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Abstract

Our understanding of Inka expansion continues to develop with new research further cementing the idea that the Inka's expansionary tactics were targeted and agile, specifically enacted to achieve coercive control over populations, resources, and specialist craft expertise. The nature of Inka influence at Caleta Vitor has not yet been established, however, the data now strongly suggest that the population was entangled in a complex negotiated process commonly undertaken by the Inka in new territories. This paper contributes to our understanding of Inka interaction at Caleta Vitor with new data from archaeological textiles that demonstrate Caleta Vitor's Imperial connections.

Keywords: Archaeological textiles, Inka expansion, northern Chile, *chuspa*s, Caleta Vitor

Resumen

Nuestra comprensión de las estrategias de expansión inka continúa desarrollándose con nuevas investigaciones. Estas consolidan aún más la idea acerca que las tácticas de expansión fueron dirigidas y puestas en práctica específicamente para lograr un control coercitivo sobre las poblaciones, recursos y trabajo artesanal especializado. La naturaleza de la influencia inka en Caleta Vitor (norte de Chile) aún no ha sido establecida, sin embargo, los datos sugieren que la población estaba involucrada en un complejo proceso de negociación emprendido por los inkas en nuevos territorios. Este artículo contribuye a nuestra comprensión de la interacción inka en Caleta Vitor con nuevos datos obtenidos de textiles arqueológicos, para reconsiderar las conexiones del imperio en esa localidad y sus impactos en la región.

Palabras clave: Textiles arqueológicos, expansión inka, norte de Chile, *chuspa*s, Caleta Vitor

Introduction

The Caleta Vitor archaeological complex (Figure 1) has produced a near-continuous record of archaeological textiles dating from the Early Archaic period through the Late Period, including ceremonial, decorative, and utilitarian items (Carter 2016; Martens 2019). This paper focuses on fiber artifacts from the Late Period, when the population of Caleta Vitor experienced considerable external pressure from the expansion of the Inka Empire (Santoro 1995; Santoro and Muñoz 1981), however, the nature of the relationship between the Empire and the people of Caleta Vitor has not been established. This is due in part to the site's unique archaeological record,

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particularly its divergence from local trends towards agropastoralism in the Formative Period. Here, evidence from isotope, petrographic, and traditional archaeological analysis of the economy, as well as our discovery of an Inka *unku* (Correa-Lau et al. 2023; Martens et al. 2021) at the site, combined with our investigation of *chuspas* from the site strongly suggest that the population was entangled in a more formal relationship with the Empire.

Across the Andes, an increasingly granular picture of past diets, paleoenvironmental conditions, resource use, and materials procurement is changing how archaeologists identify and characterize Imperial interactions (Cremonte 2014; Galvan et al. 2021; Gayó et al. 2020). For example, the presence of camelid fibre had previously been interpreted as a key indicator for Inka interaction and trade at Caleta Vitor, however, detailed archaeological textile analysis and stable isotope analysis conducted by the author and colleagues revealed the presence of processed camelid fibre at the site, thousands of years before the Inka Empire existed, and local camelid fibre sources (Gayó et al. 2020; Martens 2019). These findings have essentially reframed the established paradigm that camelid fibre was a highland product, traded for coastal resources.

Similarly, the lack of maize consumption and limited maize agriculture at both Caleta Vitor, and Antofagasta de la Sierra, have been interpreted as evidence that the Empire was not interested in these sites (Galván et al. 2021). However, Galván et al. (2021) have demonstrated the lack of maize dependence at Antofagasta de la Sierra is an example of the Inka's precision, site specific approach in this mining territory where their main goal of the Inka was mining, not agriculture. These discoveries further demonstrate the weakness of any approach that relies solely on a single suite of archaeological material to demonstrate Inka presence or absence. Detailed investigations demonstrate the Inka allowed, or required, subjugated groups to continue producing local pottery and textile styles and restricted access to Inka items that were markers of prestige and high status. In other cases, the Inka had local craft specialists produce Inka style items or provincial styles that appear to display traditional manufacturing methods adjusted just enough to appear as prescribed (Correa-Lau 2023; Cremonte 2014).

This paper combines the available data on the Caleta Vitor archaeological complex from isotopic (Gayó et al 2020; Roberts et al. 2017) and petrographic analysis

Figure 1. Map showing the archaeological sites, modern cities, waterways, Inka roads, *Unku* discoveries and quebradas mentioned in the article (ANU Cartography).

(Bland et al. 2013), a detailed analysis of the site's economy (Carter 2016) as well as archaeological textile data to provide new insights into Inka influence at the site.

Caleta Vitor and Northern Chile's Western Valleys

Northern Chile's Early Archaic Period (13,000-7,500 CAL YR BP) is best known for the Chinchorro culture and their early and sophisticated artificial mummification techniques. The culture spanned the north of Chile's coast to southern Peru (Figure 1), and their distinctive material culture can be found across the region. By the

end of the Archaic Period (4,000 CAL YR BP) Chinchorro burials disappear from the archaeological record and the culture goes into decline, giving way to the Formative Period, (4,000-1,500 CAL YR BP) when evidence of highland influence appears, including woven textiles, ceramics, and processed cotton (Gossypium *barbadense*). There is evidence that some inhabitants of the region adopted agricultural and pastoral practices, while others, like the people of Caleta Vitor, retained their marine focused subsistence economies.

Broadly, the Middle Horizon (1,500-1,000 BP) is marked by influence from the Tiwanaku Empire, evident in an array of material culture (Torres-Rouff 2008). Craft technologies and material types increase and advanced weaving techniques such as tapestry are perfected (Rivera 1991; Ulloa 1981b). At Caleta Vitor, small amounts of maize appear, and camelid droppings increase from the Formative Period onward but the inhabitants remained marine hunter gatherers. Some regions have produced irrigation infrastructures – evidence for the intensification of agriculture. This period is also characterized by the appearance of fortified villages called *pukaras*, thought to indicate intergroup tensions, along with continued evidence for long distance inter-group trade (Rivera 1991; Roberts et al. 2013).

Santoro and colleagues (2010) previously hypothesized that the Inka maintained direct control over the western valleys, with interests in sea bird guano and the rich fishery that was only accessible via the populated coastal valleys. It appears that the Inka administered the area via *tambos* in the Arica highlands (tambo Zapahuira and Belén) with coastal populations connected via the Inka Road system to the important hub of Tarapacá Viejo (Figure 1). This investment in infrastructure is perhaps the most significant physical indicator that there was imperial interest in the region, considering the inherent cost of construction and maintenance. Sites in the Lluta (Molle Pampa, Cruces de Molino), Azapa (Azapa 15, Pubrisa, Pampa Alto Ramírez) and Camarones valley to the south have produced sufficient material culture to show intensive interaction with the Inka State.

Caleta Vitor Archaeological Complex

The Caleta Vitor archaeological complex is located between the Azapa and Camarones valleys on Chile's far north coast, at the Pacific terminus of Quebrada Chaca/Vitor (Figure 2). Quebradas make human occupation in this terrestrially barren region possible, channeling fresh water from the Andes to the coast, cutting across the untraversable coastal cliffs of northern Chile, providing access to the rich marine biomass of northern Chile's coastal waters area (Rivera 2008, 1991). Archaeologists have produced firm evidence of occupation in the region from the Late Pleistocene when the first inhabitants established a marine economy that supported life for thousands of years into the Late Holocene (Núñez et al. 2002; Sandweiss et al. 1998; Santoro et al. 2005).

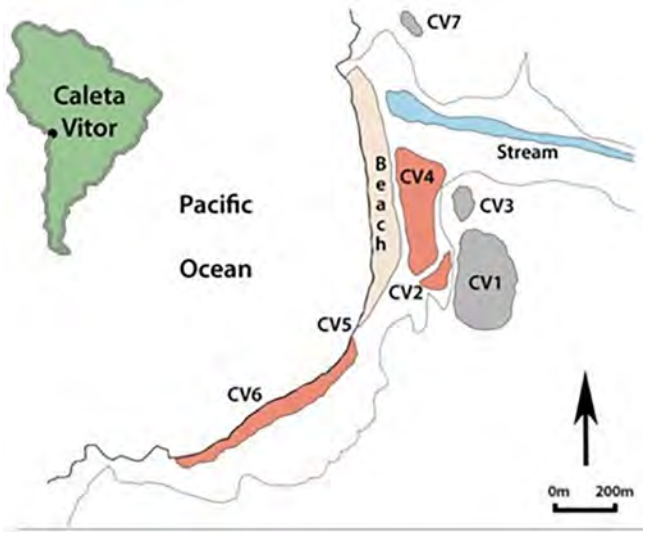

Figure 2. Map showing the excavation zones at Caleta Vitor established by Carter 2016 (Carter 2016).

The first extensive, systematic excavations of the archaeological complex were led by Chris Carter from 2008-2010. Carter divided the Caleta Vitor complex into eight sectors that include middens, burials, and cave rock art (ranging in age from the Early Archaic through to the Late Period) (Carter 2016: Table 1).

The Archaeological Context

Up until the 1990s, the Chilean Navy maintained a base on the beach of Vitor Bay and while the installation did impact some of the deposits, it also protected the site from looting, which is an ongoing problem in the region, as well as large scale urban or agricultural development. The artifacts discussed here are from both intact and disturbed deposits and include all fibre items from the Late Period, with particular focus on artifacts excavated from a previously looted context within CV2/1, and trenches CV4/1 and CV6/1 (Figure 2). Both CV4/1

and CV6/1 trenches were excavated to a depth of approximately 80 cm into dense midden deposits characterized by well-defined stratigraphy containing 25 distinct units dated to the end of the Late Intermediate Period through to the Late Period. The units contained abundant marine animal bone and shell, maize, ceramics, and camelid droppings as well as algarrobo (*Prosopis* spp.), molle (*Schinus molle*), cotton (*Gossypium barbadense*) and squash (*Curcubita* spp.). Cultural deposits continued well below the basal layers in both trenches (Carter 2016; Roberts et al. 2013; Santoro et al. In press).

CV2/1 is a midden deposit dated between the Archaic and Formative Period that was used for burials, the most recent of which are dated 989-1336 CAL YR BP (OZN923), and 969-1304 Cal YR BP (OZN924) (Roberts et al. 2013). Carter (2016) concluded that the artifacts from the previously looted section of CV2/1 were probably grave goods and that the original burial, including the skeletal remains of at least two individuals, had previously been removed, and replaced in an excavated niche, decades before his excavation began. The contents of this disturbed burial(s) have been described elsewhere and famously included one of just two Inka unkus ever identified outside of Peru's modern border (Carter 2016; Correa-Lau et al. 2023; Martens et al. 2019). In this paper we focus on the textile items from the disturbed context that have not yet been described in detail, as well as some in situ items from other deposits with good archaeological integrity.

Methodology

Definitions, and methods for analysing and recording the structural elements of textiles are after Emery (1980), Adovasio (1977) and Wendrich (1991). Horta and Aguero's (1997) chuspa typologies are referenced although, Horta's (2018) chuspa typologies developed at Azapa 15 are adopted to contextualize and interpret the chuspas. This typology is preferred because, like the Caleta Vitor collection, the Azapa 15 bags are from Late Period burial contexts, the sites are in close geographic proximity, and the model is robust (n=39 chuspas). The model comprises two categories: *pampa monocroma* and *pampa constrastada,* both of types are split in half by a central vertical line, flanked by stripes to each side, warp faced, some with supplementary warps and occasional warp floats and mostly devoid of handles (see Horta 2018 for detailed descriptions and technical characteristics of the typologies).

Without reiterating Horta's (2018) work, major technical characteristics of the Azapa 15 *contrastada chuspas* include that they are mostly wider than they are long, described as being 12cm to 20cm long, and 15.5cm to 25cm wide made in the traditional South Central Andean tradition of Z/S prepared yarns. All wefts are different shades of natural brown while coloured yarns are included in the warp only, including red, cream, and mustard and less commonly, beige, white, dark blue, green and mustard (Horta 2018). While there is a lot of overlap with the *contrastada chuspas* in terms of size, the *monocroma chuspas* are slightly smaller on average, between 11cm and 18.5cm long, and between 11.5cm and 22cm wide. Most of the *monocroma* types are made with Z/S yarns, with rare examples of single ply s spun yarns. Importantly, these bags do not have dyed yarns or handles.

The Fiber Assemblage

In total, 711 fibre artifacts (Figure 3) were recorded from 25 excavation units, across two trenches, dated from the close of the Late Intermediate Period through the end of the Late Period. Artifact deposition rates are consistent throughout with the highest concentrations of artifacts recorded in units CV6/1/9 (n=156) and CV4/1/11 (n=101) (36.1%). Most artifacts were made of camelid fibre (90.2%) with only a small proportion made from cotton (7.2%) with even fewer vegetal fibre items (2.6%). Almost 2% (n=13) of the yarns were of bi-colored camelid fiber and 3.3% (n=23) were dyed (for detailed tables, and descriptions of fibers and fiber processing from other chronological periods at Caleta Vitor see Martens 2019).

In the Andes, fibre processing conventions such as spin and ply direction are regionally consistent, perhaps related to motor habits, or passed down from generation to generation through teaching and learning (Oakland 1986:45; Edward Jolie, personal communication 2018). This convention is less evident with vegetal fibre processing, owing to the propensity for vegetal fibres to naturally curl, or twist in one direction or the other during processing, a phenomenon called fibular torsion, that can dictate spin or twist direction to the spinner. 90.8% of yarns from Caleta Vitor's Late Period assemblage conform to the Z/S South Central Andean tradition (Oakland 1986:45), with 96% of camelid fibre yarns processed in this fashion. Unsurprisingly, vegetal fibre yarns were not as consistently processed, with 43% Z/S and 43% S/Z,

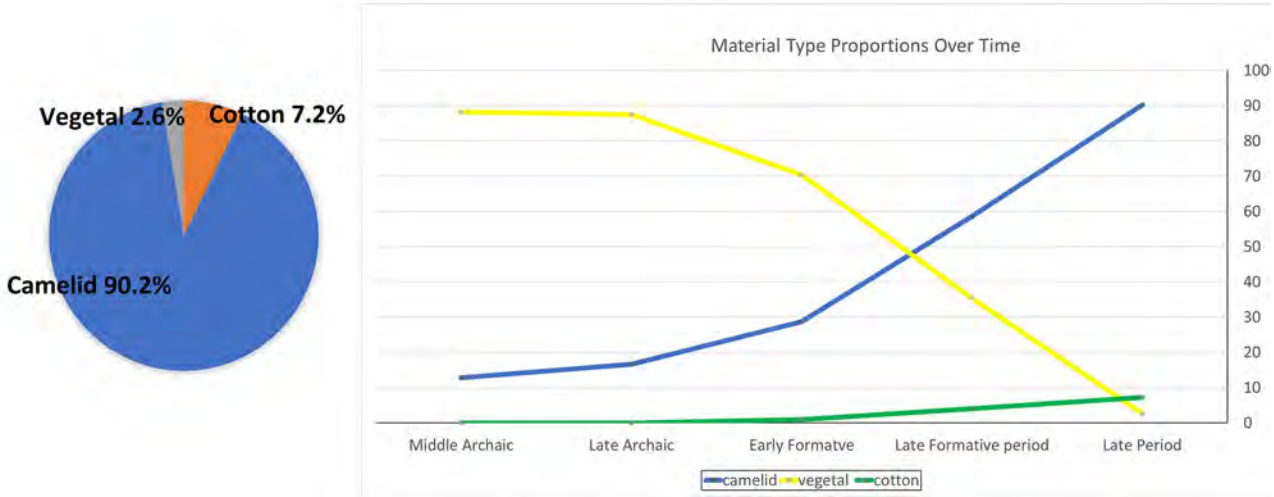

Figure 3. Graphs depicting the proportion of fibre types during the Late Period and material type changes over time.

and the remainder of untwisted single elements. Cotton yarns were slightly more consistent than vegetal with 59% in the traditional Z/S configuration and 41% in the S/Z orientation.

Results and Discussion

This detailed fibre analysis reveals a consistent trend toward increased camelid fibre usage, decreased vegetal fibre and a steady, if modest, increase in cotton across all periods beginning in the Late Archaic (Martens and Cameron 2019). The volume of fibre items also increases over time. Of course, this may be the result of preservation bias although, similar intensification has also been noted in pottery discard rates and marine resource extraction (Carter 2016), all of which have been tied to population increase. Interestingly, petrographic analysis indicates that while new pottery styles are introduced, the population continued to use the same pottery fabric sources and underlying techniques (Bland et al. 2017). Likewise, Roberts and colleagues (2013) used stable light isotopes to demonstrate the population's continued reliance on marine foodstuffs throughout occupation despite the introduction of domesticates and the trend toward agro-pastoralism noted at neighbouring sites including Molle Pampa, Cruces de Molino, Azapa 15 and Pubrisa. As with most technological trajectories in the area, despite the introduction of new cloth production and basketry technologies, Archaic Period technologies continue to be used – including twining (Martens and Cameron 2019).

Of the seven woven bags in the collection (Table 1), two; 8157 and 8078 (Figure 4a and 4b) have stylistic and structural similarities to Horta's (2018) typologies but differ in terms of size and spatial organization and one bag; 7868 (Figure 4c) conforms to the *monocroma* type. Four bags; 7695, 8134, 8108 and 8024 (Figure 5a, 6 and 7) conform to the *constrastada* type. There are also two *chucus* hats (Figure 8), made in coiled basketry

artefact number	context	length	width	repairs	yarn spin/ply
8024	CV2 burial 1/2	19.3	18		z/s
8108	CV2 burial 1/2	18.5	16.5		z/s
8157	CV2 burial 1/2	15	13		z/s
8134	CV2 burial 1/2	20.7	19		z/s
7868	CV2 SQ3 burial	no dimension	no dimension		z/s
8078	CV2 burial 1/2	30	19.8	yes	z/s
7695	CV2/ 4A surface	15	19		z/s

Table 1. Provenance and structural details of the bags from Caleta Vitor archaeological Complex.

technique, an offcut of plain (tabby) weave with a ball of compressed lime (Figure 9a), a sling (Figure 9b), an animal fibre halter with leather (Figure 9c), an Inka *unku* (Figure 10) and a striped tunic (Figure 11).

Overall, the bags that conform to the Pampa style in this collection are bigger, on average, than the Azapa 15 collection, though the sample size is considerably smaller. These bags are mostly longer than they are wide, with one exception, whereas just over half of the bags at Azapa 15 were wider than they were long. Structurally, all yarns conformed to the South-central Andean tradition of Z/S, with camelid warps and wefts. All bags are warp faced, some with supplementary warps and warp floats. Only two bags have handles still attached yet at least one other bag (Figure 5a) could have originally had a handle. The bags are sewn closed with a variety of methods – a decorative embroidery stitch, running and whipping stitches and an end-to-end overcast stitch. The Caleta Vitor collection consists primarily of *contrastada* bags, as with Azapa 15, most of the *chuspa*s are *contrastada* type.

One bag (8078) (Figure 4a) is larger than the defined types and may not be a *chuspa* for coca however, it is spatially organized as per the characteristics detailed by Horta (2018). The bag is split into two equal sections with a wider stripe in the middle of dark brown and medium brown, flanked by narrower stripes of red-brown, dark brown, cream, and medium brown. The pattern is reminiscent to the yoke of the CV *unku* albeit with slightly different order in the colour of the stripes (figure 11). The bag is made of one piece of warp faced fabric, folded in half and side seams are in embroidery stitch. It has also undergone two extensive repairs, strongly indicates it was probably not made specifically as a grave

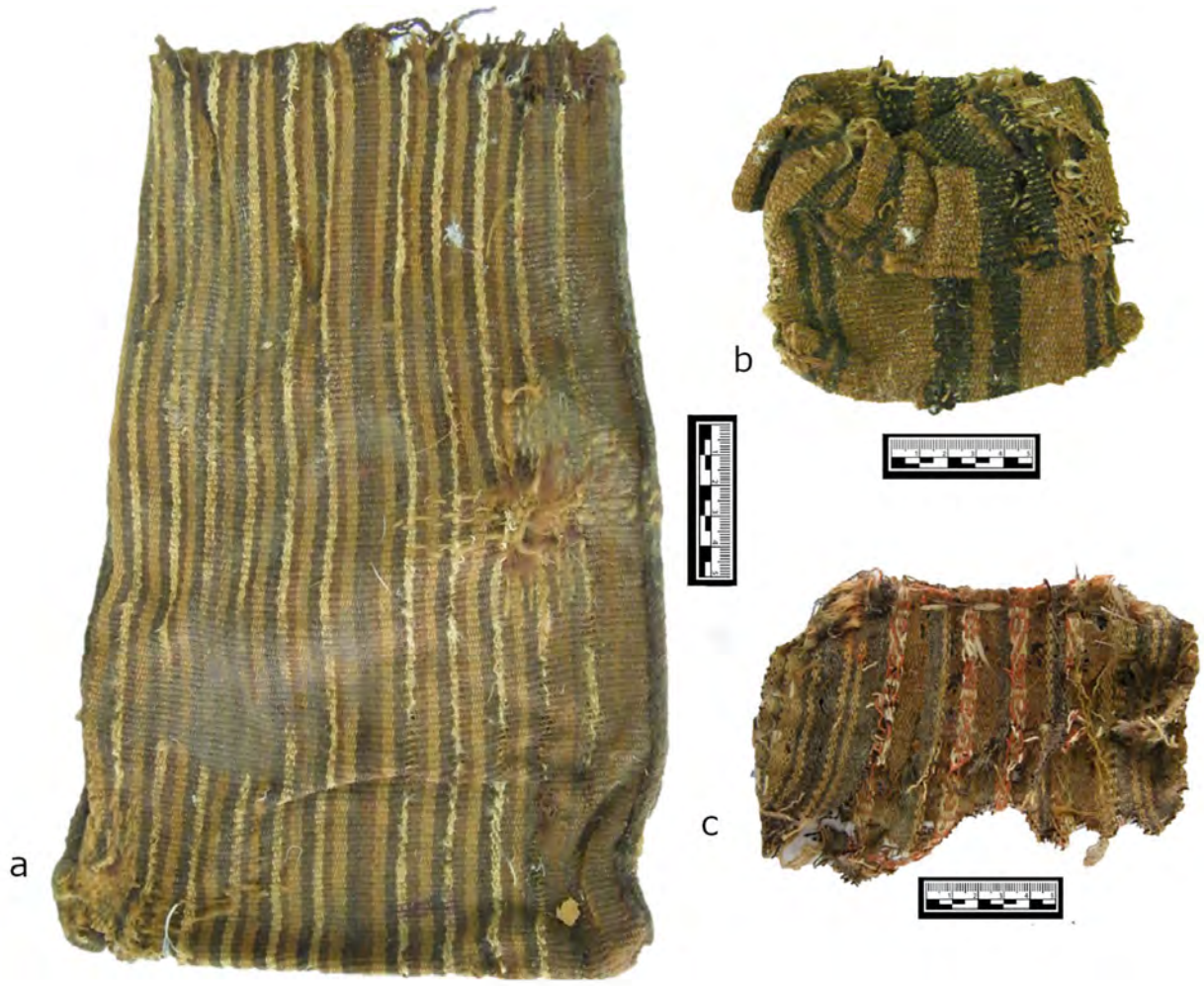

Figure 4. Bags a) 8157; b) 7868; and c) 8078. Other bags with similar style/ spatial organization expected on a *chuspa*.

good and was used enough to warrant repair before interment, this is notable because repairs are rare in the Azapa 15 collection.

The smallest bag 8157 (Figure 4b) in the collection at just 15 x 13cm, within the size parameters described by Horta for *monocroma chuspas*, it is light brown with dark brown stripes configured in the three-stripe pattern without additional elaboration as described by Horta (2018). The bag is made of a single piece of warp faced fabric with whipping stitch seams. The upper third of the bag was folded inside-out and the corners had been reinforced with running stitches.

Only a fragment of a more elaborate *monocroma chuspa* type bag 7868 is preserved (Figure 4c). The direction of the stripe suggests that it was probably the bottom section of a bag. The only remaining seam is along the bottom, indicating the usage of two pieces of fabric, rather than a single piece folded over, as in many other examples. The seams are in running stitch. The original pattern is not discernible although the fragment has medium, dark and cream colour stripes featuring the S scroll in a light pinkish tone - an elaboration featured in both *constrada* and *monocroma* type bags.

There are four examples of *pampa contrastada* style *chuspas* in the collection 8134, 8108, 8024 and 7695 (Figures 5, 6, and 7). The first (Figure 5a) *contrastada chuspa* 8134, is mostly red and features the 'over and under', motif described by Conklin (1997) in yellow in various degrees of deconstruction with cream-coloured chevrons and dark solid bars between sections. This bag is warp faced with supplementary warps and floats, it is sewn closed using polychrome cross knit looping embroidery. This elaboration is almost identical to one identified as a male Inka coca bag in Conklin's study. This distinctive pattern is strongly associated with the Inka key motif and has not previously been identified at a coastal site (1997:127). The organization of the spaces on the bag from Caleta Vitor is different to published examples. Whereas the Caleta Vitor bag features the standard *contrastada* organization, the stripes on the bag in Conklin's (1997) work (Figure 5b), from Purochuco, Perú, appear to be more evenly spaced, although the angle of the published photograph may be obscuring the actual layout. There may also have been a handle attached to the Caleta Vitor bag as there is a damaged section located where a handle would have been attached.

The second *contrastada* bag 8108 (Figure 6), features a wide central band in pink and blue in an 'x' pattern, split in half with each half being a negative of the other. The pattern may be an elaboration of the 'over and under' design featured on the previous bag. It also bears a strong

Figure 5. (a) The *Pampa Contrastada* bag from the disturbed burial at CV2 with the over-and-under design. (b) A bag previously published in Conklin (1997) from Puruchuco, Perú.

Figure 6. *Pampa Contrastada* bag filled with coca leaves. The central elaboration is featured on the left side, alongside an image from a toquapu tunic showing the similarities in the motifs.

resemblance to Inka key motif seen on other Inka items, not only *toqapu unku* but the ceramics and architecture (Figure 6 detail panel) are closely related to the Inka key motif (Conklin 1997). This bag has a decorative handle in paired weft twining, with seams sewn together in a polychrome cross knit looped embroidery technique. It is warp faced with floats and tassels attached near the handle. The wide central decorative band is flanked by two equally thick modelled columns with yellow circular details on the narrow blue and pink bands. This bag still contained a large amount of coca leaves.

The third *contrastada* bag 8024 (Figure 7a) is also made of a single piece of warp faced fabric with cross-knit loop stitch seams on the sides and it appears to have been sewn closed across the top with a whipping stitch in natural light brown camelid fibre. The bag features five stripes, the most common configuration according to Horta (2018), with white warp yarns in the dark-brown central stripe, flanked by a thick red-brown or yellowish stripe and then a thin, dark-brown stripe with the white float elaborations. Interestingly, the white elaborations are paired in the thin stripes and offset in the thicker stripes. The bag is similar to the bag from tomb 72, 74 or 79 from Azapa 15 (Horta 2018, Figure 1a)

The final *contrastada chuspa* 7695 is the only one in the collection with greater width than length (Figure 7b). It is made of a single piece of warp faced fabric with seams in whipping stitch. This bag was also sewn closed across the opening in simple running stitch using paired, camelid fibre yarns. This bag has a central stripe with an elaboration similar to *k'utu* (as described by Horta 2018) however, the horizontal components of the design

Figure 7. *Pampa Contrastada* style *chuspa*s.

in this case are much wider and appear in three, offset sets. The *k'utu* was very common at Azapa 15, appearing on 95.6% of bags. The central stripe is boarded by green stripes with dark brown stripes of a similar thickness and a thicker medium brown stripe with green and dark brown again followed by a thick yellow stripe, then dark brown, green, and again the thicker medium brown.

Chuspas have been found across the Empire where they range from elaborately decorated to simple, striped forms. The cultural meaning of *chuspas* has been investigated by Hughes (2010), Horta and Aguero (1999), and Horta (2018), among others. Hughes sees *chuspas* as important status symbols as with coca chewing given the high cost of obtaining leaves from the Andean lowlands. Furthermore, frequent depictions of high-status individuals, including the Sapa Inka, with coca bags, confirm the important place such bags played in conveying status. These bags and associated garments were made to very exacting standards by expert weavers with strict sumptuary laws governing who could wear them. The details of a person's family lineage, location of origin, and the office one held could be discerned by these textiles. Horta (2018) is of the view that the principal purpose of the sumptuous *contrastada chuspa*s and the *monochromatic chuspas* was to articulate the prevailing hierarchical differentiation where only one group had access to Inka luxury items. Horta interpreted the presence of Pampa *contrastada* style *chuspa*s at Azapa 15 as either inkanization or the presence *of mitimaes* populations. The ethnohistoric record describes an Inka policy of relocating large proportions of populations to new areas, these relocated individuals were called mitimaes (D'Altroy 2001; Davidson 2021). The purpose of this relocation policy was both political and economic, intended to reduce dissent while also consolidating or relocating labor where it was required.

Considering the number of *chuspa*s at the CV site, it is unsurprising that a ball of compressed lime, wrapped in an off-cut piece of plain weave fabric, was also recovered from CV6, framed by radiocarbon dates from the context above 530 +/-25 CAL YR BP (UGAMS10522) with the base of the trench dated at 660 +/-25 CAL YR BP (UGAMS10523). Carter (2016:238) identified the ball as lime or calcite which is an integral part of the 8,000-year-old Andean tradition of coca leaf chewing (Dillehay et al. 2010). The lime is consumed in small portions while chewing coca leaves to release alkaloids from the leaves, precipitating the desired stimulant effect, famous for alleviating hunger, providing energy and assuaging the effects of altitude sickness. The leaves were important to the Inka economy and ceremonies as were the highly elaborate textile bags that they were carried in, as emblems of imperial authority (Hughes 2010).

In addition to the CV *unku*, the excavations of the disturbed burial produced another tunic with precisely the same spatial organization as featured on *pampa chuspa*s

described by Horta (2018) - seven stripes in light and dark brown with narrow elaborations of the opposite color in narrow bands in the centre of each stripe (Figure 11). Like most *chuspa*s, this tunic is constructed from a single piece of warp faced fabric sewn up to the arm holes in whipping stitch. The neck slot is made from discontinuous wefts and there are notable repairs on both sides where the weft selvedges are sewn together. The tunic is 81 x 75 cm, within 1 cm of the average width of an Inka *unku* but 8 cm shorter than average (Martens 2019). This is consistent with previous studies and indicates local origin. Tunics with similar spatial organization are also described by Carmona (2004) (Group 2) as representing a widespread cultural tradition with shared material culture. Coastal tunics are shorter and wider, and worn with fully visible loin cloths whereas Inka tunics are longer, nearly reaching the knee (Rodman and Cassman 1995).

The disturbed burial(s) in CV2 also contained two truncated cone hats, or *chucus*. Both hats are made from camelid fibre in coiled basketry technique. All of the yarns used in the construction of the hats follows the South Central Andean tradition of Z/S except for the passive element in hat 8163 which was made in S/Z. Hat 8038 is red-brown with cream and dark brown elaborations. It is in a better state of preservation than 8136 and features a triangular design with steps on the shape's interior, pointing toward the top of the hat alternating with similar shapes pointing downward from the top of the hat with curling extensions along their edges. The design is mirrored in Berenguer's work (2015:82 and 83), where these hats are associated with the Inka empire and identified in the work of Guaman Poma de Ayala where they are associated with Inka advisors. In the same work, Pedro Pizzaro is noted as connecting the truncated cone hats with the Aymara chiefdoms on the north side of Lake Titicaca and it is suggested that they may have roots as far back as the Middle Horizon with connections to the Tiwanaku polity. The Bolivian Andean Textile Museum houses a similar hat (Figure 8c) – labelled as Late Intermediate or Inka Period, originating with the Carangas from the altiplano central and Horta (2011) has identified similar hats in the region during the Late Period. Although the museum example is more elaborate than the examples from Caleta Vitor, they share structural features and the stepped and curling downward facing motifs.

The literature strongly suggests that *chucus* were widely distributed status symbols although there is some disagreement about cultural origins and meaning. The hats could be related to the installation of the *mitimaes*, as a part of creating their perceived status, and the complex process undertaken by the empire to control and coerce these populations into submission. The goal was to manipulate newly settled populations of *mitimaes* into continued work and reduced resistance while improving the local perception of newly settled people.

Camelid product procurement and camelid husbandry

Figure 8. *Chucus* hats. (a, b) Chucus hats from CV2 disturbed burial. (c) *Chucus* hat from the Andean Textile Museum, La Paz, Bolivia.

Figure 9. (a) A ball of compressed white powder in an offcut of plain tabby weave in camelid fibre (b) a sling made of camelid fibre in fistbraiding (c) an animal halter in leather and camelid fibre.

at Caleta Vitor is not well understood, however it has been established that camelid fibre was in use since the Archaic Period and that the fibre was locally available (Gayó et al. 2020). Thus far, no camelid bone has been identified at the site, but camelid faecal pellets first appear at the site in the formative period and volume steadily increases until the Late Period when volumes increase from under 10 grams in per trench in formative contexts to over 300 grams in trenches dated to the late period, which may represent a change or intensification in camelid husbandry activities at the site or region. This investigation identified a braided and leather animal bridal and lead in camelid fibre (from the disturbed CV2 burial(s)) and a sling from the same context as the ball of compressed lime described above (Figure 9c), both of which are unambiguously associated with animal husbandry. The sling cradle may have originally been split, with the split sewn closed later while the cord is made in fist braiding technique with diamond designs. These items do not prove that camelids were maintained on site, it does suggest that there may have been interactions at the site with people engaged in that task.

Most importantly, the Caleta Vitor assemblage also included one of just two examples of Inka *unku* ever identified outside Peru's modern border (see Correa-Lau et al. 2023; Martens et al. 2021 for detailed descriptions of the CV *unku*). The garment was recovered from the disturbed area of CV2 (Martens et al. 2021). While sharing diagnostic characteristics with many known *unkus*, the CV *unku* is stylistically and technically unique leading us to conclude it is a provincial style (Correa-Lau et al. 2023).

The significance of Inka *unkus* is well established, considered tantamount to a direct link to the power of the Sapa Inka himself (Martens et al. 2021; Pillsbury 2002; Rowe A. 1992; Rowe 1979). *Unkus* have been depicted in detail, in association with historic documents associated with specific celebrations, always nearby Inka nobility, marking the socio-cultural significance of this type of Imperial regalia (Guaman Poma de Ayala 1980[1615]:98). The cultural significance and connection these garments had to nobility made them ideal strategic gifts intended to create a reciprocity vacuum in favor of the State. In this scenario, the State might offer an *unku* as a part of negotiations with other groups intended to cement loyalty from local leaders and imbue them with power. The presence of this *unku* indicates that the people of Caleta Vitor were familiar with

Figure 10. The CV *unku*.

Figure 11. Tunic found in CV2, disturbed burial.

Inka iconography, cultural values, and status symbols and that the site was important enough to merit the presence of a high-status individual.

Discussion and Conclusions

The isotopic results showed a long-term retention of hunter gatherer dietary preferences throughout occupation of the site without any appreciable evidence for maize consumption. Neutron activation analysis shows that while pottery styles changed and sherd volume increased, the source of clays remained the same. Carter (2016) found that there was some uptake of maize very late in the Late Period, this too was limited. These trends are mirrored by Galván (2021) et al.'s stable isotope study in the southern Puna of Argentina that found limited adoption of maize during the Late Period and Cremonte's (2015) south central Andean Yavi-Chicha petrographic study that identified ceramic fabric choices as representative of potter's resistance to imperial control. It is also notable that both Pampa Alto Ramírez and Azapa 15, in the neighbouring Azapa Valley has been shown to be a location where *mitimaes* re-settlement took place (Santoro and Muñoz 1981).

Our isotopic study of camelid fibre artefacts from the site showed fibres at Vitor were obtained from camelids sustained on local lomas vegetation formations during the Archaic through Late periods (660-476 CAL YR BP). This result is entirely contrary to earlier interpretative historical views, that that hold camelid fibre as a highland product and a major factor in the relationship the empire had with Vitor and other coastal communities. This finding further obfuscates our understanding of the State-site relationship by removing yet another commonly cited trade relationship. Cases and colleagues (this volume) have also identified an alternative procurement strategy at Camarones Valley, where isotope analysis show two distinct camelid groups supplying fibre for Camarones Valley, to the south of Caleta Vitor, one from the highlands and one, much smaller, from the local lomas formations.

As with those described above, *chuspas,* are an established part of the Inka strategic gift giving, used to create reciprocal arrangements intended to appease and manipulate *mitimaes* populations and create/ take advantage of local hierarchies amenable to Imperial influence. The

local style, striped tunic associated with these Inka style materials possibly represent a local origin of at least one of the individuals caught up in this process. The discovery of the *chuspas* in proximity with a provincial style Inka *unku* and *chucus* hats, strongly indicate that the individuals who used these items in life or were buried with them were directly linked to the Inka empire and that the people of Caleta Vitor understood the meaning and value of these textiles. The significance of these textiles would have been dependent on a known set of motifs and conventions and a shared understanding of a hierarchy with controlled access to powerful luxury items. Ultimately, the people of Caleta Vitor must have undergone some degree of inkanization to understand and appreciate these items, making it clear that the Inka were present and invested in Caleta Vitor. This, along with the purpose of the *chuspa*, coca and other coca consumption paraphernalia at the site further cement the idea that high status individuals with ties to the Inka Empire attended or lived at the site and may have been buried there.

For archaeologists, the establishment of Inka economic and political interest in Caleta Vitor reframes other evidence of significant population and resource use increases across virtually all measurable criteria - pottery, marine products, and fibre - at the site. From this perspective, the increases might represent purposefully resettled populations, like *mitimaes* at Azapa 15 for the purpose of resource extraction or industry intensification as at other sites in southern Peru (Aland 2018). Determining the specific purpose of the population impacts at Caleta Vitor will require further work. In any case these data show that the Inka sent emissaries or high-level advisors to the Caleta Vitor endowed with precious gifts that linked them directly to the upper echelons of the Inka political organization. This occurred at the same time as significant intensification occurred across the site's economy and the population increased, strongly suggesting that the Inka were involved in economic and political arrangements at Caleta Vitor during the Late Period.

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