

An Inka *Unku* from Caleta Vitor Bay, Northern Chile

Tracy Martens, Jacqueline Correa-Lau, Calogero M. Santoro, Christopher Carter, and Judith Cameron

As insignia of power and prestige, Inka unku (tapestry tunics) communicated the strength and extent of Inka sociopolitical hegemony in the Andes. Of the 36 known full-size examples in museum collections, only one, found in Argentina, comes from outside Peru. This article investigates another recently excavated unku found out of context on Chile's northernmost coast. To confirm its authenticity, we compiled a database showing the technical and stylistic attributes of previous finds for comparison. We conclude that this artifact is indeed a new type of unku and that the discovery affects our understanding of the complex relationship between the people of this province and the Inka state.

Keywords: textiles, Inka, *unku*, tapestry, weaving, Atacama

Como insignia de poder y prestigio, los unku (túnicas de tapiz) Inka comunicaban la extensión del poder y la hegemonía sociopolítica del Estado Inka a lo largo de los Andes. De los 36 ejemplos conocidos de unku que hemos estudiado de diferentes colecciones alrededor del mundo, con la excepción de uno del noroeste de Argentina, el resto son de regiones conocidas o no especificadas de Perú. La importancia sociopolítica de estas prendas en la historia andina nos motivó a hacer análisis técnicos y estilísticos al unku de Caleta Vitor, un descubrimiento sin precedentes, en esta bahía de la costa del extremo norte de Chile. Concluimos que se trata de un nuevo tipo de unku Inka, que proporciona una mayor comprensión sobre la compleja relación entre la gente de esta provincia y el Estado Inka.

Palabras claves: textiles, Inka, *unku*, tapiz, tejido, Atacama

***Unku*: Insignia of Inka Power**

Inka *unku* are garments with great symbolic meaning, directly linked to the upper echelons of the Inka Empire from the fifteenth to the sixteenth century (Cummins 2007; Pillsbury 2002; see Figure 1). The Sapa Inka not only wore *unku*, woven from the finest camelid (*vicuña*) fibers, but also gifted *unku* to officials, leaders of conquered territories, and military commanders (Murra 1975; Rowe 1978, 1979, 1992)—thereby perpetuating a strategy of asymmetric reciprocity, with recipients expected to compensate the state for its generosity while reinforcing state control by lending legitimacy and power to government agents (Murra 1975;

Santoro and Uribe 2018; Santoro et al. 2010; Zori and Urbina 2014).

The symbolism of Inka corporate art is deeply rooted in Central Andean cultural history (Beren-guer 2013). In the absence of a formal writing system, Inka material culture communicated important cultural information (Bray 2000). Given the relationship between *unku* and Inka power, the presence of a previously unknown *unku* in a prehispanic archaeological context on the far north coast of Chile suggests that this so-called marginal territory received more imperial attention than previously thought (Figure 2). In this article we compare the diagnostic stylistic and technical attributes of the Caleta Vitor (CV) *unku* with such attributes

Tracy Martens (martens.tracy@gmail.com, corresponding author), Christopher Carter, and Judith Cameron ■ Australian National University, Canberra, ACT 2000, Australia

Jacqueline Correa-Lau and Calogero M. Santoro ■ Universidad de Tarapacá, Instituto de Alta Investigación, Antofagasta 1520, Arica, Chile

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Figure 1. Examples of *unku* discussed in this article: (a) *toqapu unku*, © Dumbarton Oaks, Pre-Columbian Collection, Washington, DC (PC.B518.PT); (b) black-and-white checkerboard *unku*, Field Museum of Natural History (1534); (c) Inka key *unku*, courtesy of the Division of Anthropology, American Museum of Natural History (41.2/964); (d) diamond waistband *unku*, Museum of Fine Arts, Houston, gift of Alfred C. Glassell Jr. (2001.1399); (e) *toqapu* waistband *unku*, University Museum, University of Pennsylvania (27569); and (f) zigzag waistband *unku*, Brooklyn Museum (41.1275.106). (Color online)

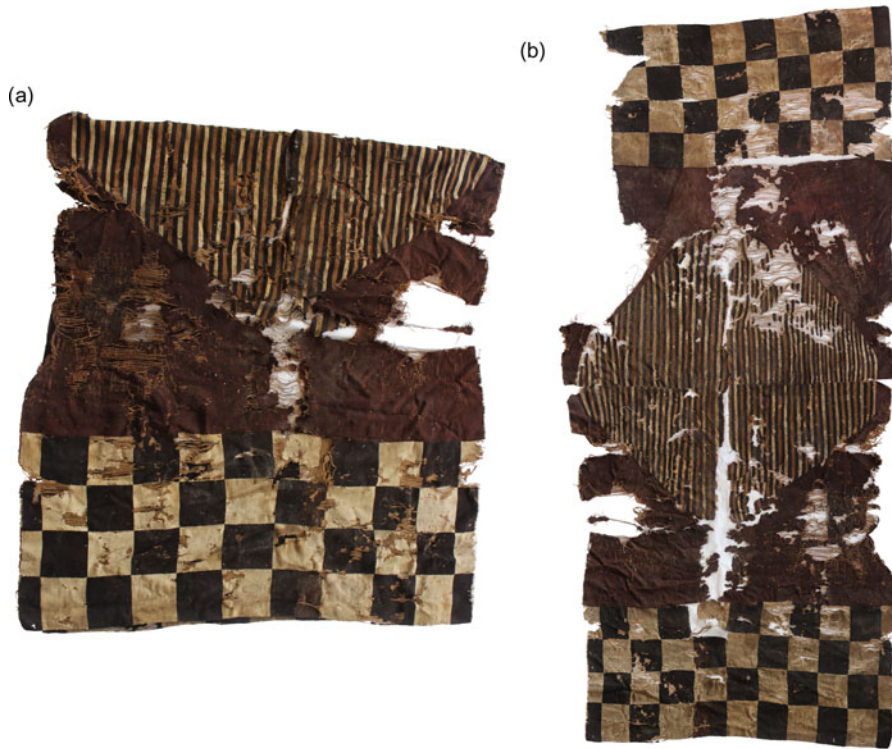


Figure 2. The CV *unku*: (a) folded in half; (b) laid flat, neck slot at center (photo courtesy of Paola Salgado). (Color online)

from previously documented and historically depicted *unku*.

Archaeological Context

The Caleta Vitor archaeological complex is located at the Pacific coastal end of Quebrada de Vitor, a narrow, steep-sided canyon in northern Chile's Atacama Desert (Figures 3 and 4). The complex comprised seven zones (CV1–CV7) representing more than 9,000 years of occupation (Carter 2016). The CV *unku* was recovered from a looted burial containing disarticulated human remains of at least two individuals, some of which had been previously removed from the chamber. Other artifacts cached in the chamber were two coiled hats, a miniature bow and five arrows, five bags, and numerous fragments of twined mats and textiles (Carter 2016:Figure 7.13). Because of the disturbed nature of the burial, it is not clear which individual was associated with the *unku*.

Results of Technical and Stylistic Analysis

Although Inka textiles are recognized for their standardization in style and construction, Anne Rowe (1978, 1997) considers technical features such as dimensions and construction methods to be a more reliable method of identification—style being easier to replicate (for technical descriptions of weaving techniques, see Emery [1980]). To establish whether the CV *unku* is actually an Inka *unku*, we compiled the largest known database of prehispanic Inka *unku*, comprising 36 full-size garments (Supplemental Table 1); this database contains more than twice as many *unku* than recorded in John Rowe's (1979) landmark study. The dimensions of all but three of the *unku* investigated in the study were recorded, with only one limited to a width measurement. Unsurprisingly, the results from the large sample showed greater variability than previously reported.

Earlier studies (Pillsbury 2002; Rowe 1978, 1979, 1992) found *unku* width to be more standardized than length, and this was confirmed in



Figure 3. Map of proposed Inka roads, archaeological sites, modern cities, and Inka unku sites.

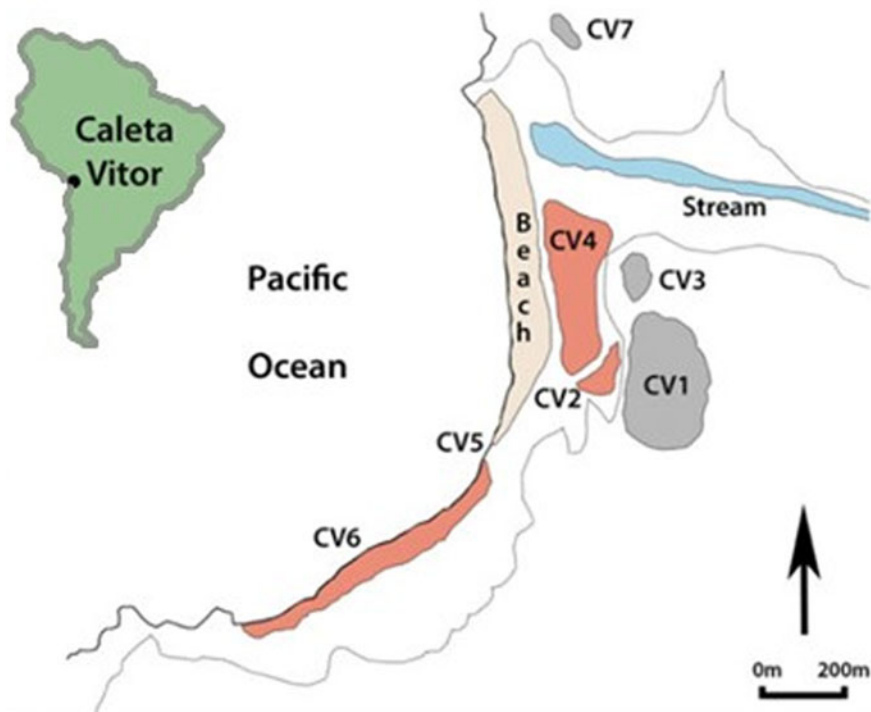


Figure 4. Archaeological zones, Caleta Vitor. (Color online)

our analysis (Supplemental Table 2). Our assemblage contained widths (70–98 cm) outside John Rowe's range (72–79 cm) but averaging 76.2 cm ($\sigma = 4.60$), within the expected range. Length measurements ranged from 79 to 110 cm, with an average length of 89 cm ($\sigma = 5.04$), slightly below Anne Rowe's average (1978:7).

We recorded one large outlier (98 × 110 cm; RT2377, Museo Nacional de Arqueología, Antropología e Historia del Perú). Its dimensions did not significantly alter the standard deviations of width or length in the sample but did significantly affect the standard deviation for black-and-white checkerboard (BW) *unku*, because of the smaller number of those garments. For this reason, it was eliminated from our calculations. With the exception of this very large BW *unku*, the width range was 73.5–80.0 cm, a maximum of 1 cm outside John Rowe's (1979:247) range, thus confirming consistency in BW *unku* size. We also noted a similar degree of standardization in diamond waistband (DW) *unku* (Supplemental Table 1). During analysis, we found that a t'oqapu waistband (TW1) *unku* had been rerecorded at 80 × 71 cm, now the typical measurement for an *unku*. The CV *unku* (91.0 × 80.5 cm) is slightly wider than average (76.20 cm) but within the established range.

The CV *unku* was woven using an interlocking tapestry technique consisting of two warps joined by 3/3 dovetailing along the shoulders (Figure 5a). The warp consists of two-ply and three-ply cotton yarns (Z-spun/S-plyed), whereas the wefts consist of camelid fiber (Z-spun/S-plyed), with eccentric wefts along the edge of the yoke providing a smooth edge (Figure 5b). Diagonal lines (defined by Emery [1980:233] as lazy lines) in the tapestry weave within blocks of single colors occur in the large, reddish area (Figure 5c). The fabric is double faced with no loose weft ends and a moderately high thread count (40 wefts: 7 warps per cm) with overcast edges. Although insufficient edge seams remain, the garment was presumably sewn up to the armholes. The neck slot is woven using discontinuous warps (Figure 5d).

Although most *unku* are woven using a single warp, John Rowe (1979) identified three examples woven in two warps like the CV *unku* (Figure 5; Supplemental Table 1). An *unku* in the Chicago Field Museum (catalog 1534) described as “in two pieces” may also have been joined in this way.

Dye analysis is still underway using high-performance liquid chromatography and mass spectrometry. Preliminary results, however, indicate that the black, yellowish, and white fibers were undyed, but the red color between the yoke and checkerboard area came from carminic acid and purpurin (Jian Liu, personal communication 2015). Carminic acid is produced from *Dactylopius coccus* (cochineal insect), a parasitic scale insect that lives on prickly pears (*Opuntia cacti*). Native to subtropical South America, Mexico, and Arizona, it has been used as a dye-stuff in the Arica region from at least 1000 BP and earlier in Peru (Cassman et al. 2008). Vegetal dyestuffs containing purpurin obtained from *Relbunium* spp. and *Galium tinctorum* are native to the Andes and were in common use by the Late period (Niemeyer and Agüero 2015).

Discussion

Four Inka *unku* styles were identified by Anne Rowe (1978) and John Rowe (1979). Pillsbury (2002:71, 73) focused on the spatial arrangement of the Inka designs, describing them as boldly geometric, favoring plain color blocks with “certain areas of elaboration” on the waist, neck, and lower border, which possibly represented information about the wearer. Anne Rowe (1997) identified three consistent features in the spatial organization: (1) the stepped yoke, exemplified by BW *unku*; (2) a pattern change halfway down the garment, exemplified by Inka key (IK) *unku*; and (3) decorative waist bands, exemplified by diamond waistband *unku*.

The CV *unku* features three of these diagnostic elements: a vertically striped yoke, surrounded by a reddish area, and a black-and-white checkerboard pattern across the bottom panel (Figure 2). This arrangement does not strictly conform to the established style (Rowe 1997; Pillsbury 2002), but construction techniques, dimensions, and spatial arrangement follow classic Inka conventions.

The most common *unku* style is the BW *unku* (Figure 1b) featuring a red, stepped yoke with black-and-white checks; it is associated with military officers in Francisco de Xerez's 1891 account of Atahualpa's army (Pogo 1936) and Guaman Poma de Ayala's drawings (Guaman Poma de Ayala et al. 1980 [1615]:Figures 38, 54, 98).

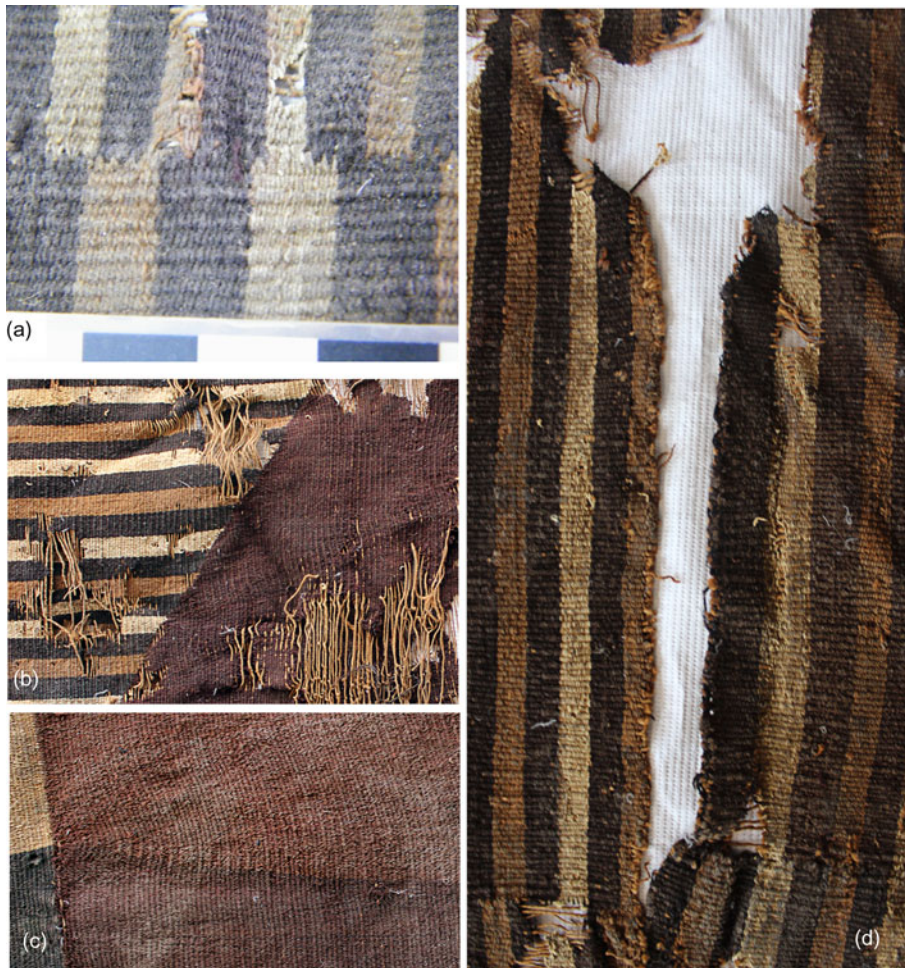


Figure 5. CV *unku* features: (a) 3/3 dovetail shoulder joint; (b) eccentric wefts creating a smooth edge along the yoke; (c) lazy line in the solid red area; and (d) neck slot with discontinuous warps. (Color online)

The black-and-white checkered area across the bottom panel of the CV *unku* is in precisely the same position as the horizontal stripes on IK *unku* and zigzag waistbands (Figure 1c; see Rowe 1978: Figure 32) and on DW *unku* (Figure 1d) described as the “lower panel” (Rowe 1979:250). The checkerboard on the CV *unku* is executed in four rows of squares, 11 on one side and 10 on the other (including partial edge squares; Figure 2b). The squares (8.0–9.5 cm × 7.3–9.5 cm) are comparable in size to the average size (7.4–7.9 cm; Rowe 1979:247), not including the partial checks at the edge of the garment (4.0–4.2 cm wide).

Technically, the CV *unku* compares favorably with the 12 diagnostic attributes in Supplemental Table 3. To our knowledge, the CV *unku* is the

only extant example of this particular arrangement, but firm correlates appear in historical documents, including a sixteenth-century coat of arms depicting Topa Inka Yupanqui, who expanded the Inka Empire into northern Chile in the early 1400s (Figure 6a; Cummins 2007:Figure 24). This Hispanic colonial depiction shows an *unku* with a straight-sided yoke, elaborated with small diamonds, over a solid color with a border of black-and-white checks, and a zigzag line and row of smaller checks across the bottom. The spatial arrangement is unusual in that the area between the yoke and the checkerboard is larger than that on IK or DW *unku*.

Another correlate appears in a drawing (Figure 6b) of the Coya Raymi Quilla celebration



Figure 6. Historic depictions of *unku* with features comparable to the CV *unku*: (a) coat of arms depicting Topa Inka Yupanqui, eighteenth century (Dumbarton Oaks, Trustees for Harvard University, Rare Book Collection); (b) soldier at a Coya Raymi Quilla celebration (Guaman Poma de Ayala et al. 1980 [1615]:98). (Color online)

(Guaman Poma de Ayala et al. 1980 [1615]:98). The only observable differences between this and the CV *unku* is its striped yoke, which is unlike conventional “stepped” types on BW *unku* (Supplemental Table 1). The “stepped” effect is created by “setting back the top of each vertical row [of squares]” (Rowe 1979:247). The CV *unku*’s checkerboard pattern does not border the yoke and has no stepped pattern.

The stripes on the CV *unku* yoke are idiosyncratic: they are narrow (0.7–0.9 mm wide) and arranged in a repeated pattern of black, yellowish, black, and white (Figure 5b). Significantly, a fully striped *unku* is featured in Guaman Poma de Ayala’s (Guaman Poma de Ayala et al. 1980 [1615]) illustration of a provincial administrator (Hughes 2010:Figure 12). Such stripes are also found on textiles from the Formative through the Late periods at Arica and Caleta Vitor (Agüero 2000; Horta 2004; Martens and Cameron 2019; Ulloa 2008). This does not imply that the CV *unku* was made locally, however. In the Arica region, there is no evidence for formalized, large-scale craft production, at least up to 600 BP (Cassman 1997:160). Coastal tunics are typically shorter and wider and worn

with loincloths, whereas *unku* are longer (Rowe 1992), further supporting our assertion that the CV *unku* was imported.

Conclusions

The technical and stylistic characteristics of the CV *unku* compare so favorably with *unku* in our database and historical depictions that we conclude it is indeed a prehispanic Inka *unku*. The checkerboard pattern, rarely seen in vice-regal *unku*, is associated with the Inka military, but the yoke pattern and style are unique. Additionally, this expansion of John Rowe’s (1979) *unku* database has added important technical, diagnostic characteristics that can be used to identify such iconic garments in the future. Although the CV *unku* strongly suggests imperial activity, further research is needed into Late period interactions in northern Chile and the suite of artifacts typically associated with the Inka.

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Data Availability Statement. Materials from the Caleta Vitor archaeological complex are housed at the Instituto de Alta Investigación, Universidad de Tarapacá, in Arica, Chile.

Supplemental Materials. For supplemental material accompanying this article, visit <https://doi.org/10.1017/laq.2020.81>.

Supplemental Table 1. *Unku* Database Summary.

Supplemental Table 2. Average Dimensions of *Unku*.

Supplemental Table 3. Diagnostic Features of Inka *Unku*.

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