-month stay in South America (June 1875/Valparaiso, Chile – March 1876/Barranquilla, Columbia) and the official aim of the journey, it's outcome in terms of the quantity of objects brought to Berlin was rather small. The archaeological collection comprised only some 1750-1800 objects.[11] Due to his strategy, a considerable part of these objects were collected by at least 23 other collectors, like Johannes Luerssen or Louis Sokoloski (cf. Fischer 2007: 205). Consequently, Bastian's collection reflects the contemporary preferences of local collectors or antiquarians and demonstrates, that textiles were still not in their focus. Bastian brought only a few textiles to Berlin and as in the earlier collections, some of the fabrics belonged to mummy bundles (e.g. VA 2235, a dressed mummy with a fabric bag from Chiu-Chiu/Chile). Other pieces were wrappings of wooden figurines (e.g. VA 1447 from Ancón, fig. 6). But Bastian's collection comprised also several *uncus*, *chuspas* and other bags (e.g. VA 2226, VA 2222, VA 2357 and VA 2359), and baskets with weaving supplies (e.g. VA 1784, VA 1787, VA 1795 and VA 1796). In addition about 250 implements for the production of textiles belonged to the collection.

Development of the textile collection

As already mentioned by Eisleb (1973: 178f) and Fischer (2007: 205), the main result of Bastians journey to South America was the network of collectors for and supporters of the museum that he had established. This network was a mayor means to guide a substantial stream of ethnographic and archaeological collections to the KMfVB during the subsequent years. Some of the collections that he had visited in Peru were later purchased for the Berlin museum, as for instance that of José Mariano Macedo[12] and that of Ana Centeno, bought respectively in 1882 and in 1888 (c.f. Gänger 2015: 88). While Centeno's collection did not contain a significant number of textiles, the Macedo collection had quite a lot of of them.

9. Legacy Max Uhle, „*Über Gewebe von A. Stübel aus Arica und Ancon.*" (N-0035 w 85, IAI SPK Berlin).

10. Although Bastian used the derogatory word "peddler" one rather has to count with antiquarians, who sold finds from Ancón, since at Lima existed already a well-established antiquity market by this time (cf. Gänger 2015).

11. It is very difficult to give an exact number of the South-American pieces, which Bastian brought to Berlin in 1876. Fischer (2007: 205) mentions 1.748 archaeological objects, but according to the inventory there must have been almost 1.800, plus five ethnograhic objects (VA 668, VA 670, VA 672, VA 675, VA 1687). In addition Bastian brought about 1.350 pieces from Meso-America to Berlin.

12. In his published travel report Bastian does not explicitly mention a visit at Macedo's house, but Macedo himself mentioned the visit in a letter to Bastian. But Macedo got confused with the year, because he indicated 1876 instead of 1875 (J. M. Macedo, letter to A. Bastian, Paris, 21st July 1888, E 453/82, SMB-EM, Acta betr. d. Erwerbg. d. Slg. Macedo, SM EMB-SPK). A further proof of Bastian's direct contact with Macedo are some pieces, which Bastian purchased from him: e.g. VA 684, VA 928, VA 931, VA 932 and VA 934.

Fig. 6. Wooden figurine from Ancón with textile wrappings (VA 1447, coll. Bastian). Photo: Staatliche Museen zu Berlin – Ethnologisches Museum, Ines Seibt.

The origin of Macedo's collection dates back to the late 1850s – probably 1858, after he had received the chair for anatomy at San Marcos University in Lima (Gänger 2015: 115). During the 1870s Macedo's collection was already quite famous and attracted other collectors but also travellers and scientists. According to Paz Soldán (1945: 17) in 1876 Macedo opened his private house to give a larger public access to the collection. He also made his collection known outside of Peru by presenting pieces in international exhibitions. The Archaeological Museum of Krakow has 18 photographic plates, which show pieces of the Macedo collection (Wołoszyn 1998: 16, Szymańska and Brabaj 1998: 12). The photographic plates supposedly had been presented at the World Exhibition of Paris in 1878 and came to Krakow as part of a collection by the Polish engineer Wladisław Kluger (1849-1884).

The mayor part of Macedo's collection, some 1,200 pieces, were ceramics. The collection became especially famous because of the large number of Recuay ceramics, but also because of its *quipus* (VA 4319 a-c). Furthermore, it contained objects made of stone, metal, shell and wood, three mummies (VA 4597 - VA 4599 from Cuzco and Chancay) and several incomplete human remains. Last, but not least, in comparison to other contemporary collections, except the one of Reiss and Stübel, the collection contained a considerable number of textiles, almost 10% of the inventory numbers. In January of 1881, Chilean troops arrived at Lima in the course of the "Pacific War" between Peru, Chile and Bolivia (1879-1884) and caused Macedo to save his collection by taking the largest part of it to Paris.[13] There it was exhibited for sale, and finally acquired by the KMfVB in 1882. Although the total number of textiles comprised only some 250 pieces (mainly VA 4333- VA 4578), it was at that time the second largest number of pre-Columbian textiles, which was acquired for the KMfVB – after the Reiss and Stübel collection. As indicated by Macedo's catalogue, all the textiles came from Ancón.[14] Some particularly beautiful pieces indicate that Macedo's selection of textiles is based on a delicate aesthetic taste. The collection comprises several *uncus* and beautiful cloths with figurative designs and embroideries. The collection does not only comprise pre-Columbian pieces, but also some of the colonial era, as for example one *uncu* (VA 4577, fig. 7 a&b). It has a red and a blue side and the yarns were not only made of wool but also of silk. Both aspects are indications for its origin in colonial times (see Hoffmann et.al. 2005: 19).[15] Macedo added to his collection a very detailed list of the objects. This list

13. According to a note in an inventory, Macedo started a new collection out of pieces, which had left behind in Lima in 1881 (cf. E 453/82, Acta betr. d. Erwerbg. d. Slg. Macedo, EMB-SPK).

14. Cf. *„Catálogo de la colección de Antigüedades Peruanas del Dr. José M. Macedo"* p. 71f. (E 453/82, Acta betr. d. Erwerbg. d. Slg. Macedo, EMB-SPK).

15. As Lena Bjerregaard comments (personal communication), the embroydery with silk yarn could also have been applicated after conquest on an older textile.

Fig. 7a&b. Uncu from the Macedo collection (VA 4577). Photo: Staatliche Museen zu Berlin – Ethnologisches Museum, Claudia Obrocki.

shows that Macedo was very familiar with his collection, since he indicated, for instance, the material used for weaving and distinguished between cotton, hemp, agave, vicuña- and alpaca-wool.[16]

At the end of the 19th century the museum received one of its largest collections of ancient Peruvian antiquities. It was given to the museum in 1899 by Arthur **Baessler** (1857-1907), thanks to another strategy of Bastian's collecting policies. He had not only instructed local people to pursue his interests but he also used his knowledge to instruct other persons travelling the world to acquire collections for the museum. A major example for this strategy was Baessler, who is until now the most important and generous patron of the museum. The museum owes to him several important collections, all of them received as donations. From his third long-time journey (1895-1898) Baessler brought more than 11,000 pre-Columbian antiquities to Berlin, most of them from Peru. In 1898 Baessler spent some time in Lima, where he met Christian Theodor Wilhelm Gretzer (1847-1926) following a recommendation from the museums staff in Berlin. Gretzer was one of the most important collectors of pre-Columbian antiquities by that time in Lima and he sold his collection or at least a large part of it to Baessler. Because the collection contained some 2.000 textiles Baesslers donation not only doubled by far the museums' stock of pre-Columbian antiquities in Berlin, it also increased considerably the number of its textiles.

The pinnacle of textile acquisition: the Gretzer collection

Baessler's donation, containing a large number of objects bought from **Gretzer** laid the foundation for the acquisition of one of the largest collections of Peruvian antiquities – if not *THE* largest one – that existed at this time in private possession. It was the second collection from Gretzer, which he created after he had sold the first one - or at least a large part - to Baessler. Gretzer was a German textile merchant from Hannover, who lived in Lima between 1873 and 1903/04 (fig. 7). Soon after he came to Peru and settled himself in Lima he started intense collecting activities. His engagement in gathering collections of natural history and, more important, pre-Columbian antiquities was a passion

16. We don't know Macedos criteria to determine the fibers and probably not all of his specifications are correct. Especially hemp is very unlikely to have been used, instead it is more probable, that Furcraea Andina, a South American agave was used (personal communication Lena Bjerregaard).

for Gretzer but quite probably also a means to get access to the Peruvian high society as an important precondition for the success of his business (cf. Hoffmann, in press). While Bastian does not mention him in his travel report, Gretzer was well-known in Lima as owner of a large collection of Peruvian antiquities at the end of the century. As noted by other travelers to Lima, like Carlos Götting (cf. Haase 2006), and as an announcement preserved on a photo belonging to Gretzer's legacy in the Museum at Hanover suggests, he also acted as merchant of his antiquities or at least offered his collection partially for sale. During his last years in Peru, he not only continued his collecting activities but even intensified them. In a course of only 4 to 5 years, until 1904, when he left Peru to go back to Hanover, he collected more than three times as many pieces of Peruvian antiquities than he had sold to Baessler. This enormous intensification of his collecting activities was quite probable not only due to Gretzer's interest in pre-Columbian cultural history and an aesthetic passion based on his profession. By the end of the 19th century Gretzer had clearly developed a financial interest in collecting pre-Columbian antiquities.

Shortly after his return to Germany, Gretzer offered his collection for sale, first to his hometown, which could not afford it. In 1906 Max Schmidt, the curator for South America in the Museum in Berlin heard about the collection being on sale and became immediately involved in its successful acquisition. Since Gretzer had an interest in reunifying his collection and in keeping it together in one museum, Berlin was in an advantageous position to buy the collection. The transfer was completed in March 1907, and soon after its arrival in Berlin a larger number of pieces was shown at the nearby Museum of Applied Arts. With more than 33,000 pieces, until today this collection is the largest one ever acquired for the present-day Ethnological Museum Berlin.

In contrast to Gretzer's first collection, the second one was not only three times as large but contained also about five times as many textiles, about 10,000. Gretzer's widow described in her memoire (1955) the collecting strategies of her husband. According to her memory he used to hire *huaqueros* for the excavations and told them precisely where to dig. On their return, Gretzer examined the delivered material and selected the pieces he considered to be worth keeping, everything else was thrown away. Gretzer's growing focus on textiles might have had its origin in his profession as a textile merchant but practical considerations in relation to his plans to go back to Germany might have played a role as well. The transatlantic transportation of larger quantities of textiles was much easier to manage than that of objects made of clay, wood, stone or metal. Textiles needed less space and were less subject to destruction by outside forces.

Fig. 8. Huaquero Matiquaena (?) next to a mummy bundle. From the collection Wilhelm Gretzer, Bildarchiv VK (5_1_1125), Landesmuseum Hannover.

The provenances of the textiles from the second Gretzer collection point to a new chapter in early Andean archaeology. While Gretzer's first collection contained mainly pieces from the central coast north of Lima and further north, the second collection contained a major number of textiles from Pachacamac (8.350), some 40 km south of Lima. Through his archaeological escavations in 1896/97 the German archaeologist Max Uhle (1856-1944) made Pachacamac once again to the public as an important pre-Columbian ritual center and an ancient burial place (Uhle 1903). As such it became an important source for the acquisition of pre-Columbian textiles, since the mummy burials were wrapped in several layers of fabric. Furthermore, the second collection reflects also a growing archaeological interest in the Peruvian south coast, which led to the first discoveries of archaeological sites in this region. Gretzer's first collection did not contain any fabric from the south coast, while the second one had 520 textiles from Ica, 25 from Ocucaje, and 34 from Pisco.

Completion of the textile collection

While the acquisition of Gretzer's second collection marked the pinnacle of the development of the Andean prehistoric collection in terms of quantity, a collection of Peruvian antiquities gathered by the director of the American department and curator ot the American collection at the museum marked it in a scientific sense. In 1910/11 for the first time a curator from the KMfVB, Eduard Seler (1849 -1922), traveled to South America. Besides other countries, Seler also visited Peru (Seler 1915). Together with his wife Cecilie Seler-Sachs (1855-1935) he collected several hundred pre-Columbian antiquities during his journey. In addition to ceramics and objects made of wood, shell and metal, the collection comprised also about 450 textiles – either complete or fragments as indicated in the catalogue.

Although the museum continued to purchase pre-Columbian fabrics from time to time until well into the 20th century, the acquisition of Seler's and a third, but rather very small collection of Gretzer mark the general conclusion of the development of textile collection at the KMfVB. For the last time, in 1924 Gretzer sold 130 textiles to the museum. It was a selection of very fine and valuable textiles that belonged to Gretzer's private collection, kept until then. As in Lima, for his house in Hannover Gretzer had used his private collection for decoration. But in 1924, due to severe inflation, he felt himself forced to again make money out of his collection by selling it in part. Gretzer even thought about selling all of the Peruvian antiquities he still owned (some 2,000) and offered them also to the museum in Berlin, but without success. After his death in 1926, a year later Erna Gretzer sold the collection to the Niedersächsisches Landesmuseum Hannover, in 1927.

As already mentioned, the pre-Columbian textile collection of the Berlin Ethnological Museum is closely linked to the establishment of archaeological research on textiles as a branch of Andean archaeology. Particularly Max Schmidt, as curator of the South American collection, dedicated his interest to the analysis of pre-Columbian fabrics, using the museum collection as a research basis. Schmidt (1908) showed for instance, that the designs of some Ica textiles depict plaiting patterns of basketry. From these first studies, Schmidt (1910, 1911) went further and analyzed also decors, which showed complex scenes of acting people. Also Seler, who mainly focused on Meso-America but was also interested in the study of Nazca iconography, in 1916 published a paper on a textile from Paracas that the museum had received as a gift from the Peruvian consul Emilio Weiss y Solf in 1915. Schmidt (1916), who by then had already developed a certain expertise in the understanding of textile tecniques, added some remarks on its manufacure. Together with the publications of Reiss and Stübel's folios these early publications mark the first step in systematic research on pre-Columbian textiles.

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10

Archaeological Textiles of Sechín Bajo – A Formative Site of the North Coast of Peru: Preliminarily Results

Katalin Nagy

email: katalinn@zedat.fu-berlin.de

Abstract
In spring 2014, I took part in an archaeological project carried out by a German-Peruvian team of archeologists in the Sechín Valley, next to the Valley of Casma, on the North Coast of Peru. The project started more than ten years ago and has been taking place parallel to some other important archaeological projects on the North Coast. Its aim was to unearth the temple mounds and to reconstruct the parts of the various phases. The earliest layers date back to the Pre-Ceramic Period. During the wall construction of the temple, many textile fabrics such as nets and ropes were used and some very early textile fabrics were found. The site was abandoned after thousands of years and a cemetery was placed on top of it. The cemetery comes from a later time period and contains tombs from different phases of cultures of the north Coast i.e. Moche and Chimú. My task was to examine these archeological textiles. The aim was to classify the textile objects and create an initial source of data. In this article I will present the textiles of the excavation and some particular examples with their typical characteristics. The textile artifacts were excavated in a small but very concrete area and the fabrics reflect a very long period of time.

Keywords: Archaeology, Casma Valley, North Coast of Peru, Sechín Bajo excavation, textiles

Textiles Arqueológicos de Sechín Bajo - Un Sitio Formativo de la Costa Norte del Perú: Resultados Preliminares

Resumen
En la primavera de 2014, participé en un proyecto arqueológico llevado a cabo en el valle de Sechín, cerca al valle de Casma, en la costa norte del Perú. El proyecto se inició hace más de diez años y se realiza paralelamente a otros proyectos arqueológicos de importancia en la Costa Norte. Su meta ha sido excavar los montículos de templos y reconstruir en parte sus varias fases de construcción. Las capas más tempranas datan al Período Pre-cerámico. Durante la construcción de los muros del templo, varios materiales textiles como redes y sogas fueron utilizados y se encontraron algunos materiales textiles muy tempranos. El sitio fue abandonado después de miles de año de uso y un cementerio se ubicó encima. El cementerio data de un época más tardía y contiene tumbas de diferentes fases culturales de la costa norte, eg. Moche y Chimú. Mi tarea ha sido examinar estos textiles arqueológicos. La meta fue clasificar los objetos textiles y crear una fuente inicial de datos. En este ensayo, se presentan los textiles de la excavación y algunos ejemplos particulares con sus característicos típicos. Los artefactos textiles se excavaron en un área pequeña pero muy concreta, y los materiales reflejan un rango temporal muy largo.

Palabras claves: Arqueología, Valle de Casma, la costa Norte del Perú, excavación de Sechín Bajo, tejidos

Introduction - The Site Sechín Bajo and the archaeological project

The Sechín Bajo project is an archaeological project with the aim to reconstruct the building stages of the Complex at Sechín Bajo. It is an archaeological investigation of the site from the late archaic to the formative period in the Peruvian region of Casma. Peter Fuchs is the director of the project (Fig. 1).

Figure 1. Panoramic view of the archeological site Sechín Bajo. The photos are property of the © Excavation Project Sechín Bajo and are published here with its permission. They are a part of the documentation and Fig. 1 and Figs. 4 -27 were made by the author of this article.

The history of the project

The first inspection of the site took place in 1998 but the excavations did not begin until two years later, in the year 2000. The site of Sechín Bajo was examined six times since then. The phases of excavations were carried out in the years: 2000, 2003, 2005, from 2007 to 2008, and finally in 2012 and 2013. Our campaign was the last one and lasted two months, with the preceding five campaigns each six months long. During the last and closing examination of the site in 2013-14, the architectural discoveries and the findings from the previous excavation campaigns were examined, the textile artifacts evaluated, and the data prepared for a final publication.

From February till March 2014, I worked as a research fellow on this project and was present at the site. The aim of the project was to unearth the temple mounds and to reconstruct the parts of the various phases. The earliest layers date back to the Pre-Ceramic Period. During the construction of the wall of the temple various textile fabrics were used and some very early textile fabrics were found. The site was abandoned after thousands of years and a cemetery was placed on top of it. The cemetery comes from a later time period and contains tombs from different phases of cultures of the North Coast like Moche, Moche-Huari and Chimú.

The textile finds

About 800 textiles were collected and numbered. The largest part of the textiles has its origin in the tombs, which were set on top of the construction much later. Although it is possible to present some textile fragments as examples of the different textile techniques of the Pre-Ceramic Period from the context of the construction, the number of these items is significantly smaller than the number of the textile objects from the graves.

The task was to examine and to classify the textile objects found, and to create a database. I did not participate in the excavations myself but analyzed the objects found, and defined the material, the type of the yarn construction, the textile structure and the thread count. As part of the documentation, I made photos and gathered the data systematically. In the following paragraphs, I will present some of the artifacts found over the fourteen years of the project. The uniqueness of the project lies in the fact that the artifacts were excavated in a small but very concrete area and that the fabrics represent and reflect a very long period of time.

The age of the textiles from the construction is defined through the age of the specific sequence of the construction, the place where the textiles were excavated. It must be strongly emphasized that although they belong characteristically to the type of pre-ceramic textiles not one of these examples is of real pre-ceramic origin, because the location of few pottery sherds indicates that they could be older than these textile fragments.[1] The age of the textiles from the tombs is more difficult to define, and absolute dating is not possible. Only by examining the layer at which they were found, relative dating is possible. At most, an association with a culture, for example Moche-Huari, could be made.

Environment

The Peruvian Pacific coast is one of the driest deserts in the world with an average annual rainfall of less than 10 mm. Along the coast, lots of smaller rivers flow into the ocean. They get their water from the Andean Mountains, from periodic rain, and from snow melting. Each river builds an oasis in which agriculture with irrigation is possible, as developed by the local population. The two rivers of Sechín and Casma build one agricultural area, which lies some kilometers inland from the sea. The Sechín River flows into the wider Casma River. The Sechín Bajo site is located in the valley oasis of Rio Sechín on the Peruvian North Coast, about 360 km north of Lima. The two different crossings, one in blue for the two rivers, Sechín and Casma, and the other in black for the North-South-highway, the Panamericana and the highway to the mountains, over the Cordillera Negra to Huaraz, provide an important commercial and cultural center. The two meeting points of the two rivers and of the roads are almost identical. The city of Casma, the Casma River, and the whole area around it was a center of cultural and social interaction (Fig. 2).

Because of a higher sand dune directly at the coast, the Casma River makes a big turn to the right and after 12 km arrives at the Pacific Ocean. For that reason, the settlement does not have a direct access to the coast, and it is not a fishing settlement. There is no point at which the area is wider than one kilometer and about 7 km long. Compared with the climatic conditions on the South coast this area has more humidity.

The history of the site

The Casma Valley distinguishes itself, compared to the neighbouring valleys, by a large number of monumental sites from the 3rd and the 2nd millennium BC. Located along about 4 km in the Sechín River Valley, upstream from its junction with the Casma River, is a complex of archaeological ruins that composes the sites Sechín Bajo, Cerro Sechín, and Taukachi-Konkan. These were created as a result of a fundamental change from subsistence economy – with intense exploitation of the sea resources and the fauna and flora near the beach – to intensive agricultural utilization of the inland floodplain with artificial irrigation. The Casma Valley was populated long before the monumental construction began. The oldest carbon 14 date found at Sechín Bajo is from 3500 BC. Archeological investigation of the Valley began in 1937 when Julio C. Tello, a Peruvian archaeologist, examined a number of sites, first Cerro Sechín, then Moxeque, and, finally, Pallka. Later, Donald Collier, an anthropologist and archaeologist who worked with Tello, presented the first sequence of ceramics from the Casma Valley.

In 2008, a German and Peruvian archaeological team found a circular plaza, 10-12 meters in diameter, constructed of rocks and rectangular adobe bricks. A nearly 2 meter tall frieze was dated at 3600 BC. Both the plaza and the frieze are the two oldest examples of monumental architecture discovered until now in the Americas.[2] Sechín Bajo is a large archeological site with ruins dating from 3500 BC to 1300 BC. It is one of the oldest centers of civilization in the Western Hemisphere. Sechín Bajo may, therefore, be considered, together with the sites of Caral, as the oldest urban settlement of the Americas.

The Complex of Sechín Bajo

The investigations showed an over two thousand year old array of monumental architecture, a series of at least three structures with their internal stages of construction which

1. Peter Fuchs, personal communication

2. Panoramic view of Structure 1 of Sechín Bajo. In: Fuchs et al., 2009, 64, Fig. 12-13.

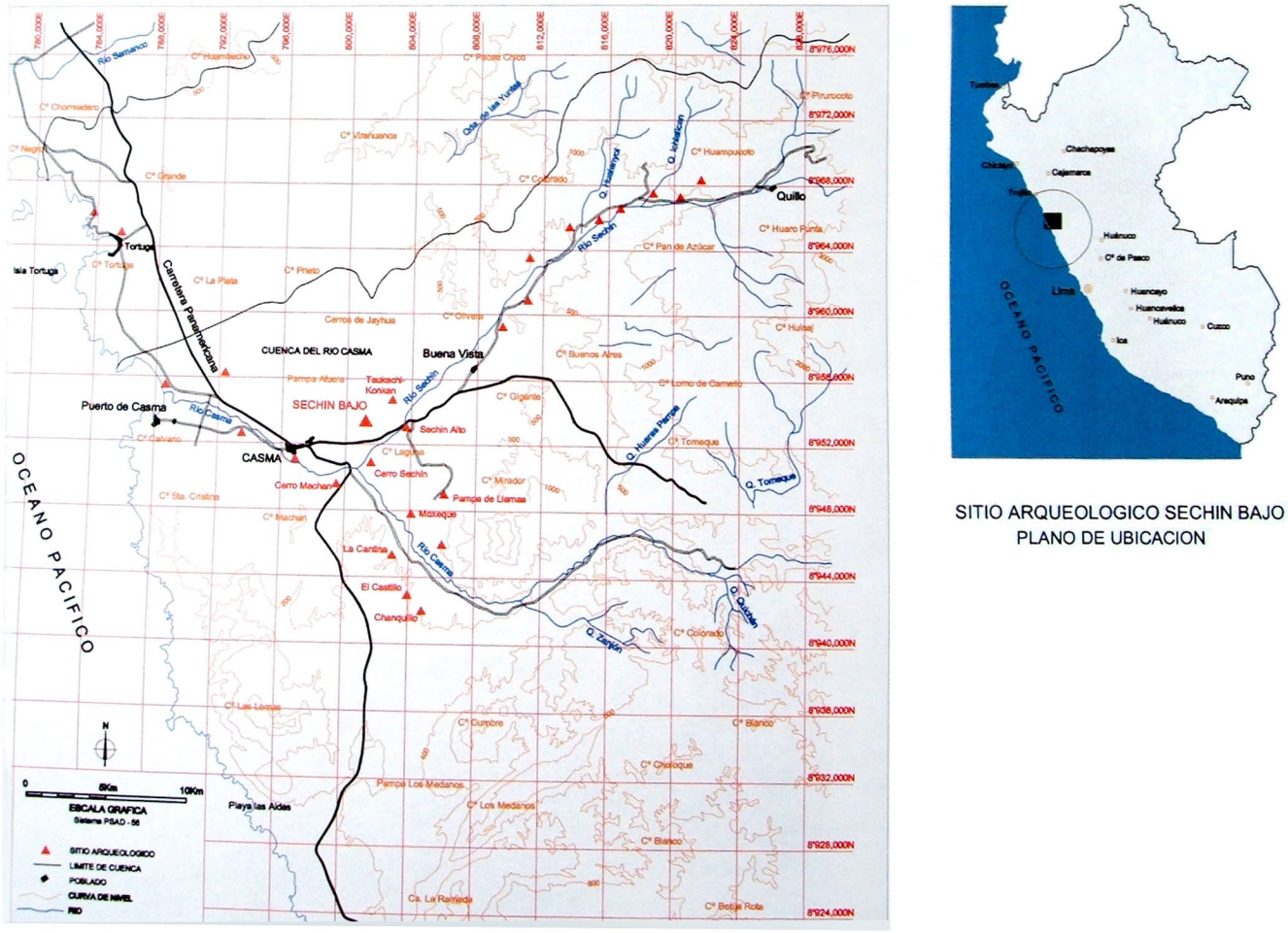

Figure 2. Map of the environment of Sechín Bajo and of the city of Casma. Graphic design: Archaeological Project Sechín Bajo.

originated already in the 4th millennium BC.[3] The later structures were raised on top of the earlier ones, which were carefully filled in and secured. This method shows that the builders had a strong attachment to the place, the location. It seems that the custom of the „Temple Entombments", documented at the sites discovered in the central Andean region, Kotosh or Huaca Lucía at Batán Grande had its origin in the Casma Valley.[4] According to the 37 carbon-14-dates from the site, the length of the time needed for the construction of the Sechín Bajo site and the time it was used can be limited approximately from 3700 to 1300 BC i.e. 2400 years. The descriptions that follow summarize the changes in the construction over this long period of time.

Structure 1: The first structure consists of a rectangular plaza made of stone and clay of 20 x 50 meters laterally. Later on, a circular excavation 12 meters in diameter was sunk into that plaza, which was expanded at least five times later on and each time provided with an additional sunken plaza. All carbon-14 data regarding this structure indicate a construction time and utilization period for the entire second half of the 4th millennium BC. Structure 1 of Sechín Bajo belongs to the oldest of its kind in the central Andean region.[5] However, the textiles found do not belong to the earliest building phase. The enlargement of the complex lasted until about 1500 BC and the artifacts found can be associated with the last phase and thus dated.

Structure 2: In the period following, a part of the plaza of Structure 1 was covered with another building structure. According to its ground plan, it was 35 x 39 meters wide and about 8 meters high and its axis was aligned in

3. Description of the construction and its structures: Fuchs et al., 2006 and 2009.

4. Fuchs P. R., R. Patzschke, 2012, 89

5. Drawing of Structure 1 of Sechín Bajo. In: Fuchs et al. 2009, 63, Fig. 11.

North-South directions. The walls were made of rubble set in a clay mortar, covered with clay plaster and their corners were rounded off. This building shows a regular internal structure of nine rooms arranged in three rows of three rooms. Later, the central room was modified in such a way that a niche wall with rounded corners and 18 niches was created. The walls are covered with a multi-layered plaster of a high quality and the floors with a compact mud layer. It is still unclear when building 2 was created. It was renovated over and over again: the plasters were repeatedly renewed and the evidence of modifications and changes made to the entrances is available. The information used to date the structure came from the first phase of renovations and it was identical with the last reconstruction phase of the neighbouring Structure 3. The last of these phases was dated in the 16th and the 17th centuries BC. Graffiti was created on the South-West facade of Structure 2.

Some fireplaces, only sporadically used, with a number of broken ceramic vessels in them, were uncovered at the foot of this wall. These artifacts are similar to the first pottery found in the nearby Cerro Sechín. Both provide evidence of the first appearance of ceramics in that region, described as the Laguna Complex by Peter Fuchs in 1990 and 1997. Because one of the biggest clay reliefs found present some people in a presumably ritual situation and dressed accordingly, the description of this scene will follow.

Clay Relief

The clay relief was uncovered on a surface of approx. 10 m^2. It is a frieze of three people facing frontally with their arms spread. They are dressed in a skirt or a tunic. Their feet are open sideways and look out from under their garments. There is an oblong object, maybe a knife or a scepter, in the right hand of every figure. In their left hands, they hold a round object sticking out from a head of a snake. These round objects could be identified or interpreted as mollusks (Spondylus). The heads of the figures are depicted differently and a collar-like fabric lay on their shoulders. The hair partially falls around their face with the rest tied into three tufts on top of the head. This kind of presentation of the hair is reminiscent of trophy heads from Cerro Sechín. One can assume the figures in the relief are people, who are possibly witnessing a ritual, perhaps even, in Court 1.[6]

Structure 3 is the largest of the site. The ground plan shows a structure of about 145 x 125 meters, which is about 15 meters high and is surrounded by a wall, about 2 meters in height and 3,5 meters wide. The rounded corners of the structure are aligned with the cardinal directions. Along a central axis there are four courts placed one after another in an ascending order, two on each level, connected with each other by various stairs. The walls of Courts 2 and 4 contain different numbers of niches that also differ in size. These niche-walls were built in later, similar to the niche wall in the centre room of the earlier Structure 2. There is a great sector stretching north-west from Court 1. This sector is bordered from a side by a flat *plaza* that probably served as a space for larger crowds but is used agriculturally today. In front of it there is a staircase, about 3 meters high, which leads to Court 1 (Fig. 3). The staircase, first with an open access, was replaced with a double staircase with a common bottom step. The development of turning staircases on the sides of the newly created Courts 2 and 4 underline a new social orientation within the structure and a reinforce physical separation. The access restrictions already found in Structure 2 exist here as well. This structure is the most monumental with both public squares and private areas. Structures 2 and 3 were constructed in such a way that they face Cerro Sechín on the other side of the Sechín River, only two kilometers away. Therefore, a presumption can be made that the builders of the two partly contemporary mounds interacted with each other.[7]

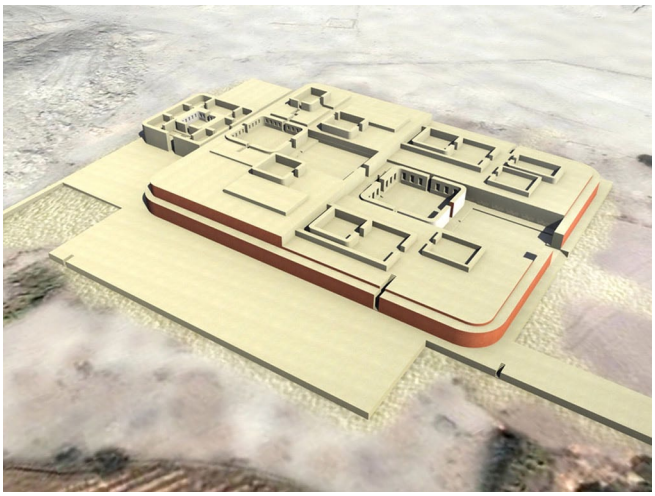

Figure 3. Isometric reconstruction of the construction with the three building. View from the East side. Graphic design: Archeological Project Sechín Bajo. In: Fuchs et al. 2009, Fig. 16.

6. Clay relief of the third building (Structure 3) of Sechín Bajo. Description and fig. 18 in: Fuchs et al., 2009, 67

7. Fuchs P. R., R. Patzschke, 2012, 90

Textile artifacts found during the excavations in Sechín Bajo (2000 – 2012)

Around 800 textile artifacts were found. The sample of excavated textiles can be divided into two groups – the earlier and the later ones: Group 1: Context of the construction: the early textiles and Group 2: Context of the burials: the late textiles. The *earliest* means the oldest textiles and date from the period about 1500 BC and the latest date from the graves around 1500 AD.

The origin of the early textiles

According to the information gathered through the process of the excavation, the building was abandoned in a planned and organized manner approximately in 1500 BC.[8] The indication of that is the fact that the rooms were swept clean. There was no garbage and no other objects left behind. Textiles, mainly cords, from the time of construction and different phases of expansion of the whole site, were used as a part of the architectural components and thus correspond to the respective construction phases.

The origin of the late textiles

When the construction was no longer in use, the area surrounding the mound and the surface of the construction itself were used as a burial site. All late textile artifacts came from the graves. 140 of them were excavated. The dating of the graves can be seldom confirmed, and very few of these textile artifacts can be exactly dated.

All further textile finds, consisting mainly of fiber fragments, came from the graves. The graves at the site remained undisturbed for the most part (except the placing of a new grave could damage an old one). The cemetery near and around the site at the foot of a small hill is much more disturbed. The destruction can be seen on the small craters making the area look like a moonscape. Most of the graves are made in a 'simple' manner, consisting of no more than a plain outer frame made out of little stones, and the frames are irregular, due to bad preservation. There is very little information about the city of Casma and its cemetery, neither from the time of the Inca rule nor from the Colonial Period. Although the two settlements, 'Casma La Alta' and 'Casma La Baja' are referred to in the chronicles of the 16th century, cemeteries belonging to them were not mentioned.[9] The main non-textile objects group consists of ceramics, different kind of cups, and vessels. In addition to the fabric fragments, the finds in the graves include cords, which served as packaging material for the body of the diseased.

Two different contexts of the textile artifacts

The textiles of Sechín Bajo can be organized in two completely different groups. The first one contains textiles belonging to the building construction. The second one includes all the textile artifacts that came from the burials. Until now it seems that the two groups must be dated in a completely different manner. The age of the textiles from the construction is determined by the age of the exact position and stages of the construction itself, that is, the place where the textiles were excavated. Meanwhile, the objects in context of the building structures are as old as the last sequence of the building.

At this point it is only certain that a long period of time must have passed between the first and the last activities done on the building (or the ones done in the ritual context when the textiles were embedded).

This fundamental distinction of the archaeological textile objects must be clarified for the purpose of a better understanding of the results of the evaluation of the research database. Also, the volumes of these two groups are considerably different. The group connected to the construction is made up of very few, remarkably small fragments, whereas the other group, the group of the textiles from the burials, is significantly bigger. It is worth mentioning at this point that that the size of the fragments from the second group is not much larger than the fragments in first one. The difference results from the circumstances of preservation and the reasons for it also vary in both cases.

The building construction has been left behind in a planned and organized manner, so the structure was evidently cleaned up and there was no intention of leaving any objects behind. Therefore, it possible that the few small textile fragments found are more or less only accidental remnants from that time, whereas the small size of the textile artifacts from the graves is due to the conditions inside the tombs. Although the climate in Sechín Bajo is dry, as it is along the whole Peruvian Coast, even a little bit of moisture can cause intensive decay of textiles. There are more textile remnants left from the graves of children than adults. This can be ascribed to the size of the body. Not mummified bodies but bones of complete skeleton were mostly found in the graves.[10] The decaying body produced so much fluid that the textiles fell apart and this happened more in the tombs of adults.

8. Peter Fuchs and Renate Patzschke, personal communication

9. I appreciate Peter Fuchs supplying this information.

Jahr	Kisten-nr.	Nummer (eir	Cuadri-cula	Area	Corte	Name des Objektes	Länge, cm	Breite	Material1	Farbe1	Material2	Farbe2	Material3	Farbe	Technik	Faden-aufbau1/ Kette	Faden-aufbau2/ Schuss	Faden-aufbau3
2000	6	SB-/240c	13g	4	Aus dem Verst	Gewebefr	8	5,5	BW	Braunbeig, RAL 1013					Zwirnbinc	Z/2S	Z/2S	
2000	6	SB-/240e	13g	4	Versturz im Ho	Gewebefr	8	2	BW	Nussbraun 8011					Zwirnbinc	Z/2S	Z/2S	
2000	6	SB-/245b	13g	4	aus Hofverfüllu	Gewebefr	6	3,5	BW	Nussbraun 8011					Zwirnbinc	Z/2S	Z/2S	
2000	6	SB-/273b-1-2	14g	4	Versturz. Wanc	2 Gewebe	8	7	BW	Nussbraun 8011					Zwirnbinc	S/2Z	S/2Z	
2005	1	SB-/874	17k-l	6	50-70 cm	Gewebefr	8	6	BW	Kastanienbraun 8015					Zwirnbinc	Z/2S	Z/2S	
2005		SB64/878	17l,	6A	70 cm	Gewebefr	4	3	BW	Beigebraun 8024					Zwirnbinc	nicht erke	nicht erkennbar	
2007/8	33	**SB-/2675**	7-8f	13	Versturz	Gewebefr	25	8	BW	Gelborang	BW	Orangenbraun 8023			Zwirnbinc	Z/2S	Z/2S	
2007/8	33	**SB-/3014**	1-3f-i	11	Versturz	Gewebefr	11	10	BW	Perlweiß 1013					Zwirnbinc	S/2Z	Z/2S	
2007/8	33	SB-/3015d	1-3f-i	11	Versturz	Gewebefr	6	4	BW	Grauweiß 9002					Zwirnbinc	S/2Z	S/2Z	
2012	7	SB425/3625b	3j-k	14	Verfüllung	Gewebefr	11	5	Pflanzenfa	Nussbraun	BW	Braunbeige 1011			Zwirnbinc	Z/2S	Z/2S	
2013	7	SB425/3702	2-3g	14	Grava-Verfüllu	Gewebefr	7	1,5	BW	**Tiefschwarz** 9005					Zwirnbinc	Z/2S	Z/2S	
2012	7	SB425/3891	3h	14	Verfüllung, Ho	Gewebefr	6	4	BW, rein	Beige 1001					Zwirnbinc	Z/2S	S/2Z	
2012	7	SB426/3930	4g-h	14	Geröllschüttun	Gewebefr	4	2,5	BW??, mil	Schwarzbraun 8023					Zwirnbinc	Z/2S	S/2Z	
		SB426/3932	4g-h	14	Geröllschüttun	Gewebefr	agment								Zwirn?	Dreher?		
2012	7	SB425/4004	4h	14	Grava-Verfüllu	Gewebefr	12	8	BW	Schwarzbraun 8023					Zwirnbinc	Z/2S	S/2Z	
2012	7	SB425/4017	4g	14	Grava-Verfüllu	Gewebefr	12	3	BW	Tiefschwarz 9005					Zwirnbinc	Z/2S	S/2Z	
2012	7	SB425/4024	4h	14	Grava-Verfüllu	Gewebefr	16	4	BW	Tiefschwarz 9005					Zwirnbinc	Z/2S	S/2Z	
2012	7	SB425/4080b	4g-h	14	Grava-Verfüllu	Gewebefr	10	5	BW	Schwarzbraun 8023					Zwirnbinc	Z/2S	S/2Z	
2012	7	SB425/4300	3-5g-h	14	Grava-Verfüllu	Gewebefr	17	17	BW	Beigebraun 8024					Zwirnbinc	S/2Z	Z/2S (feinere Schuss	
2012	7	SB425/4342a	3-4g-h	14	Grava-Verfüllu	Gewebefr	10	4	BW, rein	Beigebrau	BW	Beige 1001			Zwirnbinc	Z/2S	Z/2S	
2012		SB423/4441,	Piso/ Estrich	14	Estrich Hof 1/1	Gewebefr	ca. 15	15 cm	**BW + Pfla**	Graubeige 1019					Zwirnbinc	**Z/2S**	**Z/2S**	

Figure 4. Section of the table for documentation. Graphic: author.

Excavation and protection of the textile objects

Immediately after the excavation, the textiles were, at least partially, immersed in tap water, dried, and bagged.[11] Some larger textiles fragments that could be laid out were placed on a piece of cardboard, which was sometimes covered with a fleece cotton fabric. Many of the fragments are, however, only smaller or bigger lumps of fiber. These, as well as other three-dimensional objects which could not be flattened, were bagged and thus protected. The objects were stored in plastic boxes kept mostly dust free in sealed, transparent, and labeled bags. They were protected from vermin with the use of the moth and bug repellant: *naphthalene*. The boxes were stacked in a small building created especially for this purpose where textiles were stored on shelves.

Documentation

To present the gathered data a data sheet was created. The numbers of each item listed on this data sheet refer to the time and place and are listed with the *cuadricula*, the quadrant where the excavation of the object took place. The numbering allows the findings to be assigned to the site with certainty and was later used in the creation of the list of objects incorporated in the graphic shown (Fig. 4). The following data was collected:

- year (the date of the finding)
- number (evidence) Sechín Bajo
- the place of the finding -more precise data: *cuadricula*
- cut: *area*
- layer; the depth of the object
- size
- form category / item (however, naming is often not possible, since only a little fragment was preserved)
- material and color or colors
- technique
- yarn – spinning direction (S- or Z-rotation)
- thread count of warp and weft
- selvages (warp or weft edge; top/bottom)

While the investigation and the analysis of the facts from the study is not completely finished yet, some results seem to be definite. Some of them will be presented here

1 The Early Textiles

The fragments of the Early Textiles are, without exception, so very small that identification of any motif is impossible and only in very few cases periodical or continuous decoration is recognizable. Only enlargements can make those details visible at all.

Sometimes one finding consists of more fragments of different quality and techniques. For instance a cluster of small fragments from a secured context of the construction, presented the techniques of twining, looping and plain weaving (Fig. 5).[12] Also, remnants of a chunk of clay with cotton yarn belong to the textile founds. Such examples come predominantly from the construction and from the landfills.

Twining

The textiles located in Sechín Bajo exhibited different kinds of textile techniques. Comparing to other formative excavations reporting on textile techniques, twined and looped fragments are the most important examples (Fig. 5).

10. Many thanks for this kind information from the physical anthropologist Dr. Bernd Trautmann.

11. Peter Fuchs and Renate Patzschke, personal communication

12. All textile photos were made by the author and are a part of the documentation.

Figure 5. SB-/240a-d; a small sample of fragments from the context of the construction

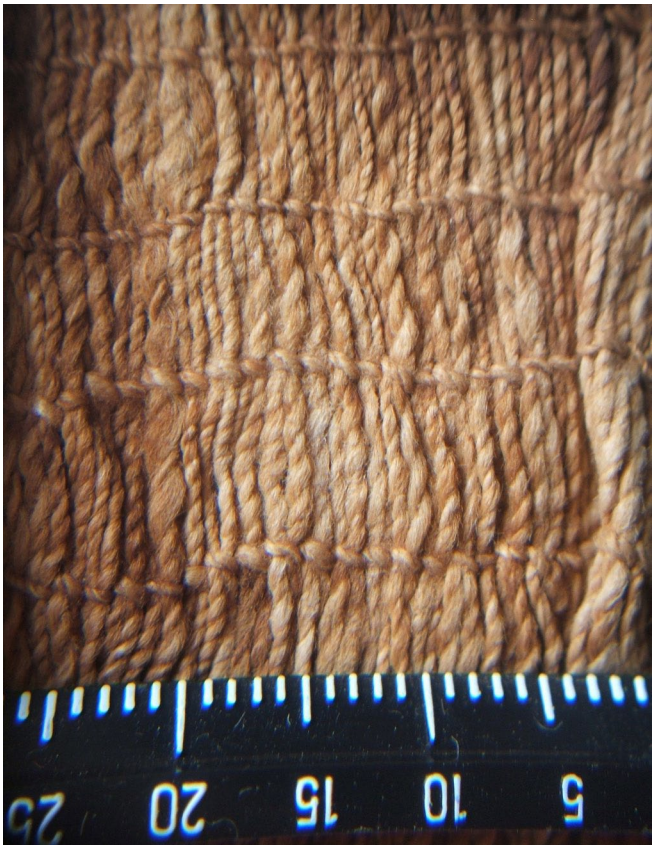

Figure 6. Plain twining with paired warps; fragment SB-/2675

Twining is a non-loom technique. Originally only the weft elements were flexible, the elements of the warp direction were stiff plant elements, totora reed stripes or straw-like *junco* reed, fixed by the weft parallel next to each other.[13] In its basic form each vertical warp element is held in place by a pair of twisted horizontal weft threads. "The term *twining* indicates that the weft yarns twine or turn about the warps, instead of interlacing or interweaving."[14] Particularly impressive is the fact that not only one kind of twining technique but more variants are represented among the examples produced with this technique. Twined textiles show variations with different kind of grouping of the warps and different directions of twining. Differences of plain twining are based on the handling of the warps: they are single or paired. Two fragments are examples for the category of twined textiles with paired parallel warp, Bird named this group "plain twining" (Fig. 6).[15]

Another example has similar paired warps but the direction of the twining by the wefts alternates. The item with the number SB-/273 can provide a better image of the structure of plain twining with paired warps (Fig. 7). There are also examples for the use of the opposite direction of the twining, different patterning and motive design.[16] Gloria Olivera Alegre explains a special version of twining from "precerámico de Paraíso I, Huacho". She describes it: "La preferencia por los hilos de urdimbre con retorsiones distintas da origen a los aspectos de "V" o ZIGZAG en el tejido".[17] Another example from the group of the twined textiles of Sechín Bajo has the same appearance and was made on the same way (Fig. 5, bottom right).

Comparison with other sites of the Pre-Ceramic Period

The textile fragments from the Late Pre-Ceramic Period from Sechín Bajo are so tiny, that it is difficult to interpret their role or their use. For that reason I decided to compare them with the textile founds in other preceramic archaeological sites hoping for more insight. The site reports for additional materials from the Late Pre-Ceramic and Initial Ceramic Context, especially for textiles, make a comparison possible. The most important result of the evaluation of these Early

13. Grieder, 1988, 154
14. Bird et al., 1985, 112
15. Bird et al., 1985, 146
16. Variations of twining techniques see Bird, 1985, 112 and 114, Table 11
17. Precerámico de Paraíso I, Sitio 50, Huacho. Olivera Alegre, 2006, 107f, Fig. 17

Figure 7. Plain twining with paired warps and wefts with alternate direction; fragment SB-/273a

Figure 8. Mixed plant fibers of the oldest twined textile of the site: cotton and bast; SB425/3625

Textiles of Sechín Bajo is the fact that all of them are comparable with other archaeological textile artifacts found earlier and published in corresponding reports. This comparison shows that these kinds of textiles existed in a bigger area and through a longer period of time in the Pre-Ceramic Period. Following well-known preceramic sites were chosen for the comparison: Huaca Prieta in the valley of the Chicama, La Galgada on the Tablachacha tributary of the Santa River, and Salinas de Chao near the coast north of Casma, where Gloria Olivera made a special investigation of the textiles.

Materials of the oldest textile example

The preceramic textiles of Sechín Bajo have been made mainly from cotton and sometimes also cotton was mixed with plant fibers, a kind of bast. Among all the textile findings in the context of the construction the oldest textile object is the fragment SB425/3625 (Fig. 8). This piece has been dated after the layer where it was found and the context of it is presumably not preceramic.[18] This means that none of the textile items can be considered as a real "preceramic textile" and that this oldest example made from the blend of cotton and plant fiber is not definitely a preceramic product. This piece of information that came from the process of the excavation is of great significance, since this quality of mixed cotton is thought to be older than the examples of pure cotton fibre.

This textile was also produced with the technique of twining. It is the only one from Sechín Bajo where the fibres of the cotton were still mixed with plant fibers, a kind of bast still not identified. Such a combination of plant fiber and cotton was also discovered by Junius B. Bird in Huaca Prieta.[19] These plant fibers are also not identified. Due to the very few examples of the Sechín Bajo Early Textiles a thorough comparison of the material and yarn quality was not possible.[20] This oldest example is the only one with a spot of red, which is probably a pigment.[21]

Decorated textiles of the Pre-Ceramic Period

Junius B. Bird excavated several textile artifacts where the use of the transposed warps was used for making decorative effects.[22] "The technology of the construction is highly

18. Peter Fuchs, personal information

19. Bird et al., 1985, 103f

20. Similar vegetal or bast fibers from La Galgada and from Huaca Prieta have been examined by botanists. Nor the investigation of the team of Grieder nor of Bird yielded any results (Grieder, 1988, 154 and Bird et al., 1985, 103).

21. See also Bird et al., 1985, 143

22. For transposed-warp see also Bird et. al, 1985, 115

Figure 9. Holes in twined textile with crossed warps; SB425/4342a

significant, for it was used to create patterns and designs which are the earliest known art in American textiles."[23] In a piece from Sechín Bajo another kind of decor made with the technique of transposed and crossed warps was found. A regular row of small holes was created, probably for a special purpose (Fig. 9).

In the iconography of Chavín, the main figures that appear ("el lanzón", Tello-obelisk, Stele-Raimondi) were probably those of the Pantheon gods. They were accompanied by some different zoomorphic figures. One of them is a condor. It could be one of the oldest figures, which appeared already around 2000 BC – a fact we know from a cotton textile fragment from the excavation of Huaca Prieta. Here, directly at the coast, the figurative twined textile with the motive of the condor was found. As already mentioned at Sechín Bajo all twined textile fragments were small and behind the regular alternating transposed warps it was not possible to identify a motif. However one fragment has a possible motif. From the group of the Early Textiles, the fragment SB 425/4017 is the most complex, and the only one with a probable design. This fragment is still too small to see any part of the possible motif, but its existence becomes clear through its comparison with the work and one description of Milica D. Skinner.[24] Because the description of this fragment from Sechín Bajo could be very similar, this suggests that a creation of a design was also intended (Fig. 10). The intense black color has here obviously an important role in the creation this piece. The fact that elaborate art was produced in a Pre-Ceramic context is not surprising in view of the evidence from Huaca Prieta, recorded already by Junius B. Bird in 1946[25], "... the twining represents the largest group of textiles".[26]

Colors

Important aspect of decoration is color. In the small textile sample from the construction at Sechín Bajo the range of cream-beige-tan is dominant, most of which is natural undyed cotton. The usage of the intense black color is a fact at Sechín Bajo. There are also some fragments made of threads dyed bluish black. The dye may have been indigo, and an analysis is in the works. The only fragment with a motif, mentioned above, also has this kind of black. To emphasize the role of the black color at Sechín Bajo the sample is too small. Evidence for the use of black dyed threads together with natural tan threads has been also found. Red was also noticed during the excavation. Later, when they were studied, this color could no longer be seen, but differences in the quality of the yarns indicated that some of the yarns were dyed before weaving. "It appears that a considerable range of dye colors was known at La Galgada and its trading connections before 2000 B.C."[27]

Nets

Two types of net are presented here. One small fragment from the context of the construction is a net made of cotton with the looping technique (Fig. 5, top right). Because of its tiny size, no definition of its function is possible. It has a sturdy edge and it is probably the main reason that exactly this part of these nets survived.[28] This is different in regard to another net object (SB-/2857); it is bigger and almost

23. Bird et al., 1985, 146

24. Milica D. Skinner describes the textile with the design of the "Spread-Winged Male Condor with Snake in Stomach" and this leads to my understanding of the technique: "Twining, Z, paired warps, zigzag warps with occasional diamonds – upper warps remain on top except when angle of zigzag is changed." (Bird et al., 1985, 161f and 164f, Figs. 109-111)

25. It was published later by John Hyslop and Milica D. Skinner in 1985.

26. see also Table 10 (Bird et al., 1985, 113)

27. Grieder, 1988, 181. Colors and dyes through the Pre-Ceramic Period and their analysis are described also: Bird et al., 1985, 142f

28. Olivera Alegre, 2006, 63, Foto 24

Figure 10. Design with transposed wefts. Fragment of a twined textile; SB425/4017

identical to the *"junco bag"* from Huaca Prieta. It is also made out of *junco*.[29] The structures of the bags are similar: first a ring is formed and the strands are attached around it. They are linked and twisted into each other and form a flexible bag (Fig. 11).[30] The "junco bag" from Huaca Prieta was already 1994 mentioned by Katterman, she compared it with a looped network fragment from Hacha.[31] Some other net-like textiles that belong to this group are mostly closely related to pieces from other pre-ceramic sites such as Huaca Prieta, Salinas de Chao, or La Galgada.

Plain weave

The type of rich decorated looped cloths, like the textile sample at La Galgada, is not represented in Sechín Bajo.[32] As mentioned before, the construction was cleaned before it was abandoned and probably that is the reason that only some tiny fragments have been excavated. The only textile object left behind presumably as a whole item is a big plain-weave cloth. The dates of the stratigraphy indicate that this is the second oldest textile found from the building construction. This object is also damaged and consists of many fragments but, with its measurements, it is by far the largest textile artifact found. The piece is approximately 2.5 or 3 square meters in size. Some fragments of seams made with accurate stitches demonstrate that this big cloth consists of more pieces. It was probably used in the entrance in lieu of a door or part of a room decoration. It was found on the clean floor of the Structure 3.[33] This piece is woven of natural light tan cotton, the warp threads are plied more tightly than the weft threads (both S-plied 2Z), the thread count of the warp is 4 / cm and of the weft 3 / cm. Some other smaller pieces of similar quality were also found but in another part of the building.

Distribution of the techniques of the Early Textiles

The diagram shows the distribution of the techniques of the Early Textiles in percentage. The biggest part was the technique of twining, 45 %. Plain weave was almost identical, 41 %; (several times with paired warp or weft, or both). The smallest group contains the nets or net-like objects, such as knotted nets, looping, and linking (Fig. 12).

2 The Late Textiles

All textiles that did not belong to the construction came from the graves. A great part of them clearly originated from one particular grave, which could be seen on the numbers

29. Junco is the common name of a group of gras-like plants on the Peruvian coast includes the sedges, *Cyperus* and *Scirpus*. Their leaves and stems provide valuable raw material. *Typha* has been reported from the coastal valleys. (Grieder, 1988, 148)

30. Bird et al., 1985, 199, Fig. 143.

31. Katterman, 1994, 40f, Fig. 2.

32. Grieder, 1988, 166f

33. Many thanks for the kind information from Renate Patzschke.

Figure 11. A junco bag, fragment; SB-/2857

assigned to these artifacts. In case of many other textile findings, specific grave assignment is not possible due to the destruction that the burial sites have suffered.

What should be mentioned here is that the graves were found during the archaeological excavations in the Complex and not searched for explicitly. These graves were found mostly above the walls and were recorded on the site map. The accumulation sequence in these quadrants (*quadriculas*) is clear. No remains of a Christian Cemetery of early Colonial Period were found in Casma or around it. Also, no written sources suggesting the existence of one were discovered there.

Condition and general description of the textile finds from the graves

Among the 140 excavated burials were many more children burials (younger than 15 years old) than adults. Less than

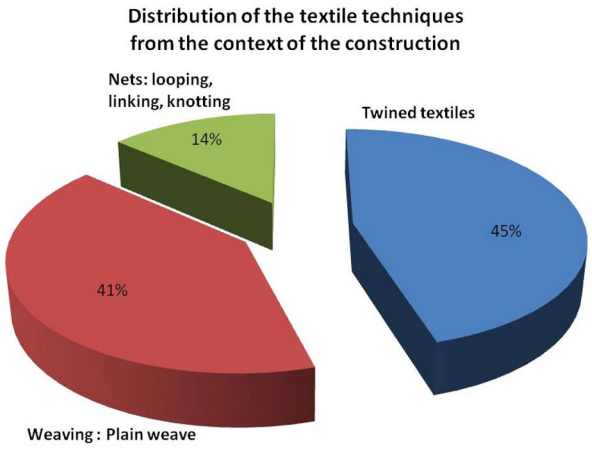

Figure 12. Diagram of the distribution of the textile techniques from the context of the construction

one third (31 %) of all burials were adults.[34] The majority of the findings from the tombs are small or tiny fragments of textiles. This is due to the conditions under which the items remained for centuries and is true of the general descriptions of many other archaeological excavations. The acidic, damp environment affects the yarns and triggers chemical reactions with the fibers, causing the cloth (entirely or partly) to disintegrate. This decay is not uniform; depending on their placement in the grave, the textiles were exposed to the destructive moisture differently causing different long-term changes to the woven fabric. The percentage of fragmentation can be accredited to the changing conditions of the preservation for centuries.

Furthermore, the textiles suffered during the excavation; they had tears or even fell apart. We were able to preserve the parts of the fabrics which were less affected by the destructive effects of the decomposition process. Only in a few cases can we talk of a fully preserved artifact. We also documented some cloths which were fairly well preserved. The children's graves were found in general better preserved than those of adults. One of the best preserved burials belongs to a child. This burial, No. 48, is presented in the following section.

Burial 48

The bundle of the burial 48 (SB222/2101) is special since it is one of the very few that was preserved in very good condition and its contents could be examined as a whole. The bundle belonged to a body of a female child approximately 3 or 4 years old (Fig. 13). Apart from the bones of the child the bundle consisted completely and only of textiles. The list of the textile artifacts could here serve as the basis for comparison with other burials.

The child was dressed in an elaborately decorated shirt, made of a cotton gauze fabric additionally decorated with stripes woven of valuable raw material (dyed camelid hair). Moreover, a yarn from red camelid hair was wrapped around the fingers of the child. Such burial rituals were common. The bundle of the child contained two more shirts. These differ from each other: the smallest one (possibly worn by the child as newborn baby) is simple but practical. It is a loose plain weave shirt made of over-spun cotton yarn which gives it elasticity, softness, and makes it absorbent. The second shirt is also a cotton gauze fabric shirt but the stripes are simpler and made of cotton.

Wrapping

Two striped cloths were used to wrap the body. Finding borders and selvages was of utmost importance during the process of unwrapping (Fig. 14 - 15). Two woven cotton fabrics, both decorated with stripes (dyed cotton warp stripes of warp face plain weave), covered the body of the child, which was wrapped first in the smaller shirt and after that in a bigger one. In order to achieve the required width of the cloth, two identical pieces were sewn together. The seam was sewn with a regular and solid stitch. For the wrapping, two such cloths are used, the first one was laid across on the second one, most likely to enhance the stability. The largest part of the recovered fabrics was en general used as burial cloths to wrap bodies. The direction of the path of the threads was chosen precisely to achieve the desired shape – either diagonal or straight. Due to the development of moisture during decomposition with subsequent drying out inside the grave, this diagonal thread path became hardened and kept its position preserved.

Garments: three shirts

A red string of camelid hair was wrapped around the fingers before the burial. The left forearm had a red bracelet also made of a red dyed camelid hair cord (Fig. 16). The child wore it most likely for a while before the death. The bundle included three cotton shirts, each in a different size. The child was dressed in the biggest one for the burial. The other two of pure cotton were placed next to the child (Fig. 17). It looked as if the body was rested on the smallest of the shirts. This smallest one was damaged the most. It was identified as a shirt only from the side-seams and the opening of the sleeves. The sizes of the shirts are as follows: 45 x 49 cm (biggest), 52 x 34 cm (middle), and 40 x 35-38 cm (small). The middle shirt is visibly narrower but also longer than the biggest shirt. The reason for this could be because of the specific development of babies**:** newborn, infant and toddler. A long shirt is not favorable if a child crawls around and learns to walk.

The two bigger shirts are almost entirely preserved. The technique of gauze weaving is clearly visible. Also, the decoration is clear and hardly damaged. The whole front side of the biggest shirt is covered with a complex motif. It was made with a combination of plain weave and gauze (Fig. 18). The front and the back were sewn together. The front side of the middle shirt is decorated with a horizontal checkerboard stripe, which was also made with a combination of

34. The demographic analysis of the tombs was performed by the physical anthropologist Dr. Bernd Trautmann. There are some methods to define the sex in early infancy; with their combined implementation an approach is possible but the result has to be interpreted carefully. Many thanks for his kind information.

Figure 13. Burial Nr. 48 (SB222/2101) of a female child (3-4 year old)

Figure 14. Unwrapping: Burial Nr. 48

Figure 15. Unwrapping: three layers of textiles; Burial Nr. 48

Figure 16. Bracelet and red yarn; Burial Nr. 48

the plain weave and gauze weave (Fig. 19). Both shirts was made of one piece, the warps run vertical. The shoulder part and the neck slit are created in the same way on both shirts – the big shirt and the middle one. To create the neck slit the warps were separated in the middle then the shoulder part was woven. A common phenomenon of both shirts is that a thick horizontal stripe under the neck slit protects it from tear. The stripe of the middle shirt is simple, two thick multiplied cotton weft yarns are woven across the whole width (Fig. 20). For the bigger shirt was this line embroidered with cotton yarns in two different shades of nature cotton (Fig. 21). The difference between the decorated front stripes of both shirts is that the decoration of the big shirt is more complete. Between two red stripes (weft-faced plain weave with red dyed camelid weft yarn) is a third one composed of a repeated small motif made of yellow dyed camelid fiber yarns (supplementary weft). Summarizing the documented facts of these shirts it seems that the child was dressed appropriate to its age and the decorations of the shirts became more complete.

Figure 17. The big and the middle shirt; Burial Nr. 48

Figure 18. The front of the big shirt; Burial Nr. 48

Other burials

In the following different kind of textile fragments of more burials are discussed. These consist of fragments of presumably decorated shirt or shirts and some different kind of plain weave and striped textiles as the covering or the wrapping.

The list of fragments of other (presumably) shirts:

- Burial 102 (SB352/2901) of a 2-4 years old boy (Fig. 22)
- Burial 125 (SB447/3738) of a 3-4 years old boy (Fig. 23), Detail of the shirt (Fig. 24)
- Burial 7 (SB64/876) 6 months old child (Fig. 25)
- Unidentified burial (SB-/2280a-d), presumably fragment of a shirt and fragments of a striped wrapping cloth (Fig. 26)
- Unidentified burial (SB426/3932), small fragment of a shirt (Fig. 27)

All fragments mentioned above belong presumably to the shoulder part of shirts made for children. These textile fragments were identified on the base of the burial 48. Shirts with this kind of design for neck split and shoulder are until now not known and to find similar examples in museums and collections will be an interesting endeavour. The fact that the shirts belonged to children should make us cautious and consider that this design was used exclusively for children shirts. The decorative stripe has an important role, like a strong band that does not let the neck split to tear. These stripes have different designs, and are not always made from dyed yarns (Figs. 20-21-22). All dyed yarns are camelid fiber. Among all burial textiles the use of cotton is predominant; camelid fiber was used in general only for decoration.

Camelid hair

Camelid hair was found only during the later phase at the site; yarns made from camelid hair were found only in the context of the tombs. Only very few individual objects made exclusively from camelid hair were found. The camelid hair either had a natural solid darker color or was dyed. Only in one finely woven net camelid hair was used exclusively. It

Figure 19. Combination of gauze and plain weave- technique of the middle shirts; Burial Nr. 48

Figure 20. Shoulder part of the middle shirt; Burial Nr. 48

Figure 21. Shoulder part of the big shirt, decorated stripe with yellow and red wefts; Burial Nr. 48

Figure 22. Fragment of a shirt (SB352/2901); Burial Nr. 102 (2-4 year old boy)

Figure 23. Fragments of a shirt (SB447/3735a-b); Burial Nr. 125 (3-4 year old boy)

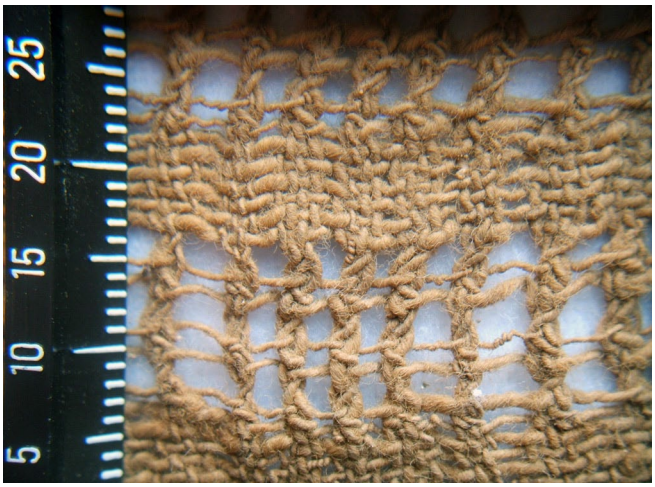

Figure 24. Detail of a shirt (SB447/3735); Burial Nr. 125

has a recognizable very dark blue color. The fine quality of the knotted net implies a decorative item, presumably a hair net, and less an object of use such as a fish net.

Summary

The early textiles of Sechín Bajo were produced with the same textile techniques as other examples excavated at other Pre-Ceramic sites at the North Coast, such as Huaca Prieta, La Galgada, and Salinas de Chao. This gives evidence that the same kind of textile production was practiced contemporaneously in an expanded area and makes us presume that the geographical conditions allowed these centers to be connected.

The small size of the excavated fragments is characteristic not only for Sechín Bajo. At the archaeological site of Salinas de Chao the situation is similar but the presented fragments are more complete and sometimes have a sturdy edge, and so give more information. Gloria Olivera listed the Pre-Ceramic textile techniques as follow: looping, linking, knotting, twining and plain weave.[35] All these kind of textile techniques are to be found in Sechín Bajo too.

All the Sechín Bajo textiles from the context of the construction presented here belong to the third, and last of the building phases.[36]

The comparison of the Early Textiles of Sechín Bajo along with the textiles of the other Pre-Ceramic sites demonstrates that before the new textile technique of plain weave was introduced, the textile technique of twining had already been practiced at a very sophisticated level. Also all the technical possibilities of ornamentation and design of motifs were utilized. When examining the little fragments, it is clearly visible that the pieces were made elaborately. However, the effect of the fine and subtle play of yarns can only be appreciated on a wider surface. The results of this investigation show that all Pre-Ceramic textile techniques and near all versions of the twining-technique known from the sites of Huaca Prieta, La Galgada, and Salinas de Chao, were also present in Sechín Bajo at about the same time.

The investigation of the techniques of the building construction of Sechín Bajo and the later built Cerro Sechín shows, apart from the changing of the construction form, the development of the production of the clay brick.[37] The simple platform that was still built in the first phase of

35. Olivera Alegre, 2006, 28f

36. Actual evaluation can bring more differentiated results.

37. Fuchs, P., R. Patzschke, 2012, 90

Figure 25. Small fragments (SB64/876); Burial Nr. 7 (ca. 6 months old baby)

Figure 26. Fragment of a shirt with different other fragments from a presumable burial (SB-/2280a-d)

Figure 27. Fragment of a shirt (SB426/3932), from a presumable burial

Sechín Bajo was substituted in Cerro Sechín by a stepped platform and the new conical form for the clay bricks introduced. This development took place simultaneously with the shift of the proportion between the techniques of twining, interlacing and weaving.

The portion of the textiles made with twining decreased while the plain weave textiles gained popularity. This development correlated directly with the decreasing amount of cotton fiber. The technique of the twining did not disappear but continued being used for making mats. The quality of cotton fiber provides a different quality, compared to bast fiber. The changing of the raw material, from bast fiber into cotton, not only allowed but simply required new technologies, and this was a long process.[38] Much more study is required in order to document this change more precisely. At the moment, the time line of the process cannot be set since not enough documented dates are available. It could prove helpful, however, to observe the parallel technological changes in different domains like building construction, ceramic and textile production.

This article is based on the documentation, investigation, and on the evaluation of the dates gathered from the excavated textile material of Sechín Bajo. The aim of the author was to present two small parts of this sample, which are well defined and create distinguishable groups. Some clear and convincing conclusions were reached. The investigation and the evaluation of the whole material are still in progress. The intention with this article is to convey an impression of the finding and to introduce them as a mosaic of the history of the Pre-Columbian textiles.

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38. Woven textiles with twined warp end finish were excavated by Grieder at La Galgada and by Bird at Huaca Prieta. (Bird et al., 1985, 192, Fig. 137; Grieder, 1988, 159)

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11

Headdress forms in the Paracas Necrópolis Mortuary Tradition

Ann H. Peters[1]

Abstract
The importance of headdress is indicated by its careful arrangement on the head of the recently deceased, display on the apex of a mortuary bundle, and prominent depiction in contemporary artifacts. In woven, embroidered or painted imagery, headdress elements include featherwork, the body of a bird or mammal, draped cloth or intertwined bands, often depicted as serpents. Due to their position above the human body, the headdresses are the most consistently preserved textile artifacts in tombs of the Paracas Necropolis mortuary tradition. Some elements appear only with men, others are found with both men and women and certain headcloths are unique to women. Diverse headdresses are present in each bundle, and the forms, materials and styles change among funerary contexts placed in the Necropolis of Wari Kayan and other sectors of the Paracas site between about 200 BCE and 200 CE. Therefore, headdresses provide insight into changing social identities, relationships to the landscape, and political alliances with neighboring societies linked to the late Paracas and early Nasca traditions, demonstrating a dynamic process of interaction and transformation on the south coastal region of the Central Andes.

Keywords: Paracas, Nasca, Topara, mortuary analysis, gender, garment system

Formas de tocado en la Tradición Mortuaria de la Necrópolis de Paracas

Resumen
La importancia del tocado se indica por su arreglo cuidadoso en la cabeza del recién fallecido, su ubicación el la vértice del fardo mortuorio, y su representación prominente en los artefactos contemporáneos. En los imágenes tejidos, bordados o pintados, los elementos de tocado incluyen plumarios, el cuerpo de una ave o un mamífero, una tela o bandas entrelazadas, con frecuencia tomando la forma de serpientes. Debido a su posición arriba del cuerpo humano, los tocados son el tipo de artefacto textil conservado con mayor frecuencia en las tumbas de la tradición mortuorio de Paracas Necrópolis. Algunos elementos aparecen únicamente con los hombres, otros se encuentran tanto con hombres como con mujeres, y ciertas telas de tocado únicamente con mujeres. Diversos tocados están presentes en cada fardo, y las formas, los materiales y los estilos cambian entre los contextos funerarios introducidos en la Necrópolis de Wari Kayan y otros sectores del sitio de Paracas entre c. 200 BCE y 200 CE. Por lo mismo, los tocados ofrecen una visión de cambiantes identidades sociales, relaciones con el paisaje, y alianzas políticas con sociedades vecinas ligadas al las tradiciones de Paracas tardío y Nasca temprano, así demostrando un proceso dinámico de interacción y transformación en la región de la costa sur de los Andes Centrales.

Palabras claves: Paracas, Nasca, Topara, análisis mortuorio, género, indumentaria

The Necropolis of Wari Kayan at the Paracas site, also referred to as the Paracas Necropolis, is a cemetery composed of pit tombs containing well-wrapped conical mortuary bundles, almost all facing north with foodstuffs, pottery, gourds and baskets at their feet and staffs and (generally in male contexts) weapons at their right side. Photographs from the 1927-1928 excavations, directed by Julio C. Tello, give the impression of huge seated figures looking out over the steep hillside towards the Bay of Paracas (Fig. 1).

Under a densely woven cotton outer wrapping, the larger and better preserved bundles were dressed in large mantles, headdresses and other garments and regalia, arranged in

1. Project: Practice in Life, Presence after Death: Style and Substance at the Paracas Necrópolis ann.h.peters@gmail.com http://www.arqueologia-paracas.net/

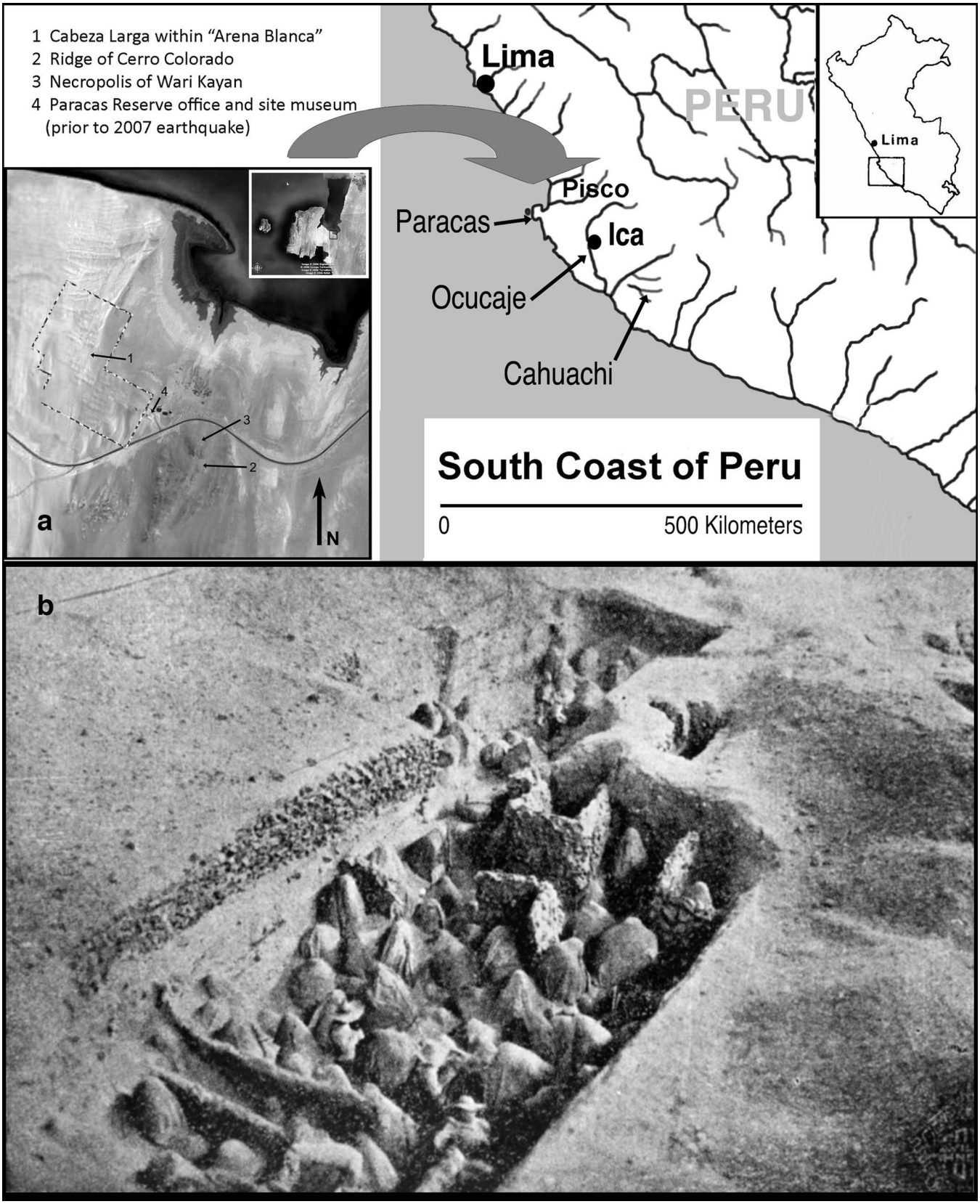

Figure 1. (a) Paracas site in the context of the south coast region; composite satellite image and map created by A. H. Peters and E. Tomasto, with permission from Google Earth. (b) An area of the Necropolis of Wari Kayan under excavation in 1927-1928; image based on Carrion Cachot 1949 plate III. All images not otherwise credited are by A. H. Peters.

layers alternating with large cotton wrapping cloths around a seated, mummified individual at the core.[2] Here 'Paracas Necropolis' refers to the specific, recurrent tomb form and arrangement of artifacts that constitute evidence of a mortuary tradition, defined in sectors A and B of the Wari Kayan cemetery but also present in some other areas of the Paracas site and potentially elsewhere in the region.

Many Paracas Necropolis garments are embroidered, a decorative procedure unusual among Andean textile traditions known for design based on the manipulation of warps and wefts, forms of diagonal interlacing, knotting and other structural techniques. This discussion focuses on headdress elements, including those created using these structural techniques as well as those that incorporate embroidered design.

Paracas Necropolis garments are constructed using panels of 1:1 plain weave in cotton or camelid hair, either balanced or somewhat warp-dominant, joined with simple seams of overhand stitching using yarns like those employed in the weaving. The "post-structural" decoration includes embroidery based on backstitch, and also, in Linear design, on running stitch and whipping stitch.[3] The embroidered areas of garment margins are usually bound with yarn like that used in the embroidery. The most common binding technique incorporates two or more rows of complex looping, often called cross-knit looping due to its structural resemblance to knitting.[4] Many garments have a fringe along some parts of the garment margins, and in these areas the edge binding also covers the join between the separately constructed fringe and the adjacent plain weave panel.

Due to the striking colors and imagery in the embroidered areas and their relationship to imagery depicted on ceramics, textiles and other media in the contemporary south coast traditions that we call late Paracas and early Nasca, most analysis of the Wari Kayan textile assemblage has focused on embroidery styles. Following Dwyer (1979), one group of styles is termed the Linear mode (also called Geometricized or Abstract by members of Tello's research team), while a second group of styles is termed the Block Color mode (also termed Naturalistic by Tello's team and other early 20th century researchers). Paul (1982) defined the Broad Line style group, which combines features from both the Linear and Block Color modes. Peters (1997) defines a Linear style group largely associated with headcloths. As the Necropolis textiles are more fully documented, a wider range of more specific styles can be defined and traced among the gravelots, and hopefully also will be traced in other sites in the region. Here, similarities to textiles associated with late Paracas tradition contexts and early Nasca contexts are noted, while artifacts with characteristics that do not recur among the Necropolis gravelots are referred to as 'outsider' styles.

Garment forms have received less attention, though Carrión (1931) provides some diagrams and Paul (1990) develops reconstructions of wear and a useful classification of male attire based on garment categories developed by Carrión and used in most of the 20th century mortuary bundle openings and inventories. Female garment types were also defined in mortuary bundle documentation beginning in 1933, but were not published. Frame (2007) developed a proposal regarding the depiction of female attire and also noted a form of loincloth resembling those excavated by Kroeber at Cahuachi and analyzed by O'Neale (1937). Peters and Tomasto (2017) discuss the expression of gender identities in garment types and forms of regalia.

Based on a review of all documented garment forms present in Necropolis mortuary bundles, I propose a more specific typology of male and female garment forms, useful for discussing both gender and patterns of cultural association and influence throughout the period of cemetery formation and the Paracas-Nasca transition. While examples of the same garment form may be embroidered with different motifs and in different styles, specific garment forms turn out to be a strong marker of mortuary bundles constructed over the same period. This is probably because they are emblematic of social affiliations expressed in the cultural practices of garment production, the offering or collection of garments as mortuary offerings, and the dressing of the ancestral bundle.[5]

Headdresses are particularly prominent and often well preserved, as they are located on the individual's head or wrapped around "false heads" in the display layers, generally located at the apex of the mortuary bundle and therefore less subject to decay. Headdress elements appear to have played a prominent role in signifying social identity or affiliation of the deceased person, messages which were replicated or transformed in the sequence of display layers, reconstructions of the evolving identities of an ancestral figure (Deleonardis and Lau 2004, Peters 2010). Headdresses are not only visually prominent elements of each mortuary bundle, they are also formally diverse, particularly within and among the male mortuary bundles.

2. Tello 1929; Tello 1959; Tello and Mejía 1979; Tello (comp.) 2012; Yacovleff and Muelle 1934

3. These techniques have been described and diagrammed by O'Neale (1932) and several of the other publications cited here.

4. Yacovleff and Muelle 1934, fig. 9 p. 91.

5. For discussion of the relationships between the formal variations we term 'style' and techniques, practices and *habitus* (Bourdieu 1977), as well as intentioned or emblematic expressions of social identity, see Dietler and Herbich (1998), as well as essays in Conkey and Hastorf (1990) and Carr (1995).

Figure 2. End finishes of women's warp-patterned bands, stitched in two layers and draped over the outer display layer of the mortuary bundle. (a) WK 113 item 5, AMNH 41.2/8840, photo A. H. Peters. (b) WK 347 item 4, MNAAHP RT5009; photo Maria Jhong/ MNAAHP.

Headbands

All headbands are constructed with S(2z) camelid hair yarns[6] similar to those used in the contemporary embroideries. While painstaking and complex, headband construction could have been a portable art, suited to the mobile lives of herders and travelers. Headdress bands have been documented arranged on the head of male individuals, and are typically wrapped around a 'false head' structure created by the bound apex of a male mortuary bundle. The forms and techniques are diverse, and change over time. One form of band is also found draped over the outer display layer of some female mortuary bundles, dated to early phases of the Wari Kayan cemetery sequence contemporary with Paracas phase 10.

The bands draped over female bundles[7] are wide, constructed of two layers of warp-dominant plain weave, with images created by substituting supplementary warps on one or more contrasting colors, that float on the back when not in use (Fig. 2). The two warp-faced panels have been stitched together back to back, enclosing these loose warps. Plain weave with warp substitution (Rowe 1977) is also used in woven borders on contemporary male tunic form 2.[8] Only two examples of these wide bands associated with women have been

6. S(2z) refers to two z-spun (counterclockwise) yarns plied together in the S (clockwise) direction. I use a notation system closely related to that developed by Splitstoser and Tiballi, explained in Splitstoser 2012.

7. Peters and Tomasto 2017, figs. 3 and 5, pp. 390-392.

8. Paul 1990, plates 2 and 4; Peters 2014a, figs. 4c, 6b, 6d p. 123, 130, 132; Peters 2014b, fig. 4e, 6a.

Figure 3. Men's looped headbands: an early form arranged on the man's head: (a) WK 136 item 21, MRI DB-48; photo A. H. Peters. Later forms wrapped around the 'false head' in the outer display layer: (b) WK 421 item 9a, MNAAHP RT1032; (b) WK 421 item 9, MNAAHP RT1701; photos Maria Jhong/ MNAAHP.

well-documented to date: WK 113 item 5 (Fig. 2a) ends in a long 4-ply fringe, with a wide tubular sleeve of cross-knit looping covering the join while WK 347 item 5 (Fig. 2b) divides into three segments near each end.[9] A simpler warp-patterned plain weave band with a 'stripe and ladder' pattern, similar to the woven borders of a women's dress,[10] was draped over the outer display layer of female bundle WK 326; like that of WK 113, it was ornamented by two pairs of triangular yellow-feathered pendants attached by cotton cords.

While they were not found binding the apex of these female bundles, these bands are structurally related to contemporary headbands worn by men. Narrower headbands with warp substitution are documented in contemporary contexts at Ocucaje and on the head of the man in early bundle WK 110.[11] Narrow warp-patterned 'stripe and ladder' headbands have been documented among later Wari Kayan male contexts designated as phase EIP 1B or EIP 2, including WK 310 and WK 38.

Tubular looped headbands (Fig. 3) are documented among early male contexts, both on the head of the individual and atop the outer display layer in WK 401, WK 381 and WK 136[12] and combined with the close-knotted type atop a display layer on WK 114 and WK 157. The early form is relatively loose and flexible and divided into two or three

9. MNAAHP 2013, fig. 96 pp. 172-3.

10. Peters and Tomasto 2017, fig. 6 p. 393.

11. Peters 2014b, fig. 4e.

thick 'fingers' at the finished ends. Several documented examples, such as WK 136 item 21 (Figure 3a), were placed in a mortuary bundle with one end and about a meter of the patterned tube completed, long yarns extending from the unfinished end like a fringe. Linear mode images worked in supplementary yarns in three or four colors depict motifs also common among Paracas Tradition textiles from the Cavernas tombs or Ocucaje.

In later male bundles designated as EIP 1A or 1B, the looped bands are longer and flat, more tightly made with finer yarns, and divide into four, five or six tubular 'fingers' at each end,[13] Complete examples are over four meters in length. WK 421 items 9 and 9a (Fig. 3b, 3c), two looped headbands arranged together, formed part of two sets of matching garments. Their color and motifs each match Linear mode embroidery on borders and panels arrayed across the plain weave ground fabric of a large mantle, 'unkuña' type tunic and man's wrap-around skirt placed in the bundle.[14] Many tubular looped headbands conserve bunches of small yellow feathers bound with cotton yarn at one or both ends. Short versions have been found in bundles containing relatively elaborate miniature garments.[15]

Close-knotted headbands (Fig. 4) are typical of early Wari Kayan male contexts and fragments have been identified in much later bundles, perhaps placed as heritage objects. The genre is defined by a close knotted panel depicting repeating motifs, flanked by two panels in a complex diagonal interlace forming a diamond pattern, followed by two panels of weft patterning over grouped warps that typically depict a simplified version of the central motif, followed by the warps extending in two long yarn fringes. Complete examples are about 25 cm. wide and about 4.5 to six meters in length. A narrower type depicting smaller motifs[16] is typical of Paracas tradition contexts in the Cavernas tombs (Medina 2009) and appears at Ocucaje in several styles and color combinations. As Medina has noted, the wider Necropolis type depicts Linear mode motifs like those embroidered on contemporary mantles.[17] One of the knotted headbands on the apex of WK 114, together designated as item 6, is in an Ocucaje style depicting two alternating motifs (Fig. 4a), while the other (Fig. 4b) is a wider type typical of the early Necropolis mortuary bundles. A knotted headband was worn by each of the men in WK 210 and WK 352,[18] and one was wrapped over two headcloths on the head of the man in WK 199. Knotted headbands also wrap the 'false head' in display layers in WK 210, WK 157 and WK 49.[19]

Figure 4. Men's close knotted and looped headbands: WK 114 item 6, three headbands and extra fringe, originally wrapped around the top of the outer layer of the mortuary bundle to create a huge 'false head' structure. (a) The upper, Ocucaje style knotted headband was at the core, with a looped headband wrapped at the front to create a 'topknot'; (b) details and overview of the larger headband with two-headed bird motifs wrapped beneath it. AMNH 41.2/8739, 41.2/8742; photos A. H. Peters.

12. Lavallée 2008, fig. 11, p. 88; Verde 2009, fig. 16, pp. 70.

13. Lavallée 2008, fig. 57, pp. 151, fig. 71, p. 180; Verde 2009, figs. 60-61, pp. 116-7.

14. Carrión 1949, plate VI; Kajitani 1982, figs. 26 and 30; Tello and Mejía 1979, cover.

15. Lavallée 2008, fig. 23, p. 104, fig. 29 pp. 108-9; Verde 2009, figs. 35, 37 pp. 87-8.

16. For example, MNAAHP 2013, fig. 97 pp. 175-6.

17. Lavallée 2008, fig. 12, pp. 89; Verde 2009, fig. 49 p. 71, fig. 52 pp. 104-5.

18. Peters 2014b, fig. 5f.

19. Lavallée 2008, fig. 12, pp. 89; Verde 2009, fig. 17 p. 71.

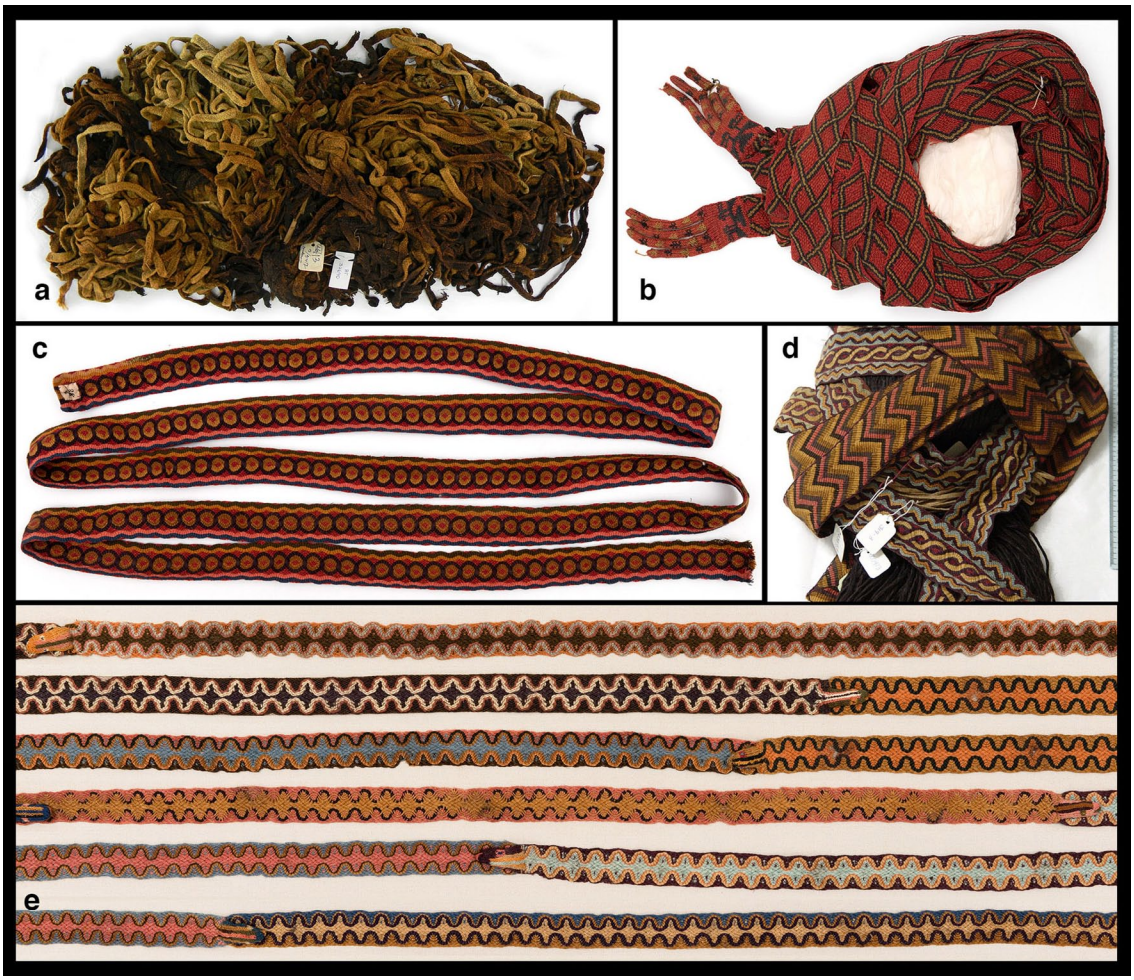

Figure 5. Men's oblique interlaced headbands: (a) WK 26 item 13, long monochrome band originally wrapped around the top of the bundle, MNAAHP RT37690; photo A. H. Peters. (b) WK 421 item 10, band conserved in position, arranged on the top of the mortuary bundle, MNAAHP RT14094; (c) WK 38 item 7, one of two textured bands, part of the headdress of the outer display layer, MNAAHP RT2847; (e) WK 38 item 43, headband in the form of a series of serpents, wrapped around the top of an inner layer, MNAAHP RT1875; photos Maria Jhong/ MNAAHP. (d) WK 319 item 3, hairpiece with one monochrome and two wide textured bands, MNAAHP RT3858; photo A. H. Peters.

Oblique interlaced headbands (Fig. 5) have a long history. A relatively narrow monochrome type constructed with pairs of camelid hair yarns is present in early contexts that include late Paracas tradition garment types, such as Cateo (test pit) 99 tomb 2, and later recurs in EIP 1A contexts such as WK 26 (Fig. 5a), as well as EIP 2 contexts like WK 319 (Fig. 5d). WK 26 item 13, originally wrapped around the apex of the bundle, is a very long band, less than two cm. in width, which has never been extended for measurement. While oblique interlaced ties on men's skirts and loincloths are structurally similar, the headbands have tightly interlaced paired elements and appear to have been constructed from one end, while the ties have a looser 2/2 twill-like interlace symmetrical around a center line, and may have been constructed in pairs using a sprang technique (Frame 1991).

Wider headbands combine balanced oblique interlace of paired yarns with 'rep' single-faced bands of compact elements, in one or more contrasting colors, that cross in patterns resembling a three-strand braided or plied structure.[20] Where their arrangement has been preserved, they may bind the forehead and topknot of a man,[21] or form a cap-like hemisphere around the top of a mortuary bundle, as preserved in WK 421 item 10 (Fig. 5b), with the ends ornamented with tufts of yellow feathers. Examples from male bundles designated as EIP 1A usually have a red background of paired elements with the 'rep' bands in dark green, dark blue, purple or yellow-gold. In a few examples, these other colors are used instead for the background. The more elaborate and better-preserved examples may have the ends covered in sleeves of looping ending in tubular 'fingers'. While some examples have not been extended

20. Yacovleff and Muelle 1934, fig. 15 p. 119.

21. Peters and Tomasto 2017, fig. 16 p. 430.

Figure 6. Men's tapestry headbands: (a) WK 89 item 7, part of the headdress of the outer display layer, MNAAHP RT183; (b) WK 38 item 8, part of the headdress of the outer display layer, MNAAHP RT 3739; photos Maria Jhong/ MNAAHP.

for measurement, these headbands also may be over three meters long.

As analyzed by Frame (1991), oblique interlaced bands in later contexts, designated as EIP 2, have surfaces dominated by compact single-faced bands that create diverse textured patterns, exemplified by WK 38 items 6 and 7 (Fig. 5c).[22] This headband style, with looped end finishes, was found arranged on the head of WK 23 (Peters and Tomasto 2016, fig. 16 p. 430) while a similar band wrapped the 'false head' in the outer display layer. Two Nasca-related bundles have headbands worked in sections of different colors: WK 38 item 43 (Fig. 5e), two cm. wide and almost 4.5 meters in length, is worked in eight sections with different color combinations that each end in a three-dimensional looped snake head. Similarly, WK 451 item 3a is worked in segments ending in tubular looped 'fingers' that transform each into a image of a headband.[23] In late bundles designated as EIP 2, wide oblique interlaced headbands dominated by diagonal 'rep' bands appear without looped end finishes. WK 318, WK 319 and WK 298 have wider, shorter headbands worked in relatively dark hues of red, green, purple-blue and brown and others worked in bright pastel hues – hallmarks of different Nasca-related styles.

Tapestry bands (Fig. 6) appear in several male mortuary bundles designated as EIP 1A, 1B or 2, usually in a fragmentary state. Three relatively well-preserved examples have been documented, all combining several motifs on a red background. WK 217 item 35 was wrapped around the head of the man and secured his hair in a topknot.[24] Components of the headdress in the outer display layer, WK 89 item 6 alternates three types of motifs: a pair of horizontal figures linked by a serpentine appendage, a double-headed serrated serpentine-insect figure, and a human figure carrying a staff.[25] WK 89 item 7 (Fig. 6a) alternates five motifs: a set of six stepped blocks, a condor figure with head bent back, a rayed head, a double-headed serpent and a profile spotted feline, similar in style to the band in WK 217. WK 38 item 8 (Fig. 6b) depicts a series

22. Frame 1991, figs. 29-40 pp. 147-171. Also see MNAAHP p. 122 fig. 34.

23. Kajitani 1982, fig. 39; Lavallée 2008, fig. 78, pp. 193; Verde 2009, fig. 75, pp. 147.

24. Yacovleff and Muelle fig 16 p. 121.

25. Paul 1990 plate 5.

Figure 7. Men's sling-form headdress elements: (a) WK 91 item 54, maguey fiber sling with complete functional components, MNAAHP RT3443; (b) WK 91 item 56, sling with a human hair ornament replacing the maguey fiber tassel, MNAAHP RT3442; (c) WK 217 item 47, maguey headdress element with sling-form components and looped tassel cover, MNAAHP RT5675; (d) WK 253 item 45a, maguey headdress band composed of sling tassels and pairs of braided cords, MNAAHP RT931; (e) WK 89 item 10, sling with yellow feathers replacing the maguey fiber tassel, MNAAHP RT6416; (f) WK 23 item 15, sling-form headdress ornament of maguey and human hair, MNAAHP; photos A. H. Peters.

of profile felines with a mouth appendage ending in a human head, with sporadic substitutions of a horizontal anthropomorphic figure with two short and one long head appendage, as well as a mouth appendage ending in a human head. The figure styles in these tapestry bands combines elements of Linear and Broad Line mode design, with figure styles reminiscent of polychrome double cloth textiles found in the Nasca region.

Sling-form headbands (Fig. 7) are ubiquitous among the Wari Kayan male mortuary bundles, and also vary over time. Functional slings (Fig. 7a, 7e) are braided of maguey fiber cordage, with a ring of cotton yarns at the end retained in the hand, a diamond-shaped 'basket' to hold the projectile and a tassel of braided and bound maguey fiber[26] at the end released.[27] Variable spin direction indicates that the maguey fiber was added and twisted as the object was made, which facilitated the separation and union of braided elements to create the 'basket'. Slings found near the body in early male bundles may have been part of the individual's headdress. In later male bundles, functional slings continue to be present, and also elements of slings such as a series of 'baskets' or tassels are combined to create headdress ornaments (Fig.

26. Probably Furcraea occidentalis, a South American agave species.

27. Yacovleff and Muelle 1934 pp. 113-4.

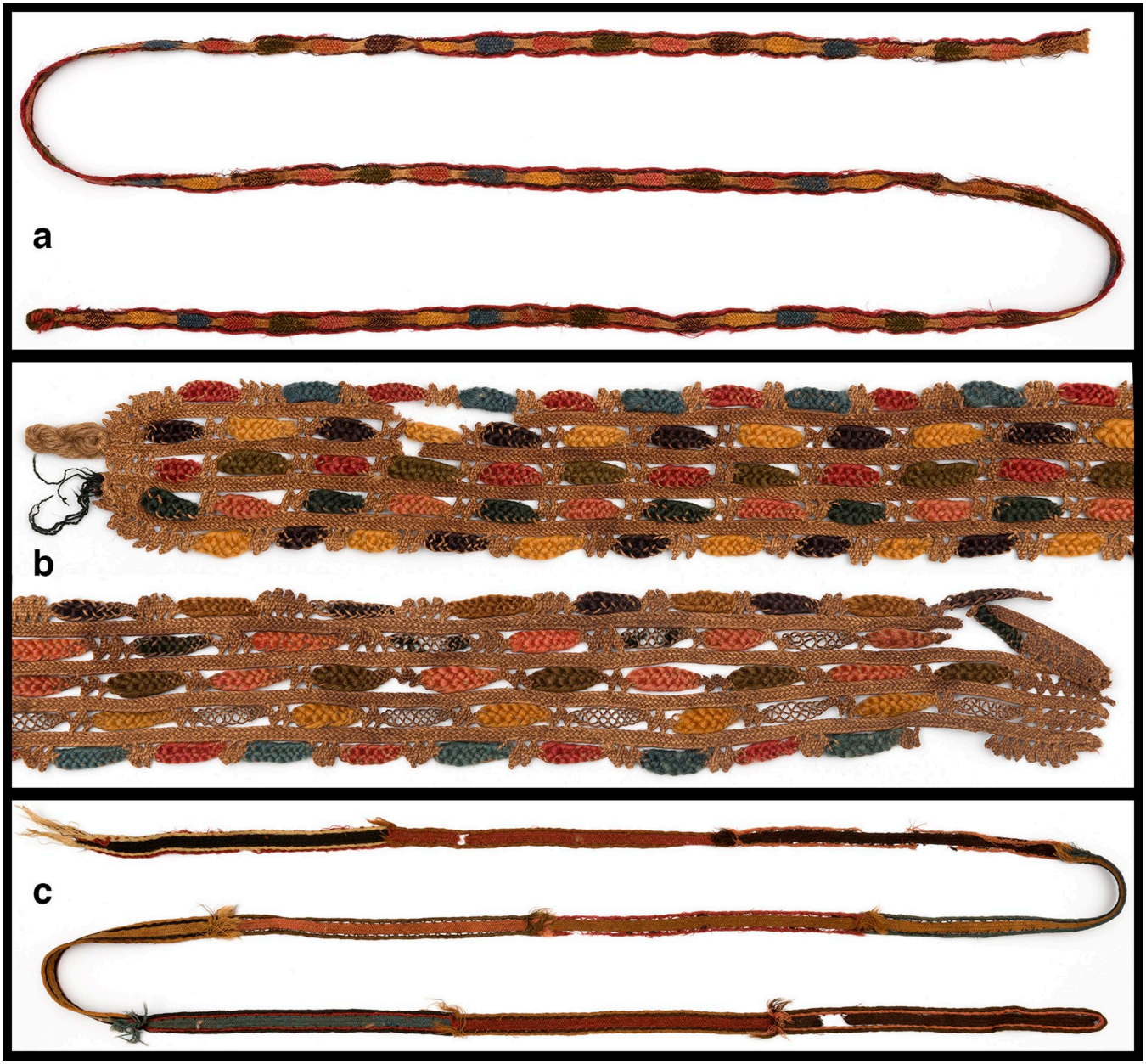

Figure 8. Headdress elements combining maguey fiber and dyed camelid hair: WK 253 item 29, MNAAHP RT2574; WK 253 item 28, MNAAHP RT1876; WK 253 item 35, MNAAHP RT2575; photos Maria Jhong/ MNAAHP.

7b, 7c), sometimes documented on the head. Human hair is used to ornament the sling tassel in WK 91 (Fig. 7b), and combined with maguey fiber in a sling-form ornament in WK 23 (Fig. 7f).

In the late bundle WK 253, a group of maguey fiber headdress bands (Fig. 8) are created using complex flat braiding techniques and incorporate camelid hair yarns or twisted fiber in bright colors, including examples divided in long sections of different colors (Fig. 8c), a form reminiscent of the sectioned headband in WK 451. Each of the mortuary bundles designated as EIP 2 contains a form of headdress element found in no other bundle at Wari Kayan. These late contexts are associated with unusually large numbers of artifacts created to be worn by an individual or wrapped around the apex of the bundle, none of them designed to match another garment. These changes suggest a shift in the aspects of social identity expressed by headdress ornaments in mortuary ritual, and very likely also in other social contexts.

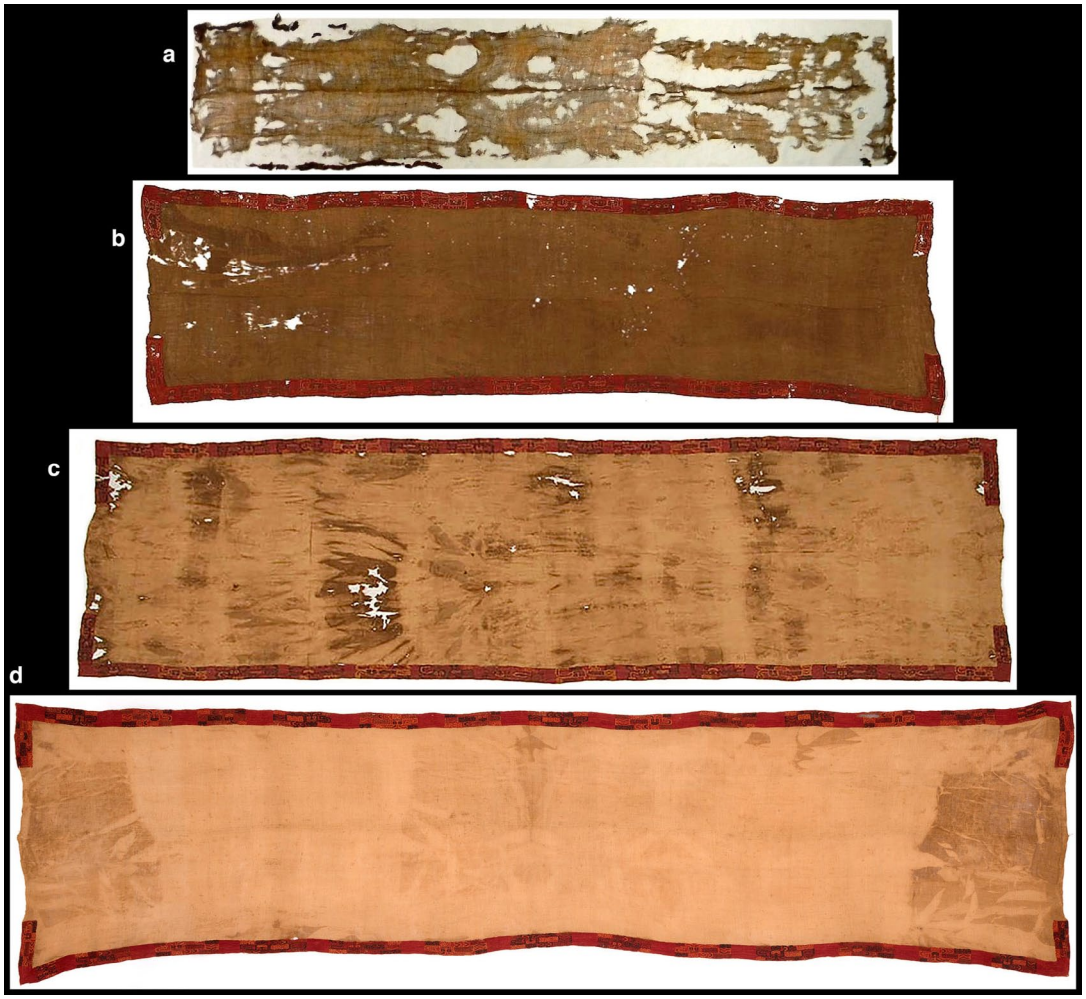

Figure 9. Headcloth form 1: (a) WK 199 item 43c, wrapped around the man's head under headband 43a and headcloth 43b, MNAAHP RT18671, photo A. H. Peters. (b) WK 147 item 31, wrapped around the man's head over headcloth 32, MNAAHP RT2688; photo Maria Jhong/ MNAAHP. (c) WK 114 item 50a, wrapped around the top of the bundle over proto-Nasca style headcloth 50b in a display layer sealed within the bundle, AMNH 41.2/8787; photo AMNH. (d) WK 157 item 30, part of a display layer with many headdress elements, sealed within the bundle, MNAAHP RT1396, photo Maria Jhong/ MNAAHP.

Headcloths

The majority of Paracas Necropolis headcloths are long and relatively narrow, constructed of two seamed panels of fine, loosely woven 1:1 plain weave with narrow Linear mode embroidered borders on the sides (weft selvages) with bracket-like extensions on the ends (loom end or warp selvages). This type of headcloth may be twisted and wrapped around the head of a male individual[28] or the 'false head' of a male or female mortuary bundle, and is the most common form in early Wari Kayan mortuary contexts. Examples woven of natural cotton range from about 2.25 to 2.75 meters in length and 50 to 70 cm. in width, while examples woven of dyed camelid hair range from about 1.25 to 1.75 meters in length and about 40 to 45 cm. in width. The latter appear in later contexts, associated with other distinctions in style and range of motifs suggesting that they represent a different production tradition.

Early forms of this headcloth form 1 (Fig. 9) are woven with fine over-spun cotton yarns, with the final twist in either the S or Z direction. Natural cotton colors vary from cream white to beige, ochre, or a silvery light brown. While the tubular (and sometimes kinked) look resembles a single ply yarn, close examination of some examples reveals that two elements have been joined, though an initial spin direction may not be visible. In the two superimposed headcloths in early bundle WK 199, the cloth is very loose and flexible and the embroidered figures difficult to discern (Fig. 9a). Well-preserved examples in EH 10 male bundles such as WK 147 item 31 (Fig. 9b) and WK 114 item 50a (Fig. 9c)

28. Peters and Tomasto 2017, fig. 14 p. 428.

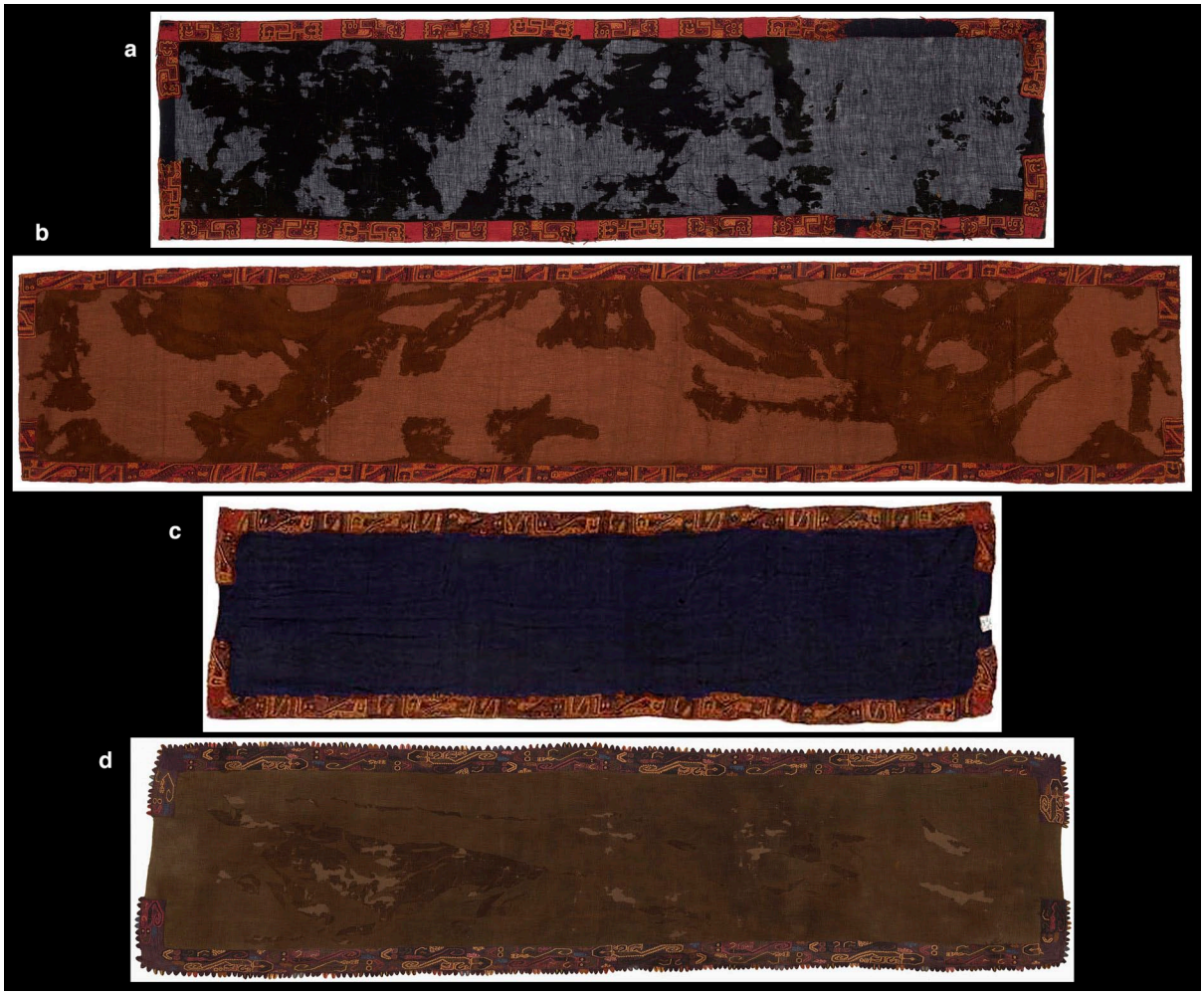

Figure 10. Headcloth form 1 variants from EIP 1A contexts: (a) WK 94 item 46, found with a pin of raptor feathers in a display layer sealed within the bundle, MNAAHP RT5939; (b) WK 421 item 68a, part of a display layer sealed within the bundle, MNAAHP RT2612; photos Maria Jhong/ MNAAHP. (c) WK 12 item 382-51, with color reconstructed (original dark blue cloth was poorly preserved), MNAAHP RT3918; based on MNAAHP catalogue photo. (d) WK12 item 382-50a, originally a darker green, with headcloth 51 forms one of three pairs of headcloths in the second display layer arranged over the man, MNAAHP RT2831; photo Maria Jhong/ MNAAHP.

define a distinctive Linear mode style group (Peters' Linear 2) with figures developed within a rectangle alternating with areas of the background color, stitch direction changing on a diagonal at each corner and a unique edge binding that incorporates three rows of darned 'plain weave' instead of looping.[29] This type of headcloth continues to be common in transitional bundles such as WK 49, WK 94 and WK 157 (Fig. 9d) as well as predominantly EIP 1A bundles such as WK 16 and WK 421, where it diversifies in form and component materials.

In male bundles transitional to EIP1A, headcloth form 1 appears with a wider range of component materials, color schemes, imagery and forms of edge binding (Fig. 10). The cloth may be woven of either natural cotton or dark blue camelid hair yarn, the borders may be a bit wider, and some edge finishes incorporate looping rather than a darned finish. Linear 2 design (Fig. 10a) continues, but also continuous Linear 'twisted strand' motifs appear, linking the headcloth to a mantle or garment set featuring the same motifs (Figs. 10b, 10c). Among bundles designated as EIP 1A, new background colors appear such as dark green, blue-purple or yellow-gold, and Linear 2 embroidery appear for the first time on other garment types, such as unkuña tunics. Among mortuary bundles transitional to EIP 1B, headcloth form 1 may be woven of dyed cotton. In WK 378 item 16 and WK 12 (382) item 50a (Fig. 10d), headcloths with Linear mode borders depict motifs adapted from Block Color imagery on other garments in the bundle, in the wider range

29. Paul 1982; Peters 1997; Peters 2014a, fig. 4-2.

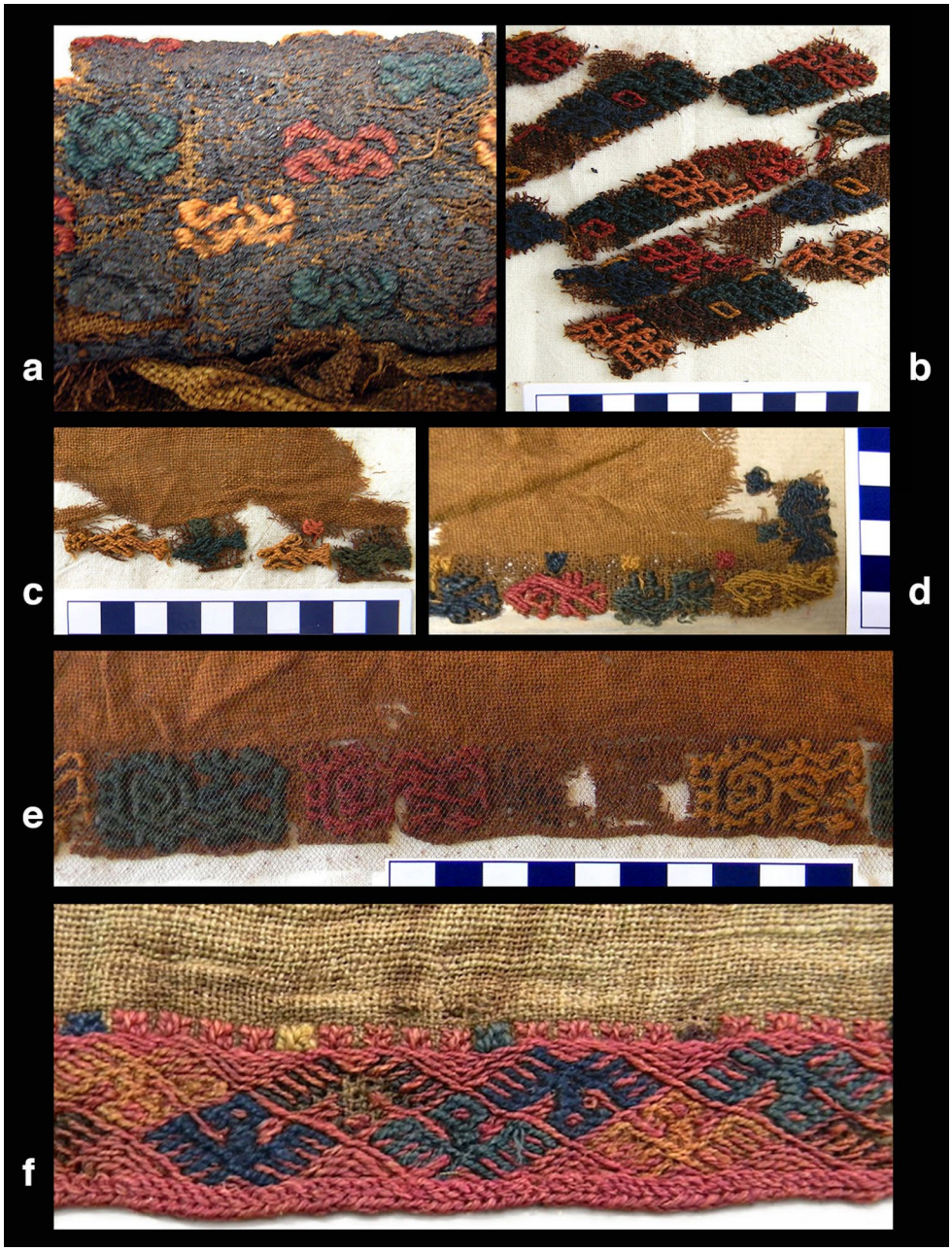

Figure 11. Mosaic style headcloths from early contexts: (a) WK 113 item 4, draped over the head of the woman, AMNH 41.2/8839b; (b) WK 352 item 29, fragmentary headcloth border, MRI DB-04; (c) WK 352 item 61, fragmentary headcloth border, MRI DB-19; (d) WK 352 item 74, fragmentary headcloth border, MRI DB-14; (e) WK 352 item 64, headcloth border with figures resembling a geoglyph in the Ica valley, MRI DB-09; (f) WK 352 item 70, headcloth border, MRI DB-23; photos A. H. Peters.

of colors present on those embroideries.[30] Features like a looped tab fringe, or tiny figures embroidered on the central panel, link these hybrid headcloths to later or more Nasca-influenced types of headcloths in these contexts, and also in later male bundles.

Throughout the Paracas-Nasca transition there are other headcloth forms present, some associated with 'outsider' styles and several associated with female bundles. One style group, largely known from fragmentary examples, has wider borders with a continuous, diagonally organized 'mosaic' pattern of Linear mode motifs (Fig. 11), shown here in examples from the EH 10 female bundle WK 113 (Fig. 11a) and the gender-ambiguous, Ocucaje-related bundle WK 352 (Figs. 11b-11f). Several of these headcloths with continuous border patterning can be considered 'proto-Nasca' in style, though they appear in well-documented contexts designated as EH 10. One group (Fig. 11c, 11d) depicts figures in simple, largely monochrome styles intermediate between the Linear and Block Color modes, including some of the earliest textile examples of motifs that appear on Ocucaje 10B ceramics. A motif in an unusual Linear style (Fig. 11e) closely resembles a late Paracas geoglyph in the Ica region.

30. Lavallée 2008, fig. 72 p. 181; Verde 2009, fig. 69 p. 136.

Figure 12. Headcloth form 2:

(a) WK 352 item 94, one of three similar headcloths in inner display layers of this unusual trans-gendered context, MRI DB-25; photo A. H. Peters.

(b) WK 28 item 24, one of four similar headcloths grouped in an inner display layer, MNAAHP RT2852; photo Maria Jhong/ MNAAHP.

Wide headcloths (Fig. 12) are composed of two seamed panels that total about 95 cm. to 1 m. wide, with very narrow borders (1.5 cm). One group of unusually wide headcloths in bundle WK 352, items 75, 77 and 78, has red borders embroidered in the Linear 2 style.[31] Another distinctive group of headcloths in WK 352 (Fig. 12a) has narrow monochrome borders with 'twisted strand' images created by patterns in the stitch direction.[32] Created with over-spun ochre cotton yarns with a final S or Z direction, the two seamed panels create a headcloth 77 to 82 cm. wide and between 175 and 195 cm. in length. Similar to headcloth form 1, these wide headcloths had been wrapped, turban-like, around the apex of the mortuary bundle.

Later female bundles, designated as EIP 1, are also adorned by wide headcloths. WK 28 item 24 (Fig. 12b), typical in form, is one of six similar headcloths superimposed around the apex of an inner layer of the bundle. About 1.65 to 1.70 m. in length and 95 cm to 1 m. in width, it is composed by two seamed panels of loosely woven, often dyed S(2z) cotton edged by narrow borders, less than two cm. in width. These headcloths feature a purple or green background with tiny Block Color mode figures of birds, felines or other Nasca-related imagery.[33] Their Nasca-related color schemes and imagery contrasts with the red-dominant four-color Linear mode embroidery or woven borders of most other garments in a group of approximately contemporary female mortuary bundles, including WK 1 and WK 234.

31. Peters 2014a, fig. 4-2a, b.

32. Peters 2014a, fig. 4-3a, b.

33. Peters 2014a, fig. 4-3c, d.

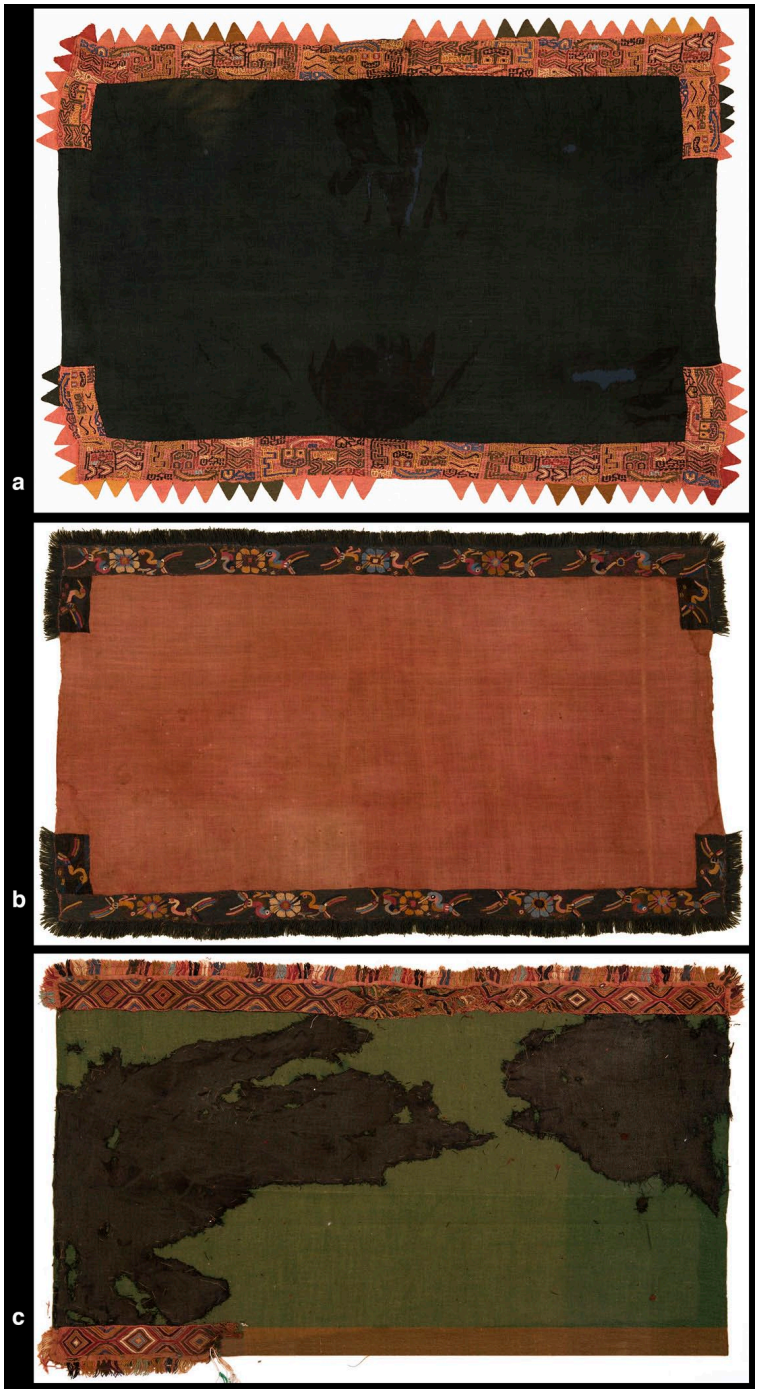

Figure 13. Headcloth form 3, examples from garment sets placed on inner display layers in EIP 1B male mortuary bundles: (a) WK 310 item 33, MNAAHP RT793; (b) WK 262 item 20, RT1449; (c) WK 262 item 40, MNAAHP RT2911; photo Maria Jhong/ MNAAHP.

Among male bundles designated at EIP 1B, a shorter type of headcloth (form 3) becomes common, usually woven with dyed camelid hair (Fig. 13). Usually less than a meter in length, these headcloths range from about 33 to 40cm. in width, woven of a single panel. Most have 'bracket' shaped embroidered borders with Block Color figures as well as the types of fringe present on contemporary mantles and other garment types. This headcloth form often appears as part of a garment set, and can be as diverse in color and ornament as any other type of garment.[34] WK 310 item 33 (Fig. 13a) appears to pay homage to traditional headcloth border design, but is embroidered on a Nasca-related type of purple cloth and edged by a triangular looped fringe. WK 262 item 20 (Fig. 13b) is early Nasca in both technique and design, depicting paired hummingbirds around a flower and edged by a fine plied fringe created directly on the garment margin. WK 262 item 40 (Fig. 13c) has continuous patterning and plied fringe on lateral borders without bracket ends, traits atypical of the Wari Kayan assemblage.

A long, narrow headcloth (form 4), based on a single woven panel of dyed camelid hair, has wide straight lateral borders (Fig. 14a-b). This form has been documented only in WK 292 and WK 190, both male mortuary contexts that include unusual, Nasca-related textiles.[35] WK 292, designated as EIP 1A, has an inner display layer wrapped in an extraordinary mantle, item 190-17, embroidered with diverse figures that all face in the same direction.[36] In the layer below, headcloth 190-28 (Fig. 14a), a panel of dark blue camelid hair 1.85 m. by 30 cm. embroidered with wide red borders with unfinished Linear mode imagery, was found together with a matching unkuña tunic. WK 190, designated as EIP 1B, contained the famous painted 'Calendar Mantle' 290-45 and 'casulla' tunic panel 290-13.[37] Headcloths 290-48 (Fig. 14b) and 290-49, juxtaposed in an inner display layer near the 'Calendar Mantle', are each about 33 cm. wide and

34. See Kajitani 1982, fig. 38.

35. WK 12, WK 190 and WK 292 form part of a group of bundles with numbers switched by Tello in 1928, to avoid sending unique contexts to be opened in Seville as part of the Iberoamerican Exposition of 1929, so the inventory numbers created when the bundle was opened do not match the original excavation number.

36. Peters 2010 fig. 23 p. 222-3.

37. Aponte 2006; Tello 1959, plates LXVIII- LXXVIII, Tello and Mejía 1979, figs. 106 and 109-111 pp. 398-402.

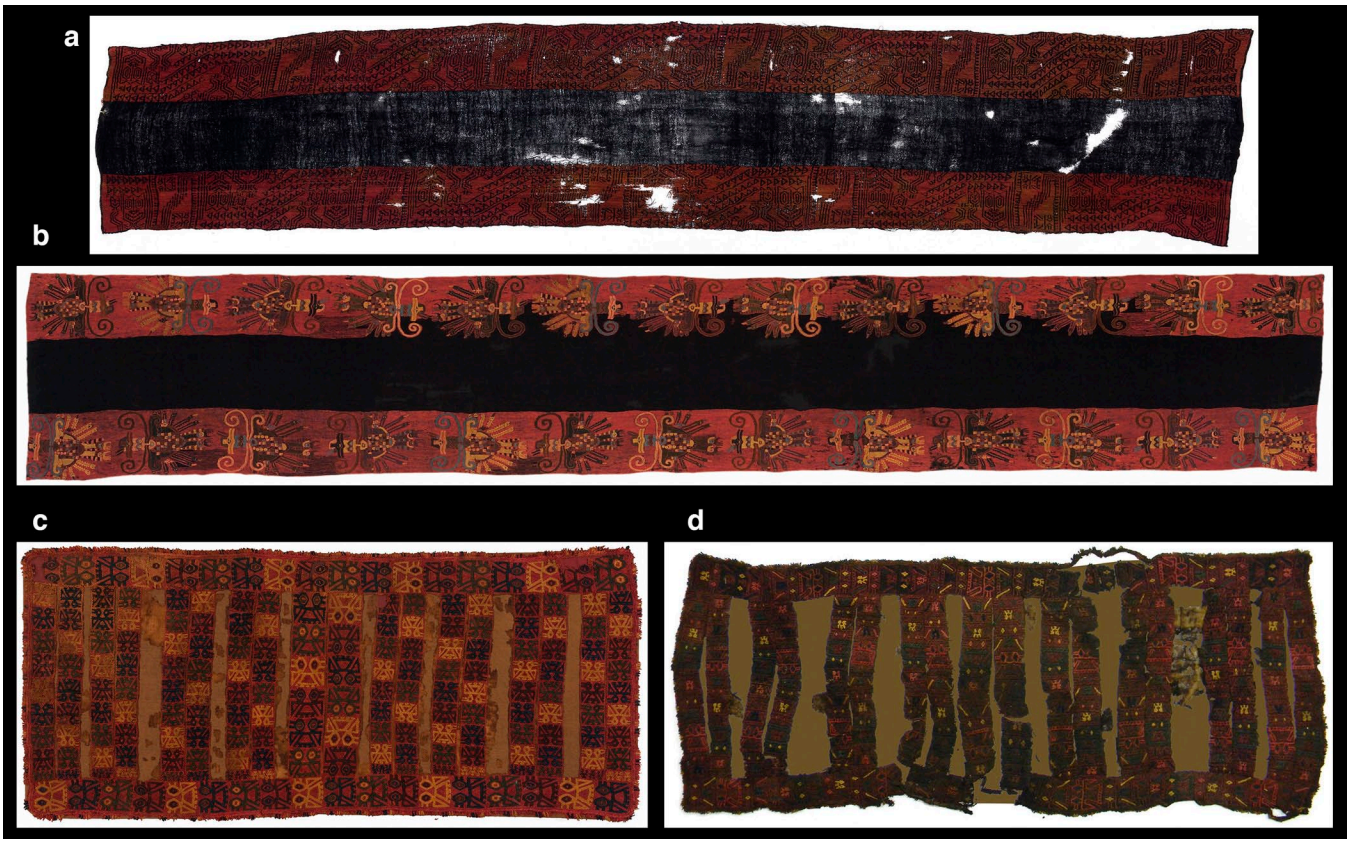

Figure 14. Headcloths form 4 and 5: (a) Form 4: WK 292 item 190-28, part of an inner layer of the mortuary bundle, MNAAHP RT1782; (b) WK 190 item 290-48, part of an inner layer of the mortuary bundle, MNAAHP RT4561; photos Maria Jhong/ MNAAHP. Form 5: (c) WK 190 item 290-62 (or 67), headcloth over the individual's head, MNAAHP RT2593; photo Maria Jhong/ MNAAHP. (d) WK188 item 12, part of an inner layer of the mortuary bundle, AMNH 41.2/8873; photo A. H. Peters.

respectively 2.14 and 2.44 m. in length, embroidered in the Block Color mode. They each form part of a garment set, which correspond to two mantles of the outer display layer.[38] These headcloths demonstrate continuity in an emblematic style that sporadically has been placed in the Necropolis of Wari Kayan, apparently coming from an outside producer community closely linked to the early Nasca tradition.

An intriguing type of headcloth (form 5), present in only a few male bundles designated as EIP 1B, has proportions and embroidery layout resembling a woman's mantle but differs in being smaller in scale, embroidered on fine loosely woven cotton cloth, and edged with a plied yarn fringe (Fig. 14c-d). WK 188 item 12 (Fig. 14d) has lateral borders and transverse bands with two wider bands flanking the central axis, a unique feature of the woman's mantle.[39] The beige cotton panel, about 27 cm in width and 68 cm. long, is embroidered with Linear mode two-headed birds on a purple background. Placed over the head of the man in WK 190, headcloth 290-62[40] (Fig. 14c) has a panel of beige cotton about 29 by 67 cm., embroidered in a 'heritage style' with Broad Line double-headed bird figures, which match a second headcloth beneath that also resembles a reduced-scale heritage mantle. These headcloths have been embroidered in Paracas-related styles characteristic of contexts designated EH 10B, but the colors, yarn characteristics, and other production details indicate that they were produced later. Their similarities in form and motif suggest a social link between these adjacent mortuary contexts, though other garment types, embroidery styles and headdress elements in these two bundles are dissimilar. In the later EIP 2 bundle WK 319, headcloth 24 is similar in its proportions and the organization of its embroidered decoration, but does not imitate the unique features of the woman's mantle.

38. Aponte 2006; Lavallée 2008, fig. 13 pp. 90-93, fig. 14-16, pp. 96-100; MNAAHP 2013, fig. 31, pp. 116-6, fig. 81, pp. 152-3, figs. 89-91 pp. 162-5; Verde 2009, figs. 18-20 pp. 72-5, fig. 68 pp. 132-5.

39. Peters and Tomasto 2017, fig. 7 p. 394.

40. Aponte 2006; Lavallée 2008, fig. 43, pp. 119; MNAAHP 2013, p. 121 fig. 33.

Figure 15. (a) Headcloth form 6, part of the group of garments termed 'anako' in Tello's research notes and inventories, WK 38 item 39c, grouped with other anako type garments in an inner layer of this early EIP 2 mortuary bundle, MNAAHP RT2936; photo Maria Jhong/ MNAAHP. (b) Early Nasca style headcloth, WK 318 item 3, placed atop the outer display layer of this late EIP 2 mortuary bundle, MNAAHP RT1231; photo Maria Jhong/ MNAAHP.

Headcloth form 6 (Fig. 15a) recurs in male mortuary bundles designated EIP 1B or EIP 2. It forms part of a garment system with small mantles, headcloths, loincloths[41] and tunics with continuous embroidered borders on all garment margins, termed Anako in most of the 20th century unwrapping notes and inventories. This garment system has formal similarities to garments excavated at Cahuachi by Kroeber in 1926,[42] including loincloths identified by Frame (2007). Similar in their proportions to the 'Anako' mantles and loincloths, the headcloths are relatively short and wide, ranging from 60 cm. to 95 cm. in width while only 95 cm. to 1.25 m. in length. The headcloths are distinguished by fine, relatively loosely woven cotton cloth, which often has been dyed and is found in a fragmentary state.

Among the male mortuary bundles created in the final phase of the Wari Kayan cemetery, headcloths in Nasca-related styles appear on the apex of the bundle in the final display layer. This represents a change in practice, as among the earlier bundles, particularly Nasca-related textiles were hidden beneath headcloths and mantles in more common Wari Kayan styles. For example, a fine, deteriorated headcloth embroidered in early Nasca techniques, colors and motifs originally covered the headbands and hairpiece of WK 319 item 3 (Fig. 5e). It was preserved as a border fragment associated with other elements that crowned the outer display layer, removed for conservation, and re-associated in 2006.[43]

The adjacent mortuary bundle, WK 318, appears to be the latest complex male bundle documented in the Necropolis of Wari Kayan and was crowned by headcloth 3 (Fig. 15b).[44] Like others in the EIP 2 Wari Kayan mortuary bundles, this headcloth is relatively small, totaling 53 cm in width by 84 cm in length. It is an early Nasca textile. Diagnostic features include bicolor yarns, including brown and beige yarns plied and used to weave the central panel.

41. Frame 2007 p. 69 fig. 9.

42. O'Neale 1937, plate XXXIVa.

43. See Paul 1990 plate 6 for arrangement circa 1980, and MNAAHP 2013 fig. 93 p. 168 for current arrangement.

44. Previously published in Kajitani 1982, fig 37; MNAAHP 2013, fig. 84 pp. 156-7.

Double-faced embroidery is used to create the stepped lines and flowers there, while the yarn fringe has been created directly on the warp end selvages. Yet another diagnostic Nasca feature is the independently constructed looped figurative border constructed on separately woven bands, depicting birds. A row of looped tabs on its inner margin is stitched to the edges of the central cloth. Despite these diverse Nasca-related features, this headcloth differs in style from those recurrent in Nasca 3 contexts, either because it is somewhat earlier or because it was created elsewhere. The Brooklyn Museum's "Paracas Textile," said to have ornamented the apex of a male mortuary bundle excavated in Arena Blanca prior to 1923, is perhaps the most famous headcloth in an early Nasca style found atop a mortuary bundle at the Paracas site.[45]

Hair styles, caps and fringes

Hair arrangements are an important aspect of the headdress, as well as the personal identity still visible in the initial postmortem ritual. The men and women at the core of the Wari Kayan mortuary bundles have fairly diverse hair arrangements. Some arrangements, such as shoulder-length hair interspersed with small braids or more carefully arranged rows of five or more neat, tight braids, are worn by both men and women. Men wearing oblique interlaced headbands or with their hair bound by a skein of yarn, sling or cord typically have their hair pulled forward into a topknot, often over their right temple. The man in WK 12 (a bundle opened as 382) wore a moustache, while WK 52 and at least one other man are described as wearing a beard.[46] Like tattooing and face painting, these aspects were covered by cloth in the first phase of mortuary ritual, but are carefully depicted on some 'warrior' figures in contemporary embroidered and painted imagery.

Ornaments created with human hair or dark hues of camelid hair become important in contexts designated as EIP 1A, and they become more common and more elaborate in contexts where Nasca influence appears to be more dominant and direct. Where camelid hair is used in these artifacts, the long, relatively straight, coarse fiber and the hues of dark brown or grey appear to imitate human hair, and can be difficult to distinguish without close examination.

Caps created using looping or knotting techniques (Fig. 16a and 16b) appear in male bundles designated as EIP 1B. In several cases, the individual is described as balding in the unwrapping notes or dissection protocol. Three hemispheric caps of close simple looping in WK 89 are almost identical[47] but two are made with spun and plied human hair and one of dark brown camelid hair. A cap found in WK 451 is described and illustrated as more complex in structure, including side flaps decorated with feathers.[48] In the contemporary tomb WK 190, item 290-28 may have originally formed part of this genre of headdress, recovered in the form of two

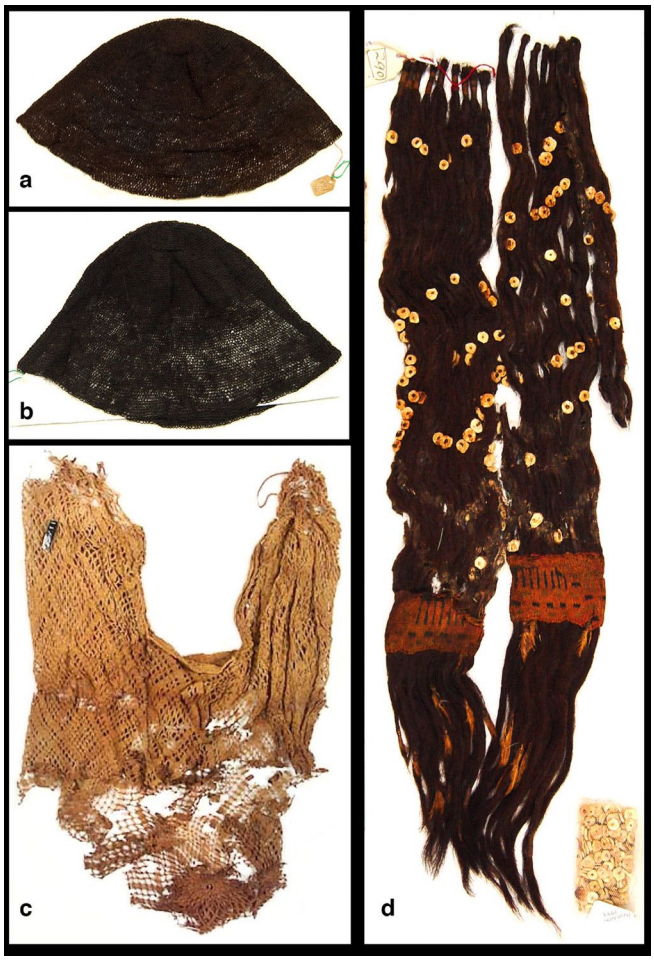

Figure 16. Cap-like headdress elements from EIP 1B male contexts: (a) and (b) WK 89 items 46 and 47, looped caps of camelid hair and human hair, MNAAHP RT2941, RT2942; (c) WK 89 item 11, bag or headdress element with bands of more compact knotting creating a diamond pattern, MNAAHP RT113; WK 190 item 290-28, S-spun, unevenly Z-plied human hair cords joined in two bands of loose oblique interlace, ornamented by Spondylus sp. shell beads with an organic adhesive, tubular looped camelid hair bands and feathers, MNAAHP RT2524; photos A. H. Peters.

45. Brooklyn Museum 38.121, published, for example, in Harcourt 1934 plates 88-104 Tello 1959, plate LXXIX, Kajitani 1982, fig. 48; Lavallée 2008, pp. 210-211.

46. See, for example, Tello and Mejía 1979, p. 453.

47. Paul 1991, fig 19 p. 195-6.

48. Tello 1959, fig. 44 p. 289). WK 190 item 290-28 (Figure 15d; also see Aponte 2006.

Figure 17. Plied and braided hair ornaments from EIP 2 male mortuary bundle: (a) WK 318 item C, Z-plied human hair fringe, MNAAHP RT25883; (b) WK 319 item 95, S-plied cotton and human hair fringe, MNAAHP RT4154; (c) WK 253 item 54, Z-plied cotton and human hair fringe, MNAAHP RT1578; (d) WK 253 item 58, band of multiple layers of Z-plied human hair fringe, MNAAHP RT3893; (e) WK 319 item 20, oblique interlaced hair band, MNAAHP RT3440; photos A. H. Peters.

bands each composed of a row of locks of human hair decorated with diagonal lines of shell disks, encased near the bottom in a sleeve of fine close looping of unusual design and continuing in the form of a fringe ornamented with feathers (Fig. 16d). Their structure is also related to human hair fringes discussed below.

Small hammock-shaped or bag-like objects of simple knotted netting in natural cotton fiber are often found close to the body of male individuals. These often appear to be freshly made and unused, and come in a range of forms.[49] Hammock-shaped knotted headdresses are associated with Paracas Tradition contexts in the Cerro Colorado tombs and at Ocucaje. We recorded one on the head of the man in mortuary bundle Arena Blanca 4, corresponding to the Paracas Necropolis mortuary tradition and designated as EIP 1B.[50] Two caps constructed with decorative knotting patterns were recovered in WK 89: item 11 (Fig. 16c) has diamond shaped designs, while item 43 has a more complex knotted pattern creating dorsal insect-bird figures.[51] These complex knotted caps are unique among the mortuary bundles documented to date. Other unique artifact types found in WK 89 include embroidered cloths folded and stitched into a triangle, interpreted by Paul as a type of loincloth but which also might be a headdress element. The diversity of forms of regalia and the concentration of particular types in a single tomb or in only two or three of those studied suggests diverse social origins of both the individuals and their mortuary assemblages.

Masses of human hair, twisted skeins, plied or braided cords, and fringes bound to a cotton cord (Fig. 17) are interrelated artifacts included in the later male bundles. Differences in the color, thickness of strands and other characteristics indicate that they are made from the hair of individuals other than the person at the core of the mortuary bundle. The use of human hair in some sling-form headdress elements, discussed above, may be related. While trophy heads have not been identified to date in any Wari Kayan gravelot, objects of human hair may play an analogous role; they bring the power of another individual into a ritual context. Complete human hair fringes have been identified in WK 190 and in three male mortuary bundles designated as EIP 2. The fringe structure and production practices, well as human hair cords placed in the same bundle, vary among the mortuary contexts: WK 190, WK 318 (Fig. 17a) and WK 253 (Figs. 17c and 17d) have fringes of hanks of hair doubled, bound and twisted into short Z-plied cords (in some cases incorporating cotton yarns), the hair hanging loose below, while WK 319 has S-ply cords (Fig. 17b), 3-strand braids (Figs. 5e) and oblique interlaced bands (Fig. 17e). Fringes of the plied type can be combined to construct a hemispheric wig.[52]

49. See Yacovleff and Muelle 1934, fig, 17 pp. 121-4.

50. Peters and Tomasto 2015, pp 318-319..

51. Paul 1990, figs. 37 and 38 pp. 212-3.

52. MNAAHP 2013, fig. 95 p. 170.

Figure 18. Wig-like headdresses of locks of hair and feathers attached to a looped structure:

(a) WK 226 item 3, crowned the outer display layer of a woman's mortuary bundle, MNAAHP RT7091;

(b) WK 26 item 2, crowned the outer display layer of a man's mortuary bundle, MNAAHP RT37687;

(c) WK 188 item 3, crowned the outer display layer of a man's mortuary bundle, over a crescent-shaped reed headdress with brown and yellow feathers, AMNH 41.2/8864; photos A. H. Peters.

The 'false head' of a mortuary bundle can be crowned by a wig-like headdress, which combines a looped cap-like structure with hair fringe, and is associated with feathered ornaments (Fig. 18). The outer display layer of the female bundle WK 226 was topped by a looped cap decorated with Z-plied cords of human hair decorated with yellow feathers (Fig. 18a) and a similar cap was found on an inner display layer.[53] WK 26 item 2 (Fig. 18b) is a cap similar in structure with more prominent featherwork, though not as well preserved, placed on the outer display layer of a male bundle designated as EIP 1A. WK 188 item 3 (Fig. 18c) is a looped cap decorated with doubled and bound hanks of gray-brown hair, possibly camelid, placed on the apex of the outer display layer of this EIP 1B male bundle over another headdress ornament of fine reeds decorated with brown and yellow feathers.

53. Vreeland ms. 1975, consulted in the library and archive of the MNAAHP.

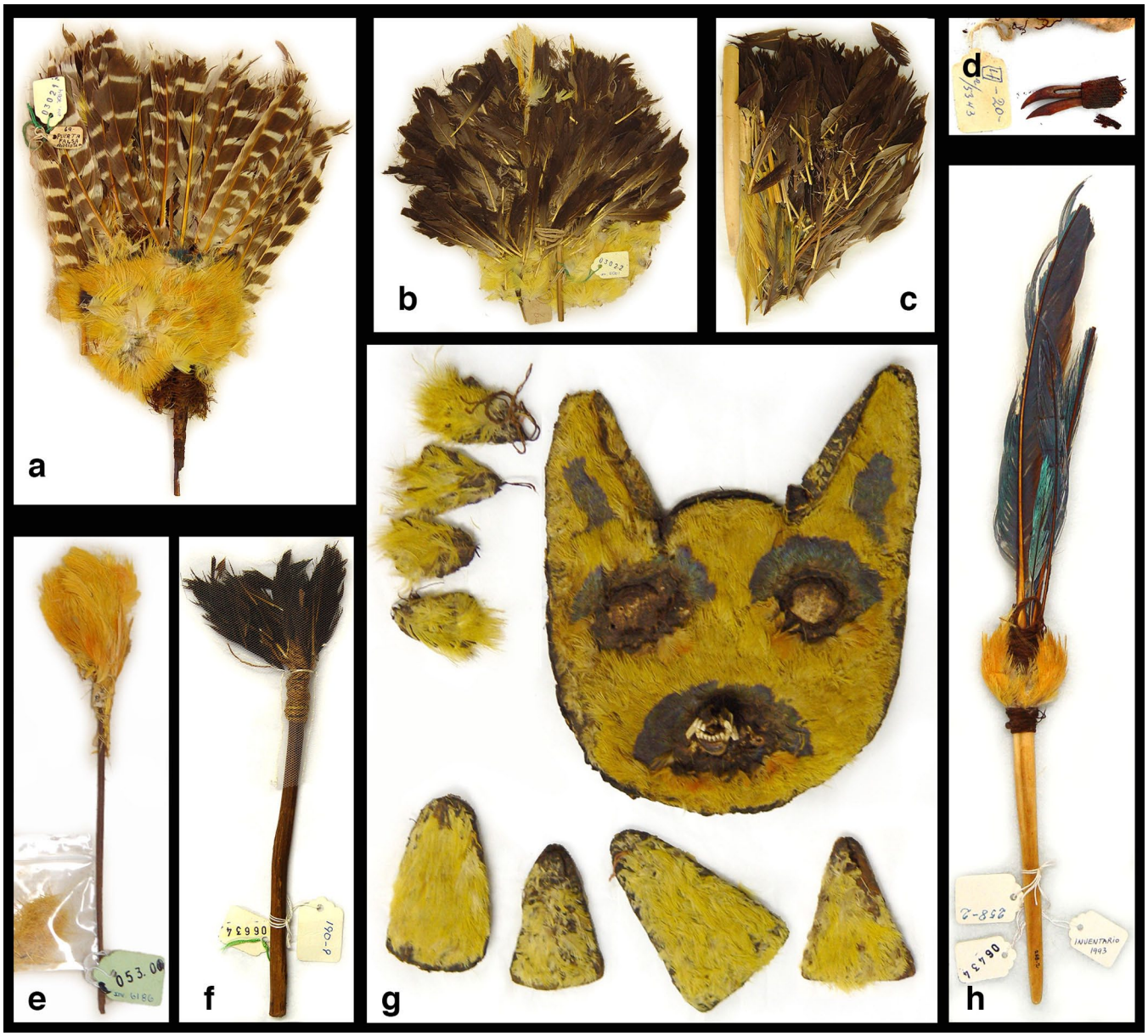

Figure 19. Feathered headdress pins and bird or animal effigies: (a) WK 400 item 6a, wood pin with raptor and parrot feathers, MNAAHP RT3021; (b) WK 421 item 6a, cane pin with oropendola feathers, MNAAHP RT3022; (c) WK 94 item 6, bone pin with oropendola feathers, MNAAHP RT2959; (d) Arena Blanca 4 item 20, gull beak in looped cylinder, MNAAHP MO3927; (e) WK 147 item 38, wood pin with parrot feathers, MNAAHP RT5300; (f) WK 292 item 190-9, wood pin with brown feathers, MNAAHP RT6634; (g) Arena Blanca 157 item 4, assorted triangular pendants and mask with a fox muzzle, skin covered with adhesive and parrot feathers, MNAAHP RT24930; (h) WK 258 item 2, bone pin with puna ibis feathers, MNAAHP RT6434; photos A. H. Peters.

Animal and bird headdress elements

Yacovleff (1933) provides an excellent analysis of feathered headdress ornaments. Peters and Tomasto (1917) review some additional artifacts from mortuary contexts unopened at the time Yacovleff wrote. The composition of the feathered pins and tassels inserted into men's headdresses (Fig. 19) changes over time, with blue and yellow macaw (Ara ararauna) important in bundles designated as EH 10 and raptor feathers and mealy parrots (Amazona sp.) becoming prominent in bundles designated as EIP 1 and 2. Some contemporary bundles, such as WK 94 and WK 421, share tassels of similar design made with feathers of the same species, possibly indicating the same producers or ritual specialist. While color and design are certainly important, the presence of feathers from sociable Amazonian parrots

(Fig. 19e, etc.) or oropendulas (Figs. 19b, 19c), fierce Andean raptors (Fig. 19a) or water birds of the Andean lakes (Fig. 19h) and Pacific shores (Fig. 19f), embody multiple levels of significance related to their habits and geographic origins. Wood and bone pins may also bear significance in their material, as well as their form.

The body parts of birds and animals can be incorporated in headdress elements like those depicted in embroidered and painted imagery. Andean fox pelts[54] are placed on the apex of the outer display layer of many male mortuary bundles designated as EIP 1A and others transitional to EIP 1B. Some have the short reddish-brown hair characteristic of the coastal Sechura fox (*Pseudolopex sechurae*), while others have a thicker, variegated pelt more typical of southern Central Andean foxes (*Pseudolopex culpaeus*).[55] Feathered skin ornaments incorporating a fox muzzle that crowned the outer display layer of Arena Blanca 157 (Fig. 19g) have been interpreted as either a fox or feline, both of which appear as headdress elements in embroidered imagery. However, feline pelts or body parts have not yet been identified in the Wari Kayan gravelots. Feathered cloth headdresses with large 'Oculate being' ringed eyes and whiskers, flanking a fox muzzle, crowned at least two mortuary bundles in Ocucaje tombs.[56]

While feathered bird effigies incorporating skeletal elements are known from Ocucaje, the only example we have identified in the Paracas Necropolis mortuary tradition is the beak of a laughing gull (Larus atricilla)[57] bound by a sleeve of complex looping (Fig. 19d), that once formed part of a display layer in the male bundle Arena Blanca 4, designated as EIP 1B. It appears significant that entire fox pelts are documented on the apex of many of the complex Wari Kayan male bundles, while the two examples of facial elements of a mammal or bird combined with other materials in a representation, analogous (but not formally similar) to those from Ocucaje tombs, come from the smaller clusters of burials in the Arena Blanca sector.

Wrap-up

This review of headdress forms at the Paracas Necropolis demonstrates evidence for the gender associations of headdress elements and for a trajectory of change over time. However, the relationship between style and time is inseparable from the social and political affiliations expressed in dress, which result in diversity among contemporary mortuary bundles and channel influences and innovations. Headdress elements were placed in highly visible locations, where their styles preserve evidence for the projection of diverse identities and the contributions of different producer groups.

There is much more to be done in the analysis of each headdress form. For instance, among the many examples of headcloth form 1 there are differences in production practices, proportions and imagery, including features dominant in a single mortuary bundle and recurring features that can be traced among different gravelots. This is true for other headband and headcloth forms, as well as slings, human hair ornaments, and featherwork. The other headcloth forms each cluster in certain mortuary bundles, which also share some other characteristics. The gender references are interesting, and not a simple dichotomy. What other aspects of social identity may be referenced by these headcloths? The changing characteristics of featherwork and human (or other) hair ornaments interact, as the two are typically juxtaposed in headdresses and can be used together to ornament an artifact. Do they embody analogous social or philosophical references?

As the documentation of a wider number of mortuary bundles improves, new forms of headdress elements will probably be documented and forms now 'unique' may be perceived as part of a genre present in several contexts. I expect these elements to be important for comparisons with other sites in the region, as headdresses are more likely to be preserved and identifiable in disturbed burials and in contexts with less favorable conditions of preservation than Tello and other members of his excavation team found at the Necropolis of Wari Kayan.

Acknowledgements

Documentation of headdress elements with data on their location in the mortuary bundle and the biological sex of the individual at the core relies on the analytic contributions of co-director Elsa Tomasto-Cagigao and the members of the project Practice in Life, Presence after Death: Style and Substance at the Paracas Necropolis (www.arqueologia-paracas.net). I thank the personnel in Human Remains, Organic Material, and Textiles of the Museo Nacional de Antropología, Arqueología e Historia del Peru (MNAAHP), the Director and staff at the Museo Regional de Ica

54. Lavallée 2008, fig. 9, pp. 86; MNAAHP 2013, fig. 92 pp. 166-167; Verde 2009, fig. 13 p. 68.

55. This canid genus has also been also designated as Lycalopex.

56. Morris and Van Hagen 1993, fig. 44 pp. 65.

57. Identified by Antje Chiu as part of the project *Prácticas En Vida, Presencia Después De La Muerte: Lo Estilístico Y Lo Material En La Necrópolis De Paracas*, 2012.

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12

Nasca Textiles of south Peru, Los Molinos, Sector B. Analysis and Insights

Daniela Biermann

Abstract
In a northern sector of the administrative centre of Los Molinos, studied by the PALPA Project under the leadership of Dr. Markus Reindel (KAAK Bonn) and Lic. Johny Isla Cuadrado (Institudo Andino de Estudios Arqueológicos, Lima), textile fragments were found in undisturbed strata dating to the Early and Middle Nasca Phase (325-620 AD). Archaeological data indicates that this area was a location used for ritual ceremonies. Detailed analysis, together with exact archaeological evidence offer an overview of the nature and quality of these remnants within the broad spectrum of material and textile analysis techniques. Could these findings provide us with further insight into the society of the Nasca?

Keywords: Nasca culture, excavation, textile findings, south coast of Peru

Nasca Textiles del sur de Perú, Los Molinos, Sector B. Análisis e Insights

Resumen
En un sector al marjen norte del centro administrativo de Los Molinos, estudiado por el proyecto PALPA – bajo la dirección de Dr. Markus Reindel (KAAK Bonn) y Lic. Johny Isla Cuadrado (Institudo Andino de Estudios Arqueológicos, Lima) – se han encontrado textiles en capas intactas de las épocas Nasca temprano y Nasca medio (325-620 d.C.). Los datos arqueológicos indican el uso de este sector para ceremonias rituales. El análisis y los datos exactos ofrecen una visión general de la naturaleza y la calidad de los artefactos y la gran diverdidad de sus materiales y las técnicas textiles. ¿Pueden estos hallazgos constribuir a una mejor compresión de la sociedad de los Nasca?

Palabras clave: Cultura Nasca, excavación, hallazgos textiles, costa sur de Perú

Introduction

Textile remnants discovered in an archaeological project in southern Peru offer us the opportunity to analyze objects from a precise archaeological context. All the archaeological information is available. The textiles underwent a detailed analysis. Combined with the data from the excavation, new questions were raised, which provide us with a deeper insight into the Nasca society.

The Nasca culture

The Nasca was a society located on the south coast of Peru with its main area in the region of the Nasca river basin and the region of the Ica River to the north.

Chronologically the Nasca were active in the Early Intermediate Period (Fig. 1). The phases relevant to my investigation are the Early Nasca Phase (325 – 440 AD) and the Middle Nasca Phase (440 – 620 AD). The Early Nasca Phase includes cultural phases Nasca 2 and 3; the Middle Nasca Phase includes cultural phases Nasca 4 and 5. The chronological table is based on the results of the Nasca-Palpa project.

The PALPA project

Under the direction of Dr. Markus Reindel and Lic. Johny Isla Cuadrado in the years from 1998 to 2007, the archaeological project of PALPA was undertaken in order to research the region around the modern town of Palpa,

YEARS	PERIODS	CULTURES	PHASES	CERAMIC STYLE	LOCATIONS
1535 AD	LATE HORIZONT	Inka / Ica		Inka / Ica	Pueblo Nuevo
1155 AD	LATE INTERMEDIATE PERIOD	Ica		Ica	Pinchango Alto Chillo
820 AD	MIDDLE HORIZON	Wari		Chakipampa	Los Molinos
590 AD					
630 AD				Loro (Nasca 8)	
605 AD	EARLY INTERMEDIATE PERIODE	Nasca	Late	Nasca 7	Parasmarca
440 AD				Nasca 6	
325 AD			Middle	Nasca 4, 5	La Muña Jauranga Hanaq Pacha
90 AD			Early	Nasca 2, 3	Los Molinos
120 BC	TRANSITION	Initial Nasca		Nasca 1 Ocucaje 10	Estaquería
280 BC	FORMATIVE PERIOD / EARLY HORIZON	Paracas	Late	Ocucaje 8, 9	Jauranga Pinchango V.
360 BC					
385 BC			Middle	Ocucaje 5, 6, 7	Jauranga
525 BC					
570 BC			Early	Ocucaje 3, 4	Mollake Chico Pernil Alto
800 BC					
890 BC	INITIAL PERIOD			Puerto Nuevo Disco Verde Hacha	Pernil Alto
1140 BC					
2895 BC	ARCHAIC			no ceramics	Pernil Alto
3805 BC					

Fig. 1. Chronological table containing the archaeological and the physical dating results of the Nasca-Palpa project (Reindel/Wagner 2009, fig. 1.2)

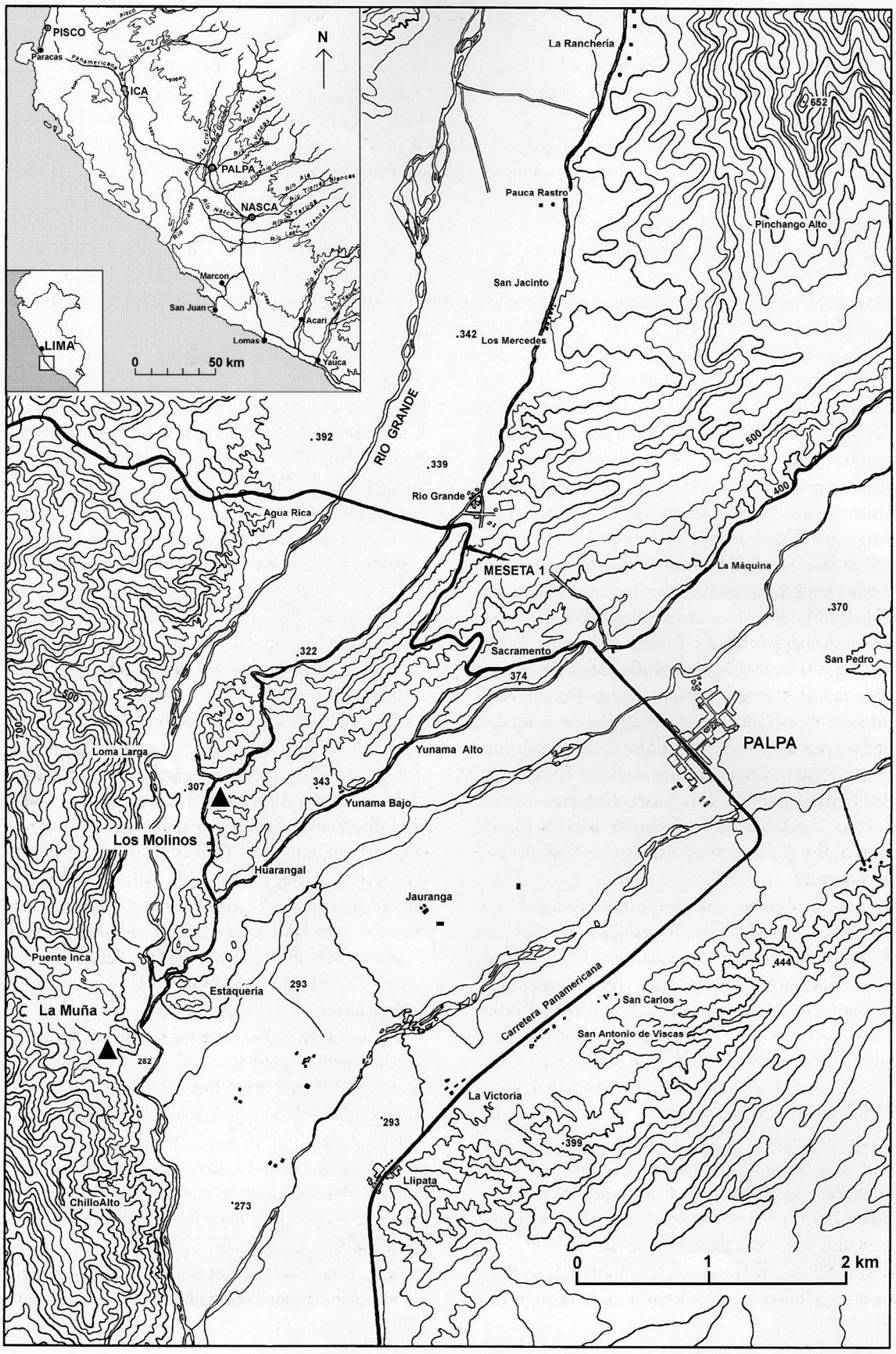

Fig. 2. Map of the lower area of the Palpa valley with the sites of Los Molinos and La Muña (Reindel/Isla Cuadrado 2001, fig. 1)

Fig. 3. Aerial photograph of Los Molinos (Reindel/Isla Cuadrado 2001, fig. 37)

investigating the archaeological sites of the Nasca culture (Fig. 2). The investigated area is located in the region of the river Grande, Palpa and Viscas. Between the lower valley sections lies the most fertile zone of the whole area. The main focus was to study and map all of the geoglyphs and to see them in context to the nearby settlements. Geoglyphs are mostly geometrical forms visible as a result of stones having been removed.

In this, and in the following project, NASCA, diverse scientific specialists participated in the working group. For example, geologists studied indications of climate changes in south Peru. These investigations provide proof of changes from humid to an increasing arid climate (Reindel/Wagner 2009: 17-18) throughout the Paracas and Nasca Periods, peaking in the Middle Horizon (620 – 1000 AD) with an extremely arid climate. So, the zenith of the Nasca culture in the Early Nasca Phase can be explained in part as a result of climate.

The archaeologists mapped, in addition, all the archaeological settlements of the region – not only those of the Nasca period. Some locations were excavated. As part of the PALPA project, textile remains were discovered – almost all of them in the two settlements, Los Molinos and La Muña.

The site of Los Molinos

The photo in fig. 3 shows the site of Los Molinos. The view is from the west. Different areas of the site are located along the hillside. The excavated areas in the south are of small size and are outside the photo, on the right.

The site of Los Molinos is divided into different sectors: the central sector correlates with the centre of the settlement. Sector B is located to the north. Between both sectors lies an arid valley showing clear signs of geoglyphs. Sector C is located to the south of the centre (Fig. 4).

The largest sector is the centre of the settlement (Fig. 5). The architectural structures were built on five levels from west to east. A corridor in the lower part offers access to buildings to the north and south. The entrance to a bigger area in the south has not been excavated. The architectural structure of these buildings and the use of adobe bricks indicate administrative use. Smaller structures are situated in the upper part of the central sector. Here – on the fourth and fifth terraces – were located simple houses made of wattle and daub for domestic use. Nowadays the upper area has been almost virtually destroyed.

The sector C is an area further to the south. It is separated from the center by a small ridge. In this southern

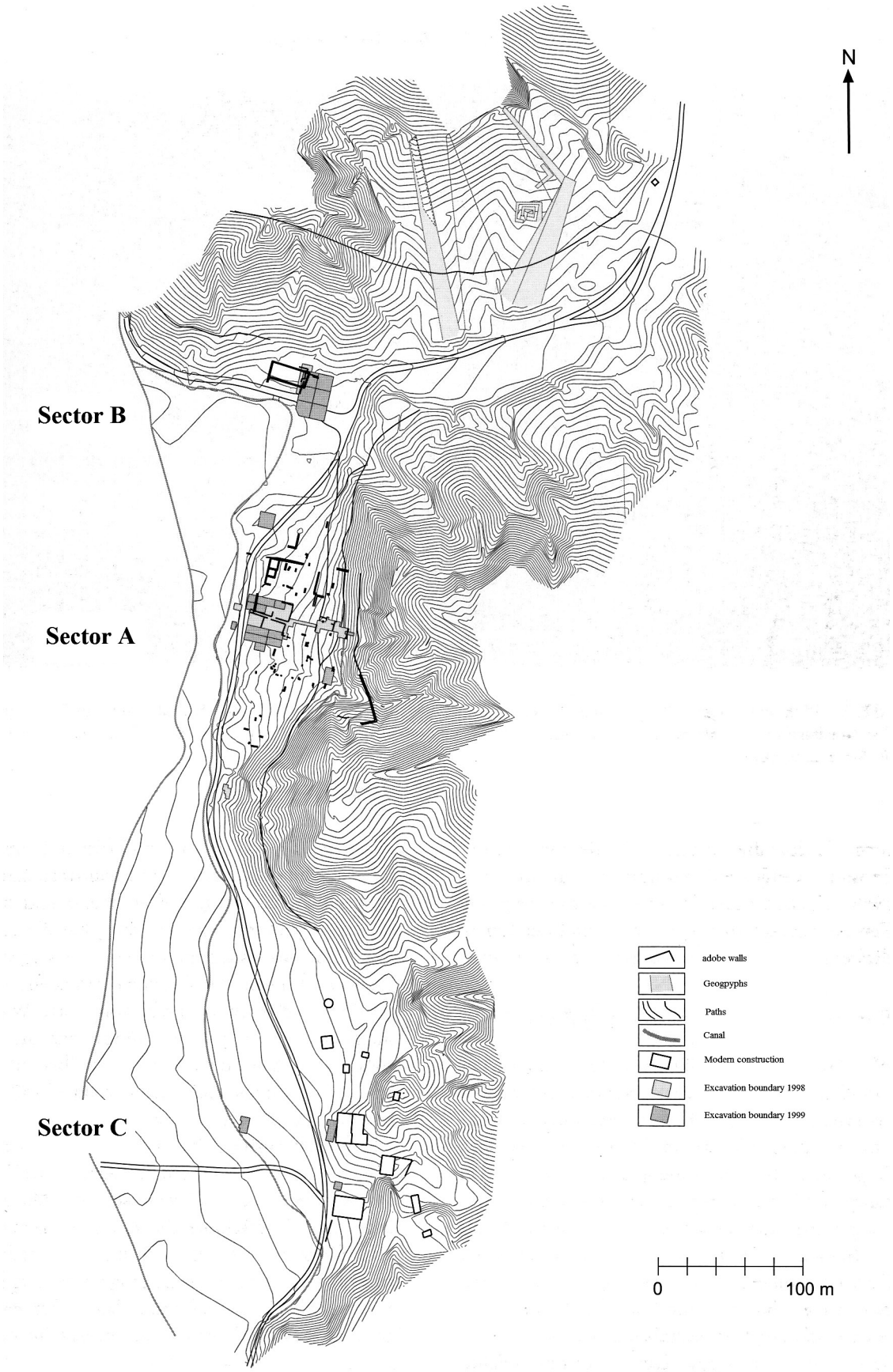

Fig. 4. Plan of the Los Molinos site (Reindel/ Isla Cuadrado 2001, fig. 3)

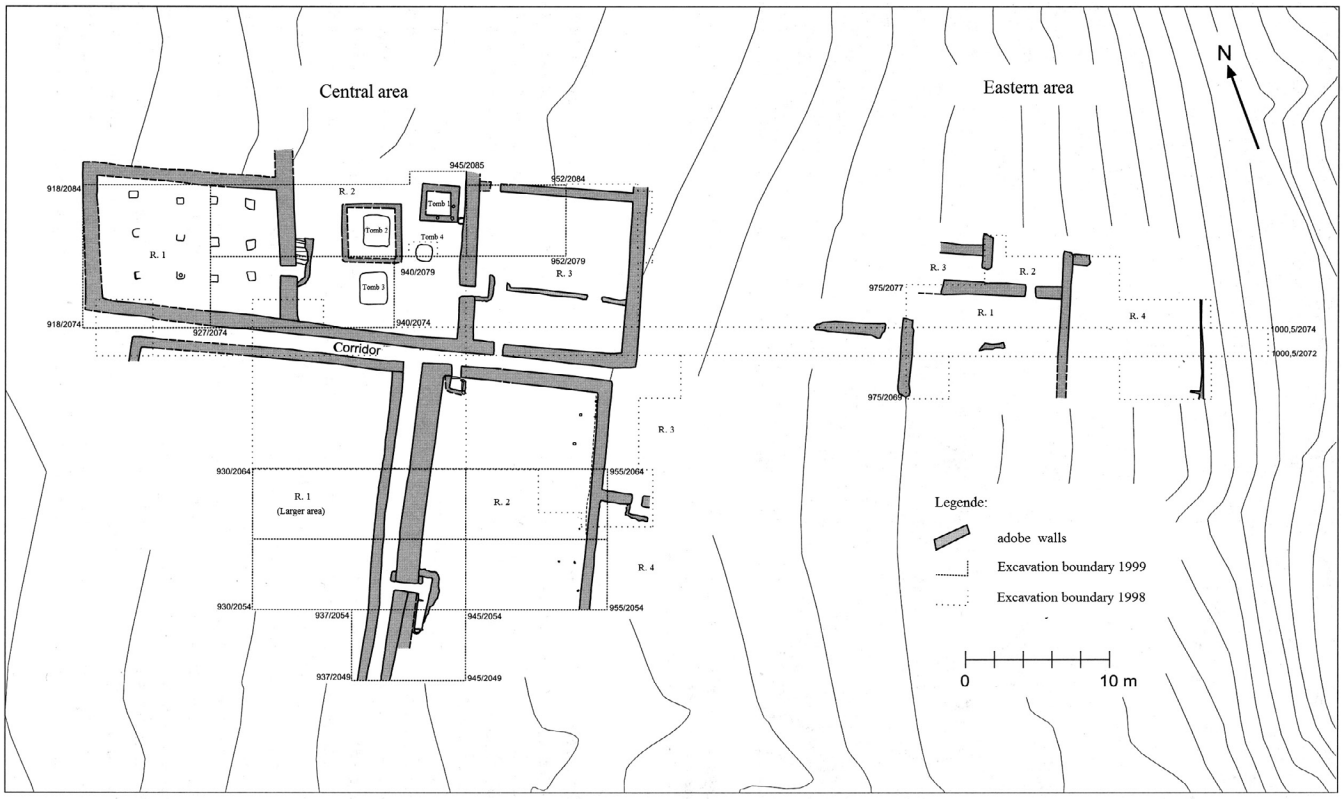

Fig. 5. Plan of the oldest construction phase of the buildings in the centre (sector A) of Los Molinos (Reindel/Isla Cuadrado 2001, fig. 5)

sector were found only very simple dwellings. This was, probably, the area where the ordinary people lived.

Over time central sector A as well as southern sector C were used as living areas.

In various phases tombs were dug in between the floor of the buildings. This has been documented only in sector A and in sector C. So during these phases there was a repeated change in function: activities of daily life alternated with the use of these areas as a cemetery.

Sector B as part of the Los Molinos site

Sector B of Los Molinos is located to the north of the main settlement. Archaeologists excavated an area of 40 m^2, where they discovered two platforms on different levels (Fig. 6). The arrangement shows many similarities to the architecture in the centre of Los Molinos, sector A. In both sectors, A and B, the different levels are connected by a central ascending corridor with walls left and right, from which you have access to both platforms.

According to the archaeologists, the centre of Los Molinos could have looked like the reconstruction in figure 7. At the top we can see smallish residential houses made of wattle and daub, in the foreground spacious buildings for administrative use. To the left the buildings have large roofs, on the right a large square is visible, which could have been a gathering area. We can assume the platforms in sector B may be just as impressive.

The quantity of layers and the quality of repairs and reconstructions in the Early Nasca Phase show how intensively this sector was used at this time. However, these layers are empty of remains, that is to say, in the excavated area there are no signs of domestic use, no fireplaces, no domestic waste of any description. No tombs were found either. The structure of the buildings and the proximity of geoglyphs in the arid valley nearby lead us to believe that this area was used for ceremonial purposes.

In the Middle Nasca Phase, section B was re-used. This time for a shorter phase, but again, architectural findings indicate ceremonial use. Ceramic fragments depicting mythical designs from the Middle Nasca Phase support this theory. A fireplace dating from the Nasca 4 or 5 phase was discovered on the western platform. The separation of areas for ritual and domestic use was probably less well-defined during this time.

Chronological classification in Los Molinos B

During the excavation the archaeologists noted the extent of each archaeological layer. The horizontal stratigraphy

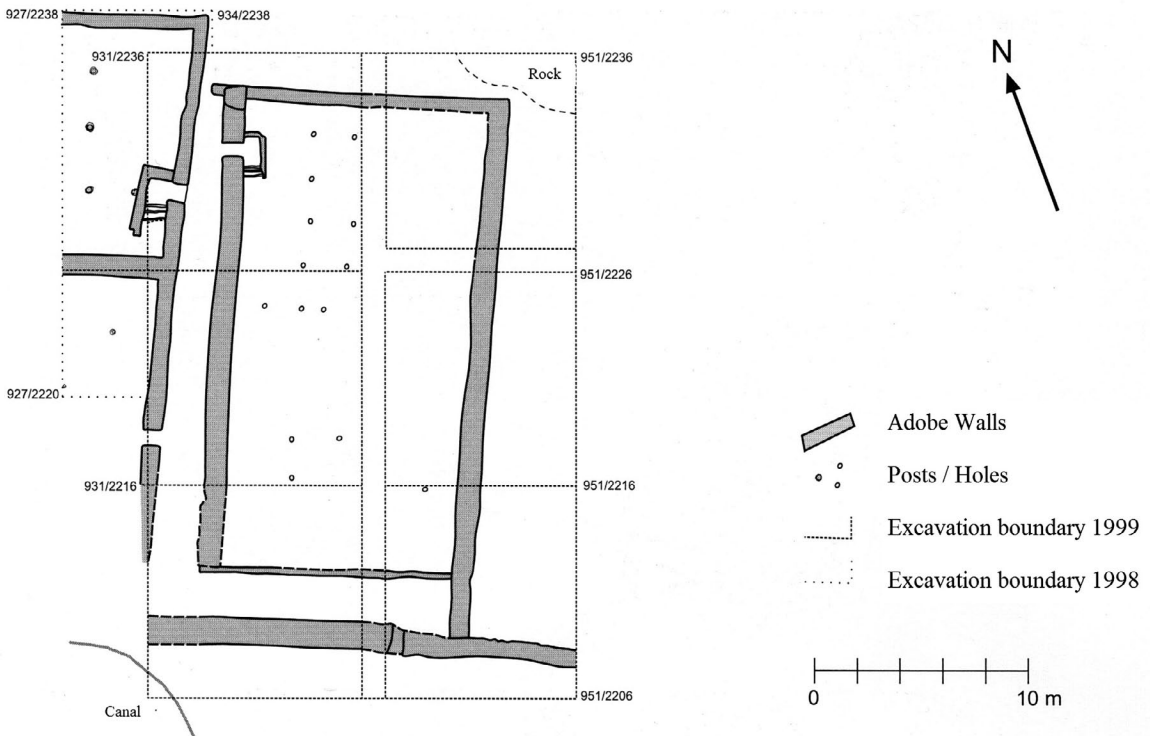

Fig. 6. Plan of the oldest construction phase of the buildings in the northern sector (sector B) of Los Molinos (Reindel/Isla Cuadrado 2001, fig. 10)

encompasses 40 m^2 and the vertical stratigraphy consisted of multiple layers. The sum of these two stratigraphies add up to a "correlation of layers".

This "correlation of layers" makes it possible to identify objects from specific cultural phases. Therefore, textiles found in layers containing datable findings, eg. ceramic fragments will necessary date from the same phase. An important duration of settlement in Los Molinos B was during Nasca 3.

In Los Molinos B we are lucky enough to have further help in dating objects, namely clear evidence of different construction phases. Archaeological changes, eg. walls, floors and points of access, indicate these different phases. Four of them date from the cultural phase Nasca 3. The fifth construction phase took place later, in Nasca 4 and Nasca 5. In all of these construction phases textile remnants were found.

The analysis of the textile findings

For the analysis of the PALPA textiles, a detailed method of analysis was created. At the same time the results were stored in my specifically for this project created data-base. Here all the archaeological, as well as textile-technological data were combined.

During the excavation the findings of each separate stratum (layer) and archaeological unit were put together. For the analysis, I sub-divided the objects and allotted each fragment its own number. For example, ‚finding 312' would be sub-divided into 312-1 etc. according to how many different textile fragments were found. The specimens were not damaged, i.e. all analysis was non-destructive. Each textile was examined as one piece.

First each textile was classified by technical group, eg. weaves, braiding or looping.[1] A further group are yarn fragments, ie. simple yarns.

Within these groups, I further analyzed sub-techniques in the yarn structure, such as "plain weave" or "cross-knit loop", and then analyzed the kind of material used, eg. cotton, camelid hair, as well as human hair. I analyzed the direction of twist and ply and the stages of the yarn fragments, and later refined my results according to the Splitstoser system[2].

Next I analyzed all the yarns according to colour. Over time, yarn colours can change (even along one single yarn) and so I examined each yarn on the basis of primary colours

1. For the classification I used the classifications of Annemarie Seiler-Baldinger and Irene Emery.

2. Splitstoser 2012.

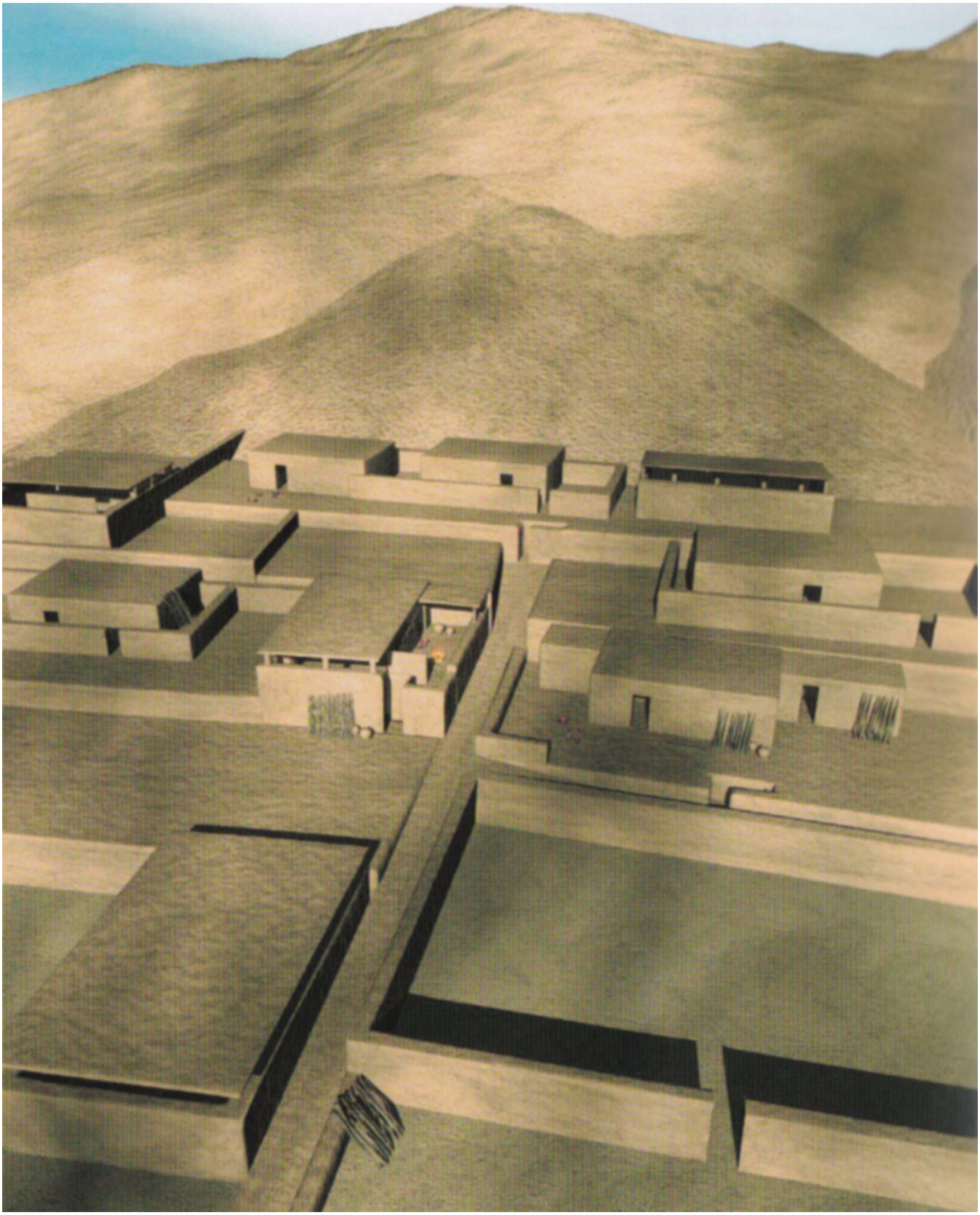

Fig. 7. Hypothetical reconstruction of the excavated central area of the Early Nasca settlement Los Molinos (Reindel/Wagner 2009, fig. 25.7)

Fig. 8. Photo of a woven fabric with stripes, without selvage (finding 819-1).

and simultaneously recorded hue differences eg. red-blue or blue-red and also noted differences between the lightness and shade of colours.

Various patterns were produced using different yarns and colours, eg. checked, striped etc., not only in woven fabrics but also in braiding or looped textiles (Fig. 8).

The group comprising woven fabrics, supplies us with much more information than other groups: If we find fabrics with selvages, for example, we can differentiate between warp and weft selvages. The weft selvages are very simple (Fig. 9). In warp selvages, on the other hand, there are almost always weft yarns made of either foreign yarns or reinforced yarns of the same yarn as in the main body. This information can tell us which selvage is which and therefore give us information about the density of warp and weft. If the fabric still has two warp or two weft selvages, we can determine the length or width of the complete piece of fabric.

A further group of techniques, namely embroidery, seams and stitches, but also examples of darning, were always added to basic textile. Here I noted the kind of stitch used, the location of the stiches as well as the materials employed.

Braiding and looping groups demonstrate various finer techniques: Braiding techniques differ in the interaction of elements: One part exists of active and passive elements, eg. “two-strand twining”. The other part consists of active and active elements, such as “plain plait of three or more elements” (Fig. 10) and “three-dimensional round cords of 2 x 2 elements” (Fig. 11). In the example of a round cord in fig. 11 two different long knots with three and four turns, respectively, are added on the cord.

The looping techniques include all techniques with one element, ie. “simple linking”, “cross-knit loop” (Fig. 12), “simple looping” and different knots. The diverse techniques I recorded in detail. The density of the objects in the techniques of braiding and looping were noted with the quantity of elements per cm.

Fragments of yarns were documented, also. These findings give us a good idea of what kind of materials were formerly in use, even when the whole article no longer remains (Fig. 13). In addition, combinations of different materials, such as camelid hair plus cotton, or various colours twisted into one yarn, show interesting details.

Fig. 9. Photo of a woven band with warp stripes (finding 408-1).

Textile findings of the Early and Middle Nasca Phase of Los Molinos B

Only a few textile fragments were found in sector B. These findings are single pieces without any connection to each other. But, as I mentioned earlier, these textiles were excavated in the context of all five construction phases. So we have a sequence of findings throughout the different cultural and even constructional phases (Fig. 14):

Plain weave of cotton yarns exists in all construction phases. Only those of the second phase are patterned with stripes. All phases included braided objects made of camelid hair. Looped objects were excavated in the third and fifth phases – mostly "cross-knit loop" of camelid hair. Yarn

Fig. 10. Photo of the finding 824-6 ("plain plait of five elements")

Fig. 11. Photo of a three-dimensional round cord (finding 824-9)

Fig. 12. Photo of the finding 833 in the technique of “cross-knit loop”.

Fig. 13. Photo of yarn fragments cumulated in the excavation as finding 429-20.

Not datable	Surface	401 (1-3)
Nasca Phases	**Construction Phases**	**Number of object**
Middle Nasca Phase – Nasca 4 / Nacsa 5	Construction phase V	430 (1), 407 (1), 423 (2), 404 (1-2)
Early Nasca Phase – Nasca 3	Construction phase IV	847 (1-2), 849 (1-3)
	Construction phase III	408 (1), 428 (1-10), 429 (1-32), 812 (1-2), 833 (1)
	Construction phase II	824 (1-21) 822 (1-2) 819 (1-3)
	Construction phase I	422 (1), 862 (1) 420 (1)

Fig. 14. Table of the construction phases and the corresponding textile objects

fragments exist in very different quantities: in the first and the forth phases there was only one yarn, both of camelid hair. In the second phase 17 yarns, nine of cotton and eight of camelid hair. Most yarn fragments exist from the third phase: 32 fragments. Two thirds of which (21) are made of camelid hair, 11 of cotton. In the fifth phase all the yarns (six) are cotton.

So I came to the conclusion that all the techniques, material and other criteria identified in the textile findings of the third construction phase display the most variation.

The first four construction phases date to the Early Nasca Phase. At the end of this phase catastrophic rainfall interrupted the further development of the society. Of course, the population didn`t change in the whole area, but changes in the structural and cultural order of the Nasca are detectable. To see clearer variation between the remnants we can contrast the objects of the Early Nasca Phase with those of the Middle Nasca Phase.

If we compare the findings of the Early Nasca Phase with those of the Middle Nasca Phase we can clearly see the variation between the remnants. But we have to consider that the objects of the Early Nasca Phase date to four construction phases, which were executed during the long cultural phase of Nasca 3. The findings of the last construction phase date to the Middle Nasca Phase, the cultural phases Nasca 4 and the beginning of Nasca 5. In this fifth construction phase sector B was only a short time in use. Maybe for this reason, there are many more findings dating from the cultural phase from Nasca 3 than from the later phases.

Three textile objects were found on the surface. These are not datable. The undisturbed layers under the surface contained 82 objects dating back to the Early Nasca Phase and six objects from the Middle Nasca Phase.

If we begin with the woven objects, all plain weaves are made of cotton in the Early and the Middle Nasca Phases. Only in the Early Nasca Phase, do we have remnants with stripes. Dyed yarn does not exist in the Middle Nasca Phase, in the Early Nasca Phase half of the patterned and almost a third of the plain coloured woven objects are dyed. No difference was observed in the density of the warp and weft yarns of both phases. Selvages, the dimensions of warp and weft and seam stitches have only been observed on fragments dating from the Early Nasca Phase.

Objects displaying braiding techniques are only found in layers of the Early Nasca Phase. These show different subtechniques and are mostly made of camelid fibre material in bright colours.

Fragments in “cross-knit loop” of the looping techniques exist in both phases. In addition, in the Early Nasca Phase there is an extra looping technique. In the Early Nasca Phase the variety of colours is extensive; but also one object from the Middle Nasca Phase sample is very elaborate. The density of the elements is identical in both phases.

Fig. 15. Photo of a tap in the technique of "cross-knit loop (finding 423-1)

All the yarn fragments in the Middle Nasca Phase are made of cotton. In the Early Nasca Phase the majority are made of camelid hair, the minority of cotton. Half of the woolen yarns are twisted, another large quantity show Initial twist. Several yarns exist of various stages of twist. The cotton yarns are mostly twisted and re-plyed. In the Middle Nasca Phase the yarns show an equally distribution of stages, initial twist, ply and re-ply.

As I mentioned earlier, sector B is likely to have been used for rituals in all phases, which leads to the question: "Can we observe distinctive features in the remnants that ended up in this area?"

In the overview of all textile findings from the site of Los Molinos I can see a clear difference in terms of variety and detail in the textiles from sector A, the centre of Los Molinos. This is possibly due to the great quantity of findings in the centre – 717 sub-objects dating back to the Early and Middle Nasca Phases. The findings of the sector A display a great range of techniques, materials and designs. Also here the quantity of variations and the complexity of combinations within one object are very extensive. The fragments of sector B – on the other hand – strikingly show yarns mainly made of camelid hair, instead of cotton.

Among all the textiles from sector B, one object attracts special attention: a small tab – part of a border – using the "cross-knit loop" technique which is made of one continuous strand of yarn (Fig. 15). This yarn changes colour from red to yellow to red, indicating a design. The dyeing must have been undertaken with a clear idea of the finished design. So it looks like "ikat" in the technique of cross-knit-loop.

Los Molinos as part of the settlement pattern of the Nasca society

The settlements in the region of the PALPA project are structurally divers. Differences are demonstrated in the size, location, structure of settlement, style of architecture found, as well as in the pattern of surrounding settlements.[3]

By putting all this information together, it becomes apparent that a clear hierarchy existed between settlements. At the lowest level, we find 'simple settlements', then come 'simple centres'. At the next level, and at one per valley section or the whole valley, are the 'local centres'. The largest settlement, or 'regional centre', of which only one is known, is Cahuachi in the Nasca Valley.

3. Soßna 2012, pp 263–265.

Throughout the Nasca Phases, the importance of settlements waxed and waned. Los Molinos can be classified as a 'simple centre' in the Early Nasca Phase, whereas in the Middle Nasca Phase, it had lost this status. The hierarchical nature of the Nasca society is clearly mirrored both in the sophistication of the settlements themselves, as well as in the tomb architecture in the respective settlements. But this will be another subject ....

Conclusions

As shown in the presentation, the site of Los Molinos was allocated a special status as a "simple centre" in the Grande de Nasca valley in the Early Nasca Phase, when the Nasca culture was in the ascendancy. In the Middle Nasca Phase the site lost this status. The northern sector B was always used for ceremonies. The two platforms and their surrounding structures were built and rebuilt in various construction phases – in each of them textiles were excavated. The number of findings is low – the ritually used areas appear as almost empty layers. Nevertheless, the remnants of the Early Nasca Phase show, in general, a larger variation and quality. Many of the few textiles of the Middle Nasca Phase are of simple and well known quality. But elaborate fragments can be found from this phase, too.

The excavated yarn fragments of camelid hair in particular indicate the use of elaborate textiles in this ceremonial area.

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Pre-Columbian Textile Structures at Castillo de Huarmey, Peru

Aleksandra Laszczka, Jeffrey C. Splitstoser[1] & Miłosz Giersz[2]

Abstract
Systematic excavations at the Castillo de Huarmey archaeological site, located on the North Coast of Peru, enabled researchers to collect an immense number of fabrics. During the first season of textile investigations, carried out in July of 2014 by American and Polish researchers, 724 objects were examined, including textile fragments, yarns, and cordage. A general description of the basic structures indicates a variety of weaving techniques. Although the collection consists mainly of plain weave of all kinds, new structures such as three-dimensional cross-knit looping and feather-mosaic work were recognized, none of which were encountered among textiles collected from the surface in previous decades.

Keywords: archaeology, textiles, Castillo de Huarmey, Wari, fabric structure

Estructuras Textiles Precolombinas en Castillo de Huarmey, Perú

Resumen
Las excavaciones sistemáticas en el sitio arqueológico Castillo de Huarmey, ubicado en la costa norte del Perú, han facilitado la recolección de un número inmenso de textiles. Durante la primera etapa de las investigaciones de los textiles, llevada a cabo en julio de 2014 por investigadores de Polonia y de los Estados Unidos, se examinaron 724 objetos, los que incluían fragmentos de telas, hilos, y cuerdas. Una descripción general de las estructuras básicas indica una gama de diversas técnicas de enlace. Aunque la colección mayormente consiste de muchos tipos de tela llana, se han reconocido estructuras novedosas tales como anillado complejo tridimensional y mosaico plumario, ninguna de las cuales se habían encontrado entre los textiles recolectados en la superficie en décadas previas.

Palabras claves: arqueología, textiles, Castillo de Huarmey, Wari, estructura textil

The Castillo de Huarmey archaeological site on the Peruvian North Coast is one of the most important ceremonial centres of pre-Hispanic Middle Horizon period (ca. 600-1050 AD), with Wari's culture expansion. The site has been the subject of study by Polish and Peruvian archaeologists since January 2010. Castillo de Huarmey is located in the suburbs of the modern city of Huarmey, less than four kilometres from Pacific Ocean, and occupies an area of forty-five hectares. The monumental architecture was built with adobe bricks and stones, employing a relatively uncommon architectural technique of using enormous wooden beams, on the summit of a large rocky spur. Its core was formed by enormous *chullpa*-tower-shaped mausoleums with a regular orthogonal plan, several stories high. A crucial discovery was made in 2012 when the first un-looted Wari royal tomb was found (Giersz 2014, Giersz 2016). The burial chamber contained the remains of sixty-four female individuals, fifty-eight of whom were accompanied with valuable ceremonial offerings and grave goods, such as gold, pottery, spindles and fabrics, which indicate they held high social status and imply they specialized in the production of yarns and textiles of high quality (Prządka Giersz 2014). Because the majority of the textiles have not yet been studied, this paper provides only a general description of a portion of the fabric collection.

1. Associate Research Professor of Anthropology, George Washington University, Washington, D.C.

2. Assistant Professor of Archaeology, University of Warsaw, Poland

Textiles from Castillo de Huarmey: History of Investigations

In prior decades, the archaeological site has been regularly looted by treasure hunters called *huaqueros*. As a result of this large-scale pillaging of the site, many textiles have been destroyed and their archaeological context lost. In the 1960s a German archaeologist, Heinrich Ubbelohde-Doering, collected from the surface of the site 155 textile fragments, which are held at the Staatliches Museum für Völkerkunde in Munich, Germany (Prümers 1990, Prümers 2000), locally known as the Museum Fünf Kontinente. An important study of the textiles from Castillo de Huarmey, which are now part of the Museo Amano collection, was done by William Conklin (1979), who analysed their weave structures and iconographic representations. Conklin claimed that during the Middle Horizon, the site of Castillo de Huarmey, also called Campanario, was under Wari and Moche cultural influences, although archaeological excavation at Castillo de Huarmey did not confirmed any Moche material remains that would support the aforementioned statement (Giersz 2016).

In the middle of 1980s, Heiko Prümers carried out an archaeological field survey which yielded 366 textile pieces whose iconographical and technological analyses were submitted in his doctoral dissertation. Additionally he took into account textile pieces collected by Ubbelohde-Doering, as well as weaving utensils, some wooden artefacts, and ceramic fragments found on the surface (Prümers 1989, Prümers 1990). However, prior to 2010 the site was never subjected to systematic excavations of its primary archaeological contexts.

In January 2010, Polish specialists from the University of Warsaw made a full non-destructive survey of the site and the first archaeological excavation of undisturbed contexts, and in 2012 they were the first to unveil a royal Wari burial on Peru's north coast. Of the many discoveries of the Castillo de Huarmey Archaeological Project's researchers, led by Miłosz Giersz from the University of Warsaw, of particular importance to the present study is a large collection of archaeologically excavated fabrics. Although their preservation and condition is not ideal, especially those coming from the main chamber that were exposed to the processes of human decomposition, many fragments are in good condition, including those found outside the main chamber. The most important archaeological objects discovered during excavations were presented in the book, *Castillo de Huarmey: El mausoleo imperial wari* (Giersz, Pardo 2014). One of the chapters is dedicated to a selected group of conserved fabrics collected in 2010, 2012 and 2013 from various areas of the site. Consisting of bags, miniature textiles, bands and headdresses, they show a diversity of forms and techniques; however, they are a scant percentage of the entire textile collection.

Description of the Textile Collection

In July of 2014, Jeffrey Splitstoser, from The George Washington University, United States, and Aleksandra Laszczka, a student from the University of Warsaw, Poland, carried out a preliminary evaluation of the textile collection. The objective was to estimate the number of items, note the variety of weaving techniques, and describe their states of preservation in order to determine the scope of research for the following seasons. The result of this collaboration is a fabric inventory, in which 724 objects were examined, including textile fragments, yarns, and cordage. These materials were recovered from both primary burial context and disturbed layers of the principal monumental compound where the Wari ancestors were buried and worshipped. Since the inventory was completed, the collection essentially doubled after excavations carried out in 2015, and it will continue to grow every season. And although the inventory represents only approximately half of the current collection, the results of the present reconnaissance revealed the unique character of textiles that is probably equally applicable to the larger collection – specifically, the collection consists of fabrics made by highly skilled spinners and weavers who used multiple complex weaving techniques to create sophisticated iconographic motifs. The results of this preliminary inventory form the basis for the discussion below.

Methodology and Terminology

The classification scheme that was used to describe archaeologically excavated fabric structures from Castillo de Huarmey was developed by Irene Emery (1966) and published in her book, *The Primary Structures of Fabrics*. Emery's scheme was modified and updated by Ann Pollard Rowe in two publications: *Warp-Patterned Weaves of the Andes* (1977), and "After Emery: Further Considerations of Fabric Classification and Terminology" published in *The Textile Museum Journal* (1984). Our inventory classified the Huarmey textiles according to their fabric structures.

Single-Element Structures

While the majority of textiles are made with two or more sets of elements, Castillo de Huarmey weavers produced fabrics and accessories made of single-element structures, such as knotted looping and cross-knit looping. These techniques were used to make nets, hats, and even bags. There were also fabrics, usually tassels, made with oblique interlacing,

Fig. 1. Three-Dimensional cross-knit looping figurine (photo by Miłosz Giersz)

and there are individual instances of linking and twining. Other structures include wrapping used to wrap cords and make spools of yarns.

In fact, one of two structures that were encountered in the present study but not by Prümers is a single-element structure: three-dimensional cross-knit looping in the form of a little figure that looks like it has two horns and a tail (Fig. 1). What remains today is a single figure, but in the past it was most likely a chain of multiple figures that were stitched to the edge of a fabric.

Two or More Sets of Elements

The vast majority of the collection has structures made of two or more sets of elements that are interlaced. In other words, they have warps, wefts, and sometimes additional elements (e.g., extra warps, wefts, stitching elements, etc.). Not surprisingly, the most common structure is plain weave.

Plain Weave

A preliminary look at the inventory suggests that the collection consists primarily of plain weave of all kinds: there are 390 fragments made in simple plain weave, which is 53,9% of entire collection, including 323 examples of balanced or predominant warp or weft plain weave, forty-six of warp-faced plain weave, and twenty-one of weft-faced plain weave. Approximately 20% of plain weave was decorated with stripes or bands in another colour. Among the many objects made exclusively of plain weave include fragments of forty-eight bags and forty-two miniature tunic fragments, called *uncus*. In addition, seven specimens consist of plain weave covering cane or other vegetable fibers to form a helmet, called *tocados*.

Twenty-five fragments (3,5% of the studied collection) are made with discontinuous interlocked elements. Eleven of them are plain weave with discontinuous, interlocked warps and wefts. Six fragments have discontinuous interlocked warps and the remaining eight have discontinuous interlocked wefts. Most of these are balanced or warp-predominant plain weave; however, there are two cases of discontinuous warp and weft that are weft faced, and one specimen is warp-faced. In most cases, the fragments are large enough with sufficient design area present to make confident interpretations of fabric structure; however, it is always possible that elements that span the

entire length or width of a fabric might in fact have been discontinuous in the original fabric.

Tapestry is a specific type of plain weave using discontinuous wefts woven in weft face, which hides the warps. It is undoubtedly one of the most versatile techniques, allowing weavers to obtain almost any desirable pattern. In the Huarmey textile collection, 138 fragments of tapestry (19,1% of the studied collection) were documented where the most representative technique combines slit and reinforced-slit tapestry, which is observable in forty-nine pieces. This structure is usually associated with outlined motifs. Slits without reinforcements are present in thirty-six pieces, and reinforced slit tapestry is found in fourteen textiles. There are also thirty-nine tapestry fragments made with single interlocks between warps. In most cases, the decoration is geometric or figurative. It is worth noting that there are several fabrics with tapestry combined with other structures. Usually the second structure is simple plain weave (sometimes as separate panels stitched together), but there is also one example of tapestry with gauze. Because tapestry is frequent, it is possible to distinguish some textile forms that have tapestry decoration, including twenty-five bands, thirteen bags, and sixteen probably shirt, or *uncu*, fragments.

Float Weaves

Twill is a float weave characterized by "diagonal alignment of floats" (Emery 1966: 92). It is not frequently encountered among Huarmey fabrics. It was found in only three textiles (0,4% of the collection), and in one example it was the only structure associated with the web; however, two of these specimens are multi-web construction, and the float-weave web panels were stitched to panels of plain weave. Diamond twill (2x1) is represented in two fragments, and one fabric is made with 2x1 twill weave.

Compound Weaves

Compound weaves involve either an extra sets of elements, such as warps or wefts, that are supplementary or complementary. The extra elements are usually added to make patterns. 14,1% of the inventoried collection has patterning made either with plain-weave-derived structures or with supplementary and/or complementary elements combined with plain weave.

- **Complementary Elements**
  Seven fragments (1% of the collection) were encountered with complementary warp patterning. Patterns are usually stripes or geometric forms.

- **Supplementary Elements**
  Another decorative structure, comprising eighty fragments (11% of the collection), consists of supplementary elements added to plain weave.

  There are three fragments with supplementary warps and seventeen fragments with supplementary wefts. In many other cases, extra elements formed floats – both supplementary warp-pattern weaves (twenty-nine fragments) and supplementary weft-pattern weaves (fourteen fragments) were encountered; they are always in association with plain-weave grounds. Stripes are the most representative decoration for this structure, but there are some figurative motifs.

  There are seventeen fragments in the collection that have a plain-weave ground with patterning that takes the form of modular bands made with plain weave with supplemental, discontinuous wefts woven in weft face. In his article, William Conklin (1979: 165) called this category of textile: "plain weave with modular weft bands". Supplemental, discontinuous wefts woven in weft face were also added to gauze-weave grounds.

- **Double Cloth**
  Another type of compound weave involves the addition of complete weave structures (i.e., an interlacing fabric with both warps and wefts). These are called double weaves or double cloth, and double cloth was encountered in fifteen pieces (2,1% of the entire sample). In almost all cases, one face has colourful dots, or highlights, made with supplemental, discontinuous wefts woven in weft face with weft substitution.

Interacting Elements

In addition to fabrics with two or more sets of interlacing elements, which were discussed above, the present study encountered fabrics with interacting elements that cross and re-cross.

- **Gauze**
  Gauze is a structure where the warps cross and re-cross. Gauze was encountered in eight specimens, representing 1,1% of the study collection. Gauze was never found alone but always with plain weave. In three cases, gauze was associated with supplementary, discontinuous wefts woven in weft face (tapestry) including, in one case, a gauze and slit-tapestry band.

Accessory Structures

The present study encountered several structures that are accessory to fabrics including multiple types of embroidery and featherwork.

Embroidery

At least two types of embroidery were encountered including cross-knit looping, cross-knit loop stitching, and running stitch.

Fig. 2. Featherwork mosaic attached to plain-weave fabric (photo by Miłosz Giersz)

- **Cross-Knit Loop Stitch**
  Cross-knit loop stitch differs from cross-knit looping in the following way: cross-knit looping is a fabric made with a single-element that does not depend on a ground fabric to remain intact. Cross-knit loop stitch is a type of embroidery that is added to the edge or centre of a fabric. It loses its integrity if the ground fabric is removed. Prümers (1990) encountered simple cross-knit loop stitching embroidered around the edges of fabrics and occasionally in the centre of them. The present study encountered the remnants of a single example of cross-knit loop stitch, consisting of four colours similar to those found in the fragment with running stitch below. The stitching forms a circular pattern embroidered on plain-weave that is now gone except where there is cross-knot loop stitching.

- **Running Stitch**
  There is a single example of running stitch on weft-faced plain weave making a three-colour, double-faced, geometric design.

Featherwork

Another structure not encountered by Prümers, which is also an accessory structure, is featherwork mosaic, which was encountered in a single specimen, a belt or band. The featherwork makes a figurative design with colourful feathers that were cut into shapes and attached to a white, cotton, plain-weave fabric, probably using a resin glue (Fig. 2). Several other textile fragments are decorated with feathers that were knotted onto strings, and the strings were attached to plain-weave cotton fabrics with whip stitching. This type of featherwork is also an accessory structure.

Painting

The collection consists of six fabrics painted with geometric designs. Most were painted plain weave, but at least one seems to have been plain weave with supplemental wefts that formed floats.

Resist (Tie Dye)

In addition to structural decoration, the inventory encountered four fragments of balanced plain weave decorated with resist-dye techniques, called tie-dye, where the fabric was tightly wrapped and tied with something, probably cotton cords, which prevented dyes from penetrating them, leaving areas of the fabric that remained undyed.

Summary

A preliminary look at the inventory indicates that the collection consists primarily of plain weave of all kinds, from balanced to warp- and weft-faced, often with additional elements used to making patterns. As the inventory suggest, the majority of textile structures, were also encountered by Prümers as published in his doctoral dissertation. However, we were able to distinguish two new structures, a

three-dimensional cross-knit looping and featherwork mosaic, that were not encountered by Prümers during his surface survey of the site.

Without doubt, the textiles excavated from the archaeological site of Castillo de Huarmey need detailed analyses of all kinds (e.g., structural, dye, iconographic, functional, etc.). While structure investigations, such as the present study, which is in its initial stages, can widen our knowledge about textile practices in ancient Peruvian cultures (e.g., Splitstoser 2009, Splitstoser et al. 2010), other investigations, including iconographical analysis, are also needed to fully understand the Wari cultural phenomenon on the North Coast of Peru.

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The curious case of Sir Henry Wellcome's wooden statuette clad in tie-dyed Wari cloth

Penelope Dransart

University of Wales Trinity Saint David

Abstract
A wooden statuette clad in small-scale garments made from a Wari style tie-dyed textile joined the collections of the City of Liverpool Public Museum (now National Museums Liverpool) in 1951 along with other items distributed by the trustees of the Wellcome Historical Medical Museum. This article discusses Wari style tie-dyed tunics as part of an ensemble of garments. It explores the character of the Wari period textile (c. AD 600-1000) used for dressing the statuette, its similarity to textiles in the Fowler Museum at the University of California, Los Angeles and the Museo Nacional de Arqueología, Antropología e Historia del Perú, as well as the chronological mismatch between the style of the textile and that of the wooden figurine. Unless the statuette was made to order in recent times to be dressed in an ancient textile, it is perhaps Late Horizon (c. 1430 - 1532) in date. Sir Henry Wellcome acquired the statuette before his death in 1936, at a time when there was an emergent market in unprovenanced pre-Hispanic antiquities. The statuette is a composite figurine clad in bespoke garments made from an older textile. Its appearance bears witness to collecting practices which included modifying ancient artefacts to appeal to modern collectors and it destabilises simple understandings of what the dressed aspect of the statuette can convey to a museum visitor.

Keywords: Wari textiles, tie-dyed tunics, colour saturation, iconography, museums – collectors and collecting, artefact modification for the antiquities market

El curioso caso de la estatuilla de madera de Sir Henry Wellcome, vestida con paño Wari

Resumen
Una figurilla de madera vestida en prendas a escala reducida, fabricadas con un textil con teñido por amarre de estilo Wari se sumió a las colecciones del Museo Público de la Ciudad de Liverpool (actualmente Museos Nacionales Liverpool) en 1951, junto a otros objetos distribuidos por los fiduciarios del Museo Médico Histórico Wellcome. Este artículo considera las túnicas de estilo Wari teñidos por amarre como parte de un conjunto de indumentaria. Se explora el carácter del textil del período Wari (c. AD 600-1000) utilizada para vestir la figurilla, su similitud a los textiles en el Museo Fowler de la Universidad de California Los Angeles y el Museo Nacional de Arqueología, Antropología e Historia del Perú, tanto como el desencuentro cronológico entre el estilo del textil y el de la figurilla de madera. Excepto que la figurilla haya sido fabricada a la medida en tiempos recientes para ser vestida en un textil antiguo, data posiblemente al Horizonte Tardío (c. 1430 - 1532). Sir Henry Wellcome adquirió la figurilla antes de su fallecimiento en 1936, en una época cuando había un mercado emergente de antigüedades pre-hispánicas sin procedencia. Se trata de una figurilla compuesta, vestida en prendas hecha a la medida de un textil más antiguo. Su apariencia es testigo a prácticas de coleccionar, las que incluyen modificar los artefactos antiguos para que sean más atractivos a los coleccionistas modernos y desestabiliza una comprensión simple de lo que el aspecto vestido de la figurilla pueda expresar a un visitante al museo.

Palabras clave: textiles Wari, túnicas, teñido por amarre, colores saturados, iconografía, museos – colectores y coleccionando, modificación de artefactos para el mercado de antigüedades

In a corner of the Americas gallery of the World Art Museum at the National Museums Liverpool, three human figures from different parts of the Americas attracted my attention. In the sombre lighting conditions, which are, of course, intended to preserve the wonderful colours of the artefacts on display, a sumptuously dressed Plains Indian doll and a naked Quimbaya style figurine from Colombia accompanied a wooden statuette, dressed in Wari style tie-dyed garments. All three of these figures were purchased by Sir Henry Solomon Wellcome (1853-1936) who, early in his career as a pharmaceutical entrepreneur, began to collect antiquities. The miniature-sized Wari garments, in particular, caught my eye because the hues are resonant and the design motifs delineated in white add a brilliant quality to the overall effect.[1]

There is nevertheless something disquieting about the statuette (figure 1). Jane Feltham (1989: 12) described it as a talisman. Her choice of this term implies that people using the statuette, perhaps in ritual contexts, endowed its human form with divinely sanctioned, protective powers. The term 'talisman', Don Skemer (2006: 18) reminds us, 'should be reserved for powerful, sometimes apotropaic objects'. Yet the ensemble, consisting of a wooden figurine clad in textiles that are recognisably Wari in style, does not fully match my expectations concerning what a Wari potentate, robed in splendour, might have looked like.

Accompanying the statuette, a museum label identifies the wooden figure on stylistic grounds as Chancay (c. AD 1200 – 1470) and the garments as Wari (c. AD 550 – 900).[2] This alleged mismatch provides a focus for study because it destabilises simple understandings of what the dressed aspect of the statuette can convey to a museum visitor. To cast light on the murky history of the figure and its garments on their journey from Peru to London, where Wellcome helped establish a pharmaceutical company, before finally it arrived in Liverpool, I will investigate the character of the textile used to make the small-scale upper garment, breech cloth and headdress. An examination of the technical and colour characteristics of the Wari tie-dyed textile helps me to explore why it was susceptible to being repurposed in modern times. This discussion will also consider the dress of elite men as an ensemble including tunic, headdress and facial decoration, as revealed by Wari polychrome ceramics. In the light of early twentieth-century collecting practices, these lines of enquiry provide a context for considering why the statuette and its dress raise fascinating questions about its unsettling appearance.

Elite male Wari attire

Effigy jars with a human face on the neck of the vessel occur in different Wari pottery styles, including a ceremonial style known as Robles Moqo (Menzel 1964: 24). The imposing presence of these vessels is heightened by the polychrome depiction of the woven and dyed designs of the effigies' garments. Some of these personages wear a tunic displaying diagonally placed circles, apparently based on designs inspired by the characteristic motifs formed by the tie-dyeing of textiles. Surviving examples of complete Wari tunics in museum collections are conventionally dated between the seventh and the ninth centuries, in Middle Horizon Epochs 1 and 2 of the chronology devised for the Central Andes (Rowe 1977: 31-2; 2012: 200, 203).

A study of Wari iconography led Anita Cook (1996) to identify high ranking personages depicted in the effigy vessels as 'rulers' or 'emperors'. These male figures are shown wearing either a tapestry or a tie-dyed tunic and, on the head, a four-cornered hat. One such effigy from Pacheco in the Nazca drainage wears a tie-dyed tunic, a hat and displays an elaborate facial design; Patricia Knobloch (2012: 129) referred to him as a 'paramount warrior'. Cook (1996: 88) argued that the combination of hat and tunic distinguished the political status or 'office' of the wearer, marking his incorporation into the ruling Wari elite and masking his own ethnic affiliation. The hats modelled and painted on the face neck jars are distinctive because the base band tends to be decorated with a row of rhombus shapes (Cook 1996: 90). Real examples of four-cornered hats in museum collections display both geometric and figurative designs. Some of them incorporate a band of repeated rhombuses in the designs, running round the middle of the sides of the hat (de Lavalle 1984: 111; Frame 1990: 13; Dransart and Wolfe 2011: 46-7) (figure 2). Since the tie-dyed tunics are associated in the ceramic depictions with hat-wearing persons of high rank, the simple head cloth on the Liverpool statuette is disconcerting.

1. The statuette's accession number at the National Museums Liverpool is 51.68.545.

2. The period of occupation of the type site named Huari or Wari in the central highlands of Peru is often dated c. AD 550 – c. 900 and the chronological period known as the Middle Horizon c. AD 600 – c. 1000 (for example, Rowe 1967; Jennings 2006, 2012). Some of the tie-dyed tunics discussed here were probably woven in valleys connecting the highlands with the coast in the Departments of Ica and Arequipa in the south of Peru as well as in other places, perhaps in the Huari capital itself. Ann P. Rowe (2012: 204 n.1) therefore reminds readers that the tunics are Wari in style rather than necessarily being emblematic of Huari as the capital of a political state.

Figure 1. Statuette dressed in small-scale garments made from a Wari style tie-dyed textile with camelid fibre warp and weft. Accession number 1951.68.545, National Museums of Liverpool, donated by Wellcome Historical Medical Museum. Photograph by the author.

Figure 2. Wari four-cornered hat, camelid fibre. Accession number 1994.35.151, Metropolitan Museum of Art, bequest of Arthur M. Bullowa, www.metmuseum.org

Another expectation derived from a study of Wari face neck jars is that the Wellcome statuette ought also to have had elaborate face painting or tattooing. On the jars, the face is often painted with an asymmetric design which is more complex on one side than the other. This design consists of four large triangles with the points meeting in an X-shaped configuration on the right side of the face (that is, on the viewer's left) and a repeat design consisting of small triangles with a stepped hypotenuse on the left (that is, on the viewer's right). The more complex half of the facial design undergoes variation on different effigy vessels (Cook 1996: 115, figure 5). While Cook (1996: 95) relates the diamond shapes of the face painting to the row of diamonds that are found round the base of the four-cornered hats, the patterning of the variant arrangements of the small triangles with a stepped hypotenuse presents the sorts of permutations that occur in some tie-dyed tunics dating from the Wari period. Hence the tunics, hats and facial designs painted on the effigy jars rely on a shared set of design principles. The Liverpool statuette instead has a broad, simple band painted beneath the eyes. This feature, however, is not characteristic in Chancay style. Alexandra Morgan's (1996) study of Peruvian pottery figurines demonstrates that Chancay face paint often emphasises the cheek line, running in a diagonal from the side of the nose to the corner of the mouth on both sides of the face.

A third discrepancy is noticeable in the Wellcome figurine and it concerns the neck opening of the tunic. Sophie Desrosiers (1988: 29-33; 2010) observed a tendency in late pre-Hispanic times for men in the Central Andes to wear their tunics with the neck opening oriented vertically and women with the neck opening oriented horizontally. If this figure is male, one would expect the neck opening of the tunic to have a vertical neck slot. At first sight the tunic appears to depart from this gendered distinction. The treatment of the neck will form an important aspect of my discussion below.

The Liverpool statuette

Simply carved from wood, the figurine is 388 mm tall. It stands straight with long legs ending in feet that protrude backward at the heels as well as forward (figures 3 and 4). The torso is armless and is surmounted by a relatively large head, which is flat at the back (figures 5 and 6). Eyes and mouth are perfunctorily indicated, the former almost disappearing beneath the heavy, flat brow from which the nose protrudes. Karen Ayers (2000), who prepared a conservation treatment report on the statuette before it was placed in the display case, noted that the nose had been broken. It is therefore possible that the broad stripes of blackish paint under the eyes once continued over the nose. If the statuette is genuinely pre-Hispanic, rather than a carving made to order to be dressed in an ancient textile, a band passing over the cheeks and nose might mimic the banding in a similar position on a cast metal Inka figurine in the National Museum, Copenhagen. This female figurine also has a relatively large head compared to the rest of the body but otherwise is much more detailed in its conception and finish than the Liverpool statuette. Armless wooden figurines are known in museum collections, but they are difficult to date.[3]

The statuette is clothed in three garments made out of the same textile woven from camelid fibre yarns. Over a breechcloth-like undergarment, a larger fragment is worn poncho fashion with the sides of the garment unseamed. Another textile fragment covers the head. The statuette also sports a long cord plaited from dark brown yarns, probably also of camelid fibre. One end terminates in three faded red tassels, each emerging from a knop bound with dark yellow yarn, and the other is wrapped with a rawhide binding.

My discussion now turns to consider the particular character of the tie-dyed fabric.

3. In the collections of the Peabody Museum of Archaeology and Ethnology at Harvard University, an undated carved human figure wrapped in net fabric has the torso and arms carved in one piece (Peabody number 32-25-30/35, searchable on the museum's online database at http://pmem.unix.fas.harvard.edu:8080/peabody/).

Figure 3. The frontal aspect of the statuette in 2000, prior to conservation. Accession number 1951.68.545, National Museums of Liverpool. Photograph by Vivien Chapman

Figure 4. The rear aspect of the statuette in 2000, prior to conservation. Accession number 1951.68.545, National Museums of Liverpool. Photograph by Vivien Chapman

Figure 5. The front of the statuette in 2000, during conservation, with the upper garment removed. Accession number 1951.68.545, National Museums of Liverpool. Photograph by Vivien Chapman

Figure 6. The statuette from behind, during conservation, with the upper garment removed. Accession number 1951.68.545, National Museums of Liverpool. Photograph by Vivien Chapman

Dot-in-a-diamond designs

Tie-dyeing has been used in different parts of the world to produce a design in which undyed rhombus- or circular-shaped motifs appear on a dyed background. The dyer grips the centre of the motif tightly and uses thread to bind the areas of fabric which will resist the dye. He or she then immerses the fabric in one or more dye baths in order to produce the desired intensity of colour forming the ground of the design. Frequently the centre of the motif is left unwrapped, resulting in a characteristic central dot. Woven fabrics tend to pull in a diagonal direction along the bias and the tension of the binding can result in a pattern of rhombus-shaped motifs (figure 7). The corners point in the direction of warp and weft, instead of the motif taking on the appearance of a square oriented vertically and horizontally along the warp and weft directions (Webster, Hays-Gilpin and Schaafsma 2006: 319-20), especially if the dyer folds the fabric twice and pinches the edges of these folds (Knobloch 2013: 49).

The use of distinctive designs based on circles or dot-in-a-diamond motifs were geographically widespread in the pre-Hispanic Americas. Where environmental conditions favour the preservation of organic materials, tie-dyed textiles have survived in the Central and South-Central Andes as well as in Mexico and in Southwestern USA.[4]

4. Two tie-dyed textiles found in a cave called Don Bonfilio, near Caltepec in the Tehuacán region of the state of Puebla, Mexico, were analysed by Alba Guadalupe Mastache de Escobar (1974). Photographs of thirteenth-century tie-dyed textiles from Lake Canyon, southern Utah, White House, in the Canyon de Chelly, Honanki Pueblo, in the Verde Valley, and Casa Grande, southern Arizona are included in Webster, Hays-Gilpin and Schaafsma (2006: 319, Figure 1a-e).

Figure 7. Detail of a fragment of a Chancay style tie-dyed textile, cotton warp and weft. Accession number 1964.313.3, National Museums of Liverpool. Photograph by the author.

As mentioned above, Wari potters depicted high status personages wearing tie-dyed garments in ceramic effigies. Other depictions occur in sculpture and rock art and, in Mesoamerica, in wall paintings and codices (Webster, Hays-Gilpin and Schaafsma 2006: 320-1). Patricia Anawalt, Virginia Davis and Pamela Scheinman used batik to reproduce small squares and tie-dye to reproduce small diamonds in the recreation of a step-fret design in the blue knotted cloak worn by Aztec rulers (Anawalt 1990; 2000: 218-27).

Studies of such visual representations have encouraged researchers to interpret the repeat patterns formed by dot-in-a-diamond motifs as the pelage of jaguars and the scale markings of serpents (Brugnoli and Hoces de la Guardia 1991: 15, 31). Indeed, dot-in-a-diamond motifs were painted in polychrome on the bodies of serpents in a composite Wari vessel in which a cup rests on a serpent pedestal (Knobloch 2012: 137, figure 117).[5] In Mesoamerica and Southwestern USA, the designs are associated with maize cultivation and serpents as related to the fertility brought by clouds, rain and lightning (Webster, Hays-Gilpin and Schaafsma 2006: 338-40).

Despite the widespread geographical distribution, the technique of tie-dyeing was not used consistently through time. During the Late Archaic and Formative periods (from c. 1500 BC to c. AD 500) in northern Chile and North-west Argentina, tie-dyed yarns were wrapped turban fashion round the head of the wearer or, alternatively, they served as fringed pubic coverings (Cases C. and Agüero P. 2004: 119, Table 1; López Campeny 2006: 293).

Early examples in Peru of resist-dyed textiles with dot-in-a-diamond designs are assigned to Siguas and Early Nasca styles. From the site of La Chimba in the Sihuas Valley, in

5. Denver Art Museum Collection 1996.37.

Figure 8. Southern Nasca style tie-dyed tunic, camelid fibre warp and weft. Accession number 1980.564.3, Metropolitan Museum of Art, gift of Arthur M. Bullowa, www.metmuseum.org

the Department of Arequipa, Joerg Haeberli (2002: Figure 8) attributed a textile with a characteristic tie-dyed rhombus on a red ground to Siguas 1, dating from 543 BC to AD 121.[6] Tie-dyeing occurs on different Siguas garment types: tunics, mantles, and rectangular cloths with ties attached to the four corners (Haeberli 2001: 94 and 96). Early Nasca pottery and textiles, dating from the first to third centuries AD, also occur in some of the Siguas burials, indicating that the two cultures must have been in contact. One of the occupants of a grave in a Nasca cemetery site known as Cabezas Achatadas, in the Camaná Valley, wore a headdress consisting of three narrow bands wrapped round the head, the middle one a tie-dyed textile with a design of yellow rhombuses on a red ground (Biermann 2006: 233-4).

While tie-dyeing in cultures other than Wari was used in a range of different garment types, dyers and weavers working within Wari traditions seem to have restricted the technique to tunics alone. Ann Rowe suggests an antecedent. Textiles made from small tie-dyed rectangular units sewn together to make a tunic possibly represent what she calls

6. Joerg Haeberli (2001: 131, n. 3) uses the spelling Siguas to distinguish the name of the archaeological culture from Sihuas, the modern spelling of the name of a river.

a 'southern Nasca style' as a precursor to the Wari tie-dyed garments (figure 8).[7] Tunics were also made by sewing together long strips of tie-dyed fabric.[8] These tunics display comparatively desaturated colour combinations and they do not have a fringe at the lower edge.

Wari style tie-dyed tunics and their more or less contemporaneous counterparts from Chile are, in contrast, fringed at the bottom edge. The weaver formed this fringe by grouping warp ends at the bottom and head of the loom length after she or he had removed the loom bars, allowing the threads to twist back on themselves Z-fashion, in the opposite direction from the S-ply of the warp yarns (Hoces de la Guardia and Brugnoli 2006: 47-8, 96-7; Dransart and Wolfe 2011: 44).

Examples from the collections of the Universidad de Tarapaca in Arica, in the far north of Chile, include an incomplete fragment of a Wari style tie-dyed tunic (Ulloa 1985: 83, no 250; Sinclaire Aguirre 1999: 39).[9] Unfortunately, this piece is from an unknown findspot and it lacks archaeological associations to help explain why it was found so far from the geographical sphere of Wari influence. A second fragment in the same collections, from the site of Azapa 1, is more distinctively local in style and was recovered from a context which also contained local Cabuza style pottery (Santoro and Ulloa 1985: 77).[10] Like the Wari style tunics, its rectangular modular units are executed in a discontinuous warp and weft technique and it, too, terminates in a fringe twisted from the turns of the warp. It differs from its Wari counterparts in that its modular units are arranged to be wider than tall and, given the fading of the garment, the dye technology might well have been different.

Tunics from cemeteries surrounding San Pedro de Atacama, Chile, were constructed from modular units that are somewhat larger than those found in Arica and further north. An example from the Coyo Oriente cemetery consists of eight such units, four at the front and four at the back, with two red and two blue units arranged in alternation on each side (Cases C. and Agüero P. 2004: 124).[11] Further examples of large tie-dyed garments were detected at the Quitor-6 cemetery. In Ingeborg Lindberg's (1963: 198) description, the rectangular red and blue 'patches' (she used the term *parches*) were tie-dyed in small rhombuses or circles.[12] The larger scale of the modular units and the red and blue colour combination distinguish these textiles from Wari tunics. Another local Atacama trait is evident in the plain weave of the cloth, which relies on the use of a multiple weft (Cases C. and Agüero P. 2004: 124).

Characteristics such as the use of discontinuous warp and weft to create modular units as well as fringing at the lowermost edge of the tunic formed part of a repertoire of weaving practices that were transmitted south and north along the spine of the Andes (Dransart 2014: 228-30). Such traits do not in themselves articulate ethnic identities. Weavers and dyers instead used these cloth-making practices to express local ethnic affiliations which, in the case of the Atacama tie-dyed textiles, are unlikely to have derived from contact with the highland culture of Tiwanaku (Cases C. and Agüero P. 2004: 134).

Knowledge of dye technology and preferences for certain colour schemes therefore became the basis for communicating ethnic affiliation and perhaps, too, the office performed by the wearer in specific ceremonies. The main garment worn by the Liverpool statuette does not have a fringe round the bottom. It does, however, make use of a strongly coloured textile and my discussion now turns to consider the colours in a scheme that relied on white fleece to bring out the special quality of the dyed hues.

Dazzling hues

If one were to accept the view that the Liverpool statuette was a talisman – defined above as something 'powerful' and 'sometimes apotropaic' – the strong hues of its garments would contribute to such an identification. The making of the colourful textile depended on a complex series of processes. A series of modular units was woven from an all-white warp and weft of camelid fibre, held together with a temporary scaffold weft or a series of narrow loom bars (see

7. Ann P. Rowe (2012: 202, Figure 192) reported that one of these textiles, in a private collection, was C-14 dated and produced a calibrated result of AD 414 – 575 (95.4% probability).

8. For an example, see a tunic donated to the Metropolitan Museum of Art by Arthur M. Bullowa, accession number 1980.564.1 (searchable on the online database at http://www.metmuseum.org/art/collection/search).

9. This textile has the accession number of masma-30581 in the online data base, which is searchable at www.uta.cl/masma/patri-edu/textiles.htm

10. This fragment has the accession number of masma AZ1-30526 in the online data base at www.uta.cl/masma/patri-edu/textiles.htm

11. This tunic is no. 3937, from Coyo Oriente, in the Instituto de Investigaciones Arqueológicas y Museo de la Universidad Católica del Norte. Another tie-dyed tunic (no 3945-1) was judged to be in too poor a condition for Cases C. and Agüero P. (2004: 124) to provide a complete description of its construction. Given the state of preservation of some garments, they note that it is not always possible to be certain whether the garment was a tunic or a mantle.

12. Garment no 2788, in the Instituto de Investigaciones Arqueológicas y Museo de la Universidad Católica del Norte (Cases and Agüero 2004: 125, n. 19).

images in Strelow 1996: 10-11, plates 1a-1c, and 125, figures 1 and 2). Then the units were disassembled and placed in different or repeated dye baths, using tie-dyeing and other forms of linear resist techniques. The next step was to reassemble them, probably on a loom or under tension, by threading the temporary weft, which previously held the modular units in place, back through the turns of the warp, to dovetail the units back together. Long gaps between the selvedges formed by the turns of the weft were stitched to the adjacent modular unit, sometimes (but not always) using a thread that matched one of the colours in the modular units (Burian n.d.). At this stage, the piece was ready to be converted into a full-sized tunic.

The effect in Wari style tie-dyed garments relies on contrasts of strong hues dominating the visual field: red, golden yellow, green, blue and dark violet. Some modular units were tied and dyed red in a straightforward operation to make an undyed white design on a red ground. White designs also appear on a blue ground. Indigo, sometimes dipped for longer or shorter periods of time in the dye bath, produced a lighter and a darker intensity of blue. Green usually appears with yellow tie-dyed rhombuses. D'Harcourt (1962: 159) explained the process: the dyer tied the modular units (or applied some other resist) for dyeing the fabric blue. After untying the bindings, he or she next dyed the unit yellow, which made a yellow design on a green ground. A number of the blue-dyed units had some of the binding removed and then were placed in a red bath. The result was a series of small red and white rhombuses on a violet ground.

Modular units dyed with a red design on a yellow ground are unusual because they have a darker motif on a lighter background. In tie-dyeing, the ground is not bound and is exposed to the dye; it is usually darker than the tied pattern motifs. Because she observed that the yarns have a slightly compact or felted appearance in the red-on-yellow modular units, Ina VanStan (1963: 169-72) suggested that another form of resist dyeing must have been used. She thought that the application of hot wax, as in batik, or a combination of such a method with tie-dyeing, could have been used for these units. These red motifs are also of a larger scale than the rhombuses and straight lines that appear on the units with a light design on a dark ground. In the Liverpool textile, the red-on-yellow designs are also larger in size than in the other units. Ann Rowe (2012: 194) describes the effect as an explosive one breaking up the repetition set up by the patterned flow of the little, open rhombuses.

Wari style tie-dyed tunics display unusual chromatic preferences when compared with the repertoire of other pre-Hispanic textiles. Because the construction of the textile relies on the use of a discontinuous warp and weft in a fabric that is warp predominant, both these elements combine to create an impression of relatively undiluted colours possessing a chromatic purity.[13] The techniques used in constructing the fabric therefore enhanced the possibilities for choosing a particular spectrum of hues.

Prior to the Wari period, Andean fibre artists had sometimes employed colour sequencing to draw attention to the method of construction used in making the fabric. Anne Paul studied this phenomenon in relation to Paracas/Topará textiles. She observed that such textiles are normally embroidered on a plain woven cloth base; the complexity is not so much in the construction but in the design of the images (Paul 2004: 64). The use of colour, she argued, seems to have been intended to serve an 'esoteric function' in the logic encoded in the colour choices, as well as providing visually pleasing effects (Paul 2004: 75). In some cases, the weavers/embroiderers selected colour combinations to draw attention to methods of textile construction. For instance, Paul (2004: 60, Figure 5.7) demonstrated how the repetition of four colours in repeated blocks along the edges of a headcloth invokes 'an image of four-strand oblique interlacing'.

In the Wari style tie-dyed tunics, the colour schemes do not make such an explicit reference to the construction of the cloth. The use of a discontinuous warp and weft, however, enabled weavers to contain saturated hues within the individual modular units. Perhaps, as Rebecca Stone (1986: 140) suggested, the hues had 'become subject matter' in the visual arrangement of the tie-dyed units. These tunics are distinctively different from another tunic type commonly worn by Wari men of high status, which was woven in a tapestry technique. In these tapestry tunics spinners, dyers and weavers used a palette of darker and lighter shades of weft yarn, spun from undyed, naturally coloured camelid fleece, as well as a range of dyed colours (Stone 1986; Stone 1992; Bergh 2012a).

Compared to the tie-dyed tunics, the chromatic schemes of Wari tapestries are based on a greater modulation of contrasts between light and dark, as well as between unsaturated and saturated colours. To extend the tonal range of colours at their disposal, spinners and dyers producing yarns for the tapestry tunics relied on what was by then the ancient practice of selecting light brown and mid-brown camelid fleece to dye some of it red and blue as a complement

13. The hues are saturated, which means that they are not made pallid by being diluted with white (see 'saturation' in Merriam-Webster, *Dictionary*, available at http://www.merriam-webster.com/dictionary/saturation and consulted on 16 September 2014). In a warp predominant weave, the warp is more closely spaced than the weft, but both are visible in the finished cloth.

to undyed yarns. They reserved the white to keep it as such or to dye it light hues such as yellow or green or, in the case of an exceptional tapestry tunic in the Museo Chileno de Arte Precolombino, light pink (Sinclaire Aguirre 2010: 34). Three-thousand-year-old yarns from the site of Tulan 54, in the Atacama Desert of northern Chile, already relied on such a principle; white fleece was not abundant and yarns spun from naturally occurring brown fleece colours were dyed red to complement the range of natural colours from white to brown (Dransart 2002a: 213).

From surviving Siguas style textiles, it appears that weavers had begun to obtain greater supplies of yarns spun from white fleece than had been previously available, and they put it to good effect in tie-dyed textiles. Joerg Haeberli (2002: 253) suggested that the slopes of Nevado Ampato, from where the Sihuas River rises, were the source of camelid fleece used in the textiles.

The pairing of areas of chromatically strong hues (as the background) with resist dyed patterns formed by narrow white lines and small rhombuses was an unusual aesthetic strategy in the Andes. Earlier Nasca period tapestry weavers and potters had surrounded bright colours with fine black outlines in a tradition Wari weavers and potters chose to continue (Knobloch 2012: 122, 125). White outlining on the face designs of Robles Moqo style effigy jars from Pacheco is significant, however, because these designs were clearly inspired by Wari tie-dyed tunics. Beginning c. AD 850, in Middle Horizon Epoch 2, Wari weavers developed further the trend for white outlines in tapestries (Dransart 2002a: 150-51, plates 6.4 to 6.6), as did potters in polychrome ceramics, including the style known as Viñaque (Knobloch 2012: 133, figure 110).

White camelid fleece, therefore, must have been esteemed for its brilliance in its own right while affording dyers with the means to create intensely colourful hues for the tie-dyed tunics. The dye pigments from which the saturated hues were produced relied paradoxically on the need for a ground formed from all-white fleece for the purity of the various hues to obtain their maximum effect. It is possible, moreover, the use of white camelid fleece conveyed complex symbolic meanings in a realm of cosmological associations that now are not fully accessible to people in the present. In Wari times, people might have regarded white fleece, for instance, as possessing some kind of meteorological significance, in reference to white clouds and thunder, as do llama and alpaca herders today in Isluga (Dransart 2002a: 54). If spinners and weavers of the tie-dyed tunics made associations of a comparable character, the outrageously conspicuous consumption of white camelid fibre would have added to the awesome appearance of such garments.

For much of the twentieth century, theoreticians of colour have not held colour schemes in high regard when based simply on contrast of hue. Albert H. Munsell argued that the 'use of strongest colours only fatigues the eyes' (Munsell and Cleland 1921: 9). The hues of red, yellow, green, blue and violet used in the tie-dyed tunics are what Munsell called 'simple hues' (Munsell and Cleland 1921: 14). In the colour sphere he developed for measuring and standardising colours, these hues would be somewhere near the equator (whereas paler tones would be closer to the north pole and darker tones to the south pole). Because these hues are close to saturation, with only the violet providing the darkest tone, colour schemes of Wari tie-dyed textiles would surely have met with Munsell's disapproval.[14]

In Western-dominated art markets, shifts in purchasers' preferences have resulted in periodic reappraisals of what connoisseurs consider to be 'art' (Clifford 1988: 222-6). Ancient Andean tunics therefore became susceptible to changing tastes on the part of collectors. Reid's (1984: 62) appreciation for Wari tie-dyed tunics is symptomatic of the expansion of Western aesthetic horizons when he stated: 'The final result is a modern painting somewhat like the incessant movement of hundreds of atoms flying like darts in an immense space'.[15]

In order to appreciate these visual qualities to the full, dealers and collectors unstitched certain tunics in order to hang them in the manner of an abstract painting. In the next section I explore some aspects of the inherent structural weaknesses of Wari tie-dyed tunics that made them vulnerable to be put to uses that would not have been envisaged by the original makers and users of such garments.

Modular units and structural weaknesses

Wari style tie-dyed tunics achieved their dazzling appearance through the repetition of modular units in specific colour combinations, sometimes baffling the viewer by reversing some of the expected repetitions. Standard shapes were used as modular units, based on a rectangle, a triangle with a stepped hypotenuse, an L-shape, a hook, or a

14. The colour schemes of industrially woven carrying cloths currently used by people in Andean communities are also based on contrasting hues. In a study of different kinds of colour contrast employed in Isluga, northern Chile, I found that women, in their own weavings, eschewed contrasts based simply on hue (Dransart 2002b: 59 and plate 1).

15. My translation of the Spanish: 'El resultado final es una pintura moderna algo como el movimiento incesante de cientos de átomos volando como dardos en un espacio inmenso'.

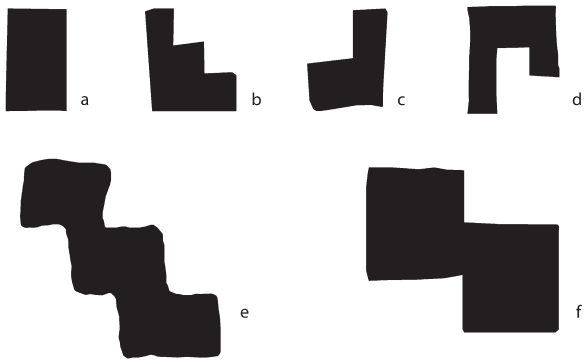

Figure 9. The shape of modular units used in Wari style tie-dyed tunics (not to scale):

9a. Modular unit in the form of a rectangle (Metropolitan Museum of Art 1980.564.3)

9b. Modular unit in the form of a triangle with a stepped hypotenuse (Metropolitan Museum of Art 1986.488.3)

9c. Modular unit in the form of an L-shape (Museum für Völkerkunde, Berlin VA 29101)

9d. Modular unit in the form of a hook (British Museum Am 1954,05.445; see also Metropolitan Museum of Art 33.149.46)

9e. Modular unit in the form of a stepped block with twelve selvedges (Fowler Museum at UCLA, X80-1122). The missing lower right hand corner is reconstructed.

9f. Modular unit in the form of a stepped block with eight selvedges (Fowler Museum at UCLA, X86.3953; see also National Museums Liverpool, 1951.68.545)

stepped block (figure 9). An isolated example of a nearly complete stepped block from the collections of the Fowler Museum originally had twelve selvedges (figure 9e). The shape of the unit is in three steps, tie-dyed red, with two white rhombuses in each step (Phipps 2013: 63, No 65). More than one modular shape might be used in one fabric (figures 10 and 11). In the Liverpool textile, there are rectangular and stepped block modular units, the latter having eight selvedges (figure 9f).

The dimensions of the individual modular units used in a tunic are not always constant. As a consequence, the fabric may not lie flat because weavers eased the fullness of the larger units to adjust them to fit against the smaller ones. Ann Rowe (2012: 193) commented that neighbouring units, which had been adjacent when originally woven, might not be next to each other after dyeing and were destined for use in different tunics. Ana Lisa Hedstrom and Yoshiko Wari, as reported by Jane Rehl (2000: 15, n.9), conducted an experiment in an attempt to reconstruct the original conformation of strips of modular units by cutting out individual units from a photograph of a tie-dyed tunic in the Amano Museum. They were, however, unable to do so because some units were missing, having presumably made their way into other tunics.[16]

Some Wari style tunics are symmetrical in their design, being made from two similar loom lengths joined together longitudinally by overcast stitching at the side seams and along the front and back of the garment. Openings were left for the neck and arms, but there was no finishing treatment for these openings (Rowe 2012: 195). Other tunics were made from two different loom lengths using various modular units. One of the tunics in the Metropolitan Museum of Art has rectangular modular units on one side of the garment and triangles with a stepped hypotenuse on the other (figure 10). The dominant pattern is on the diagonal, which is strongly marked on the side of the tunic with the rectangular modular units, but a reversal of elements occurs on the other side with the stepped triangles (de Montebello 1980-1981: 73).

The Liverpool textile was patched from a larger piece of a type rarely represented in museum collections. A comparable textile, consisting of an almost complete tunic half, is in the collections of the Fowler Museum, Los Angeles (figure 11).[17] It is possible that the garment it came from was originally asymmetrical because a complete, but opened up, tunic in the collections of the Museo Nacional de Antropología y Arqueología e Historia del Perú, Lima, has different left and right sides. One half is like the Fowler textile in consisting of step block modular units (each with eight selvedges) and rectangles. The other is composed from triangles with a stepped hypotenuse.[18]

The processes used for assembling, disassembling and re-assembling the modular units to compose the tunics resulted in the frequent occurrence of long vertical slits, which were closed by overcast stitching. This stitching proved to be a point of weakness, which collectors and dealers have been able to exploit when preparing tunics for sale on the art market. Most of the ancient Andean textiles in museum collections lack the contextual information that is available

16. The tunic is illustrated in Amano and Tsunoyama (1979: 23, No 8).

17. Fowler Museum accession number X86-3953. In photographs, the yellow ochre in the yellow-on-green units is similar in both the Fowler and the Liverpool textiles, but I have not yet had an opportunity to study the former in the real. Because the Liverpool piece has been patched from fragments, at this stage of my research it is difficult to confirm whether or not it might have once belonged to the Fowler Museum textile.

18. Museo Nacional de Antropología y Arqueología e Historia del Perú accession number 231344. The tunic was exhibited in an exhibition, from December 2013 to April 2014, entitled Gold and the Incas: Lost Worlds of Peru, at the National Gallery of Australia: http://nga.gov.au/exhibition/INCAS/Default.cfm?IRN=231344&MnuID=3&ViewID=2 (accessed on 14 September 2016).

had they been obtained from archaeologically controlled excavations. Many Wari style tie-dye tunics held in museum collections came through what Michael D. Coe (1993: 273) called the 'art market as system' in the production, distribution and consumption of pre-Hispanic antiquities. At some point(s) along this system, anonymous persons evidently replaced the worn stitching between the textiles' modular units and, not knowing what the garment types were, sometimes sewed up the neck slot too. Their intervention resulted in tie-dyed textiles as flat works of art intended for the aesthetic appreciation of the collectors.

Rowe (2012) discussed specific instances where tunics have undergone modifications. Her most dramatic example is a textile consisting of tie-dyed rectangular units interspersed with long strips of solid colour.[19] Once a tunic, it was opened up to make it look like a mantle. Someone cut the plain red stripe, which probably had been at the centre of the garment, into two along its length and then stitched together the two pieces, with the halves of the red stripe now forming the textile's outermost edges. Rowe (2012: 196-8) judged the stitching to be modern.

Another tunic considered by Rowe appears to be missing one of its horizontal rows.[20] She also observed that the dark violet units tie-dyed with small rhombuses in an X-formation were probably taken from another textile in order to replace deteriorated blue units. Describing the repair as being skilfully done, she noted that the fringing at the armholes is not a characteristic of Wari period garments (Rowe 2012: 196). The implication therefore is that this tunic was also reconstructed in recent times.

The conservation of the textile in Liverpool

Sometime in the past along the flow in the production, distribution and consumption of pre-Hispanic artefacts, the Liverpool statuette was provided with garments recuperated from an ancient tie-dyed textile. A careful record made in 2000 during the conservation of the statuette is highly revealing. Before and after slides provide information on how, to judge from the use of modern threads, someone had modified the textile in recent times. There were other clues; the removal of the upper garment exposed a metal tack driven into the small of the figure's back to keep the undergarment in place. Such tacks were not used in pre-Hispanic times (figure 6).

When the upper garment was laid flat for inspection, a T-shaped slot was revealed, cut into the fabric (figure 12). This form of neck opening was also foreign to ancient Andean weavers. The person who made this modification selected a weak part of the fabric, which already had been in a poor condition due to moth damage.[21] There was a further loss of fabric during the conservation process (figure 13). The person (or persons) who modified the textile to fit the statuette devised another neck opening by unstitching the join between two green modular units. They placed the opening horizontally, tight across the chest of the statuette, apparently not knowing that this horizontal arrangement would have been associated with women's tunics in the Central Andes.[22]

The rawhide binding of the cord wrapped round the neck of the statuette is likewise an uncharacteristic feature of pre-Hispanic textiles (figure 14). Hence there are several reasons for suspecting that the statuette was dressed in recent times.

At least three sewing threads were noted during the conservation of the upper garment (Ayers 2000). Much of the overcast stitching in modern-looking thread is crudely done. There are, in addition, slight traces of a different red stitching underneath the overcast stitches between two green modular units at the base of the neck on the back of the upper garment as the textile was arranged on the statuette (figures 4 and 15). Two tunics in the collection of the Metropolitan Museum of Art also have red stitching at the base of the neck opening, somewhat roughly done (figure 10).[23] A further stretch of stitching on the Liverpool upper garment, running horizontally across the front of the upper garment, may be pre-Hispanic. It is executed in *punto de forma de zeta* (Katterman 2006: 352), using a paired yarn in a yellow

19. The Textile Museum, Washington D.C., no 91.90.

20. The Textile Museum, Washington D.C., no 91.308.

21. It is worth noting that Fowler Museum textile X86-3953 has also suffered deterioration in the blue modular units (see again Figure 11).

22. The term 'tunic' is used here as a conventional term defined in dictionaries to refer to 'a simple slip-on garment made with or without sleeves and usually knee-length or longer' (Merriam-Webster dictionary, available at https://www.merriam-webster.com/dictionary/tunic, and consulted on 3 March 2017). As an under or outer garment, it was worn in the ancient Classical world by men and women. In Wari and later periods in the Central Andes, slip-on garments were made of different fibres and were variable in length, expressing gender and ethnic distinctions. The slip-on garments of coastal peoples (men and women) and of highland men were seamed at the sides with openings for head, arms and legs, unlike the untailored Inka-style cloth, with which highland women wrapped themselves. The upper garment worn by the Liverpool statuette differs from tunics in this respect because the sides were not stitched, but were left open.

23. Metropolitan Museum of Art, Gift of Rosetta and Louis Slavitz, 1986.488.3 and Metropolitan Museum of Art, Gift of Arthur M. Bullowa, 1980.564.2, available on the searchable data base at http://www.metmuseum.org/art/collection/search.

Figure 10. Wari style tie-dyed tunic, camelid fibre warp and weft. Accession number 1980.564.2, Metropolitan Museum of Art, gift of Arthur M. Bullowa, www.metmuseum.org

ochre or tan colour, and is visible in Figures 3, 12 and 14. After cleaning, the upper garment was attached to conservation net and replaced on the statuette (figures 14 and 15).

Sir Henry Solomon Wellcome, collector of antiquities

All three of the human figures currently on display in Liverpool entered the museum's collections in 1951 as a donation from the trustees of the Wellcome Historical Medical Museum to what was then the City of Liverpool Public Museum. Wellcome's collecting activities had begun by 1878 when, employed as a travelling salesman by a New York company of druggists, he went to Ecuador to look for sources of Cinchona bark, from which quinine was extracted (James 1994: 68).

This expedition gave Wellcome the opportunity to indulge in some amateur archaeological digging. At least some of the artefacts he found seem to have accompanied him when he moved to London in 1880 (Larson 2009: 9-10). An inventory of objects made later in his life indicates that certain items were 'excavated from the Inca tombs of Peru by Mr Wellcome'.[24] His antiquarian interests therefore were rooted in the second half of the nineteenth century, a period during which foreign explorers and traders had been developing their interests in collecting pre-Hispanic artefacts alongside the antiquarian activities of local South Americans (Boone 1993a: 323-5; Gänger 2014: 1-3). From the middle of the century, 'purposeful excavation' had been increasingly adopted as a strategy for obtaining antiquities rather than relying on accidental discoveries encountered during building works or agricultural activities (Gänger 2014: 54).

In London, Silas Burroughs and Wellcome set up a new pharmacy business (James 1994: 87-8). The business prospered and Wellcome soon developed an enthusiasm for purchasing antiquities in the salerooms. He made many of these

24. Harry Port, who was head of Wellcome's museum stores (Larson 2009: 108-9), drew up this inventory. It is undated. Mr Port, Inventories, Wellcome Library, London, WA/HMM/CM/Lis/2

Figure 11. One half of a Wari style tie-dyed tunic with stepped block and rectangular modular units, camelid fibre warp and weft. Accession number X86.3953, Fowler Museum at University of California, Los Angeles, gift of Mr. and Mrs. Herbert L. Lucas Jr. http://fowler.ucla.edu/collections/objects/x86-3953

purchases under different assumed names (Wilkins or Wilton) to avoid revealing his identity and he also employed agents to make purchases on his behalf (Larson 2009: 81). In 1896 he appointed C.J.S. Thompson as a researcher and a collecting agent. Thompson's pseudonyms were Treve and Epworth (James 1994: 265-8; Larson 2009: 81). One of his tasks was to draft in other Wellcome employees, whose jobs otherwise were as delivery men, workmen, personal attendants and caretakers, to act as bidders when Wellcome wished to buy antiquities. Frances Larson (2009: 81) calls such members of staff 'factotums' and they were the ones 'who packed and unloaded and recorded and cleaned Wellcome's curiosities, week in and week out'. Wellcome threw himself into a whirl of competitive and cooperative activities focused on the determination of the monetary value of an artefact and the thrill of making a successful bid to claim ownership over it. Larson (2009: 91-2) suggests that he relished his entry as a collector into the antiquities market, and that he felt more comfortable in joining it than the academic community to which he wished to belong by planning his Historical Medical Museum. Shortly after the First World War, a market in pre-Hispanic antiquities was emerging (Coe 1993: 271) and by this time Wellcome's collection had been growing at an exponential rate. Perhaps it was during this period that Wellcome acquired the statuette.

In 1913, Wellcome had inaugurated a Historical Medical Exhibition in premises in Wigmore Street, London. For this new development he drew on his previous experiences of participating in trade exhibitions and fairs (Larson 2009: 22-3). With Thompson now as Curator of the Exhibition, Wellcome encouraged his staff to put on a display combining original artefacts, carefully repaired ancient objects and copies of originals (Larson 2009: 172). The Exhibition remained open for nineteen years. Wellcome's attitude towards collecting was based on using his collections to demonstrate that medicine was a branch of anthropology in which anthropological questions might be addressed 'in a wide sense'.[25] Andean mummies, textiles, pottery and other items would all contribute towards demonstrating how the history of medicine (and the human body) might be treated in a holistic manner. Wellcome therefore aimed to make his collections as 'complete' as possible for the Historical Medical Museum he intended to open (Larson 2009: 90). It is likely the Liverpool statuette was destined for this museum as a potential exhibit. Because he was aware of practices used by auction houses to sell antiquities, the possibility that the statuette was the product of a dealer's workshop might not have dissuaded Wellcome from acquiring it.[26]

Wellcome died in 1936 and, after World War II, trustees of the as yet unopened museum only retained the artefacts they deemed to be specifically related to the history of medicine. In a report dated 1944, the ethnographic materials were stated to be 'more extensive than any other' part of Wellcome's collections (Russell 1986: 57). Large numbers of items that were declared to be surplus were transferred to the British Museum, where its staff selected items for their collections and the remainder were distributed to a number of university and municipal museums, including some in the Commonwealth.

Accordingly, six months after the end of World War Two, under an agreement between the Trustees of the Wellcome Historical Medical Museum and the Keeper of Ethnography at the British Museum, about 1,300 cases of artefacts and other materials were transferred to the British Museum. Plans were put in place for Wellcome staff to check the two hundred cases of Mexican and Peruvian material for items

25. H.S. Wellcome, Royal Commission on Museums, written answers (1929), Wellcome Library, London, WA/HSW/OR/l.1

26. Another possibility is that Wellcome's own staff might have dressed the statuette in an ancient Wari textile.

Figure 12. The statuette during conservation with the upper garment raised, revealing the T-shaped slot cut into the textile. Accession number 1951.68.545, National Museums of Liverpool. Photograph by Vivien Chapman

Figure 13. The statuette during conservation showing the loss of textile in the dark blue area due to moth damage and the second neck opening between two green modular units. Accession number 1951.68.545, National Museums of Liverpool. Photograph by Vivien Chapman

of potential interest to the Wellcome Historical Medical Museum. The British Museum then had first choice of the remaining artefacts before the Wellcome trustees made the rest available for distribution to other museums in the UK and Empire. Liverpool was mentioned in the plans for this process as a particularly worthy recipient because it had 'close association with the Colonies, the prominent place it takes in the teaching of tropical medicine and the fact that most of its Ethnographical Collection has been destroyed by enemy action'.[27]

The statuette perhaps was selected by the City of Liverpool Public Museum on 8 February 1951, during the fourth allocation of surplus artefacts, concerning 'general African and general American items in equal proportions … the first selection of Peruvian pots – about 100 in all'.[28] E. Ashworth Underwood, the Director of the Wellcome Historical Medical Museum, explained the 'material … consists mainly of Peruvian pottery and textiles and there is also a miscellaneous collection of other types of material'.[29] Alternatively, the statuette might have been chosen for Liverpool on the sixth instalment, which took place on 18 October 1951.

In any event, in 1951 the statuette reached Liverpool. On entering the collections of the municipal museum curatorial staff gave it a new accession number, clearly signalling the date of its arrival.

Concluding thoughts

If the Liverpool statuette is a talisman, it is a talisman of a modern age. Its glowering presence is intended to dissuade the viewer from examining its fabrication too closely. People living during Wari times conceivably considered the brilliance of the dazzling hues in the textile to possess special qualities when the spinners of all white camelid fibre produced the warp and weft yarns for weavers and dyers to make strips of modular units for assembling into a full-sized tunic. The textile, however, was not originally intended to clothe the statuette. Someone cut its remnants to fabricate small-scale under and upper garments and a head cloth. Whatever Sir Henry Solomon Wellcome thought when he purchased the statuette before 1936, in its dressed aspect it now seems to belong to a period of time when dealers and collectors thought that ancient objects might be 'improved'.

Wari style tie-dyed textiles were vulnerable to modification because of the construction method using modular units, which were dovetailed together along horizontal joins and stitched between vertical joins. The decay of this stitching added to other forms of destruction occurring in ancient times. Finds from the uppermost layer of Structure 5, a subterranean chamber, at the site of La Real in the Majes Valley, Department of Arequipa, provides an instance where

27. T.R.G. Bennett, Memorandum I, The Wellcome Ethnographical Collections (1945), Wellcome Library, London, WA/HMM/TR/Eth/A.1

28. Letter from E Ashworth Underwood, Director of WHMM to GHS Bushnell, Curator CUMAE (30 January 1951), Cambridge Museum of Anthropology and Archaeology Archive (Box 376 Doc 111).

29. Letter from E. Ashworth Underwood, Director, WHMM to G.H.S. Bushnell, Curator, CUMAE (8 October 1951), Cambridge Museum of Anthropology and Archaeology Archive (Box 376 Doc 111).

Figure 14. Front view of the statuette after conservation with the upper garment now supported by net, accompanied by the cord. Accession number 1951.68.545, National Museums of Liverpool. Photograph by Vivien Chapman

Figure 15. Rear view of the statuette after conservation with the upper garment now supported by net. Accession number 1951.68.545, National Museums of Liverpool. Photograph by Vivien Chapman

excavators encountered a fragment of a tie-dyed tunic made from triangular units with a stepped hypotenuse. The fill of this chamber included disarticulated human remains and a large part of a four-cornered hat was also present the same level, suggesting that these deposits were derived from the disturbed burial of at least one Wari lord (Quequezana Lucano, Yépez Álvarez and López Hurtado 2012: 114, Figures 4.1 and 4.16a; Yépez Álvarez 2012: 19-21). Daniela Biermann (2006: 229) also reported the insertion of a Wari tie-dyed tunic in the early Nasca-period cemetery of Cabezas Achatadas. Some prehistoric practices, therefore, resulted in the alteration of Wari style tie-dyed tunics, separating them from their original contexts.

During the course of the twentieth century, Andean antiquities increasingly became a collectible category through the activities of the art market, subjecting textiles to other types of modification. Collectors favoured Wari style tie-dyed tunics if they survived to a greater extent than the fragment from La Real. The stitching of the tunics was vulnerable, allowing dealers to convert them into something more desirable to the collectors. Two different strategies were considered here: the conversion of a seamed tunic into a flat textile suitable for display on someone's wall and the use of a smaller fragment to dress a figurine. Someone repurposed such scraps by turning them into small-scale garments in order to dress the statuette now in Liverpool. In so doing, this anonymous person (or persons) attempted to reunite the textile with a human form. The textile had probably been separated from a human body it once accompanied in a funerary context. Their attempt, however, does not entirely convince viewers who are conversant with Wari depictions of elite male warriors.

The Liverpool statuette therefore is a composite object bringing together not only different materials, such as wood, textile and rawhide. In its composite character it also is an amalgam of different episodes in time in which an earlier textile wraps a more recent wooden figurine, combining different substances with different temporal dimensions.

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15

Tocados del Horizonte Medio al Intermedio Tardío en la costa central: Una visión desde el valle de Asia, Perú (Siglos VII-XII d.C.)

Rommel Angeles Falcón[1]

Resumen
Las excavaciones arqueológicas efectuadas en Huaca Malena, valle de Asia, costa central del Perú, permitieron recuperar una gran cantidad de finos tejidos del periodo Wari correspondiente a los siglos VII al XI d.C. donde destaca una gran variedad de adornos de cabeza o tocados elaborados en fibra de camélido, cestería y plumas destacando finas bandas constituyendo una extraordinaria muestra de la variedad de tocados existentes durante el Horizonte Medio. Se han identificado 18 tipos de tocados la mayoría asociados al sexo masculino y en menor grado al femenino, algunos de estilos locales y otros probablemente de otras regiones de los Andes. Se describen los tipos identificados.

Palabras clave: Horizonte Medio, Wari textiles, costa central andina, Huaca Malena, tocados

Tocados from the Middle Horizon to the Late Intermediate on the Central Coast: A View from the Valley of Asia, Peru (7th-12th Centuries AD)

Abstract
Archaeological excavations carried out at the Huaca Malena site, in the Asia Valley of Peru's central coast region, permitted recovery of a large quantity of fine textiles of the Wari period, corresponding to the 7th to 11th century AD. A prominent element of the assemblage is a great variety of headdresses created in camelid hair, basketry and featherwork, including fine headbands, which constitute an extraordinary sample of the diverse headdresses that existed during the Middle Horizon. 18 types of headdresses have been identified, the majority associated with men and a smaller number with women, some in local styles and others probably from other regions of the Andes. The types identified are described.

Keywords: Middle Horizon, textiles Wari, Andean Central Coast, Huaca Malena, headdress

El sitio

El año 1997, realizamos excavaciones arqueológicas en Huaca Malena (Angeles – Pozzi Escot 2000, 2002, 2004), una plataforma construida con adobes hechos a mano del periodo Intermedio Temprano (siglo III al V d.C.) ubicada en el valle bajo de Asia, costa central del Océano Pacífico del Perú a 100 kilómetros al sur de Lima (Figura 1A). Sobre dicha plataforma fue emplazado un extenso cementerio del periodo Horizonte Medio (Siglos VII al XI d.C.) a inicios del periodo Intermedio Tardío (Siglos XI al XII d.C.). La riqueza textil asociada a dichas tumbas, contribuyó a que el sitio fuera intensamente depredado. Tanto de día como de noche grupos de personas saquearon sistemáticamente el sitio despojando de sus finos tejidos a los fardos funerarios dejando desolación y abandono. La sequedad del clima de la costa peruana y la escasez de agua, permitió que la irrigación no afecte el sitio y que la conservación de los tejidos y de todo material orgánico sea óptima. En 1925, Julio C. Tello condujo excavaciones en el sitio recuperando 312 fardos funerarios (Tello: 2000). Algunos de los finos tejidos de Huaca Malena guardan relación con los tejidos denominados Epigonal y Tiahuanaco procedentes de las excavaciones de Max Uhle en Pachacamac (Uhle:2003, Lámina 6) así como con los de Ancón y Chimucapac en el valle de Supe (Figura 1 B).

1. Museo Huaca Malena; Museo de sitio de Pachacamac

Figura 1A. Mapa del Perú y América del sur con la ubicación de Huaca Malena.

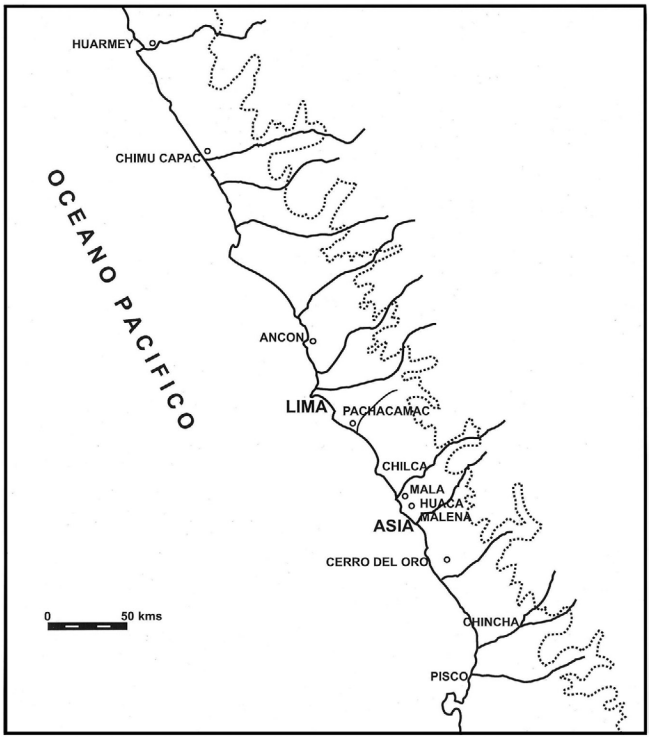

Figura 1B. Mapa de la costa del Perú con los principales sitios del Horizonte Medio mencionados en el texto.

Los fardos funerarios

Las tumbas se ubican en la parte superior de Huaca Malena, estas son de planta circular e intrusivas a los rellenos arquitectónicos o las emplazan dentro de los muros desmontando los adobes para formar espacios cuadrangulares donde depositaban entre uno a dos individuos (Pozzi Escot y Angeles 2011). Los fardos funerarios tienen forma oblonga o en forma de pera, estos en gran parte se encontraban vestidos con una túnica, un tocado y sujetados con soguillas de fibra vegetal. En la parte superior de los fardos funerarios colocaban un fragmento de cerámica. Alrededor del fardo dejaban ofrendas de comida en mates o calabazas, maíz y los instrumentos relacionados a las labores que realizaban los individuos.

Los fardos funerarios de los hombres llevan al exterior, un uncu o camiseta de algodón o de fibra de camélido, en la cabeza llevan un tocado, las mujeres llevan una vincha en la cabeza e instrumentos de tejido y un vestido a manera de manta (Frame y Angeles: 2014). En el caso de personajes de mayor importancia, los fardos llevan una falsa cabeza que representa un rostro, se trata de un paño de algodón, doblado y cosido al paquete funerario donde han elaborado el rostro de un personaje mediante hilos, nariz de fibra vegetal e inclusive láminas de metal que penden debajo de los ojos a manera de lágrimas. En este caso los tocados son más elaborados e incluyen varios elementos.

La indumentaria

Los fardos datan del periodo Horizonte Medio, y destaca la presencia de finos tejidos de estilo Wari además de otros tejidos contemporáneos a dicho estilo. Los uncus por ejemplo son anchos y cortos de similar forma a los hallados por Max Uhle en Pachacamac (Vanstan 1967), varían principalmente en su elaboración, en el caso de los uncus de algodón se distinguen los de color pardo, crema, naranja y en paneles de colores alternos. Los uncus de fibra de camélido están elaborados en técnica de cara de urdimbre, urdimbres discontinuas y urdimbres complementarias, así mismo en tapiz.

La vestimenta femenina se caracteriza por un paño rectangular que envuelve el cuerpo desde el torso y esta sujetado por alfileres o cintas policromas (Frame y Angeles op. Cit.). Hay vestidos de algodón y en fibra de camélido distinguiéndose los elaborados en urdimbres complementarias con trama y urdimbre de fibra de camélido (Pozzi Escot y Angeles 2011: 81-82).

En esta oportunidad hablaremos de los tocados de cabeza que poseen una gran variedad tanto en hombres como mujeres donde se distinguen elementos locales y foráneos que los relacionan con otras zonas de los Andes. Los tocados son

Figura 2. Contexto funerario en la plataforma A de Huaca Malena, tumba múltiple de hombre y mujer, periodo Horizonte Medio Época 2B - 3. Foto Rommel Angeles.

elementos distintivos de las culturas andinas y son elemento de identidad. La cerámica Nasca, Moche y Wari presenta muchos ejemplos de personajes que portan elaborados tocados, así mismo los tejidos Paracas presentan una amplia representación de personajes que portan elaborados tocados. La cerámica Wari presenta personajes con bandas, gorros de cuatro puntas (Frame: 1990), plumas y diversas representaciones. Los tocados de Huaca Malena recuerdan a los tocados reportados en Ancón por Reiss y Stubel (1880-1887) y discutidos por Peter Kaulicke (1997) así como a otros procedentes probablemente de la costa sur dentro del estilo Wari, tal como la peluca procedente de Chilca y tejidos procedentes de Nasca (Rowe: 1986).

Tocados masculinos

Estos fueron hallados asociados a fardos funerarios de adultos masculinos tanto en contextos funerarios primarios como secundarios producto del saqueo del lugar. Entre los contextos funerarios de adultos con tocados, se distinguen los hallados en la plataforma A de Huaca Malena, podemos describirlos de la siguiente manera:

Tumba 1, Plataforma A, Unidad I Bb, Capa B Nivel 3 (Figura 2).
Ubicada al lado de muro de adobes; está compuesta por dos fardos funerarios de adulto, hombre y mujer. El fardo funerario perteneciente a un individuo de sexo masculino lleva una túnica de plumas de color naranja y en la cabeza porta un tocado de cestería con un penacho de plumas asociado a este, debajo de esta prenda se ubica el paquete funerario envuelto con tela de algodón y soguillas de fibra vegetal. El fardo femenino es un paquete que lleva una cinta de tapiz Wari Provincial colgado en el cuello y una faja de telar a la altura de la cintura, el fardo presenta una fina tela de algodón de color crema.

Tumba 2, Plataforma A Unidad I Aa, Capa B Nivel 1:
Fardo funerario masculino de forma oblonga lleva un tocado de cestería con un penacho de plumas y una soguilla forrada de pelo de color beige, lleva una túnica de algodón listada de algodón. A la altura de la cabeza llevaba un mate conteniendo alimentos (Pozzi-Escot y Angeles 2011 fig. 9). El fardo se hallaba dentro de una cámara de planta circular con tapa de piedra sobre la cual se había colocado una

Figura 3. Fardo funerario de hombre, con tocado de cestería, tocado de plumas y uncu de fibra de camélido, colocado al interior de muro de adobes, plataforma A de Huaca Malena, periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles

cabeza de adulto y en las inmediaciones el cuerpo de dicho adulto con los pies amarrados. Alrededor de este se hallaron una serie de fardos funerarios disturbados.

Tumba 3 Plataforma A, Unidad I Bb, Muro 8 Nivel 1 (Figura 3)

La tumba fue construida desmontando los adobes que formaban el muro 8 dejando solo los adobes de las paredes externas de dicho muro para formar una pequeña cámara cubierta con una laja de piedra. Al interior de esta, el fardo se encontraba vestido con un uncu de fibra de camélido de color marrón en técnica de cara de urdimbre y portaba en la cabeza un tocado de cestería asociado a un penacho de plumas de color verde y amarillo. Al pie del fardo se encontró dos maíces como ofrenda.

1.- El tocado de cestería

Los tocados de cestería son tubulares y delgados, han sido confeccionados de junco y probablemente de toquilla, debido a la finura y flexibilidad de algunos ejemplares, los convierten en un elemento de prestigio, han sido elaborados mediante la técnica de sarga y formando en el borde líneas similares a la de una espiga en una sola pieza, presentan un color pardo dorado y están asociados a uno o dos penachos de plumas que son colocados en un pliegue del tocado. Los tocados de cestería son abundantes dentro de la colección de Huaca Malena y han sido tipificados como pertenecientes a personajes de clase media dentro de los contextos funerarios de Huaca Malena. La colección de tocados de cestería de Huaca Malena sobrepasa los 20 ejemplares completos. Existen al menos tres formas de usarse:

a.- Tocado de cestería alto, tienen una altura de 30 centímetros y no presenta pliegue (Figura 4 A).

b.- Tocado de cestería alto y plegado en la parte inferior para darle mayor estabilidad (Figura 4 B).

c.- Tocado de cestería plegado por la mitad hacia adentro destinado para colocar en el pliegue uno o dos penachos de plumas con estructura de fibra vegetal (Figura 4 C).

Figura 4A. Tocado de cestería alto, elaborado mediante la técnica de sarga. Código 110-2011. 31 x 25 cm. Huaca Malena, plataforma A. superficie. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles

Figura 4B. Tocado de cestería doblado, elaborado mediante la técnica de sarga. Huaca Malena, plataforma A. superficie. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles

El junco puede obtenerse con facilidad en el valle de Asia así como en los valles vecinos de Mala por el norte y Cañete por el sur, esta planta crece en afloraciones de agua dulce propios de los humedales de la costa peruana. La tumba de elite de un personaje de Huaca Malena llevaba su tocado de cestería tipo a, al interior del fardo funerario (Angeles: 2005). En Huaca Pucllana, la tumba de un personaje de elite asociado a finos tejidos de tapiz de estilo Wari poseía entre sus pertenencias un tocado de cestería tipo a, como los de Huaca Malena (Ccencho 2013: 110- 111). En Ancón, Reiss y Stubel (Op. Cit.Plate 21), grafican cabezas de fardos funerarios portando tocados de cestería asociados a penachos similares a los de Huaca Malena de tipo a, b y c; estas tumbas corresponden a fines del periodo Horizonte Medio.

Un grupo menor de tocados de cestería tiene decoración estructural calada con diseños en disposición diagonal o ajedrezada, estos son de menor altura que los tocados altos alcanzando una altura de 13 centímetros (Figura 5). Un ejemplar de similares características ha sido reportado en el sitio de Huaca Huallamarca o Pan de Azúcar del valle del Rímac

Algunos tocados de cestería de Huaca Malena presentan otras asociaciones como soguillas de pelo de animal o huaracas u hondas de fibra vegetal. En un caso, el tocado de cestería se halló asociado a una red de fibra vegetal pintada de color celeste, naranja y natural.

Figura 4C. Tocado de cestería plegado, elaborado mediante la técnica de sarga, asociado a dos penachos de plumas de papagayo con estructura de fibra vegetal. Huaca Malena, plataforma A. superficie. Periodo Horizonte Medio Época 2 B-3. Código 194-2012, medidas 27 × 10.5 cm. Foto Rommel Angeles

Figura 5. Fragmento de tocado de cestería, calado. 30 x 13 cm Huaca Malena, plataforma C. superficie. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles

2.- Penacho de plumas

Se trata de una estructura conformada por plumas de aves atadas por el raquis a una trenza plana elaborada con filamentos de fibra vegetal de agave (*Furcroya andina*), la misma que ha sido asegurada mediante hilos de algodón o de fibra de camélido generalmente de color natural. Tienen la forma de un abanico, sin embargo han sido halladas como adorno de cabeza asociada a los hombres. Las plumas cuando son largas son sujetadas adicionalmente por un hilo de fibra de algodón. Las plumas pertenecen a diversos tipos de aves tanto de la costa como de la selva amazónica. Hay penachos con plumas procedentes del ala del ave y también penachos con plumas del pecho del ave. Cuando se utilizan plumas del ala generalmente se trata de guacamayo, también utilizan plumas de flamenco, garza. En algunos casos las plumas son teñidas y en otros usan dos tipos de plumas de diferentes aves en un mismo penacho. Los penachos varían en su tamaño, los hay grandes y pequeños, los pequeños en un caso lo hemos hallado asociado a un fardo de un infante. Los penachos parecen distinguirse de acuerdo al estatus del poseedor, el Hallazgo 4 consistente en un fardo Wari de elite perteneciente a un adulto, lamentablemente disturbado, incluía un tapiz wari, lacrimales de plata, un tocado de cestería y dos penachos grandes de plumas, uno de ellos con plumas de flamenco (Pozzi Escot y Angeles: 99; King: 2012 fig. 15 pp 27). En otros casos los penachos son de menor tamaño, como en el caso de los fardos previamente descritos. Hay penachos de plumas de garza, loro y probablemente otras aves costeras.

El uso de plumas indica en el caso de ser procedentes de la Amazonía, fuertes vínculos de contacto con esa región y su uso estaría generalizado ya que también se han hallado en Huaca Malena, uncus o túnicas de algodón con plumas de papagayo. La forma de elaborar los penachos de pluma al parecer no varían incluso en la época Inca, en el cementerio de Puruchuco Huaquerones, una momia inca incluía entre sus objetos de prestigio un penacho de plumas con trenza plana.

Por el momento podemos segregar al menos tres tipos de penachos de plumas:

a.- Plumas atadas a una estructura de fibra vegetal (Agave) en trenza plana con hilo de algodón por la parte media de las plumas para darle mayor estabilidad. Los tamaños varían desde 30 centímetros a 10 centímetros, pudiendo estar definido por la asociación a un adulto o a un niño (Figura 6 A).

b.- Plumas atadas con hilos de fibra vegetal a un pequeño vástago. Son generalmente pequeños (Figura 6 B).

c.- Plumas atadas y enrolladas con hilos de fibra de camélido (Pozzi-Escot y Angeles 2011: 97)

Heidi King ilustra dos penachos de plumas (Op. Cit.; 182, 183) de papagayo, una de ellas de la región de Nasca y otra de la colección del Museo de Historia Natural de New York, estas tienen gran parecido a los penachos de Huaca Malena. Un fardo funerario del Horizonte Medio recuperado por Frederic Engel (1984)en el valle de Chilca a 40 kilómetros al norte del valle de Asia, incluye un penacho de plumas de guacamayo similar al tipo a de Huaca Malena, una cinta de tapiz ranurado y una túnica de similares características a las descritas para Huaca Malena.

Figura 6A. Penacho de plumas de papagayo de color naranja y plumas de ave de color marrón no identificadas sujetadas a estructura de fibra vegetal en trenza plana y amarrado con hilos de fibra de algodón. 25 x 26 cm. RN 159470. Huaca Malena, plataforma A. capa A. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles

3.- Banda de tapiz con apéndice, estilo Wari-Pachacamac

Este tipo de elementos constituyen ejemplos muy significativos de la textilería de Huaca Malena y corresponden a bandas elaboradas en tapiz excéntrico o ranurado con urdimbres de algodón y trama en fibra de camélido. Se trata de un ejemplar vinculado a una serie de bandas con similares características reportadas por primera vez en Huaca Malena, por ello se les denomina Wari provincial. Tienen un largo de aproximadamente 50 centímetros y una altura de hasta 10 centímetros, en ambos extremos de la urdimbre presentan apéndices rectangulares con diseños ajedrezados policromos. Bandas de este tipo probablemente eran usadas como tocado sobre una vincha de cestería.

A nivel estructural podemos describirlas de la siguiente manera, tomando como referencia la banda de la figura 7 A:

> Se trata de fajas o bandas cortas y policromas, con dos apéndices colocados a los lados en el orillo de urdimbre, manufacturadas con hilos de urdimbre de algodón (12 u x cm2) y con tramas de lana (18 t x cm2) colores guinda, rosado, amarillo ocre, celeste morado, verde, azul, marrón naranja.

El urdido ha sido continuo. El tejido ha sido realizado en técnica de tapiz encontrándose las variantes de excéntrico, para la realización de motivos circulares como ojos y apéndices de los personajes y el dentado en el cambio de color y el delineado para delimitar la figura.

Figura 6B. Pequeño penacho de plumas de color amarillo, sujetadas a vástago mediante soguillas e hilos de fibra vegetal 14 x 11 cm. Código 358-2013. Huaca Malena, plataforma A. capa A. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles

La realización del tejido se inició de la parte media de las urdimbres, mientras que las urd. de los lados eran dejados sin tejer para luego en estas mismas tejer una tela llana que luego serían dobladas para servir de base al ribeteado.

El tejido ha tenido un revés y un derecho aunque no se aprecia en toda la faja ya que tiene igual acabado, solo se aprecia en los extremos ya que tiene terminaciones en tejido llano 1 x 1 con trama de algodón los cuales han sido doblados. Hacia el otro lado para luego cubrirlo con el sesgo o ribeteado de color rojo, esto parece ser hecho en los 4 lados del apéndice, pero la cara donde son escondidas, los dobleces presentan el zurcido más disimulado.

Una banda ha sido cortada en dos y cosida uniendo ambas partes y estuvo colocada como ofrenda en la parte exterior de un fardo funerario disturbado, esta presenta el diseño de un felino desestructurado y contrapuesto sobre fondo rojo (Figura 7 B).

Figura 7A. Banda con apéndice, elaborada en tapiz excéntrico, 60 x 9 cm. RN 206263. Estilo Wari Pachacamac. Huaca Malena, plataforma A. capa A. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles.

Figura 7B. Banda con apéndice, elaborada en tapiz excéntrico, la banda ha sido hallada cortada y cosida en dos, 32 x 19 cm. RN 273917. Estilo Wari Pachacamac. Huaca Malena, plataforma A. capa A. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles.

Todas estas bandas se caracterizan por poseer un fondo rojo sobre el cual se ilustran diseños contrapuestos. Los temas representados en este tipo de bandas son graficados en la figura 7 C:

- Personaje de perfil con tocado, portando báculo, con alas y cola, lleva tocado y mira hacia arriba, presenta las piernas semiflexionadas. El personaje presenta el ojo partido y presenta un lagrimal. Se relaciona fuertemente con el estilo Wari.
- El personaje de perfil descrito anteriormente aparece desestructurado en partes destacando imágenes del rostro, el tocado, el ojo con el lagrimal y el ala.
- Diseños geométricos consistentes en cruces escalonadas, rombos y serpientes estilizadas enmarcados en paneles.
- Diseño estilizado desestructurado probablemente representando a un felino de perfil.
- Ave humanizada de perfil portando cabeza trofeo: Grifo de Pachacamac, acompañada de un personaje en posición frontal con un elaborado tocado y chacchando coca (Figura 7 A).

Estas finas bandas, presentan iconografía relacionada al estilo Wari Pachacamac. Si bien se conocen pocos ejemplares de este tipo de bandas, podría tratarse de un tipo dentro

Figura 7C. Principales diseños representados en las bandas con apéndice de Huaca Malena y que corresponderían al estilo Wari Pachacamac. Dibujo: Rommel Angeles.

del corpus conocido como Wari Provincial, aunque algunos investigadores lo puedan considerar dentro del estilo Moche Wari por el uso del fondo rojo, en realidad los diseños son netamente Wari. Se ha observado sin embargo que algunas de estas bandas son elaboradas en tapiz ranurado pero los diseños son similares.

Si bien estas bandas hasta la fecha no han sido halladas en contexto cerrado en Huaca Malena, consideramos que eran colocadas en la cabeza sobre algún tipo de soporte y asociadas a personajes masculinos, efectivamente una tumba procedente del valle medio de Asia perteneciente a un adulto de avanzada edad incluía como ofrenda una vincha de este tipo pero su preservación no era la más óptima. La colección del museo incluye 12 de este tipo de bandas.

Existen algunas variantes de este tipo de bandas, contamos con un ejemplar que no posee los apéndices a los extremos y otra que es más delgada y de 60 cms. sin embargo los diseños son similares a las previamente descritas.

Debido a la poca frecuencia de este tipo de bandas, consideramos que era de la gente de elite enterrada en Huaca Malena, la misma que ostentaba la ideología Wari e incluso relacionada a Pachacamac. Por su parte, Susan Bergh publica una banda de dicho estilo (Bergh 2013 :274 fig. 31)

4.- Penachos de pelo de zorro.-

Se trata de una estructura compuesta de un pequeño vástago de madera al cual va amarrada un segmento de piel de la cola de un zorro. Existen tres variantes reconocidas:

a.- Cola de zorro con o sin vástago de madera y amarras de fibra de algodón o de camélido en la base (Figura 8 A).

b.- Cola de zorro con tejido anillado de fibra de camélido a la aguja formando la base que sujeta al penacho (Figura 8 B)

c.- Piel de zorro atada a un pequeño vástago de madera con hilos policromos de fibra de camélido (Figura 8 C)

Las amarras son con hilos de fibra de camélido de color rojo o se hace un. En un caso el vástago ha sido envuelto con hilos de fibra de camélido de varios colores. Generalmente son pequeños, tienen una altura máxima de 10 a 14 cm. Tampoco tenemos por el momento una asociación directa a personajes masculinos, sin embargo en la mitología andina el zorro es un animal vinculado a la noche y en los dibujos del cronista Guaman Poma de Ayala se observa a un niño que porta en la cabeza una piel de zorro. El zorro habita en la actualidad en las lomas de Asia así como en la sierra cercana al valle de Asia.

Figura 8A. Penacho de cola de zorro con vástago de madera y amarras de fibra de camélido. 25 X 10 cm RN 273246 Huaca Malena, plataforma A. capa A. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles.

5.- Bandas en doble tela

Las bandas de doble tela están elaboradas por dos grupos de urdimbres y dos grupos de tramas, con el objetivo de que en la misma pieza existan dos telas en colores opuestos, en el proceso de entramado ambas se intercalan (D´Harcourt 2008). Estas bandas poseen dos colores rojo y crema, el rojo es en fibra de camélido y el crema en algodón, presentan decoración mediante tramas suplementarias a modo de bordado en fibra de camélido policroma. Los diseños corresponden a ganchos a manera de olas o cabezas geométricas de animal o diseños escalonados en general. De las bandas halladas al menos una posee terminación con dos cordoncillos trenzados de fibra de camélido. Las bandas de doble tela son largas si bien no contamos con piezas completas, estas

Figura 8B. Penacho de cola de zorro cuya base presenta tejido en técnica de anillado de fibra de camélido en colores negro, verde y amarillo. 18.5 x 6.5 cm Inventario 998-2017. Huaca Malena, plataforma C. capa s. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles.

Figura 8C. Penacho de piel de zorro envuelto a caña enrollada de hilos de colores de fibra de camélido y sujetada con hilo de fibra vegetal. 18 x 3 cm RN 163194 Huaca Malena, plataforma A. capa A. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles

alcanzan los 150 cm de largo y un ancho de 2 centímetros aproximadamente (Figura 9 A y 9 B). Los diseños de las bandas en doble tela son parecidos a las de las cintas de tapiz, en un caso se ha hallado una banda de doble tela en proceso de elaboración por lo cual consideramos que su confección es local. La técnica de doble tela de colores opuestos es relativamente común en Huaca Malena donde aparece en paños rectangulares con iconografía compleja donde destaca wel diseño de serpientes de dos cabezas, dispuestas en forma de "s" (Angeles – Pozzi Escot 2004), así mismo se han hallado doble telas en proceso de elaboración.

6.- Peluca Wari

Las espectaculares pelucas wari son consideradas como un símbolo entre los tocados Wari por su rareza y excepcionalidad. En Huaca Malena han sido halladas varias de ellas en contexto primario y secundario. Si bien Julio C. Tello halló una de estas asociado a la cabeza de un fardo funerario de adulto masculino, nosotros hemos hallado la parte superior de un fardo funerario disturbado asociado a una de estas pelucas, junto a tela fina de algodón en cara de urdimbre de 2 x 1 y un fragmento de cerámica asociado al tope del fardo funerario, muy característico entre los fardos funerarios de Huaca Malena. Las pelucas wari son tocados tubulares elaborados mediante la técnica del anudado y afelpado o simili velour en la parte frontal de la pieza. La estructura es de fibra de camélido con la que forman los nudos y en cada uno de ellos se colocan mechones de pelo teñido de color rojo (Figura 10 A y 10 B), probablemente se trata de pelo de animal aunque no se descarta que en algunos casos sea cabello humano. Los mechones son ordenados mediante una pequeña trenza en la base y luego se colocan sueltos dando la apariencia de una peluca. En la parte frontal lleva un cerquillo de pelo del mismo color y un panel rectangular elaborado en técnica simili con diseños geométricos.

Figura 9A. Detalle de banda decorativa en técnica doble tela en algodón y fibra de camélido con tramas suplementarias de fibra de camélido en colores policromos. 150 x 2 cm. Inventario 295-2013. Huaca Malena, plataforma A. capa A. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles.

Figura 9B. Fragmento de banda decorativa en técnica doble tela en algodón y fibra de camélido con tramas suplementarias de fibra de camélido en colores policromos y cordoncillo trenzado de fibra de camélido. 52 x 2 cm. Inventario 308-2013 Huaca Malena, plataforma A. capa A. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles.

La figura 10 C muestra un ejemplar con diseño de una cruz sobre fondo beige. La sección delantera corresponde a un panel elaborado en técnica simili velour en fibra de camélido en color beige de fondo con diseño geométrico en forma de cruz con apéndices laterales hacia arriba en color rojo y verde. En el lado inferior posee un panel en color rojo a cada lado. La parte superior presenta un flequillo de pelo de camélido en color rojo. Esta sección mide 190mm de ancho y 130 mm de altura. La segunda sección corresponde al resto del tocado, es pelo de camélido de color rojo, esta tiene una base estructural de fibra de camélido anudado con una gran cantidad de mechones de pelo de camélido en color rojo y pardo. Cada mechón mide 230 mm de alto, la parte inferior es trenzada en "s" con una altura entre 70 a 110 mm culminando en amarras y luego el pelo es suelto.

El Museo cuenta con tres ejemplares completos de este tipo de tocados, uno de ellos se halló asociado a la parte superior de un fardo funerario. Las excavaciones efectuadas en 1925 por Julio C. Tello identifican un fardo funerario de adulto masculino que portaba una de estas pelucas (Tello: 2000). Si bien estas han sido halladas en otros lugares de la costa como Chilca, Nasca (Rowe op. Cit.) y recientemente en Catalina Huanca (valle del Rímac), se trata de uno de los elementos más significativos y característicos de la sociedad Wari. A nivel tecnológico podemos relacionarlas con los gorros de cuatro puntas Wari (Frame Op. Cit.)

7.- Gorro cónico

La colección incluye dos gorros cónicos elaborados en fibra de camélido de color natural beige y marrón en técnica de anillado con decoración mediante bandas horizontales.

Figura 10A y B. Vista frontal y vista posterior de un fragmento de peluca Wari correspondiente a la sección del pelo teñido de rojo, técnica de anudado en hilos de fibra de camélido de color beige natural y trenzado. Inventario 309-2013. Huaca Malena, plataforma A. capa A. Periodo Horizonte Medio Época 2 B-3. Código 309-2013 , medidas 19 × 17 cm. Foto Rommel Angeles.

Uno de los gorros presenta un tirante del mismo material destinado a asegurar el gorro a la cabeza del individuo y de la parte posterior penden mechones de pelo de camélido de color marrón (Pozzi Escot y Angeles 2011: 104), el otro gorro presenta bordes escalonados, tomando en consideración que se trata de piezas únicas, estas podrían proceder de la región de la sierra tomando en cuenta que en otros sitios de la costa central no hay ejemplares similares.

Cabe indicar que en la sierra de Lima en la actualidad aún se practica la técnica del anillado de fibra vegetal para elaborar bolsas policromas y esta tradición es desconocida en la costa.

8.- Soguilla forrada en pelo de animal

Del mismo modo se han hallado en asociación a fardos funerarios de elite, largas soguillas elaboradas de hilos de fibra de camélido los cuales han sido envueltos por delgadas tiras de piel con pelo de animal (no identificado) de color natural que recuerda la forma de la cola de un animal o una larga serpiente. Estas vistosas soguillas se colocan en la cabeza del individuo mediante varias vueltas sobre el tocado de cestería (Pozzi Escot y Angeles: 2011 fig. 9) y en algunos casos se utilizan como amarras de algunos fardos funerarios. La estructura de la soguilla generalmente es de pelo de camélido sin teñir de color negro o beige y el pelo del animal varía entre el negro y el beige. Generalmente culmina en un fleco de hilos de fibra de camélido de color rojo o beige en algunos casos con una borla (Figura 11 A). Las soguillas son bastante largas alcanzando los 6 metros de largo a más y un ancho de 1 cm a 1.5 cm.

Figura 10C.Tocado o peluca Wari, anudado y simili velour, trenzado. Fibra de camélido RN 253795. Huaca Malena, plataforma A. capa A. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles.

Figura 11A. Detalle de soguilla trenzada de fibra de camélido de color beige y forrado con delgadas tiras de piel con pelo de animal en dos tonalidades. Huaca Malena, plataforma A. capa A. Periodo Horizonte Medio Época 2 B-3. Código 152-2011, medidas 676 × 1 cm. Foto Rommel Angeles.

Figura 11B. Soguilla de fibra de camélido forrada o envuelta con filamentos de piel con pelo de animal de color marrón oscuro y simili velour de color beige. 518 x 1 cm Inventario 967-2017 Huaca Malena, plataforma A. capa A. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles.

Figura 11C (*abajo*). Detalle de fragmentos de una soguilla en fibra de animal elaborada mediante técnica de simili velour. Teñido. Huaca Malena, plataforma A. capa A. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles.

Figura 11D. Fragmento de soguilla de fibra de camélido a la cual se ha enrollado piel con pelo de animal y además tejido de algodón con plumas de color naranja. Huaca Malena, plataforma C. capa S. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles.

En algunos casos combinan la soguilla de pelo con la técnica de simili velour (Figura 11 B). D´Harcourt (2008: Pl LXVIII. 3) publica un detalle de estas soguillas procedente de la costa central del Perú.

Dentro de ese grupo de soguillas existe otro tipo de soguillas con pelo de animal teñido con apariencia de simili velour, su uso es más restringido ya que la colección es menor que la de la soguilla de pelo de animal de color natural. Se trata de soguillas más finas y delgadas de color rojo con intersecciones de color amarillo y negro o mediante la combinación de colores rojo, verde, azul, beige y marrón (Figura 11 C). Algunas de estas soguillas del mismo modo alcanzan los 550 cm de largo y un grosor de 1 cm. Finalmente también se ha hallado dos fragmentos de soguillas forradas que combinan pelo de animal con plumas de guacamayo (Figura 11 D).

9.- Tocado con cordoncillos de fibra de camélido

Este tipo de tocado consiste en una cinta de tela de algodón en cuyos extremos presenta cordoncillos decorados en técnica de tapiz y de la cual penden una serie de cordoncillos de fibra de camélido de color rojo agrupados y de diferente tamaño con torsión final en Z(Figura 12 A)., una variante de este tipo de tocados es que penden una serie de tejidos llanos de fibra de camélido con las urdimbres sueltas formando los cordoncillos Otra variante es un cordón principal trenzado, de fibra de camélido al cual se introducen hilos de color rojo o negro a manera de colgantes (Figura 12 B). Este tipo de tocados parece ser muy frecuente en el Horizonte Medio 2B y 3 y está representado en la cerámica Wari en especial de la costa nor central donde se observan personajes que llevan cabello que culminan en cabezas de serpientes (Figuras 12 C), este tipo de vasijas son frecuentes entre Chancay, Huaura, Supe y Huarmey.

10.- Bandas de tapiz ranurado con decoración en paneles

Este tipo de bandas eran colocadas directamente sobre la cabeza de los individuos y generalmente se encuentran pocos

Figura 12A. Tocado masculino incompleto, compuesto por una banda de algodón que culmina en flecos decorados en tapiz ranurado del cual penden hilos de fibra de camélido de color rojo. 74 x 85 cm. Inventario 07-2011. Huaca Malena, plataforma C. capa S. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles.

Figura 12B. Detalle de otro tocado de hilos colgantes donde la cuerda superior es de fibra de camélido donde se insertan los hilos de color rojo. Huaca Malena, plataforma C. capa S. Periodo Horizonte Medio Época 2 B-3. Código 480-2014, medidas 60 × 14 cm. Foto Rommel Angeles.

Figura 12C. Vista posterior de una botella cuello efigie elaborado en molde donde se observa un tocado a manera de cabello que culmina en cabezas de serpientes. La parte delantera de la vasija presenta el rostro del personaje y en el pecho una representación de un arco aserrado que culminan en cabezas de serpientes. Periodo Horizonte Medio, época 2B – 3. Procedencia: Valle de Huaura, costa nor central del Perú. Colección privada de Miguel Angel Silva Esquen.

ejemplos la mayoría de ellos carbonizados, salvo algunas excepciones. Se trata de bandas elaboradas en tapiz ranurado con urdimbre de algodón y tramas de fibra de camélido policroma. En uno de los bordes de trama presentan agrupaciones de tramas flotantes y en los paneles que no presentan diseños específicos en algunos casos se observan urdimbres flotantes. Los diseños de estas bandas son bastante estilizados pondremos como ejemplo una banda incompleta con paneles que presentan diseños de aves contrapuestas y de peces (Figura 13). Dentro de dicho grupo podemos incluir unas bandas de tapiz ranurado que posee diseños de serpientes geometrizadas o de olas a manera de ganchos con el borde de trama con tramas agrupadas dispuestas en forma de media luna, solo poseemos dos ejemplares.

Figura 13. Fragmentos pertenecientes a una banda cefálica elaborada en tapiz ranurado con tramas agrupadas flotantes. Decoración en paneles con urdimbres flotantes en los paneles intercalados que no presentan decoración. Medidas: 136 x 5 cm Inventario: 291-2013. Huaca Malena, plataforma C. capa A. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles.

11.- Cinta de tapiz trama de fibra de camélido y urdimbre de algodón

Se asocian a personajes masculinos, están elaboradas en tapiz ranurado con urdimbres de algodón y trama de fibra de camélido policroma. Generalmente poseen un fondo rojo sobre el cual se distribuyen diseños repetitivos o muy variados de serpientes entrelazadas, aves, rombos y diseños geométricos en general (Figura 14 A). Poseen un largo de 250 cms y un ancho de 1 a 1.5 cm, algunos ejemplares poseen en el extremo de la urdimbre dos cordoncillos elaborados en técnica de anillado que culminan en dos borlas. Este tipo de cintas la hemos hallado asociadas a personajes adultos y niños generalmente de sexo masculino y su iconografía es bastante local (Figura 14 B), incluso se han hallado al menos tres ejemplares en proceso de elaboración En algunos casos el tapiz está elaborado con tramas y urdimbres de fibra de camélido y usan el brocado para formar otros diseños pequeños (Figura 14 C). Consideramos que estas cintas datan de fines del Horizonte Medio pero se siguen utilizando hasta los inicios del Intermedio Tardío, principalmente por la iconografía que presentan. Una cinta de similares características fue publicada por Max Uhle dentro del material denominado Epigonal, es decir lo que hoy denominamos fines del Horizonte Medio.

Figura 14A. Iconografía registrada en una de las cintas de tapiz de Huaca Malena. Periodo fines del Horizonte Medio e inicios del Intermedio Tardío. Dibujo Rommel Angeles.

Figura 14B. Cinta de tapiz ranurado urdimbres de algodón y trama de fibra de camélido policromo. Medidas: 245 x 1.5 cm Inventario 316-2013. Huaca Malena, plataforma C. capa A. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles.

Figura 14C. Cinta de tapiz y brocado, urdimbres de fibra de camélido de color marrón natural y tramas de fibra de camélido policromas. Medidas 105 x 2 cm. Inventario 79-2011. Huaca Malena, plataforma A. capa A. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles.

Figura 15A. Vista frontal de tocado de cestería y decorado con paño de algodón recamado de plumas de papagayo y probablemente pato. Medidas 40 x 24 cm. Inventario T 43 PAHM. Huaca Malena, plataforma D. capa A. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles.

Figura 15B. Vista posterior del mismo tocado. Huaca Malena, plataforma D. capa A. Periodo Horizonte Medio Época 2 B-3. Foto Rommel Angeles.

12.- Tocado de cestería con tejido plumario

El Museo conserva un ejemplar correspondiente a un complejo tocado compuesto por una corona tubular de cestería de junco al cual se ha cosido una tela de algodón recamada de plumas, este mide 40 cm de altura y 24 cm de ancho, se encuentra plegado; la parte frontal presenta decoración ajedrezada de plumas de color naranja (probablemente papagayo), amarillo (probablemente papagayo) y negro (ave no identificada), hacia la parte superior las plumas son de color naranja, dichas plumas han sido recortadas para darle la forma deseada (Figura 15 A), en la parte posterior el paño presenta plumas de color negro en la parte superior, anaranjadas en la parte media y azules en el paño de algodón (Figura 15 B). Este paño ha sido cosido a la estructura de fibra vegetal mediante puntadas simples con hilos de algodón; a ambos lados lleva unos tirantes compuestos por un tejido de algodón con pequeñas plumas cosidas a este, las plumas son anaranjadas y azules. Restos de otros dos tirantes similares con plumas de color naranja y celeste nos indican que este tipo de tocado era sumamente exclusivo pero poco común. Se distingue de otros tocados asignados al estilo Chimú (King: 2012: 160-165) o a la costa central, debido a que la estructura es diferente (Mendoza 2004).

La vestimenta femenina

Al igual que en el caso de los hombres, los fardos funerarios femeninos poseen algunas características que las identifican como tales (Angeles – Pozzi Escot 2004), en algunas ocasiones colocan a la altura de la cabeza una bolsa de fibra de camélido policroma elaborada en urdimbres complementarias, llevan una faja de telar elaborada en fibra de camélido a la altura de la cintura, material referido al tejido (conos de algodón, husos con piruros) y un vestido a manera de manta que envuelve el paquete funerario, con detalle se ha descrito un contexto funerario perteneciente a una mujer en un artículo reciente (Frame y Angeles:2014), en esta ocasión presentamos un fardo funerario de la colección con los respectivos elementos asociados al exterior (Figura 16).

Figura 16. Fardo funerario femenino indicando sus principales elementos exteriores. Huaca Malena, Plataforma A, Capa B. Periodo fines del Horizonte Medio Época 3. Foto Rommel Angeles.

Tocados femeninos

Al parecer la mujer poseía una menor variedad de tocados, solo hemos identificado cinco tipos: una correspondiente al estilo Wari Provincial, una cinta en tapiz, brocado y anillado sumamente fina, una serie de vinchas en trama tubular de doble tejido elaborada en una sola pieza que culmina en flecos con borlas, algunas vinchas en técnica de cara de urdimbre y el tocado de red. Al respecto, pasamos a describirlos.

1.- Cinta de tapiz estilo Wari provincial

Esta cinta fue hallada en asociación a un fardo funerario femenino ubicado en la plataforma A de Huaca Malena (Figura 2) , el fardo presentaba forma envoltura de paño de algodón sujetada por soguillas de fibra vegetal y en el cuello llevaba colgada la cinta, originalmente debió estar ubicada en la cabeza, también poseía un cono de algodón, vestía un paño de algodón muy fino de color crema. A la altura de la cintura llevaba una faja de telar en fibra de camélido. El fardo no ha sido abierto. A su lado se halló un fardo funerario de adulto masculino que llevaba un tocado de cestería con penacho de plumas y un uncu de plumas de color naranja. La cinta mide 65 cm de largo y 2 cm de ancho, está confeccionada con urdimbres de algodón y tramas de fibra de camélido mediante la técnica de tapiz ranurado y excéntrico (Figura 17 A); estilísticamente corresponde al periodo Horizonte Medio Epoca 2 B y 3 según la propuesta de Dorothy Menzel (1969). La cinta venía asociada a una fina cinta en fibra de camélido en técnica de cara de urdimbre con urdimbres complementarias y tres cuentas de Spondylus. El hallazgo de Spondylus en Huaca Malena es poco común por lo que debio de ser una ofrenda muy valiosa. La cinta posee 24 urdimbres sobre la cual se cruzan las tramas de color rojo, rosado, celeste, morado, lila, amarillo ocre y marrón. Presenta una sucesión de diseños geométricos de estilo Wari provincial a manera de tocapus donde destaca una especie

Figura 17A. Cinta de tapiz ranurado y excéntrico, urdimbres de algodón y trama de fibra de camélido, asociada a fardo funerario femenino. Medidas: 65 x 2 cm. Estilo Wari Pachacamac. Huaca Malena, Plataforma A, Tumba 1, Unidad I Bb, Capa B Nivel 3. Periodo Horizonte Medio Época 2 B - 3. Foto Rommel Angeles.

Figura 17B. Detalle de la cinta de la figura 17 A.

de batracio, el diseño del ojo partido y el ojo con lagrimal en forma de ave, muy frecuente en la cerámica del estilo Wari Pachacamac (Figura 17 B).

2.- Cinta de tapiz, brocado y anillado

Fue hallada en una tumba disturbada perteneciente a una mujer, acompañado de una bolsa en fibra de camélido con urdimbres complementarias y una honda policroma, la tumba se hallaba en la plataforma A de Huaca Malena. La cinta es bastante rara en el contexto de otros materiales de Huaca Malena. Se trata de dos cintas asociadas con la misma técnica estructural y decorativa con diseños solo en una cara del tejido (Figura 18 A). Presenta diseños geométricos y de cabezas entrecruzadas dispuestas en paneles. El color de fondo de la cinta es marrón (el color de los bordes y de los intervalos sin diseño). Los diseños son de color ocre amarillo, verde oscuro y claro, azul oscuro y claro, morado en dos tonos, blanco y rojo.

Una de las cintas presenta al borde inicial ó cabecera una franjita de colores en punto anillado el cual se proyecta en ambos extremos formando cordoncillos, los cuales se encuentran atando o sujetando mediante un nudo simple a la otra cinta. Los diseños de ambas cintas están distribuidos en paneles de 5.5 a 6 centímetros de largo por 4.2 centímetros de ancho, dejando libres una franja a cada lado de la trama de 3 milímetros de ancho de color marrón, cada panel tiene un intervalo de 14 milímetros en pelo de camélido color marrón. Los paneles presentan la siguiente decoración: Líneas zigzagueantes y paralelas de pequeñas cabezas geometrizadas y entrecruzadas, cada línea tiene un color distinto, las cabecitas presentan apéndices a manera de orejas a cada lado y todas tienen ojos. Tanto los diseños como los ojos están rebordeados en hilo de color marrón claro o azul así como puntos de color azul dentro de cada línea de diseño. Los colores usados en este diseño son: ocre en tres tonos, blanco, rojo, azul en dos tonos y verde en dos tonos. El número de líneas zigzagueantes es 9.

El segundo panel consta de 2 bandas de 4 estrellas cada una, paralelas y separadas por dos líneas: 2 al centro y 2 a cada costado del borde de trama. El diseño básico es 4 rombos concéntricos en cuyo contorno exterior tienen 8 radiaciones como si fuese una estrella, las cuatro estrellas están unidas en la parte central por una línea, en los espacios vacíos se presentan dos líneas paralelas al diseño que forman un vértice cada una como si fuesen parte de otros rumbos concéntricos (Figura 18 B).

A nivel estructural las cintas han sido elaboradas con urdimbres de algodón y trama en fibra de camélido. Las cintas a nivel decorativo fueron elaboradas en reps de trama (panel 1), brocado y tela llana (1x1) los paneles 2,3 y 4 y los intervalos en tapiz. La cabecera y los cordoncillos en anillado y

Figura 18A. Dos cintas asociadas a tumba disturbada de mujer. Tapiz, brocado y anillado. Medida aproximada 44 x 5 cm. Estilo Malena. Huaca Malena, Plataforma A, Tumba disturbada, Unidad I C.a. , Capa B Nivel 1. Fines del Horizonte Medio Época 3. Foto Rommel Angeles.

Figura 18B. Detalle de la iconografía de las cintas de la figura 18 A.

el remate final en punto festón. Presenta 26 hilos de trama por cm2 y 21 hilos de urdimbre por cm2. Los hilos presentan en algunos casos torsión en Z y retorsión en S y en otros casos solo retorsión en S. la urdimbre es torsión en S y retorsión en Z. La iconografía de estas cintas está presente en Huaca Malena en otros textiles tales como en uncus de fibra de camélido y en algunas bolsas elaboradas en fibra de camélido en urdimbres complementarias.

3.- Vincha de fibra de camélido en trama tubular de doble cara con borlas

Estas son elaboradas con pelo de camélido en técnica de doble tela de doble cara con trama tubular, la cual está unida por costura vertical y presenta dos caras. La cara externa es de color roja al centro lleva una banda con motivos geométricos de círculos consecutivos en disposición vertical a manera de un "8", diseños escalonados, diseños de animales estilizados, para ello utilizan los colores celeste, amarillo, rosado, marrón o verde sobre fondo rojo. La cara interna es roja pero presenta una banda central barras horizontales y verticales formadas por el cambio de los hilos que conforman los motivos en la cara externa. Las vinchas culminan en borlas de trencillas formadas por el largo de los hilos de urdimbre; por lo general, la torsión de los hilos es en «s» (de derecha a izquierda).

Con anterioridad se ha descrito a detalle esta técnica (Frame y Angeles: 2014). Cabe precisar que hay algunas variantes tanto en el número de flecos como en el ancho de la vincha tal como puede apreciarse en la figura 19 A (Figura 19 A), algunas vinchas son bastante delgadas y consideramos que deben de pertenecer a niñas. Estas vinchas corresponden a una producción local, y forman parte del estilo Malena, algunas de esas vinchas han sido halladas en proceso de elaboración (Figura 19 B) y por los diseños y colores se relacionan fuertemente a bolsas y vestidos femeninos elaborados en fibra de camélido en cara de urdimbre de urdimbres complementarias.

4.- Vincha de fibra de camélido ancha en trama tubular de doble cara

A diferencia de las anteriores, estas vinchas son más anchas y con una decoración externa bastante compleja; también son elaboradas con pelo de camélido en técnica de doble tela de doble cara con trama tubular, la cual está unida por costura vertical y presenta dos caras. La cara externa es de color roja con diseños de serpientes aserradas y entrelazadas con diseños de aves y otros diseños geométricos, los diseños son delineados en negro (Figura 20 A y 20 B). La cara interna es roja con una banda central barras horizontales y verticales formadas por el cambio de los hilos que conforman los motivos en la cara externa. El ejemplar de la figura 20 A fue hallado asociado a un vestido femenino completo elaborado de fibra de camélido en cara de urdimbre y con bandas decorativas con paneles en urdimbres complementarias. Consideramos que por el tipo de manufactura y calidad del tejido, este tipo de vinchas anchas, corresponde a piezas de elite.

5.- Tocados de red

Una serie de tocados elaborados de fibra vegetal (*Furcroya andina*) mediante la técnica de red y bordados a la aguja han sido hallados en Huaca Malena. Este tipo de tocados son sumamente finos y de pequeño tamaño y parecen estar asociados a mujeres, sin embargo se necesita mayores evidencias para afirmar esta propuesta. Varios de los ejemplares

Figura 19A. Tres vinchas femeninas elaboradas en fibra de camélido mediante trama tubular de doble cara y flecos que culminan en borlas. Huaca Malena, Fines del Horizonte Medio Época 3. Foto Rommel Angeles.

Figura 19B. Vincha en fibra de camélido mediante trama tubular de doble cara en proceso de elaboración, no se ha culminado de trenzar los flecos. Medidas: 35 x 3 cm Inventario 515-2015. Huaca Malena, Fines del Horizonte Medio Época 3. Foto Rommel Angeles.

poseen teñido mediante una tonalidad púrpura que probablemente la obtenían del caracol marino *Thais chocolata* o del univalvo denominado *Concholepas concholepas,* ambas especies marinas habitan en aguas frías del Océano Pacífico. Se ha observado algunas variaciones en la modalidad de ejecución de estas prendas. En algunos casos están elaborados íntegramente de fibra vegetal y en otros casos presentan decoración bordada a la aguja utilizando hilos de algodón blanco (Figura 21 A). Consideramos que este tipo de prenda es de la costa central y su elaboración probablemente fue local, un ejemplar de la colección se encuentra en proceso de elaboración (Figura 21 B), por lo que creemos que se trata de un objeto elaborado en el valle. El museo cuenta con 5 ejemplares completos y uno asociado a un cráneo femenino

Figura 20A. Vincha en fibra de camélido mediante trama tubular de doble cara. Medidas: 17.5 x 5 cm. RN 273292. Huaca Malena, plataforma A. capa A. Periodo Horizonte Medio Época 3. Foto Rommel Angeles.

hallado en superficie lamentablemente disturbado además de muchos fragmentos del mismo tipo. Este tipo de redes consideramos que pertenecen a fines del periodo Horizonte Medio, un ejemplar fue hallado recientemente en el sitio de Castillo de Huarmey asociado al periodo Horizonte Medio y fue exhibido en una muestra de los hallazgos de ese sitio en el museo de Arte de Lima. Asi mismo en la colección de Max Uhle existe algunos ejemplares procedentes de Pachacamac.

Lena Bjerregaard (2017: 157-159), ilustra algunos ejemplares completos de este tipo de piezas procedentes de Pachacamac y que forman parte de la colección del Museo Etnográfico de Berlin (2017). Asi mismo la misma autora hace un detallado análisis de estas redecillas asignándolas al periodo Intermedio Tardío (Bjerregaard 2011), consideramos que a futuro podría dilucidarse mejor su cronología y su asociación a un género determinado o a un tipo de actividad de la persona que los portaba.

Fardos funerarios de niños

Algunos fardos funerarios de infantes presentan asociaciones que indican su género, tal es el caso de un fardo funerario de un niño de pocos meses enterrado en la Plataforma A. Este llevaba un paño de algodón crema que lo envolvía el cual estaba sujeto por soguillas de fibra vegetal. A la altura del pecho llevaba atado al paquete funerario un pequeño penacho de plumas de flamenco lo que indicaría que se trata de un niño (Figura 22). La colección también incluye uncus de niños así como vestidos de niñas.

Figura 20B. Vincha en fibra de camélido mediante trama tubular de doble cara. Medidas: 18 x 2.5 cm. Huaca Malena, plataforma A. capa A. Periodo Horizonte Medio Época 3. Foto Rommel Angeles.

Figura 21A. Tocado de red para la cabeza elaborado en fibra vegetal trenzada en una sola pieza y teñida de color lila. Presenta decoración bordada a la aguja en disposición de bandas diagonales de donde salen cabezas triangulares de serpientes estilizadas geométricas. Presenta un cordoncillo estructural que sale de los lados y que sirve como amarre para sujetar en el cuello. Medidas: altura 9 cm diámetro 49 cm. RN 263678. Huaca Malena, plataforma C. capa A. Periodo Horizonte Medio Época 3. Foto Rommel Angeles.

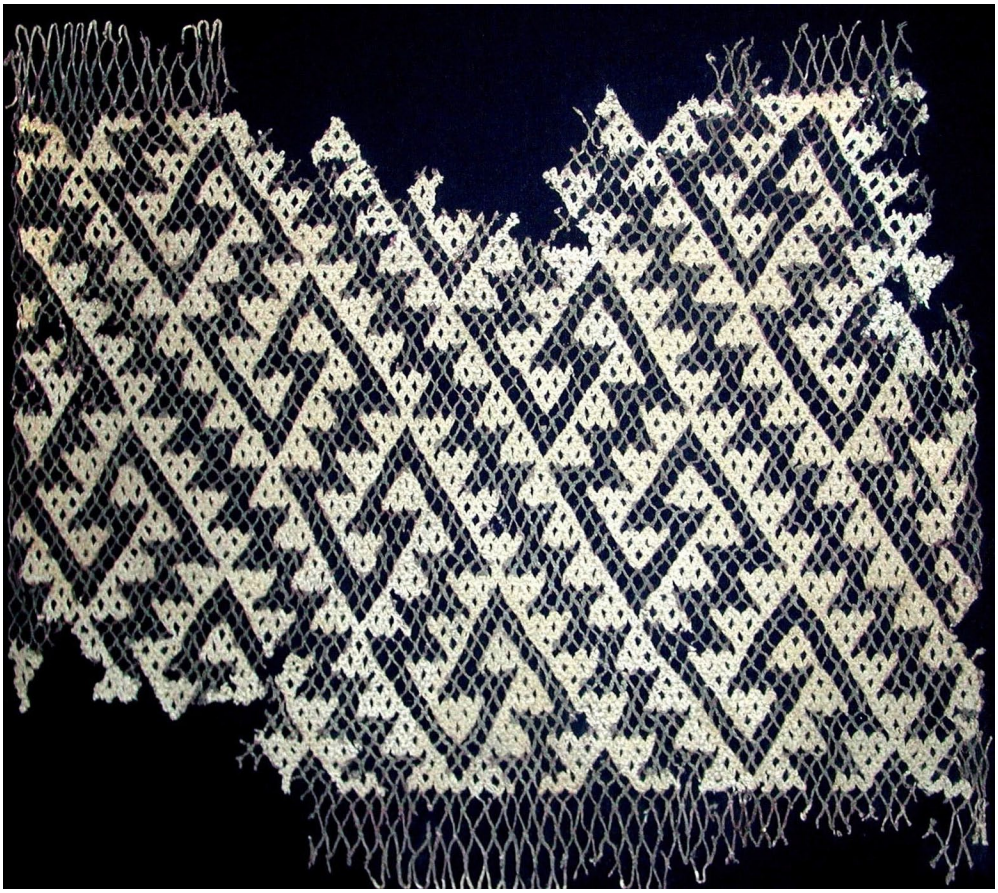

Figura 21 B. Tocado de red en proceso de elaboración. Medidas: 30 x 27 cm. Huaca Malena, plataforma A. capa A. Periodo Horizonte Medio Época 3. Foto Rommel Angeles.

Figura 22. Fardo funerario de un niño. Tela llana de algodón crema, soguillas de fibra vegetal y penacho de plumas de flamenco atado con hilo de fibra de camélido de color rojo. Huaca Malena, Plataforma A, capa B. Periodo Horizonte Medio Época 2 B - 3. Foto Rommel Angeles.

Tocados de niños

1.- Vincha en simili velour

Un pequeño ejemplar incompleto de vincha pudo pertenecer a la elite local relacionada con Wari. Esta procede de la plataforma E de Huaca Malena, en contexto disturbado. Mide 15 cm de ancho y una altura de 6 cm, fue elaborada en técnica simili velour con diseños de rombos concéntricos en colores rojo, celeste, verde, amarillo, lila y negro, en la parte inferior lleva unos cordoncillos de fibra de camélido que servían para ser sujetadas a la cabeza (Figura 23). D´Harcourt (2008, Pl LXVIII 1,2,4) publica una banda en ese estilo procedente de Nasca, pero ella no posee cordoncillo. Dicha técnica está vinculada a los gorros de cuatro puntas Wari.

2.- Banda de tapiz ranurado

Una banda de tapiz procedente de la plataforma E presenta asociación con restos de cabello fino perteneciente a un niño, por lo que consideramos que fue destinado a dicho uso, se trata de una fina banda de tapiz ranurado de 190 cm de largo con una altura entre 4 a 6 cm elaborada con urdimbres de algodón y trama de fibra de camélido (Figura 24 A); un borde de trama presenta tramas agrupadas flotantes con una delgada banda de color amarilla y en el otro borde de trama una sucesión de delgadas bandas de color negro seguida de otra de color amarillo. El diseño central ocupa el resto de la banda sobre un fondo rojo, consiste en una sucesión de paneles consecutivos escalonados donde se enmarcan diseños delineados de cabezas de peces raya contrapuestos, en colores rosado, marrón, celeste, verde y guinda (Figura 24 B). A nivel iconográfico y tecnológico esta banda se relaciona fuertemente con el estilo Moche Wari (Prummers: 2000), sin embargo este tipo de representaciones se difunden fuertemente a fines del Horizonte Medio (Desrosiers y Pulini: 1994). Cabe precisar que el uso de tramas agrupadas flotantes es un rasgo bastante presente en las colecciones de tapices de Huaca Malena del Horizonte Medio.

4.- Cráneo con tocado complejo

Una excepcional pieza recuperada de Huaca Malena corresponde a la cabeza de un fardo de niño que conservaba insitu su tocado. Corresponde a un niño de aproximadamente 8 años probablemente de la elite local y presentaba un turbante elaborado de tela abierta de algodón de color celeste y pardo que envolvía la cabeza, a este se le había envuelto una cinta de tapiz roja como la descrita para los hombres y un pequeño penacho de plumas de flamenco (Figura 25 A). Con el apoyo del artista plástico Luis Tokuda se ha hecho la

Figura 23. Vincha incompleta anudado, simili velour, fibra de camélido. Huaca Malena Plataforma D capa S. Periodo Horizonte Medio Epoca 2 B – 3. Código T 57 A HM, medidas 18 × 9 cm. Foto Rommel Angeles.

reconstrucción del rostro y aspecto del niño (Figura 25 B). Consideramos que este cráneo de niño debe corresponder a inicios del periodo Intermedio Tardío, probablemente en el siglo XI d.C.

Algunas aproximaciones

La variedad de tocados presentes en los contextos funerarios de Huaca Malena nos hablan de que el sitio fue un lugar donde se enterraban individuos con fuertes vínculos con el estado Wari pues algunos tocados aparte de ser productos muy finos de este estilo, conservan una iconografía bastante particular y probablemente sean productos importados no elaborados en el sitio. Del mismo modo este acceso estaba vinculado no solo a los hombres sino también a las mujeres y los niños. La presencia de tejidos relacionados al estilo Wari Pachacamac o reconocidos como Wari provincial es de gran importancia y por ende consideramos que su vinculación a la costa central y al santuario que comenzaba a florecer en el valle de Lurín (Kauilicke: 2002), a futuro puede aportar nuevos datos para las relaciones entre dichos valles.

Podemos trazar una distribución puntual de la distribución de algunos tipos de tocados de Huaca Malena para comenzar a entender la dinámica social de ese tiempo. Si bien los tejidos Wari juegan un rol principal, estas comunidades tenían amplia aceptación de otros estilos contemporáneos y su propio estilo local. La dinámica de contactos del valle de Asia en este periodo se amplía notablemente y sobrepasa lo local para obtener bienes suntuarios como plumas y Spondylus de regiones lejanas.

La variedad de tocados de Huaca Malena indican los elementos distintivos de fines del periodo Wari y como algunos elementos locales perviven y se mantienen hasta el Intermedio Tardío. Efectivamente, los diseños de serpientes entrelazadas en color rojo y delineado con negro se popularizan en el periodo Intermedio Tardío por lo que consideramos que un grupo de estas piezas se originan incluso en épocas más tempranas y perviven fuertemente en el periodo intermedio Tardío e incluso hasta el Imperio Inca. En Huaca Malena no tenemos material Inca ó cerámica asociada al Intermedio Tardío por lo que consideramos que la mayor parte del material data del Horizonte Medio hasta los inicios del Intermedio Tardío que en Pachacamac algunos investigadores denominan Ychma Temprano.

Figura 24A. Banda decorativa asociada a cabello de niño. Tapiz ranurado. Medidas: 260 x 5 cm. Inventario 968-2017. Huaca Malena Plataforma D capa S. Periodo Horizonte Medio Epoca 2 B – 3. Foto Rommel Angeles.

Figura 24B. Detalle de la banda decorativa de la figura 24 A.

Figura 25A. Cráneo de niño asociado a tocado in situ. Huaca Malena Plataforma A capa S. Periodo fines del Horizonte Medio e inicios del Intermedio Tardío. Foto Rommel Angeles.

Figura 25B. Reconstrucción hipotética del niño con su tocado correspondiente a la figura 25 A. Elaborado por Luis Tokuda.

Por otro lado, si comparamos los tocados de Huaca Malena con otras regiones podemos ver que hay elementos comunes que se dan durante el Horizonte Medio al menos entre Nasca y la costa central por un lado y también con la costa norte. Los tocados de Huaca Malena nos muestran sus propias particularidades y parte de la indumentaria utilizada durante el Horizonte Medio que en ocasiones solo podía identificarse en la cerámica escultórica de Wari, Conchopata o de las áreas bajo la influencia de Wari entre los siglos VIII al X aproximadamente. Un caso comparativo puede verse en las urnas procedentes de Conchopata en Ayacucho donde los personajes representados lucen diversos tipos de tocados (Figura 26); por otro lado a lo largo de la historia los tocados utilizados en el norte de Chile (Berenguer:2006) tienen sus propias particularidades formales y tecnológicas diferentes a los de Wari y producidos por sus mismas dinámicas culturales, sociales y políticas.

Cabe indicar que si bien no hemos mencionado las evidencias del intermedio Temprano para el sitio, los contextos que hemos reconocido indican un fuerte uso del algodón y ausencia casi total de la fibra de camélido, es durante el Horizonte Medio cuando los niveles de producción de fibra de camélido crecen fuertemente y los tejidos se convierten en vehículos de identidad, desarrollo y prestigio.

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Figura 26. Detalle de un gran fragmento de urna procedente de Conchopata, Ayacucho con la representación de cabezas de personajes con diferentes tocados. El tocado del personaje central recuerda a los tocados de cestería procedentes de Huaca Malena. Museo Regional de Ayacucho. Foto Rommel Angeles.

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Hallazgo de una Ofrenda Textil con material Horizonte Tardío e Inca Local en el valle medio de Pisco

Luis Peña Callirgos*

Resumen
Durante la ejecución del Proyecto de Evaluación Arqueológica del Poliducto Camisea –TGP. Variante Pisco, se intervino uno de los sitios denominado Alto Huayanga I, en donde se realizó el hallazgo de una ofrenda textil en muy buen estado de conservación que pertenecería al Horizonte Tardío o Inca local para el valle medio de Pisco.

Palabras claves: Inca, Valle de Pisco, Alto Huayanga, depósito textil, materiales de producción textil, CAMISEA

Finding a Textile Offering with Late Horizon and Local Inca Material in the Middle Valley of Pisco

Abstract
During the execution of the Archaeological Evaiuation Project for the Camisea – TGP [Liquid Natural Gas] Pipeline, Pisco Variant, work was carried out at one of the sites known as Alto Huayanga I, locating a feature consisting of a textile offering in an excellent state of conservation that pertains to the Late Horizon or local Inca occupation in the middle Pisco Valley.

Keywords: Inca, Pisco Valley, Alto Huayanga, textile cache, textile production materials, CAMISEA

Introducción

Durante las últimas décadas se vienen realizando importantes proyectos de infraestructura en el Perú. Es en el marco de estos proyectos que se realizan a su vez investigaciones arqueológicas para salvaguardar, proteger y/o recuperar el material arqueológico.

Dentro de estos proyectos se viene recuperando importantes hallazgos, muchos de los cuales no llegan a ser conocidos ya que estos quedan solo en los informes técnicos que se entrega al Ministerio de Cultura, los cuales no son difundidos o dados a conocer.

En el año 2001 y 2002, se realizó el citado Proyecto de Evaluación Arqueológica a cargo de la Licenciada Kaarina Saavedra y el responsable del sector del hallazgo el Lic. Julio Abanto.

Ubicación del Sitio

El sitio Arqueológico Alto Huayanga I, se ubica en la margen izquierda del río Pisco sobre la falda norte del promontorio rocoso conocido como cerro Esquina Grande. Se trata de un asentamiento aldeano complejo con estructuras arquitectónicas de recintos de uso doméstico y terrazas de contención. El hallazgo se realizó en el sector C trinchera 8, unidad 1, capa B. El sitio presentaría según la evidencia arqueológica dos ocupaciones Chincha e Inca, el hallazgo sería del Horizonte Tardío.

* Lic. en Arqueología de la Universidad Nacional Mayor de San Marcos lucho_tex@yahoo.es

Mapa 1. Mapa de ubicación del sitio

Hallazgo de la Ofrenda Textil

Este hallazgo se relaciona con la segunda ocupación del sitio, se ubicó sobre el muro de la primera terraza dentro de un relleno de abandono, constituido por tres costales de algodón, además de un pedazo de yeso y dos mates.

Descripción del Hallazgo

I. Primer Saco (1)

Se trata de un saco de algodón listado, bien elaborado el cual estaba amarrado con un cordoncillo de algodón hacia la abertura (1). En su interior contenía:

- Un saco de características similares pero de menores dimensiones (1A).
- Un paquete elaborado con tela de algodón burda (1B),
- Un saco chico de tela de algodón parchado y burdo (1C),
- Otro saco chico de algodón blanco bien elaborado (1D),
- Fragmentos de cordones de hilos y cuero, además de tiras de cuero que se utilizan para aplicar sobre tejidos y flecos enrollados (1E).

1. Primer Saco.- Elaborado en algodón, decorado con listas verticales de colores naturales en cremas y marrones, contiene en su interior los siguientes elementos:

Fig. 1. La ofrenda in situ sobre la terraza, donde se aprecia un saco listado, un paño burdo, cuencos de calabazas y un bloque de yeso.

Fig. 2. Imagen donde se aprecian los dos sacos, uno listado y el otro de color crema.

Figs. 3 y 4. Vista del primer saco con parte de su contenido al interior y exterior del mismo.

Fig. 5. 1.A

1.A.- Saco de algodón listado de similares características al anterior pero de menores dimensiones.

1.A.1.- Envoltorio conformado por un paño de algodón con listas verticales anchas de color crema y marrón claro, bien elaborado que tiene sus extremos doblados, dos de ellos hacen un doble lazo simple para asegurar el paquete, el envoltorio contenía lo siguiente:

Fig. 6 y 7. En su interior se halló una bolsa policroma finamente tejida (1.A.1.a) y una bolsa de algodón en dos tonos (1.A.1.b).

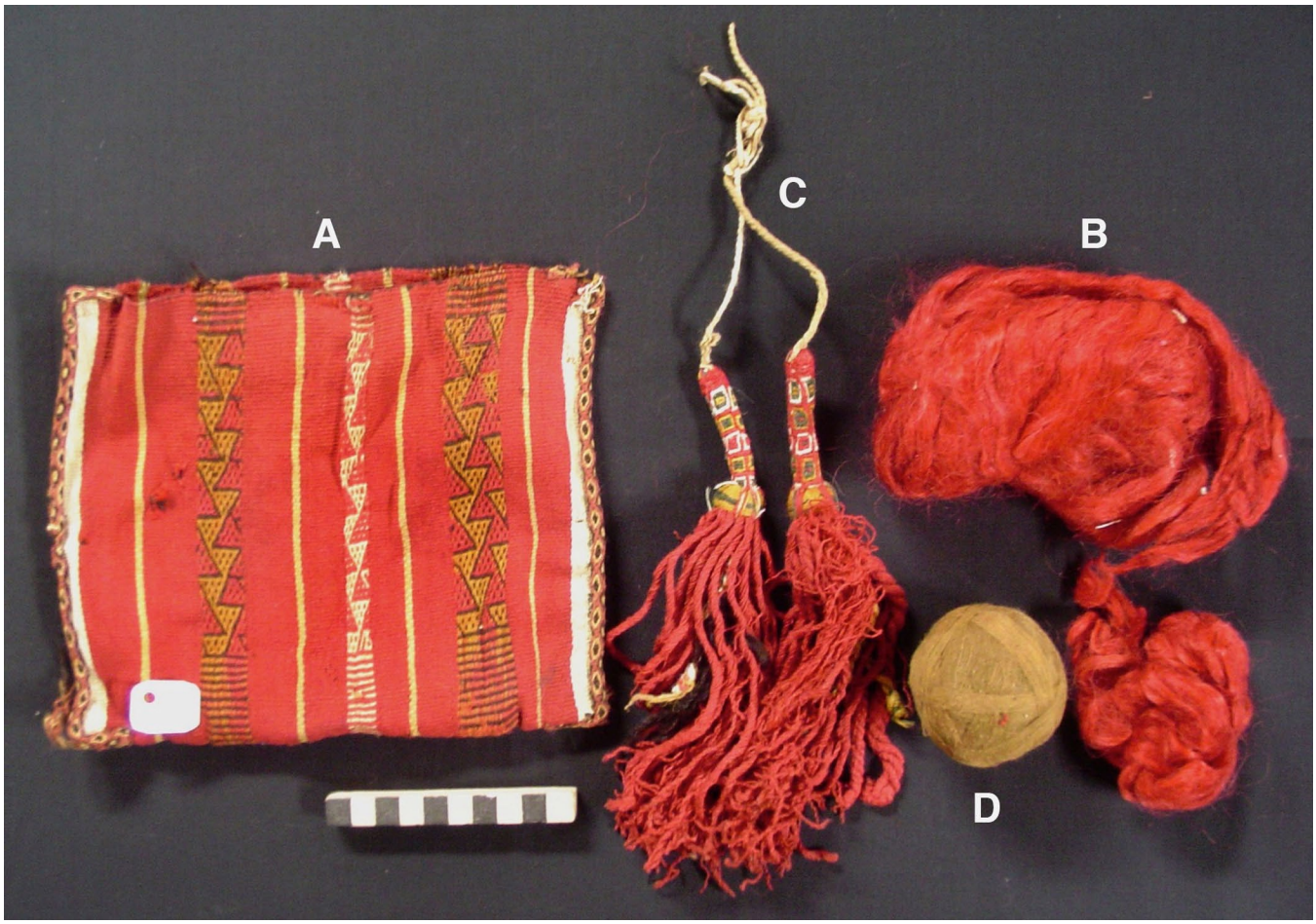

Fig. 8. 1.A.1.a

1.A.1.a.- A) Cuerpo de bolsa o chuspa policroma (en colores rojo, blanco, fucsia, amarillo ocre oscuro y marrón oscuro), en técnica de cara urdimbre con urdimbres complementarias, elaborada en fibra de camélido, finamente trabajada, presenta decoración listada y bandas con diseños geométricos estilizados. En su interior contenía:

- B) Fibra de camélido limpia sin hilar, teñida de color rojo.
- C) Dos borlas policromas finamente trabajadas.
- D) Un ovillo de fibra de camélido amarillo ocre oscuro.

1.A.1.b.- Bolsa de algodón en dos tonos crema y marrón, en su interior contenía:
Una madeja de hilos y tres ovillos en fibra de camélido teñidos de color fucsia, un ovillo de fibra de camélido de color amarillo ocre y tres ovillos de fibra de camélido en tonos naturales de color marrón oscuro y los otros en tonos entre negro y plomizo, todos los hilos presentan una torsión en S.

1. A.2.- Envoltorio, constituido por un paño de algodón listado, el cual presenta dos de sus bordes doblados hacia adentro, los otros dos extremos se amarran para asegurar el contenido. Al interior se halló un unku de plumas.

1. A.2.a.- Unku elaborado en dos paños de tela llana unidos en el borde de trama luego recamado de plumas dos colores presenta diseños geométricos escalonados, muy bien elaborado, se encuentra inconcluso (ver detalle del amarre de sarta de plumas en Yacovleff, 1933:145 fig. 2).

Fig. 9. 1.A.1.b

Fig. 10. 1.A.2

Fig. 11. 1.A.2.a

1.A.3.- Envoltorio conformado por un paño de algodón, sus dos extremos cubren el contenido y los otros dos hacen un amarre doble lazo simple. En su interior se halló seis sartas de plumas de diferentes colores enrolladas en palo de madera o fibra vegetal, además estas se hallaron envueltos en fibra de algodón. Las plumas se encuentran la mayoría en muy buen estado de conservación.

Fig. 12. Primera vista del envoltorio (1.A.3) con su paño externo de algodón.

Fig. 13. Paquete abierto donde se aprecia su contenido.

Fig. 14. Plumas de diversos colores envueltas en un soporte de fibra de junco.

1.A.4.- Envoltorio elaborado de tela llana de algodón de color blanco, dos de sus extremos aseguran el contenido con lazo doble simple, su interior contenía:

Figs. 15 y 16. Imágenes del proceso de apertura del envoltorio (1.A.4).

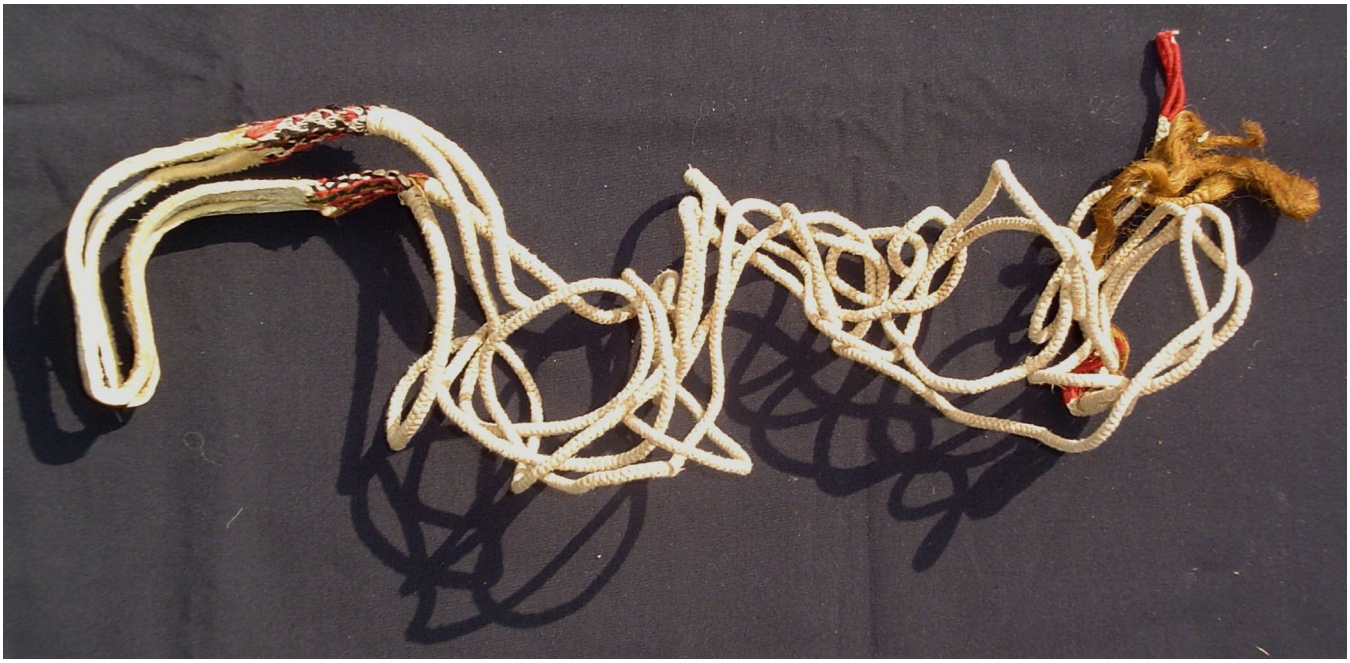

Fig. 17 1.A.4.a

1.A.4.a.- Honda con paleta de cuero. A los extremos de la paleta presenta un segmento decorado con hilos de colores, luego prosiguen los cordones de fibra vegetal largos en dos pares, uno de ellos termina en ojales de lana roja y los otros en fibra vegetal teñida de marrón y torcida. Se encuentra en buen estado de conservación.

1.A.4.b.- Bolsa de fibra de camélido con listas verticales en tres tonos, contenía:

- Un paquete chico que envuelve 4 ovillos de fibra de camélido, de color natural y teñidos.
- Dos ovillos de lana uno beige y el otro marrón.

Fig. 18 y 19. Primera vista de la bolsa cerrada (1.A.4.b) y segunda vista de apertura parcial.

Fig. 20. Vista final de la bolsa con todo su contenido.

1.A.4.c.- Bolsa mediana de algodón de color blanco, bien elaborada y conservada en su interior se halló:

Una madeja de hilo de fibra de camélido teñida de color mostaza; 8 ovillos de hilos, dos de fibra de camélido teñida de rojo, 6 de fibra de algodón en color blanco, además de dos ovillos chicos de algodón envueltos en hoja de maíz, amarrados sus extremos con hilos de algodón, tanto los ovillos como el hilo de amarre presentan torsión en S.

Fig. 21 y 22. Primera vista de la bolsa (1.A.4.c), segunda vista de la bolsa con su contenido al exterior.

Fig. 23. Ovillos de algodón de dos cabos torsión en S, envueltos en hoja de maíz, con los extremos amarrados con hilos de algodón.

1.A.4.d.- Pequeño paquete, con fragmento de tela de algodón, cerrado con doble lazo simple, en su interior se halló un mineral, posiblemente se trate de un mordiente para teñir.

Fig. 24. 1.A.4.d

Fig. 25. 1.A.4.e

1.A.4.e.- Fibra de camélido de color natural, doblada y con doble lazo.

1.A.5.- Bolsa de algodón blanca bien elaborada y conservada, contenía en su interior:

- Cuatro ovillos grandes de algodón de color natural marrón claro, torsión en S.
- Un ovillo pequeño de hilo combinado (marrón y blanco), torsión en S.

Fig. 26. 1.A.5

Fig. 27. 1.B

1B.- Envoltorio de tela burda y usada de algodón, en su interior contiene un ovillo de fibra de camélido de color marrón oscuro, torsión en S y una pequeña madeja de fibra de camélido de color blanco, torsión en S.

1C.- Bolsa hecha de retazos de tejidos de algodón, en su interior se halló tres ovillos de fibra de camélido de color natural blanco, presentan torsión en S.

Fig. 28. 1.C

Fig. 29. 1.D

1.D.- Bolsa monocroma de algodón bien elaborada en perfecto estado de conservación, en su interior contenía:

1. D.1.- Unku policromo de fibra de camélido inconcluso, presenta diseños geométricos, a modo de plumas horizontales, estos están distribuidos en todo el campo, esta prenda se halló doblada. Fue elaborado a partir de dos paños similares, pero uno de ellos presenta una falla de elaboración ya que uno de sus extremos es más angosto lo que dificulta su cierre, una de sus caras (A) presenta costuras en ocho con hilo de color azul. Se observa que estas dos piezas no coinciden perfectamente y hay diferencias entre ellas lo que podría evidenciar que fue hecho por dos personas distintas. Esta prenda se halla en buen estado de conservación.

Fig. 30. Vista superior del unku (1.D.1), cara A

Fig. 31. Vista inferior del unku (1.D.1), cara B.

1. D.2.- Paño de listas verticales en fibra de camélido, en colores marrón, marrón claro y crema, forma rectangular, finamente trabajado. Se encuentra en muy buen estado de conservación.

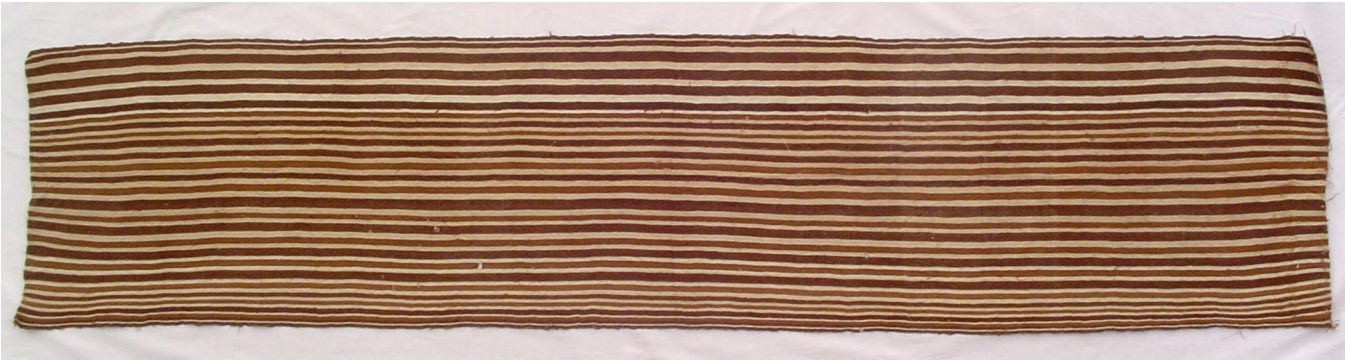

Fig. 32. 1.D.2

Fig. 33. 1.D.3

1. D.3.- Restos de flecos cortos sueltos de color rojo, tiras de cuero para aplicaciones, hilos, entre otros.

2. Segundo Saco

Saco de fibra de algodón bien elaborado y en perfecto estado de conservación, al interior se halló fibra de algodón sin despepitar y tres recipientes de calabaza.

Fig. 34 y 35. 2 – Segundo saco

3. Envoltorio de algodón

Envoltorio conformado por un paño de algodón listado, este se encuentra remendado. En su interior se halló un paño monocromo de algodón, una caña con hilo de algodón enrollado, fibra de lana sin hilar (amarrada), madejas y ovillos de hilos de lana.

Fig. 36 y 37. 3 – Envoltorio de algodón

Fig. 38. 3.A

3. A.-Se encontró además tres bolsas medianas, elaboradas en fibra de camélido con decoración de listas verticales en tonos de marrón, crema y lila. Una de ellas presenta sus ribetes acabados, la otra solo uno de ellos y la tercera no presenta ribetes; dos de ellas contenían madejas de lana, ovillos y flecos.

3. B.- Envoltorio pequeño conformado por un tejido monocromo de algodón que envuelve:

- A) Dos pequeñas sandalias de cuero dobladas con las tiras de cordones de algodón
- B) Dos sonajeros, de alguna especie de material de cuero.
- C) Un ovillo de fibra de camelido en color natural marron oscuro, torsión en S.
- D) Una piedra de cuarzo.
- E) Una pequeña conopa de piedra representando una mazorca de maíz.

Fig. 39. 3.B

Fig. 40. 4 – Paño de algodón

4. Paño de algodón

Se trata de un tejido de algodón listado, está conformado por dos paños unidos por puntadas tipo súrgete. Ha sido remendado y parchado, presenta huellas de desgaste.

Tipos de Materiales:

Sacos y bolsas

En el Hallazgo encontramos que la mayoría de material estaba contenido en sacos (1, 1A y 2), además de bolsas de diversos tamaños, la mayoría en algodón (1, 1A 1A1b, 1A4c, 1A5, 1C, 1D y 2) y fibra de camélido (1A1a, 1A4b y 3A).

Algunos de ellos presentan decoración listada (1, 1A, 1A4, y 3A), el resto son de color blanco (1A1b, 1A4c, 1A 5, 1C, 1D y 2).

Dichos materiales son elaborados en tejido llano cara de urdimbre, y su confección fue a partir de un paño rectangular doblado y cosido por los bordes de trama.

El cuerpo de la bolsa o chuspa más elaborada (1A1a) contenía borlas y otros materiales en su interior evidenciando que estaba en proceso de confección, se halló en perfecto estado de conservación.

Envoltorios

Se encontraron diversos envoltorios que contenían varios materiales todos elaborados en algodón, la mayoría de color claro en muy buen estado de conservación (1A1, 1A3, 1A4 y 1A4d), otros con decoración listada (1A2 y 3), tres envoltorios de tejidos reutilizados de color marrón (1B y 3B) y uno con decoración listado (3).

La mayoría de estos envoltorios presenta dos de sus extremos que envuelven el contenido y los otros dos extremos hacen un doble nudo simple que aseguran el contenido, la técnica de elaboración es tejido llano balanceado 1x1, semi espaciado.

Unkus

Se hallaron dos unkus, uno de lana (1D1) con diseños geométricos policromos a manera de plumas horizontales. Esta prenda fue elaborada en dos piezas dejando las aberturas del cuello y brazos, aunque evidencia costuras en puntadas tipo ocho que no están concluidas.

Otra pieza es un unku recamado de plumas (1A2a), el cual fue elaborado en base de dos paños de tela llana de algodón unidos por los bordes de trama dejando la abertura del cuello. Sobre esta tela se aplicaron las plumas en dos colores, generando diseños geométricos escalonados. Esta

prenda no fue concluida ya que hay dos zonas que falto colocarle las plumas además no evidencia costuras de cierre hacia los costados.

Paño listado

Se trata de un paño listado (1D2) de fibra de camélido y de forma rectangular finamente trabajado. En técnica de elaboración de tejido llano cara de urdimbre 1x1, se encuentra en muy buen estado de conservación.

Honda

Honda de paleta de cuero, al extremo de la paleta e inicio de los cordones dobles de color blanco presenta decoración policroma con diseños geométricos. Hacia sus extremos dos de los cordones presentan ojales de color rojo y en los otros extremos rematan en una especie de borlas de color amarillo ocre oscuro.

Borlas

Se hallaron dos hermosos ejemplares, policromos y de flecos largos finamente trabajadas, dentro de una bolsa policroma (1A1a), están sueltos. Este tipo de elemento se colocaba en las esquinas inferiores del cuerpo de la bolsa.

Sartas de plumas

Se encontró en uno de los envoltorios (1A3) seis sartas de plumas de diversos colores, las cuales constan de tiras de plumas que son envueltas en un soporte de fibra de junco lo que permitió una óptima manera de transportarla y mantener buenas condiciones de conservación.

Madejas y ovillos

Se encontraron en las diversas bolsas y envoltorios algunas madejas de hilo en fibra de camélido teñidas, así como ovillos de fibra de camélido teñidas y de color natural, ovillos de algodón en colores naturales.

Otros materiales

También se encontraron partes de tiras de cuero, tira de flecos sueltos cortos, los que sirven de aplicaciones para tejidos.

Comentarios finales

Como investigadores, no solo debemos entender a los tejidos desde un punto de vista estético, sino también el trasfondo social en el que se desarrollan y la importancia que estos tuvieron para las culturas precolombinas. A través de las características particulares que estos presentan podemos identificarlos en estilos: las formas de las prendas, dimensiones, los diseños empleados y el tipo de decoración que presentan, estructuras, tipos de fibras, torsión de las mismas, etc.

Es así que el tejido se convirtió en el principal medio de comunicación visual para las diferentes sociedades que les permitía identificarse entre ellas.

Asimismo no debemos limitarnos solo al estudio de uno de estos elementos como los tejidos, sino contrastar con el resto de materiales para así tener una visión más global de lo que está pasando en estas sociedades.

Sobre este hallazgo excepcional podemos ver claramente que se trata de materiales que provienen de un taller textil, ya que se ha cuidado en cada detalle la elaboración de las prendas; se observa en las fibras seleccionadas tanto de algodón como de fibra de camélido, el teñido es cuidadoso y altamente especializado, el hilado obtenido es fino, demostrando así el grado de especialización y destreza que tuvieron.

Los accesorios que utilizaron, como los rollos o sartas de plumas perfectamente trabajadas y listas para utilizar, las tiras de cuero que presentan perforaciones por donde pasa el hilo que las asegura al tejido y también las sartas de flecos cortos, son muy similares a los hallados en los unkus del hallazgo de la trinchera II de Alto Huayanga.

Asimismo podemos observar que en la elaboración de una misma prenda trabajaron hasta dos tejedores y se notan claramente las diferencias que han dejado plasmado en el tejido (caso del unku policromo con diseños geométricos a modo de plumas, 1D1). Uno de los paños que lo conforma está mejor trabajado que el otro, además presenta diferencia en la distribución y tamaño de los diseños. A cambio el otro paño presenta un borde de urdimbre más angosto, lo que ha ocasionado que la prenda no pueda cerrar bien.

Si bien se puede identificar el estilo de estos materiales este está relacionado a la tradición Inca, se trataría de un variante local ya que se están conjugando diseños que tiene una amplia tradición para la costa central y sur. Los diseños se adecuan a los cambios y modificaciones, por ejemplo la chuspa policroma de lana (1A1a) que presenta en la parte de su cuerpo decoración listada con diseños entrelazados, con iconografia recurrente para la costa central y sur. Sin embargo, los colores y el acabado del ribete de la bolsa son en técnica entorchada característica del estilo Inca. Además en su interior hallamos unas borlas del mismo estilo lo cual también nos indica que esta bolsa estaba inconclusa ya que no se encontró la cinta que conformaría su asa.

Muchas de las prendas halladas no han sido concluidas o estaban en proceso de trabajo. Además, encontramos diferentes materiales para la elaboración de los mismos, como algodón y lana en fibra, ovillos de algodón y fibra de camélido ya listos para utilizar. Hay evidencia de materiales para

aplicar sobre los tejidos, como las tiras de cuero, las borlas, las sartas de plumas y los rollos de flecos.

En el envoltorio 3B se hallo una pequeña conopa de piedra que representa una mazorca de maíz, las conopas son muy frecuentes en las ofrendas Inca.

Por las evidencias mencionadas, podemos observar a través de los tejidos la manera como estas sociedades se adaptan a los cambios sin dejar de lado sus tradiciones locales.

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17

Trajes de poder. Los conjuntos Chimú con borlas

Victòria Solanilla

Universitat Autònoma de Barcelona. Bellaterra (Barcelona)

Resumen

A raíz de la puesta en marcha del Museo de Culturas del Mundo (MCM) de Barcelona, inaugurado en febrero de 2015, y conocedores de que entre las piezas procedentes de América precolombina había una camisa con borlas Chimú perteneciente a la Colección Folch, creímos que sería interesante estudiarla.

Por otro lado, en una reunión que se realizó en Basilea en marzo de 2014, con motivo de la puesta al día del grupo que formamos los integrantes del proyecto *Corpus Antiquitatum Americanensium* perteneciente a la Unión Académica Internacional, en la que participaron conservadores de las secciones de América de los principales museos europeos, se dio a conocer la existencia de otra camisa Chimú con borlas en el Rautenstrauch-Joest-Museum (RJM) de Colonia (Alemania). En una visita posterior comprobamos que también tenían un manto y un turbante del mismo tipo.

Con anterioridad, conocíamos también la existencia previa de un traje de un dignatario Chimú, conservado en el Museo Chileno de Arte Precolombino (MCHAP). Se trata de un traje completo, que consta de un faldellín, una camisa y un tocado en forma de turbante, que había sido estudiado por Brugnoli, Hoces de la Guardia, Jélvez & Gómez en 1997.

Partiendo, pues, de dichos conocimientos previos procedimos al estudio iconográfico de estos dos nuevos materiales de Colonia y de Barcelona. De esta manera hemos conocido parte del contenido del denominado «Bird lot» (o lote Bird), que provenía de una excavación llevada a cabo en la Costa Norte del Perú el año 1956. Como se sabe, dicha excavación no fue documentada de manera apropiada y además el lote se ofreció en una subasta de arte en EE.UU. inmediatamente después. Este hecho hace pensar que actualmente la mayoría de piezas de este «lote Bird» están en manos de museos y colecciones privadas.

Palabras clave: Costa Norte de Perú, textiles Chimú con borlas, lote Bird, iconografía textil, indumentaria ceremonial, *Corpus Antiquitatum Americanensium*

Power suits: Chimu ensembles with tassels

Abstract

Following the setting up in Barcelona of the Museum of World Cultures (MCM), inaugurated in February 2015, and knowing that among the pieces coming from pre-Columbian America there was a tasselled Chimu shirt pertaining to the Folch collection, we thought that it could be worthy of study.

On the other hand, in a meeting held in Basel in March 2014 to update the group formed by the participants in the International Union of Academies' *Corpus Antiquitatum Americanensium* project, attended by curators of American collections kept in main European museums, the existence was reported of another tasselled Chimu shirt in the Rautenstrauch-Joest-Museum (RJM) in Köln (Germany). In a later visit we paid to this museum, we could ascertain that they also had a mantle and a turban of the same kind.

Prior to these, we knew the existence of the outfit of a Chimu dignitary, kept in the Museo Chileno de Arte Precolombino [MCHAP]. It has the appearance of a complete suit, consisting of a loincloth, a shirt, and a headdress in the shape of a turban, studied by Brugnoli, Hoces de la Guardia, Jélvez & Gómez in 1997.

Building therefore on this previous knowledge, we proceeded to the iconographical study of these two new materials in Köln and Barcelona. We have thus got to know a part of the contents of the so called «Bird Lot», that came from an excavation conducted in the North Coast of Peru in 1956. As is known, this excavation was not properly documented; moreover, this lot was offered in an art auction in the USA immediately afterwards. This fact invites us to think that today most pieces from this «Bird lot» are kept in museums and private collections.

Keywords: North Coast of Peru, tasselled Chimu textiles, Bird Lot, textile iconography, ceremonial garments, *Corpus Antiquitatum Americanensium*.

Introducción

En el estudio del conjunto de tres piezas del MCHAP (Brugnoli *et alii*, 1997: 45) se habla del sentido que podían tener estas indumentarias:

> «Estos textiles constituyen un lenguaje para "activar" a los dioses mediante el ceremonial del que son parte. Bienes materiales presentes en rituales cíclicos en que se logra unir dos mundos: el de los hombres y el de los dioses, convirtiéndose en vehículos de acercamiento entre ambos. La intensidad lograda por el dominio en el ámbito de la percepción se mantiene vigente y actúa en el espectador contemporáneo conmoviendo sus hábitos perceptuales.»

En la publicación *Chimú: Laberintos de un traje sagrado*, a raíz de la exposición homónima del MCHAP (2005-06) coorganizada con el Instituto Nacional de Cultura del Perú, se afirma lo siguiente (VV. AA., 2005: 21):

> «Éste [refiriéndose al conjunto textil de tres piezas del museo] parece ser el único en su categoría que se conserva completo, pues los escasos ejemplares del mismo estilo que se conocen en las colecciones mundiales corresponden a prendas aisladas o fragmentos de ellas.»

En dicho trabajo se daba noticia de otro conjunto completo así como de otra camisa aislada, todavía no estudiados en aquel momento.

A juicio de las investigadoras, estos textiles tenían una identidad propia dentro de toda la textilería de la Costa Norte de Perú, y concretamente durante el período de la Cultura Chimú.

Técnicamente hablando constatan que se usaron en ellos hilos de algodón de un solo cabo torcidos en S en los tejidos planos del soporte, e hilos plegados y retorcidos en Z para la tapicería tridimensional. Asimismo, se combinaron en ellos urdimbres dobles o pareadas con tramas simples.

Las estructuras textiles que más utilizaron fueron la del tapiz de ranuras y tejidos transparentes reticulados y de gasa vuelta. Fue así como se confeccionaron las indumentarias objeto de este trabajo.

Cada técnica, color y combinación de colores, así como la división visual-espacial, tenían un significado más allá de su efecto estético. Las tejedoras que hacían este tipo de trabajos altamente especializados trabajaban por encargo del estado, que podía tener personajes de élite que usaran este tipo de trajes. Por ejemplo, un oficiante que a través de un ritual concreto quisiera propiciar la fertilidad. A través de sus obras transmitían mensajes accesibles a la población, pero a los que hoy en día sólo podemos aproximarnos hipotéticamente.

El traje ceremonial completo constaba de tres prendas:

a) *Turbante*. Compuesto por un tejido rectangular muy largo que termina en secciones de elaborados diseños. Con él se envolvían la cabeza transformándose en un tocado abultado, cuyos dos extremos caían a ambos lados o por la espalda.
b) *Camisa*. De forma ancha y a la vez corta y con mangas, liviana, típica de la Costa, puesto que las de la Sierra (unku) eran de tejido más grueso y sin mangas y llegaban hasta media pierna (rodillas).
c) *Taparrabos o faldellín*. También formado por un tejido rectangular muy largo y estrecho, en uno de cuyos extremos tenía cosido un gran panel rectangular con la misma decoración que el resto del traje. Este tejido, doblado, se pasaba entre las piernas como si fuera un calzón, y quedaba de frente la parte rectangular de la terminación, como si fuera un faldellín.
d) Pero actualmente se debería añadir una cuarta prenda: *el manto*, de mayores dimensiones que los citados anteriormente. Más adelante se darán ejemplos de él.

Otra característica de estas prendas es su intenso colorido. Aquí se mezclan los hilados de algodón que hemos citado más arriba (gama de marrones), para tejer la base o soporte del traje, con los de fibra de camélido (posiblemente alpaca, por su finura) para decorar el resto de la prenda con infinidad de colores, predominando el rojo y sus variadas tonalidades.

Estos «trajes de poder o ceremoniales» tenían una acusada función simbólica puesto que sus decoraciones estaban relacionadas directamente con aspectos de la ideología Chimú. Estos símbolos aludían a la persona que los usaba y al momento concreto de su utilización. En el caso del conjunto del MCHAP se referían a la fertilidad agrícola, que en forma de ritual surgía en las construcciones ceremoniales en las que veneraban a sus ancestros y que eran controladas por la élite. Por lo tanto, quien utilizó este traje encarnó el poder de asegurar la reproducción de una sociedad agrícola que vivía en un territorio desértico pero que padecía de manera periódica las destructivas inundaciones derivadas del fenómeno atmosférico denominado «El Niño».

Sin embargo, en el caso del conjunto del RJM de Colonia, se trata de un conjunto de tres piezas, de las que el turbante y el faldellín (que en realidad es un manto) comparten diseño, pero no así la camisa. Los dos primeros pertenecían al «lote Bird» y podrían haber formado parte de las 36 piezas que originariamente componían dicho lote. Los símbolos diseñados se refieren a una escena que se repite: dos hombres sobre una embarcación de alta proa, que es un tema muy recurrente y que tiene su origen en el estilo

Moche V (McClelland, 1990) y posteriormente en el arte de Lambayeque.

Y, finalmente, estudiamos la camisa del MCM de Barcelona, propiedad de la Sra. Stella Folch. Forma parte de la interesante colección del Sr. Alberto Folch, que su hija ha cedido en comodato al Ayuntamiento de Barcelona durante 20 años. En este caso el símbolo que se repite parece ser el busto de un personaje de frente, de múltiples colores y disposiciones. También se pueden apreciar elementos vegetales.

Los Trajes

El conjunto del MCHAP de Santiago de Chile.[1] En el artículo de Palma & Baixas (1986: 381), el primero que estudia este conjunto, se citan dos piezas tejidas con técnicas similares: un fragmento del Musée de l'Homme[2] (D' Harcourt, 1979: 151) y una camisa de la Colección Amano (Amano & Tsunoyama, 1979: 20-21). En el artículo citado se afirmaba que la mayor analogía respecto a un conjunto de tres piezas y a alguna de las técnicas que se utilizaron en su confección se encontraba en dos piezas del estilo del «lote Bird», estilo de un material arqueológico aparecido de modo coetáneo en el comercio de arte de Nueva York y que fue registrado por el Dr. Junius Bird entre 1957 y 1958. Esta es la razón de que se denomine «Bird Lot» (o lote Bird) a este conjunto de piezas. Siguiendo el hilo de la investigación, Ann Rowe (1984: 37) afirma que estos textiles pudieron pertenecer a una o a varias tumbas de la Costa Norte del Perú.[3]

Por su parte, en su excelente trabajo, y tras un exhaustivo estudio de las tres piezas desde diversos puntos de vista, incluida la interpretación del lenguaje visual, Palma & Baixas llegan a la conclusión de que hay muchas analogías y también diferencias entre el conjunto del MCHAP, la camisa de la colección Amano y los conjuntos textiles denominados por A. Rowe como pertenecientes al estilo del «lote Bird».

Concretamente, desde un punto de vista estructural y de organización de los elementos visuales, el conjunto del MCHAP y las piezas del estilo del «lote Bird» que más se parecen son: el conjunto del Textile Museum (TM) (Rowe, 1984: 48-49, lám. 3; fig. 21-22), el del Metropolitan Museum of Art (Rowe, 1984: 50, fig. 23), la estola del Seattle Art Museum (Rowe, 1984: 58, fig. 36) y el fragmento de Cao Viejo (Rowe, 1984: 56, fig. 32).

Los dos conjuntos y la estola tienen partes del tejido realizadas con las técnicas de reps de trama, tapicería y gasa. Y además las aplicaciones volumétricas están representadas por círculos concéntricos y penachos. Tienen en común los grandes paños lisos de los taparrabos o faldellines de algodón color café y terminaciones de franjas con flecos, menos en los bordes de las mangas.

Según A. Rowe, el taparrabos del MCHAP y la estola de Seattle, a pesar de que tienen un mismo diseño, no fueron tejidos como conjunto, pues aprecia en ellos ciertas diferencias estructurales. Y la estola es de un estilo más avanzado (Rowe, 1984: 55). En cambio, Palma & Baixas (1986: 391) afirman que ambas piezas tienen repetido un mismo elemento figurativo: una figura antropomorfa con el tocado sobre la cabeza; y aunque pueden no ser del mismo conjunto, pueden ser dos juegos que provienen del mismo contexto arqueológico.

En la camisa de la Colección Amano (Amano & Tsunoyama, 1979: 20, lám. 4) los hilos verdes de fibra de camélido presentes en el tejido de tapicería de alguno de los elementos bidimensionales de la camisa de la colección Amano (idem) no aparecen en las piezas del «lote Bird», pero sí en un sector de la camisa del MCHAP, cerrando algunas de las figuras antropomorfas. Ann Rowe afirma que esta camisa se parece al «lote Bird», pero según ella sería de un período más temprano[4].

Las explicaciones sobre la técnica con la que realizaron los antiguos Chimú las tres prendas que conforman este conjunto del MCHAP las encontramos explicadas de una manera muy acertada en las tres publicaciones realizadas en Santiago: Brugnoli & Hoces de la Guardia (1989: 68), Brugnoli *et alii* (1997: 14-31) y VV. AA. (2005: 25-39). Y por esta razón se obvia su descripción en este trabajo.

En cuanto a la iconografía, estamos totalmente de acuerdo con la idea de que el reticulado base de estas prendas está en relación directa con el de la arquitectura de adobe de Chan Chan y también con sus redes de pesca (VV. AA., 2005: 49-50); así como con la idea de ver lo que había detrás de dichas paredes y con la de que la pesca en el mar era la manera de proveerlos de alimentos, juntamente con los que obtenían de la agricultura. En una palabra: estos símbolos que podemos asociar a las redes podían haber sido la forma de explicar de manera simbólica el tránsito de la fertilidad del mar a los campos de cultivo. Y también

1. Adquirido por Don Sergio Larraín García-Moreno en 1980. Posteriormente lo donó al MCHAP.

2. Musée de l'Homme, nº X.33-217-319.

3. El primer material encontrado es una serie de conjuntos de indumentaria emparejados, encontrados en la Costa Norte en 1956, en una tumba muy rica y en otra serie de tumbas con contenidos similares. Estos conjuntos no fueron excavados científicamente, por lo que no se conoce el lugar concreto del entierro ni si había otros objetos no textiles. Al ser tan parecidas entre si, parece obvio que las piezas de indumentaria provienen todas de un mismo lugar.

4. Rowe, 1984: 52.

Fig. 1. Detalle de la decoración común del manto (faldellín) y del turbante del Rautenstrauch-Joest Museum (RJM) de Colonia. Con su permiso.

es muy interesante ver la interpretación del espacio que se hace en la obra citada (VV.AA., 2005: 51-55), relacionándolo con el del centro ceremonial de Chan Chan; así como la explicación de todos los elementos vegetales que decoran los tres tejidos (VV.AA., 2005: 56-61).

El conjunto de tres prendas del RJM de Colonia.

El faldellín (manto), el turbante y la camisa llegaron como préstamo al Museo de la mano de Carmen Öechsle, desde Zúrich, para la exposición «Los tesoros del Perú» (*Schätze aus Peru*) que se llevó a cabo en Colonia en 1959. A finales de dicho año se compró este conjunto gracias a los medios proporcionados por la compañía Mauser-Werke, de Colonia.

Tanto el turbante como el faldellín (manto) tienen la misma decoración: dos personajes en una barca o balsa. Los antecedentes de esta iconografía los podemos encontrar en las pinturas de la cerámica Moche que tan bien ha explicado A. M. Hocquenghem (1987: figs. 109, 110, 111) dentro del apartado «Escenas de navegación».[5]

5. Ella explica que estas escenas de navegación y pesca representaban en realidad un acto sagrado, más que profano, y que debían corresponder a un mito o rito. Ancestros y celebrantes transportaban a través del océano un cargamento de ofrendas (vasijas, frutas, madera) y también prisioneros (alguno sacrificado), y se enfrentaban a las fuerzas marinas.

Fig. 2. Manto (faldellín) del conjunto Chimú del RJM de Colonia. Con su permiso.

En el caso que nos ocupa, creemos que las embarcaciones representadas en los textiles Chimú se referían más bien al rito incaico de transportar un cargamento de ofrendas por el agua. Lo explica Cristóbal de Molina (1959: 86-87) diciendo que cada año, después del solsticio de verano, cuando salía la luna nueva los incas comenzaban el combate ritual del Camay, y al 12º día iniciaban a celebrar el Mayocati, que consistía en el cargamento de ofrendas citado más arriba, que acababa llegando a las islas guaneras, cerca de la costa. También se sabe que durante el mes de febrero los incas ofrecían un importante sacrificio de oro, plata y mullu a sus huacas principales (Poma de Ayala, 1936: 238-239). Este transporte que vemos en los textiles Chimú, y que otros estudiosos han referido que podrían ser de mullu (Völker, 1999: 178), sería el mismo en el caso de los Incas.[6]

El manto está tejido sobre la base de tela llana, de doble cara de algodón. En un extremo quedan restos de una tira blanca de fijación (2-3 cm de ancho); y en el otro, un fleco hecho a base de tiras de dos colores: el superior, rojo, con unas figuras tejidas con un sombrero anguloso; el inferior, amarillo, formado por una serie de tiras paralelas sin decoración. La parte central del manto está hecha de tres paños, a base de una gasa elaborada con la técnica de «tejido torcido». Encima se tejieron una serie de diseños realizados con diversos bloques de color: los celestes y marrones, de algodón; rojos, rosados, amarillos y verdes, de fibra de alpaca, hilados en Z y retorcidos en 2S. Este patrón está interrumpido regularmente por rosetones rojos cosidos, de los que salen conjuntos de hilos de diferentes tamaños que se presentan como elementos de tipo vegetal (hilos atados), con

6. Las conchas de *Spondylus*, importadas masivamente desde Ecuador, jugaban un rol muy importante en el culto de los Chimú. Servían de ofrenda funeraria: molidas, el polvo era utilizado para espolvorear el camino por donde pasaba el gobernante. Hay muchas explicaciones sobre su extracción del mar, entre ellas la escena recurrente de dos hombres sobre un bote. Es asimismo recurrente la presencia de las conchas de *Spondylus*, representadas como triángulos o cuadrados. Así se representaron en el tejido que nos ocupa.

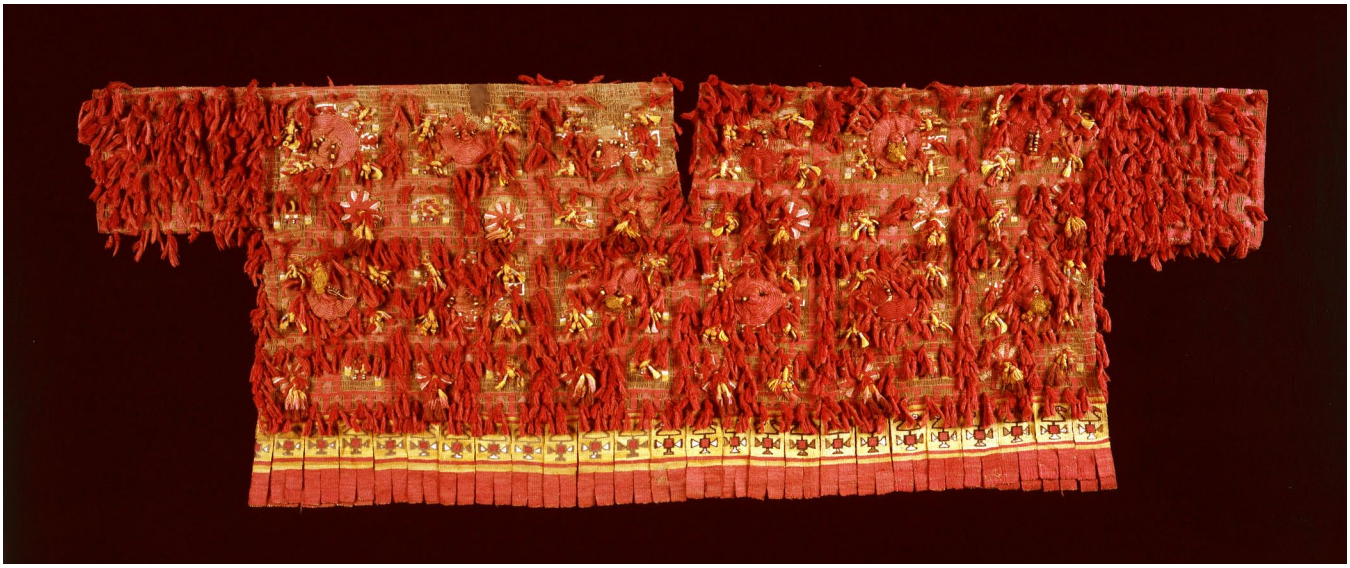

Fig. 3. Camisa del conjunto Chimú del RJM de Colonia. Con su permiso.

frutas y flores de puntas redondas. En medio del entramado se tejió la escena descrita más arriba de dos personajes con tocado sobre una embarcación (balsa?) de alta proa, y con una serie de rombos celestes repetidos debajo (*Spondylus*?). Se podría decir por tanto que la decoración de este manto nos lleva por una parte al mundo vegetal, a la agricultura que practicaban, y por otra parte al mundo acuático y a la vez religioso, por el hecho de que transportaban *Spondylus*.

Medidas: 408 x 115 cm.

La camisa, más ancha que larga y con mangas, está peor conservada que las otras dos piezas y tiene una decoración diferente: sobre la base de una tela de gasa de algodón marrón, se ejecutó la técnica de tapicería así como unas series de aplicaciones volumétricas, representadas por figuras geométricas y penachos que son plantas distintas con frutos y flores en las puntas. Termina por la parte inferior con una doble tira de color rojo y amarillo: la primera, de fondo rojo con una serie de figuras muy geometrizadas; y la segunda, amarilla, forma un fleco de tiras anchas.

Medidas: 180 x 51 cm.

El turbante tiene decorados los dos extremos. La parte central está hecha a base de un tejido llano de algodón, cuadrado, de cuatro paños (50 cm de ancho cada uno), que se dobló en diagonal, con las dos esquinas opuestas, que se cosieron a los paneles decorados que citábamos más arriba. Así no se podía desdoblar el tejido llano. La decoración es la misma que tiene el manto: escenas de dos hombres sobre una embarcación y con *Spondylus* debajo, mezcladas con elementos tridimensionales y rosetones de hilos rojos, como los ya mencionados en el manto.

Medidas: 430 x 15 cm.

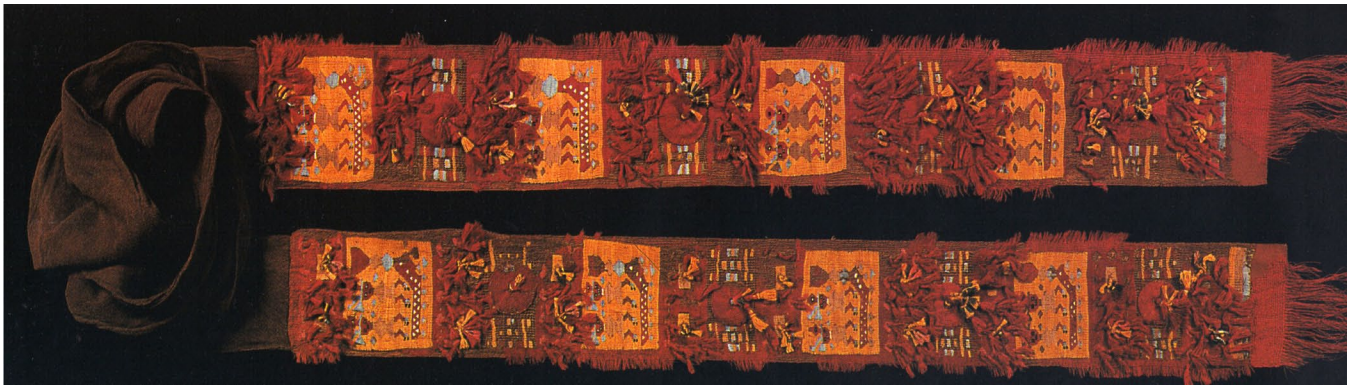

Fig. 4. Turbante del conjunto Chimú del RJM de Colonia. Con su permiso.

Fig. 5. Camisa Chimú (MEB CF 1009) del MCM de Barcelona. Con su permiso.

Camisa del MCM de Barcelona (MEB CF 1009)

Fue adquirida por el Sr. Albert Folch en Perú por los años 1960. Su actual propietaria, la Sra. Stella Folch, hija del coleccionista, ha cedido durante 20 años esta pieza al citado Museo.

Sobre una base de algodón de tela llana, se tejieron encima con técnica de tapiz varios elementos que comparten urdimbres, hechos con fibra de alpaca. Urdimbre: hilos de dos cabos (dobles), torsión en S, retorsión en Z. Y trama: un solo hilo, torcido en S. Por un lado, una serie de borlas que cubren la totalidad de la camisa; y por el otro, elementos tridimensionales que representan vegetales rodean el motivo decorativo principal: cabezas de frente que alternan los colores (negro, blanco, rojo, amarillo, celeste y rosa) representan un personaje hecho en tejido de tapicería, hilos de dos cabos y retorsión en Z, que parece llevar cabellera, un ojo (el otro está sin tejer) y una capellina.

Cuando encontramos un elemento vegetal, está cosido en el ojo de los personajes.

Fig. 6. Detalle frontal de las cabezas de la camisa Chimú (MEB CF 1009) del MCM de Barcelona. Con su permiso.

Fig. 7. Detalle de la decoración y de un elemento vegetal de la camisa Chimú (MEB CF 1009) del MCM de Barcelona. Con su permiso.

Fig. 8. Detalle de la terminación inferior de la camisa Chimú (MEB CF 1009) del MCM de Barcelona. Con su permiso.

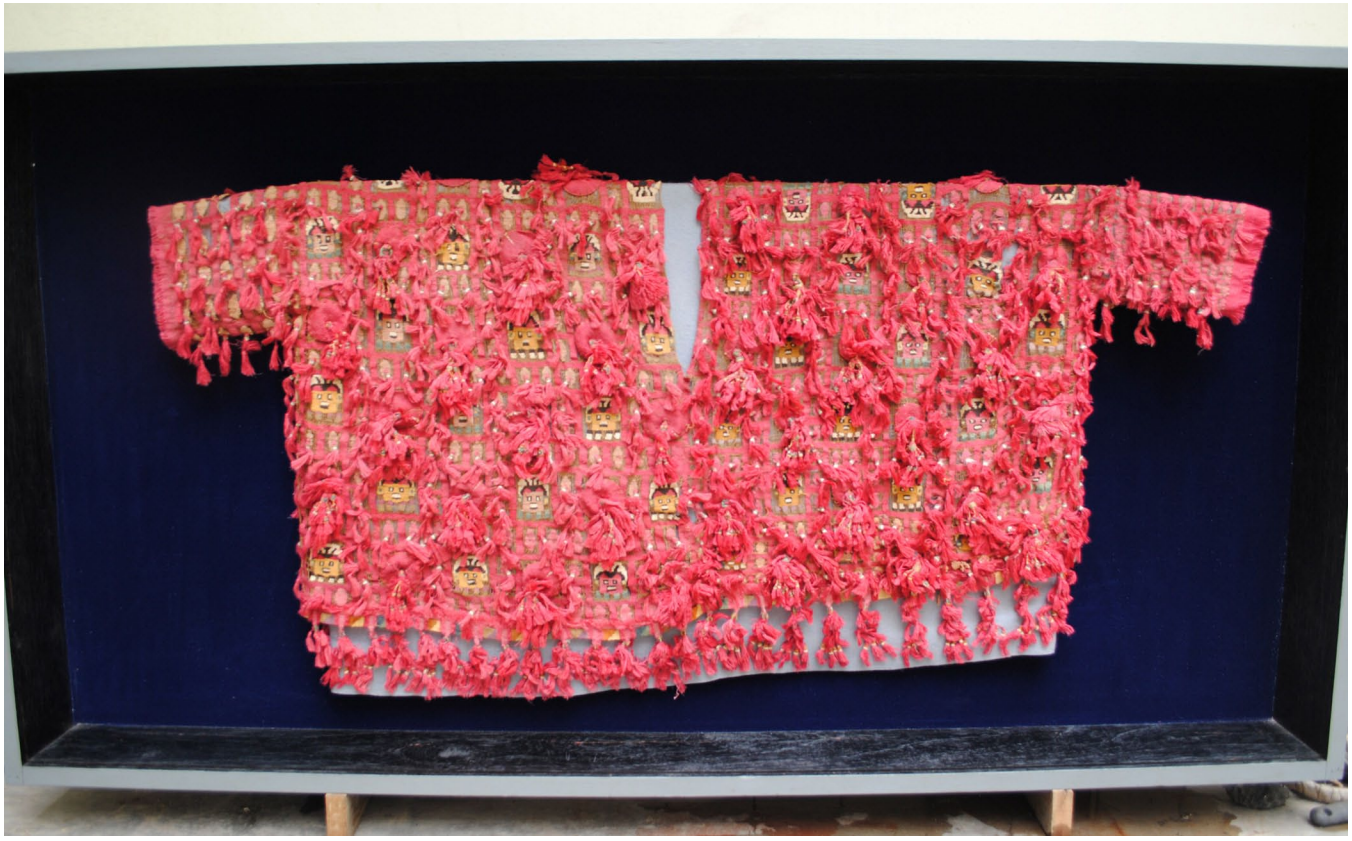

Fig. 9. Camisa Chimú (FMAT-000207) del Museo Amano de Lima. Con su permiso.

La terminación inferior está hecha con borlas aplanadas, en vez de tiras amarillas de tapiz. Tienen dos colores: el superior en rojo y el inferior en amarillo. Esta doble borla tiene como decoración en la parte superior unas caritas hechas de manera muy simple con punto de cadeneta. ¿Posible influencia de la cultura Chancay?

De la parte central delantera es evidente que se recortó una tira, o dos, lo que impide su cierre, como habría sido lo normal en una camisa.

Esta iconografía de cabezas de frente es muy común en la mayoría de textiles Chimú que representan figuras antropomorfas: con tocado, sin él, en forma de media luna, o, en el caso de esta camisa, con cabellera. Normalmente se representan las personas de frente.

Medidas: 62,5 x 98 cm.

La camisa del Museo Amano (Amano & Tsunoyama, 1979: 20, fig. 4) fue hallada en Chancay y es probablemente algo más temprana que el «lote Bird», o quizás tejida más hacia el norte, porque tiene algunos rasgos del estilo Lambayeque, tales como hilos verdes en el tejido tapiz, y borlas en el extremo inferior en vez de fleco de tapicería. Tejida a la plana con urdimbres en Z.

Esta camisa se parece a las del «lote Bird», ppero es de un estilo anterior. Otro dato que demuestra que fue uno de los ejemplares de esa época anterior es el uso, en los diseños frontales y en la banda de flecos, de hilos de fibra de camélido en tejido de tapicería (Rowe, 1984: 44), como se hará posteriormente con las piezas del lote Bird.

Conclusiones

El manto del RJM de Colonia tiene la misma decoración que la camisa del TM de Washington. En todos los sentidos; por lo que dicho manto podría ser la pieza que faltaría para completar el traje: camisa y turbante en el TM de Washington y manto en el RJM de Colonia.

Sobre los mantos: Cuando Ann Rowe (1999: 444) describe cómo son en general las prendas de los conjuntos del «lote Bird», afirma hablando de los taparrabos que son particularmente distintivos porque tienen un panel final ricamente decorado de 90 cm de largo y 110 cm de ancho.

Sin embargo existen otras piezas de mayor tamaño, que por sus medidas y forma rectangular deberían denominarse también mantos. Y así se denominan en la publicación *Kunst der Welt im Rautenstrauch-Joest-Museum für*

Köln (Völker, 1999: 178-179), porque sus medidas son a las claras espectacularmente mayores que la comentada anteriormente: 408 x 115 cm, y está hecha de tres paños. Otro ejemplo lo tenemos en el «faldellín» del conjunto del MCHAP: 367 x 121 cm.

Y citamos de nuevo a Ann Rowe, que en su artículo «Textiles Chimú» (Rowe, 1999: 444) comenta la existencia de un manto de un conjunto que no tiene camisa, único en el «lote Bird». Sus medidas son: 160 x 142 cm, consta de tres paños y está decorado con paneles de esquina escalonados sin bordes. Pero no indica su procedencia.

Sobre los largos faldellines: Por el hecho de ser el paño tan largo, se lo enrollaban alrededor de la cintura, a la vez que se lo pasaban entre las piernas. Debía abultar mucho, y, al enrollarse alrededor del cuerpo tanta tela, quizás colgaba por detrás como si fuera una cola.

En Chan Chan, entre los relieves de barro de la Huaca de los Reyes, hay uno que tiene un arco-iris de gran tamaño y en cuya parte superior se aprecia una serie de tres personajes que caminan en hilera en la misma dirección (de derecha a izquierda). Todos ellos tienen una especie de «cola» que les cuelga por detrás y una lanza entre las manos. Quizás esta «cola» podía ser la parte de tela sobrante de ligarse el largo taparrabos.

A este respecto Ann Rowe (1999: 41) comenta: «es imposible decir exactamente cómo se llevaba esta pieza de tela. Hay muchas maneras posibles de cubrirse con una pieza de tela tan grande y es inútil hacer especulaciones.» Muy probablemente, el efecto final era el de una falda.

Finalmente, es interesante decir que de las nuevas piezas encontradas y presentadas en este estudio, tres en Colonia y una en Barcelona, creemos firmemente que las tres primeras podrían pertenecer al «lote Bird» y que la cuarta es algo anterior, pero su estilo es el mismo. Únicamente difiere en que tiene borlas en el extremo inferior en vez de tiras de tapicería (como se ha citado más arriba) y en conjunto la camisa no tiene tantas borlas como las del lote Bird. Todas ellas forman parte de esos ejemplares «perdidos» por el mundo, de los que quedan muchos fragmentos por encontrar y describir.

Victòria Solanilla
Mayo de 2016

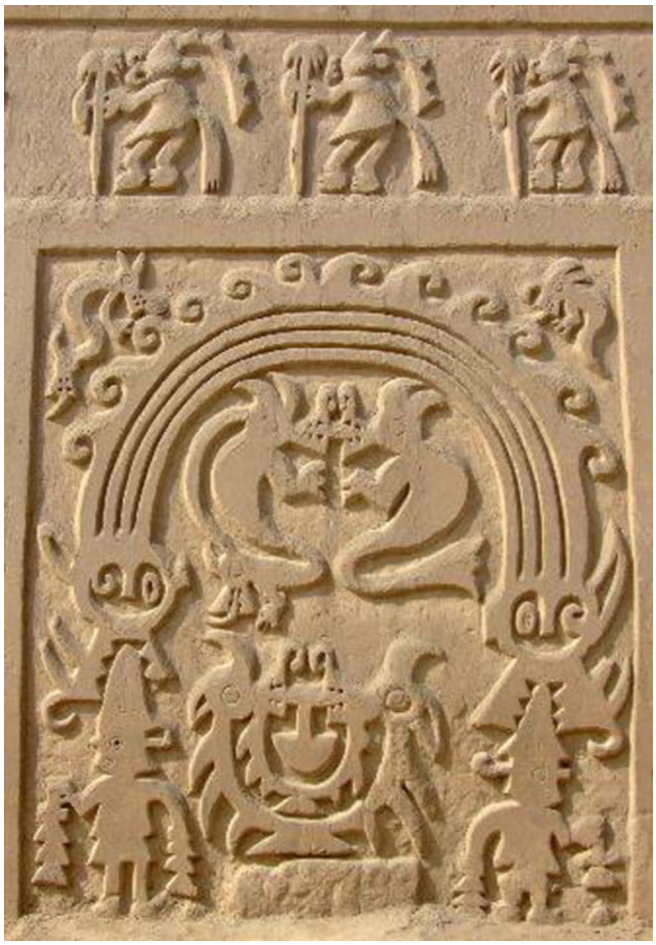

Fig. 10. Relieve de la Huaca de los Reyes de Chan Chan. Obsérvese la cenefa superior.

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18

Structure, Design, and Gender in Inka Textiles

Blenda Femenías

Catholic University of America

Abstract
This paper focuses on Inka textiles that apparently were made specifically for or were used by males or females in pre-Columbian times. In particular, I address relationships among tapestry-woven objects (especially those featuring *tukapus*, rectangular design blocks) and those created using warp-patterned structures, centering on garments and personal accessories. While there are fewer extant full-size garments associated with females than with males, the availability of a large number of miniature female-associated garments both facilitates and complicates gendered comparisons.

Estructura, Diseño y Género en Inka Textiles

Resumen
Este ensayo se enfoca en textiles Inka que aparentemente fueron creados o utilizados específicamente por personas masculinas o femeninas en tiempos pre-columbinos. En particular, se abarcan las relaciones entre los objetos tejidos en tapiz (especialmente los que incluyen *tukapus*, bloques rectangulares de diseños) creados con estructuras en patrones de urdimbre, en particular vestimenta y accesorios personales. Aunque existen menos ejemplares de prendas al tamaño pleno asociados con individuos femeninos que los asociados con individuos masculinos, la existencia de gran número de prendas en miniatura con asociaciones femeninas tanto facilita como complica las comparaciones de género.

Introduction

In this essay, I assess current research into Inka textiles and their gendered dimensions, and offer possible future directions for their continued study. Especially through considering extant Inka garments, I attend to the ways in which relationships among textile structure and design articulate conceptually and practically with gender. I begin by considering salient features of Inka culture and society in terms of how we know what we know about the Inkas and their garments. These features include gendered aspects of Inka society that are conveyed in representations of the body. A closer look at key points about Inka textiles includes characteristic woven structures, design motifs, and layouts that connect significantly to garments used by male and female persons. Ruminating on the ways in which the existing research has been shaped by the character of the material record, I consider possibilities for continued explorations of Inka dress and gender.

Central to my exploration are Inka textiles that apparently were specifically made for or used by males or females in pre-Columbian times. In particular, I address relationships among tapestry-woven objects (especially those featuring *toqapus*, rectangular design blocks) and those created using warp-patterned structures. My analysis includes both garments and personal accessories. While there are fewer extant full-size garments associated with females than with males, there are a large number of small-scale, or "miniature" female-associated garments; that availability both facilitates and complicates gendered comparisons.

Representations of the Inkas

Our understanding of the Inkas is strongly influenced by the character of the available evidence, which is connected to several unique features of preservation and destruction. In the 1530s, the Inkas controlled a large extent of western South America; in terms of contemporary nations, the

territory stretched from Colombia into Chile and inland as far as central Bolivia (Morris and von Hagen, eds. 1993; Matos and Barreiro, eds. 2015; Shimada, ed. 2015). When the Spanish invaded, the Inkas' political control of this large expanse was far from stable; this situation created several paradoxes related to the preservation and destruction of society overall, and of the material record in particular. The character of the evidence that remains is heavily imbued with the worldviews of both the European colonizers and the diverse Andean people who became the colonized.

Even to record terms for objects in Quechua—the language of the Inkas—and to provide Spanish language equivalents was a daunting task. Among the earliest sources that offer information about garments and textiles is Diego González Holguín's 1608 Quechua-Spanish dictionary, first published 66 years after the Spanish invasion (González Holguín 1608, 1952, 2007; Yapita, Arnold, and Aquilar 2007). In the early seventeenth century as well, Felipe Guaman Poma de Ayala produced a letter to the king of Spain in which he documented colonial abuses and offered his views of pre-Columbian as well as contemporary Andean societies (Guaman Poma 1980 [1615], 1987, 2001). One point that Guaman Poma makes is that the conquistadors destroyed persons and objects illegitimately because they did so outside the context of war as Andean people understood it. For example, he accuses Francisco Pizarro personally of burning alive some of Guaman Poma's own ancestors (2001: 396[398]; on "ancestor/mummy," Quechua *mallqui*, see MacCormack 1991: 406 and Salomon 1991: 20). Such willful destruction of human beings and their property contributes to the paradoxes to which I refer. In the 1530s, the Inkas were the currently dominant Andean society; logically, we would expect more Inka textiles to survive than those of any other pre-Columbian group. That is not the case. In Inka mortuary practices, bodies were often preserved, kept above ground, and periodically removed for rites of veneration. Other, earlier societies, such as Paracas, had buried the dead deep in the ground, where they were not disturbed for many centuries, and the textiles on and around the bodies were both plentiful and well preserved (see, among others, Paul 1991).

The Inkas themselves burned textiles as sacrificial offerings, according to several Spanish chroniclers (Murra 1989: 281). From 1532 on, the Spanish destroyed thousands of Inka garments incidentally while burning the living and dead persons who were wearing them and in the process of looting tombs for gold and silver objects (MacCormack 1991, Ramos 2010, Salomon and Urioste 1991). They also burned many warehouses in which cloth was stockpiled at strategic points throughout the empire, but the Inkas themselves destroyed warehouses filled with their cloth to keep textiles and other precious goods out of Spanish hands during the wars of conquest (Murra 1989: 288).

Today few of the surviving Inka textiles that inhabit museums and collections come from archaeological contexts, so establishing provenance is generally impossible. Within the existing material record, technical specificity provides the most accurate means of identifying objects as Inka. The technical and stylistic evidence that the textiles themselves provide has been vital, therefore, in ascertaining their cultural affiliation: when structure and style are standardized, even small variants can be telling and those idiosyncrasies can suggest local or regional specificities (A. Rowe 1978, 1992; J. Rowe 1979).

In addition to entombing ancestors in stone structures, the Inkas also buried human bodies at very high altitudes on snow-capped peaks. A few examples had been known since the mid-twentieth century, such as Cerro El Plomo in northern Chile (Mostny 1957, von Hagen 1993). In recent years an increasing number of such burials have come to light, notably in southern Peru and in Argentina. Many of them have been excavated archaeologically, such as at Llullaillaco, Salta, Argentina (Beorchia 1975, Ceruti 2003). Taken together, these finds have substantially added to the corpus of provenanced textiles as well as provided examples of additional variants of the Inka repertoire, such as full-size and tiny garments, many now in the Museo de Arqueología de la Alta Montaña, Salta, Argentina (Abal 2010; http://www.maam.gob.ar/index1.php; http://mariastenzel.photoshelter.com/image/I0000.KspEm7bBjE).

Certain characteristics of Inka art contribute to even as they limit our ability to understand both Inka garments as specific types of textiles and the bodies that the garments cover and adorn. Realistic representational art tends to be the exception rather than the norm. Stylistic regularities in the depiction of human forms do not effectively encourage the visualization of how Inka garments looked *as garments*–how they were reshaped and transformed while people were wearing them and after being removed, as the bodies within them affected the fibers' memory.

Inka full-size, three-dimensional sculptures of human forms, which sixteenth-century Spanish chroniclers mention seeing displayed in Inka buildings, do not survive (MacCormack 1991: 258). The 3D sculptures that remain are metal figurines of nude males and females, ranging from about two to six inches high, such as those in the Dumbarton Oaks Research Library and Collections, Harvard University (PC.B.474, http://www.doaks.org/resources/bliss-tyler-correspondence/art/pc/PC-B-474.jpg/view) and the National Museum of the American Indian (5/4120, http://nmai.si.edu/inkaroad/inkauniverse/cusco/cusco-experience.html). Similar, relief-carved thorny oyster (*Spondylus*

princeps; Quechua *mullu*) shell figurines also exist. Often they were associated with the high-altitude burials, such as the figurines in the Museo de Arqueología de la Alta Montaña, (http://www.maam.gob.ar/index1.php#). In addition to the garments identifiable as Inka that were preserved on frozen human bodies in the burials, tiny garments made were made for the figurines. The more recently discovered burials often contained numerous figurines, fully dressed in clothes identical or similar to those of the humans they accompany. Among the figurines known previously, dressed figurines had been the exception as many of them had survived nude, with the surviving garments scattered in many collections and difficult to identify. Numerous aspects of the figurines have increasingly drawn the attention of scholars (see, especially, Abal 2003, 2010; Dransart 1995; Martínez 2007; McEwan n.d. [2016]; Phipps 2004; and A.P. Rowe 1997).

Along with the finite amount of extant material, the character of Inka art severely limits our understanding of the repertoire of pre-Columbian Inka garments and the ways in which they were worn. Our thinking, therefore, is disproportionately influenced by the colonial record. The chronicle of Martín de Murúa (1616, 1987) contains watercolor illustrations of Inkas, including several of the supreme or Sapa Inka and of the Coya, his female counterpart. The sixth Inka, Inca Roca, and his young son, Guaman Capac Inca, are both depicted wearing patterned tunics and large mantles in the Murúa manuscript; see also Guaman Poma (2001: 103[103]). Felipe Guaman Poma de Ayala, whose manuscript contains almost 400 images, is the most prolific and most widely cited colonial artist who depicts Inka attire (Guaman Poma 1980[1615], 1987, 2001). While he most likely did see garments that were produced before 1532, when the Spanish arrived in Peru, he was probably born about the same time (Adorno 1980) so many of his impressions are of post-contact production. He provides individual depictions of all 12 Inkas and Coyas who ruled the empire through just after the Spanish invasion (2001: 86[86]-143[143]). The eighth Coya, Mama Yunto Cayan, wears an elaborate ensemble of dress and mantle; the two small females flanking her wear similar but less ornate garments (2001:134[134]-135[135]). Many Guaman Poma drawings show design features that resemble but do not exactly match those on extant textiles.

Inka Garments and Their Gendered Features

The colonial illustrations, therefore, complicate rather than expand our knowledge of pre-Columbian gendered patterns of dress. It is the objects themselves that can provide reliable evidence. Overall, that evidence indicates that in the Andes before Europeans arrived, there were clear distinctions between male and female dress although some garments were similar. The mantles worn by people of both genders are all large rectangles; those worn by males and females usually differ in size, proportions, and designs, and sometimes in woven structure. In Quechua, the male's mantle was called *yakolla* and the female's version, *lliklla* (González Holguín 1608).

The tunic, it seems, was exclusively a male garment and an important one (see discussion in Femenías 2013b). The basic rectangular tunic (*unku*) was generally sleeveless as are all the known Inka examples. Like most other pre-Columbian garments, it was not tailored to fit the human body but loosely surrounded the body and obscured its contours. In pioneering works, John Howland Rowe and Ann Pollard Rowe detail the stylistic unity and standardized set of design and structural options that generally characterize Inka textiles. The Inka tunic type shows remarkable technical consistency, from tapestry weave to embroidered edgings (A.P. Rowe 1978). It is immediately recognizable as well from its narrow iconographic repertoire (J.H. Rowe 1979). As the abstracting tendencies in the art of earlier cultures reached their zenith among the Inka, recognizable figural representations almost vanish.

One simple but elegant, standard layout of the Inka *unku* is a horizontal polychrome band of diamonds on a plain ground, sometimes with different colors above and below the band; J.H. Rowe (1979: 245) named this the "diamond waistband" type. The band is often a single row of repeated, identical, concentric stepped diamonds; those in museum collections include a white tunic in the Metropolitan Museum of Art (http://www.metmuseum.org/Collections/search-the-collections/50007194?; see Femenías 2013b) and several examples in the Textile Museum (A.P. Rowe 1978: 9-19). Other banded tunics feature two rows of geometric patterns such as those Murúa shows, one worn by the young Guaman Capac Inca discussed above and another worn by the Inka Lloque Yupanqui that closely resembles a tunic in Arequipa, Peru (Phipps et al. 2008: 127-128).

A combination of repetition and symmetry with alternation characterizes another typical Inka tunic design, which consists of diagonals with blunted points and dots or rectangles, often nearly square (for an example in the Textile Museum, see https://www2.gwu.edu/~textile/AheadofHisTime/timeline3.html). This design has been widely referred to as the "Inka key" since J.H. Rowe (1979: 245) so christened it. Although the arrangement in tunics is often a checkerboard, the motif also appears alone, as it does in numerous places in several colorways on a tunic in Dumbarton Oaks (PC.B.518, http://www.doaks.org/library-archives/dumbarton-oaks-archives/historical-records/75th-anniversary/images/PreColumbianTextile.jpg/view; see Femenías 2013a: 29, Fig. 3; Stone 2007). The individual rows of the checkerboard can also be seen as sets of alternating colors

and directions of the motif, forming zigzags with flattened points. Both the individual motif and sets of two facing motifs occur in different forms in garments woven in other structures and in many other Inka art forms (Femenías n.d.c [2013], Phipps 2004: 21-22, A.P. Rowe 1997), and the abstraction is an aspect of representations of body parts including arms and hands, and mouths and teeth (Cummins 2002: 93-94).

In addition to the numerous examples of full-size tunics in collections, tiny tunics exist; some male figurines found in burials were dressed in Inka key tunics. Two such tunics are associated with figurines found in Aconcagua and Llullaillaco burials (Abal 2010: 300-301, Imagen 133 and 364-365, Imagen 169). The overall layout, the organization of color alternation, and the finishing details of the tiny tunics correspond precisely to those of several full-size tunics. The blocks are red-on-yellow and green-on-navy blue, exactly as in the Dumbarton Oaks tunic and the Textile Museum tunic; the colored blocks, along with red and navy blue horizontal stripes, also alternate as in the Textile Museum tunic and several others. (Abal 2010: 332-335, Imagenes 56 and 57, shows a virtually identical tunic, Pieza N-33, but gives the dark color as black rather than navy blue). The tiny tunic from Aconcagua also has the embroidered edge finish and zigzag hemline embroidery that are characteristic of full-size tunics. While the small-scale garments have routinely been called "miniature" (e.g., see A.P. Rowe 1997), including by me, I now see that as a misnomer. This tiny tunic, for one, is not truly a miniature: it does not duplicate the larger version; rather, it has only two rows of blocks and three stripes where the Textile Museum tunic has eight rows of blocks and five stripes. The weaver chose to render motifs that include all the details of the full-size motifs rather than to simplify them and include the same number of motifs on the reduced-size garment; this choice seems to indicate that the elements selected were the important ones. These details include the blunted ends of the diagonals, the concentric rectangle of alternating color "dots" in the opposite corners, and placement of the red-on-yellow block in the top left corner.

A variant of this design, zigzags-and-squarish dots, is also prominently featured on woven bags found with the figurines(Abal 2010: 299-300, Imagen 132; 303-304, Imagen 135; and 308, Imagen 138). While the tunic seems to be tapestry woven, the bags closely resembles the complementary-weft and/or complementary-warp patterned bags discussed by A.P. Rowe (1997: 7-9, figs. 4-6).

In contrast to the standard male garments of tunic and mantle, which differ considerably in layout and structure, two female garments are apparently more similar to each other in both ways. One basic female garment was a wrapped dress such as the one from Museo Sitio Pachacamac (MSPACH 595, Phipps 2004: 130-132, Cat No. 3). The dress was called in Quechua *aksu*, or, usually in Ecuador or northern Peru, *anaku* (A.P. Rowe 1997: 12). The other garment was the mantle or shawl, Quechua *lliklla* such as one in the Textile Museum (91.366, A.P. Rowe 1997: cover, 20, fig. 27). While Inka tunics are generally tapestry woven, Inka dresses may be tapestry but are more likely complementary-weft or complementary-warp patterned (as the Museo Sitio Pachacamac dress) in combination with plain weave; it is often quite difficult to distinguish the warp or weft direction, especially when the selvedges are covered by applied edge finishes (A.P. Rowe 1997: 12-16, figs. 11-17; see also Phipps 2004: 21-22, who uses the terms "warp float" and "weft float," and considers weft float and tapestry as conceptually equivalent in the Quechua term *qompi*, which I discuss below).

Many of the clothed metal figurines in the high-altitude burials represent females. Numerous tiny *aksus* and *llikllas* also survive, independent of the female figurines with which they were probably originally associated, in museum collections. The shawls found on the figurines are usually made to be worn folded, while the known full-size garments are more likely to have been worn unfolded. An *aksu* and a *lliklla*—which were likely often made in sets but have become separated—may be very similar in their woven patterning but can best be distinguished by their size and layout, and sometimes by the placement of holes made by pins that secured them when worn (A.P. Rowe 1997: 20).

Female garments, both full-size and tiny, employ warp- or weft-patterned zigzags-and-dots as a common motif. The alternation of dark- and light-background blocks, and the red-and-yellow color pattern also frequently appear on female garments. Among extant Inka dresses, the preponderance of the zigzag-and-dot pattern is striking, as is the variety of permutations of the basic pattern. A.P. Rowe notes that full-size garments with this type of patterning became known more recently than the tiny versions (1997: 14). Isabel Martínez, analyzing the use of variants of this pattern on numerous tiny female garments, notes that red-and-yellow is the dominant color scheme in the garments she examined, with isolated instance of red-and-purple (2007: 5). Regarding color and dyeing, however, she also asserts that the use of dyed yarns indicates high rank and that undyed yarns, correspondingly, lower rank (ibid.: 4). This idea cannot be substantiated, however, as there is extensive use of white in Inka garments, such as the Metropolitan Museum's Inka tunic discussed above, and as the dominant color in numerous Inka dresses, both full-size and tiny, and of cotton and camelid fiber (A.P. Rowe 1997: 14, 16). Together these indicate that undyed and/or white yarn was probably another

indicator of high status—quite likely connected to the quality of the fiber used and the skill deployed in creating finely spun, tightly plied yarns (ibid.: 9).

The variability of the pattern is evident in a complex version of the zigzag and "dot" ona *lliklla* in the Textile Museum (91.366; see A.P. Rowe 1997: cover, 20, fig. 27). A wide band spanning the full width is composed of three patterned bands, with red-and-yellow flanking red-and-dark purple (almost black). The zigzags terminate in rectangular dots within each color block, and four diagonals often form a diamond containing four different color combinations. The "dots" do appear singly but are of various lengths, and most are in groups of three or four, sometimes doubled to six or eight. Each dot is rectangular rather than square, and one end often has an extended tab. They suggest, among other images, corn kernels.

The fact that Inka key and zigzag-and-dot designs in numerous permutations occur in both male and female garments suggests that the significance of specific alterations may be linked to gender. Dransart (1995) has linked the zigzag to a serpent, Quechua *amaru*, and Martínez (2007: 5) similarly cites R.T. Zuidema's (1967) discussion of the connection between the Amaru name to females and a high-ranking pre-Columbian Inka lineage. While such associations seem logical, numerous other identifications are also possible; studies of zigzag patterning in twentieth-century Andean weavings have obtained the term *mayu kinku*, Quechua "winding river," for this design.

Overall, there are considerable differences between male- and female-associated garments, which raises questions about the reasons for those differences. Within the corpus of extant Inka garments, complementary-warp and complementary-weft patterning seem to be more associated with garments for females, and tapestry with those for males. However, the size of that corpus is so small compared to the number of garments produced for Inka use—whether during or after the Inkas' and Coyas' lifetimes, and including for ceremonial offerings—that we must proceed with caution. Are the differences primarily an artifact of the material record?

It is striking that in the finest extant weavings that can be dated to pre-Columbian times, tapestry is used so often for male-associated garments and so rarely for female ones. Elaborately patterned *unkus* are almost all tapestry woven; elaborate *aksus*, hardly ever. Ann Rowe notes that a woman's shawl (*lliklla*) in the Museo Regional de Ica that recently (as of the mid 1990s) had come to light was the "first known tapestry-woven woman's garment" (1997: 18-19, fig. 23). The practical qualities of the fabric resulting from different woven structures account for some choices. As *aksus* are worn folded and wrapped, and held closed with pins, it may be that tapestry weave provided a less desirable texture for that manner of use. Nevertheless, functionality cannot fully explain the gendered differences; in bags, for example, no advantage accrues to warp-patterning over tapestry, and both structures are used. Perhaps the situation is that more male-associated garments have been preserved. Disproportionate survival could be an artifact of the hierarchical structure that privileged male persons over females, a disparity that is likely to have increased in the early colonial era (Silverblatt 1987; Dean 1999; Graubart 2007). Design features associated with the highest ranks appear not only on garments. Those features are more readily woven in tapestry, which is better suited to forming discrete units. The association of those features with gender seems linked to colonial changes.

Toqapu: Virtuosity and Gender

Inka woven clothing and objects made in other media often feature *toqapus*, complex geometric motifs, usually rectangles, frequently almost square, and generally framed. While use of this Inka motif was apparently confined in pre-Columbian times, it expanded significantly in the colonial era, as scholars have often discussed (Femenías 2003, Cummins 2011). *Toqapus'* presence on Inka tunics has received consistent attention, but its more-recently addressed and significant presence in other media needs further attention (Cummins 2011). The singular tunic in the Dumbarton Oaks collection mentioned above represents, on several levels, the epitome of the complexity of Inka weaving (PC.B.518; see discussion by A.P. Rowe 1978; J.H. Rowe 1979, 1996; Stone 2007; and Hamilton 2014, among others). The technical virtuosity of the tapestry, including a very high thread count, and the apparently random assortment of many different motifs—some of which are identical and others that vary only by color or small details—are two prominent features to which analysts almost always point. In another way, however, the technical ability shown is less extreme than we might think. First, the object is not large but is a standard-sized tunic to fit the human body, measuring about 183 cm (folded at shoulder to 91.5 on longest side) x 77 cm; second, tapestry weave itself is not complicated structurally. Also, although exceptionally well woven overall, the tunic does contain more than a few flaws and irregularities.

Guaman Poma offers numerous drawings of Inka emperors who wear all-*toqapu* tunics, leading interpreters to label the tunic as "royal" (see discussion in Stone 2007). Yet among those who wear this type, according to Guaman Poma, one of the most important men he calls emperors ruled after the Spanish Conquest: Tupac Amaru, the last Inka to rule the Vilcabamba territory, whom the Spanish

executed in Cusco in 1561 (Guaman Poma 2001: 119[119]). This image of the Inkas' defeat is closely associated with a *toqapu* tunic, but the presence and evidence for continued use of many colonial *toqapu* tunics raises questions about the legitimacy and hierarchy of Inka rule (Dean 1999; Pillsbury 2002, 2006).

It is in the realm of *toqapu* as well that the gendered dimensions of the use of a design feature are most strikingly played out. While colonial female garments are often jampacked with *toqapus*, in combination with other motifs and patterns, we do not have pre-Columbian female *toqapu*-patterned garments—despite the fact that Guaman Poma repeatedly shows pre-Columbian Inka women wearing them, such as Mama Yunto Cayan (2001: 134[134]). Thus, while the Dumbarton Oaks all-*toqapu unku* is certainly a paragon, it is unique in another way as well: it seems to be missing its mate. One question that remains unanswered is one I posed in an earlier discussion of gender and *toqapu*s (Femenías 2003). Where is the "Dumbarton Oaks *aksu*"? Will we perhaps one day come to know an all-*toqapu* pre-Columbian woman's dress?

One factor connecting garments made in different woven structures is that the cloth is finely woven, Quechua *qompi*, a term long thought to apply to tapestry but now acknowledged to include a range of finely made cloth (as numerous authors discuss; see for example Murra 1989; A.P. Rowe 1978, 1997). Given the limited size of the sample of Inka textiles, however, we cannot know if textiles using all kinds of patterning would have been covered by the *qompi* rubric, or if the term refers more appropriately to the status of the persons using those textiles. The link between structure and hierarchy, that is, may be more social than technical.

Given that the recent advances in our knowledge of Inka dress rely so heavily on the figurines in the high-altitude burials, we can also wonder if such an *aksu* would be tiny rather than full size. As the tiny garments have already expanded our knowledge of gender and dress, in what ways might they do so in future? Overall, the garments corroborate available information about full-size garments, which indicate clear distinctions between male and female dress. Research by Clara Abal (2003, 2010), however, discussing a female figurine clothed in a tunic, indicates that bodies and dress are not always perfectly correlated by gender, reminding us that no isolated garment can definitively be considered "male" or "female." Recent research on Spanish Christian colonial attitudes toward indigenous gender identities, sexual behaviors, and ritual transvestism provides paths for further insights into pre-Columbian concepts of social personhood that were likely not confined to rigid dimorphism (Dean 2001; Horswell 2005).

Along two interdependent avenues, examining gender through the extant garments can also expand our knowledge and ways of thinking. The complexities of design, whether executed in complementary warp- or weft-patterning or in tapestry, need further investigation. The striking similarities between tapestry-woven motifs, including *toqapus*, and those achieved in different structures need closer examination in terms of the gender-associated tendencies they seem to demonstrate. Smaller-scale technical features, from fiber to spinning and dyeing—or the lack thereof—can also provide additional clues.

Perhaps most frustrating for students of dress is how little we know about what the Inkas looked like, nude or clothed. Bioarchaeology studies of Inka bodies from burials increasingly provide more information about people's physical appearance. Other technological developments, especially 3D modeling based on inputting multiple characteristics of extant garments, are likely to help make concrete our vision of the garments' appearance when living Inkas wore them, and how the meanings of dress provide glimpses into the larger dimensions of the Inka creative universe.

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19

Lambayeque Textile Iconography and its Continuity in Chimu and Inca Cultures, and its link to modern Ecuadorian Pujilí Corpus Christi Celebrations

Yvonne Fleitman, Senior Curator; and Alisa Baginski, Textile Historian

Art of the Americas Department, The Israel Museum, Jerusalem

Abstract

This paper traces the continuity of the iconography and rituals expressed in the textiles of the Late Intermediate Period (900-1470 CE) of the North Coast of Peru.

We suggest a new identification for the Principal Deity of the Lambayeque culture. We propose that this image and its attributes continued to be displayed in ceremonial costumes of the later Chimu culture; that the rituals continued into the Inca Period; through the Colonial evangelization of the Americas; and even into contemporary Corpus Christi processions in Ecuador.

Keywords: Principal Deity of Lambayeque, Andean bear, spectacled bear, Lambayeque iconography, Chimu, Moche arc, bicephalic serpent, feathered scepters, Pujilí Dancer, Octavas de Corpus Christi processions

Iconografía textil Lambayeque y su continuidad en las culturas Chimu y Inca, y su vinculación con el Danzante Pujilí en las celebraciones del Corpus Christi Ecuatoriano

Resumen

Este artículo describe la continuidad de la iconografía y los rituales representados en los textiles del Período Intermedio Tardío (900-1470 d.c.) de la Costa Norte del Perú.

Sugerimos una nueva identificación para la Deidad Principal de la cultura Lambayeque. Proponemos que esta imagen y sus atributos continuaron siendo utilizados en trajes ceremoniales de la posterior cultura Chimú; que los rituales continuaron hasta el período Inca; luego durante la época colonial a través de la evangelización de las Américas; e incluso se distinguen en las procesiones contemporáneas de las Octavas de Corpus Christi en Ecuador.

Palabras claves: Deidad Principal Lambayeque, oso andino, oso de anteojos, iconografía Lambayeque, Chimú, arco Moche, serpiente bicéfala, cetros emplumados, el Danzante de Pujilí, Procesiones de la Octava de Corpus Christi.

Introduction

We would like to propose that the image of the Principal Deity of Lambayeque was based on, and developed after, the Andean bear (*Tremarctos ornatus*). This bear, more commonly known as the spectacled bear (*oso de anteojos*), is the only extant bear native to South America – a threatened species spotted in recent years in Ecuador and Peru. It is estimated that fewer than 3000 exist in the dense Andean jungles[1] of South America. The spectacled bear has a dark body, but the most distinctive feature of the male is the white hourglass pattern on its face. The hourglass pattern runs down from the forehead, encircles the eyes, and broadens over the snout, chin, and chest. The eyes are adorned with concentric black and white circles, resembling eyeglasses, hence the term "spectacled"[2] (Fig. 1).

1. With the notable exception of the dry forest-scrub habitat in north coastal Peru. See the IUCN Red List of Threatened Species™ website, accessed March 19, 2017, http://www.iucnredlist.org/details/22066/0.
2. Each bear has its own unique markings, similar to human fingerprints.

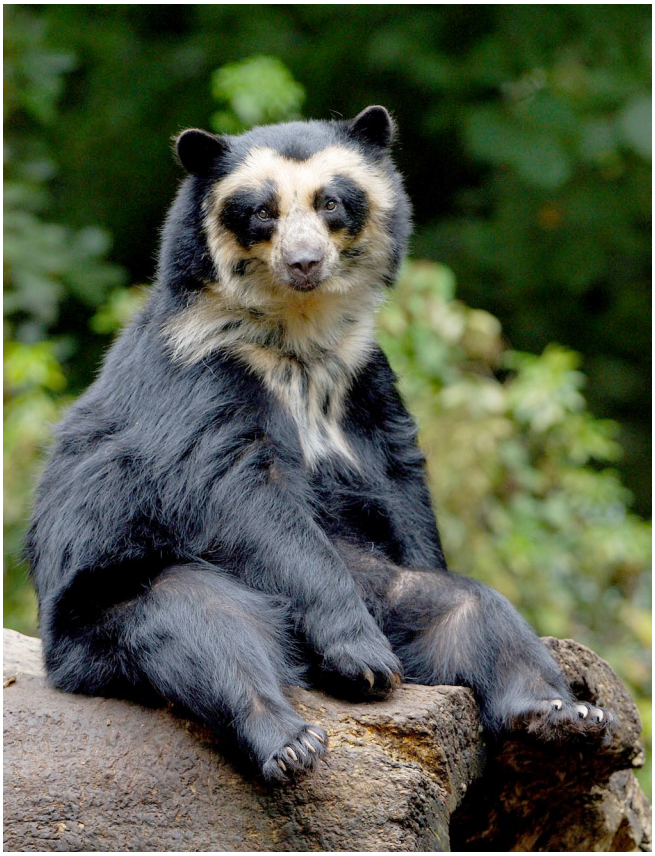

Fig. 1. Andean Spectacled Bear (*Tremarctos ornatus*). Photograph © Arco Images GMBH / Alamy Stock Photo

A tapestry textile fragment in the Israel Museum collection depicts a similar frontal black and white face, with spectacled eyes, hourglass nose and gritted teeth, which offers a striking resemblance to the image of a fierce spectacled bear. This image was mistakenly identified as a feline in the past, because the animal was unknown until several decades ago (Fig. 2).

A reconsideration of the image of the Principal Deity of Lambayeque in other textiles is revealing. The attributes present a frontal figure with a very tall headdress, with elaborate crescent-like feather headdress; spectacled eyes (or the so called "comma shaped eyes"); hourglass nose; a tight neckpiece under the chin – reaching up to the ears – in the form of a bicephalic serpent; gritted teeth; sometimes the deity holds one or two scepters.

Fig. 2. Fragment with depiction of the Andean Spectacled Bear (*Oso de Anteojos*)
Lambayeque, Peru, 1100–1350 CE
Camelid fiber; tapestry, brocade, 24 x 35 cm
B79.0891 The Israel Museum, Jerusalem

In two textiles of the Israel Museum, Jerusalem (IMJ) featuring the Principal Deity of Lambayeque, most of these attributes resembling the bear are depicted[3]. The spectacled eyes or the so called "comma shaped eyes" may have been inspired by the double lines around the bear's eyes. Also represented are the hourglass nose, the gritted teeth (Fig. 3); and the neckpiece that resembles the white collar (or pectoral) on the chest of the bear (Fig. 4). To affirm our position, several ceramic bottles of the Principal Deity of Lambayeque shaped in the form of a four-legged bear-like animal are in the collection of the Museo Regional Arqueológico Enrique Brüning,[4] and cited by Jose Antonio de Lavalle.

The attributes vary according to their material: in funerary metal masks the Deity appears as a broad face with spectacle/"comma shaped eyes" and a prominent nose. The IMJ gold mask (Fig. 5) has at its sides protrusions of heads that suggest the bicephalic neckpiece, similarly depicted with four heads, on the finial of the Chornancap Priestess scepter.[5] In ceramics the Principal Deity of Lambayeque – who scholars identify with Naymlap, the legendary ruler and conqueror who came from the sea – has pointed cones on the forehead, the so called "huaco rey" bottle (Fig. 6).

3. Panels B14.1949 and B14.1950 are fragments from the same loom.

4. The collection of the Museo Regional Arqueológico Enrique Brüning in the city of Lambayeque includes a ceramic vessel representing the Principal Deity of Lambayeque as a zoomorphic figure. See Carol J. Mackey, "Los Dioses que Perdieron los Colmillos," in Kryzysztof Makowski et al. (eds.), *Los Dioses del Antiguo Perú, Vol. 2* (2001), Fig. 8, 118. For images of the same vessel and another virtually identical vessel, see José Antonio de Lavalle, *Lambayeque*: Culturas Precolombinas, *Colección Arte y Tesoros del Perú*, 1989, 32–33.

5. See Carlos Wester La Torre, *Chornancap: Palacio de una Gobernante y Sacerdotista de la Cultura Lambayeque*. Ministerio de Cultura, Peru, and Brüning National Archaeological Museum, 2016, 309, Fig. 192.

Fig. 3. Panel with depiction of the winged Principal Deity of Lambayeque and attendants
Lambayeque, Peru, 900–1350 CE
Cotton, camelid fiber; tapestry, 24 x 41 cm
B14.1949 The Israel Museum, Jerusalem

Fig. 4 Panel with depiction of the Principal Deity of Lambayeque assisting a llama giving birth
Lambayeque, Peru, 900–1350 CE
Cotton, camelid fiber; tapestry, 21.5 x 25 cm
B14.1950 The Israel Museum, Jerusalem

Fig. 5. Funerary mask with depiction of the Principal Deity of Lambayeque
Lambayeque, Peru, 900–1100 CE
Gold, copper, pigment, 35 x 51 x 23.5 cm
B79.0935 The Israel Museum, Jerusalem

Fig. 6. Bottle in the form of the Principal Deity of Lambayeque with headband (detail)
Lambayeque, Peru, 900–1100 CE
Clay, turquoise inlay, 23 x 16.5 x 18 cm
B03.1409 The Israel Museum, Jerusalem

Fig. 7. Textile fragment depicting the Principal Deity of Lambayeque Published in José Antonio de Lavalle, *Lambayeque: Culturas Precolombinas.* Banco de Crédito del Perú, 1989, 143

Fig. 8. Ceremonial attire including: a feathered crown, a headband with silver cones, a small feathered tunic
Chimu, Peru, 1200-1470 CE
Crown: copper, reeds; cotton, applied feathers, plain weave on paired warps, resin
26 x diam. 13.5 cm
Headband: camelid fiber, tapestry; silver
51 x 3.5 cm
Tunic: cotton, applied feathers; plain weave on paired warps; camelid fiber, tapestry; spondylus beads, silver, 64 x 51.5 cm
B79.0384(24), (27), (35)
The Israel Museum, Jerusalem

Lambayeque Iconography and its continuity in Chimu Culture

The Principal Deity of Lambayeque appears on a textile fragment published in *Lambayeque*, *Colección Arte y Tesoros del Perú*[6] (Fig. 7). The face of the Deity is recognizable as that of a bear, particularly because of the snout. He is dressed in full regalia with all his attributes (described above). In addition he wears a tunic with metal plaques, to which quadripartite bell-like ornaments are attached. He also wears shoes that have applied plaques, and pointed toes (or possibly paws?). He holds two scepters.

In the extensive Chimu collection of the Israel Museum, there is an assemblage of a royal or aristocratic burial chamber[7] that contains 54 objects dating from 1200–1470 CE that illustrate the riches of Chimor.

This assemblage of ceremonial attire contains, in three dimensions, all the attributes of the Principal Deity of Lambayeque depicted in the Lavalle textile fragment: a tall multicolor feathered headdress trimmed with yellow feathers; a small feathered tunic with silver quadripartite bell-like ornaments (Fig. 8); small and non-functional shoes with

6. José Antonio de Lavalle, *Lambayeque*: Culturas Precolombinas*, ibid.* 143.

7. The Armand Pierre Arman Collection, IMJ. A similar assemblage was first published in 1984 by Ann P. Rowe, in *Costumes and Featherwork of the Lords of Chimor*: *Textiles from Peru's North Coast*. Washington, DC: The Textile Museum, 1984, 151-164. Such assemblages are also found in the collections of Museo Larco, Lima; The Textile Museum, Washington DC; The Metropolitan Museum of Art, New York.

Fig. 9. Silver scepters, headband, neckpiece, a pair of small shoes
Chimu, Peru, 1200–1470 CE
Silver, wood, feathers, reeds; camelid fiber, tapestry
B79.0384(10), (26), (24), B05.1523, B79.0384(09) (a-b)
The Israel Museum, Jerusalem

pointed toes (paws?) covered with silver plaques; and two silver scepters, one in the form of a floral design, the other is an oar-shaped scepter surmounted with a human head[8] (Fig. 9). In the Chimu culture, the oar was the hallmark of Tacaynamo, the mythological founder of the Chimu dynasty, and symbolized his arrival from the sea by raft; in the preceding Lambayeque culture, the oar-shaped scepter refers to Naymlap, obviously another iconographic influence of Lambayeque on Chimu culture.

Of compelling interest are two objects: a textile headband with three-dimensional silver cones (Fig. 9), for wearing on the forehead, which is depicted on the forehead of the "huaco rey" Lambayeque clay bottles (Fig. 6); and a silver neckpiece with a bicephalic serpent (Fig. 9). It is our understanding that the iconographical purpose of these ornaments when used together completes the illustration of the bicephalic arc of the Moche iconography[9]. The Moche arc is also present on several Chimu painted textiles depicting

8. All objects have textile remnants or textile pseudomorphs with evidence of paired warps.

9. See Santiago Uceda, "The Priests of the Bicephalus Arc: tombs and effigies found in Huaca de la Luna and their relation to Moche rituals." in Steve Bourget and Kimberly L. Jones, eds., *The Art and Archaeology of the Moche: An Ancient Andean Society of the Peruvian North Coast* (Austin: University of Texas Press, 2008), Figs. 9.2–9.5, 154–157.

Fig. 10. Painted panel featuring a crowned Chimu deity with a bicephalic serpent
Chancay or Chimu, Peru, 1000–1470 CE
Cotton; plain weave, painted, 125 x 98.5 cm
B79.0846 The Israel Museum, Jerusalem

a Chimu Deity wearing a crown – the crown itself is decorated with triangles – with a bicephalic serpent emerging from both sides (Fig. 10). The bicephalic serpent motif assumes the form of pointed cones on the forehead of the Principal Deity of Lambayeque. The completion of the bicephalic arc is achieved by the silver neckpiece which has two animal heads. Thus part of the iconographical elements of the arc are on the headband, and part on the neckpiece.

To continue with Lambayeque iconography and its persistence in Chimu culture, there are two rare feathered Chimu scepters in the Israel Museum collection in the form of trees with leaves (represented by feathers), with roots

Fig. 11. Scepters shaped like a tree, with macaw and other birds perched on its branches, feathers representing leaves
Chimu, Peru, 1100–1470 CE
Wood, reeds, camelid fiber, feathers; tapirage, 67 x 29 x 19 cm
B81.0809, B81.0811 The Israel Museum, Jerusalem

(represented by loose threads), and with parrot effigies suspended from the branches (Fig. 11). These scepters may have functioned as an allegory for agricultural renewal, and would have additionally demonstrated the holder's power. We consider that these floral scepters are illustrated in Lambayeque textiles as scepters held by the Principal Deity of Lambayeque, showing roots (Fig. 7), or as leafy trees with birds on top as depicted on another textile [10]. In this scepter, together with IMJ examples, by specifically using feathers to represent the leaves on the trees as well as the perching birds on the branches, the artist was placing the focus on feathers, an Andean component which was the distinctive and exclusive domain of aristocracy. In addition, the rooted trees and birds of the scepter recall the duality of the earth and the heavens.

In Ecuador, a similar scepter is still in use today. The scepter is referred to as *alfanje o bastón de baile*, decorated with multicolored ribbons and small figures of birds. It is brandished by the Pujilí dancer – known as *Tushug* or Rain Priest – during the colorful *Octavas de Corpus Christi* celebration in the small town of Pujilí in the Cotopaxi province[11] (Fig. 12).

10. A Lambayeque textile published in José Antonio de Lavalle, *Chimú*: *Culturas Precolombinas*, Banco de Crédito del Perú, 1988, 173. Spanish-English version.

11. According to Herrera and Monge, "un alfanje adornado con cintas y figuritas de ave," that is, "an alfanje decorated with ribbons and figures of birds" (Sylvia Herrera and Elena Monge, "El Danzante, Icono Cultural de la Fiesta de las Octavas de Corpus Christi de Pujilí," *Kalpana* 8 [2012]:5–13).

After delving for many years into the origins and meaning of the singular Chimu scepters, during a visit in 2013 to the Patio Andaluz Hotel in Quito, I saw a statue dressed in full regalia representing the beloved Ecuadorian Pujilí dancer of the Corpus Christi procession. Amazingly,

Fig. 12. Statue of the Pujilí Dancer, detail of scepter, and cabezal decorated with triangles
Hotel Patio Andaluz, Quito

Lambayeque Iconography and its continuity in Inca Culture

The ancient Pujilí dancer is believed to be of Quechua legacy. However, there are many elements of this Corpus Christi celebration that appear to correspond to prevalent motifs in Lambayeque rituals as depicted in the textiles cited above.

A plausible interpretation of the panel on Fig. 3 is presumably a representation of an act connected to agriculture. It portrays the Principal Deity of Lambayeque; he dons an elaborate feather headdress with his characteristic hourglass nose and "comma eyes" or spectacled eyes, and with outspread triangular wings in place of arms.[12] These wings are consistent with the story relating to the passing of Naymlap according to an oral account recorded by the Spaniard Miguel Cabello de Balboa in 1586.[13] Standing under the Deity, on either side, are small attendants in profile, wearing light blue caps. Next to the attendants are

the figure held a similar scepter, made using the same technique, resembling a tree trunk or stalk of maize, with branches wrapped in dyed yarns and adorned with multicolored ribbons. Two additional "Chancay (?)" trees with parrots are cited by Heidi King, *Peruvian Featherworks: Art of the Precolumbian Era*, The Metropolitan Museum of Art, New York, 2012, Plate 65, 202.

12. The wings appear to be diamond-shaped rather than triangular as a result of the pattern that unites the repeating figures that represent the Deity.

13. Miguel Cabello de Balboa, *Miscelánea Antártica: Una Historia del Perú Antiguo. UNMSM,* 1951. (Eighteenth century copy of an original manuscript completed in 1586, now in the New York Public Library).

forms resembling flying fish with white wings.[14] Above the attendants are large pelicans. Shown on the wings of the Deity are small figures with triangular caps, surrounded by numerous birds. The figures hold a colorfully striped implement of some sort. The absence of rafts on this panel makes it highly unlikely that the activity depicted here involves the collection of *Spondylus* oysters or fishing; rather, considering the implements in their hands, the motion of these figures may be interpreted as the collection of guano.[15] In our opinion, because of the position in which it is grasped, the implement held by the figures is not a scepter, which is usually held by its middle or from below, and not from above as depicted here. The narrative seems to imply that the Principal Deity has flown across the sea to a distant destination, traversing the islands where the guano is collected. To emphasize this message, the figure of the Deity is highlighted with bold symbolism representing the ocean – in the form of the blue outline, filled with the ubiquitous wave pattern – which frames his clothing, headdress, tunic, and legs.

The breeding of llamas is the main theme of the panel on Fig. 4, a narrative textile portraying the Principal Deity of Lambayeque, once again donning the characteristically tall and ostentatious headdress.[16] Standing frontally, the Deity assists a llama as it gives birth to a *cría* (Spanish, baby llama); the protruding tongue may suggest that the mother is groaning. The llama's body is covered with a textile patterned with alternating black- and cream-colored camelid footprints. The Deity and the llama are surrounded by four attendants in profile. Three of the attendants wear *cría*s as headdresses,[17] and walk in a procession. The fourth attendant (in the upper right) shows gyrating hand postures, presumably suggesting a dance. Different attendants appear to be holding different objects.[18] The smaller object may in fact be a bag known as a *chuspa*, which would have held coca to be fed to the llama.

We believe that the Lambayeque narrative featured in Fig.4, focuses on a ceremony that was in fact a source for later ceremonies practiced in Cuzco in Inca times, which involved either black or white llamas. The ceremonies were mostly timed to coincide with the winter and summer solstices. One of these ceremonies, the Cápac Raymi – celebrated in Cuzco in December and symbolizing Inca authority, involved a royal white llama dressed in a colored tunic, looked after by two human attendants, and never sacrificed. The Inca white llama was for some time fed nothing but coca leaf and chicha, normally consumed by humans. It represented the first llama to have emerged from the Incas' place of origin after the destruction of the world in the Great Flood. In general, the llama played a central role in Cuzco ceremonies, including processions with dancers.[19] Even today, the llama remains an Andean symbol of fertility and abundance.[20]

Lambayeque Iconography and its links to modern Ecuadorian Pujilí Corpus Christi celebrations

The use of the llama can also be found in the contemporary Christian festival of Corpus Christi, celebrated annually in the Ecuadorian canton and town of Pujilí. Indeed, we believe that the entire festival – widely thought to be strictly of Inca origin – features many of the prevalent symbols and motifs that appear in the Lambayeque and Chimu textiles in the collection of the Israel Museum. These include the most important element of the festival, namely the tall, elaborate headdress of the Pujilí dancers, the most important attribute of the Principal Deity of Lambayeque (Fig. 12). Tall and heavy at 30 kilos, it must be supported from behind with one hand. Altogether, the complete attire can reach 36 kilos. The festive headdress – known as the *cabezal* – is always trimmed with big feathers; the frontal part outlined with triangles in a manner reminiscent of the bicephalic

14. *Exocoetus volitans* or *E. peruvianus*.

15. The collection of guano is a labor-intensive manual task, employed for thousands of years and never replaced by modern labor-saving techniques. The source of the fertilizer, namely the birds, must not be disturbed.

16. Carol J. Mackey, "Los Dioses Que Perdieron Los Colmillos," 127–128.

17. A North Coast textile from The Museum of Fine Arts, Boston (accession no. 16.41), depicts an attendant with a big fish over its head. This could be a parallel to the *cría*s over the attendants' heads in our textile. The Boston textile also shows an attendant grasping a long implement, which, judging from the position of the hand is similar to the implement which appears on Fig. 3. See Rebecca Stone-Miller, "To Weave for the Sun" (Boston: Museum of Fine Arts, 1992), pl. 36, 125–126.

18. Here again, as in Fig. 3, and as in the textile mentioned in the previous footnote, the position in which the attendants grasp their respective objects strongly suggests that none of these implements are scepters.

19. Sabine MacCormack, *Religion in the Andes: Vision and Imagination in Early Colonial Peru*, (Princeton: Princeton University Press, 1991), 173.

20. The llama is the largest South American member of the camelid family. Llamas are not restricted to high altitudes; as demonstrated by the Lambayeque textile, they live and breed in the coastal desert. The female gives birth during the rainy season, from December to March.

serpent. The triangles also appear as pointed cones on the forehead of the "huaco rey" in Lambayeque ceramic bottles. These triangles can also be seen on painted Chimu textiles, wherein the bicephalic serpent is represented either overhead[21] or on, and at both sides of the crown of the Chimu deity (see Fig. 10).

The Pujilí festival – which is indigenous to the region – represents a show of gratitude following the maize harvest. It also portrays the productive cycle of sowing, germination, and harvest. The alfanje (previously discussed) is reminiscent of the maize plant; stalks of maize are often added to the scepter.

In addition to the Pujilí dancers, the participants in the Pujilí procession consist of traditional, characteristic groups of marchers and dancers, always dressed in the same fashion. Like the *cabezal* (very tall headdress), of the Pujilí dancers, elements of the costume and trappings of the various groups resemble the motifs of the Lambayeque textiles.

Included among the groups and elements are the *Peones de Haciendas* (farm workers), who carry spirally decorated, upside-down hoes, and wear uniform hats and costumes, just like the small figures with colorfully striped implements held from above in the agricultural guano collection panel (Fig. 3). Also included are groups of marchers, in black face or wearing dark masks, leading the aforementioned black and white llamas. Some animals are forced to drink chicha during the celebration march.[22] This is reminiscent of the breeding textile panel (Fig. 4) with dancers and llama, whose central feature is the Principal Deity of Lambayeque. Again, the hourglass-shaped snout in the image of this deity brings to mind the spectacled bear.[23] Toward the end of the procession individuals donning various masks, including dark, long-snouted, bear-like masks, [24] perform and strengthen the notion that an ancient connection does in fact exist between the Pujilí Corpus Christi celebration and the Principal Deity of Lambayeque.

Consequently, the imagery in the Lambayeque textiles reinforces our belief that later festivals such as the celebration of the llama in the Inca Cápac Raymi to the colonial/contemporary Pujilí Corpus Christi processions may have their origins in the Lambayeque culture. The Pujilí dancer is the syncretic icon of the Precolumbian and Christian beliefs. Furthermore, in some form or another, the imagery common to the festivals and the textiles relates to agricultural and animal fertility.[25] To summarize, the Pujilí procession has performances comparable to the Lambayeque narrative textiles, the outstanding features being: the tall and ostentatious headdress of the Pujilí dancer which is the main attribute of the Principal Deity of Lambayeque; and the *cabezal* outlined with triangles similar to the pointed cones on the forehead of the "huaco rey" ceramics. Additionally, farm workers carrying spirally decorated, upside-down hoes; a dressed llama being force-fed chicha; masked dancers wearing dark, long-snouted, bear-like masks; all attest to the fact that the true origins of the festival can be traced back to the Lambayeque culture.

Photographs © The Israel Museum, Jerusalem by: Elie Posner (Fig. 2, 6, 9, 11); Ofrit Rosenberg (Fig. 3, 4, 10); Meidad Suchowolsky (Fig. 8); Yvonne Fleitman (Fig. 12)

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21. See Helmut Schindler, *The Norbert Mayrock Art Collection from Ancient Peru* (Munich: Staatliches Museum für Völkerkunde, 2000), N.M. 297, p. 171.
22. For video illustrations of the Pujilí dance and celebrations, see Spencer Weart, Corpus Christi Pujilí Ecuador. Published August 6, 2016, https://youtu.be/NOaI4n-jnFM, accessed March 19, 2017.
23. The dark face paint and dark masks that characterize this large group of marchers in the Pujilí procession are commonly understood to be a reference to the black slave laborers of the Colonial past. But as stated above, in our opinion the dark-colored faces and masks may actually symbolize the spectacled bear which we regard as a symbol of the Principal Deity of Lambayeque. Clearly, the same may also be true of the bear-like masks worn by a number of other participants in the procession.
24. For video illustrations of the Pujilí dance and celebrations, see Mario Alonso R. H., Fiesta de Corpus Cristi, Pujilí. Published June 9, 2015, https://www.youtube.com/watch?v=VZOe19tyBKg, accessed March 19, 2017.
25. With regard to the Pujilí procession, the term "fertility" relates specifically to the fertility of the maize harvest.

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La imagen divina y el simbolismo religioso en textiles del Antiguo Perú

Uwe Carlson[1]

Resumen
Una gran parte de los antiguos textiles peruanos muestra imágenes divinas en muchas variaciones. Estos se complementan con el simbolismo religioso de la fertilidad, que se presenta en tres alternativas diferentes y muchas variaciones. Algunas culturas también utilizaron imágenes emblemáticas divinas. En la costa del ave marina tenía un estatus casi divino, que se expresa en muchos tejidos. Textiles de las culturas del norte y del sur se acogieron al contenido de las formas de Chavín, pero encontraron sus propias variaciones. Murales, relieves, joyas y otros objetos que contienen la misma información que los textiles. La sociedad del antiguo Perú era más de dos milenios y medio influenciado religiosamente por este simbolismo. Los sacerdotes creados con la imagen divina y sus requisitos de simbolismo para las prácticas de ingeniería agrícola y la agricultura en un entorno de gran complejidad. Este medio de vida exitoso fue el origen del desarrollo de las civilizaciones peruanas.

Palabras claves: Iconografiá, ídolo, dios agua / diosa tierra, meandro escalonado, meandro serpiente, simbolismo de fertilidad, emblemática

The divine image and the religious symbolism in textiles of ancient Peru

Abstract
A large part of the ancient Peruvian textiles shows images of the gods in many variations. These are supplemented by the religious symbolism of fertility, which is presented in three different alterations and many variations. Some cultures also used emblematic images of the gods. On the coast the sea bird had an almost divine status, which is expressed in many textiles. Textiles of the cultures of the North and the South availed themselves of the content of forms of Chavín, but they found their own variations. Murals, reliefs, jewelry and other objects are containing the same information as the textiles. The society of ancient Peru was more than two and a half millennia religiously influenced by this symbolism. The priests created with the divine image and its symbolism requirements for agricultural engineering practices in this highly complex environment. This successful livelihood was the origin of the development of the high ranking Peruvian civilizations.

Keywords: Iconography, idol, water god / earth goddess, step wave, snake wave, fertility symbolism, emblematic

1. uwe.carlson@web.de

Mapa 1: Imagen de los valles andinos: Representación de una vista aerea de dos valles (y de la cordillera blanca y negra al fondo) de la costa central con detalles de manejo de agua y agricultura. Idea y dibujos Uwe Carlson, realización de la animación digital Frank Gießelmann. © Uwe Carlson

Introducción

Dentro de este texto, que se refiere a la presentación „Imagenes divinas y su simbolismo religioso en los textiles del antiguo Perú“, solo nos vamos a referir a los aspectos esenciales de esta temática. La iconografía del antiguo Perú debe ser considerada como no descifrada hasta hoy en día. Tenemos que considerar aproximadamente 10 a 12 culturas importantes, sus diferentes condiciones y características específicas.

La presentación se refiere igualmente al libro „Tierra, agua, hombre y los dioses“ por Uwe Carlson y Heiko Diestel (2015), donde estos aspectos han sido considerados en detalle. Esto determina que en la cultura Chavín la imagen divina se presenta mas o menos uniforme y se distingue por un simbolismo complementario muy significativo donde se definen dos otros dioses actuantes al lado del dios supremo (Viracocha) formando así la base de un simbolismo. Estos son segun Kaufmann Doig los símbolos del dios agua (simbolo del meandro) y la diosa tierra (símbolo del escalón). Ambos símbolos muestran en su combinación el meandro escalonado (en Chavín una variante, el meandro serpiente). Vale mencionar que el arqueólogo Federico Kauffmann Doig ha identificado estos simbolos, habiéndolos publicado en su libro “El Incario - Una nueva perspectiva” (Kauffmann 1990, pp. 197, 209). Ambos expresan en su combinación el simbolismo de la fertilidad.

Los sacerdotes anunciaban segun la opinion del autor con este simbolismo el lema „Agua a la tierra“. Con ello y con la influencia activa del desarrollo técnico del cultivo y de la explotación agrícola se tuvo éxito desde el segundo milenio antes de Cristo. Fueron cultivando los suelos fértiles en las llanuras de los valles y también en las laderas de las

montañas para asegurar de manera sostenible el bienestar y el crecimiento de la población (Mapa 1: imagen valles andinos). Esta fue la base del desarrollo de estas culturas y de las principales civilizaciones. Chavín con su lenguaje artístico unificado tuvo un comienzo notable influyendo en todas las culturas posteriores. Por lo tanto, el lenguaje visual de objetos de arte, como los textiles y cerámicas, murales y relieves, madera y metal y otros en su mayoría, deberían atribuírsele segun la opinion del autor a Chavín.

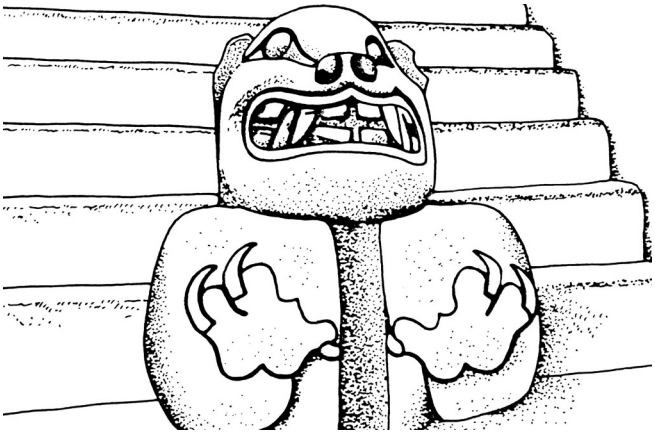


Fig. 1: Estatua felínica de Punkurí, H. Bischof "Zur Entstehung des Chavín-Stils, p. 415, dibujo H. Bischof.

El autor ha investigado profundamente estas condiciones para poder definir las representaciones de imágenes divinas, las variaciones de su simbolismo atributivo religioso en su sentido de fertilidad, el sinergismo de otros símbolos o emblemas y el significado del felino o de aves costeras y andinas. Anteriormente estos aspectos segun la opinión del autor no han sido profundizados de esta forma, así como otros ejemplos lógicos y coherentes como los que están vertidos en el siguiente texto. Estas interpretaciones reflejan los aspectos particulares de la imaginación en el mundo andino.

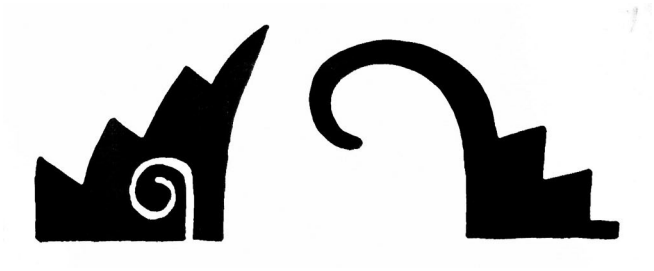


Fig. 2: Simbolo pintadas en cerámicas: Tuancahuan y Chorrera, Lavalle/Lumbreras "Die Andenvölker" pp. 132 y 57, dibujo Uwe Carlson.

Hace más de la mitad de un siglo, que la arqueóloga peruana Rebeca Carrión Cachot (1955, pp. 10 – 15) tenía ya sospechas de los vínculos entre el trabajo de los sacerdotes en sus templos, su culto religioso relacionado al culto del agua y su implicación en la agricultura y en el manejo de agua. Los resultados de las investigaciones actuales para explicar la iconografía le dieron toda la razón. Sin embargo, no se confirma su declaración de que la noción de la religión de ese tiempo facilitaría el conocimiento de estas culturas, y por lo tanto de su iconografía. Más bien se aplica desde la perspectiva actual de que la interpretación lógica de la diversa simbología de los objetos de arte peruano, en particular los textiles, ofrecen el acceso a la comprensión de las actividades y el pensamiento.

Fig. 3: Cerámica Chavín (800 A. C.) con motivo del meandro escalonado, colección privada, foto Ulrich Hoffmann.

Chavín y sus efectos sobre las culturas posteriores

Ya en el segundo milenio antes de Cristo se encontraron ídolos en muchos lugares del antiguo Perú, que tenían las características de los felinos. Estos ídolos así como esculturas o relieves estaban hechas en su mayoría de arcilla, por lo que, salvo algunas excepciones, desaparecieron. Algunos que aún existen en Punkurí (estatua de barro) (Fig. 1), Garagay (relieve de barro) entre otros. Estos ídolos mostraron representaciones poco uniformes.

Fig. 4: Dibujo de un motivo textil chavinoide de la costa sur, U. Carlson y H. Diestel "Erde, Wasser, Mensch und Götter", 2015, p. 26, dibujo Uwe Carlson.

Es probable que hacia el final del segundo milenio antes de Cristo, en la región norteandina surgió un simbolismo que se combinaba de dos elementos, a saber: el meandro y el escalón (Fig. 2). Segun la opinión del auto se mostraban con esto los símbolos tierra y agua en su combinación como símbolo de la fecundidad. La figura del escalón posiblemen refiere a las terrazas de cultivo de la región de los Andes que están destinadas a prevenir la erosión del suelo, simbolizando la tierra y del símbolo de la onda segun esta opinión simboliza el agua.

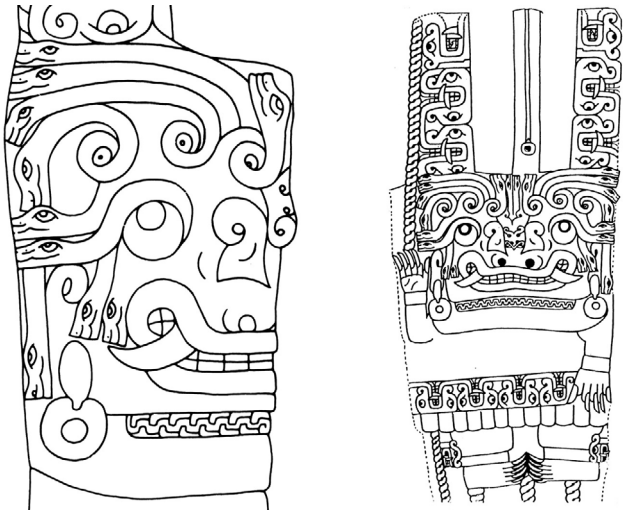


Fig. 5 y 6: El Lanzón der Chavín, izquierda detalle con las representaciones del meandro serpiente, E. P. Benson "Cult of the Feline", 1972, p. 78, dibujo John H. Rowe, derecha el relieve en plano, F. Kauffmann Doig "Manual de Arqueoliogia Peruana, 1978, p. 257.

Ya en las eras tempranas de Cupisnique y Chavín se encuentra el simbolismo del meandro escalonado en cerámicas (Fig. 3) y otros objetos (Fig. 4) de estas dos culturas. Se ha demostrado que Chavín tomó este simbolismo hasta el año 800 A. C. (según analisis de ceramicas por Ralf Kotalla, Labor für Fälschungserkennung, Haigerloch/Alem.)

Entonces tuvo que haber ocurrido un cambio. El lenguaje formal y artístico en los relieves Chavín consistía esencialmente en elementos curvados, a diferencia de la forma angular del meandro escalonado. Por esta o por otras razones pareciera que ellos han preferido un simbolismo mas adecuado: el meandro serpiente.

Este simbolismo unía la cabeza de serpiente (que simboliza la tierra), complementado por un cuerpo corto ondulado (simbolizando el meandro o el agua) (Fig. 5). Este simbolismo aparece como soporte en el primer ídolo de piedra de Chavín, el Lanzón. Las esculturas configuradas como ídolo en el antiguo templo de Chavín están recubiertas por este simbolismo (Figs. 6–7) (Carlson 2012).

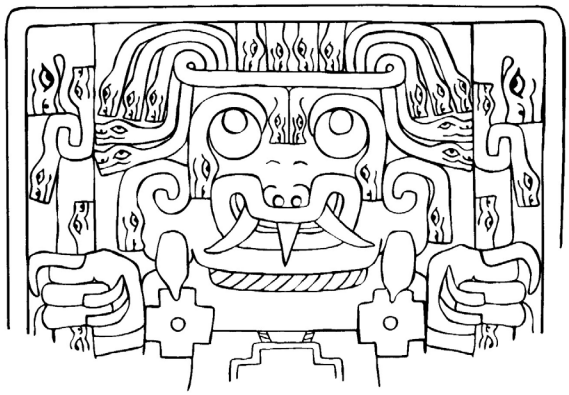
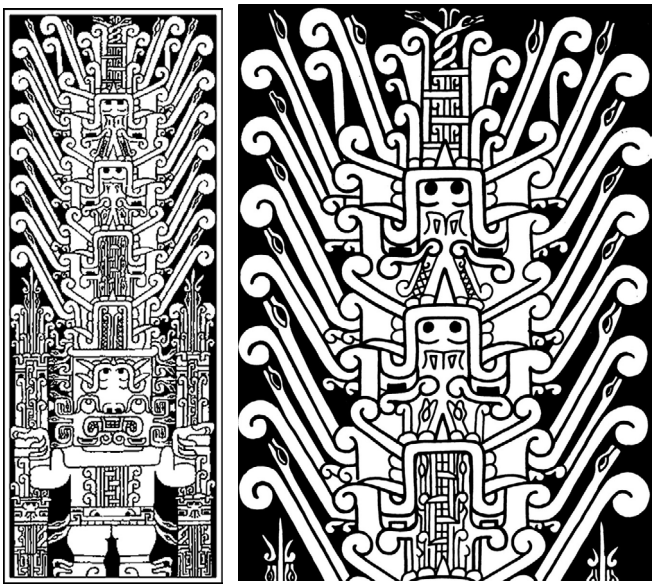


Fig. 7. Losa de Chavín (excavada en el 2014) con el motivo del dios felínico y con el simbolismo del meandro serpiente, J. Rick, "Chavin de Huantar – Boletin de fin de temporada 2013, carátula del boletin.



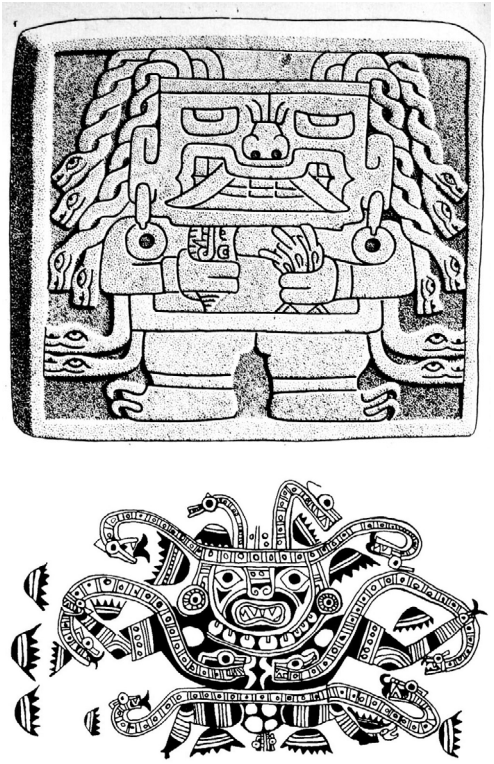
Figs. 8 y 9. La estela de Raimondi, total y detalle, F. Anton "Altindianische Textilkunst, 1984, p. 42, dibujo John Rowe.

Fig. 10: Relieve de una cerámica Huari, dios agua y diosa tierra (con simbolos de serpiente) un su unión, R. Carrión Cachot, "El Culto al Agua en el Antiguo Perú, 1955, p 59.

Muchas otras imágenes felínicas en forma de relieves representaron igualmente este simbolismo entre 800 - 500 A. C. (Fig. 7). En el templo nuevo, construido aproximadamente entre 700 y 600 A. se puede observar una cornisa con un relieve (Fig. 16) mostrando los felinos con símbolos separados, donde se muestran cabezas de serpientes en la espalda y en la parte superior de la cabeza y distribuído en su cuerpo se extienden símbolos meándricos. Evidentemente estas combina-ciones son hechas por el espectador de manera imaginaria. El meandro serpiente también se afirma claramente en el diseño de la cola de los felinos (Figs. 16–19).

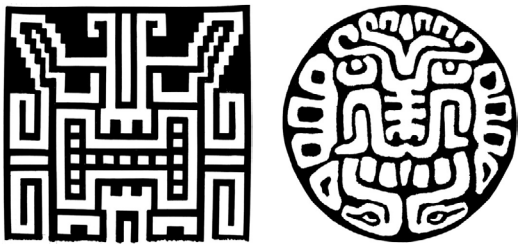
Con gran asombro hemos encontrado estas imágenes en la mayoría de las culturas posteriores, en objetos de metal, textiles, y otros. Es bueno señalar que estas representaciones a pesar de su diversidad creativa tienen el simbolismo común en el diseño de la cola (Figs. 16–19). En Chavín es el meandro serpiente, en algunas culturas, el diseño de la cabeza en la cola es diferente. Cabe señalar que aquí se presentan sólo símbolos, en la medida aquí bien puede prevalecer una variación.

En la estela de Raimondi se pueden observar en el tocado (fig. 8 y 9) los simbolos meandro y (cabeza de) serpiente un al lado del otro, formando juntos el simbolismo de le fertilidad (mendro serpiente). Un detalle de una ceramica Huari (relieve) (fig. 10) la diosa tierra puede confirmar con sus atributo serpiente (cabeza con cuerpo recto/no andulado) el mismo simbolo, mientras el dios agua manifesta en su tocado un meandro dual.



Figs. 11 y 12. Relieve de Chavín y pintura fineline de Moche con el mismo contenido: El ídolo felínico chavinoide con meandros serpientes junto con el strombus y spondylus. En la imagen Moche meandros serpientes junto con el spondylus. Chavín: F. Kauffmann Doig "Manual de Arqueología Peruana, 1978,p. 257. Moche: Pintura fineline U. Carlson y H. Diestel, "Erde, Wasser, Mensch und Götter", 2015, p. 45, dibujo Jürgen Golte.

En la estela de Raimondi se pueden observar en el tocado (fig. 8 y 9) los simbolos meandro y (cabeza de) serpiente un al lado del otro, formando juntos el simbolismo de le fertilidad (mendro serpiente). Un detalle de una ceramica Huari (relieve) (fig. 10) la diosa tierra puede confirmar con sus atributo serpiente (cabeza con cuerpo recto/no andulado) el mismo simbolo, mientras el dios agua manifesta en su tocado un meandro dual.



Figs. 13/14: Comparaciones meandro escalonado y meandro serpiente de Chavín: A la izquierda en un textil de la costa sur y a la derecha un objeto de oro del norte. Fig. izquierda véase fig. 4. derecha "Andean Art at Dumbarton Oaks", 1996, p. 67, dibujos Uwe Carlson.

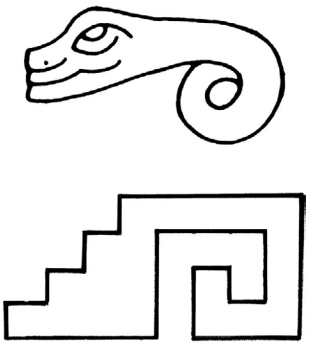


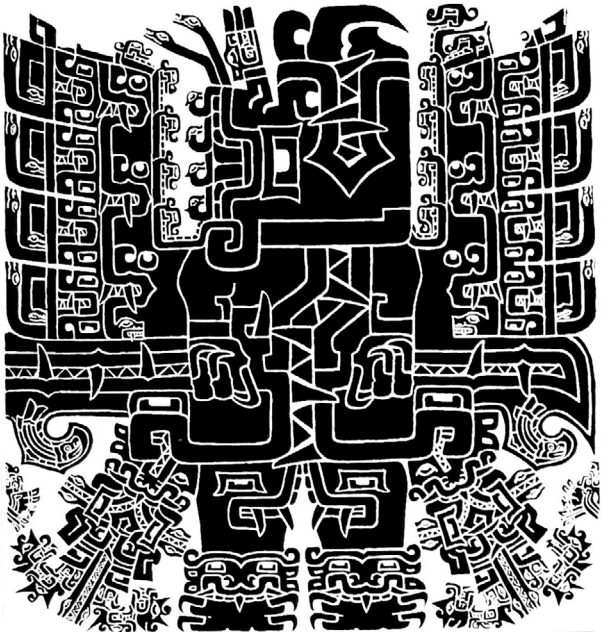
Fig. 15: Los dos simbolismos de fertilidad: Meandro serpiente y menadro escalonado, dibujo Uwe Carlson.

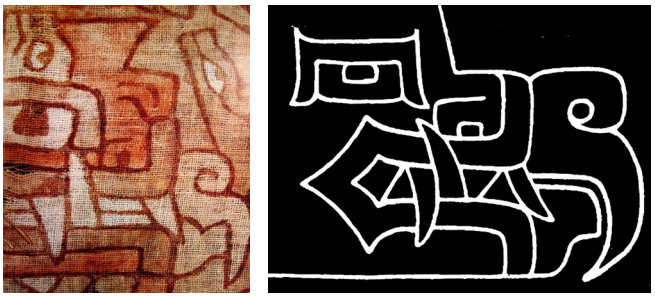
La comparación de un relieve de Chavín (Fig. 11) con una pintura fineline (Fig. 12) de una cerámica Moche segun la opinión del autor nos muestra claramente la influencia que Moche tuvo de Chavín. Ambos muestran los felinos con el múltiple simbolismo del meandro escalonado. La única diferencia es la manera de su apariencia artística.

Figs. 16 -19: Felino (dios felínico): de la cornica de Chavín, E. P. Benson "Cult of the Feline", 1972, p. 71; de un textil Paracas, colección privada, dibujo Uwe Carlson, de una cerámica Recuay, dibujo Yoshitaro Amano, de una cerámica Moche, G. Kutscher "Nordperuanische Gefäßmalereien des Moche-Stils" (imágenes 309-311), dibujo Gert Kutscher.

Alrededor del 500 A. C. (según investigacione de la construcción y de los relieves del templo de Chavín) se produjo un cambio en la imagen divina de Chavín. Las expectativas de los sacerdotes (y probablemente también de la población) respecto al ídolo pudieron haber sido desalentadoras. Una de las razones fueron quizás los desastres naturales.

La comparación de un relieve de Chavín (Fig. 11) con una pintura fineline (Fig. 12) de una cerámica Moche segun la opinión del autor nos muestra claramente la influencia que Moche tuvo de Chavín. Ambos muestran los felinos con el múltiple simbolismo del meandro escalonado. La única diferencia es la manera de su apariencia artística.





Figs. 20 – 22: Imagen divina felínica-ornitomorfa del relieve de la columna de la portada de templo nuevo de Chavín (E. P. Benson "Cult of the Feline", 1972, p. 79, dibujo J. H. Rowe), detalle de un textil Chavín con cabeza felinica-ornitomorfa (Lavalle "Arte Textil del Perú", carátula, foto Carlson) detalle de los colmillos y del pico, dibujo U. Carlson.

Alrededor del 500 A. C. (según investigacione de la construcción y de los relieves del templo de Chavín) se produjo un cambio en la imagen divina de Chavín. Las expectativas de los sacerdotes (y probablemente también de la población) respecto al ídolo pudieron haber sido desalentadoras. Una de las razones fueron quizás los desastres naturales.

Los sacerdotes complementaban según la opinión del autor (Figs. 20–22) la imagen divina a través de la figura del ave más fuerte de la región de los Andes, la harpía. Esto hizo crear un ídolo híbrido que se encuentra en la última etapa de la construcción del Templo Nuevo, en las columnas de la portada. Los relieves de las dos columnas muestran al ídolo con un pico adicional y alas. Además se observa una gran variedad de simbolismos (especialmente el meandro serpiente). Muchos otros objetos de Chavín así como textiles, (Fig. 21) acreditan este nuevo ídolo (Carlson 2012).

Fig. 23: Detalle de un textil Paracás, felino volador con mascara ornitomorfa (harpyia) y meandro serpiente, Världskulturmuseet Göteborg, foto Uwe Carlson.

Paracas - Recuay – Moche

También este ídolo hibrido se ha extendido en la costa hasta Paracas, más tarde también a Moche y Tiahuanaco. Mientras Chavín muestra el pico como atributo esencial en sus obras, en Paracas se muestra otra imagen (Figs. 23–24). Paracas presenta exclusivamente vistas frontales de felinos voladores. Estos representan un artificio de la influencia ornitomorfa que está caracterizado por una màscara de ave colocada en la frente del felino. En dicha máscara se puede reconocer visiblemente que se basa en la arpía.

Fig. 24 a y b; Rostro con mascara orniotomorfa de un textil Paracas, Världskulturmuseet Göteborg, foto Uwe Carlson, dos mascaras ornitomorfas (harpyia),dibujos Uwe Carlson.

En Recuay, situada cerca de Chavín, las pinturas de las cerámicas (los textiles no se pudieron conservar muy raro en la sierra) se pueden identificar porque contienen muchos meandros serpiente y meandros escalonados. Textiles de diversas culturas han demostrado repetida y claramente la conexión con los felinos del templo de Chavín. El relieve más conocido se presenta en la famosa Estela de Raimondi (Figs. 8–9) donde se muestra al ídolo felínico con un gran tocado en la cabeza. Esto exhibe según la opinión de autor de forma similar a los félinos de la cornisa mencionada los símbolos separados: cabezas de serpiente (el cuerpo recto de la serpiente en este simbolismo no tiene importancia) y el símbolo meándrico (en este caso en forma de una ola).

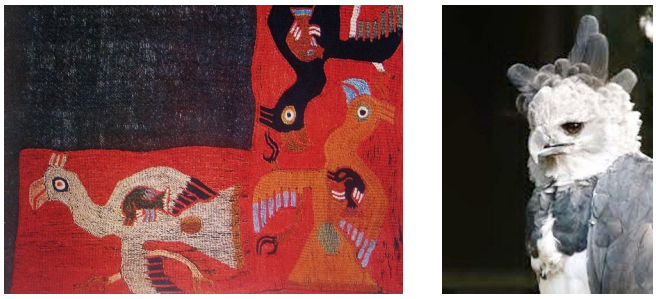
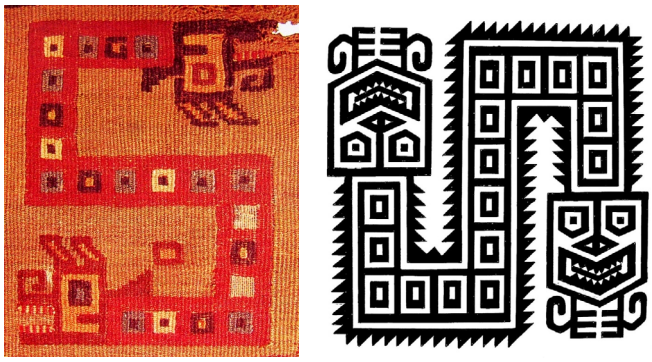


Fig. 25. Detalles de aves de un textil Paracas, Lavalle “Tejodos Milenarios del Perú”, 1999, p. 193; foto de una harpyia con plumas verticales en la cabeza, foto internet www.pinterest.com

Aunque un textil Moche temprano nos muestra el delicado simbolismo Chavín (Fig. 30), sin embargo se presenta una imagen parecida: el simbolismo del meandro serpiente. Los tejidos Moche así como también objetos de cerámica, muestran a veces el simbolismo en dos variantes: El ser (divino?) tiene el pico y las alas (Figs. 31–32) que pueden percibirse en la parte posterior de la imagen así como el simbolismo del meandro serpiente y en el tocado el simbolismo del meandro escalonado.



Figs. 27 – 28: Izquierda: Cabezas felínicas en combinación dual o meandrica, las cabezas muestran los simbolos escalón y meandro por separado. Textil Huari, F. Anton “Altindianische Textilkunst aus Peru”, 1984, p. 131 / imagen 103. Derecha: Representación similar, el meandro puntado indica el meandro escalonado y el simbolismo de la boca revela igualmente este simbolismo. Textil Paracas, Lavalle “Tejidos milenarios del Perú”, 1999. pp 166/167, dibujo Uwe Carlson.

Fig. 29: El meandro puntado demuestra el mismo simbolismo que el tocado, en base al meandro escalonado, en un textil Chimú. Todos manifestan la imagen divina con el simbolismo de le fertilidad. Colección privada, foto Uwe Carlson.

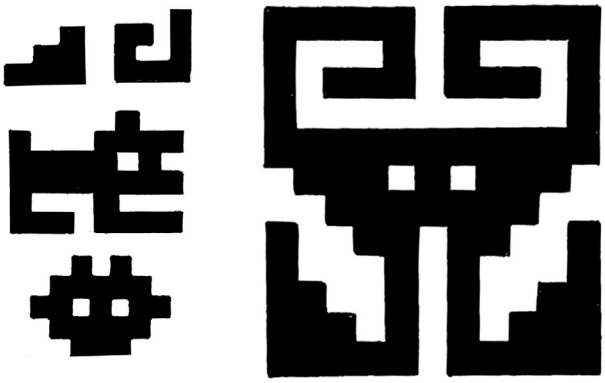
La emblemática Moche

Moche ofrece una variedad especial de representaciones emblemáticas, incluyendo características especiales como la pintura de línea fina (Fig. 12) en la cerámica y las representaciones en textiles que según la opinión del autor deben ser consideradas como imagenes divinas emblemática. Los emblemas tuvieron gran influencia en las pinturas y relieves de edificios como por ejemplo templos.

Fig. 30. Imagen divina en un textil Moche temprano, la expresión de la imagen divina felínica se puede comparar con la imagen de la estela Raimondi (imágenes 8 y 9). En el borde arriba cabezas en estilo emblemático. Colección Museo Amano, foto Uwe Carlson.

Figs: 31 y 32: Textil Moche en estilo geometrico: Imagen divina antro-pomorfa (cuerpo) - ornitomorfa (pico y alas) con el simbolismo del meandro escalonado en el tocado y los simbolismos del meandro serpiente junto con alas detrás. El dibujo separado a la derecha muestra el simbolismo delö meandro escalonado (dos) y del meandro serpiente (tres). Textil colección privada, foto Uwe Carlson, dibujo Uwe Carlson.

Muchos textiles Moche fueron diseñados con la estructura básicamente geométrica. En ellos se construyó la emblemática, usando como base al meandro escalonado (Figs. 33–34) y sus símbolos (meandro y escalones), la imagen felínica y en adición un par de ojos. Se pueden encontrar en forma individual o a través de diversas combi-naciones en los tejidos. Se crearon diseños muy elaborados como la combinación con la imagen felínica. También se encuentran composiciones del ídolo construido por meandros escalonados y felinos.



Figs. 33 y 34. A la izquierda los los cuatro elementos basicobasicos de la emblemática Moche: Escalón, meandro, felino, dos ojos. A la derecha el simbolismo emblemático como ejemplo se muestra por dos meandros escalonados, dos elementos meandro–escalón y un par de ojos. Motivos de textiles privados, dibujos Uwe Carlson.

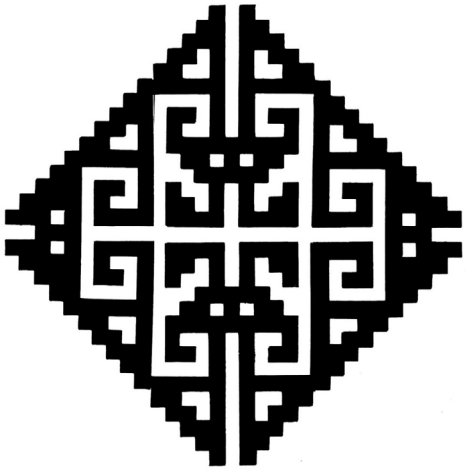


Fig. 35: Imagen emblematica Moche. H. Prümers "Investigación de Textiles del Castillo Huarmey", copias del autor H. Prümers, dibujo Uwe Carlson.

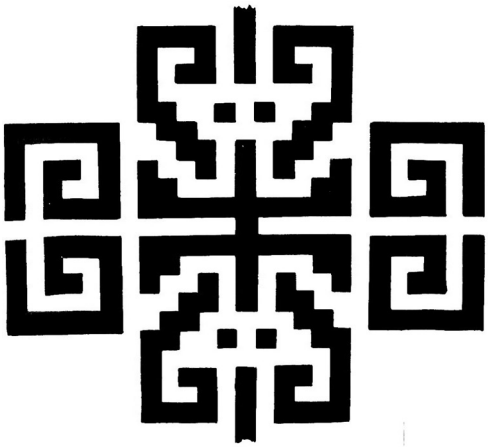


Fig. 36: Imágen emblemática Moche. H. Prümers "Castillo Huarmey", copias del autor, dibujo Uwe Carlson.

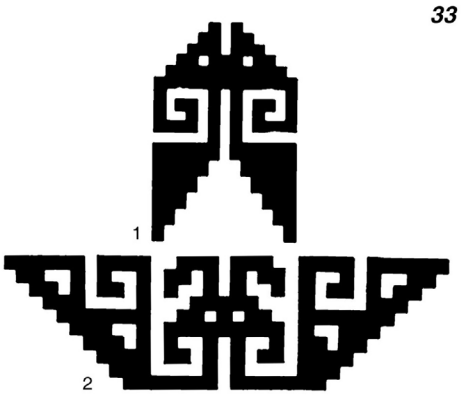
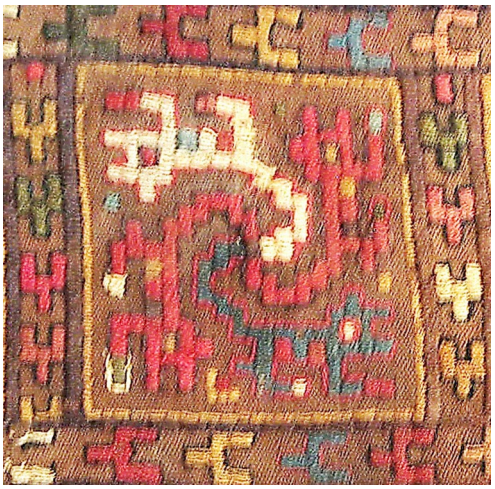
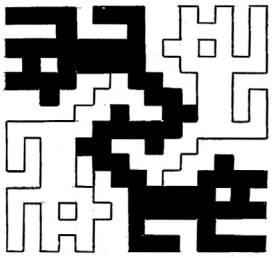


Fig. 37: Imagen emblematica Moche. R. Ravines "Tecnologias Andinas, tomo II, 1978, p. 214 y Colección Abegg en "Textilien aus dem alten Peru", 2007, p 133, dibujos Uwe Carlson.

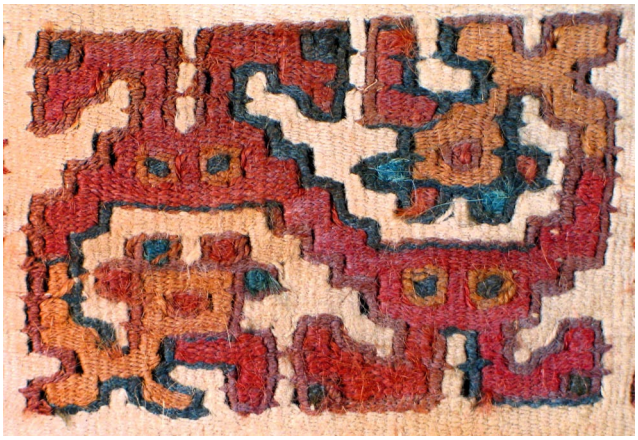
En las ilustraciones de los felinos se observa notoriamente el pico como atributo ornitomorfo chavinoide que fue adquirido por Moche (Figs. 42–43) y también podemos encontrarlo en cerámicas. Como no era muy conocida la arpía en la costa, se completó el pico por ojos diferentes del búho, importante ave de la costa de la familia de las lechuzas. (Carlson 2016).

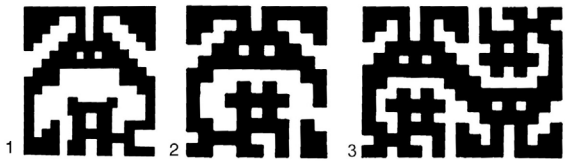




Figs. 38 y 39: Detalle de un textil Moche: Combinación de cuatro felinos con el simbolismo del meandro escalonado en la cola, en el centro. Textil Museo Amano, dibujo Uwe Carlson.

Figs. 40 y 41: Imagenes divinas con incorporación del meandro e imagen divina combinado por dos meandros escalonados y rostro divino. Textiles colección privada, fotos Uwe Carlson

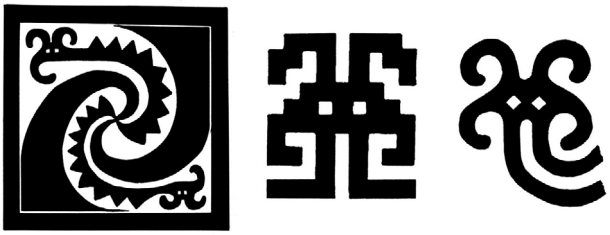




Figs. 42 y 43: Combinación reciproca de un motivo emblemático Moche junto con el motivo de un felino ornitomorfo. Dibujos de tres graficos ejemplos parecidos, el de arriba a la derecha. Textil colección privada, Foto y dibujos Uwe Carlson.

En muchos patrones o modelos de textiles diseñados geométricamente se requiere una interpretación precisa de los detalles. En dos dibujos los detalles del meandro escalonado fue diseñado deliberadamente en blanco (Fig. 39) para que sean reconocibles la parte del negro. También en un textil de varios colores se exhibe una cabeza con pico por separado de un detalle emblemático (Fig. 42).

Fig. 44: Imágenes divinas y emblemáticas en un textil Moche. En los cuadrados seres antropomorfos con cetros. En los triángulos emblemas junto con cabezas felínicas. En los bordes cabezas emblemáticas. Colección privada, foto Uwe Carlson.



Figs. 45: A la izquierda imágenes divinas en repetición reciproca en un relieve de barro en la Huaca Cao Viejo. Foto Uwe Carlson.

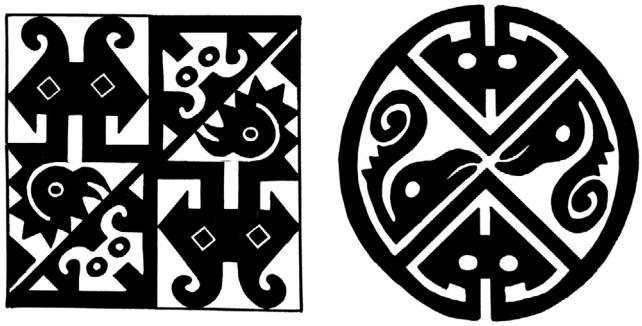
Fig. 46: En el centro a la izquierda un motivo de la Huaca de la Luna: La combinación de dos pares de símbolos tierra (forma puntada) y agua (forma de ola) junto con la representación de la imagen del dios supremo (igual a fig. 45 Cao Viejo). Dibujo Uwe Carlson.

Fig. 47. Esta imagen muestra que los dos dibujos son iguales en su contenido, tejido y relieve. Dibujo Uwe Carlson.

Fig. 48: El relieve impresionando de la Huaca Cao Viejo revela el "Mundo divino del antiguo Perú". La imagen muestra en forma dual reciproca las unión del dios agua (lado izquierda arriba y derecho abajo) con la diosa tierra (lineas puntadas con rostros). La imagen del dios supremo se observa en el centro arriba y abajo. Se demuestra la fotografia del sitio Cao Viejo y un dibujo clarificando (fig. 51). Véase también fig. 10, la union del dios agua con la diosa tierra.

Relieves y murales impresionantes

Las excavaciones en la Huaca Cao Viejo en el valle Chicama han descubierto murales y relieves increíbles. Todos los los diseños de estas imágenes de ídolos emblemáticos están basados en textiles. Es evidente que la similitud de las imágenes se puede ver entre sí en detalle. El tipo de representación sólo está determinado por el material y la tecnología del trabajo. Así han podido recurrir a líneas curvadas (Figs. 45–47). Otro motivo se refleja en un relieve que muestra al ídolo emblemático en conjunción con los ídolos simbólicos dios agua y diosa tierra (Figs. 48–49).



Figs. 49 y 50: A la izquierda el dibujo de un relieve de la Huaca de la Luna, en cada mitad diagonal se observa doblemente la imagen divina y el ave marina junto con el simbolismo de la fertilidad. Dibujo Uwe Carlson. A la derecha el dibujo de un objeto de oro de la Huaca Cao Viejo muestra dos simbolismos del dios supremo, junto con los motivos de aves combinado con el simbolismo de la fertilidad. Dibujo Uwe Carlson.

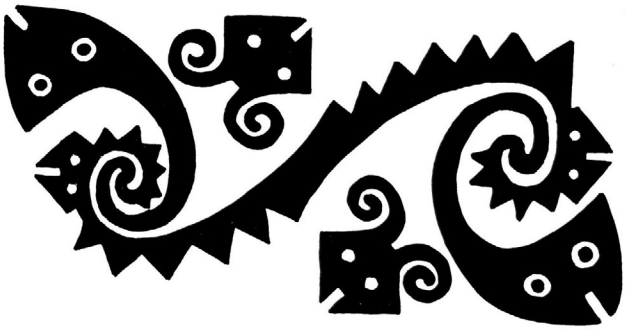


Fig. 51. El dibujo "El Mundo Divino del Antiguo Perú" muestra el relive en la fotografia de la imágen fig. 48. Véase el comentario respectivo. Dibujo Uwe Carlson.

Aún de manera más importante se expresa sehgun la opinión del autor la imagen del mundo divino del antiguo Perú en un relieve muy notable. Esta nos expone de manera dual y recíproca, una imagen con las repre-sentaciones de los ídolos dios agua y diosa tierra, en el momento de su unión. La otra imagen (dual) en el centro debe ser, segun la opinión del autor, como imagen del dios supremo. Sólo este relieve revela visiblemente la imagen de la trinidad de dioses y también la presencia de ellos en el simbolismo de todos los textiles. Una vez más, la imagen del dios supremo se ve claramente en su resultado, el modelo de la materia textil (Figs. 48–49) (Carlson n. d. 2015).

Dos objetos, una imagen de la Huaca de la Luna y un objeto de oro de la Huaca Cao Viejo, también dan testimonio de la participación del ave costera /marina (Figs. 49–50). Fue venerado más adelante en Chancay, probablemente porque éste era considerado como un indicador de la abundancia de pescado o incluso de la ausencia de peces en tiempos de El Niño. Muchas presentaciones en textiles manifiestan que debe haber tenido un estado semi-divino. Ver también capitulo "Chancay y el ave marina semi-divina" en Carlson y Diestel, 2015, pp. 51-53).

Figs. 52 y 53: En un tocado de oro del museo de sitio de la Huaca Cao Viejo revela la imagen de dios agua, igual al relieve de barro pintado de la Huaca de la Luna. El simbolismo presenta solamente el meandro, el simbolo del agua. Fotos Uwe Carlson.

Nazca - Tiahuanaco / Huari - Chimú

En Nazca se pueden encontrar textiles diseñados de forma geométrica (Figs. 56 – 58). También es notable que aquí se producen representaciones que muestran probablement el dios agua (Fig. 52). Tales imágenes también se conocen de Moche y así lo demuestran con toda claridad un objeto de oro de la Huaca Cao Viejo y un relieve de la Huaca de la Luna. Sin embargo, este tipo de representaciones de estos dioses son bastante raros (Figs. 53– 54).

Otro textil Nazca muestra que en este caso los ídolos se han creado a partir del simbolismo del meandro escalonado (Fig. 55). Admirablemente, se encuentran en Nasca ídolos en imágenes donde sólo se muestra la cabeza (Fig. 56) como tal con el simbolismo difícil de descubrir. Al igual que en los felinos de la cornisa de Chavín los símbolos se muestran por separado y el artista ha determinado presentar las puntas de forma oculta en los dientes de la cabeza felínica. Los meandros se ven con más claridad.

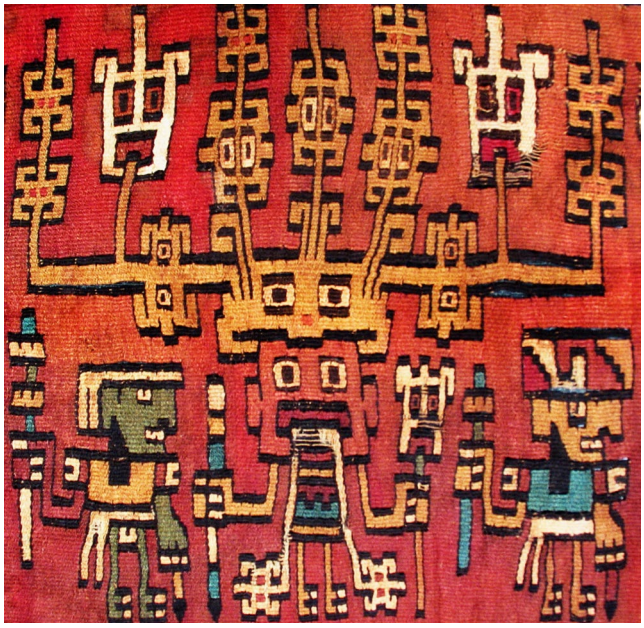
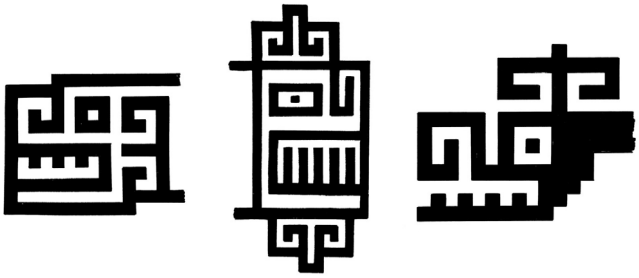


Fig. 54: Un textil Nazca muestra la imagen del dios agua con su tocado inmenso indicando los simbolos del agua y dos cabezas felínicas. Las otras personas se identifican posiblemente como sacerdotes. El de la derecha muestra el simbolismo del meandro esclonado en su tocado. Colección privada, foto Uwe Carlson.

En Nazca, así como en otras culturas, hay muchos ejemplos en los que se expresa en los textiles en forma del meandro escalonado sólo el simbolismo de la fertilidad. Esta imagen (Fig. 59) tiene excelentes condiciones de asentamiento en su estilo entrelazado (interlocking), para ser representado. Tales especificaciones se pueden encontrar en grandes tejidos, así como en bandas.

Fig. 55: El textil Nazca muestra una imagen divina en estilo emblemático compuesto por dos meandros escalonados y un rostro. Además se observan simbolismos geometricos de combinaciones del meandro escalonado y simbolos de meandros. Colección privada, foto Uwe Carlson.

En Nazca, así como en otras culturas, hay muchos ejemplos en los que se expresa en los textiles en forma del meandro escalonado sólo el simbolismo de la fertilidad. Esta imagen (Fig. 59) tiene excelentes condiciones de asentamiento en su estilo entrelazado (interlocking), para ser representado. Tales especificaciones se pueden encontrar en grandes tejidos, así como en bandas.



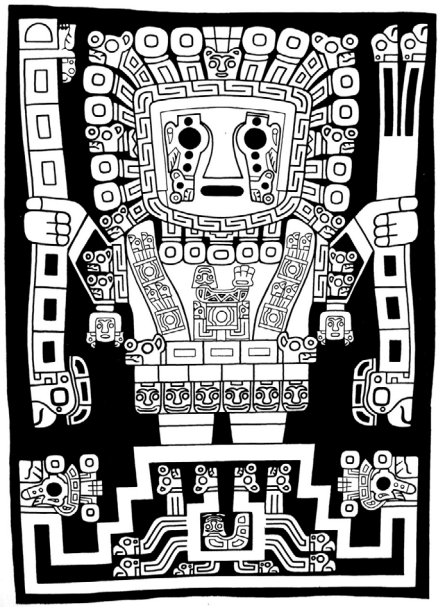
Figs. 56 – 58: Tres imágenes muestran dibujos de cabezas divinas felínicas representando igualmente el simbolismo de la fertilidad. Los meandros se combinan con los dientes (puntas!) que representan los simbolos escalonados para obtener la expresión de la fertilidad. Motivos de textiles colección privada, dibujos, Uwe Carlson.

Tiahuanaco y Huari formaban en el horizonte medio una cultura que se extendió desde el sur hasta el norte del Perú. En Tiahuanaco se encuentra la famosa Puerta del Sol. Aquí el un jefe alto o posiblemente elídolo también está representado con el rostro frontal y sentado sobre un pedestal, que se

forma a partir de meandros escalonados (Fig. 61). El ídolo es casi antropomórfico, por lo tanto, certificó su referencia al pasado a través de cabezas felínicas (en el tocado) y cabezas de aves (en el cetro). Los mismos se presentan también en la base y revelan una identidad clara con Chavín. También una cerámica encontrada en Tiahuanaco nos muestra la presencia de los felinos (pintado plásticamente) y el ave de rapiña (bajo la cabeza felinica). El meandro escalonado esta presentado de manera separada como dos símbolos individuales. (Fig. 62).

Fig. 59: Textil Nazca con diseño del meandro escalonado en seis colores diferentes, formando así un modelo o un patrón. Colección privada, foto Uwe Carlson.

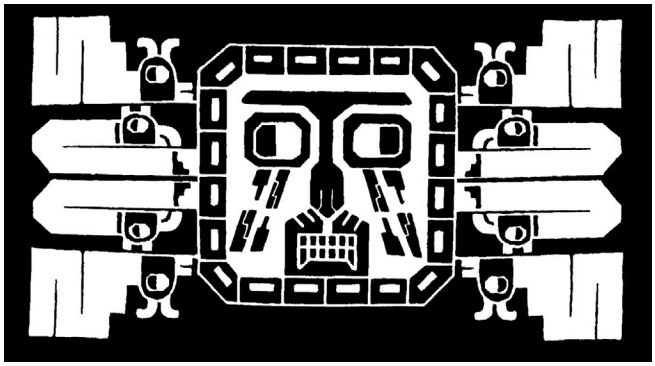
Fig. 60: Variantes del simbolismo del meandro escalonado en fajas de Nazca. Colección privada.

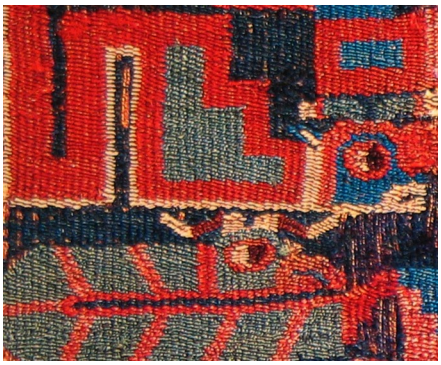


Figs. 61: A la izquierda el relieve central de la Puerta del Sol. El tocado muestra signos que se refieren al origen de la imagen divina (dios felínico de Chavín), los de los cetros se refieren al caracter ornitomorfo de este dios. El podio revela la forma dual del meandro escalonado, junto con los mismos símbolos en el tocado y cetros.

Fig. 62: La cerámica en estilo Tiahuanaco esta representando el felino esculpido y la imagen pintada del felino y del ave, revelando la imagen divina felinica-ornitomorfa de Chavín. Foto Ricardo Bardales, Universidad de Puno.

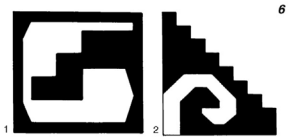
Un textil muy notable de esta cultura muestra en original y dibujo , la imagen del felino junto al meandro escalonado y al meandro serpiente. Tales representaciones son raras (Figs. 63–64). Como motivos más típicos son considerados los que están en un rectángulo dividido por una diagonal: La fisonomía del ídolo y el meandro escalonado. Este último se presenta en dos variantes: el símbolo meandro incorporado en el escalón o el símbolo escalón incorporando en la forma del meandro (Figs. 65–67).



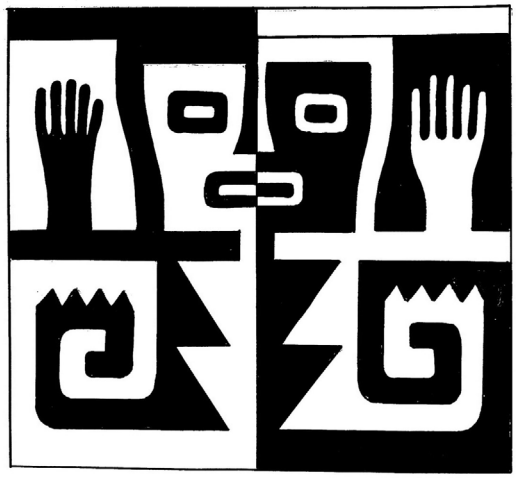


Figs. 63 y 64: El textil Huari muestra una cabeza felinica con dos simbolismos de fertilidad a los lados derecho/izquierdo. El detalle muestra los dos simbolismos por separado. Textil: V. Drake Moraga "Animal Myth and Magic", 2005, p. 18. Dibujo Uwe Carlson.

El motivo anterior (Fig. 70) es una de las mejores representaciones de la imagen divina, con los símbolos adicionales de la fertilidad. La cabeza del dios felínico está combinada con dos meandros escalonados. En el espacio libre se muestra el simbolismo del escalón incorporado en el meandro (comparar con Fig. 66).



Figs. 65 - 67: Detalle de un textil Tiahuanaco-Huari. El diseño rectangular esta repartido en forma diagonal. A la izquierda se muestra el retrato divino, a la derecha el meandro escalonado, el escalón esta incorporando al meandro. El dibujo de la derecha muestra las dos formas típicas usadas por Tiahuanaco-Huari: El escalón incorporado en el meandro y el meandro incorporado en el escalón. Textil: F. Anton "Altindianische Textilkunst aus Peru", 1984, detalle de fig. 91. Dibujos Uwe Carlson.



Figs. 68 y 69: Dos variantes representan la imagen divina Huari junto con el simbolismo de la fertilidad. La imagen divina se muestra con un fondo de dos colores, la cabeza en la parte superior junto con dos manos adorantes y el sombolismo de la fertilidad por simbolos separados (meandro y puntas = escalones) en la parte inferior. Textiles: Col. priv. y F. Anton "Altindianische Textilkunst aus Peru", 1984, imagen 98. Dibujo Uwe Carlson.

Una imagen Huari (cabeza felínica) nos deja descubrir el simbolismo atributivo con facilidad. Se esconde a la derecha (meandro doble) y en la cabeza (línea en zig-zag). Además otro textil muestra los símbolos de la fertilidad (forma del meandro escaloando). Este tejido también aporta significativamente la representación por separado de los símbolos expresados con los puntados (Fig. 71).

Otro textil Huari muestra en variantes coloradas la repetición de una imagen felínica que se refiere a las representaciones de Chavín (Fig. 72). Su carácter ornitomorfo está identificado por las alas, igualmente en el tocado y en el cetro. En la cadera se muestra un meandro serpiente. Un textil de diseño semejante muestra a un ser zoomorfo con el

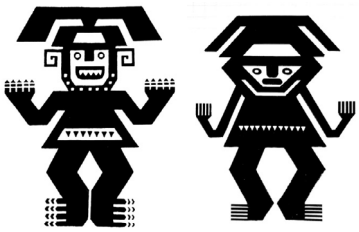
Fig. 70: El textil Huari muestra una imagen divina en forma de una cebeza felínica con su dientes impresionantes, cuyo cuerpo consiste en dos meandros escalonados combinados, que incluye un simbolimo del meandro incorporando un escalón (véase fig. 66).

zoomorfo con el simbolismo del meandro escalonado por separado. Otra parte de la tela exhibe una estructura formada por ocho simbolismos combinados del meandro escalonado. Estos fragmentos de tela también demuestran claramente la presencia de los dos simbolismos, meandro escalonado y meandro serpiente, en la cultura Huari. (Figs. 73–74).

Fig. 71: Imágenes divinas Huari en forma de cabezas felínicas. El simbolismo de le fertilidad se revela por el detalle zizag (puntas = escalones) en la parte superior de la cabeza con el meandro dual en la parte derecha de la cabeza. Coleccion privada, foto Uwe Carlson.

Chimú muestra esencialmente ídolos antropomorfos (Figs. 75–77), que también revelan su simbolismo por separado. El tocado que refiere a la variante curvada, puede ser interpretado como un meandro. La contraparte en forma una linea de puntas la podemos encontrar en el área de la cadera.

Fig. 72: La imagen divina Huari se presenta con reliquias chavinoides: Una figura antropomorfa, atributos ornitomorfos (alas), cabezas de aves en el tocado y en el cetro, simbolismo meandro serpiente en la cadera. Figs,. 73 y 74: Un textil Huari muestra dos partes diferentes con la imagen divina zoomorfa con simbolismo de fertilidad y un simbolismo repetiendo ocho veces la presentación de la fertilidad (los meandros afuera y los escalones adentro). En muchas culturas el “punto”, significa un ojo, que revela la imagen divina. Vease figs. 91 – 93. Textiles colección privada. Fotos Uwe Carlson.



Figs. 75 – 77: Imágenes divinas antropomorfas Chimú: El dios se presenta en forma antropomorfa. Su tocado revela una forma particular del meandro, el escalón se encuentra en la linea puntada a la altura de la cadera. Textil colección privada. Dibujos Uwe Carlson.

Fig. 78 y 79: El tumi ceremonial en oro con piedras semipreciosas esta mostrando la imagen divina de una manera particular y muy representativa. Los ojos y alas simbolicas hacen identificar el caracter ornitomorfo (que se refiere a Chavín). La parte superior del tocado muestra dos tiras que revelan el simbolo del meandro o de la ola (arriba) y el simbolo de escalón en forma de puntas (abajo). Dos aves estan simbolizando la fertilidad como aves costeras o picaflores. Museo Brüning, Lambayeque. Foto U. Carlson.

El famoso Tumi muestra un tocado en forma de media luna, en dos niveles se observan los símbolos tipo meandro (agua) y en forma de puntas (tierra). La connotación ornitomorfa se puede percibir en los ojos y las pequeñas imitaciones de alas en los dos lados del cuerpo. Un dibujo de otro objeto está confirmando dicha interpretación del tocado respecto a los símbolos del meandro escalonado (Fig. 78–79).

Otra variante del tocado nos muestra su forma semicircular con una configuración en zigzag. Lo interpreta al meandro escalonado y se puede identificar en muchos textiles Chimú (Figs. 80-81). En otros tejidos se pueden identificar meandros serpientes chavinoide. Algunas telas muestran también representaciones con simbolismos del Período Intermedio Tardío (véase la sección siguiente). Un fragmento textil en estilo de Lambayeque muestra una imagen del ídolo, acompañado por el simbolismo del meandro escalonado y del meandro serpiente (Fig. 80). Dos otros de Chimú manifestan en sus tocados con el simbolims de los meandros escalonados la fertilidad (Figs. 81-82).

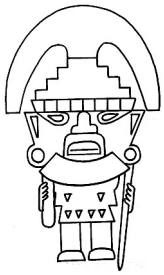
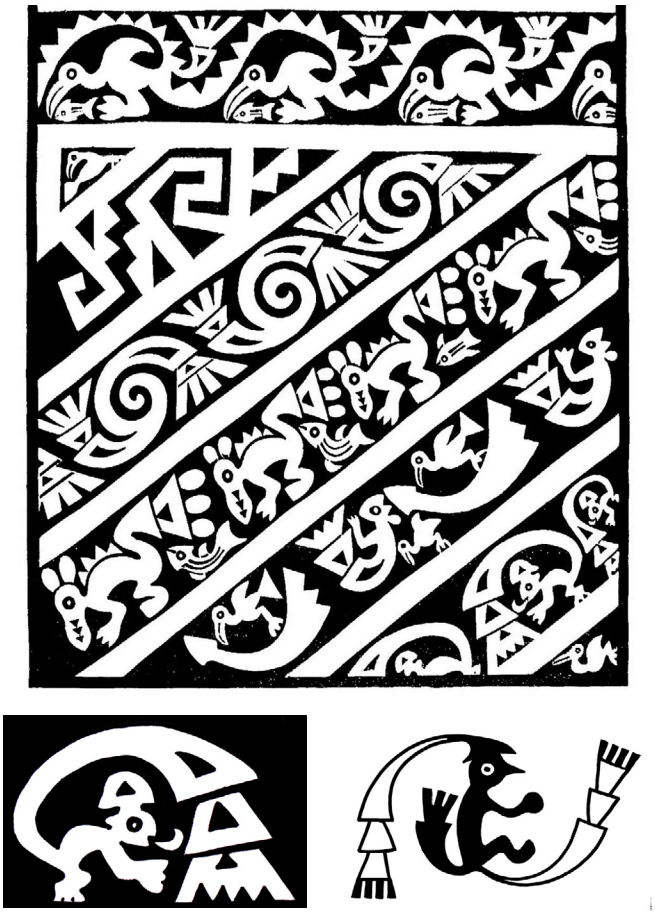


Fig. 80: La imágen antropomorfa-ornitomorfa en un detalle de un textil de la cultura Lambayeque demuestra una representación divina con los dos simbolismos atributivos. Los ojos y las alas simbolicas (brazos?) revelan el caracter ornitomorfo de la figura. En el tocado una variante del meandro escalonado y en la cadera los meandros serpientes. Figs. 81 y 82: Dibujo de una figura Chimú, el tocado muestra el simbolismo del meandro escalonado, en una forma combinada. La imagen felínica a la derecha muestra este simbolismo variado en su todado. La forma redonda del tocado está ilustrando al meandro (comparar con fig. 80) y los simbolos de puntas del escalón. En la cola se observa el simbolismo de borlas del Intermedio Tardio (vease figs. 86 y 87). Textiles: Colección privada. Dibujo segun un objeto de madera en el Museo de Oro, Lima, Uwe Carlson.

El nuevo simbolismo del Intermedio Tardío

En muchos edificios o templos de adobe (Trujillo, Túcume) existen relieves que muestran un nuevo simbolismo atributivo: como estructura puntada o en forma de borla). Obviamente después de alrededor de dos mil años el uso del meandro escalonado y del meandro serpiente mostraron la necesidad de un „nuevo simbolismo“ (Figs. 83–87).

Esto lo derivo de los diseños textiles, donde las piernas, brazos y cola interpretan al meandro escalonado en formas dentadas o puntadas. Otros ejemplos muestran objeto con formas de peces como seres divinos. Otros muestran las aves costeras/marinas equipados con símbolos puntados y meándricos, que son como forma particular del meandro escalonado probablement simbolismos de fertilidad. Algunos muestran el simbolismo de la borla en conjunción con la fisonomía (Figs. 88–90).



Figs. 83 – 85: El conjunto de motivos de huacas en Trujillo realizado por el artista Pedro Puerta de Trujillo muestra la variedad de alternativas en el simbolismo atributivo de la imagen divina en el Intermedio Tardio. En estos ejemplos se muestra una cantidad de variaciones del tipo borla, que se puede observar también en los dos otros ejemplos. Fig. 84 y 85 dibujos segun relieves de barro en Túcume, Uwe Carlson.

Desde el simbolismo antes mencionado, surgieron imágenes emblemáticas, que estaban dotadas de un „ojo“ central. Un ejemplo de ellos se muestra junto con el meandro escalonado, donde se revela claramente que ambos tienen el mismo mensaje. Estos ejemplos se muestran en textiles pintados y otros en textiles tejidos (Figs. 91–93) (Carlson y Diestel 2015, pp. 48 – 49).

Figs. 86 y 87: En un textil de la costa central se muestra una imagen divina en los cuales brazos y piernas están combinados con símbolos teniendo como bas las formas puntadas/escalonadas. Junto con las formas meandricas resulta el simbolismo de la fertilidad. También en el otro textil de la costa central se observa dicho simbolismo.

Figs. 88: Un textil pintado de la costa central nos mustra un animal simbolizando el felino, cuya lengua esta formada de manera meándrica, y mostrando puntas significando escalones. Un meandro escalonado (meandro incorporado en el escalón) se observa en la parte superior del textil. Colección privada. Foto Uwe Carlson.

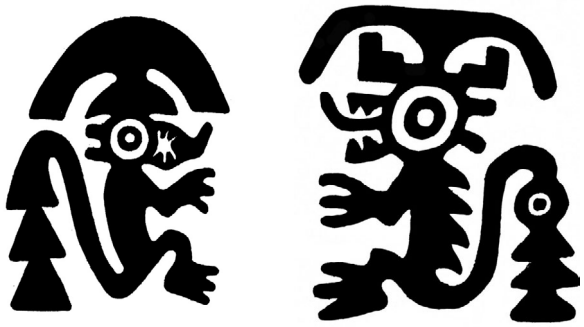


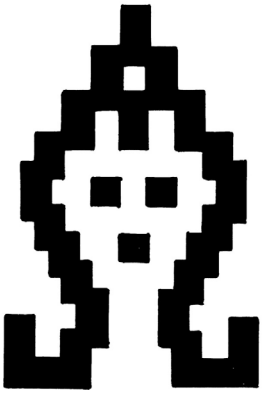
Fig. 89 y 90: Dos ejemplos igualmente pintados de la costa norte estan confirmando las interpretación anteriores, 89 Museo Amano, 90 MAAH Trujillo. Dibujos Uwe Carlson.

Figs. 91 – 93: En estos tres textiles exhibe una representacion común de un sombolismo de borla dual conectado con un simbolo del ojo, este ultimo representando al dios mismo. Una manera muy simple de expresión de la imagen divina con el simbolismo atributivo. En el ejemplo 92 esta combinado el ejemplo del Intermedio Tardio con una representación anterior: El meandro escalonado "clasico" en forma dual. También equipado con un ojo, de manera emblemática. Textiles: Colección privada, centro Museo de Puruchuco. Fotos Uwe Carlson

Chancay y el ave marina sagrado

Figs. 94-95: Dos detalles de textiles Chancay muestran aves marinas en conjunción con el simbolismo atributivo: A la izquierda el ave marina con el simbolismo del meandro escalonado en un forma particular y a la derecha el simbolismo de borlas del Intermedio Tardio, aqui con meandros adicionales. Textiles: Colección privada, fotos Uwe Carlson

La cultura Chancay presenta una variedad de técnicas textiles. Dos ejemplos de tejidos dobles (Figs. 96 – 98), exhiben diseños diferentes de cabezas felínicas, uno con un meandro en combinación con la cabeza felínica dentada y la otra muestra la cabeza felínica con el simbolismo del meandro escalonado (tela doble y el dibujo de otro tejido).



Figs. 96-98: Dos textiles de la cultura Chancay muestran en telas dobles (arriba una faja con motivos diferentes) la imagen divina, complementado por el simbolismo atributivo. En los tres ejemplos se puede identificar la cabeza felínica y a sus dos lados el meandro, mientras el escalón se descubre en el zigzag de la cabeza o en la forma escalonada del motivo. El dibujo 97 muestra un motivo comparable a 98. Textiles: Colección privada, fotos Uwe Carlson.

Dos detalles de tejidos sugieren la simbiosis entre iconos felínicos y aves marinas semi-divinas. Sumado a ello, se muestran por separado los símbolos puntados y meándricos. El ave marina tiene una posición importante en los dos textiles.

Figs. 99 y 100: En dos textiles (detalles) de la cultura Chancay se reconoce la relación de la imagen divina con el ave marina, que se encuentra en los dos motivos. A la izquierda en el centro la imagen divina, con manos en forma de “borlas”, junto con aves marinas. Dos marcos superpuestos muestran el meandro y las puntas (escalones), arriba con una cabeza felínica. Afuera imágenes de aves marinas en forma entrelazada, combinado con su simbolismo atributivo. A la derecha el ave evidencia más importancia, se presenta junto con el simbolismo atributivo. El felino (la cabeza) esta junto con los motivos del meandro. Textiles: Colección privada, fotos Uwe Carlson.

Figs. 101 y 102: Un textil de la cultura Chancay muy sofisticado muestra el ave marina junto con el simbolismo de la fertilidad en estilo "interlocking" (entrelazado). El dibujo manifesta el motivo claramente. El ave está combinada con un cuerpo de dos puntos, significando en su posicion el simboilismo atributivo. Sobre su cuerpo se encuentra lo mismo junto con un meandro, formando igualmente el simbolismo de la fertilidad. Entre los dos se descubre la cabeza felínica en blanco, formada por dos puntas con ojos (a partir de la mitad de la cabeza felínica). Textil: Colección privada, foto y dibujo Uwe Carlson.

Dos ejemplos de textiles de textiles presentan en muestras de telas dobles al ave marina incorporando al meandro escalonado. El cuerpo tiene un diseño puntado y la cabeza y el cuello están adornados de forma meándrica. El ave marina sagrada se muestra en un boceto junto con el simbolismo del meandro escalonado (Figs. 94–95).

Tejidos de Chancay, producidos en varias tecnicas, nos muestran otros ejemplos del ave marina con el simbolismo del meandro escalonado que simboliza la fertilidad. Algunos de estos modelos presentan las aves marinas junto con el simbolismo adicional en estilo "interlocking". Una parte de tales tejidos muestra las aves con el estilo entrelazado, lo que significa que el sujeto se inserta en sentido inverso a la otra, y así surge una repetición recíproca. El textil de la foto también enseña un contorno y su carácter complejo del tejido lo convierte en una obra maestra (Figs. 99–100).

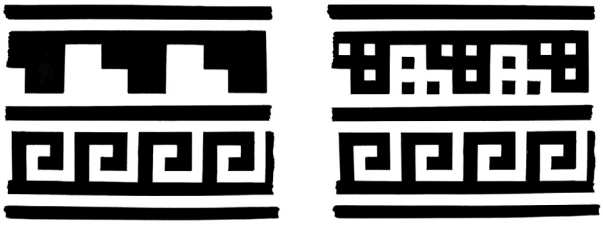
Figs. 103 – 106: Dos telas dobles de la cultura Chancay y dos dibujos revelan la simbiosis de la imagen felínica divina con el ave marina (sagrada). Textil: Colección privada, foto y dibujos Uwe Carlson.

Figs. 107 – 108: Un simbolismo dual (arriba) en un textil pintado de Chancay presenta el meandro escalonado combinado con el rostro felínico, en combinación dual. Dibujos: Simbolismo entero, simbolo felínico, sombolismo del meandro escalonado. Textil: Colección privada, foto y dibujos Uwe Carlson.

Las aves marinas sagradas se manifestan en particular a través de textiles, donde la imagen del ídolo y el ave están formando una unidad. El resultado es una simbiosis semejante a la de Chavín, a excepción de este caso en que el ave marina esta representado como suplemento (Figs. 103–106).

El simbolismo escondido en los textiles

Algunas telas tienen representaciones parecidas a la simbología del Período Intermedio Tardío. Un textil pintado de Chancay revela la imagen félinica dual con el simbolismo de fertilidad incorporado. El motivo se presenta casi de forma emblemática (Figs. 107–108).

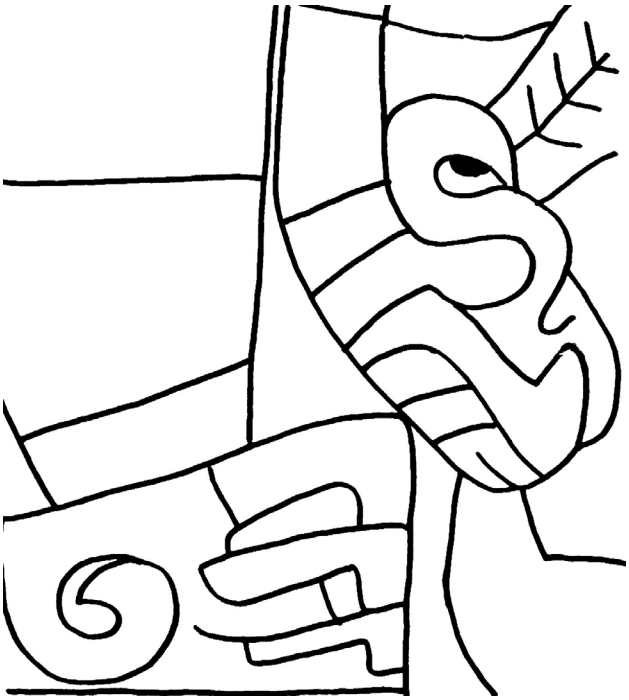


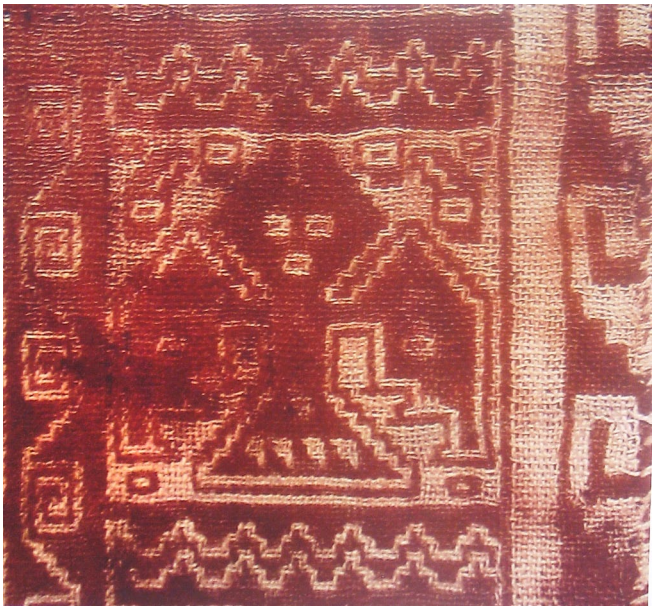
Figs. 109 – 111: La imagen divina (cabeza felínica) esta incorporado en el escalón, el meandro se presenta por separado. La imagen "entera" muestra la imagen divina junto con el simbolismo atributivo. Textil: Colección privada, foto y dibujos Uwe Carlson.

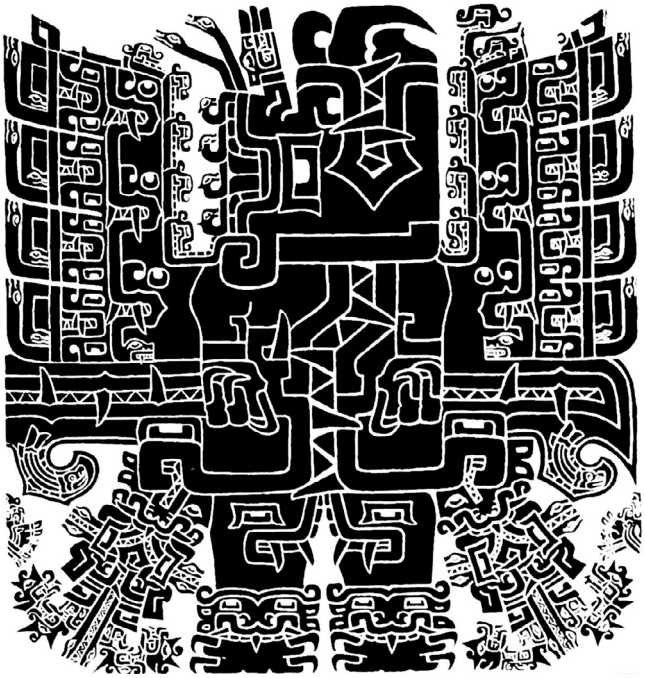
Algunos ejemplos de textiles nos hacen descubrir su simbolismo escondido. El textil Chancay revela en dos rayas diagonales, la repetición de la cabeza felínica y el meandro. Aparentemente falta el motivo del escalón. Se pude reconocer si uno elimina la fisonomía de la imagen felinica (Figs. 109–111).

Otro ejemplo muestra la representación por separado de la cabeza de serpiente y del meandro en Chavín. En la imagen de la izquierda los meandros se esconden en los oidos y los pies. Un detalle similar encontramos en un relieve de piedra (Figs. 112–113).

Figs. 112 y 113: En las imágenes divinas de Chavín (textil y relieve en piedra) se observan los simbolos de cabeza serpiente y mendro en forma separada (en los pies de la imagen divina).







Figs. 114 – 116: Una tela doble de Chancay muestra un contenido similar all relieve de una columna de la portada del templo nuevo de Chavín, la imagen divina en su variante felínica-ornitomorfa. La comparacion del dibujo de la tela y de la columna revala algunos detalles interesantes. Los artistas usaron, como los de Paracas y Tiahuanaco, rasgos o atributos para referirse a Chavín. En la parte superior del textil se pueden observar en cada lado el meandro serpiente y una cabeza de ave. El dios felinico tiene alas, pero un rostro frontal, los atributos para presentar al dios felínico-ornitomorfo estan por separado. Textil: Colección privada, fotos y dibujo Uwe Carlson.

Un ejemplo muy notable muestra segun la opinión del autor que un ídolo diseñado en Chavín reaparece después de 2000 años en un textil de Chancay. En un distinto tiempo un motivo en una tela doble con diseño rompecabeza no ha podido ser explicado. En la representación gráfica se puede identificar claramente como felino alado. La comparación con las imágenes de los relieves de las columnas del Templo Nuevo ofrece la solución. A los dos lados de la cabeza se puede ver un meandro serpiente, así como dos cabezas de aves. En un tamaño de solo 12 × 12 cm no se tiene una „resolución“ mas grande. Sin embargo, todos los componentes son idénticos con la imagen de la columna. Sólo queda la interrogante de conocer cómo llegó a Chancay esta imagen alrededor del 1400 D. C. (Figs. 114–116).

La religión como base del desarrollo del antiguo Perú

Las últimas imágenes dan una idea de los valles cultivados con mucho éxito. Una „ciudad“ como se puede observar en la imagen digital del valle de Nepeña. Al igual que muchos otros lugares su importancia se debe al éxito de su gestión en el valle, con especificación del lema „agua a la tierra“, por la religión creada por los sacerdotes. Los textiles eran los medios que tenían los sacerdotes, para enseñar y el pueblo ha podido certificar su fe y la religiosidad por la vestimenta.

Una aldea en la imagen digital (Mapa 1) se puede comparar con Caylán, sitio arqueólogico de la epoca formativa en el valle de Nepeña (Fig. 118). Probablemente esta ciudad fue fundada antes de la época Chavin y posiblemente tenia en ese momento una superficie de más de 20 hectáreas, siendo en esa época la más grande de las Américas. Hoy en día está destruída, pero aún sus restos son claramente evidentes, a sólo unos metros de la orilla de la tierra fértil del valle (Fig. 117).

Figs. 117 – 118: Agricultura en el valle Nepeña, al lado de los cerros desérticos, a unos pasos de las ruinas de la antigua ciudad de Caylán. En la epoca formativa con una superficie de aproximadamente 20 hectareas fue la ciudad mas grande de las Americas.

Síntesis

En su mayoría, segun la opinión del autor, la imagen divina en el antiguo Perú se manifestó en textiles junto con un simbolismo de expresión religiosa. La imagen divina se presentaba en sujeción o subordinación a las diversas culturas y a las interpretaciones artísticas respectivas. Asimismo el simbolismo atributivo tuvo variaciones y diferentes modificaciones.

Por ejemplo, se puede interpretar que la imagen divina se reveló en forma felínica con variaciones antropomorfas y ornitomorfas, también como representación híbrida, en configuraciones sorprendentes abstractas o emblemáticas como imagen con inspira-ciones antropomorfas e igualmente de manera reducida, mostrando solamente cabezas o rostros divinos.

Por esto opina, de la misma manera ha cambiado el simbolismo religioso de la fertilidad, vale decir, del meandro escalonado al meandro serpiente en el Horizonte Temprano. La utilización de los dos símbolos al mismo tiempo en las culturas de Intermedio Temprano y el Horizonte Medio, con las variaciones del meandro escalonado así como el uso del símbolo de una borla en el Horizonte Tardío.

A pesar de estas diferentes variaciones, se ha mostrado una constante en el contenido de estos simbolismos durante una época de aproximadamente 2500 años. Según la opinión del autor la imagen divina siempre se encuentra junto con el simbolismo atributivo, que esta combinando los signos de los dioses tierra y agua al simbolismo de le fertilidad. Con respecto a estos dos dioses subalternos, la imagen divina debe encontarse en una trinidad (Carlson y Diestel 2015, pp. 60 – 61).

En la costa el ave costera/marina se presentaba con un status sagrado o posiblemente divino, indicando la riqueza de peces comola base de vida de la población costera incluyendo los valles. El ave se representó en muchos textiles y también en otras obras de arte junto con el dios superior. Igualmente en imágenes de carácter simbiótico. También se presentaba junto con la manifestación del simbolismo de la fertilidad. Se presume que pudo haberse considerado como un ídolo o un ser semidivino.

Los sacerdotes transmitían la imagen divina junto con el lema “agua y tierra” o “agua a la tierra”, el contenido de la religión y el método de la supervivencia. Con esto y la influencia probable en el manejo del agua y sus técnicas agrícolas, ellos desarrollaron la cultura peruana a un alto nivel cultural. Tenemos que considerar los textiles de este período como uno de los mejores testimonios de esta época.

En este sentido, debe mencionarse la imagen de los dos valles o los paisajes fluviales valles que aparece al principio de este artículo (Representacion valles andinos en pagina 4). Aquí las la relaciones en el antiguo hábitat se presentan de manera reconocible. La presentación debe ser limitado simbólicamente. La longitud original de estos valles cuenta hasta 100 km y más. La imagen ilustra este hábitat en los valles, dentro de un periodo de aproximadamente 2000 años. (Carlson y Diestel 2015, pp. 172-174).

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Provenance investigations of raw materials in pre-Columbian textiles from Pachacamac; strontium isotope analyses

Karin Margarita Frei and Lena Bjerregaard

Abstract
Pachacamac was considered a sanctuary or oracle by several of the pre-Columbian Andean cultures. As a pilgrimage destination, the site was rich in archaeological artifacts and yielded also many well preserved textiles. Some of the objects found at Pachacamac are considered offerings by the pilgrims to their Gods, and the majority are assumed to be of nonlocal origin. Others are from the Ychsma people, who lived in Pachacamac and the nearby Rimac Valley during the last centuries before the conquest. We have investigated 10 pre-Columbian textile samples, which were supposedly excavated at the archaeological site of Pachacamac, Peru. The textiles from which the samples came today form part of the Ethnological Museum of Berlin. Nine of the ten textiles investigated in this study were collected by Wilhelm Gretzer (1907 museum entry) while the last one (textile V A 62696) was collected by von Diebitsch and entered the museum in 1925. The aim of this study was to, for the first time, investigate the origin of the pre-Columbian textiles' raw materials (mostly wool) by the application of strontium isotope analyses.

Investigaciones de procedencias de materias primas en textiles precolombinos de Pachacamac; Análisis de isótopos de estroncio

Resumen
Pachacamac fue considerado como un santuario u oráculo por varias de las culturas andinas precolombinas. Por ser un destino para peregrinos, se han encontrado muchos artefactos arqueológicos en el lugar, los que incluyen textiles conservados en buen estado. Algunos de los objetos encontrados en Pachacamac son considerados ofrendas a los dioses, hechas por los peregrinos, por lo que se supone que en su mayoría proceden de un origen no local. Otros son de la cultura Ychsma, una población residente en Pachacamac y el adyacente valle de Rimac durante los últimos siglos antes de la conquista. Hemos investigado 10 muestras de textiles precolombinas que supuestamente fueron excavadas en el yacimiento arqueológico de Pachacamac, Perú. Los textiles forman hoy parte del Museo Etnológico de Berlín. Nueve de los diez textiles investigados en este estudio fueron coleccionados por Wilhelm Gretzer (entrada en 1907) mientras que el último (textil VA 62696) fue coleccionado por von Diebitsch y entró en el museo en 1925. El objetivo de este estudio ha sido, por primera vez, investigar el origen de las materias primas de los textiles precolombinos (principalmente lana) mediante la aplicación de análisis de isótopos de estroncio.

Introduction

Wilhelm Gretzer was a German textile merchant, who lived and worked in Lima for 20 years around the turn of the 19th century. Gretzer collected preColumbian artifacts, a practice very much in vogue in the upper-class society of Lima at the time. He sold around 40.000 artifacts to the Museum für Völkerkunde in Berlin, of which ca. 10.000 were textiles.

Gretzer acquired the artifacts either by excavating them himself or by buying them from local grave robbers. He was however meticulous and noted the locations from which the articles were excavated, but this information often provided

by the grave robbers can't be considered *always reliable*. Hence, the context in which these textiles were found should therefore be considered with care.

Pachacamac is a very important archaeological site situated ca. 45 km south of Lima. Until the Spanish conquest it had been a ritual place for several thousand years used by people of many different cultures from diverse geographical regions. Pachacamac was considered a kind of Sanctuary and/or Oracle and was for many cultures a pilgrim destination. The rich amount of artifacts retrieved from the site seems to point to the fact that many of these goods were offerings to the Gods. Hence, many of the pre-Columbian objects found in Pachacamac (including the textiles) were not locally produced, but instead had been brought by the pilgrims, probably from their place of origin. In order to investigate, where these textiles came from, textile archaeologists often rely on iconography and the techniques with which these textiles were made. Nevertheless, this type of information does not necessarily provide information on where the textiles' raw material came from. As pre-Columbian cultures are known for their long-distance trade, this study aims at investigating where the textiles' raw material might have come from.

The textiles investigated in this study are:

Fig.1,2,3,4. Shroudpatches, V A 56735, V A 57024, V A 56886, V A 56906.

4 of the analyzed textiles (V A 56735, V A 57024, V A 56886, V A 56906) are made by the Ychsma people. They lived in and around Pachacamac in the last centuries before the Spanish conquest. The textiles analyzed are parts of shrouds for wrapping the dead. The technique is slit and interlocked tapestry, the material is cotton. All 4 fragments have 2S warps, and the wefts are Z, 2Z or 2S – often mixed in the same textile.

The hairnet (V A 42669) is made on the central coast of Peru between AD 1200 – 1500. Likely in Pachacamac by the Ychsma or in Chancay on the coast, 80 km north of Lima (and so 120 km north of Pachacamac). It is made from 2S Furcreae Andina – a South American Agave sort and the technique is lark's head knotting.

The three textiles (V A 57540, V A 57793, V A 58040) are from the Lambayecke/Sican culture that flourished AD 900-1100. The center of this culture was on the northern coast of Peru around the contemporary city of Chiclayo, 770km north of Lima. They are woven in tapestry technique.

The first one (V A 57540) is a man's tunic (S cotton warps and wefts and Z camelid fiber wefts).

The second (V A 57793) is an unidentified fragment (2S and 2Z cotton warps and wefts of 2S and 2Z cotton and 2S camelid fiber) Notice the image of women spinning the camelid fiber on drop spindles.

Fig. 5. Hairnet, V A 42669

The last one (V A 58040) is a fragment of a woman's hip cloth (warp 2S cotton, and weft 2S camelid fiber). The three dimentional plants are made in wrapping and looping techniques.

Fig.6. Man's tunic, V A 57540

Fig.7. Fragment, V A 57793

Fig.8. Fragment of a Woman's hipcloth, V A 58040

V A 56568 is a fragment of a Chimu textile – made between AD 1200-1450 on the northern coast of Peru. It's size and purpose is unsure – another fragment of the same textile was sold to the National Museum of Copenhagen in 1923. The fragment has 2Z cotton warps and 2S camelid fiber wefts.

The last of the analyzed textiles (V A 62696) is a provincial Inka man's tunic from AD 1450 – 1550. It has 2S cotton warps and 2S camelid fiber wefts. The basic pattern is made in tapestry with eccentric warps and rounded forms, which is rather seldom in preColumbian Peru and has so far only been found in the south of Peru. However the tunic is composed in a typical Inka way – with a diamond waist band and a step fret net yoke.

Strontium isotope analyses and baselines

Ericson (1985) was the first who proposed the idea of using the variations of the strontium isotopic ratios in archaeological materials and to relate these to the bedrock and soil characteristics of specific geological areas and thus to constrain their potential geographical origin. Since then, many studies of human and animal migration have been conducted on the base of archaeological bone tissue/skeletons (Price et al., 1998, Price et al., 2010, Knudson et al., 2005, Grupe et al., 1997, Montgomery et al., 2003, Evans et al., 2006, Price et al., 2011). The base for performing such tracing studies lies in the fact that strontium isotopic ratios ($^{87}Sr/^{86}Sr$) do not change within their pathway throughout the food chain (Graustein, 1989).

Furthermore, the age and the type of lithology of the bedrocks (magmatic, metamorphic and sedimentary rocks) on which respective soils are developed impose a control on the $^{87}Sr/^{86}Sr$ ratios of a particular geological area and thereby creating necessary variations in this signature which are measurable and traceable. However, studies have shown that the knowledge of the local bedrock is not always sufficient; hence there is the need to characterize the so-called bio-available strontium isotope composition of the targeted area. There are several ways to characterize such a bio-available signature: by bone tissue of small animals, by plants, by water and/or soil samples (Evans et al., 2010, Frei and Frei, 2011, Price et al., 2002). However, it should be noted that the spatial resolution of the bio-available $^{87}Sr/^{86}Sr$ ratios can be similar in different geographical areas, therefore setting limits to the discrimination between different areas with the same or very similar bio-available strontium characteristics.

Fig.9. Fragment, V A 56568

Fig.10. Man's tunic, V A 62696

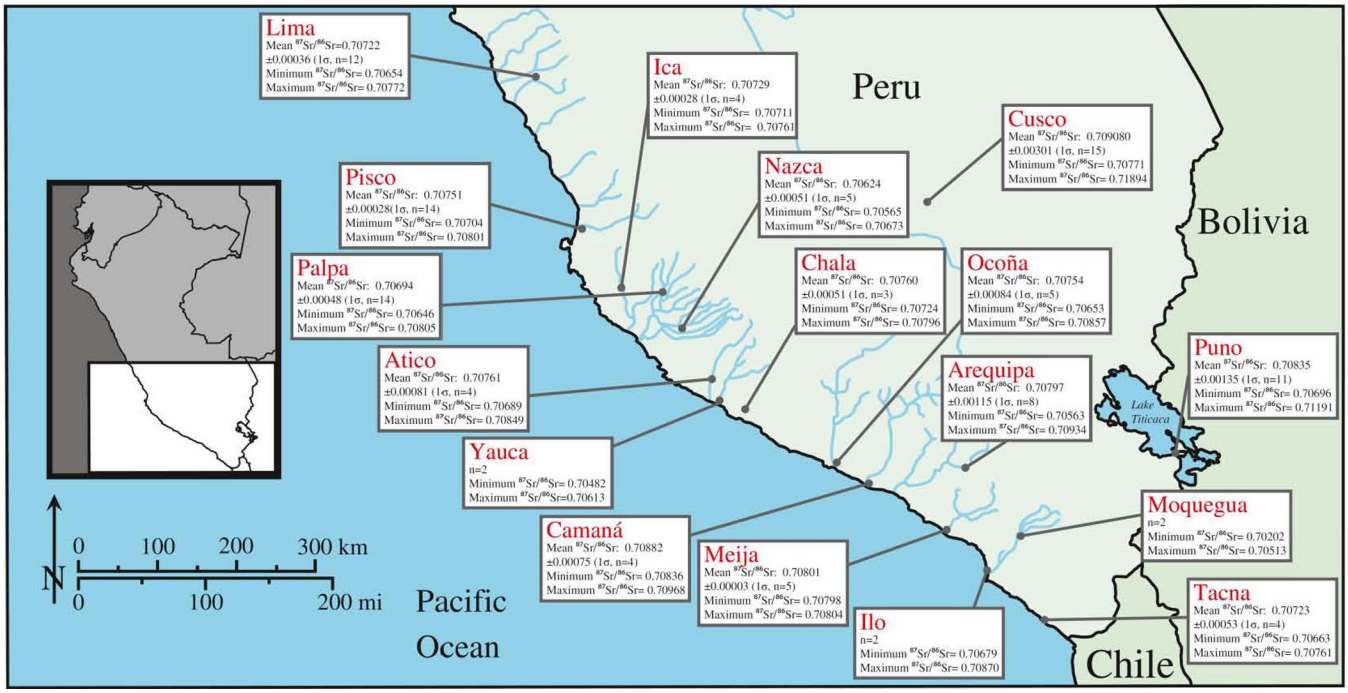

Fig.11. Map of the South Peru depicting soil baseline sampling locations and mean radiogenic strontium isotope ratios, after Knudson et al., (2014), figure 3.

While the use of radiogenic strontium isotope values to investigate paleomobility is increasing in the Andes, there is still no good baseline coverage of the strontium isotope bioavailability ranges of the different areas. Peru is however, to date, one of the best areas investigated by this methodology, and efforts have been made by e.g. Knudson et al., (2014) to provide some baseline knowledge of the area. Knudson et al., (2014) collected and analyzed soil samples from different areas, mostly covering the southern part of Peru. Their study revealed a $^{87}Sr/^{86}Sr$ range from 0.702 to 0.719 (Fig. 1), the highest values coming from the Cusco area.

However, as the baseline for Peru is still incomplete, we have sampled the Pachacamac area to constrain the local strontium isotopic baseline. A total of six samples were collected by Dr. Jane Feltham covering the Pachacamac site. The strontium isotopic values of the soils collected in this study yielded a range from $^{87}Sr/^{86}Sr$ = 0.7062 to 0.7083. Similarly, the soils samples investigated by Knudson et al., (2014) from the area of Lima yielded a similar range of $^{87}Sr/^{86}Sr$ = 0.7065-0.7077. Based on these studies we propose a local baseline for the area of Pachacamac of $^{87}Sr/^{86}Sr$ ~ 0.706 to 0.708.

Pre-cleaning/decontamination of ancient textile samples

The sampling protocols for ancient textiles vary depending on whether the textiles have been dyed or not. In this case most of the textiles have been clearly dyed. Consequently, the samples followed a series of pre-cleaning processes to ensure the decontamination of the textiles' raw material previous to dissolution. The textile samples were washed 1N hydrochloric (HCl) acid and subsequently in 20% dilute cold hydrofluoric (HF) acid under ultrasonic treatment for 1 hour in a 7ml Teflon beaker (Savillex™). The samples were rinsed twice with 1 ml of deionized water (MilliQ™) in an ultrasonic bath between the acid washes. The respective acid washes were subsequently pipetted away from the textile samples and the remaining fiber samples were thereafter deeply rinsed (several times) with 1 ml of deionized water (MilliQ™) and dried.

In order to remove traces of dyestuff in the textiles, the rinsed textile fiber samples were emerged in 3 ml of 0.2M ammonium peroxodisulfate $(NH_4)_2 S_2O_8$ (a strong oxidant, abbreviated as "APDS") on a hotplate (preferably at 130 ºC)

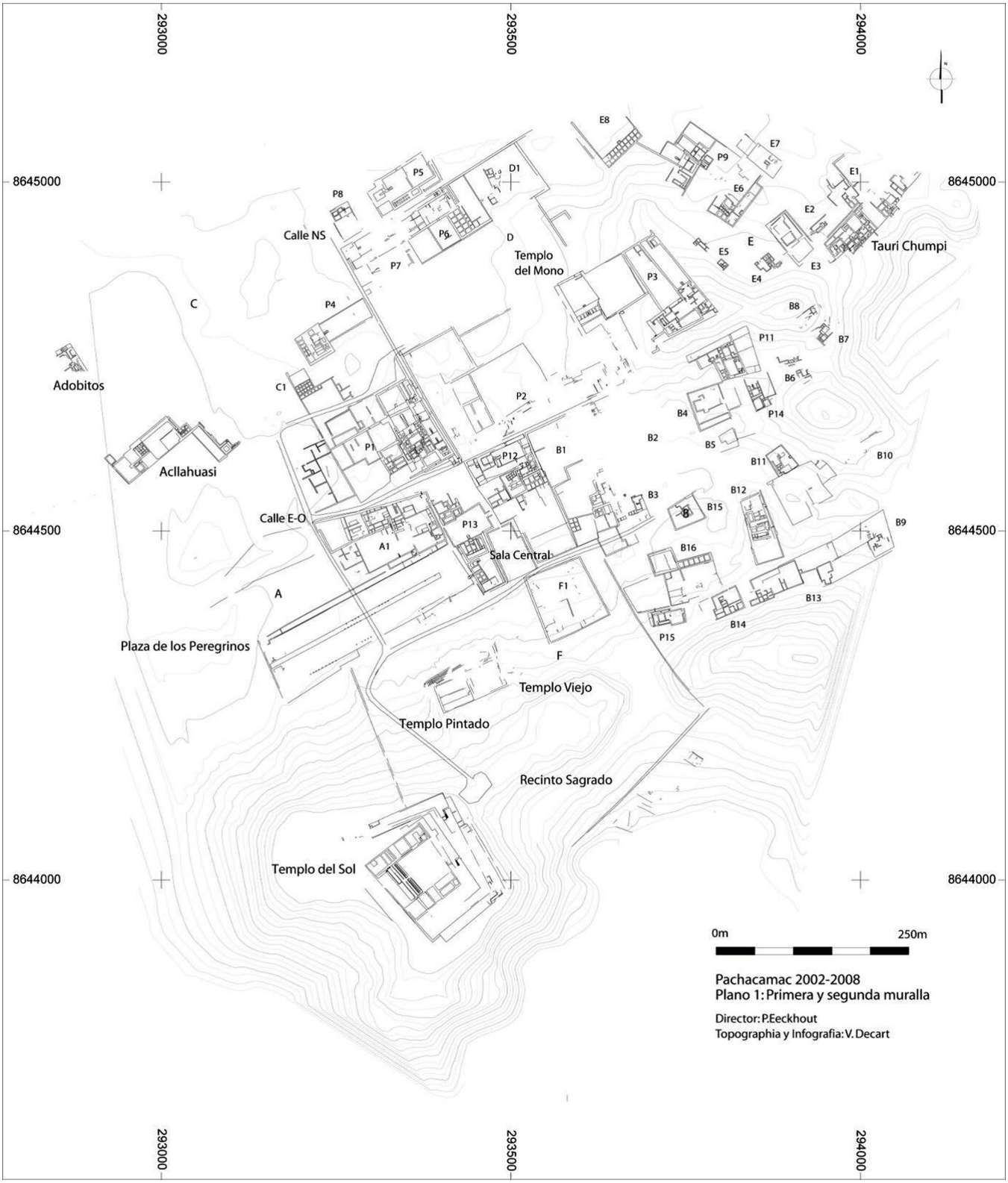

Fig.12. Map of Pachacamac with indications (+) of where the soil samples were taken.

for c. 30 minutes. The residual textile fiber samples were once again deeply rinsed with 1 ml of deionized water (MilliQ™) several times and subsequently dried.

The final residual textile fibers were dissolved in a 1:1 mixture of 30% HNO_3 (Seastar™) and 30% H_2O_2 (Seastar™). The samples tended to decompose within 30 to 60 minutes. After decomposition the solutions were dried down on a hotplate at c. 80 °C.

Samples were taken up in a few drops of 3N HNO_3 and loaded on especially prepared, disposable pipette-tip columns containing 0.2 ml, intensively pre-cleaned mesh 50-100 SrSpec™ (Eichrome Inc./Tristchem) ion chromatographic resin. The elution recipe essentially followed that of Horwitz et al. (1992).

Strontium from the soil samples were separated according the analytical procedures and protocols described by Frei, and Sr fractions from these samples were measured on the same facility described below.

Thermal ionization mass spectrometry

The samples were dissolved in 2.5 µl of a Ta2O5-H3PO4-HF activator and subsequently loaded onto outgassed 99.98% single rhenium filaments. Samples were measured in a dynamic mode on a VG 54 Sector IT mass spectrometer (at the Danish Center for Isotope Geology, University of Copenhagen), at temperatures between 1300 and 1450 °C. The mass 88 ion beam was kept above 300 mV during an analytical run which consisted over a minimum of 6 blocks with 10 mass scan cycles each.

Strontium isotopes results

Table 1 presents the results of the strontium isotope analyses of the ten textiles investigated in this study. The results present a range of strontium isotopic values from $^{87}Sr/^{86}Sr$ = 0.7069 to 0.71209. When these values are compared with the local baseline range of Pachacamac which ranges from $^{87}Sr/^{86}Sr$ = 0.7062 to 0.7083, only one of the herein investigated textile samples fall within this range (56906). Table 1 depicts the values in bold black as the samples that have strontium isotope values that are nonlocal while the bold red value depicts the one that could be made of local raw material. This fact indicates as expected that the large majority of these textiles were made of nonlocal raw materials. Furthermore, the range of values indicates that the areas from which these raw materials came from are several. It should be however noted, that even though the textiles are made of nonlocal raw materials, the can still have been weaved at Pachacamac.

Table 1. Strontium isotope results from textiles from Pachacamac

Lab nr.	Museum nr.	$^{87}SR/^{86}Sr$	abs. error
KF911	VA 42669	0.70908	0.00003
KF912	VA 58040 W	0.70971	0.00007
KF913	56906 3W	**0.70690**	0.00004
KF914	57793 3W	0.70930	0.00003
KF915	VA 56568 V W	0.71007	0.00004
KF922	VA 56886 BW	0.71088	0.00003
KF923	57540 WB	0.71057	0.00006
KF924	VA 56735 BW	0.71209	0.00004
KF925	VA 57024 BW	0.71177	0.00003
KF926	VA62696 V	0.71174	0.00003

W is wool, BW is cotton (*Baumwolle*)

Art historically these textiles belong to the following cultures:

1-4 Ychsma
5 Ychsma/ Chancay
6-8 Lambayeque
9 Chimu
10 Inka provincial

They all supposedly were excavated in Pachacamac.

Conclusions

The textiles analyzed within this study yielded in their majority (90 %) values that were nonlocal. Furthermore, the values yielded a somewhat large enough range which suggest that the materials originate from areas with different geological terrains and hence geographically different. The strontium isotopic values tend to all be above 0.709, values that as seen in the map by Knudson et al., (2014) seem to indicate that they came from inside the country, probably the mountains. This fits perfect for the camelid fibers. Cotton was not grown in the mountains, and as the strontium values of most of the cottons are too high for the areas south of Lima, the raw cotton must have grown further away, where the strontium values are higher, i.e. maybe on the northern coast or the far southern coast.

Only one of the Ychsma shrouds (fig. 1,2,3,4) is made from local cotton. The other 3, made in the same Ychsma style are woven in nonlocal cotton.

Further investigations are needed to enable further conclusions on the potential trading routes of textiles' raw materials of ancient preColumbian textiles. Nevertheless, our pilot study shows the potential of applying strontium isotope analyses to textiles in museum collections also from the preColumbian world.

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22

Analysis of Paracas fibre material from the Gothenburg Collection

Anna Javér *

Swedish National Museums of World Culture

Abstract

Gothenburg City has in its collection, 2000-year-old textiles from the Paracas peninsula in Peru. After the exhibition ”A Stolen World” at the National Museums of World Culture in 2008, Peru asked for a repatriation of the collection. Following negotiations between the City of Gothenburg and the Ministry of Culture in Peru it was decided that the ownership of the textiles would be returned to Peru. In June 2014, the first four textiles were returned to the National Museum of Archaeology, Anthropology, and History (MNAAHP) in Lima as a start of the repatriation. This was also the beginning of a collaboration with the shared objectives to learn more about physical conditions of the Paracas textiles collections in Peru and Sweden. In September 2015, the textile conservator returned to MNAAHP to examine the physical condition of the textiles after more than a year of acclimatization to the new museum environment. The investigations into the condition of the collection were undertaken by the textile conservator, as a visiting fellow, at the Heritage Laboratory of the Swedish National Heritage Board along with chemist Kaj Thuresson. Several analytical techniques were employed for the study: fibre documentation, optical microscopy, SEM, compression testing and pH measurements.

Análisis del material de fibra de Paracas de la colección de Gotemburgo

Resumen

La Ciudad de Gothenburg tiene en su colección un grupo de textiles de 2000 años de antigüedad, procedentes de la península de Paracas en Perú. Después de realizarse la exhibición “Un Mundo Robado” en los Museo Nacionales de la Cultura Mundial en 2008, Perú pidió la repatriación de la colección. Luego de las negociaciones entre la Ciudad de Gothenburg y el Ministerio de Cultura del Perú, se decidió entregar los textiles al estado peruano. En Junio de 2014, los primeros cuatro textiles fueron enviados al Museo Nacional de Arqueología, Antropología e Historia del Perú (MNAAHP) en Lima, dando inicio al proceso de repatriación. También se inició una colaboración con el objetivo compartido de aprender más acerca de las condiciones físicas de las colecciones de textiles de Paracas en el Perú y en la Suecia. En setiembre de 2015, la conservadora textil volvió al MNAAHP para examinar la condición física de los textiles después de más de un año de ajuste al nuevo ambiente museológico. Las investigaciones acerca de la condición de la colección fueron realizados por esta conservadora textil, como investigadora visitante en el Laboratorio de Patrimonio del Patronato de Patrimonio Nacional de Suecia, junto con el químico Kaj Thuresson. Varias técnicas analíticas fueron empleados en el estudio: documentación de fibras, microscopía óptica, microscopía electrónica SEM, prueba de resistencia a la compresión y medición del pH.

Degradation is a natural part of life for all organic material, including textiles. However, there are factors that intensify degradation. It may be light, heat, humidity or pests, but also improper handling. At first glance the Paracas textiles, despite their advanced age, look very well preserved. The colours are bright and they are embroidered in intricate patterns. It is only when you study them closely and analyse fibres that you realize that this is not the case at all. After many years above ground, since excavations on the Paracas peninsula in Peru during the 1930s[1] the textiles bare clear

* Anna Javér is a textile conservator and responsible for the National Museums of World Culture’s textile collections, their preservation and availability to researchers and visitors. Anna is a technical engineer and a textile economist and trained as a textile conservator in London. Email anna.javer@varldskulturmuseerna.se

1. Paul, Anne. 1979. *Paracas Textiles: Selected from the Museum’s Collection,* Gothenburg, The Ethnographic Museum Gothenburg. Etnologiska Studier nr 34.

signs of degradation. The fibres are brittle and pulverise on handling. In many cases the weaves and embroidery today stay together out of old habit.

Out of the total collection in Gothenburg, 89 textiles are formally owned by the City of Gothenburg, the so called Gothenburg Collection. They are kept in the Museum of World Culture, alongside other objects from the Paracas culture. The Museum is responsible for their care and preservation and for making them accessible to research and the general public in and outside of Sweden. During the last twenty years fibre material from the collection have been analysed as a long-term project to understand the degradation processes and condition of the Paracas textiles in Gothenburg. This work intensified as Peru in 2008 asked for repatriation of the collection.

Between 1991 and 1993 fibres from textiles in the Gothenburg collection were analysed. The pH of the fibres was measured and the surface of the fibres were studied in a scanning electron microscope. The pH of the camelid fibres was 3.0 which is on the acid side and it was suggested that this was an indication of degradation products. In an attempt to reduce the rate of degradation display cases were constructed in which oxygen was substituted with ammonium gas to raise the pH of the fibres. The gas was then replaced with neutral nitrogen gas to prevent further degradation[2]. During the 1990s, forty Paracas textiles were exhibited in Gothenburg Ethnographic Museum. The rest of the collection was stored on Kapa plates, cardboard sheets with polyurethane core.

Again in 2001 analysis of fibres in the Gothenburg collection was carried out. The pH of the fibres was measured and the surface of the fibres were studied in a scanning electron microscope. Fibres were sampled by the textile conservator, from the same textiles as in 1992, textiles that had been on display and subjected to the ammonia and nitrogen treatment. Fibres from textiles in the collection that had not been on display and thus had not been subjected to the ammonium gas treatment, were also sampled. The pH of the treated fibres were now 5.9 and of the untreated fibres, 3.5[3]. The textiles not on display seemed to be relatively unaffected by eight years in storage. Ammonium treatment appears to have had a positive impact on the camelid fibre, while the cellulose in the cotton fibre were too degraded to be analysed. The result was disturbing since the cotton fabric acts as support for the embroideries.

Photo 1. Paracas textile from the Gothenburg Collection 1935.32.0188/ RT-38074. Photo: The National Museums of World Culture, Sweden (CC-BY)

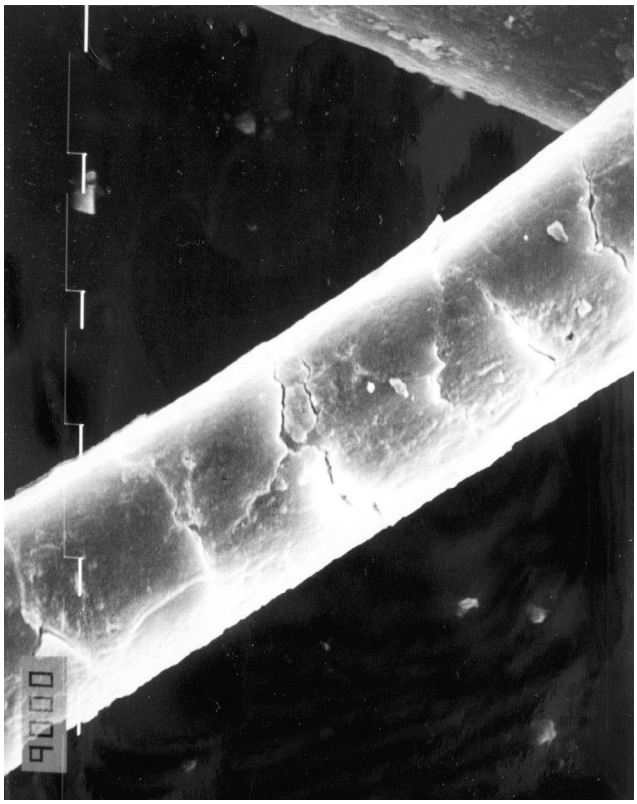

Photo 2. Scanning electron microscope image of a red camelid fibre from the embroidery of the Calendar Mantle under two thousand times magnification. The analysis and Scanning Electron Microscope (SEM) photographs were carried out in 1993 by Harald Åsnes at TEFO, the Swedish institute for textile research and the results are presented in an unpublished report available from TEFO. Photo: TEFO (CC-BY)

2. The analysis of the fibres and the research of ammonium gas treatment were carried out in 1991-1993 by Harald Åsnes at TEFO, The Swedish Institute for Textile Research.

3. The analysis and Scanning Electron Microscope (SEM) photographs were carried out in 2001 by Jörgen Ohlsson, M. Sc., Manager of the Fibre Department at IFP Research AB in Sweden and the results are presented in an unpublished report available from IFP Research AB.

Photo 3. The Gothenburg collection on display in the exhibition "A Stolen World". Photo: The National Museums of World Culture, Sweden (CC-BY)

In 2001 the collection was packed carefully and moved to the new storage facilities at the Museum of World Culture in Gothenburg[4]. The textiles rest on a support of plain polyester weave stretched over an aluminium frame. This system has been developed locally and is based on a similar system constructed under the guidance of Vuka Roussakis, textile conservator at the Natural History Museum in New York[5]. It has proven to be a well-functioning system, lightweight and volume saving for the fragile archaeological textiles. The textiles were stored for seven years and in 2008 it was time to display them in the exhibition '"A Stolen World" at the Museum of World Culture.

Textiles from Paracas have been taken out of Peru illegally almost since they were first discovered. Today there is more knowledge and awareness about the problems associated with looted objects and illicit trade. Even today weapons, drugs and objects travel the same routes. The textiles in the exhibition are believed to come from the funerary complex Necrópolis de Wari Kayan. Exactly which tombs they come from is not known, since they were looted and have not been properly documented. The exhibition *A Stolen World* aimed to raise general awareness of the consequences when objects are being looted and thereby lose their original context[6].

In connection with the exhibition, in 2008, Peru asked for a repatriation of the collection. Following negotiations between the City of Gothenburg and the Ministry of Culture in Peru it was decided by the municipal councillor that the ownership of the textiles would be returned to Peru during the years 2014 to 2021[7]. In June 2014 the first four textiles were returned to the Museo Nacional de Antropologia, Arqueologia y Historia (MNAAHP) in Lima, Peru as a start of the repatriation.

In 2013 the conservator, as a visiting fellow at the

4. Javér, Anna. 2012. Om och om igen– att flytta 2000 år gamla textilier från Paracas, Peru. In: *Moving Collection – Processes and consequences* IIC Nordic Group conference, Oslo, October 15-17 2012.

5. Roussakis, Vuka.1986. "Storage renovation and mounting techniques for the Andean Textile Collection at the American Museum of Natural History", in *Textile Treatments Revisited. The Harper Ferry Regional Textile Group 8th Textile Preservation Meeting.* Washington, 7 November 1986.

6. http://www.varldskulturmuseerna.se/varldskulturmuseet/aktuella-utstallningar/utstallningsarkiv/en-stulen-varld/ (2016-06-01)

7. http://www5.goteborg.se/prod/Intraservice/Namndhandlingar/SamrumPortal.nsf/D709C76F3C280ED2C1257A8E004ECA31/$File/KF_Handling_2012_nr_151.pdf?OpenElement (2016-06-01)

National Heritage Board in Sweden, was able to do analysis of fibres from the Gothenburg collection. Together with chemist Kaj Thuresson at the National Heritage Board the weight, length and diameter of 23 fiber samples were measured as well as the pH. For every sample, approximately 4 mm of thread was put into a 0.5 ml Eppendorf safe-lock micro centrifuge tube and covered with 50 µl deionized water. The samples were left to extract at room temperature for approximately 6 hours. Measurements were taken with a new Horiba LAQUA twin pH meter calibrated with pH 4.0 and pH 7.0 standard buffer solutions. The pH meter probe was rinsed with ample deionized water between each measurement (but not dried in order not to disturb the sensitive probe surfaces). The samples were then measured by VWR Prolabo paper dosatest for pH 0-14 and all the readings recorded.

SEM images were taken with a scanning electron microscope under 500 and 1000 times magnification. Because the fiber samples were too small to be subjected to a tensile test instead a compression test was constructed. The fibre samples were supported on glass microscope slides and sections of 1 mm were cut off each sample whilst ensuring that the yarn's twist and ply were not disturbed. A microscope slide cover glass was placed on the sample and then carefully weighed down with a 200-gram weight. Stereomicroscope images of the test samples were recorded before and after compression and their behaviour was noted, e.g. the subjective feel of how flexible the fibres were or how easily they crushed under the weight.

The Calendar mantle[8] is the most unique object in the collection and perhaps most unique in the world. It was to be included among the first four objects to be repatriated back to Lima. Fibres from different areas of the mantle were analysed. White undyed camelid fibre from the embroidery, was hardly not changed at all. The 2000 year old fibre is still

Photo 4. Anna Javér as a visiting fellow at the National Heritage Board measuring pH of the fibres. Photo: Marei Hacke, Swedish National Heritage Board (CC-BY)

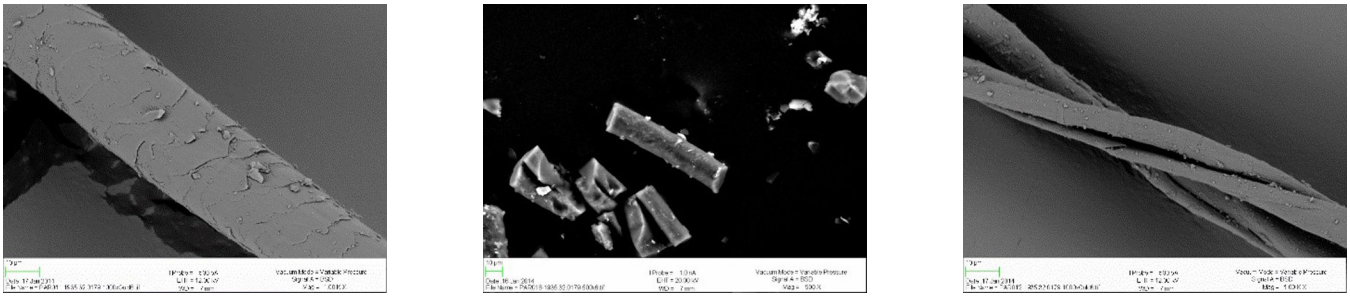

Photo 5 . Scanning electron microscope image of a white camelid fibre (to the left) and a black camelid fibre (in the middle) from the embroidery under magnification. To the left is a cotton fibre from the support weave under magnification. All are from the Calendar Mantle. Photo: Swedish National Heritage Board (CC-BY)

8. http://collections.smvk.se/carlotta-vkm/web/object/96680 (2016-06-01)

Photo 6 and 6a (detail). The Calander Mantle from the Gothenburg Collection 1935.32.0179/RT-38072 were one can see both the camelid embroidery threads and the cotton support weave. Photo: The National Museums of World Culture, Sweden (CC-BY)

flexible and supple as new. In the scanning electron microscope the white camelid fibre look new with perfect epidermis scales, the lines that characterize wool. Black camelid fibres from the embroidery are in contrast crushed and shatter like glass under the weight. In the dyeing process metal ions have been added in order to get the black colour and with time the metal has accelerated the degradation of the fibre. Today it is very brittle and carbonised[9]. In the scanning electron microscope the black fibre has almost no texture left and breaks into small pieces with sharp ends.

A fibre from the same object but from the cotton support weave have the beautiful - clockwise rotations which is characteristic of cotton. But in the scanning electron microscope one can also observe the degradation of the fibre through the cracks and debris on the surface. In the same textile, as here described in the Calendar Mantle, there are parts that are extremely fragile as well as parts that are flexible as new. The risk of vibrations from handling and transport can be very damaging for the textiles.

We consulted with colleagues at the National Museum in Copenhagen[10] and Museum of Ethnography in Berlin[11] on how to safely transport the textiles. Together with the transport company we constructed crates with double inner boxes so that the vibrations were reduced to a minimum in the inner box with the textiles. The vibrations were measured throughout transportation with data loggers of similar type used during space missions by NASA.

The trip went by truck and boat from Gothenburg to Amsterdam and by plane to Lima, Peru. At Cargo the crates were unloaded together with the Deputy Minister of Culture, the National Heritage Board and former Peruvian ambassador to Sweden met the press and ensured that the Gothenburg collection had arrived safely to the country. The crates were then transported to the Museo Nacional de Antropologia, Arqueologia y Historia and placed in the textile storage over the weekend to acclimatise from air transport.

Three days later the crates were opened in front of the press by Peru's Minister of Culture and The Swedish Ambassador in Chile and Peru. When they left the room, us conservators had a chance to do a thorough survey of the textile's condition after transport. Only a few new breaks in the delicate embroidery was noticed. The method of packing had worked and condition reports could be filled out and signed.

In the afternoon, we packed the crates again since President Humala wanted the repatriation ceremony to take place in the presidential palace. The textiles were displayed in the gold room which is a replica of the Hall of Mirrors in Versailles. The Municipal Council President of Gothenburg, The Swedish Ambassador, Peru's Minister of Culture and Peru's Minister of Finance together with President Humala signed the agreement of repatriation. When the ceremony was over the textiles were once again packed and transported them back to the museum where Carmen Thays Delgado and her colleagues are now responsible for the preservation of the collection.

Photo 7. The conservators at the Museo Nacional de Antropologia, Arqueologia y Historia inspecting the Calander Mantle after transport.Photo: The National Museums of World Culture, Sweden (CC-BY)

The investigation into the condition of the Paracas fibres continue with a comparative study of fiber material

9. As noticed by Ann H. Peters i early Nasca textiles. Peters, Anne H. 2012. "Identity, Innovation and Textile Exchange Practices at the Paracas Necropolics, 2000 BP", in *Textile & Politics. The Textile Society of America* 13th Biennial Symposium. Washington DC, September 19-22, 2012.

10. Visit to the National Museum in Brede, Denmark and personal communication to Textile conservator Maj Ringgaard and conservator Barbara Berlowicz in March 2014.

11. Visit by Lena Bjeergaard to the National Museum of World Culture to see the Gothenburg collection in June 2013.

from the Paracas culture in Peru as part of the agreement between Gothenburg and Peru. 10 more fibres from 4 different objects will be analysed together with conservation scientist Marei Hacke and conservation chemist Kaj Thuresson at the National Heritage board[12]. Fibres from the collection at the Museo Nacional de Antropologia, Arqueologia y Historia were sampled in September 2015 together with Carmen Thays Delagado and Maria Ysabel Medina Castro in order to see if there are any noticeable differences in the condition of the fibres. Our intentions are to see how dyes and the condition of the Paracas fibers correspond. Hopefully, the results from the analysis will help to broaden the international interest in this unique textile world and its future and perhaps the conservator's knowledge of material can contribute to the ongoing discussion about repatriation issues.

12. http://www.k-blogg.se/2016/06/22/starka-resor-skora-tradar/ (2016-06-27)

23

La conservación de dos fardos funerarios provenientes de contextos arqueológicos: El caso de la cueva del Lazo, Ocozocoautla, Chiapas y la cueva de la Candelaria, Torreón, Coahuila, México.

Gloria Martha Sánchez Valenzuela[2]

Resumen
El presente artículo se enfoca en la conservación de dos fardos funerarios localizados en diferentes cuevas dentro de la República Mexicana que, a pesar de encontrarse en polos opuestos, se conservaron gracias a las condiciones de humedad y temperatura estables dentro de un contexto seco. Lamentablemente, en ambos casos, no existe un registro minucioso del contexto (mediciones de humedad, temperatura, análisis de sedimentos, entre otros), así como de las condiciones en las que estos se encontraban (elementos asociados –restos óseos, ornamentos, posición, etc) que permitan realizar una intervención lo más fehaciente posible. Estos ingresan a la CNCPC[1] completamente colapsados, después de haber estado almacenados por largos periodos de tiempo; sólo se tenía conocimiento de que se trataban de textiles que formaban parte de un envoltorio o fardo funerario. Al realizar los primeros procesos de conservación se fueron revelando algunas evidencias que permitían hacer una reconstrucción de cómo pudo ser el fardo, esto junto con el soporte gráfico y bibliográfico determino los procesos de conservación permitiendo realizar una interpretación museográfica, de manera que el espectador pueda comprender el uso y función del textil, asegurando su preservación a las generaciones futuras.

Palabras clave: conservación, fardos, interpretación, textil arqueológico

The Conservation of Two Funerary Bundles: The case of Candelaria Cave, Torreón Coahuila and The Lazo Cave, Chiapas, México.

Abstract
This article focuses on the conservation of two funerary bundles found in different caves in the Republic of Mexico which, despite having been found in the far north and far south of the country, were both conserved thanks to stable conditions of temperature and humidity within dry contexts. Unfortunately, in both cases a detailed record of the contexts does not exist (measurements of the humidity, temperature, soil analysis, and other factors), nor of the conditions in which they were found (associated elements: skeletal remains, ornaments, position, etc.) which would permit the most accurate possible intervention. They arrived at the National Cultural Heritage Conservation facility completely collapsed, after having been stored for long periods of time; it was only known that these were textiles that each had formed part of a shroud or funerary bundle. On carrying out the initial conservation processes, evidence appeared that permitted a reconstruction of the possible form of each bundle, which together with graphic and bibliographic background information determined the conservation strategies, allowing the development of interpretations for museum display such that a viewer could understand the use and function of the textiles and assuring their preservation for future generations.

Keywords: conservation, bundles, interpretation, archaeological textile.

1. Coordinación Nacional de Conservación del Patrimonio Cultural – INAH
2. http://conservacion.inah.gob.mx ; gloriamsv.cncpc@inah.gob.mx ; marthasvmex@gmail.com

Introducción

La restauración de textiles arqueológicos, procedentes de contextos funerarios, es un campo especializado donde prevalece el criterio de la mínima intervención para su conservación, con la intención de respetar el objeto como evidencia del paso del tiempo junto con la información que proporcionan antes de una intervención. Quienes trabajamos en este campo tenemos la responsabilidad de conocer la diversidad de estudios que se utilizan en las diferentes áreas de investigación, además de trabajar interdisciplinariamente para la preservación y registro de las evidencias, dando como resultado un mejor conocimiento de los bienes culturales; sin alterar la información y conservándola de tal manera que contribuyamos a su interpretación. Lamentablemente, en México, son pocos proyectos donde participa un restaurador dentro del equipo de exploración y rescate, en la mayoría de las ocasiones nuestra presencia se da después de su extracción, de manera que llega a nuestras manos descontextualizado, con poca información que ayude a dar una propuesta de investigación e intervención lo más adecuada e integral posible.

Los casos que nos ocupan son el vivo ejemplo donde los bienes se extrajeron y fueron almacenados por largos periodos de tiempo antes de su intervención, además de contar con poca información sobre el registro de contexto, ubicación, procesos de extracción, condiciones de almacenamiento, entre otros. Estas son algunas de las razones por las cuales se tuvieron que intervenir de manera descontextualizada; sin embargo para su conservación se aplicaron los principios de respetar la integridad del patrimonio cultural, buscando soluciones reversibles en las acciones de conservación, así como la compatibilidad entre los materiales que permitan su retratabilidad es decir, que los productos aplicados para su conservación no modifiquen física y químicamente al bien, que impidan o alteren sus características para futuros estudios; además de permitir nuevas posibilidades de tratamiento. Al mismo tiempo se ejecutó una intervención reconocible que integrara visual y estéticamente al bien cultural, permitiendo su comprensión a las generaciones actuales y futuras revalorizando su significado cultural.

Además al ser patrimonio, que forma parte del acervo de un museo, los criterios que se establecieron para su intervención están directamente relacionados con la misión del destinatario, donde la principal función es didáctica para difundir nuestra cultura. La investigación bibliográfica, el examen y diagnóstico de los textiles permitieron evaluar progresivamente las potencialidades para recuperar su forma y función dejando en la mente del interlocutor una visión clara del bien, revalorándolos y proporcionando un sentido de identidad.

Caso 1: Cueva del Lazo

Como ya se mencionó en este volumen (ver Domenici y Sánchez) la exploración arqueológica de La Cueva del Lazo, Chiapas dio como resultado el hallazgo de una gran cantidad de materiales de origen orgánico, principalmente textiles y cordelería, que fueron recuperados y resguardados por un lapso de 10 años en el estado de Chiapas, hasta que llegan en 2007 a la Coordinación Nacional de Conservación del Patrimonio Cultural para su conservación.

En el caso particular del textil con referencia: 25 LAV97 Y2 EXP1 N16/E8 CAPA A/B (A.1) FARDO EN ESQ.8 y No. Clave 60-02/06, se encontraba comprimido, inmerso en un bloque de tierra sin forma definida (ver en este volumen Domenici y Sánchez, Figura 32); exclusivamente se sabía (por los datos arqueológicos) que estaba asociado al esqueleto no.8, no sabemos si los restos óseos se encontraban al interior del textil, o cuál era este tipo de asociación. Lamentablemente después de realizar una revisión bibliográfica exhaustiva sólo se encontró un registro gráfico de su ubicación dentro de la unidad de excavación; se carece de registro fotográfico de su hallazgo y extracción que indique su ubicación, posición, dimensiones, elementos asociados, condiciones de levantamiento, embalaje, etc.

Esto supuso un gran retroceso para la intervención, puesto que no se tenía la certeza del tipo de bien que sería conservado; es decir su carácter, dimensiones, contenido, etc. Se realizó una limpieza superficial, para eliminar la tierra, para observar las características del textil, esto permitió localizar tres conjuntos de fragmentos textiles: uno de ellos, el de mayor dimensiones, conservaba una sección con parte del cuero cabelludo, indicando que ahí se encontraba el área del cráneo o cabeza, dejando un hueco que se delimitaba por una banda de textil a manera de amarre, sugiriendo la sección del cuello, revelando que era un lienzo que conformaba un envoltorio o fardo. El otro conjunto respondía a varios fragmentos de tejidos que integraban una manta y el último sólo respondió a un fragmento aislado de textil (para mayor información ver Domenici y Sánchez).

De antemano se sabía que los textiles o bienes localizados en la cueva eran producto de 11 entierros de infantes, donde nueve fueron envueltos en fardos funerarios compuestos por una o más capas de textiles amarrados con cordeles de algodón o de fibras vegetales (Orefici, 1998: 13-18). Esta información junto con los criterios de intervención y la información proporcionada por Domenici (en cuanto a medidas y posición de los infantes) determinaron la propuesta de intervención.

En México es difícil encontrar fardos completos en las excavaciones arqueológicas, por lo general (debido a las condiciones climáticas) sólo se conservan pequeños fragmentos

textiles que indican que formaron parte de un lienzo o conjunto mortuorio; este tipo de tejidos suelen exponerse montados sobre una tela auxiliar de soporte en un bastidor; sin embargo en esta ocasión, uno de los conjuntos no correspondía a un fragmento bidimensional; no se sabía la forma exacta pero existían claras evidencias de ciertas partes como la ubicación del cráneo y amarre a la altura del cuello; esto proporcionaba una imagen figurativa de un textil que envolvía un infante en posición fetal . Aunque no se conocían con exactitud las dimensiones del infante se decidió realizar una reconstrucción hipotética para brindar al público la posibilidad de comprender que el bien cultural en cuestión se trataba de un fardo, cuyo textil tenía la función de envolver un cuerpo. Como restauradores tenemos la responsabilidad de prever sus posibles deterioros a futuro provocados por la manipulación, el deterioro natural de los materiales, o bien la falta de comprensión que lo pueden llevar al abandono hasta convertirse en una ruina. Al darle un nuevo sentido al objeto este es reconocido, valorado y por lo tanto preservado.

El bien con no. de clave 60-02/06 de acuerdo con sus datos arqueológicos indicaba que se trataba de un fardo mortuorio correspondiente al esqueleto 8, éste se encontraba dentro de un gran bloque de tierra, que impedía reconocer el contenido; venía embalado en una caja de cartón dentro de una bolsa de plástico.

Como primer paso se procedió a eliminar la tierra de manera mecánica mediante pinceles, brochas de pelo suave, por succión con aspiradora de baja potencia protegiendo previamente el objeto mediante mallas de tul de nylon de trama cerrada, facilitando el paso de las partículas de tierra pero no de fragmentos del bien cultural. Este proceso se realizó repetidamente para eliminar paulatinamente el exceso de tierra presente; esto permitió ubicar y separar diferentes partes que se encontraban incluidos en el bloque de tierra dando como resultado 3 conjuntos de tejido que se trabajaron de manera individua. Una vez separados los fragmentos se procedió a la identificación y análisis de deterioro de la fibras[3] observando diversas alteraciones físicas y químicas producto de la descomposición de los cuerpos, así como la degradación natural de las fibras, dando como resultado debilitamiento y friabilidad, denotando sequedad y pérdida de elasticidad de los hilos, permaneciendo quebradizos. Estos daños provocaron pérdidas de ligamentos (trama y urdimbre) poca cohesión de las fibras y por tanto inestabilidad de los tejidos. Además presentaba tierra acumulada entre los ligamentos, oxidación de las fibras traduciéndose en cambios de color, presencia de manchas, deformaciones, roturas y dobleces.

En el caso que nos ocupa el fragmento responde al de mayores dimensiones y se localiza una sección que envolvía el área del cráneo y la sujeción del lienzo con una banda textil alrededor del cuello. Estas evidencias se respetaron realizando una limpieza de manera puntual, por medio de soportes que permitieran conservar la forma original de cada una de las áreas (ver en este volumen Domenici y Sánchez, figura 35).

La limpieza química se realizó con agua y un tenso-activo de manera local humectado (a manera de ajedrez) diferentes áreas del textil colocando papel secante en la parte inferior, rociando agua por encima y secando por medio de aire, para evitar deformaciones.

Una vez limpio, se sometió a un tratamiento para flexibilizar y consolidar las fibras con una mezcla de polímeros[4] por medio de aspersión, esto permitió que las fibras recuperaran flexibilidad y resistencia. Posteriormente se colocó un soporte auxiliar con crepelina de seda teñida al color del tejido para brindar estabilidad a los fragmentos de tejido y permitir su manipulación. Como parte de su conservación se decidió elaborar un montaje museográfico para su mejor comprensión, donde se hace evidente que el fragmento constituye un fardo o bulto mortuorio. Para este proceso se colocó un segundo soporte[5] cuyo tejido se asemeja al original, proporcionando volumen y permitió colocar una estructura interna (simulando el cuerpo del infante) que no afecta visualmente.

Como se comentó desde un principio, se cuenta con pocos datos sobre su contexto de origen, se sabe que envolvía a un infante de aproximadamente año y medio de edad, encontrado en posición fetal, que una vez extendidos y colocados los restos óseos mide alrededor de 46 cm. Con esta escasa información se decidió realizar un soporte que simulara a un infante en posición fetal elaborado con ethafoam®, forrado con una tela elástica de algodón. El cráneo y cuerpo fueron tallados por separado para facilitar la colocación de los elementos al interior de cada sección. El modelo de cráneo fue seccionado de forma longitudinal en cuatro partes con el fin de introducirlos en la cavidad sin ejercer esfuerzos sobre el textil (ver en este volumen Domenici y Sánchez, figura 36). Finalmente se colocó el modelo y se envolvió con todo el textil realizando costuras invisibles para mantener la forma del envoltorio (ver en este volumen Domenici y Sánchez, figura 37). Esto permitió conservar el bien y recuperar su significado cultural.

3. Fibras de algodón.
4. Mezcla de PEG-Almidon-Metilcelulosa
5. Tela de lino mediano

Imagen 1. Ubicación del estado de Coahuila
www.travelbymexico.com/estados/estados/coahuila.jpg

Imagen 2. Localización de la Cueva de la Candelaria en el estado de Coahuila.

Caso 2: Cueva de la Candelaria (Sánchez, G; Solís, L; Catro, M; 2015: 11-19,58-63)

Al igual que la exploración de muchas cuevas en la República Mexicana, el descubrimiento de la Cueva de la Candelaria surge de manera fortuita en los años cincuenta, cuando una persona oriunda de la región por casualidad encuentra varios cadáveres y otros objetos en el Valle de las Delicias dando aviso al Instituto de Antropología. Es así como en 1953 surge el primer proyecto formal de investigación del INAH en el norte de México para explorar y transmitir la importancia de este sitio a nivel nacional e internacional (Aveleyra, 1956:21).

El proyecto implicó la realización de varias temporadas de campo: la primera de ellas durante los últimos días de marzo y principios de abril de 1953 con la participación de Manuel Maldonado Koerdell (geólogo y paleontólogo), Arturo Romano (antropólogo físico), Francisco González Rul y Pablo Martínez del Río; la segunda temporada en septiembre de 1953 con el Dr. Ignacio Bernal y el Arq. Luis Aveleyra y la tercera temporada en abril de 1954 con Aveleyra, Goribar, Elizondo, González Rul, Rodríguez, Romano, Lezama y Martínez del Río (Arqueología Mexicana, Vol. 30, 1998:62).

La cueva de la Candelaria está situada en la Comarca Lagunera, al pie de la sierra de la Candelaria, en el valle de las Delicias al suroeste del estado de Coahuila (Imagen1-2). Se trata de una simple grieta de grandes dimensiones, con abertura en forma de tiro vertical y configuración interior sumamente accidentada, utilizada por los antiguos laguneros como enorme depósito mortuorio" (Arqueología Mexicana Vol. 30, 1998:63). La cueva se abre a unos 30m sobre el nivel del bolsón, compuesta por rocas calizas, desprovista de vegetación ya que no cuenta con agua en las cercanías dando como resultado su carácter semidesértico.

El orificio para ingresar, tipo chimenea, mide aproximadamente un metro de diámetro; el tiro se ensancha transversal y verticalmente llegando a la cámara más alta, de forma irregular aunque se aproxima a la forma rómbica. En el extremo más lejano existe una abertura que comunica a una segunda cámara, aún más irregular que la anterior, que se prolonga por numerosas cámaras laterales de tamaño y forma variables, que están perdidas en la profundidad de las rocas y las cuales ya no se exploraron puesto que los materiales antropológicos sólo se encontraron en la primera cámara (Aveleyra, 1956:51). El piso se encontraba casi oculto tanto por materiales de derrumbe, así como por un número indefinido de bultos mortuorios desparramados, abiertos parcialmente y su contenido esparcido por doquier (Imagen 3), como resultado de la acción de los saqueadores y el desprendimiento de grandes piedras del techo de la cueva que habían caído sobre los bultos, además de la descomposición de los cadáveres y la intrusión de animales menores.

La materia prima de la cual se extraían las fibras para la elaboración de tejidos provenía de diversas especies de agave y yuca (plantas oriundas de la región). Dentro de las diferentes investigaciones que se realizaron se encontró que

Imagen 3. Interior de la Cueva de la Candelaria. INAH, México, 1953.

la identificación de fibras estuvo a cargo del herbario de la Universidad de California bajo la dirección del científico Howard Arnott, quien identificó básicamente tres plantas como las productoras de fibras textiles: Yucca Treculeana, Yucca Carnerosana y Agave lechuguilla. De las 150 muestras analizadas, Weitlaner concluye que la yuca, por su abundancia y resistencia, se empleaba para la elaboración de tejidos hechos en telar (como bandas angostas y mantos grandes) y el Agave lechuguilla para el cordaje fino o burdo, hilo para coser, redes, flores, objetos emplumados, etc.

Probablemente los hilos, para elaborar los mantos, fueron teñidos con colorantes naturales (también de la región) y torcidos por el sistema de enrollar los manojos bajo la palma de la mano sobre el muslo. En la gran mayoría de los elementos analizados se encontró que los hilos están compuestos por cuatro cabos iniciales de torsión en "z", éstos unen y se obtienen dos cabos de torsión en "s", que finalmente se unen para obtener un hilo de alta resistencia con torsión en "z". En el caso de estudio se observó que el hilo está conformado por dos cabos de torsión en "s" para conformar uno de torsión en "z".

Al igual que en el resto de Mesoamérica para obtener mantos de grandes dimensiones se unían dos o más lienzos por medio de costuras con hilos de mayor grosor. Las medidas aproximadas de los lienzos de la colección, varían de 110 a 182cm de largo y entre 7.5 a 115cm de ancho. En este caso en particular, el textil consta de 10 fragmentos, de los cuales seis conforman parte del manto que cubre el cuerpo y cuatro corresponden al área que envolvía la cabeza o cráneo; sus medidas aproximadas con los elementos extendidos es de 90 x 150 cm y como bulto mortuorio de 45 x 81 cm. La densidad del tejido es 17 hilos de trama por 10 hilos de urdimbre en $2cm^2$. Presenta básicamente diseños de líneas o bandas de colores utilizando básicamente el color crudo o natural de la fibra, anaranjado, café y negro (colorantes que están en proceso de identificación).

De los diversos lienzos estudiados por Weitlaner, se hace evidente que los laguneros no intentaban sobresalir

Imagen 4. Textil de la Cueva de la Candelaria antes de procesos de intervención. CNCPC-INAH, México, 2014.

Imagen 5. Proceso de limpieza y separación de fragmentos. CNCPC-INAH, México, 2014.

particularmente en los tejidos finos, a menudo se identifican irregularidades en la manipulación de las caladas y descuido en el tendido de la urdimbre, aunque cabe resaltar que se dedicaban cuidadosamente a la decoración.

Dentro de su manufactura es raro encontrar precauciones para reforzar los orillos laterales, se observó que los orillos muestran una urdimbre simple, no hay congestionamiento a lo largo de las orillas, no existe diferencia en el tejido ni hilos más fuertes para hacer el refuerzo.

En el caso de estudio los orillos se presentan ya bastante desgastados con refuerzos a manera de surjete y los de la periferia están peor conservados que la costura de unión al centro. No se distinguen orillos terminales ni cabeceras y el tejido es sencillo de cara de trama (predominancia de los hilos de trama que los de urdimbre).

El textil se encontraba compactado, fragmentado, con múltiples roturas, pérdida de tejido y ligamentos, algunas zonas muy degradadas, con manchas múltiples y mal olor como producto de la descomposición de los cuerpos; además de pérdida de flexibilidad o rigidez, múltiples dobleces y forma indefinida (Imagen 4).

Al desconocer la forma y función del textil, su intervención presentó todo un reto que implicó planear estrategias de acuerdo con los avances que se presentaban. Se inició con una limpieza mecánica para retirar la mayor cantidad de polvo y suciedad acumulada que permitiera la manipulación del material e ir separando los diferentes elementos que lo conformaban. Poco a poco se fue extendiendo (sólo las partes que así lo permitían), retirando todos los elementos ajenos o adyacentes de manera mecánica a través de pinceles, brochas y aspiradores de baja potencia (Imagen5).

Al terminar con esta limpieza se observó que se contaban con diez elementos o fragmentos: seis completamente planos y cuatro con una serie de pliegues intencionales que denotaban un área que estuvo amarrada originalmente (con una volumetría original); además de localizarse algunos cabellos que indicaron que estuvieron en contacto con el cuero cabelludo. Esto fue el primer indicio que llevó a pensar que se trataba de un fardo mortuorio; donde los fragmentos planos conformaban un manto que cubría el cuerpo y los fragmentos con volumen rodeaban la cabeza.

Posteriormente se efectuó una limpieza acuosa con hisopo rodado para humectar las fibras que permitiera extender los fragmentos textiles lo mejor posible. Una vez extendidos se colocaron sobre dos mallas y se procedió a una limpieza acuosa por inmersión (únicamente en los elementos planos, los elementos con volumen no se sometieron a inmersión puesto que las fibras textiles son sumamente higroscópicas y se podía perder las formas originales, esos fragmentos únicamente recibieron una limpieza y flexibilización superficial con hisopo rodado).

Una vez limpios los fragmentos se colocaron en papel secante, para retirar el exceso de agua, y se dejaron secar en una superficie plana con peso para evitar deformaciones; al mismo tiempo se alinearon los hilos de trama y de urdimbre.

Para poder manipular todo el conjunto fue necesario montar los fragmentos en un soporte auxiliar de tela de lino (Imagen 6), uniendo los fragmentos por medio de costuras

Imagen 6. Montaje de fragmentos sobre soporte auxiliar por medio de costura. CNCPC-INAH, México, 2014.

con hilo de seda teñido al color del originar. Finalmente se le colocó una crepelina de seda (Imagen 7), teñida al color del original, en la parte superior o anverso para que sirva de capa de protección y evitar abrasiones así como acumulación de polvo en el textil original y por la parte posterior se colocó un forro de algodón, con una finalidad exclusivamente estética para que no se observaran los hilos de costura.

Ya conservado, y después de una revisión bibliográfica, se determinó presentar el textil como un fardo mortuorio, para lo cual se elaboró una estructura interna que simulara la osamenta que envolvía el textil o manto (Imagen 8). Las dimensiones se establecieron de acuerdo con las referencias bibliográficas sobre la estatura promedio, de acuerdo a los restos óseos encontrados en la Cueva de la Candelaria, donde de los huesos largos se infirió una estatura promedio masculina, de 1.67m y femenina de 1.57m.

La estructura o maniquí se elaboró de tyvek® relleno con fibras sintéticas para dar el volumen adecuado. Estos materiales son inertes, ligeros y permiten su manipulación para dar la posición adecuada del mismo. El maniquí se colocó en posición fetal sobre el manto ya conservado y se procedió a enrollar, ajustándolo de manera que se diera la forma adecuada alrededor de la osamenta; se sujetó por medio de costuras y finalmente se dio el acabado de los amarres

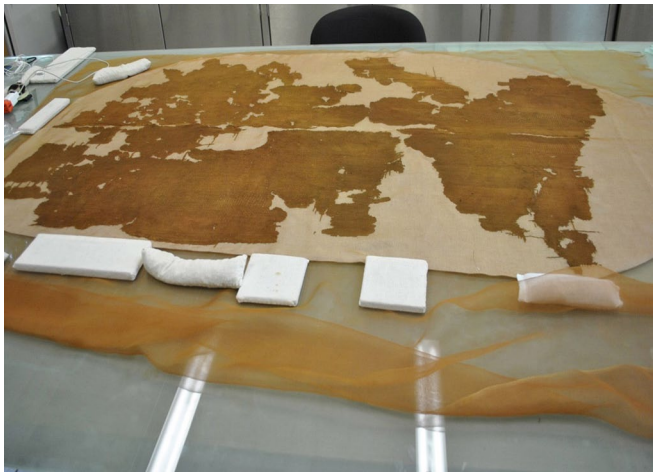

Imagen 7. Montaje de soporte auxiliar de protección con crepelina de seda teñida al color del original. CNCPC-INAH, México, 2014.

Imagen 9. Fin de proceso de fardo. CNCPC-INAH, México, 2014.

Imagen 8. Soporte interno, simulando cuerpo flexionado. CNCPC-INAH, México, 2014.

Imagen 10. Fotografía de fardos cerrados procedentes de la Cueva de la Candelaria. Tomado de la revista Arqueología Mexicana, Vol. 30, 1998:62

con cuerdas de yute patinadas con acuarelas (Imagen 9) siguiendo los patrones que se observaron en una fotografía correspondientes a un fardo original de la Cueva de la Candelaria[6] (Imagen 10).

La decisión de recuperar la funcionalidad del textil y dar una solución museográfica se dio al analizar que a lo largo de estos años los bienes que se intervinieron recurrían a un criterio de conservación, utilizando la metodología de limpiar, corregir plano y montar sobre un bastidor para su exposición o almacenaje, perdiendo mucha información sobre el bien cultural conservado y que a la larga se observa que tienen problemas de almacenamiento y exposición colocando los bastidores de manera vertical (90°) creando bolsas entre las costuras así como otros deterioros, además que los visitantes no comprenden cual fue el uso o la finalidad de estos textiles y que únicamente se quedan con la idea de que tenían textiles con ricas decoraciones (Imagen 11).

Durante los procesos de conservación, en muchas ocasiones se encuentran evidencias del uso y función de los tejidos, mismas que se pierden al corregir el plano sistemáticamente en los textiles, por lo que en este caso en particular se realizó una limpieza muy minuciosa, dejando las evidencias de pliegues intencionales para la mejor comprensión del textil, esto aunado a las referencias gráficas y bibliográficas nos llevaron a determinar su función dentro del contexto arqueológico.

6. Durante la exploración de 1953-54 se localizaron algunos fardos intactos de los cuáles existe registro fotográfico y uno de ellos se encuentra en el Museo Nacional de Antropología.

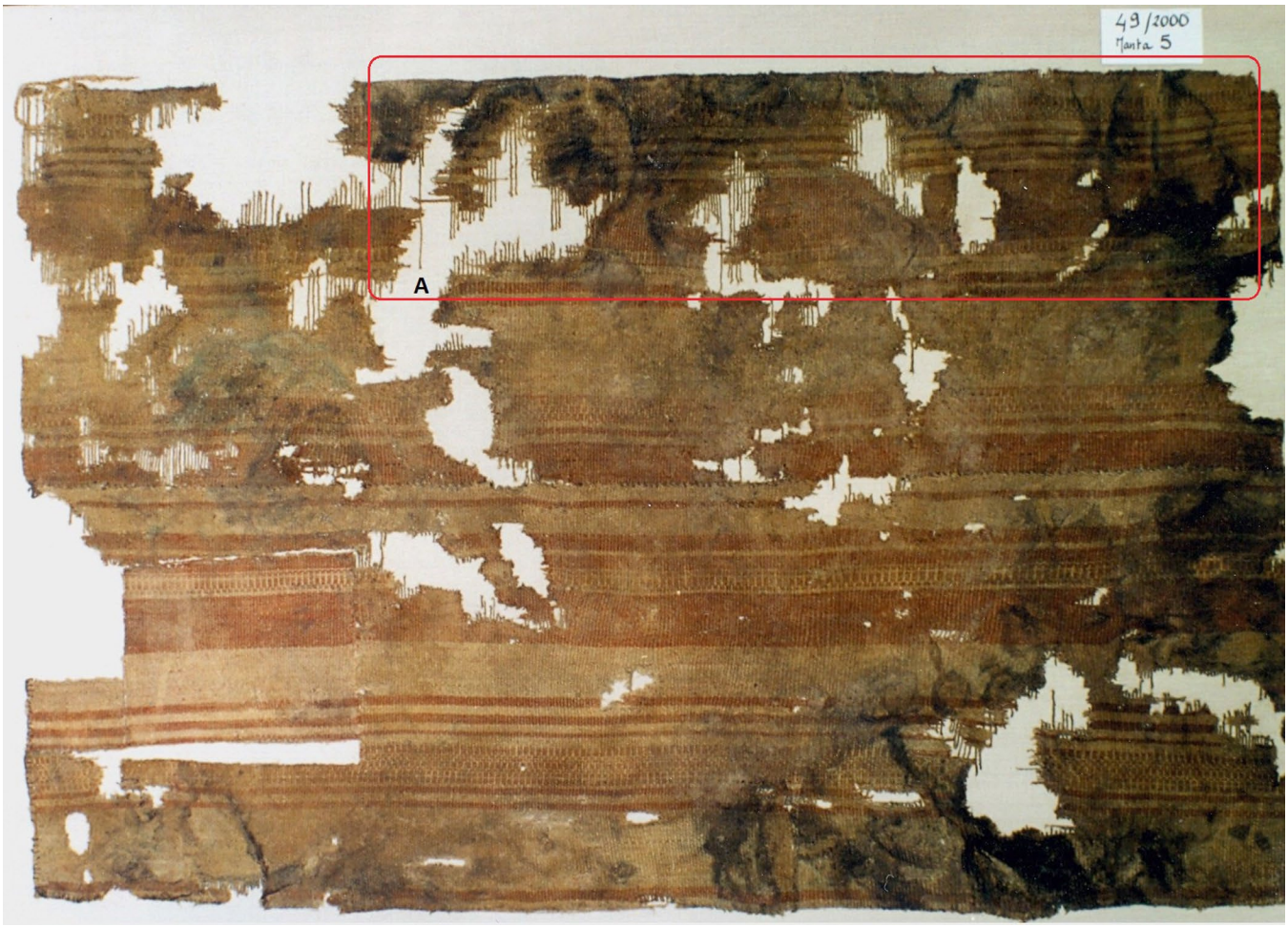

Imagen 11. Textil o manta montada (procedente de la Cueva de la Candelaria) sobre soporte auxiliar y bastidor definitivo. A) Las manchas y pliegues permiten observar donde se localizaba la cabeza o cráneo y el sentido como estuvo envuelto. Fototeca CNCPC-INAH, México, 2000

Como bien se describe en las fuentes bibliográficas, la cueva de la Candelaria, fue principalmente un recinto mortuorio dónde se encontraron una gran cantidad de fardos desmembrados y sólo algunos intactos; basándonos en las evidencias propias del textil, junto con las referencias fotográficas se pudo reconstruir un fardo, proporcionando un nuevo sentido a nuestro bien cultural, asegurando así su conservación para generaciones futuras (Imagen 12).

Agradecimientos
Quiero agradecer a Lena Bjerregaard y Ann Peters por todas las facilidades, apoyo y esfuerzos realizados para incluir este trabajo en tan destacada publicación. Así como a Davide Domenici por todo su apoyo y gestiones realizadas, junto con la Secretaría de Relaciones Exteriores de Italia y la Asociación La Venta, que hicieron posible la conservación de los textiles procedentes de la Cueva del Lazo, Chiapas. Y de manera especial a la restauradora Laura Jazmín Solís Gómez por todo su apoyo, profesionalismo y maravilloso trabajo de restauración realizado en ambas colecciones.

Imagen 12. Exposición de fardo conservado en el Museo Regional de la Laguna, Torreón, Coahuila. CNCPC-INAH, México, 2015.

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The Arizona Openwork (Tonto) Shirt Project

Carol James[1]

Abstract
In 1923 a pair of hikers came across a series of objects in a cave near the Salt River in Arizona. Among the objects was an elaborate sprang shirt, later given to the Arizona State Museum where it remains to this date. The cotton yarn in the shirt was subjected to Carbon Dating and assigned a probable origin date of the 12th century. In order to better understand the shirt, a replica was made in early 2015. Diverse technical challenges included hand spinning an appropriate cotton yarn, mapping the pattern, accurately copying the irregularities, and creating the neckline. The project yielded surprising insights.

Keywords: Sprang, Tonto Site, Arizona Openwork Shirt, Anasazi, Ancient Puebloan, Native Cotton

El Proyecto Camisa Entrelazada de Arizona (Tonto)

Resumen
En 1923, dos mochileros encontraron una serie de objetos en una cueva cerca del Rio Salt en Arizona. Entre estos objetos había una camisa elaborada en sprang, mas tarde donada al Museo del Estado de Arizona, donde permanece hasta la actualidad. El hilado de algodón en esta camisa fue fechado por radiocarbono y asignado una fecha de origen probable del siglo XII. Para mejor entender la camisa, se creó una réplica en 2015. Los diversos retos técnicos incluían el hilado manual de un tipo de algodón apropiado, la diagramación de los diseños, copiar con precisión las irregularidades, y crear la apertura del cuello. El proyecto llevó a revelaciones sorprendentes.

Palabras claves: Sprang, Sitio Tonto, Camisa Entrelazada de Arizona, Anasazi, Pueblos Antiguos, Algodón Nativo

Introduction

In 1923 a pair of hikers in Arizona came across a series of objects in a cave along the Salt River. Inside a basket, and associated with the remains of an infant, they found an elaborate openwork shirt (Kent 2957 pg 603). Two years later they donated the shirt to the Arizona State Museum (Teague 1998; personal communication, October 2010). It has been assumed that the shirt was somehow connected with the nearby Tonto Ruins, thus this garment has been called the Tonto Shirt. The word Tonto is rather derogatory in Spanish. Native Americans now prefer that we more respectfully refer to it as the Arizona (Tonto) shirt or the Arizona openwork shirt.

The hikers who found the shirt were later unable to identify the exact location of the cave, nor did they record other information pertinent to archaeology: the find location within the cave or other features of the cave. This means that the exact heritage of the shirt cannot be confidently assigned to any particular tribe, as many different groups inhabited this region (Teague personal communication, October 2010).

The shirt was on exhibit at the Arizona State Museum for some time. Lynne Teague, was the curator at the Arizona State Museum from 1975 to 2002, and coordinated the repatriation program for Native American objects. In a phone conversation she told me that no requests for reburial had been made for this shirt, but it was removed from

1. Carol James <carol@sashweaver.com

public display, as it is had been found in a funerary context. Because exact heritage of the shirt cannot be established and because it has been agreed that the Arizona State Museum has the best facilities, the shirt now rests in special restricted storage conditions at the museum.

Analysis

Lynne Teague reported on this shirt in her book Textiles of the Southwest. Yarn in the shirt, Z spun and S plied, proved to be cotton and was subjected to Carbon Dating. The shirt has been assigned a probable date of 1300 CE (Teague, personal communication, October 2010, Kent 1983A, pg 72).

Close examination of the shirt reveals an interlinking structure, and patterns of holes, resulting in designs that can be described as swirls, meanders, and wedges. These motifs, and this combination of motifs, feature in pottery from the time period in the area surrounding the find site. They were contemporary in the culture at the time the shirt was made (Teague 1998, pg 81, Kent 1983B, p 218).

This shirt is one of only three pieces of interlinking sprang which exist from North American pre-Columbian textiles (Kent 1957, pg 603, 714). Far more common are other techniques such as weaving, looping, netting, and plaiting (Kent, 1957, pp. 660-724). According to Mike Jacobs, current curator at the Arizona State Museum, one of the theories about the Arizona Openwork Shirt is that it was made by a visitor to the region. Examples of sprang are known from the Mexican states of Guerrero and Hidalgo (Teague 1998, p. 81). There are clear trade routes for precious metals, coming from Mexico. The theory proposes that a weaver travelled with the metal traders, saw the local designs, and, using local cotton, created this shirt.

Comparing front and back, the designs are mirror images one of the other S & Z. Minute irregularities can be found in the patterns. Where both sides are intact, the identical minute irregularities are present on the both sides. The technique therefore can be confidently described as interlinking sprang.

The top of the shirt, the shoulders and neckline, represent the initial loops in the warp, and the hem represents the cut ends at the meeting line near the middle of the warp. The join at the shoulder was created uniting front and back loops. The sides were sewn together, uniting 'S' and 'Z' stitches.

The Project

The motivations to replicate this shirt, as well as the goals, were numerous.

It was a collaborative effort, mutually advantageous for many. Key players were Arizona State Museum Curator Mike Jacobs, Louie Garcia, Joan Ruane, and the author Carol James.

In writing a book on sprang, author Carol James searched for examples of sprang that would be of interest to a North American readership. It seemed obvious to include the Arizona Openwork (Tonto) shirt. Carol attended a conference of Arizona Handweavers, in Tucson, in April 2014, and the topic of the shirt arose. It had been viewed by many handweavers in Arizona before it was removed and access limited. It was felt that, while respecting the reason for the restricted access, the shirt represents a valuable, but now invisible page of our shared human textile heritage. As interest in the sprang technique re-awakens, a replica would facilitate awareness of this piece of our shared heritage while protecting the original.

Carol James has been exploring low-tech braiding techniques for more than 30 years. Finding few sprang instructors, she has taken to selecting historic pieces as instructors. The Arizona Openwork Shirt presented itself as such an instructor. Carol was interested in examining this ancient example of sprang, as an opportunity to learn more about the sprang technique from an ancient piece. She was looking forward to the challenge of mapping out the patterns and replicating them.

Louie Garcia is a Tiwa and Piro Pueblo weaver and educator from southern New Mexico. He resides in Albuquerque, where he is the president of the New Mexico Pueblo Fiber Arts Guild (Garcia, 2016, pg 66). He works to re-awakening awareness of his people's ancient textile traditions, and was very pleased that sprang, long since abandoned by people of the southwest could be revived.

Joan Ruane, expert in cotton spinning, instructor and practitioner, lives in southern Arizona among cotton fields. Her website, www.cottonspinning.com, is dedicated to information on working with cotton, growing, spinning, dyeing, and weaving. She was interested in the shirt as it represents a handspun cotton garment.

According to retired curator Lynne Teague, she had received a request while working at the museum from a Native American group that she create a replica of the shirt. Not having time for to create a full replica, she made smaller pieces replicating the patterns in the shirt. To her knowledge no full replica existed to date.

The Arizona State Museum was interested in a replica for research and display purposes. Curator Mike Jacobs expressed a willingness to recommend a replica to the acquisitions committee, confident it would be accepted.

Fig. 1. The Arizona Openwork Shirt with the initial comparison sample. (photo Joan Ruane)

Planning

Joan Ruane and Carol James examined the shirt in the Arizona State Museum on April 29, 2014. They brought samples of diverse sizes of cotton for comparison, and determined that commercial 2/8 cotton was closest in size, but the threads in the shirt had a great deal more twist. During the course of this visit, the conversation with the curator Mike Jacobs turned to the possibility of creating a replica of this shirt to be donated back to the museum.

Following this visit to the Arizona State Museum, a sprang sample was made using commercially spun cotton, to verify the yarn size. This sample was cut in two: Joan Ruane took half back to the museum for a comparison photo (Photo 1). Carol James kept the other half as a gauge for comparison in the replica work.

Mapping the Design

Photos taken during the visit provided sufficient information to map out the designs on the shirt. Hole placement was plotted onto graph paper, which would serve as a pattern for the replica. The manner of pattern writing uses one square per thread. The interlinking stitches are indicated by dashes connecting the threads in each stitch. An example of the pattern is the Meander Pattern (Image 2).

The challenge was to accurately record all details of the pattern. An attempt was made to be as faithful as possible to the original shirt in mapping out the pattern, including all 'irregularities'. It was felt that these irregularities could be informative. There are places where both front and back are missing. Here a 'best guess' was made.

Patterns in the shirt can be divided into three types: meanders, wedges, and swirls.

Each motif appears at least 3 times in the shirt. The motifs are not always repeated identically. There are slight irregularities within the designs.

The central swirl features an open work path that is 2 holes wide. The swirl is formed from two solid lines that do not join at the center of the swirl. Two additional swirls appear in the lower portion of the shirt. They are in better condition on the back of the shirt. These swirls feature an openwork path that is 3 holes wide and the solid lines join at the center.

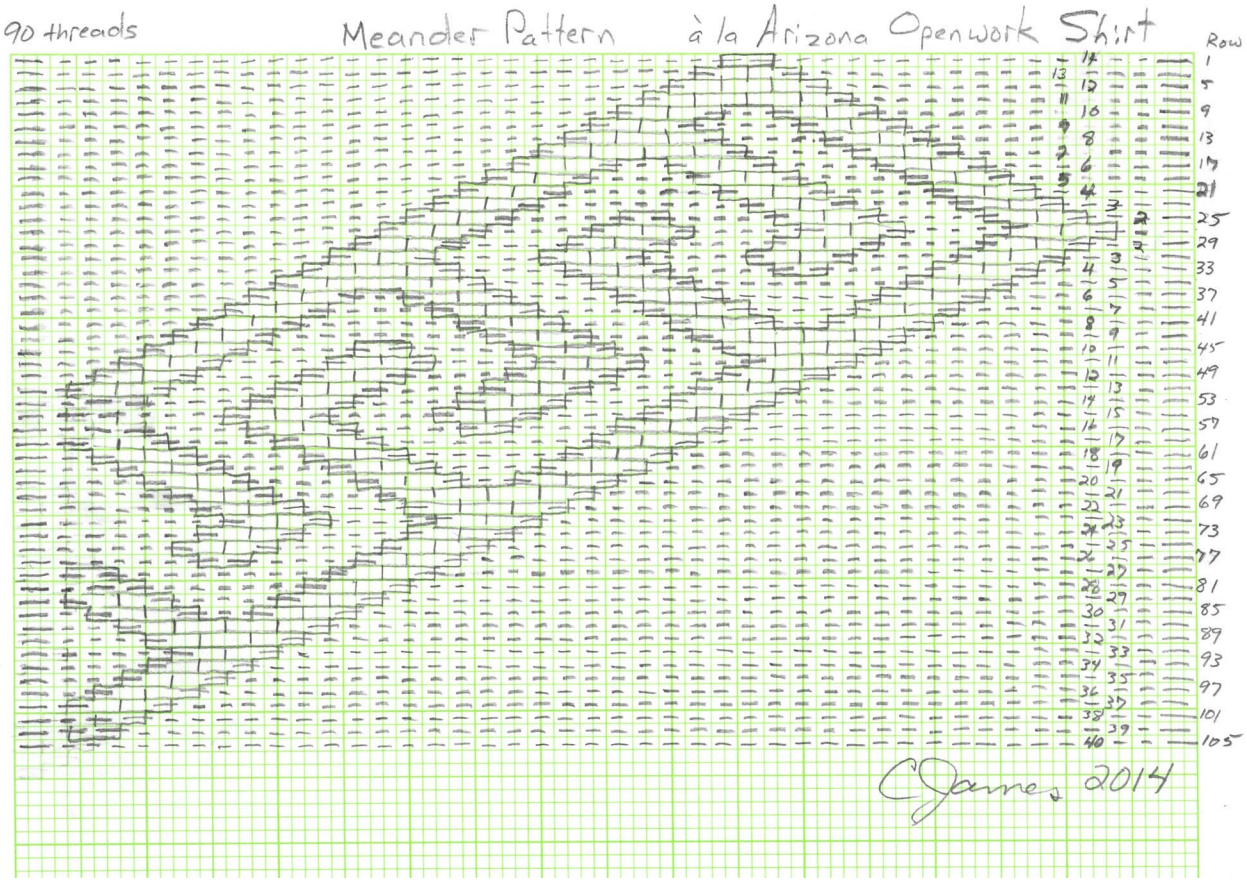

Fig. 2. Diagram of the Meander Pattern. (photo Carol James)

The meanders feature a solid path on an openwork background. The uppermost meander features a narrower path, only 3 stitches wide. The other meanders feature a solid path that is 5 stitches wide. The length of the turn-around varies from 4 holes to 6. There are occasional extra holes, or missing holes. There is only one place where the solid path is discontinuous, near the middle of the meander along the left side of the shirt.

The wedges show the most variation in design, and also the most irregularities. They vary in height from six holes tall to nine holes tall. There are also holes that are extra small, representing a missed row.

Evidence of the greatest difficulty with these wedges can be seen where one wedge meets up with the next wedge. The uppermost series of wedges avoids this problem by working the base line of holes first. In subsequent series of wedges the worker begins by creating the tip of the wedge first. In later rows the wedges need to join up properly. Of 55 wedges in the shirt, 19 of them, 28% have this problem joining. The problem is made manifest by irregular spacing between holes, irregularities in the number of threads between individual holes where wedges meet. The frequency with which this occurs, and that it occurs more frequently as the work progresses, leads us to speculate that perhaps the original artisan was not interested in the holes neatly lining up. It occurs to us that perhaps the artisan was intending to create irregularly shaped solid wedges. The irregularities in the hole spacing was less important.

For the graph paper grid, we selected paper that was 11 x 17 inches, 10 squares to the inch. This provided squares that were a reasonable size that could be comfortably read by the weaver seated at the weaving loom. Six sheets of this graph paper taped together were required to contain the entire pattern. The graph paper grid yielded the number of threads required to create the patterns on the garment: 456.

Calculating the Warp

To calculate length of warp required, the general rule of thumb is that a sprang warp can shrink as much as 30% during the braiding process (James 2011, pg 10). Official measurements of the shirt are 65cm x 65cm. Adding 30%

to this means starting with a 90 cm warp for each side, so 1.8 m total warp length. Such a length was not sufficient for all the patterns in the shirt.

Indeed, there are two kinds of 'shrink' involved in sprang. One is 'uptake' as each stitch is made. Bends made in the straight line, as stitches are made, shorten the total length. The second type of 'shrink' happens after the cloth is complete. When the garment is spread to open the holes and reveal the pattern, the total width increases and the length decreases.

Calculations were made, tested, adjusted, and tested again. The replica shirt on the frame began as a warp that was 2.4 meters long and measured 41 cm across. Upon completion of the braiding the width was still 41 cm, and the length of each side of the shirt was 1.01 meters. The 2.4 meters had shrunk to 2.02 meters. After blocking, the shirt measured 68 cm wide x 70 cm long.

The Yarn

In all, 3 shirts were produced. The first shirt used a commercially spun thread. This first shirt was used to correct the pattern. This first warp, 90 cm long, proved to be too short, lacking sufficient space for the full pattern. The 2nd shirt used a longer warp of cotton handspun. Joan Ruane had set to work to spin cotton for the project. She was unhappy with the results of her spinning, as she was unable to impart the required amount of twist in the yarn. She thus solicited the participation of Louie Garcia. Joan nevertheless provided her insufficiently twisted yarn to the weaver Carol James. Joan's skein was used to check calculations for length of warp. It also provided comparison for work with handspun.

Joan had spoken with Louie Garcia, inviting him to participate in the project. Before accepting, Louie went to visit the shirt at the Arizona State Museum, to ask permission from the shirt.

Sensing the shirt was agreeable, Louie signed on to the project.

After visiting the shirt, Louie Garcia sent two varieties of his handspun cotton, Acala and Hopi cotton to weaver Carol James. She worked these two types of cotton into a single piece of sprang, and returned the sample to Louie Garcia. Handling the sprang piece, Louie Garcia was able to judge that the Hopi Cotton was more appropriate to what he had seen at the Arizona State Museum.

Louie Garcia agreed to provide Hopi cotton grown in his own yard, ginned by hand, which he would spin to required specs. Usually he uses a drop spindle. Because of the length of yarn required as well as time constraints, he used a charkha. In January 2015, he sent a 1500 yd ball, one continuous thread, to Carol James.

Sprang work, constantly pushing the cross to the mirror image side, places different stresses on the yarn than does knitting or weaving. Thread must have high amounts of twist to maintain integrity during the process. We were pleasantly surprised to find the handspun cotton to be particularly well-adapted to sprang work. Joan Ruane is quick to tell anyone that commercial processing of the cotton fiber, to adapt it to requirements of factory production, changes the fiber completely. The handspun worked differently from commercially prepared cotton and proved ideal for sprang. Stitches, once made had a certain amount of 'grab'. They stayed packed in place along the just-completed row. At the same time the fiber surface was smooth enough for ease of movement of rows to the mirror image side.

The Frame

Requirements for this type of work include a frame on which the warp is stretched (Image 3). The full length of the warp must be available to the worker, in this case more than 2 meters. There has been some speculation on the type of loom used to create the original shirt. According to Lynne Teague, there are images of horizontal looms

Fig. 3. The sprang technique. (photo Richard Sparling)

Fig. 4. The mirror image created adjacent to the end loops. (photo Carol James)

on pottery dating to the appropriate period. Theoretically a horizontal loom would work well for this project. In this model, threads are stretched out on a frame that lies on the ground. Requirements are a space on the ground of sufficient length and width to allow work on a 2.4 m x 41 cm warp. The worker sits at one end, working each row, and then moving the row to the other end. Weaver Carol James cannot work crouched down, so does not work horizontally.

We used a false-circular warp method as described in Peter Collingwood's Techniques of Sprang on page 256 . The circular warp method has loops from both ends of the warp around a single common stick or thread. This method requires a frame that is only half the total length of the warp. It permits worker to sit upright at the frame. The warp can be moved around the frame and adjusted to a comfortable position for work.

A frame made from 2x4s and 2cm diameter dowels was used to measure and hold the warp. Smaller dowels were used to create the first cross. The end loops were originally wrapped around a knitting needle. The knitting needle was later replaced with a string.

Creating the Cloth

Work began at the first cross. Each row, upon completion was moved down and around the 2 meters of warp, also creating a mirror image braid at the other set of loops (Image 4).

The basic interlinking stitch in sprang represents threads that link around the neighbor to the right, and then the neighbor to the left. Holes are created by virtue of 'missed' linkings (Image 5). One can also think of this as pairs of 'edge stitches' that occur mid-row. For more on the method to create these patterns see the book Sprang Unsprung, or view YouTube videos:

https://www.youtube.com/watch?v=JY3jyy2rGEs

https://www.youtube.com/watch?v=CKIqIoMegig

The grid pattern created on the graph paper indicated the exact placement of holes. The weaver counted the number of squares (indicating stitches) for each row, writing the numbers in on the pattern and then worked each row accordingly, from right to left across the warp. Each row was then pushed to the mirror-image side. Frequent checks assured the work to be as accurate as possible, as close as possible to the original. As a measure to prevent errors, a cardboard tube and knitting needle were used as a cloth-spreader during construction. (Image 6) This helped to the weaver to accurately select the correct thread, avoiding irregularities. The small sample made immediately following the visit to the museum, served as a gauge. It was checked frequently to be certain of the correct number of rows per cm.

The hem of the garment features tabs. Slits were formed when the cloth was made. The ends of the tabs are where the two pieces, front and back were cut apart. Each tab ends with a knot. Examination of the garment reveals varying numbers of threads in these tabs, from 10 to 14.

Fig. 6. The sprang frame with the project. (photo Carol James)

When the weaving of the shirt was almost complete, slits were made to form the tabs (Image 7). Depending on the pattern above, it was difficult to maintain a constant ten threads per tab. Perhaps this helps to explain the variation

Fig. 5. Close-up of the openwork patterns. (photo Carol James)

Fig. 7. Fringe slits. (photo Carol James)

Fig. 8. Cutting, wetting and tying the fringe. (photo Carol James)

in number of threads per tab. The tabs were cut apart, and each end knotted to secure the work, prevent un-raveling (Image 8). Ends were dipped in water to make them easier to deal with. A crochet hook was used to help tie the overhand knots.

Finishing

Interlinking sprang adds twist on one side, removes twist on the other. The result is a cloth that has the distinct need to curl when removed from the frame. Blocking allowed the cloth to lie flat. The cloth was placed in water until thoroughly wet. It was then pinned to a blocking board and allowed to dry. When the pins were removed the cloth no longer curled. (image 9)

The shoulder seam and finishing around the neck were described by Kate Peck Kent (Kent 1957, pg 604). A single thread holds the initial loops, alternating loops from front and back forming the shoulder seam. This is exactly the feature of the false circular warp. Initially we thought that this could indicate that the original worker had used the false-circular method. Upon further examination this cannot be the case. The swirl at the center of both front and back features a counter-clockwise direction. One side was intentionally turned over before assembly.

The common thread holding the end loops, was removed carefully (Image 10). Loops were placed onto two knitting needles, one for front loops, and one for back loop. The front and back pieces were now separate. One side was turned over, and the shirt was ready for the shoulder seam.

Fig. 9. The completed cloth with fringe, before creating the neck opening. (photo Carol James)

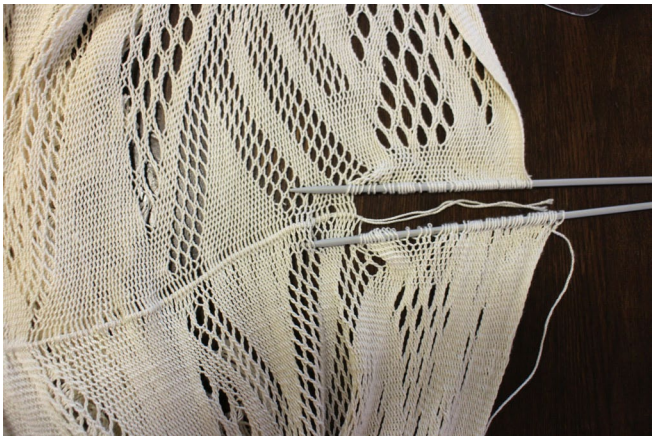

Fig. 10. Separating the looped join for the neck opening.. (photo Carol James)

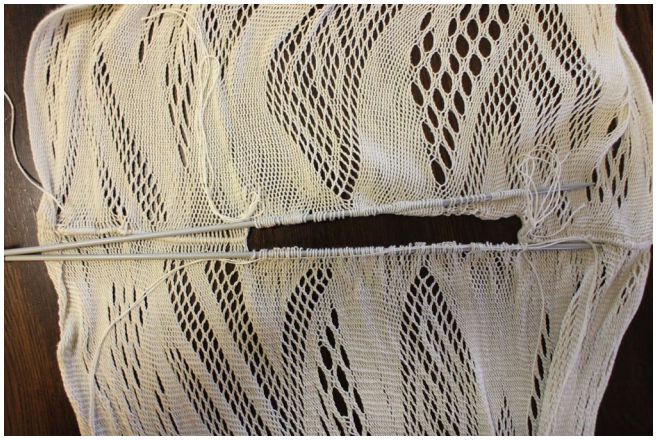

Fig. 11. The neck opening, centered, before twining. (photo Carol James)

Two shoulder seams were created. Each seam features a thread holding alternating loops from the front and from the back pieces (Image 11). .

According to Lynne Teague the neck opening was secured with twining. The initial attempt to twine around the neck resulted in an opening too small to pass over an adult human head. A looser twining at the front of the neck allowed sufficient space for the head, and also created the sag along the front neckline seen on the original garment.

Sprang can have an invisible seam. The 3-thread edge stitch can be used to sew up in a manner that imitates the interlinking stitch, creating an invisible seam. The original shirt was not sewn up in this careful manner. Side seams are sewn using a similar thread, not particularly neatly done.

Sprang work on the replica shirt was carried out during the month of February, 2015, during a lecture and teaching tour of the state of Arizona. Members of the public and those interested in sprang classes viewed the progress of the shirt. In all it required 42 hours of work to complete the shirt.

Fig. 12. Presentation of the replica shirt to the. Arizona State Museum. From left to right, Mike Jacobs, Carol James (with shirt), Louie Garcia and Joan Ruane. (photo Paula Garcia)

The Results

In all 3 shirts were created. The first was made using commercially produced thread, and has been kept by the weaver Carol James. She uses it in teaching and promoting the sprang technique.

The second shirt, made from Joan Ruane's handspun cotton, is kept by Louie Garcia, who uses it for teaching purposes.

The 3rd, the real replica, was donated to the Arizona State Museum on Sunday, March 4, 2015.

Interested members of the public were invited to come to the lobby of the museum to view the completed shirt just prior to donation. Louie Garcia came from New Mexico with his family. Louie Garcia and his daughters said a blessing and sprinkled the shirt with corn meal before it was handed over to Mike Jacobs. The shirt was placed on the plastic torso that had been created for the original shirt and was, in due process, entered into the museum collection. (Image 12)

Conclusions

Work to create this replica helped us to appreciate the skill of the original worker, who assembled these motifs and so expertly executed them. We marveled at someone who would have worked without the aid of graph paper. It was suggested that Navaho rug weavers do not always work across the full width on every row. They frequently work on pattern sections. This led us to look again at the motifs, to see if they could be created in sections. Indeed we marked off motif zones, and numbered them in the order that they could be created. (Image 13) A problem occurred around the central swirl, zone 13 which must be completed before zones 11 and 12. Interestingly the 'irregularity' in the meander pattern is located in this exact spot in zone 12, and likewise an 'irregularity' in the wedge pattern in zone 11.

This could be interpreted as evidence that the worker paused at this point in order to work on another section, presumably the swirl. When returning to the meander the artisan had lost track of the position in the motif and the error occurred.

Looking at the shirt again, we note that the first meander pattern to be created (zone 3) uses only 3 stitches for the meander path. The other meanders use 5. This could represent the development of the pattern as the worker created the shirt. After creating Zone 3, the artist decided to use 5 threads in subsequent meanders.

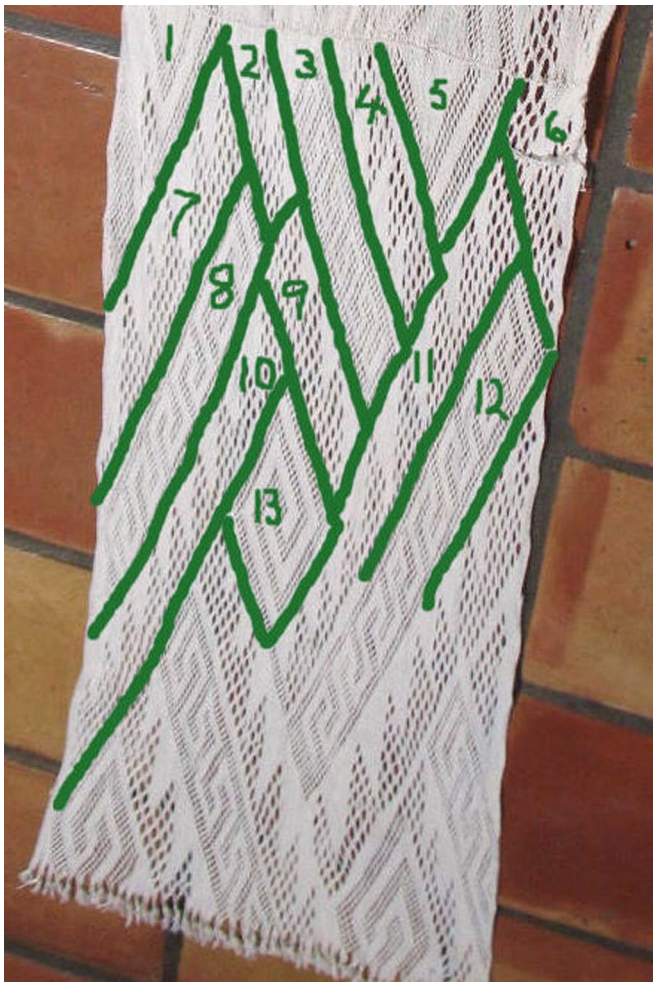

Fig. 13. One half of the shirt with diagram of the pattern zones identified. (photo Carol James)

The first wedges appear pointy-side up. All the other wedges appear blunt-side up, making it easier to create the irregular appearance of flame. The large swirl at the center features a path that is two holes wide. The two swirls near the hemline feature a path that is three holes wide.

These irregularities could be seen to corroborate the theory that the shirt was made by a visitor. The original artisan clearly was highly skilled in the technique, but the patterns developed as the shirt was made.

By July 2015, four months after completion and donation, all three shirts had been on display, available to members of the public. Already the goal has been met. The original shirt is respectfully preserved and at the same time the public has access to this important piece of our common human textile heritage (Image 14).

Fig. 14. The sprang shirt as worn. (photo Richard Sparling)

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