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The String or Grass Skirt; an Ancient Garment in the Southern Andes

Amy Oakland

Introduction to Session and South America

The regions of South America specific to our session concerning extraordinary textiles from the Southern Andes include the dry Pacific coast of southern Peru and northern Chile. Among the earliest inhabited sites of South America are those from the coast near Arica, Chile and the interior desert of the Pampa de Tamarugal. It is here that Chinchorro (9000-3000 B.P.) burials and later Formative (3000-1,500 B.P.) cemeteries of closely related coastal people known as Quiani and Fladas del Morro have been excavated (Fig. 1).

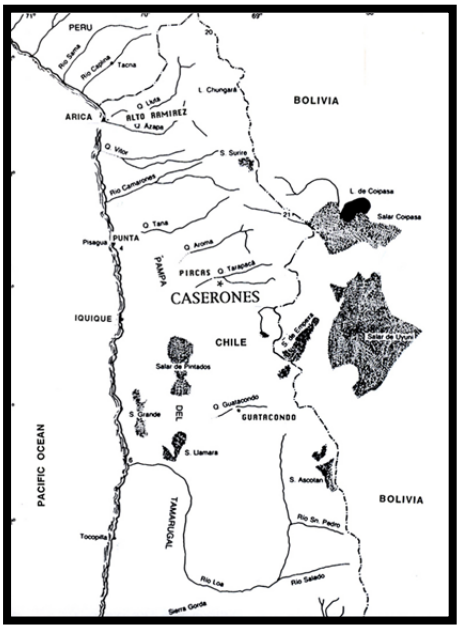

Figure 1 . *Map of the coast and adjacent highlands of Peru and northern Chile where early Formative cultures have been excavated. Redrawn from Munoz 1989:Fig. 2.*

Although humans inhabited the coast and highlands of South America for several millennia before the earliest dated Chinchorro mummies, it is the Chinchorro who left the earliest evidence of material culture, especially in objects of a usually perishable nature including twined textiles like those discussed by Vicki Cassman, Nancy Odegaard, and Bernardo Arriaza in this session. The Chinchorro settled along the Pacific coast of what is today northern Chile in a region known as among the driest areas on earth. Because of this aridity and the careful Chinchorro burial preparation, it is possible to identify prehistoric garments covering individuals in periods beginning around 9,000 years ago. Chilean textile scholars like Liliana Ulloa (1982) have traced the development of textile styles through successive millennia, research rarely available to textile specialists in other parts of the world. Max Uhle (1917) began Chinchorro and Formative investigations during the early part of the twentieth century followed by Junius Bird (1943), Percy Daulsberg (1963), Guillermo Foccaci (1974) and others (Munoz 1989). The greatest concentration of Chinchorro mummies was discovered by accident on the Morro of Arica in the

early 1980's and reported on by Bernardo Arriaza (1995). The recently published Handbook of *South American Archaeology* contains an excellent overview of Chinchorro culture written by Arriaza (2008:45-58) and his colleagues. Vivian Standen (2003) has published a detailed discussion of Chinchorro artifacts from the Morro 1 cemetery.

Recently, Ivan Munoz (2004) returned to Chinchorro and Formative sites reporting on the development of early inhabitants who settled along the Pacific coast of northern Chile. For the adjacent coast of southern Peru, Karen Wise, Niki Clark, and Sloan Williams (1994) reported on similar burial patterns in this region. It is now apparent that this early coastal complex extended from southern Peru, along the northern Chilean coast, and, pertinent to this paper, also developed inland centers such as Guatacondo and Caserones along river valleys that connect into the highlands. In all of these early centers where garments have been preserved, men wore a loincloth or breechcloth and women wore a string skirt.

Women's String Skirts

Textile scholars like Elizabeth Barber (1991) consider the string skirt to be the earliest known woman's garment worldwide. Barber (1991:ix) discusses carved Paleolithic figurines from northern Europe and states that the representations of incised parallel lines falling from a pendent cord illustrate that the figures are wearing string skirts "'Venus' figures wearing a skirt of twisted string". String skirts continued to be worn in ancient Europe and Anatolia and Barber (1991:xv) discusses the earliest extant string skirt from Denmark and the continued use of a form of string skirt as an outer-garment especially related to ritual clothing and passed within local families who inhabit the Greek Islands today.

Related to this conference in Hawaii, there remains a popular idea that string or grass skirts are an essential part of the Hawaiian woman's dance costume even if it is true that grass skirts are only one of many textile types worn while dancing. It does appear that string skirts were and continue to be an important costume in many regions of the Pacific Rim. Skirts constructed of plant fibers continue to be manufactured and worn by women living in Papua, New Guinea and Indonesia and ethnographic reports mention the string skirt as a woman's garment among California natives, however it is not the purpose of the present study to plot all archaeological and ethnographic examples of the presence of string skirts worldwide and through time. Rather it is helpful to actually see the skirts as worn since archaeological examples displayed as museum objects make it difficult to consider the swish of the fiber and the very sexy nature of the garment. Everywhere where worn, the simple fact of dressing in a skirt created from individual strings must have signaled innumerable meanings. As a cover that also reveals, the string skirt acts as an ultimate expression of femininity. In addition, during the periods when it was worn in northern Chile, the string skirt identified its wearers as people of the Pacific coast.

String Skirts in Northern Chile

String skirts are identified in Chinchorro burials as a principal woman's garment: "Clothing was minimal; males wore at most a small breech cloth and females grass skirts" (Arriaza et al; 2008:54). Chinchorro skirts are usually prepared from plant fiber strings that fall pendent from a waist cord and extend along the front part of the body. To construct a Chinchorro string skirt the vegetal fiber strands are formed by passing a holding cord through and around groups of fiber that are folded along a waistband (Arriaza 1995). A single row of simple twining is sometimes

used to hold the strings into place. The plant species used in string skirts have not been identified, however Eliana Belmonte and Vicki Cassman (Arriaza et al. 2008:54 and Cassman this session) have determined that Scirpus reeds were used archaeologically to form twined mats and these same species are found today along the Llauta and Azapa Valleys of north Chile. Standen's (2003) analysis in the Morro 1 Chinchorro cemetery identified string skirts made of both vegetal fiber as well as skirts created with spun and plied camelid fiber and some Chinchorro burials contain skirts of both plant and animal fibers placed overlapping in the same individual burial (Arriaza et al. 54, Standen 2003). String skirts were discovered in a few male Chinchorro burials, but the far greater tendency was to find the string skirts associated with women and breechcloths with men (Standen 2003).

Around 3000 years ago the Chinchorro burial tradition gave way to the Formative known as Quiani and Faldas del Morro after excavations in these Arica-area sites and other coastal locations further south. Illustrations accompanying Junius Bird's (1943) excavations in Punto Pichalo identify Formative burials where the dead are placed on their sides with their knees drawn up in front, associated with large coiled baskets, and posts that signaled burial location. Formative people dressed the dead in ways similar to the earlier Chinchorro; in loincloths for men and string skirts for women. Certainly, by the Formative period, string skirts had already identified coastal Chilean woman for thousands of years.

Chinchorro people inhabited coastal sites such as Acha and Caleta Huelen in Northern Chile living in circular houses with perishable roofs anchored by stone rings. Guatacondo in the Pampa de Tamarugal, Tulor in San Pedro de Atacama, and Caserones in the Tarapaca River Valley look like permanent Formative-period settlements that continue these earlier Chinchorro coastal semi-sedentary traditions. In Guatacondo, Clement Meighan (1980:117) identified artifacts uncovered in the Guatacondo village as "duplicated" in the cemeteries and the string skirts he excavated in burials and in the village were distinctly identified as a woman's garment even in this location far from the Pacific Ocean. At the same time that Meighan excavated Guatacondo, Delbert True and Lautaro Nunez began excavating in another inland village, Caserones in the Tarapaca River Valley (Meighan 1980; True 1980) (Fig. 2).

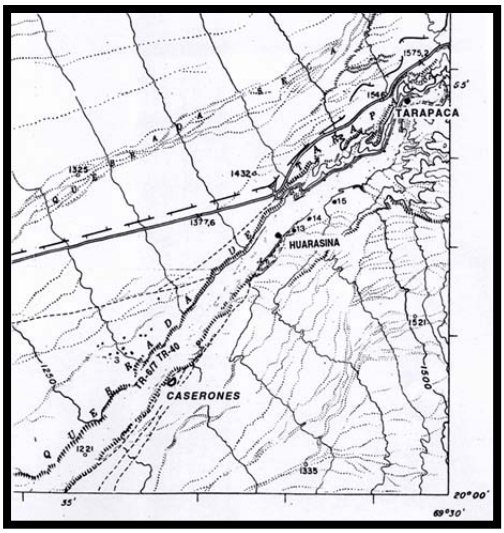

Figure 2. *The village of Caserones in the Tarapaca River Valley and the associated cemetery TR 40 across the valley. Drawn by Delbert True.*

In plan the Caserones site does not look like other early villages with its double defense wall surrounding rectangular houses and True and Nunez and others remained ambivalent with respect to Caserones' ultimate identity discussing the site first with coastal antecedents connected to the Faldas del Morro tradition (Nunez 1969; True and Nunez 1972), but later as a highland village in northern Chile with altiplano connections (Munoz 1989:119; Rivera 1991:21). Obviously, the standing walls represent the last permanent Caserones occupation before the site was abandoned around A.D. 700, but it is possible that original circular structures were altered through successive site rebuilding and reoccupation (True 1980:149). No water runs in front of the Caserones ruins today and photographs from Delbert True's original excavations illustrate how dry the region is were he found discarded baskets and fallen construction material left on the site's surface (Fig. 3).

Figure 3 (left). *Standing walls and wall rubble at the site of Caserones. Photograph by Delbert True, 1967.*
Figure 4 (right). *Excavations in the Caserones cemetery TR-40. Photograph by Delbert True, 1967.*

Caserones provided an excellent center for investigation toward the connections between material culture left in village houses and that placed in graves, a study that I have reported in an earlier article (Rodman 2000). Fragments of sewn bird-skins of the brown Pelican that were perhaps used as capes were among the only refuse discovered in the site that are related directly to the early cemetery (Rodman 2000:242; Southon et al. 1995). These Pelican robes identify a continued dependence on coastal resources at Caserones located almost 60kms from the Pacific Ocean.

The principal cemetery was located in the sand dunes across the valley from Caserones where Nunez (1970) discussed two separate early and late sections (Fig. 4). Early burials (TR-40A) identified flexed individuals lying on their sides as in other Formative period tombs inside flat plate-like coiled baskets accompanied with string skirts, twined mantles, turbans, bird-skin capes, and camelid skin robes. Burials in the later cemetery section TR-40B included seated individuals covered with woven tunics and a distinctive knotted headdress that was also uncovered in the Caserones village (Rodman 2000).

Decorated coiled baskets were a distinctive feature of the early cemetery and inside the burials were discovered a large quantity of organic material including blankets sewn with the pelts of numerous young camelids probably the non-domesticated vicuna or guanaco. It is not possible at this time to identify with certainty which particular species provided the camelid fiber discovered in the cemetery at Caserones, but even though llama domestication has been identified for the

period, most investigators suggest that Formative people hunted guanaco, a species still present in the wild in Chile or vicunas that also continue to exist in the Chilean altiplano. In addition to camelids, early Caserones people used a soft, grey fiber of the viscacha (*Lagidium viscacha*) or the smaller chinchilla (*Chinchilla langier*) (Rodman 2000). These animals are not normally discussed as providing hair for textiles in Chilean archaeological collections, but the Tarapaca Valley continues as the native home to both of these species. Cut and sewn pelts and spun viscacha fiber were woven into large, very heavy warp-faced blankets or mantles formed with warp yarns (Z2S) of greatly varying widths over wefts of finely spun, plied, and replied yarns (Z2S2Z).

Tomb 90, an early burial inside a very large, finely coiled basket was associated with a woman wearing a thick string skirt like at least 18 other burials at Caserones (Fig. 5). True and Nunez (1972) indicated that string skirts were a woman's garment "found on adult females in the Tarapaca cemetery". String skirts were paired with twined mantels in seven Caserones early burials and noted alone in seven additional tombs. Twined mantles (70 x 100 cm) were created with spaced wefts of soft plied camelid-fiber yarns spun in the S direction and plied Z. Twining yarns are very fine and worked in widely spaced rows in the Z direction (Rodman 2000:Figures 12.11and 12.12). The skirts, approx. 30-50 cm. in length, were created of very thick (1.5-2.5 cm) replied camelid fiber cord with a matted, dense texture (Fig. 6).

Figure 5 (left). *String skirt from TR-40A,Tomb 90 S-M'. Collection Museo Antropologico Arturo Prat, Iquique.*
Figure 6 (right). *Detail of string skirt from TR-40A with very thick (2.5 cm) replied cords in natural white and red-dyed camelid fiber. Collection Museo Antropologico Arturo Prat, Iquique. Photographs by Amy Oakland.*

In Caserones string skirts, two rows of large groups of finely plied yarns act as waistband cords with the pendent strings passing over and under the cords. All of the skirts are formed of thick replied strings first spun Z then plied S and replied in the Z direction. The skirts were perhaps created by stretching this thick replied string in a continuous motion over a large group of finely spun and plied camelid-fiber yarns that were stretched across the top of a small, fixed frame loom. No looms of this type have been identified at all and the suggestion is completely conjectural, however the nature of the thick cords suggests that the re-plying could have been created as part of the initial manufacturing process. Most of the skirts appear to be formed as if the yarns have plied back on themselves. One could imagine warping the loom over the group of heading yarns and loom bars working in a figure-eight motion. Most skirts show two rows of weaving at the waistband as if the first row was formed around the loom bar and the second row woven through the open shed left in the warping process. All that would remain would be to

remove the stretched yarns from the frame and the naturally over-twisted nature of the yarns would twist or re-ply together when removed from tension and would hold one another against the two rows woven at the top or waistband area. Both skirts and mantles used natural camelid colors of brown, light brown, and cream, but some unusual skirts and mantles were also dyed brilliant red. String skirts even dressed miniature figurines uncovered in the early TR-40A Caserones cemetery (True and Nunez 1972: Plate XXVIII b,c.; True 1980: Plate 14d).

Conclusion: The end of string skirts in northern Chile

What happened to this woman's garment, an essential element of dress from the earliest periods of coastal Chilean prehistory? Cassman's (this volume) discussion of twined mats originating with the Chinchorro shows that some textile traditions have endured to the present day in northern Chile. But this is not the case with the woman's string skirt that disappears from the archaeological record following the end of the Formative period. Investigators generally agree that the end of the Formative occurs when the highland oriented Alto Ramirez (Rivera 1991) bring new cultural traits such as intensive agriculture onto the Chilean coast. Perhaps as early as the first centuries A.D. it appears that the highland-style woven tunic replaced loincloths and string skirts as the only garment form for both men and women. At Caserones the later cemetery (TR-40B) contained only tunics in burials of men and women. Some Caserones' shirts from this late cemetery show a remarkable connection with the cultural group known as Alto Ramirez from northern Chile near Arica (Fig. 7) and the abundance of agricultural products like maize, popcorn, quinoa, and beans in this late Caserones' cemetery emphasizes the highland connections of these Alto Ramirez people.

Figure 7. *Alto Ramirez-style man's tunic from the late Caserones cemetery TR-40B Tomb 3. Collection Museo Antropologico Arturo Prat, Iquique. Photograph Amy Oakland.*

Formative people must have contrasted enormously with highland groups as they interacted with one another along the Chilean coast and inland desert communities such as Caserones. Alto Ramirez men wore brilliantly dyed red and blue warp-striped shirts with thick embroidery along the sides and below the neck area. Coastal Formative people wore very little; string turbans and simple loincloths. Women wrapped string skirts around their waist like the one discovered covering a miniature figurine excavated in the early Caserones cemetery TR-40A (Fig. 8).

Figure 8. *Miniature clay figurine wearing a miniature string skirt from TR-40A, Tomb 88. Photograph by Delbert True.*

It seems very strange that men and women should adopt the same tunic form, but this is apparently what happened. Following thousands of years as the principal woman's costume, it is this moment in the southern Andes when women quit wearing the sexy, feminine, coastal-associated string-skirt and like men, women adopted the stiff, figure-covering woven tunics of the highlands. These Andean tunics, their form, pattern, and social context are discussed in papers from our session concerning extraordinary textiles from the southern Andes (published this volume).

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