

CHAPTER 7

EXCAVATIONS IN CANCHAJE: INKA IMPERIALISM IN A SACRED LANDSCAPE

In 6, I detailed the goals, procedures and results of excavations at the settlement of Ampugasa. The goal of the excavations at Ampugasa was to investigate the impact of the Inka incorporation and the establishment of new state policies redefining ethnic identities in the daily life of their subjects. I investigated whether familiar domestic-level practices between the Inka and the inhabitants of Ampugasa marked the incorporation of Inka paraphernalia or shifts in residential life as the empire consolidated their presence in Huarochirí.

In the case of Canchaje I discuss and characterize the meso-level of interaction between the Inka and the people of Huarochirí. My excavations at Canchaje suggest that the site was a local level shrine associated with the Chaucarima *waranqa* and a space where the central ceremony in honor of Pariacaca. This local shrine was the ritual core and space of interaction for the different *ayllus* of the Chaucarima. I argue that intermediate scale rituals were the key venues for rendering Yauyos ethnic identity and practices into forms that were legible to both the state and local communities. Intermediate scale rituals were crucibles for the forging of legibility. At the same time, I propose that existing LIP local practices were still housed and formalized within the new spaces of interaction build by the Inka.

While arguments concerning Inka appropriation of local *w'akas* and sacred emplacements have been forwarded by many Andeanists (e.g., Acuto 2005; Acuto, Troncoso, and Ferrari 2012; Farrington 1992; Meddens et al. 2014), I pose this question not as a matter of annexation or appropriation. In my telling, the Inka are cast as powerful foreigners, tasked with

the challenge of incorporating themselves into the landscape. Not as conquerors but as different community members, as fellow worshippers of the sacred mountains and as a people that through time, interaction, and negotiation came to know the meaning and practices of the local ritual landscape. Excavations in Canchaje, and ceremonial center, pose an interesting contrast and complement to the results from Ampugasa, which focused on the Inka's imperialistic effect at the co-residential and co-ritual community level.

In this chapter I present the results from my excavations in the site of Canchaje. In contrast to the results from Ampugasa, here I will focus on local LIP-ritual spaces at the foot of the main rock outcrop, a local-level *w'aka*, and Inka-sponsored areas for reunion and feasting, that is, plazas. Canchaje is the only site identified in my reconnaissance that showed direct evidence of both local sacred emplacements -rock outcrops- and plazas as part of its central design. As I further argue below, plazas are a marker of Inka provincial politics, and demonstrate that the site was used as part of the Inka imperial practice in Huarochirí. In focusing on Canchaje, I am able to address the meso-scale of interaction among state and local groups in the region, while at the same time focus on ritual rather than domestic spaces. Specifically, I will address my second research question: Did local ritual practices and places influence the way in which Inka-sponsored rituals were performed in Huarochirí?

I will first describe the site of Canchaje and state my argument for its identification with the Chaucarima *waranqa w'aka*. I build upon descriptions from the Huarochirí Manuscript to support this argument.

In the second part I will present the results from my 2015 excavations in the site. The excavations focused on contrasting the different characteristics and paraphernalia associated with the rock outcrop and the plazas and to examine potential spaces of co-existence and interaction

between local and state practices. Plazas were the key space of Inka power production in the different corners of the empire. They were the place where commensal politics were enacted, power produced, and the kinship between local leaders and Inka authorities enforced.

Third, I present the ceramic analysis of the sherds recovered at the site. My findings show that even though Inka-style plazas in the site are present, there is no overwhelming evidence of Inka-style ceramic vessels. This poses a directly opposite situation to that of Ampugasa.

In the final section, I discuss landscape negotiation through the results from Canchaje. I argue that a legible materiality landscapes, plazas, and *w'akas* emerged through Inka imperial incorporation, yet were grounded on existing long-recognized sacred spaces. Sacred places -such as Canchaje- where communities were formed, maintained, and affirmed were ideal arenas for the Inka and Yauyos to negotiate the political *détente* through which the latter assimilated their incorporation into the Inka empire into their own historical narrative. While the relationship between Yauyos and Inka is clearly defined by a specific geographic and social context, I see Canchaje as an example of a process that was taking place in different parts of the province.

Description of Canchaje

While other sites such as Ampugasa and Llaqsatambo are recognizable multi-component residential settlements, Canchaje was in the pre- and post- Inka periods, first and foremost a ceremonial site (Figure 7.1). The outstanding features in the site's layout are two specific public spaces: plazas and the outcrop, clearly separated and exhibiting their own characteristic architecture. Sites as Canchaje were contemporary with the residential settlements -such as Ampugasa- and did not have a permanent population. According to the Manuscript, they were cyclically visited by surrounding *ayllus* to commemorate Pariacaca.



Figure 7.1: Canchaje, from the south of the site coming from Lahuaytambo (photography by PASL 2011).

Canchaje is located on a promontory overlooking the intersection between two rivers, which is similar to the location of Ampugasa (Figure 7.2). This is, however, not a fertile area, so it stands to reason that it wouldn't be chosen as the location of a large residential settlement, but a standing ritual feature where communities could go on a pilgrimage for cyclical ceremonies. Consequently, Canchaje is an ideal case study for investigating ritual interaction between the Inka and people of Huarochirí. The site has an approximate area of 3 ha. However, there are some buildings near the modern town that very likely were part of the original site, suggesting a maximal extension of 10 ha.⁹³ My research focuses on the core 3 ha area (Figure 7.3).

⁹³ The structures do not have a consistent domestic pattern akin to comparable buildings and is mostly comprised of platforms and large rooms. The domestic buildings dispersed through the site are similar to the one excavated in 2011. This area is also the one most heavily affected by destruction and dismantling. During my 2012, many

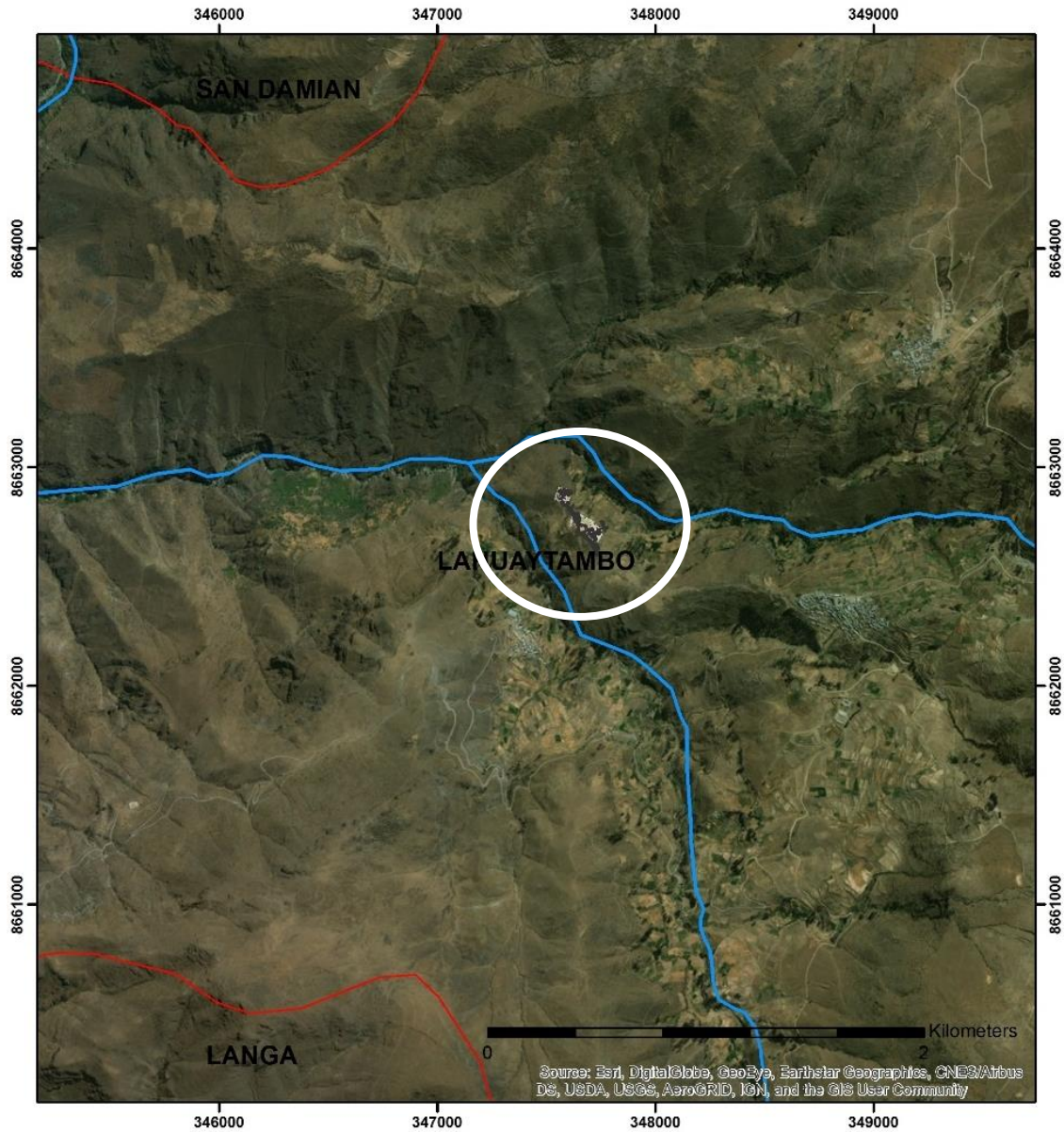


Figure 7.2: Location of Canchaje in the central point of the district of Lahuaytambo and the intersection between the main river courses (map by the author).

neighbors commented that there used to be a number of structures that reached up to the entrance of the town and had been destroyed. In 2015, an episode was constantly talked about in town that at the beginning of the year, while the *comuneros* were cleaning the bullring, one of them uncovered a human skull and stared into its eyes for a long time, becoming infected by the *vientos*. This comunero became very sick and eventually passed away at the end of the year. In 2016, I visited the town on the day when the comuneros were cleaning the bullring and they showed me some of the materials they had uncovered, which consisted of undecorated brown ceramic sherds and animal bones from large mammals that were very similar to the ones we found in our excavations. I did not see human bones.

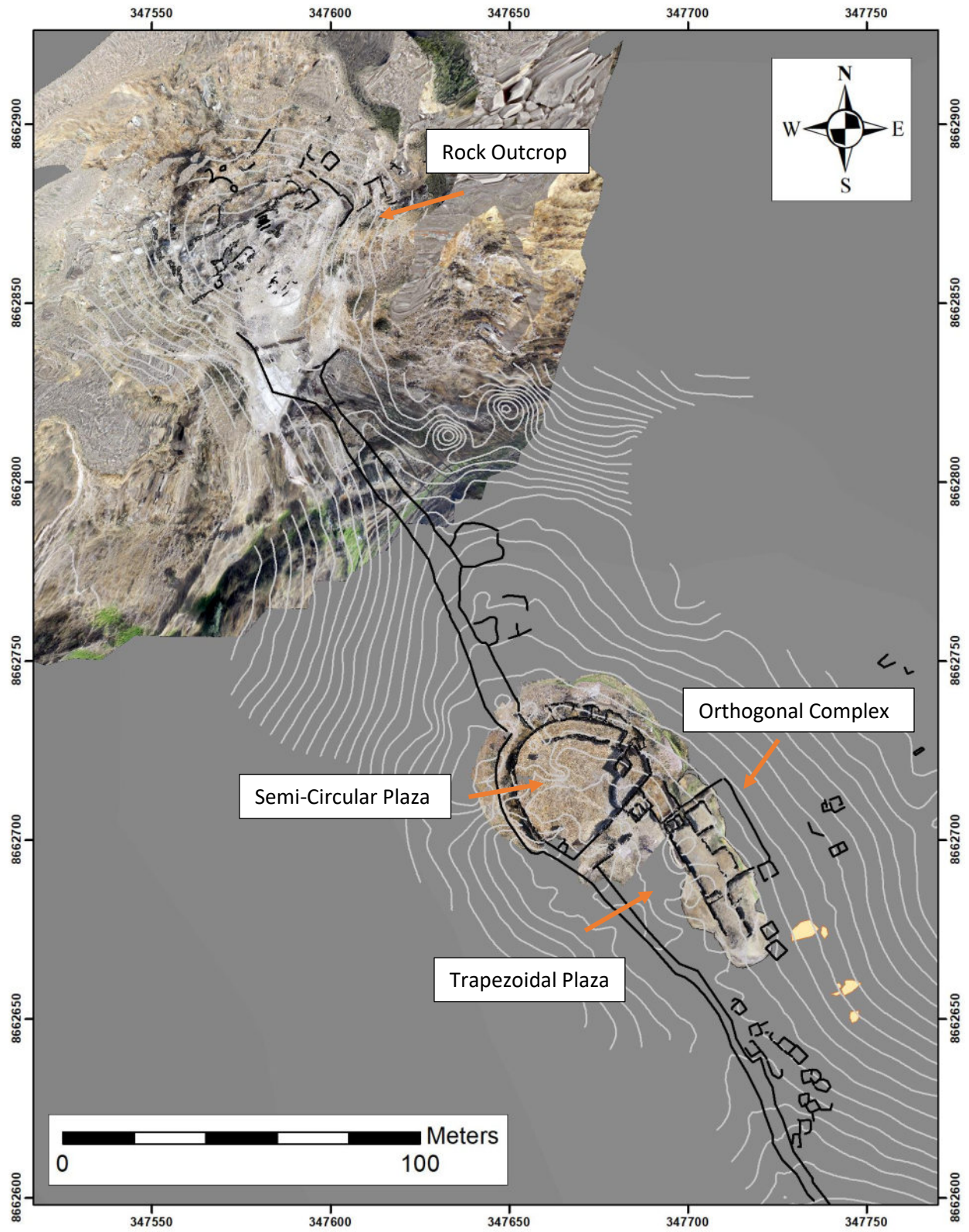


Figure 7.3: Sectorization of Canchaje (map by the author).

Starting from the south, we first accessed a single structure that consists of a large building with an irregular shape and well-defined walls that demarcated movement within. Access is through the trapezoidal plaza, an area of approximately 800 m² (an approximate length of 50 m). The plaza is not closed-off to the south, yet the other three walls are well defined and the movement from the plaza is channeled into differentiated groups of structures. Trapezoidal architectural elements are characteristic of Inka spatial configurations throughout the Andes and AMS radiocarbon dating carried out by my project shows the plaza was built during the LH (Chapter 8). This is the only plaza we have recorded of its characteristics throughout our survey of the region. To the east we registered a rectangular enclosure with large internal patios surrounding rectangular rooms. I identify this area as the Orthogonal Complex, which was built at the same time as the plaza.

The Orthogonal Complex comprised seven rectangular structures, connected through patios. This complex was neatly oriented from NW-SE, and even though its northern section was not well preserved, it is possible to recognize that the whole complex was walled, with internal accesses that served to distribute and control movement within it; the external access was likely located to the south. The overall area of the Orthogonal Complex is of approximately 900 m² and the extensions and functions of the rooms are diverse. My excavations showed that while the smaller rooms served as storage areas, the larger rooms were used for short stays, probably to carry out specific activities related to the use of the plazas. The orientation of these internal rooms slightly deviates from the overall orientation of the complex.

To the north of the Trapezoidal Plaza, a long transversal building channeled access to a second plaza. This building measures approximately 25 x 12 m and can be subdivided in up to 3 smaller rectangular rooms. A rectangular room of approximately 11 x 6 m to the east is only

accessible through this building. These rooms are in very poor preservation. To the north, the Semi-Circular Plaza encompasses an approximate area of 700 m². Also, to the north, the plaza is surrounded by three walls equally curved; the innermost is unfinished. The two outer walls close off the plaza. Between these latter two walls we found eight rectangular structures to the east; access to these structures is through the corridor defined by the innermost and second walls. A second access in this area also permits access to a small residential unit made up by two almost quadrangular structures and a small patio.

Unlike all the other walls of the site, the innermost curved wall from the Semi-Circular plaza was only partially built, connecting standing stone pillars of rectangular base. While each of the pillars differed, on average the bases measured between 1 and 1.5 m per side and had a 3 m maximal height. Four of these pillars were linked by the wall and two of them stood alone. Building on our excavations, we argue that the plaza was never fully completed, which explains the open area to the west where the innermost wall and the pillars should stand. My preliminary interpretation of the pillars, expanded below, is that they were a material representation of a mutually familiar architectural form between the Inka (Sanhueza 2012) and Yauyos which mediated the representation of local ritual and affirmation of Pariacaca's worship within a canonical Inka-style space of interaction and public ceremony.

The Rock Outcrop Plaza is larger and higher than the one in Ampugasa. As previously mentioned, this is probably a consequence of it being used as a multi-*ayllu* sacred place, rather than as a settlement avatar representing the community's attachment to Pariacaca. It measures roughly 56 x 62 m, and it incorporates a series of retainer walls and rooms on top. Among the similarities between the outcrops, both are surrounded by a number of longitudinal steps that lead into a poorly defined plaza that rests closely below the current surface. Throughout this

chapter I argue that Canchaje's outcrop was a *waranqa*-level *w'aka* directly related to the myth of Pariacaca. My excavations suggest that the function of the outcrop was the same between Ampugasa and Canchaje. However, in the latter we found evidence of a more consistent ritual use. Additionally, in Canchaje we also find direct evidence of how the Inka and Yauyos negotiated the importance, function, and role of the *w'aka* during the LH.

Excavations in Canchaje

Excavations in the trapezoidal plaza

Trapezoidal plazas throughout the Andes are a staple of Inka constructions in ceremonial and administrative centers (Gasparini and Margolies 1980; Farrington 2013; Morris 2011). While in Canchaje the plaza was not formally closed to the south, the shape in itself and the lack of analogous spaces among the sites I surveyed in Huarochirí suggest that they were not an autochthonous ritual form. We excavated two units in the Trapezoidal Plaza (Figure 7.4):

- Unit 1: a 3 x 3 m unit located adjacent to the transversal structure separating the Trapezoidal and Semi-Circular plazas. The goal of excavating this unit was to gauge the depth of occupation in the plaza and determine the base for the outstanding architecture.
- Unit 2: a 7 x 3 m trench located to the south extreme of the plaza and containing a small low outcrop oriented towards the main access of the transversal structure.



Figure 7.4: Trapezoidal Plaza. Location of the excavation units (map by the author).

Excavation of Unit 1: the first layer was comprised of loose and fine soil (Locus 500; thickness ~3cm) mixed with modern vegetation. This layer was followed by a semi-compacted overlaid grainy soil that could potentially be part of the abandonment of the plaza (Locus 501; thickness ~1cm). Underneath we found a compacted and homogeneous use surface (Locus 502; thickness ~3cm). Below that, we registered the prepared clay floor that was likely the original surface of the plaza (Locus 503; thickness ~2cm). Under the floor, we found an irregular

compacted level made primarily from gravel (Locus 504; thickness ~5cm), which lay directly atop the bedrock (Figure 7.5).

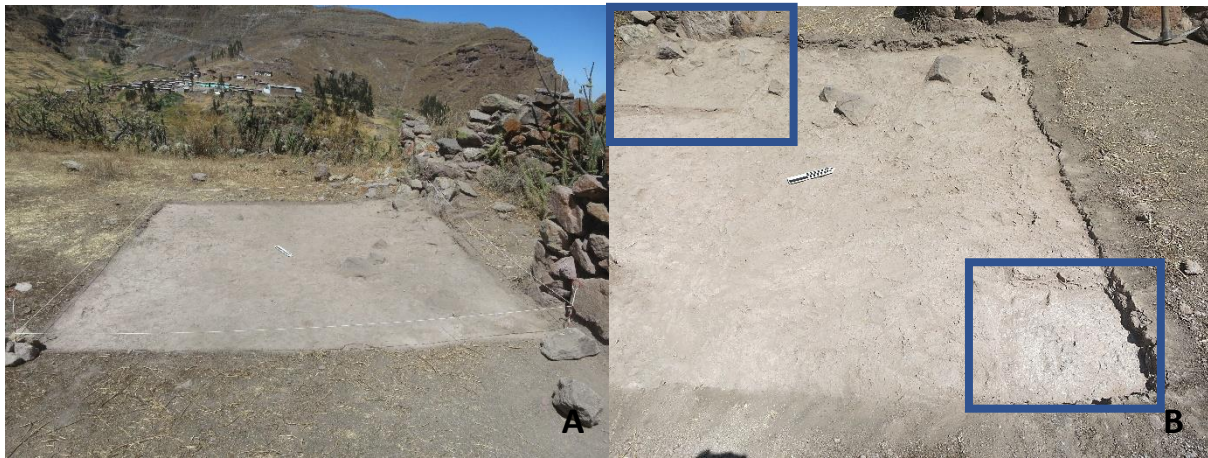


Figure 7.5: Excavation of Unit 1 in the Trapezoidal Plaza. A. Plaza floor, which was very close to the modern surface. B. Detail of the end of the excavation. Notice in the west corner a witness left from the floor level. In most of the unit we can see the level of compacted uneven gravel. Finally, in the east corner, there is a flat section of the bedrock, which determined the end of the excavation unit (photographs by PASL 2015).

Excavation of Unit 2: the first layer was loose soil, small stones, and vegetation (Locus 617). After this layer we separated the excavation in two areas: one to the north and the other to the south and directly associated with the low-rising outcrop. Underneath the surface layer we found a post-abandonment depositional wind-carried level of loose fine soil with some vegetation remains (Loci 618 and 619; thickness ~3cm). Although the unit did not have many associated artifacts, we consistently found a higher material density to the north. The third layer was the overlay (Loci 620 and 621; thickness ~1cm) that was semi-compacted, like a shell covering the main floor; it had a white tint and very few materials associated with it. The main use surface (Loci 622 and 623; thickness ~4cm) was an extremely compacted level of clay and gravel. Below we found a second floor made from yellow soil and better preserved on the western half of the trench (Loci 624 and 631). Here we found small pockets of ash (Loci 626,

627 and 628; thickness ~3cm) around the main rocks of the outcrop at the south of the trench. Only one of these features was associated with ceramic sherds.

After excavating the features, we found a third surface use (Locus 625; thickness ~10cm), also very compacted. Since we found no materials associated with the three surfaces, we excavated a small 1 x 1 m test pit in the NW corner of the trench. Through this pit we found three more floors with the same characteristics and without materials associated (Loci 629, 630 and 632; thickness ~4cm). We excavated the whole second floor (Loci 633, 634 and 635), yet we found no changes in the density of materials recovered, and ended the excavation (Figure 7.6).

The low density of materials, considering the succession of floors, was informative. Even Locus 623, which had the highest density of materials associated with the trench, only had 4 diagnostic sherds and 33 g of non-diagnostic ones. There were also few remains of fauna (unidentifiable fragments). This could be interpreted in one of two ways: both food processing and consumption were not a large component of the activities performed in this plaza, or the different floors were continuously cleaned as maintenance rather than intensity of use. This latter hypothesis is supported by the excavations in Unit 1 (which had a particularly shallow stratigraphy) and by the excavations in the surrounding residential areas.



Figure 7.6: Excavation of Unit 2. A. General view of the trench in relation to the entrance to the site. B. Detail of the excavation and surface levels between the outcrops (photographs by PASL 2015).

Excavations in the semi-circular plaza

The Semi-Circular Plaza is the most outstanding feature in Canchaje's architecture. The stone pillars described above are not a common feature in the Huarochirí landscape and their function is hard to infer from what the historical and archaeological sources of the region can tell us. It is likely that their function was that of *sayhuas*, which were features of Inka rituality that lacked a counterpart in Huarochirí (see discussion below). Consequently, excavation in the Semi-Circular Plaza provided a critical opportunity to investigate whether there was a difference in the spatial configuration and material associations to other areas in Canchaje.

I conducted preliminary excavations in this plaza in 2011. My team and I excavated three units in the Semi-Circular plaza. The information from these excavations informed the selection process of the excavations we carried out in 2015 and will be briefly summarized (Figure 7.7).

Excavation of Unit 3: we placed this unit between the two most inner curved walls of the plaza and directly encompassing the base of one of the stone pillars. The unit measured 3 x 4 m and the overall stratigraphy was very shallow. The first level corresponded to the modern surface, comprising loose stones and vegetation, with significant evidence of modern reuse as corrals. Below we found an overlay directly associated the abandonment of the plaza. Afterwards we found the occupation level that was not well preserved, even though it lay directly atop a fill level that was directly covering the bedrock. The stone pillar –and therefore the wall– were also in direct association with the bedrock (Figure 7.8).

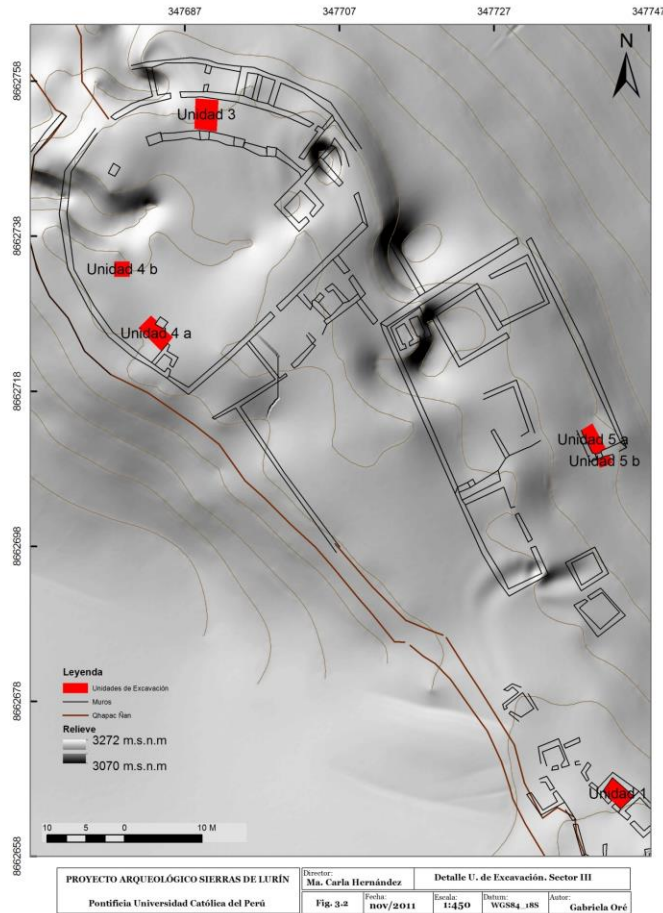


Figure 7.7: Location of the excavation units of the 2011 season in Canchaje (map by Gabriela Oré).

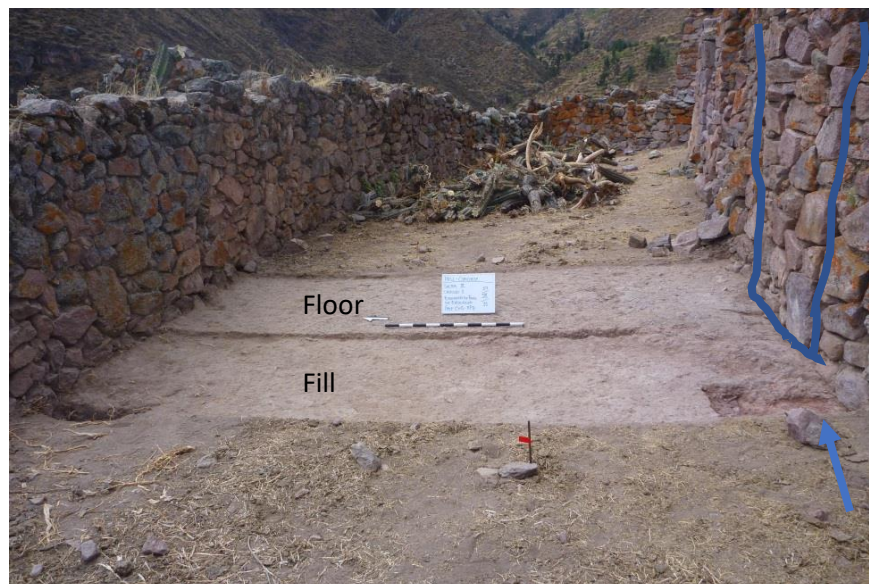


Figure 7.8: Excavation of Unit 3. Note the arrow in the lower right corner. This arrow shows the beginning level of the bedrock which was leveled before laying the floor. The stone pillar is directly associated with the bedrock (photograph by PASL 2011).

Excavation of Unit 4: this unit was divided in two different test pits: 4a was located at the foot of one of the standing stone pillars unattached to the wall. The goal of the excavation was to find a floor associated with the use of the plaza. This unit measured 3 x 2 m and linked the standing pillar with a room about 1 m to the southeast. There was a level of rockfall under the surface level; below, the stratigraphy reiterated the results from Unit 3. An overlay covered a poorly-preserved occupational surface which was built upon a fill that leveled the bedrock (Figure 7.9). On the other hand, 4b was a 2 x 2 m test pit aimed at uncovering the remaining base of a stone pillar's projected location. We found the exact same stratigraphic sequence as Unit 3 and no evidence of the removal of architectural features.



Figure 7.9: Excavation of Unit 4a, floor level; notice the shallowness of the stratigraphy (photograph by PASL 2011).

In 2015 I excavated two more units in this plaza (Figure 7.10):

- Unit 8: 3 x 3 m test pit at the base of the end of the curved wall linking the stone pillars. This excavation aimed to confirm the results from the 2011 season and provide a direct contrast between the artifacts recorded in each of the plazas.

- Room 1: found in the eastern section of the plaza and measured approximately 3 x 3 m. The room was mostly intact, with only the southwestern wall partly collapsed and modernly rebuilt, probably as a herding area. The room had a well-preserved access on the southeastern wall with an approximate height of 2.5 m. A slab was used as a lintel. We excavated this to investigate the activities carried out there and their association with the activities performed in the plaza.

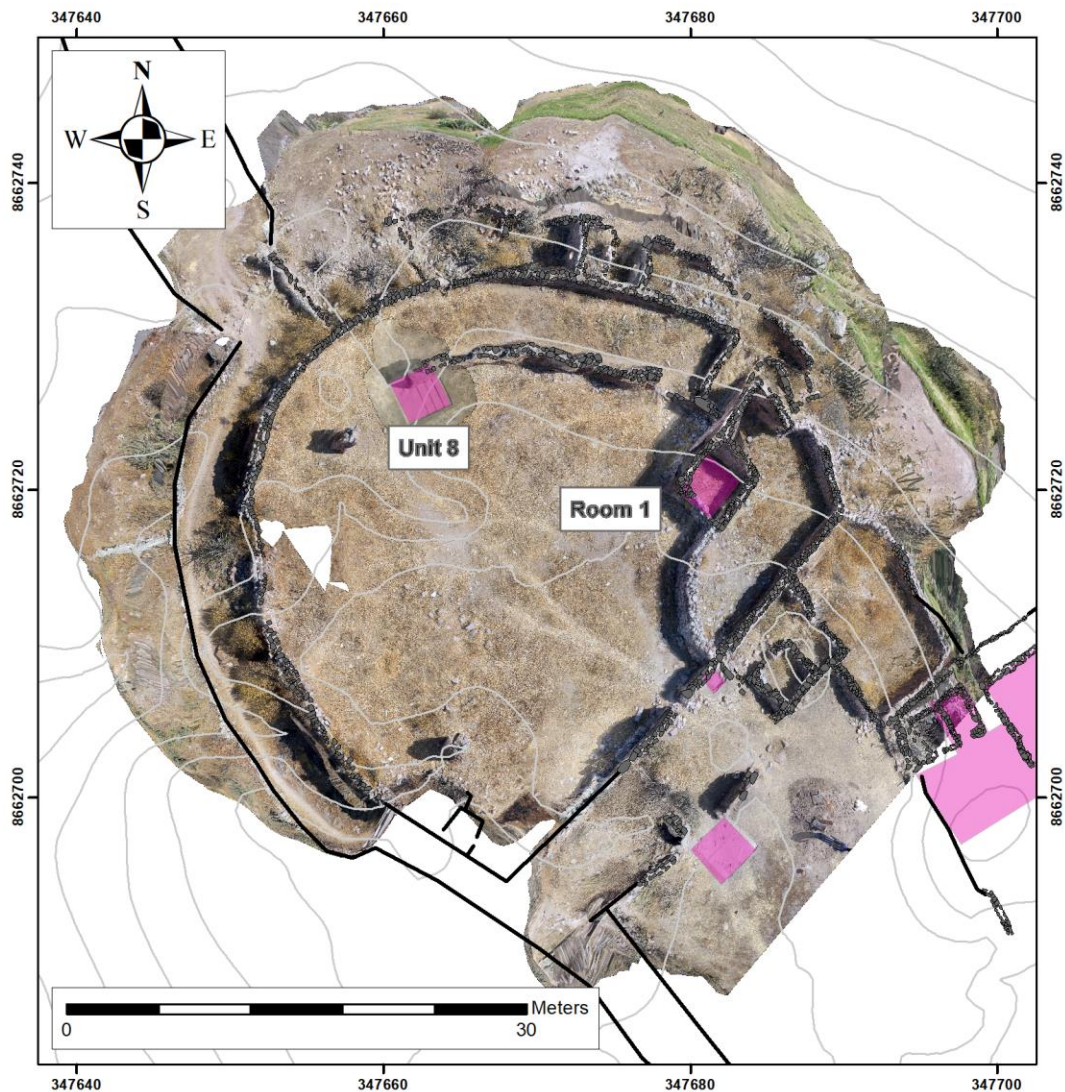


Figure 7.10: Semi-circular plaza. Location of the excavation units (map by the author).

Excavation of Unit 8: this unit surrounded the last of the stone pillars attached to the wall (Locus 672). The first level was the modern surface, and the matrix included vegetation remains, dung (Locus 673; thickness ~4cm), and grainy loose soil (Locus 674; thickness ~3cm). The next level contained a large number of ceramic sherds associated with the mortar fallen from the wall (Locus 675; thickness ~2cm). The number of ceramic sherds was already significant in comparison to the very low association in the trapezoidal plaza. A larger accumulation of mortar was directly below the northwestern corner of the stone pillar in (Locus 676; thickness ~2cm). Underneath, we found an extremely compacted floor made of clay (Locus 677; thickness ~5cm), differing from our 2011 fieldwork. At this level we also found fragments of Spanish *loza* and a small ash lent in the southern boundary of the unit (Locus 678; thickness ~3cm). Below this floor we registered a second clay floor, also associated with Spanish *loza* (Locus 679; thickness ~4cm). We uncovered two more floors without leveling fills (Loci 680 and 681; and 682 and 683; thickness ~5, 2 and 7cm, respectively) and then the bedrock (Figure 7.11). This supported my original hypothesis of cyclical cleaning and maintenance.



Figure 7.11: Unit 8 in the Semi-Circular Plaza. A. General view of the finished unit in relation to the stone-pillar wall. B. Detail of the overlaying floors and the base of the pillar associated with the bedrock (photographs by PASL 2015).

It is important to note the presence of two medium-sized stones located in the southeastern corner of the stone pillar that suggest the continuity of the wall; however, this is the only element suggesting its continuation. The lack of preparation or fill between floors shows that these floors were not a project that necessarily encompassed the whole area of the plaza, but rather a need-based maintenance. Unit 3 from 2011 showed no such a preparation and the pillar wall is the only section of the plaza with evidence of continuous reworking. Still, there is no strong evidence to fully support that the plaza was fully terminated and that the pillar wall was complete.

Excavation of Room 1: the first level was the modern surface level, vegetation and loose stones (Locus 505; thickness ~2cm), and a loose matrix of soil probably related to the use of the room as a corral (Locus 506; thickness ~4cm). At this level we could see that the rockfall accumulation in the southern corner of the room was associated with large quantities of ash, which suggested an intentional modern fire pit resting on the collapse (Locus 510; thickness ~2cm). Below the surface was a level of rockfall and mortar, denser towards the southwest of the room and closer to the walls (Locus 507; thickness ~7cm). Soil and loose stones associated with abandonment and rockfall continued throughout the whole room for the next couple of levels (Loci 508 and 509; thickness ~3cm) (Figure 7.12).

Underneath the rockfall we found an overlay of yellowish grainy and semi-compact soil associated with the abandonment of the structure (Locus 511; thickness ~4cm). Interestingly, at this level we first recovered decorated ceramic sherds in a style similar to those found in the semi-circular plaza; these sherds will be discussed below. On this level we found a floor composed of fine semi-compact soil with a considerable decrease in gravel (Locus 512; thickness ~6cm). We found remains of a ceramic spindle disk and large slabs that protruded from

the internal face of the northern wall of the room; we hypothesized they functioned as holders for looms. This surface rested upon an architectural fill (Locus 513). We also found an arrangement of medium-to-large rocks in the eastern corner of the room that may have been part of an intentional deconstruction of one of the walls (Locus 514). Under this fill we recorded a better-preserved second floor (Locus 515; thickness ~7cm), to the northwestern half of the room with evidence of burning (Loci 516 and 517; thickness ~9 and 3cm, respectively); the floor rested upon an architectural fill (Locus 518; thickness ~6cm). We found two more surfaces (Loci 519 and 520; thickness ~2cm) and underneath these a new leveling fill (Loci 521 and 522; thickness ~3cm) before reaching the bedrock.



Figure 7.12: Excavation of Room 1 in the Semi-Circular Plaza. A. Detail at the excavation process; notice the southern wall, which was mostly rebuilt and held together by an accumulation of stone and ash at the base. Also, the access is located in the east wall and is rectangular and constricted. B. End of the excavation of Room 1; notice the protruding slabs in the northern and western walls of the structure (photographs by PASL 2015).

Considering both excavation areas, I argue that the semi-circular plaza was seasonally used for community rituals and then thoroughly cleaned out –maybe even some form of

astronomical observations— rather than the large feasting ceremonies characteristic of the Inka Empire. This would account for the few artifacts, shallow deposits, and lack of domestic areas and artifacts in Room 1. Weaving is often associated with Inka politics, as clothing was a preferred gift for local lords (D’Altroy 2015).

In these areas we found fragments of decorated sherds that do not belong to the Inka style or other known LH wares. We have not found a similar style in Ampugasa either. It is based on the same coarse brown wares as most of the domestic ceramics in Huarochirí. However, it uses decoration with pinching and impressed techniques. While I will discuss this finding below, I note that the presence of these ceramics in Inka-style architectural spaces suggests an attempt to incorporate local ritual into the new state-sponsored practices (Figure 7.13).



Figure 7.13: Ceramic sherds from the excavations in the plazas of Canchaje. The first two ones suggest decorated local styles not found in Ampugasa; the third sherd could correspond to an Inka-style variant decoration (photos by the author).

Excavations in the orthogonal complex

The Orthogonal Complex lies immediately to the east of the Trapezoidal Plaza; it is a large rectangular area of approximately 42 x 21 m, comprising at least 10 rooms and large open spaces. A more exact calculation of the structures within the group is impossible given the level of destruction in this section of the site. In a previous reconnaissance, Van Dalen (2014a) argued that the complex was a *kancha*, the known Inka arrangement for households and sacred

precincts. However, my research demonstrates that this was not a residential area and lacked all the formal characteristics associated with *kanchas* in literature (Gasparini and Margolies 1980). Rather, I argue this was an area of storage and production seasonally occupied and directly associated with the activities in the Trapezoidal Plaza. During the 2015 season I conducted excavations in four areas of this complex (Figure 7.14):

- Room 1: located in the north-central area of the orthogonal complex. It measures approximately 6.5 x 7 m and its main access is in the southern corner facing the patio.
- Room 2: located to the west of Room 1. It has the same orientation as Room 1 and its main access is in the southern wall, leading into the patio. It measures approximately 3.5 x 2 m.
- Patio: the largest open area in the enclosure and the main convergence point between the structures. It measures approximately 20 x 7 m. We excavated a test unit in the plaza in the section where Rooms 1 and 2 met; this unit measured approximately 7 x 5 m.
- Room 3: located towards the southern extreme of the orthogonal complex, to the east of the Trapezoidal Plaza. The room measured 6 x 13 m. It had two accesses in the east wall, none of them allowing passage into the plaza. We excavated an area of 6 x 3 m in its northern extreme.

The goal of these excavations was to characterize the activities taking place in the complex. Moreover, the visible difference between its layout and the residential structures to the south of the plazas suggested that this construction was probably associated with the Inka period in Huarochirí. Its closeness to the Trapezoidal Plaza further supported this hypothesis.



Figure 7.14: Orthogonal complex. Location of the excavation units (map by the author).

Excavation of Room 1 (Figure 7.15): we first removed the superficial layer, which consisted of loose stones and soil, and a significant amount of vegetation (Locus 601; thickness ~8cm). After the initial clearing of vegetation, we could see four different sections in the room: a low-rise platform to the west, two areas delimited by rows of stones in to the north and south, and a rectangular sunken area in the middle.

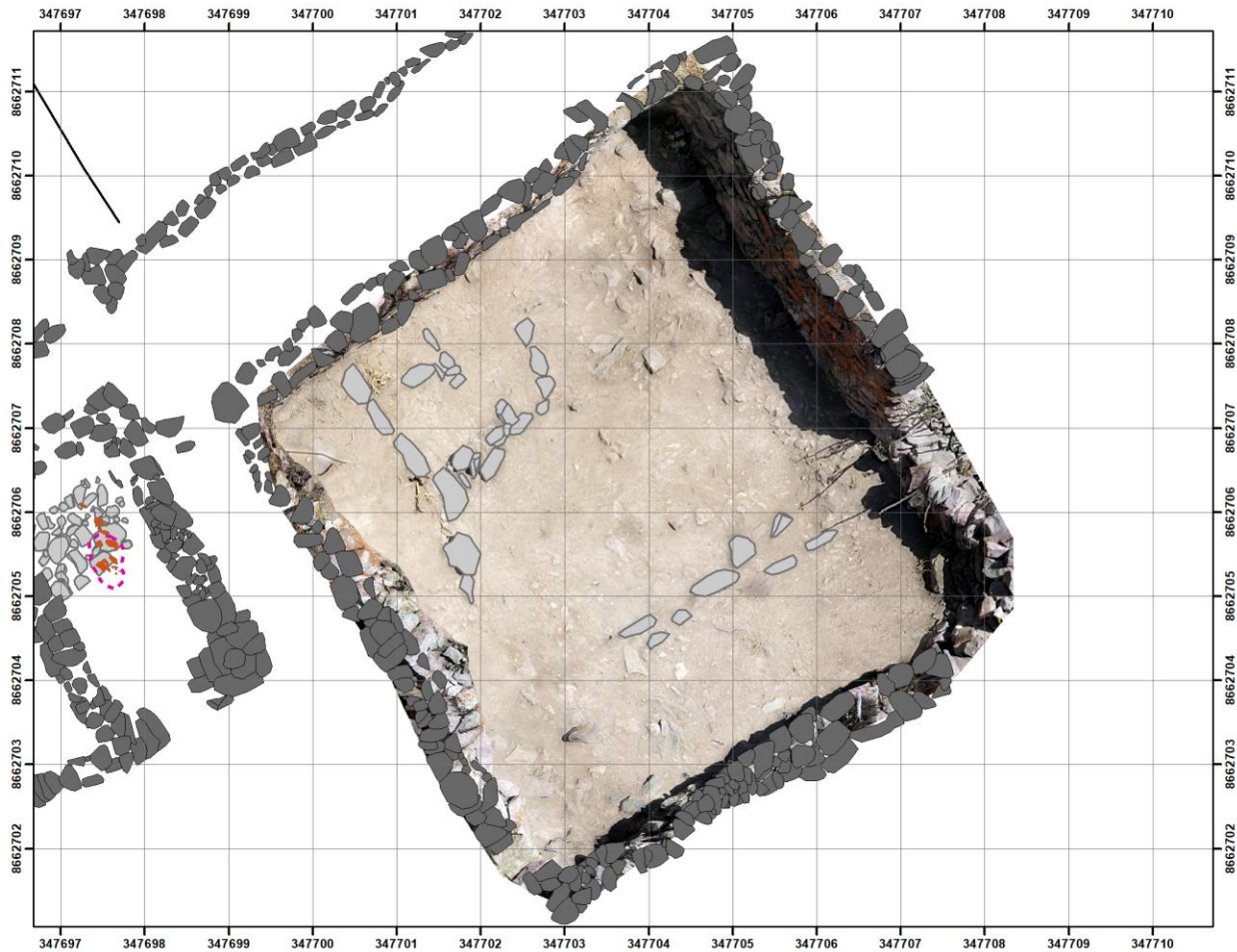


Figure 7.15: Excavation of Room 1 (drawing by the author).

We removed the next layer of loose soil from each of these sections independently (Loci 602, 603, 604 and 605; thickness ~8cm). We found further subdivisions in the northern section, consisting of three stepped sections delimited with stones. The upper level of these sectors was also divided into two small rectangular areas, and on the lower level it was intruded by a large tree root and remains of a modern burning event (Locus 606; thickness ~2cm). Under these layers we found the overlay in all the different sub-sections of the room (Loci 607, 608, 609 and 610). In the small rectangular sub-divisions of the northern section we excavated two layers of semi-compact soil associated with ceramic sherds (Loci 612 and 613; thickness ~3cm). Finally, we registered a semi-compact clay floor in all the sections of the structure (Locus 611; thickness

~1cm). In the small squares the floor was of a white hue Munsell and more strongly compacted (Loci 614 and 615; thickness ~3 and 6cm, respectively). The floor of the structure lay atop the bedrock (Locus 616) (Figure 7.16).

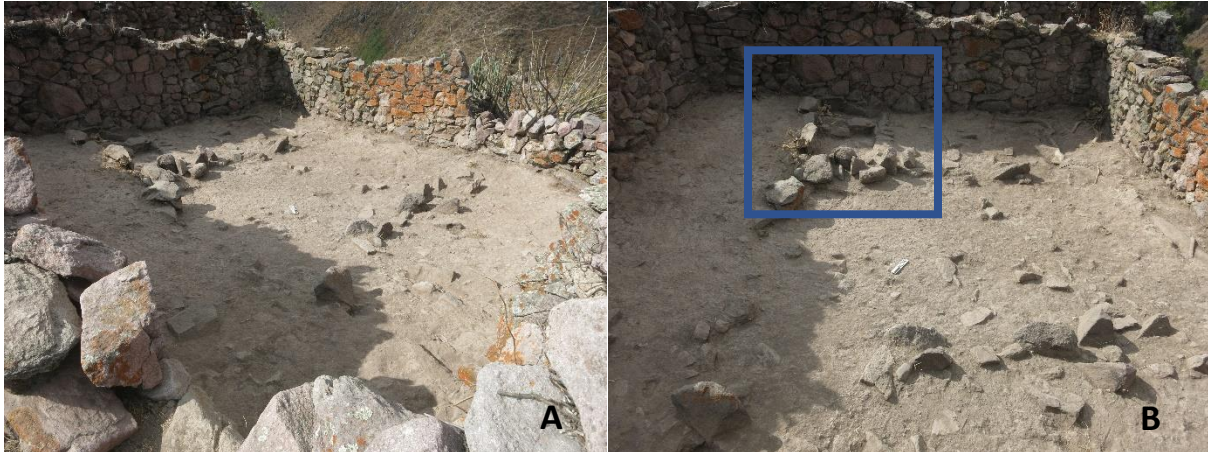


Figure 7.16: Room 1 in the Orthogonal Complex. A. Photograph taken from the access, highlighting the internal subdivisions of the room. B. Photograph taken from the southern wall; notice the rising bench to the left and in the upper section the small storage units (photographs by PASL 2015).

While the room had a large area and clear internal sectioning, we only found a very small number of ceramic sherds and no evidence of domestic activities, such as hearths, faunal remains, concentrations of materials, or storing areas. This led us to believe that the use of Room 1 was sporadic and related to plaza rituals; there is no evidence of intense occupation, yet it was both ideally located and well acclimated to serve as a rest area for a household.

Excavation in Room 2 (Figure 7.17): it was one of two rooms with similar characteristics. We chose to excavate this one because it was the best preserved (Figure 7.18). The first layer removed was composed of abundant vegetation and the roots of a *mito* tree (Locus 560) and loose soil and small stones (Locus 561; thickness ~5cm). Next, we excavated a very deep level of rockfall, which we arbitrarily separated into different sub-levels (Loci 562, 563 and 564; thickness ~40cm). In the deepest part of the rockfall the soil gained a reddish color that may be associated with internal plastering (Locus 565; thickness ~13cm). Here we found concentrations

of ceramic materials; most sherds corresponded to large storage vessels, and at least one was partially reconstructed, suggesting that the whole vessel was *in situ* at the time of collapse (Locus 566; thickness ~25cm).

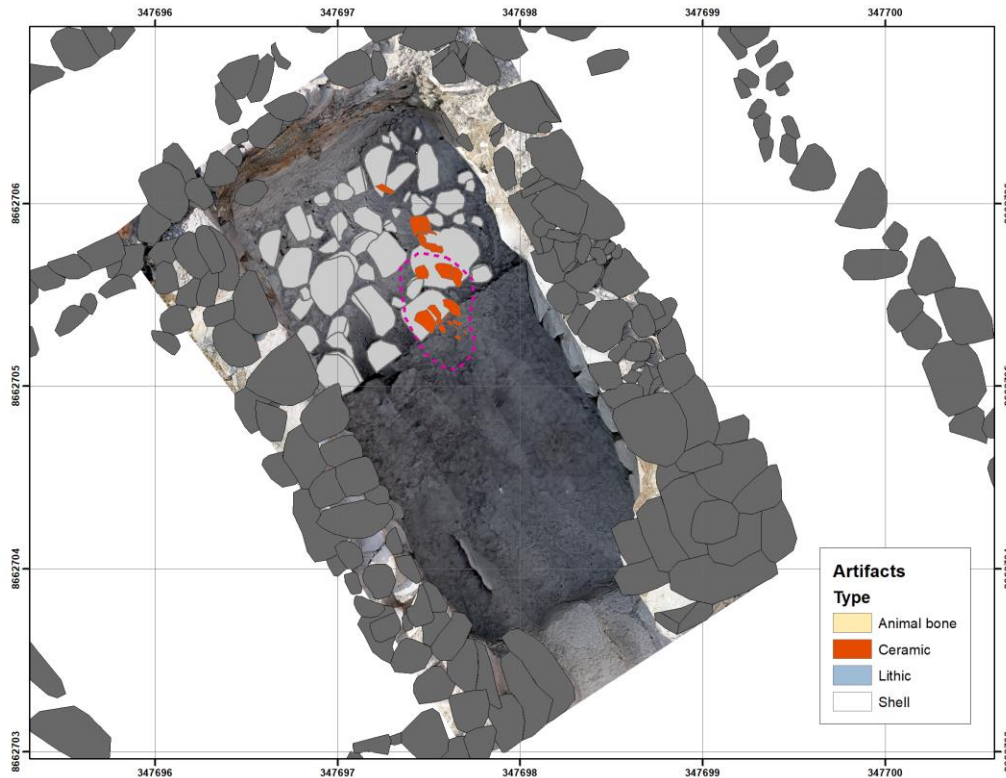


Figure 7.17: Excavation of Room 2 (drawing by the author).

The concentration of materials laid directly on top of the floor (Locus 567; thickness ~3cm). At this floor level we found the only clearly defined Inka-style fragment in the whole excavation of Canchaje; it was part of a cooking pot associated with ash (Figure 7.19). This clay floor was directly associated with flat stones that were general to the whole structure and likely served to facilitate preservation of storage goods (Locus 568).⁹⁴

⁹⁴ Specialized literature in storing practices and the building of *qolqas* (LeVine 2014) suggests that the use of flat slabs under clay floors favored cooling of the surface and preservation of the stored organic goods.

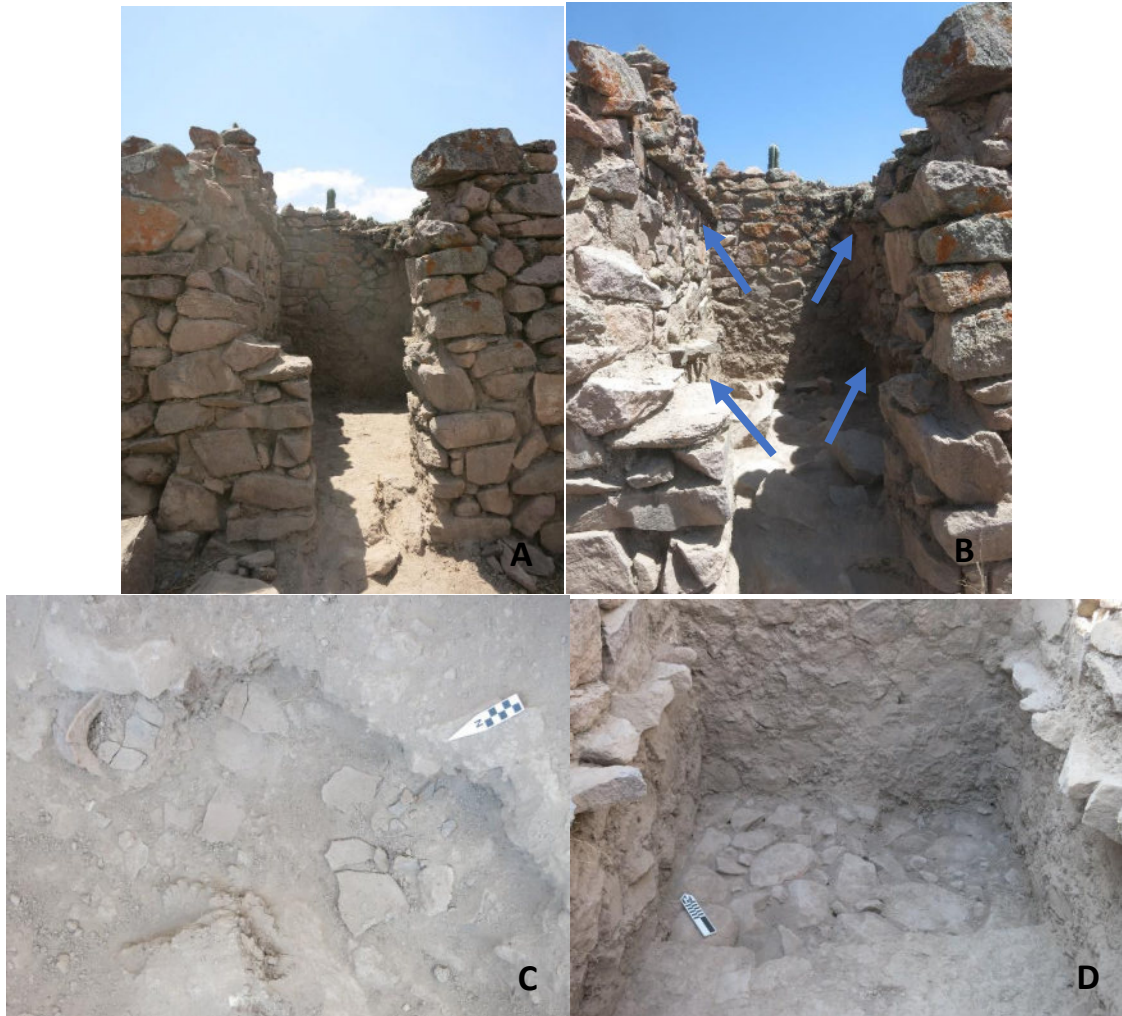


Figure 7.18: Room 2 in the Orthogonal Complex. A. Detail of the access to the structure at the floor level. B. Notice the location of two rows of cornices facing each other in the longer walls. C. Detail of ceramics findings associated with the floor. D. Detail of the flat stones underneath the clay floor favoring preservation (photographs by PASL 2015).



Figure 7.19: Details of the only Inka-style cooking pot found in Canchaje and directly associated with the storage units in the Orthogonal Complex (photographs by Ana Ursula Fernández Valdivia).

During the excavation, we found two rows of internal cornices facing each other on the longer walls. These cornices were located approximately 80 cm apart in the wall. We were informed by our local aids that these cornices were used within houses to support wooden sticks covered with mats to store ceramic vessels. This interpretation is consistent with the materials we found during the excavation and the stratigraphy of the room. The access leading into the patio was small, restricting access to the storing area and protecting the goods inside. The close association between the storage rooms and the Trapezoidal Plaza suggests that these were the storing areas for the goods consumed in the activities that took place in it.

Excavation of the Patio (Figure 7.20): given the results from Room 1 and 2, we decided to test the surface of the patio linking them together. We removed the first level, which contained loose soil and modern vegetation (Locus 569). Underneath we found ash accumulation in the west corner (Locus 570; thickness ~2cm), partly covering the concentration of rockfall in this area (Locus 571; thickness ~5cm). In the eastern section there was a homogeneous surface with little evidence of rockfall; this was the patio's floor (Locus 572; thickness ~1cm). We found another ash lent next to the corner of the unexcavated storage unit to the left of Room 2 (Locus 573; thickness ~1cm). This burning event, however, could be part of modern activities since the patio's surface was exposed in some sections.

We then excavated a trench on the eastern extreme of the unit; this trench measured approximately 5 x 1 m. We chose not to excavate the whole room because so far, we had found very little evidence of associated material culture, making the excavation of the whole area not cost-effective. After removing the section of the floor in the trench we registered a fill level made up of fine clay soil associated with gravel (Locus 574; thickness ~10cm). Underneath, we found a second, very compact surface, containing small stones as part of its preparation (Locus

575; thickness ~14cm). This surface rested on top of a second architectural fill (Locus 576; thickness ~15cm). A level of yellowish loose soil was underneath (Locus 577; thickness ~5cm) and, under this level, the bedrock (Locus 578).

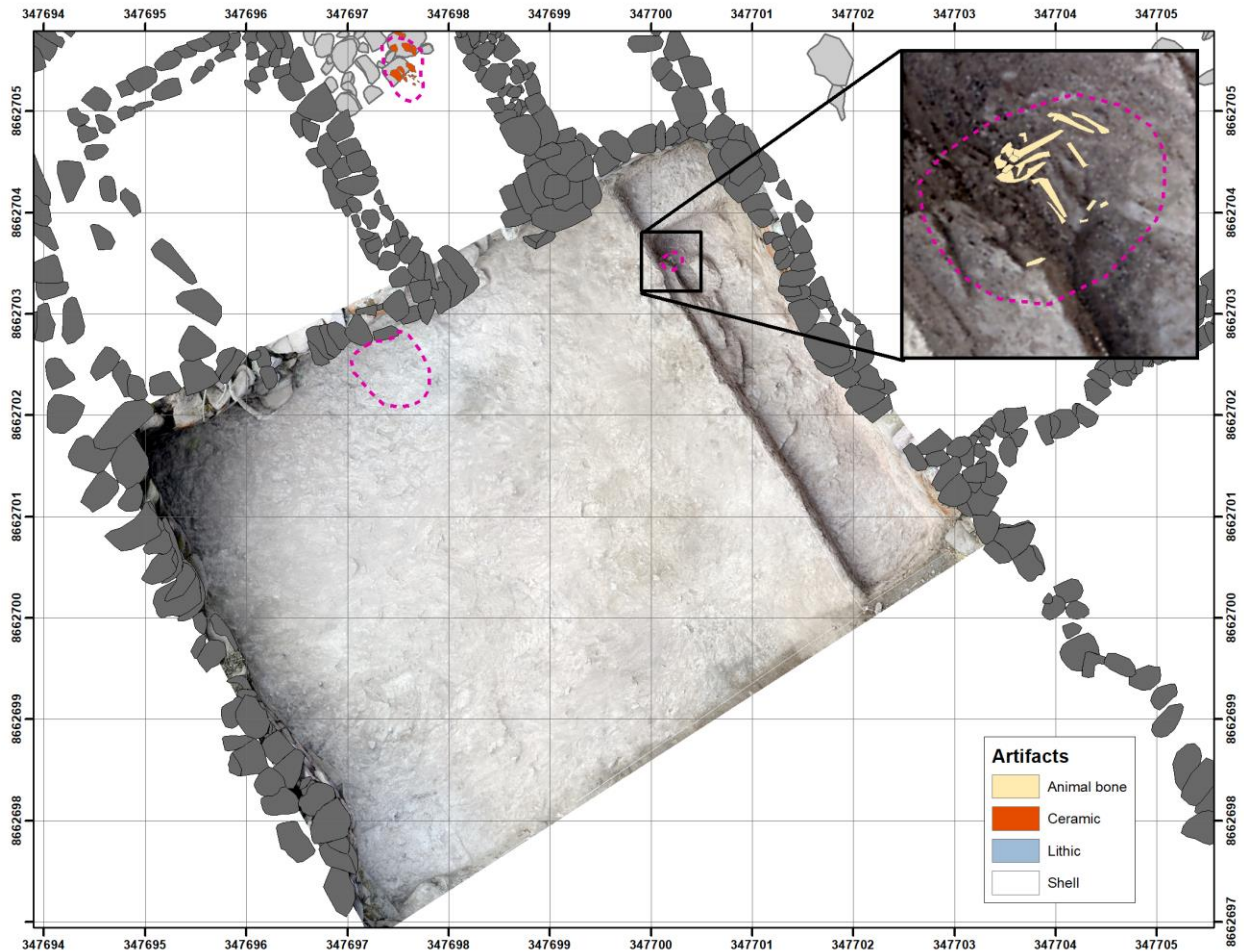


Figure 7.20: Excavation of the patio (drawing by the author).

On the second surface of the patio (Locus 574), and within the trench, we found a small burned feature (Locus 579; thickness ~8cm) near the middle of the trench and the burial of a complete feline (Locus 580; thickness ~8cm). The bones were partially articulated, with the spine and coxals still in place. The feline was extended, lying on its left side. It had been placed in a small hole in the floor. One of the feline's scapula had a posterior fracture that may have been associated with its death. Although it is not clear which genus of feline it is, the felines

found in the area are small pampa cats, the Andean mountain cat, or puma. It is possible that this feline was an offering related to the building of the structure, or to the use of the original floor (Figure 7.21). The importance of this offering vis-à-vis ethnographic is discussed in 8.

Overall, excavations in the patio suggest a ritualized use of the area, with burning events and offerings being the only activities registered. The offering of such a specific animal as part of the use and remodeling of the area, further supports that this area was in use during times of heightened ritual activities. As I argue in the following chapter, this offering is part of Yauyos rituality and may be a way to claim a stake within the Inka plaza. I can also disregard the potential domestic use of this sector of the site.



Figure 7.21: Patio in the Orthogonal Complex. A. General view of the patio; notice the location of the trench to the left, adjacent to Room 1. B. Location of the feline burial matrix within the trench in the Patio. C. Details of the excavation of the feline, notice the mandibles and long bones in situ. D. Feature where the feline was found after the excavation (photographs by PASL 2015).

Excavation in Room 3 (Figure 7.22): finally, we excavated part of the largest structure in the complex to clarify the potential activities carried out within the group. First, we removed a layer of loose soil, large stones, and vegetation (Loci 651 and 652; thickness ~16cm). Underneath, we found the rockfall (Locus 653; thickness ~40cm) and compacted mortar spilled from the walls (Locus 655; thickness ~4c.). On top of the mortar we removed a thin ash accumulation in the eastern section of the room (Locus 654; thickness ~2cm) and another lent of wind-carried brown fine soil in the northwest corner of the room (Locus 656; thickness ~3cm), unearthing the latest floor of the structure. The matrix was composed of extremely compacted grainy clay but with some cracks; the surface was tilted and partly intruded by roots (Locus 657; thickness ~7cm). Immediately under this floor we found a second one (no architectural fill between them) with the same characteristics (Locus 658; thickness ~5cm).

In order to investigate whether there were further use surfaces in the room, we excavated a 3 x 1 m trench adjoining the eastern wall. Under the second floor we found a small ash lent associated with carbon and mortar (Locus 659; thickness ~1cm) and a third extremely compacted floor with a matrix of grainy clay and gravel (Locus 660; thickness ~2cm). Under another small ash lent (Locus 661; thickness ~1cm) there was a fourth floor with the same characteristics but partly perforated by the emerging bedrock (Locus 662; thickness ~4cm). Two small ash lenses (Locus 663 and 664; thickness ~3 and 1cm, respectively) lay under the floor on top of the first architectural fill, which was a semi-compact matrix of grainy soil associated with small stones (Locus 665; thickness ~6cm). Under the fill we found the fifth floor, thinner than the previous ones (Locus 668; thickness ~1cm). Associated with this floor was a burning event associated with some type of offering since it contained more materials than the lenses and had a larger and deeper matrix (Locus 667; thickness ~3cm). Another architectural fill leveled the surface (Locus

669; thickness ~4cm) and underneath we found a sixth floor (Locus 670; thickness ~5cm) that was leveled (Locus 671; thickness ~2cm) on top of the bedrock (Figure 7.23). We did not find organic materials for dating in the lower strata of the excavation; however, based on my observations, architectural emplacement, and associated materials, I hypothesize that the whole construction and different occupational levels belonged to the LH.

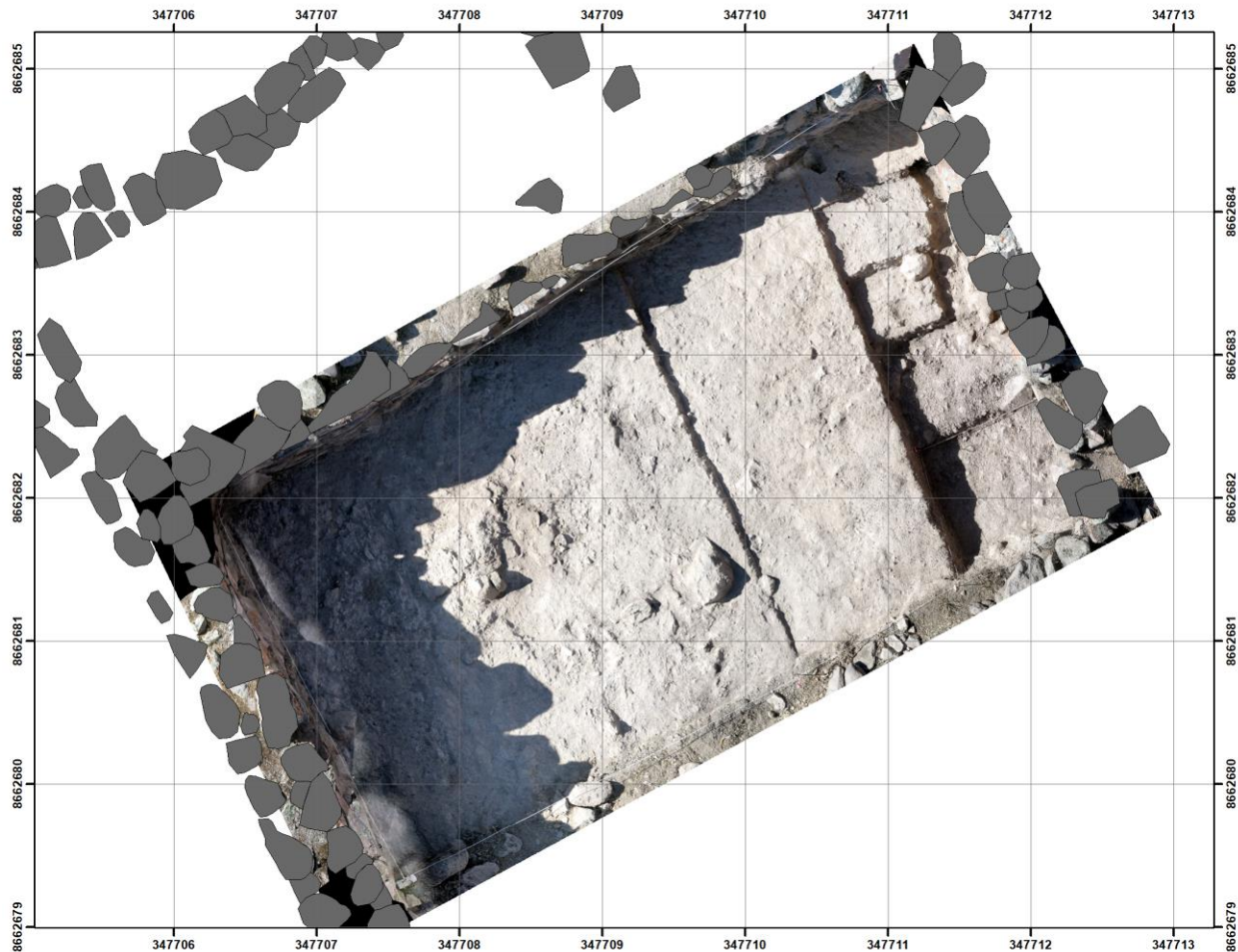


Figure 7.22: Excavation of Room 3 (drawing by the author).

The succession of floors without fills –in the majority of cases– suggests that there was a continuous need to repair the surface, which further connects these rooms with the plazas. I propose that the constant need to refurbish the floor was also a consequence of seasonal use:

since the room was not in continuous use, the floor needed to be repaired whenever it was going to be used again. There is also a lack of artifacts or contexts associated with domestic use.

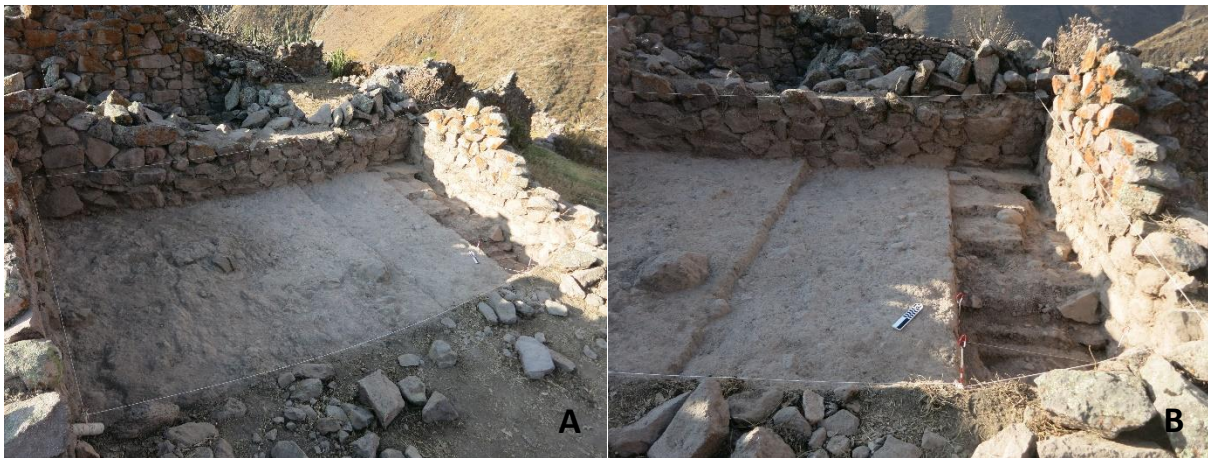


Figure 7.23: Room 3 in the Orthogonal Complex. A. General view of the end of the excavation. B. Detail of the succession of floors recorded in Room 3 (photographs by PASL 2015).

I propose that the building as a whole served to house people that came to participate in specific ceremonies in the Trapezoidal Plaza, maybe some of them ritual specialists. The complex, rather than a *kancha* occupied by Inka administrators permanently residing in Canchaje, was part of the infrastructure to bring Inka ritual practices to Huarochirí. Likely the area was probably used in the storage of the goods that would be part of feasting in the plazas.

Excavations in the rock outcrop complex

Excavations in the Rock Outcrop Complex aimed to establish a direct comparison between Ampugasa and Canchaje. The outcrop in Canchaje was significantly larger and after cleaning, we found a series of rooms that suggested a more complex layout than its counterpart. Consequently, I adapted the excavation strategy to not include two trenches and three full rooms in the highest part of the outcrop (Figure 7.24):

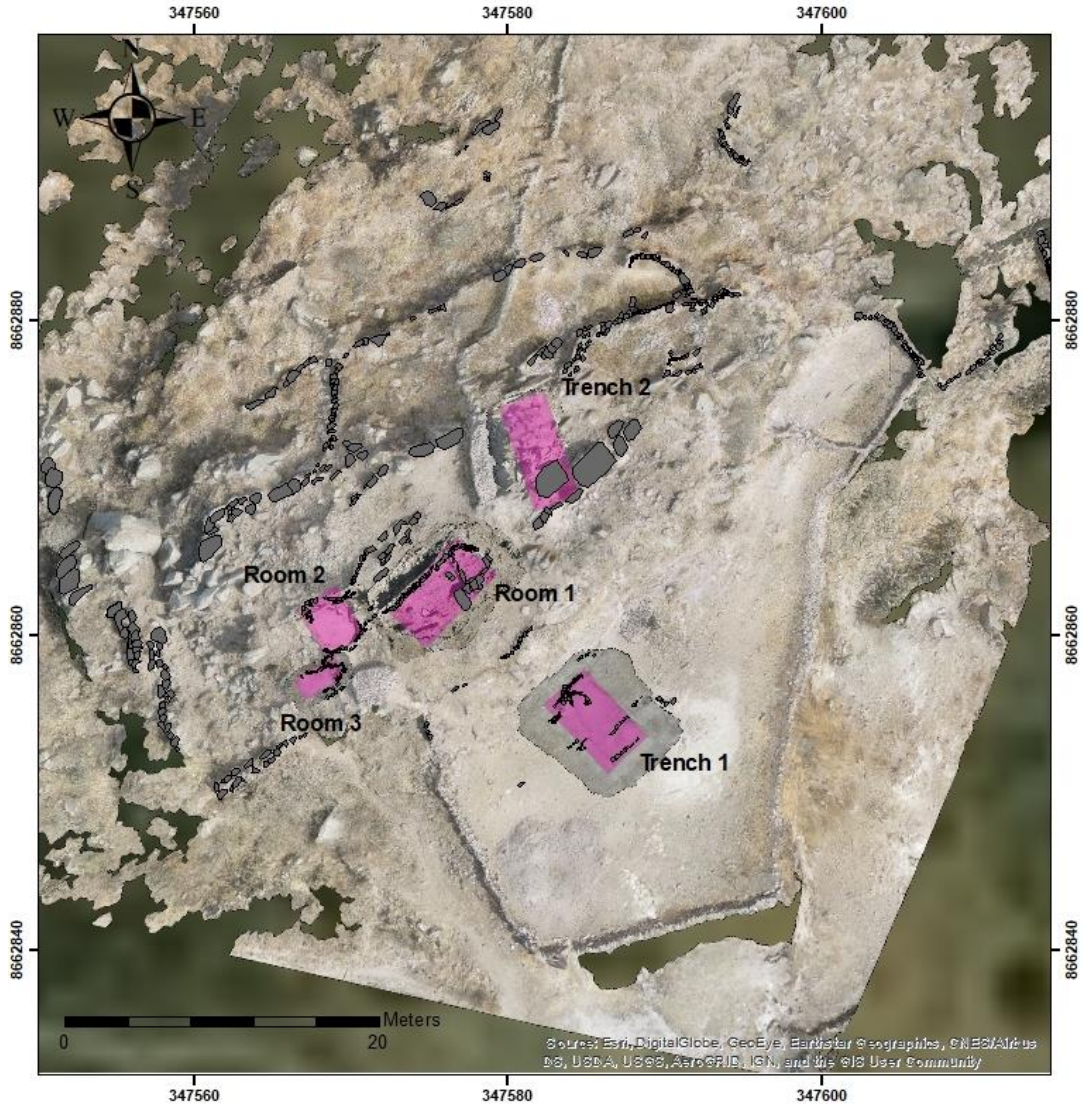


Figure 7.24: Excavation units in the Rock Outcrop Complex. Notice that the walls that have not been mapped but are visible in the photographs are modern modifications from when the outcrop was used as a corral (map by the author).

- Trench 1: located at the base of the outcrop, this was excavated to investigate the outcrop's façade and similarities with Ampugasa. It measured 6 x 3.5 m and was roughly oriented to the northwest.
- Trench 2: located on top of the eastern section of the outcrop, it was placed cross-cutting its highest point, dominated by two large boulders. It measured 7 x 3 m.

- Room 1: located in the upper central part of the outcrop. This area was probably the main access or receiver of the structures on the outcrop; it measured approximately 6.5 x 3.5 m.
- Room 2: located to the western side of the outcrop, it was directly associated with a large standing stone and located 1 m away from Room 1. It measured approximately 2 x 3 m.
- Room 3: a small circular subterranean structure with a 1 m diameter and directly to the south of Room 2. There were a number of these structures peppered around the outcrop and from the surface they appeared to be looted burials. We cleaned up an area of 3 x 1.5 m in order to record the surface associated with the subterranean structure.

Excavation of Trench 1 (Figure 7.25): this trench was placed in the area in the front of the outcrop where we could trace some stone alignment. The front of the outcrop was not well preserved, since the whole area was consistently used as a corral in recent years, so we placed our unit in the best-preserved area, where we could see the imprints of steps.

First, we cleaned up the loose soil and dry vegetation (Locus 777; thickness ~2cm), followed by a semi-compacted level that related to the abandonment of the plaza (Locus 778). Then we recorded the rockfall (Locus 779), which was concentrated at the northern part of the trench. In the northwestern corner of the trench, we found a layer of compacted clay associated with loose stones (Locus 780; thickness ~15cm) covering a curving wall oriented from north to south. To the west of the wall, we found a semi-subterranean circular structure with an approximate diameter of 50 cm, similar to Room 3. To the east of the wall, we found a small semi-rectangular structure with walls with rounded corners and an approximate length of 80 cm per side. This room was covered with rockfall (Locus 781; thickness ~20cm). This section was built on top of small platforms similar to the ones in the façade of the outcrop in Ampugasa and may have also been associated with burials.

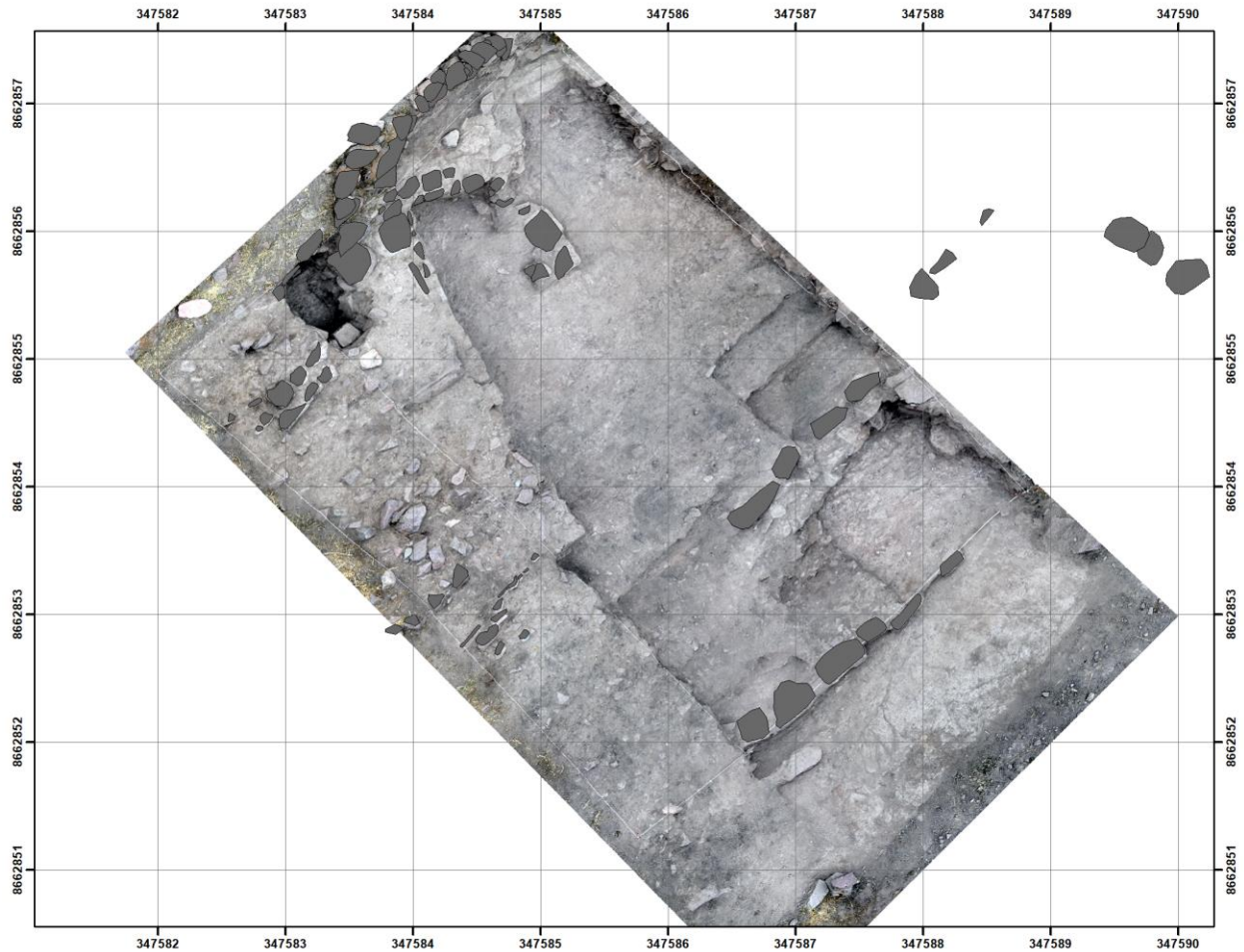


Figure 7.25: Excavation of Trench 1 (drawing by the author).

Continuing the excavation, we found the floor (Locus 784; thickness ~4cm) and small burning events (Loci 782 and 783; thickness ~4cm). To the southeastern corner of the trench we registered a levelling fill that was probably used to lay down a broad step (Locus 785; thickness ~30cm) and continued onto another surface (Locus 786; thickness ~12cm) leading towards the platforms in the front of the outcrop (Figure 7.26).

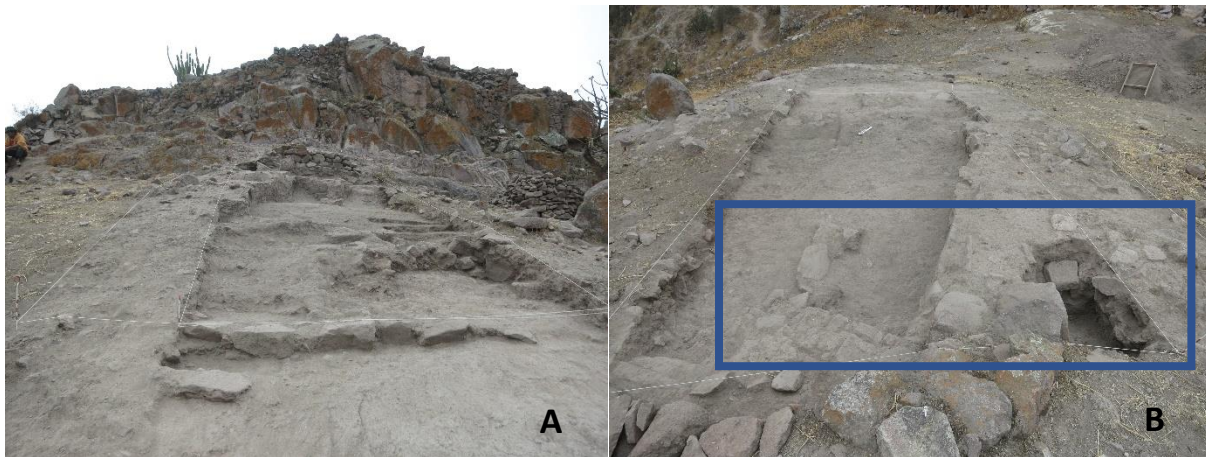


Figure 7.26: Trench 1 in the Rock Outcrop Complex. A. Photograph from the south, notice the stepped access towards the main body of the outcrop. B. Photograph from the north, notice the small rooms recorded on the trench and the curving wall separating the platform (photographs by PASL 2015).

As a result of the excavation of the trench, I hypothesize that the front of the outcrop was originally dominated by a series of steps that turned into curving platforms in a manner similar to Ampugasa. There is also evidence of rooms associated with the platforms that, by their design, seem to originally have served a funerary function. While in Ampugasa funerary structures were standing rectangular slab-roofed rooms, in Canchaje funerary structures were semi-subterranean circular cists. This difference suggests a lack of standard settlement layout among the Yauyos.

Excavation of Trench 2 (Figure 7.27): this trench was meant to examine the area where the rock outcrop reached its highest point. From the surface we observed that there were at least three rock alignments suggesting broad steps heading towards the boulders. Interestingly, these steps came from the north; in other words, not facing the plazas, but rather the harsher section of the mountain, which was surrounded by large platforms and scant evidence of residences.

First, we cleaned vegetation and loose rocks (Locus 523) associated with loose fine soil (Locus 524; thickness ~3cm). At this level we found a copper *tupu* or pin commonly associated with female shawls, although the lack of good association for the artifact limits interpretation (Figure 7.28). This type of artifact, however, was not found in other excavated sections of the

site, nor at Ampugasa. Under this level we found an overlay associated with the post-abandonment transit through the area (Loci 525 and 526; thickness ~7cm). The surface of this section of the trench was poorly preserved, with gravel perforating the soil matrix and broken in some sections (Locus 540).

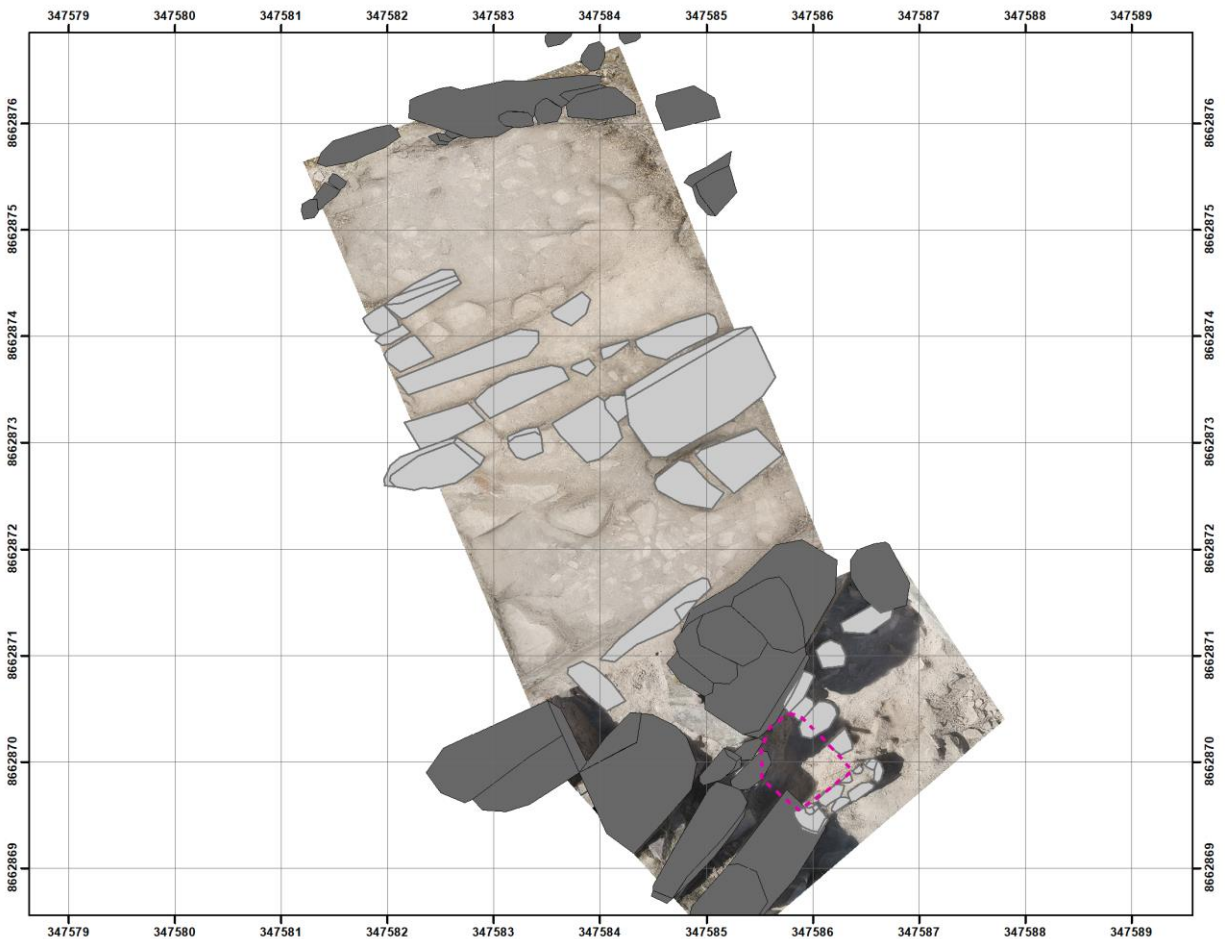


Figure 7.27: Excavation of Trench 2 (map by the author).

Under this level, we found another broken grayish surface, which we excavated independently for each step; we think this shows the steps were repaired because of intense use of this space (Loci 544, 545, 546 and 547). The steps were well-defined and carefully built; unlike those in the façade of the outcrop complex in Trench 1, the alignments created small two-face walls joined with mortar for each of the steps leading to the rocks (Loci 549, 550 and 752).

These walls contained a leveling fill over the bedrock that created the altitude for each step (Loci 548, 751, 757 and 759). At this level we found a surface in the northern extreme of the trench associated with the surface of the outcrop and the beginning of the stairway (Locus 755; thickness ~8cm) and a small burning event of approximately 15 x 10 cm on the highest step of the stairway (Locus 756).



Figure 7.28: Metal artifacts recovered from the top of the Rock Outcrop (photographs by the author).

We continued to excavate the southern section of the trench. After cleaning the area under the boulders, we exposed a small semi-subterranean structure (Locus 527). It was defined by a coarsely built wall in the interstice between both boulders, elaborated with selected stones, irregularly placed and joined with mortar (Locus 539). Within this structure, we recorded a level of semi-compacted fine soil associated with dry vegetation and coarse ceramic sherds (Loci 528 and 529; thickness ~14cm). Underneath, we observed evidence of rockfall inside the structure, also associated with coarse ceramic sherds (Loci 530, 531, 532 and 533; thickness ~30cm). We then found a two-faced low-rising wall made up of selected rocks joined by mortar and delimiting the southern boundary of the structure (Locus 534). Under the rockfall we registered a level of reddish-yellow soil to the east of the structure (Locus 535; thickness ~21cm) and a level

of brownish fine soil (Locus 536). Finally, we delimited the final wall of the structure to the east (Loci 537 and 761), which had the same characteristics described for Locus 534. Here we found the use surface of the structure (Locus 541; thickness ~7cm); we cleaned the internal walls, finding mortar (Loci 542 and 543; thickness ~7 and 11cm, respectively), small features associated with cobbles (Loci 751, 753 and 758) and the floor on top of the gravel (Locus 754; thickness ~26cm) (Figure 7.29).



Figure 7.29: Trench 2 in the Rock Outcrop Complex. A. General view of the northern part of the trench, notice the series of steps heading to the highest part of the outcrop. B. Detail of an assemblage of artifacts located in the first step closest to the rock. C. Detail of the southern part of the trench, notice the beginning of the excavation of the semi-subterranean room. D. Detail of the semi-subterranean room, notice the low-rise walls and the arrangements in the interstices between the large boulders (photographs by PASL 2015).

Excavations in this trench suggest that the peak was a central ritual space; access through the north could be interpreted in two different ways: either the stairs were on the back of the peak

to facilitate access to the top of the boulders to command attention, or there was access to the outcrop from the south that may have anteceded the building of the plazas. Additionally, the offerings associated with the trench suggest that the small structure at the foot of the rocks may have had a funerary function; in its design it is very similar to the structures recorded in Trench 1, yet we found them empty.

Excavation of Room 1 (Figure 7.30): we excavated this room because it was the first area accessed through the northern platforms of the outcrop plaza. The main wall of Room 1 was two-faced, 7 m in length and 40 cm in thickness, with selected stones joined with mortar; it was oriented roughly to the northeast, with a rounded corner that shifted into a 1.5 m wall to the southeast, which led into four steps and an access of 50 cm in width. The stairway access to the room was delimited by a transversal low-rise wall, defining a platform associated with a rock altar, analogous to the one found in Ampugasa. The main entrance to the room was through the south and was delimited by large boulders, including a large horizontal slab that serves as a step for accessing the platform. The SW part of the wall was missing.

At this level we started excavation of the stone altar. Unlike the one in Ampugasa, which had a central position within the room, this altar was located in the northeastern corner of Room 1 (Locus 690; thickness ~40cm). It had a triangular form (approximately 1.40 x 0.80 m) and was carved in the middle, thus creating a recess that looked like a seat where it faced the platform. The wall delimiting the platform partly rested on top of the altar. In the carved recess we found flat stones suggesting there was originally something deposited within. However, we did not find any evidence of burials or *Spondylus* offerings as we did in Ampugasa. The altar was directly associated with the floor of the platform (Locus 695; thickness ~5cm), which was built on an

architectural fill (Locus 699; thickness ~15cm). Considering the size and location of the altar, it is very likely that the platform was raised specifically to create a surface from which to access it.

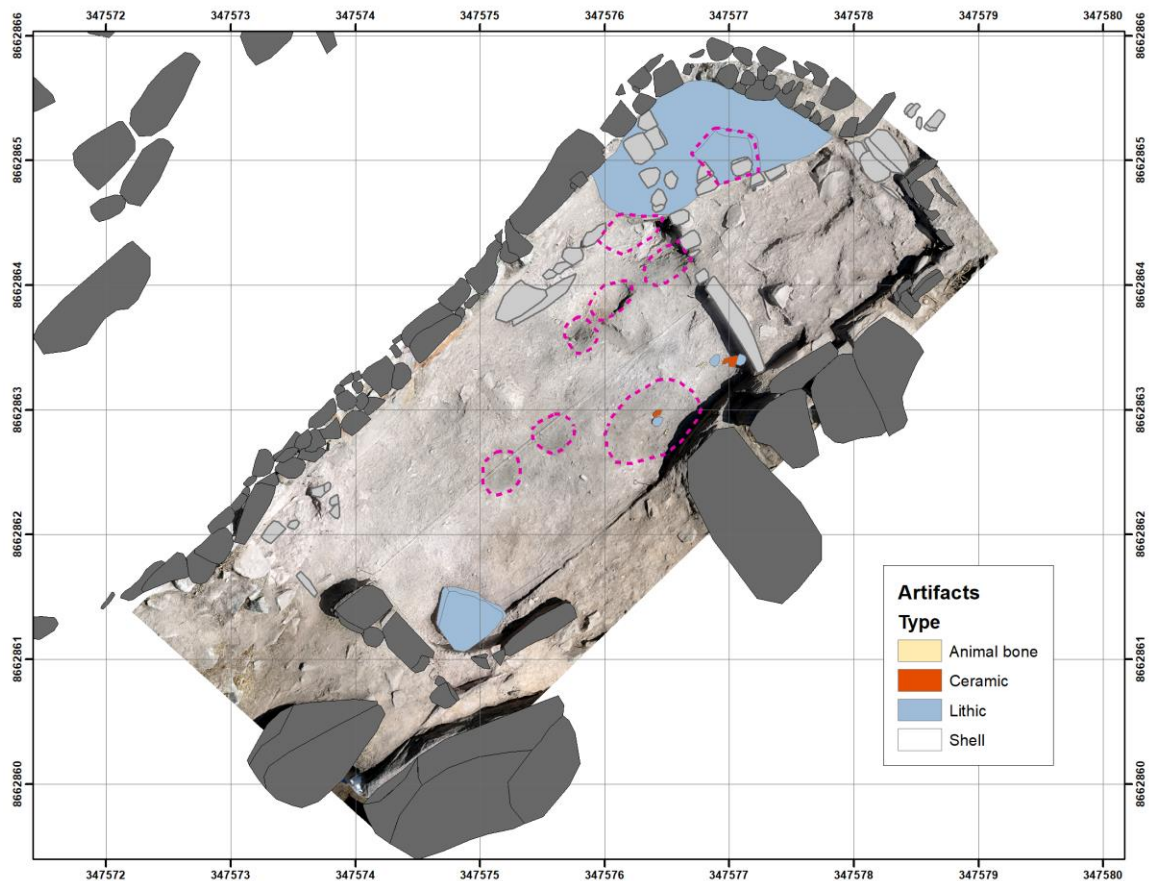


Figure 7.30: Excavation of Room 1 (drawing by the author).

Under the rockfall we exposed the floor of Room 1 (Locus 694). Unlike the floors from the other sectors, this one showed a number of significant features suggesting intensive use. In the SW corner we found a large millstone surrounded by a number of large slabs intentionally deposited surrounding it (Locus 691; thickness ~20cm). To the north, right below the platform corner, we found a large burning event covered by boulders (Locus 692; thickness ~5cm) and an accumulation of white ash right by the foot of the stone altar (Locus 693; thickness ~8cm). A lent of black ash was close to the middle of the northern wall (Locus 696; thickness ~5cm). Another feature was next to the platform (Locus 700; thickness ~2cm).

Under the floor we found a large accumulation of ash, part of a leveling fill (Locus 697; thickness ~4cm). This layer had a high count of artifacts associated, including lithics, ceramic sherds, and animal bones. This fill covered another floor (Locus 698; thickness ~6cm) which, in turn, covered another leveling, this time over the bedrock (Locus 701; thickness ~20cm). Despite its location, the animal bones recorded on the ash had no evidence of burning, which suggests they were part of a ritual for covering the original surface in order to lay the second floor. Similarly, the other ash lenses had no burnt material and therefore no association with cooking or household activities (Figure 7.31).

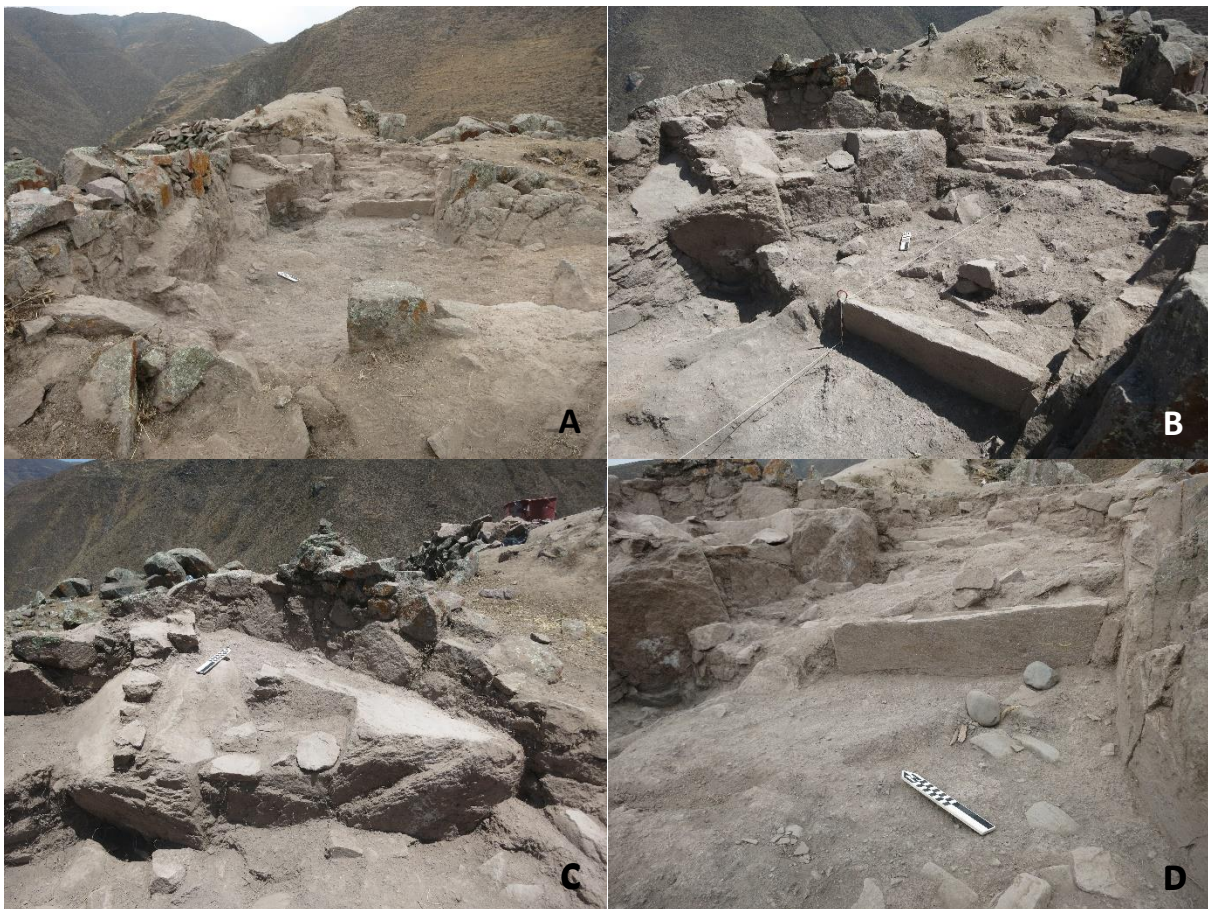


Figure 7.31: Room 1 in the Rock Outcrop Complex. A. General view of the room from the west, notice that it leads into the outcrop excavated in Trench 2. B. Detail of the eastern part of the room, notice the platform supporting the rock altar and the stairway heading out of the room. C. The stone altar, notice that part of the platform wall is built on top of it. D. Detail of a material assemblage by the foot of the platform, containing lithics, ceramic sherds and faunal remains (photographs by PASL 2015).

Excavation of Room 2 (Figure 7.32): we started excavation in this room expecting, from its surface appearance, that was used for domestic functions; however, excavation revealed that this was not the case. The first layer contained dry vegetation and some stones (Locus 637; thickness ~14cm), associated with a matrix of loose soil (Locus 638; thickness ~3cm). Underneath we found a very deep level of rockfall, including spilled mortar and large boulders (Locus 639; thickness ~9cm), and medium size rocks in the lower levels (Locus 640; thickness ~7cm). From this level we distinguished the main features of the room: in the northeast corner, an arrangement of three levels of circular steps heading out of the room and directly to the base of a large standing stone that looked similar to a *huanca*. In the northwestern and southwestern corners, we found low-rise curved walls delimiting the corners of the room. Here we found another closed access to the northwestern corner.

Under the rockfall we documented a compacted overlay (Locus 643; thickness ~3cm) directly covering the floor (Locus 645; thickness ~5cm); these levels continued throughout the whole room. On the floor we identified a rectangular opening in the southeastern corner –close to the circular stairway– created by the interstices of the wall stones. The niche was filled with burned faunal remains corresponding to *Lama* sp. or *Vicuna* sp. (Locus 644) in a matrix of very loose sandy soil (Locus 647). The remains had no evidence of cut marks or other evidence of consumption.

We then excavated the features in the corners of the room. In the northeastern corner we first removed the remnants of the rockfall (Locus 642; thickness ~13cm) and then recorded a fill level of yellowish loose soil (Locus 648; thickness ~12cm). Under the fill we found an overlay (Locus 649; thickness ~7cm) covering the corner's surface, which was compacted and made of clay (Locus 804). Inside this corner we found a standing slab covered by the rockfall; associated

with this slab we found animal bones, ceramic sherds, and lithic artifacts. The lithics were particularly interesting as they included a perfectly globular cobble placed at its foot. It is possible that the strange placement of this small slab is related to the possible *huanca* recorded on top of the stairway. Below, I argue for this “hidden” slab as a direct correlate of mutual legibility between the Yauyos and the Inka and an intentional attempt by the people that commuted to the site to protect and maintain their local ritual practices and artifacts even while the Inka redefined the focal point of interaction within the plazas.

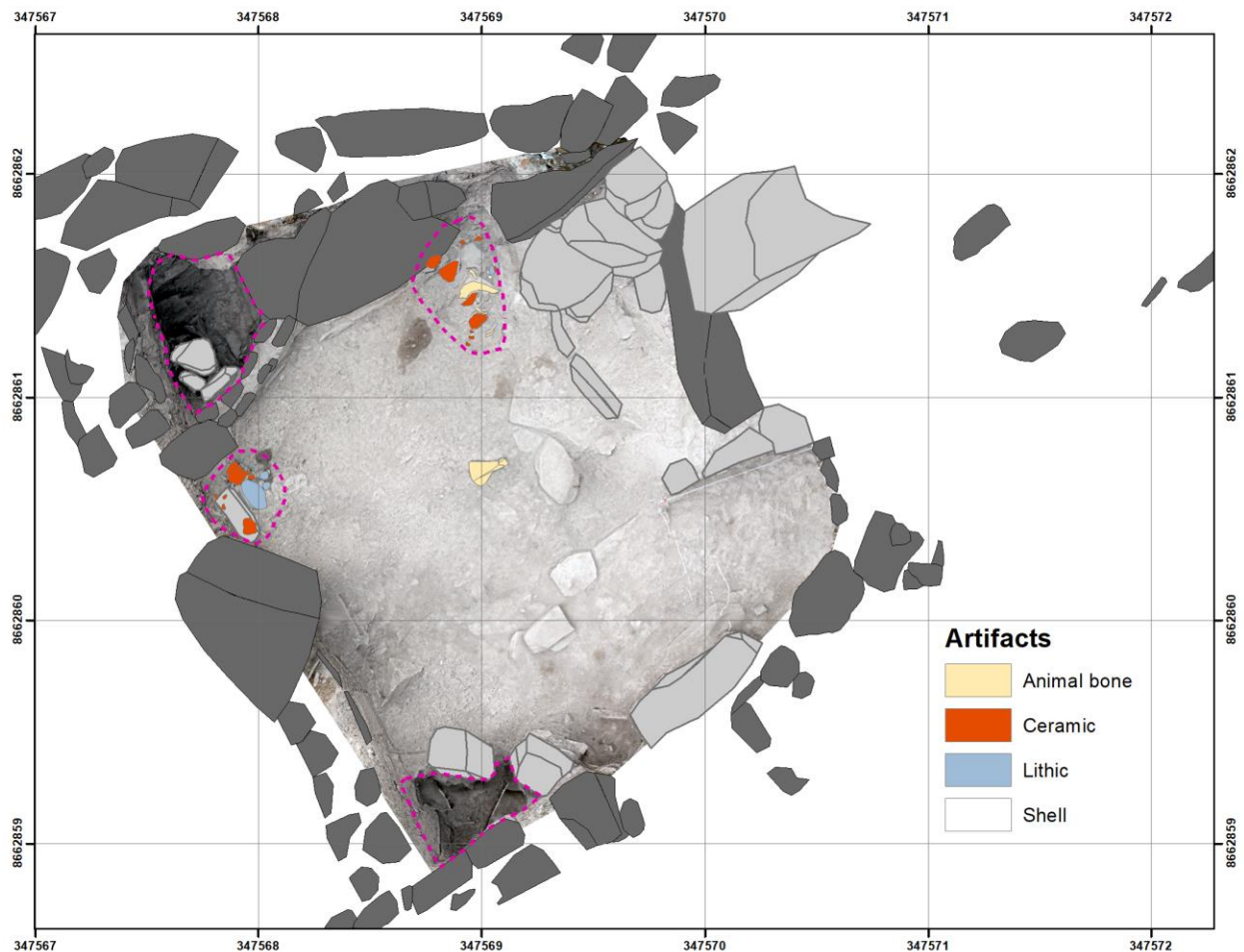


Figure 7.32: Excavation of Room 2 (map by the author).

In the southeastern corner we found a parallel sequence. We removed a level of mortar (Locus 641; thickness ~10cm) associated with the last remnants of the rockfall (Locus 646; thickness ~14cm). Underneath we recorded a compacted overlay (Locus 650; thickness ~11cm) covering the prepared and extremely compacted clay surface of the feature (Locus 803). Here we found two rectangular boulders intentionally placed to delimit the area; these boulders were not associated with the floor of the corner but with the floor of the room. We recovered remains of animal bones in the interior of the feature.

Under the main floor of the room we found a second overlay (Locus 801) and a second floor (Locus 807; thickness ~14cm). This second floor was associated with well-defined accumulations of materials intentionally placed. This was recognizable from their disposition within the structure. One of these accumulations was associated with the access to Room 2 in the northeastern corner, accessible through a single step. On top of the step we found a matrix of ash (Locus 802) associated with ceramic sherds and lithic artifacts (Locus 806). Among this assemblage we registered a large ceramic disk, two cobbles, and a hand grinder that was at the center of the group. This grinder was sent for microscopic analysis and we found remains of maize processing on its surface.

Another accumulation of materials was in the circular steps leading towards the *huanca*-like standing stone (Locus 805). This included ceramic sherds, cobbles, and an artifact fabricated from a camelid mandible. We identified the artifact as a hoe, used to clean cultivation areas from grass (Carlos Osoreo, personal communication). We recovered a marching mandible on the floor. The second floor was also associated with lithics and faunal remains and seems to have been carefully covered before laying down the uppermost floor. Below the second floor, we found a level of gravel (Locus 808; thickness ~14cm) on top of the bedrock (Locus 809) (Figure 7.33).

This room was one of the areas with a denser association with caches of ritually deposited artifacts. Interestingly, the presence of lithics seems to be the central element of these offerings, as evidenced by the presence of cobbles and grinding stones. These results are similar to those of Trench 2 and Room 1, leading me to posit that lithic artifacts were one of the key ritual offerings made by the participants of the rituals dedicated to the outcrop. Moreover, the outcrop seems not to have just been abandoned, but intentionally closed, showing the importance of the depositions.

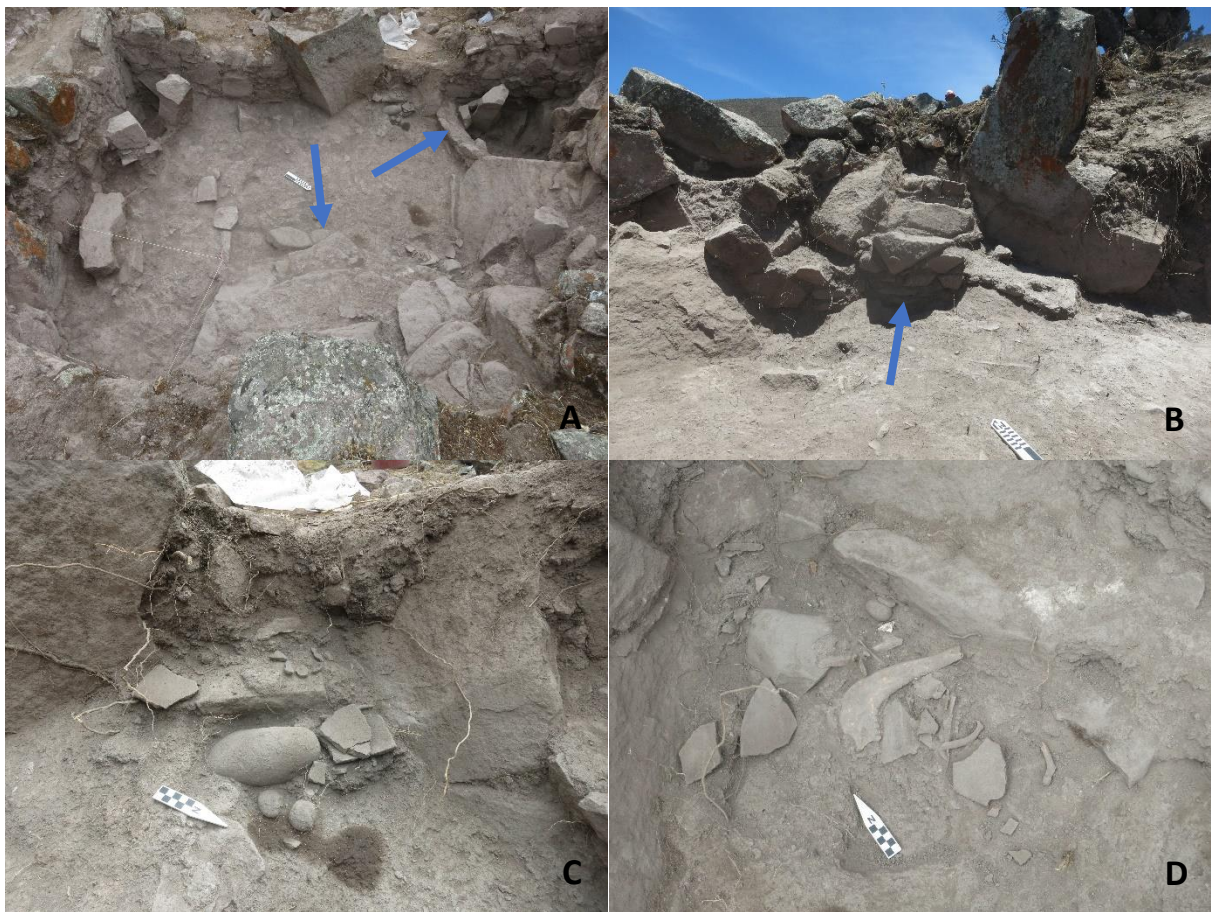


Figure 7.33: Room 2 in the Rock Outcrop Complex. A. General view of Room 2, notice in the upper right corner where there is a standing slab contained by a curved wall in the corner; in the central part of the photograph notice the curved stairs towards the possible huanca. B. Detail of the steps and the huanca. C. Detail of one of the material assemblages associated with the western access to the structure, notice the central position of the hand grinder and the small associated globular stones. D. Detail of one of the floor assemblages, notice the hoe made from a camelid mandible (photographs by PASL 2015).

Excavation of Room 3 (Figure 7.34): as I previously mentioned, after cleaning the outcrop we could observe a number of looted semi-subterranean cisterns on its hillside. We decided to clean one of them, despite its looting, to recover some evidence of its funerary function, even though from the surface there were no observable bodies. The first layer we excavated was the accumulation of wind-blown soil and dry vegetation (Loci 764 and 765; thickness ~5cm). Underneath we found an overlay (Locus 766; thickness ~6cm) covering the surface surrounding the cist (Locus 767; thickness ~9cm), which was better preserved towards the northwestern corner.

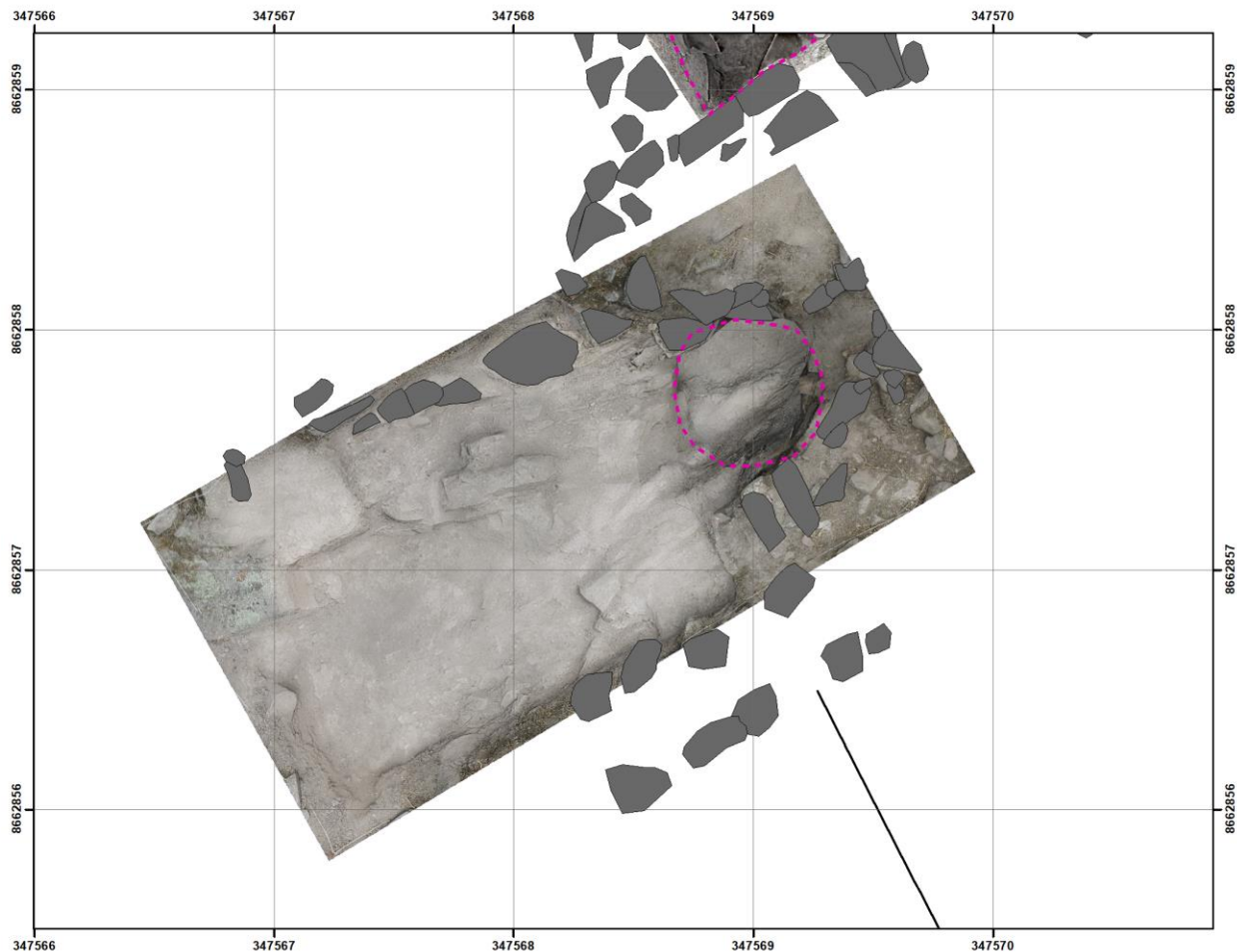


Figure 7.34: Drawing of Room 3 (map by the author).

Closer to the cistern the floor was broken, we found evidence of ash (Locus 768) and a leveling fill (Locus 769) laid directly on top of the bedrock (Loci 774 and 775). Inside the shaft we identified two post-depositional levels associated with different events of rockfall (Loci 770 and 771) covering two sections of a floor (Loci 772 and 773). The opening of the cist was defined by a wall that originally surrounded the whole opening and made with selected small and medium stones, joined through mortar (Locus 776); this wall originally enclosed most of the opening of the cist. During the excavation we found remains of small human bones, confirming its funerary function (Figure 7.35).



Figure 7.35: Room 3 in the Rock Outcrop Complex. A. General view of the excavation unit. B. Detail of the semi-subterranean structure and the wall surrounding it (photographs by PASL 2015).

From the evidence of the Rock Outcrop Complex, we can ascertain that there is no direct correlate of domestic occupation; on the contrary, the whole area served for ritual activities and, even when new floors were laid, there was a clear attempt to honor previous surfaces as they were buried. Interestingly, most of the offerings or artifacts that can be considered of high status are lithics, bone implements, or metalwork. We did not find Inka-style ceramics associated with the outcrop, which suggests that it was not the epicenter of ceremonial life in Canchaje during the Late Horizon. As in the case of Ampugasa, funerary events were a central association of the

outcrops, suggesting that the individuals buried in these cists could have served as lineage heads of the different *ayllus* related to the outcrop in Canchaje.

In the following section, I will examine some of the materials recovered from Canchaje in order to fully investigate the distribution of the material remains across the different sectors excavated. I will build upon colonial sources in order to argue that we can identify Canchaje as a shrine assigned to a specific *waranqa* of Huarochirí, and that at this meso-level of community organization the Inka strategy of mutual legibility was markedly differed from the results in Ampugasa.

Producing legibility through ritual

Excavations in Canchaje centered on the question of whether we could differentiate between local Yauyos and Inka ritual spaces, and record evidence of changes or continuities in how the Inka interacted with local ritual spaces. My hypothesis was that coexistence or connection between the rock outcrops and plazas would suggest continued attempts of creating legibility among the people of Huarochirí and the Inka. Overall, the excavations served as a critical point in analyzing the interaction between the Yauyos and the Inka, as the site stands at the intersection between a local shrine or ritually imbued place and the Inka attempt to inscribe themselves into the local landscape and tie their own practices into these spaces. Through excavations, I demonstrate that Canchaje is also a compelling example of the changing scales of ritual interaction among the Yauyos population: Ampugasa has an analogous sacred area within the confines of residential settlement, Canchaje was the scenario of rituals that brought different components of a specific *waranqa* together.

In this section I analyze the intersection between Yauyos and Inka practices related to sacred spaces. I use evidence from the ceramic analysis to investigate a potential change in the core ritual activities practiced in the site. Later, I will focus on the other types of materials recovered during the excavation. I argue that, despite the possible closing of the outcrop as a community-dominated space of interaction, the Inka attempted to funnel the practices associated with Pariacaca's worship by incorporating them into the plazas they built at the site. Overall, the excavations and material analyses results support that the relationship between the Inka and the Chaucarima *waranqa* as one of mutual engagement and fortification of kinship types, building on what was familiar between them.

Landscape, stone and the Inka in Huarochirí

While, like all Andean societies, the Inka had a strong connection with natural features such as rivers, mountains, and rock outcrops, they made the natural landscape central to the construction of legitimacy and belonging in their empire-building enterprise (Bauer 1996).⁹⁵ The natural landscape was a living canvas within which history, memory, and negotiation were carved (Crumley 1999). In this section, I will explore the role sacralized landscapes as a familiar idiom between the Inka and other Andean populations such as the people of Huarochirí.

Across the landscape, mountains were associated with an *apu*, an Andean apical deity - commonly a mountain- that was at the same time place and being and that was intrinsically

⁹⁵ The issue of legitimization also led the Inka to directly interact with the sites and monuments that were built by earlier societies, such as the Tiwanaku. This was meant to create connection between their emerging society, these – at the time– defunct and probably mythical societies, and an earlier built landscape that more than likely had become part of the natural space by the time the Inka marked their presence (Bauer 2001).

associated with community origin (Bastien 1978; Besom 2013). The *apus* were also sacred ancestors to which different communities could connect their origin and therefore establish their social position among other communities through kinship (Salomon 1995). It was a common practice among Andean societies to bury their ancestors in the mountains, therefore claiming the connection between themselves and the sacred landscape and, in practice, stake their claim of belonging in the territory (Salomon 1998). In Huarochirí, the snow-capped mountain Pariacaca was the father of all the Yauyos groups (Astuhumán 2004) (see: Chapter 5, p.116). The association with Pariacaca and water sources gives him a privileged position in the collective local mind. For the Huarochirí, an agrarian society in a very dry environment, water sources are, quite literally, the bringers of life.⁹⁶

Rock outcrops and stones share in these characteristics as well. The Inka carved natural outcrops in different areas in Cusco, even integrating them into the architecture. As Dean (2010a:14) argues “Stone in the Andes was both nature and culture, both part of the earth and part of human society. What’s more, the Inka often valued rock precisely for its ability to participate in natural and cultural environments simultaneously. That rocks were often places where complementary orders conjoined, enhanced their significance”. Rock outcrops came from the earth itself while also surfacing to the cultural world, becoming a liminal space (Eliade 1959) through which the Inka could establish direct links between themselves, the world they were

⁹⁶ One of the more common stories I heard in Huarochirí –and which is not penned into the Manuscript– is the love triangle between Pariacaca, Huayuquiri, and Vichuca. In the story, Pariacaca fell madly in love with Vichuca, the female mountain-huaca that looms over the town of Santo Domingo de los Olleros; the lands of Vichuca would have fallen under the jurisdiction of the Langasica waranqa at that point. However, Vichuca was in love with Huayuquiri, the male-mountain of Lahuaytambo, whose jurisdiction was in the Chaucairima waranqa. Despite Pariacaca’s efforts, Vichuca remained uninterested, so Pariacaca opted to gift her water, which was a wanted and much needed resource in her lands. Pariacaca then threw a jar full of water from his seat towards his intended; however, Vichuca didn’t accept the gift, so the jar ended up crashing and breaking in the area of Tijerales and Panquilma in the lower-middle valley. This is how Pariacaca provided water for this area. Variations of the myth are recorded throughout Huarochirí (Ortiz Rescaniere 1980).

building, “and the powerful spirits associated with the land and its topography” (Dean 2010a:21). Moreover, this affiliation with the landscape was not only a metaphysical exercise but also a political one; through their “sculpture program in stone”, as van de Guchte (1990:1–2) explains,

the Incas distinguished themselves from their predecessors in Andean time and space by their emphasis on the natural settings of their sculptures. Carved in bedrock and large boulders, the relationship between these sculptural statements and the environment was a crucial one. A landscape charged with meanings received a grid of order through the sculptural endeavors of the Incas in selected location.

In other words, van de Guchte proposes a unifying conceptual scheme that could be interpreted as a type of imperial program, in which stonework set a framework through which the empire operated. Dean questions how the carved-landscape was interpreted by the Inka themselves; what were the symbolic meanings behind it? For his part, van de Guchte questions how the outward materialization of stone carving made a statement about control and legitimacy on the landscape that both supported the Inka and transmitted a message to their subjects. It was a political tool of empire-building.

One critical issue to discuss in these two frameworks is how stone carvings differentially manifested themselves in the provincial landscapes. Both Dean and van de Guchte argue that stone carving was not an exclusively Inka practice. This means one of two things: either stone carvings had a pan-Andean meaning –in other words, they were interpreted by different people in similar ways– or they were a shared practice with different meanings throughout the Andes. I argue that there is evidence for both positions and that they are, in fact, not exclusive. Going back to the discussion about *apus*, the Andean pantheon is multivocal and dynamic. Meanings can change, or simply be added through time (Thomas 1992). This additive character of cultural practices and cultural spaces seems to be a constant in Andean archaeology.

Van de Guchte (1999) provides a detailed analysis of the different types of stone idols and carvings that directly refer to the Inka lineage. However, there are also sources that speak to local uses of carved and natural stones as spatial markers imbued with symbolism. For instance, Rubina (1992:71–73) studies lithification narratives in the Huarochirí Manuscript. From a linguistic perspective, she argues that the “figures” –those specific elements in a specific narrative– are brought together by a shared “theme”, and that it is only through this theme that the figures have meaning. A “motif, on the other hand, is a figure that keeps its meaning even though it may be entangled with specific themes. While the motif in itself does not have its own narrative thread, a “configuration” does. Rubina argues that stone in itself is a motif in the Manuscript, since it can be a part of different themes and can have different meanings or roles within each theme. Lithification, on the other hand, is considered as a configuration since it has its own narrative structure in which the stone is turned always into an “origin-stone”. Through this configuration, the stone becomes immersed in the semantic realm of the sacred, and Rubina distinguishes two main semantic oppositions in the characterization of the stone before and after lithification. The first one is spatial, in which the character is mobile before lithification, but once it undergoes this process it remains anchored to a specific point in the landscape. The second one is temporal, in which the events narrated before lithification are part of “ancient times”, while the lithified character exists between the present and a “forever” future; in other words, Rubina argues that the lithified being moves from the mortal to the immortal plains of existence.

The temporalization of lithification in local Huarochirí narratives is further supported by Dulanto’s (2014:141) analysis of the Manuscript as a unified mytho-history in which

the actions of these ancestral heroes, and especially their movement on the landscape, account, through a complex system of successive dual divisions, alternations, and reversals, for the ordering of places (space), events (time), and relations (society) of the

indigenous huarochiranos and their definition vis-a-vis the places, events, and relations of the nonindigenous Spanish.

The lithification process, a before and after in the existence of the local ancestral heroes, creates the local territory through time and space. The Manuscript casts these lithified heroes as natural stones to which offerings were given and that were directly associated with specific local lineages, further differentiating the local symbolism of stone in comparison to the proposed Inka program of expansion. These narratives, however, are not necessarily dissimilar and I argue that they can coexist within the same semantic realm.

There is also a strong relationship between these lithified heroes and a broader landscape marked by sacred features such as mountains and *apus*. Salomon (1995:321) argues that,

Sometimes the respective ayllu-“founding” ancestors had common parents, that is, mummies ancestral to the whole *llacta*, but more typically ayllu-founders were said to be descendants of superhuman beings, *huacas*, whose physical substance inhered in monoliths, statues, or other sacred objects. The *huacas* in turn were sometimes imagined as the progeny of major permanent land features or natural forces such as great snowcapped mountains or lightning. In this fashion, ancestry could be imagined as a seamless web expanding from family organization to geographic and even cosmological order.

Bringing together the arguments outlined above, I argue that the representation of stone and outcrops in the Huarochirí Manuscript serves to link the ancestral founder-*apu*, Pariacaca, with the local landscape, which is rich in mountains and deities with specific names and narratives, and the smaller stones that mark the landscape in specific transformative narratives. This idea of lithification as boundaries refers back to the idea of *ayllu*, in which community members descended from –and therefore their social position was defined by– their relationship to specific lithified ancestors that directly related to Pariacaca through other second-tier mountain deities. One such sites was Canchaje.

While my interpretation of the rock outcrops differs from the interpretation of Inka carved stones, there is one aspect of lithification in Huarochirí linked to Inka stonework, and this one pertains to mobile stone idols. This type of lithification is directly evident in one of the Manuscript's narratives set in colonial times: the account between Llocllay Huancupa and Cristobal Choquecasa. Llocllay was a stone idol son of Pachacamac sent by his father to protect the Yauyos. The account centers on two battles between him and Choquecaxa, and Salomon (1990) explains how this relates to Choquecaxa's dual nature as a catholic and native agent.

Llocllay Huancupa is a rather interesting presence in the Manuscript; before his self-identification as Pachacamac's son –and therefore a yunga *w'aka*– the last narratives in the Manuscript that centered on the lower valley were those of Cuniraya Viracocha, Cavillaca, and Urpi Huachac. The first of these deities crosses through the different ecological settings of Lurin, uniting, through his run, the different ecosystems of the valley (Dulanto 2014). Cuniraya Viracocha's name already references one of the Inka's main deities, and it is likely a strong avatar for the integration of the valley brought about by the Empire.

In relating these foundational narratives to Llocllay Huancupa, it is possible to trace a strong link to a foreign presence in the Yauyos narratives: that of the Inka. Pachacamac and the association between coast and highlands enter the narrative as part of a unifying ideology sponsored by the Inka. There are references throughout the text that the yauyos are aware of a powerful coastal deity, yet their more detailed narratives are limited to the actions of *wa'kas* that move between the middle and upper Lurin valley. The relationships between Pariacaca and Pachacamac are mediated by the Inka presence, also demonstrated in the discussion of Macahuisa and the conclave of *w'akas* called by the Inka in Cuzco (see: Chapter 5, p.136).

My reading of the historical documentation suggests both a pan-Andean understanding of outcrops, rocks, and lithification as part of origin histories as well as for different ways in which this understanding was materialized and interpreted between Inka and Yauyos. I propose that Llocllay Huancupa represents a relationship that was introduced into the Yauyos' worldview after their incorporation into the empire. We find this in Canchaje, when one possible stone avatar was purposefully hidden in the rock outcrop. Its significance is evident in that it was not just abandoned and neither was the outcrop itself. This is similar to the closure of domestic spaces in Ampugasa, which suggests that incorporation into the Inka Empire did not lead to a direct and sudden abandonment, but to a planned and ongoing process. In hiding their mobile *w'akas*, it is possible that the people of Chaucarima were both acquiescing to the Inka attempt to re-structure ritual practices, while at the same time, by hiding the idol within the outcrop, they could keep venerating it even if it was not visible. This could be a process akin to the one practiced by indigenous communities during the Spanish colonial period, where they kept worshiping their own local *w'akas* under the guise of Catholicism.

Meddens et al. (2010:183) describe in detail the finding of three elongated stones in a prepared basal fill at the foot of the *ushnu* of Ingapirqa/Waminan in Ayacucho. These stones were sculpted in red and white andesite and placed in a tripod configuration. From their context and formal characteristics, Meddens and his team relate them to the Inka "stone ancestors", arguing that "Portable sacred stones may represent *w'akas*, deities, ancestors, and stone equivalents or "brothers" of the living". The colonial accounts describe these stones as "sugarloaf" in form and acknowledge them as mobile representations of other lithified (or even

living)⁹⁷ ancestors, or of landscape features such as mountains⁹⁸. The fact that most stone ancestors were allegedly distributed through the expanses of the empire, and that they were recognized local *w'akas* that could be called upon by the Inka, also fostered a strong bond between local deities and the Inka. It is possible to hypothesize that such a strategy of mobility was not fully practiced before Inka expansion, as local deities and *apus* were in direct contact with the population to which they related. Their immobility was in all respects a more important feature for the communities.

In Huarochirí, Chase's (2014) excavations in the outcrop promontory of San Cristóbal, in the Checa territory, supports this hypothesis. He dates this context to the LH. He excavated a stone platform dominated by a very large stone boulder that lay atop the bedrock at a depth of 1.7 m. He found a surface compacted by heavy traffic and a crafted metal artifact representing a hand holding an egg and thus closely related to the origin myth of Pariacaca. Further down, he found a large stone in the form of an egg. Building on Meddens' work, Chase argues that "The platform at San Cristóbal could represent the burial of a *w'aka* to protect it against extirpation during the colonial period, or it could have been a shared or even mediating boundary marker for the pre-reducción era Checa and Concha. Of course, it is also possible that both scenarios could be correct" (Chase 2014:216).

⁹⁷ A clear example is that of the *wawqi* or the "brother" each Inka had. As described by D'Altroy (2015:134): "Although the Spaniards described them as idols, the Incas considered them to be the rulers –that is, to share the same *camaquen*– not simply to represent or substitute for him in the absence of his person/mummy. The most important item was probably a brother figure *wawqi* made of stone or gold, who accompanied him throughout his life and after."

⁹⁸ As an example of the importance of even parts of existing huacas or *apus*, we look at the 16th century account of the Augustinian priests evangelizing Huamachuco, in the central highlands of Peru. In this account, once Atahualpa sends one of his generals to destroy Apu Catequil because he had given him a contrary divination, saying that his brother Huascar would win the war over him, "Afterwards the high priest knew that Catequil's head was in said river and with a great number of Indians and friends, they went to the river, and recovered the head and three parts of his body, and with great reverence they took the pieces and made a great house where to put them; they adored them as before, and they offered them many clothes" (Castro de Trelles 1992:20).

Chase's focus on the stone ancestors as a local boundary is not at odds with my own hypothesis that this type of stone idol was not a local phenomenon. The lack of radiocarbon dates at the base of the San Cristobal platform make it hard to assess whether this particular *w'aka* was related to a pre-Inka or post-Inka period in the history of Huarochirí. However, the materials associated with the outcrop led Chase to believe that the site's offerings were laid down during the Late Horizon, supporting my hypothesis. I would add to this interpretation that the use of Inka materials in an offering associated with a landmark that may have been relevant before their arrival (as a boundary between Checas and Conchas) could be another example of the Inka using mobile idols to incorporate specific state-sponsored rituality into local contexts. Both the stone ancestors and the iconography related to Pariacaca support this interpretation.

In Huarochirí, local deities can be, in many cases, associated with specific *ayllus* and then traced through their relationship with Pariacaca. I propose that, in this way, it is possible to trace the changes in the local narratives of deified features and then their negotiated incorporation into the Inka religious system. Chase draws a very detailed case study for this in the case of Tutayquiri, one of Pariacaca's sons, which he considers the direct ancestor of the Checa people. The Manuscript details his conquests and how he established the Checa at the site of Llaqsatambo. Chase argues two important points: first, that local tutelary deities like Tutayquiri reflected historical events that later became myth and, second, that the narrative of Tutayquiri and his role in the construction of a Checa ethnic identity was likely dated to the Late Horizon, when such a narrative became an important necessity. From an archaeological perspective, Chase concludes that the *w'aka* Tutayquiri likely originated from the interaction between the Yauyos and the Inka, a material correlate of how mutual legibility between them was built.

Chase's argument that the development of the *w'aka* Tutayquiri was framed into the Late Horizon (or as he frames it "when is a *w'aka*?") doesn't negate other important facts: first, rock promontories are ubiquitous throughout the residential settlements in Huarochirí –and, in fact, through the Andes– and therefore likely anteceded the Inka; second, the *w'akas* that served as limits between *waranqas* were probably the outcrops given more attention in the Late Horizon, as the Inka demonstrably focused on strengthening ethnic identities throughout the empire; and third, the Inka had long-standing traditions of planting offerings in local *w'akas*, and such offerings do not necessarily relate to the date in which the *w'aka* veneration started. In other words, I suggest that while the outcrops were part of a pre-Inka ritual sphere that coalesced the Huarochirí communities and upon which the Inka created a macro-level Yauyos ethnic identity. However, Inka interaction with the outcrops was not made as an appropriation of local ritual, but rather as an attempt by the empire to insert themselves in the spaces that created and maintained local memory and identity. In summary, I argue that the Inka immersed themselves in these sacred spaces while negotiating their standing in Huarochirí and reinventing themselves within the pan-Andean ritualized landscape.

Legibility, rock outcrops, and plazas in Canchaje

The Rock Outcrop Complex in Canchaje shares a number of characteristics with the one excavated in Ampugasa. 1) The overall layout, characterized by a central large rock outcrop surrounded by a shapeless plaza that follows the orientation of the outcrop. 2) The outcrop façade contains curved steps associated with small structures of funerary function. 3) A position on one of the highest points of the mountain. Both sites are composed of two hilltops, and in both cases, the outcrop is located on one of these.

The Huarochirí Manuscript provides the best narrative of how ritual practices in the outcrops functioned. While not explicitly called outcrops, the Manuscripts speaks of ceremonial “mountain tops” during the Auquisna ceremony:

People run a race on their way to this mountain in accordance with the *yanca*'s instructions, driving their llama bucks. The strongest ones even shoulder small llamas. They scramble upward, each thinking, “I mean to get to summit first!” <margin, in Spanish:> [Which is where <Paria Caca> can be seen from.] The first llama to arrive to the mountain top was much loved by Paria Caca (Salomon and Urioste 1991:72).

If Canchaje was such a center, it is possible that surrounding communities may have run towards the site during Pariacaca's festivity, making it to the top. This could also suggest that during the race the people could have attempted to reach the top of the outcrop through the ravine and not the façade of the plaza. It also explains the quasi-circular movements that are required to reach the top of the outcrop, also mentioned in the Huarochirí Manuscript. While this is a preliminary interpretation, it highlights some of the activities that took place at the outcrop and may have differed from those in the plazas. Canchaje may have chosen as a center because of its relatively central position in the *waranqa* lands, while Ampugasa was marking a clear boundary among different *waranqas* and observed productive agricultural lands.

Canchaje has very limited evidence of a defined residential population before the Inka. The Manuscript describes a mount known as Acu Sica that was the main shrine of the Chaucarima *waranqa*. The description of the location of the site corresponds well with Canchaje. On this ritual hill the Chaucarima people came together to celebrate the festivities of Pariacaca. If so, Canchaje would have a multi-*ayllu* function, where different communities came together during the celebration. This could explain the differences with Ampugasa.

If I am correct in identifying the rock outcrop plazas as Yauyos local ritual shrines, then the next question to address is the relationship between the rock outcrops and the plazas in

Canchaje. The trapezoidal plaza adjusts to traditionally Inka-style layouts. The second plaza is semi-circular and its central feature is the presence of six rectangular stone pillars. These are a unique built feature in the Huarochirí landscape (Figure 7.36).



Figure 7.36: Panoramic view of the stone pillars in the Semi-Circular plaza of Canchaje (photograph by PASL 2011).

Sanhueza (2012) recorded similar stone pillars in the Inka Road section passing through the desert of Atacama, Chile. She argues that the process of *amojonamiento* or using stone-built features as markers along the extension of the roads served to identify both geographic and symbolic boundaries. In her interpretation, the pillars were *sayhuas*. One representation of *sayhuas* comes from Guaman Poma de Ayala, when referring to the Inka government. In the image corresponding to the “surveyors of this kingdom”, the drawing shows pillars that greatly resemble the Canchaje ones (Figure 7.37). However, this also opens new questions: why are they in the middle of a plaza? Why were only some of them part of the wall?

I have three potentially complementary hypotheses that could address this question. One possible interpretation could relate to the Chaucarima *ayllus*. Through his survey of colonial written sources, Espinoza (1997) identifies a total of seventeen *ayllus* (Table 7.1). While Espinoza carefully identifies where different *ayllus* were living in the early colonial period, he fails to analyze the actual origin and affiliation of each *ayllu*. The process through which *ayllus* were displaced is related to two specific processes: first, the adjudication of lands in the middle valley (Huamansica and Sisicaya) that date to the Inka incorporation; and second, the

establishment of toledan and post-toledan reduction towns during the early Spanish colonial period, where different communities were settled into gridded urban towns that didn't always align to their original community affiliation. I build the following argument based on the archival sources and conversations with informants during my fieldwork research.



Figure 7.37: A. Drawing from the state surveyors placing stone markers, according to the text, across the different provinces, towns and ayllus of the Empire (Det Kongelige Bibliotek Digitizing Guaman Poma's Nueva coronica y buen gobierno: <http://www.kb.dk/permalink/2006/poma/354/en/image/?open=idp468848&imagesize=normal>). B. Photograph of one of the stone pillars in Canchaje for comparison; note the similarity in form and size between both (photograph by PASL 2011).

Table 7.1: Ayllus and town distribution of the Chaucarima waranqa (based on Waldemar Espinoza Soriano 1997).

Towns	Lahuaytambo	Sunicancha	Huamansica	Lahuaytambo and Sisicaya	Huamansica and Sisicaya	Sisicaya
Ayllus	1. Pariapongo 2. Arirca	3. Sunicancha	4. Huamansica 5. Concha 6. Camarca	7. Lupo 8. Yampilla	9. Papano	10. Antaparco 11. Langa 12. Sisicaya 13. Checa 14. Chillaco 15. Andapocro 16. Chaucarimac 17. Chontay

In looking at these *ayllus*, we can identify some of them as foreign. Huamansica and Sisicaya were late additions into Chaucarima's jurisdiction, and the list of *ayllus* reflects names that are either of yunga origin (e.g. Antaparco, Sisicaya, Chillaco, Andapocro, Chontay), or were displaced from different *waranqas* (e.g. Langa, Checa). The *ayllu* Papano, which is also present in Huamansica, originates in the highlands, but its affiliation is not specified (Heggarty and Beresford-Jones 2011:59). In the town of Huamansica we find a similar situation: the *ayllu* Huamansica was local and probably settled in the middle valley, the *ayllu* Concha was part of the Checa *waranqa*, the *ayllu* Masca or Camarca likely came from the *general* area of Escomarca, the location of the mythical Anchicocha, and part of the Langasica *waranqa*.

Only six *ayllus* seem to be directly associated with the Chaucarima *waranqa*: Pariapongo, head of the *waranqa*; Arirca, which is now lost in Lahuaytambo and may correspond to the modern community of Laya, which moved to the middle valley; Sunicancha, which were reduced in the modern town of the same name; Lupo, which is also the name of the archaeological site just below the modern town of Santa Ana, in front of Lahuaytambo; Yampilla, which is originally an *ayllu* that came from Colcaruna in the initial wave of the Yauyos occupation of Huarochirí, but is today one of the only two communities remaining in Lahuaytambo; and Chaucarimac, currently a lost *ayllu*. I suggest these were the *ayllus* that were part of the Chaucarima *waranqa* at the time of the Inka incorporation of Huarochirí. Processes of ongoing waves of population movement were recorded in the Revisita de Sisicaya (Salomon, Feltham, and Grosboll 2009). Moreover, I have also found evidence of *ayllu* movement in waves and at different periods in the archival sources.

A late 16th to early 17th document from the Archbishopric Archive in Lima includes the origin story of two communities: Calagaya and Chatacancha in southern Huarochirí.⁹⁹ Gonzalo Pilcoguaman, head of the Lupo *ayllu*, and Geronimo Chuquimanta, head of the Yampilla *ayllu*¹⁰⁰, then residing in the town of Huarochirí, state both towns were made up of migrants or local *mitimaes*. According to their testimony, the lands originally belonged to the yunga people, who were expelled by a coalition of different *ayllus* then residing in the town of Huarochirí. Once the Yunga were expelled, these *ayllus* sent people to settle the newly conquered areas, which happened to be rich in agricultural land. The current residents were the direct descendants of these colonizers. This reference speaks to the mobility of the *ayllus*, and why some that were directly part of a different community could be found far from their lands by the time they were recorded in the Spanish administrative documents.

Going back to the stone pillars in Canchaje, if my analysis is correct, then it is possible that the reason there were six sayhuas, mojones, or pillars in the section of Canchaje that was built after the Inka incorporation was to mark the presence of the six local *ayllus*: Pariapongo, Arirca, Sunicancha, Lupo, Yampilla and Chaucarimac. In this way, the Inka would have maintained existing community links within the *waranqa*, recognized and maintained the ritual significance of the site as part of Pariacaca's cult, and positioned themselves as facilitating and sponsoring the activities that took place in the plaza, even when these activities were already existing ritual practices among the Chaucarima. Additionally, we should also consider the presence of local decorated wares in this area, which I do in the next section. I suggest that in

⁹⁹ ALL, Papeles Importantes, Leg.3, Exp.13, 1594-1617.

¹⁰⁰ Notice that Yampilla or Llambilla is currently the community name of the people of the lower half of Lahuaytambo; they are also the owners of the lands where Canchaje is located, suggesting that this movement of people from the town of Huarochirí towards the center of the province remained and was probably further fostered during the Inka period.

using specialized ritual vessels –and thus the only the decorated forms in Canchaje– the Yauyos were also integrating themselves into the Inka plazas. This makes the presence of these sherds at the base of one of the pillars rather compelling.

The second hypothesis speaks directly to the formal similarities between the sayhuas and the stone pillars. I investigate the potential change in the meaning of a formally similar culturally-embedded artifact from the LIP to the LH. As with the previous hypothesis, I contend that my second proposal also shows a clearly-defined case of incorporation local rituals into Inka-sponsored ritual spaces.

This explanation builds on the Manuscript and the only description that mentions a wall that, by its particular qualities, could be related to the one in Canchaje. The Manuscript describes how the ritual and pilgrimage to Mount Pariacaca starts. He talks about one specific ceremony through which *huacsas* are invested:

To first become a *huacsa*, people in fact perform a certain ritual. It's like this: a man of the Caca Sica *ayllu* functions as officiant for these ceremonies. From early times these officiants were only one or two people, and, as for their title, it was *yanca*. <margin, in Spanish:> [The master is called *yanca*.] This man observes the course of the sun <margin, in Spanish:> [That is, from the shadow that the wall casts in the sun.] from a wall constructed with perfect alignment. When the rays of the sun touch this calibrated wall, he [proclaimed] to the people, 'Now we must go'; or if they don't, he'd say. 'Tomorrow is the time.' Following this command, people go to Paria Caca in order to worship (Salomon and Urioste 1991:72).

It is possible that the partitioning of the walls has something to do with specific rituals that mark the beginning of the ritual pilgrimage to Pariacaca. If this interpretation is correct, the pillars would be marking observation points. It is not fully clear where the ritual specialist would have stood in Canchaje to make the observations; I speculate it would have been at the entrance of the transversal rectangular structure that divides the two plazas, but at this point I cannot substantiate this point.

Finally, the third model builds upon the previous one and directly speaks to the sacred landscape and the visibility mandate among sites in Huarochirí. I have previously argued that visibility among the sites –domestic or ritual– was paramount, and that the central visual contact point for the sites my team and I recorded in our survey was Cinco Cerros (see: p.136). During preliminary mapping of the site in 2013, my team and I documented a number of funerary structures with limited evidence of residential spaces. The site is considered pre-Inka, although no systematic archaeological research has been published (Figure 7.38).

The site of Cinco Cerros has been identified alternatively as Condorcoto, Pichqamarca, and Llantapa by different authors (Farfán 2010). All three sites appear in the Manuscript. Condorcoto is the mythical site of origin of Pariacaca and no author has provided a rationale to link this site to Cinco Cerros. I discard this hypothesis. Pichqamarca is first defined as an *ayllu* that lived on a mountain called Maca Calla, which overlooked San Damián, after having been expelled from Maca Calla by Pariacaca in punishment. The mountain-apu Maca Calla is said to have moved: “Maca Calla was just like a man, with a head, feet, and hands. So, after he made the head escape, the man settled again on five mountains in Llantapa and multiplied. We call the mountains where he settled, where he built the villages, Pihcca Marca. Maca Calla’s head exists in Pihcca Marca until today” (Salomon and Urioste 1991:128). Chase reads this myth as a cautionary tale against angering Pariacaca. Moreover, he thinks that the visibility of Cinco Cerros in the landscape reinforces this tale. I look at it as a manifestation of the Pariacaca myth and a sacred place that has other potential interpretations expanding on the one from the Manuscript.



Figure 7.38: Cinco Cerros, district of Antioquía (photograph by the author).

During my work in Lahuaytambo community members referred to stories about Cinco Cerros where the mountains are five brothers that either serve as couriers to Pariacaca or are his rivals in his pursuit of a southern female *w'aka* (Vichuca, in Santo Domingo de los Olleros). Taking all written and oral history into account, there is a direct connection between Cinco Cerros and Pariacaca. The number five is a central aspect of Pariacaca's myth and in colonial documents: he was born from five eggs, had five bodies, and then five sons. Cinco Cerros was also part of the everyday experience of the communities as a traditional herding route, and most questions about archaeological sites or sacred mountains were much sooner answered through a

Cinco Cerros story than any mention of Pariacaca. I was interested in investigating the connections between Cinco Cerros and the pillar-wall in Canchaje (Figure 7.39).

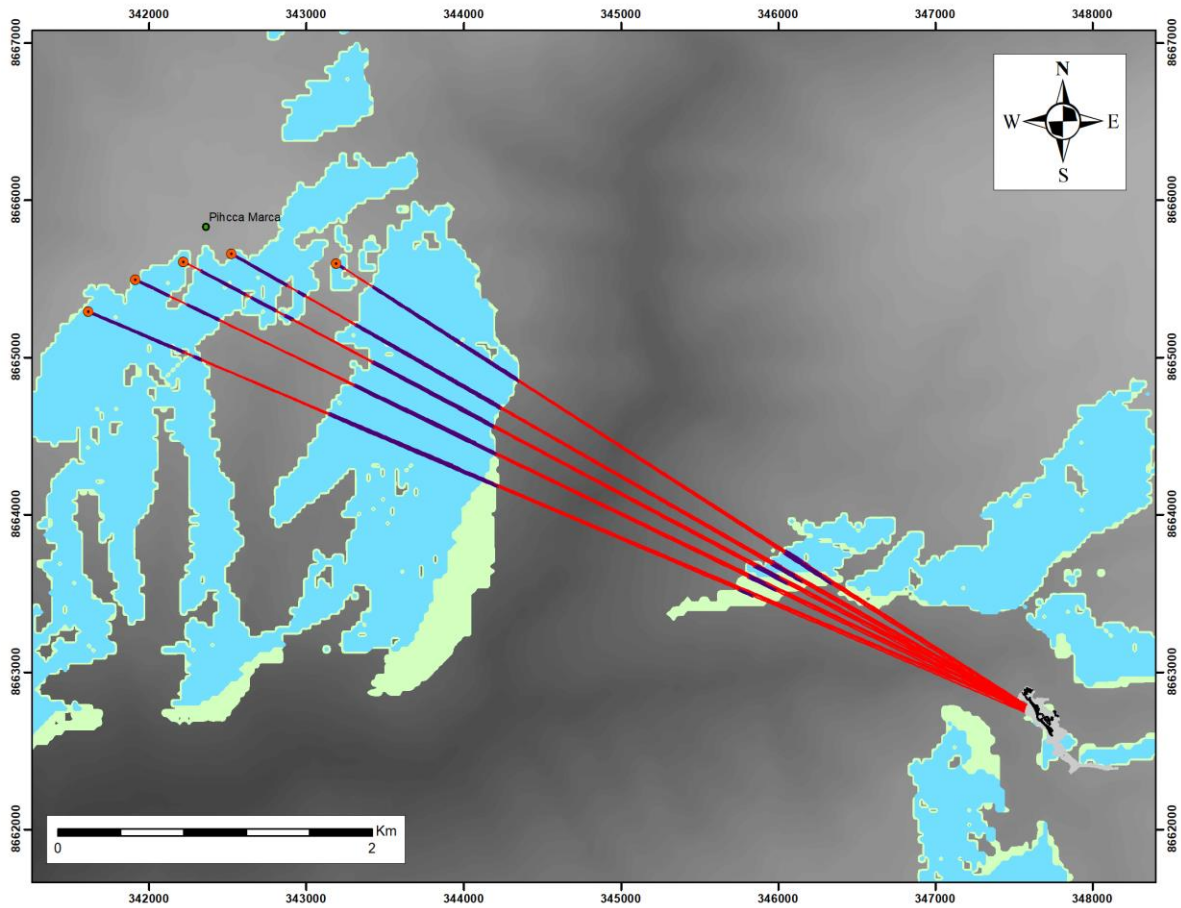


Figure 7.39: Viewshed analysis between Canchaje and Cinco Cerros.

I conducted viewshed and sightlines analysis between Canchaje and Cinco Cerros to qualify the visual experience my team and I had in the field. For the sightlines I used the spaces between the stone pillars, which were five, and directed the view towards each peak of Cinco Cerros. The red shows areas of no visibility while the purple shows visibility. Additionally, I conducted viewshed analysis from two different spots: the blue is the view from the entrance of the semi-circular plaza and the place where one first sees the pillars, the second one is a

composite view from the location of each pillar. Once again, this confirms a direct link with the five peaks of Cinco Cerros.

During the excavations at the base of one of the pillars we found no clear evidence of activities in the plaza, only a succession of clean floors. This opens a question I have not fully answered yet: were the standing pillars already in place when the plaza was built? Or were they built together with the plazas to highlight a common aesthetic between the people of Huarochirí and the Inka? I hypothesize that the construction of the only Inka plazas recorded so far in the region were attempting to link Inka ritual and public space with a ritually embedded local sacred place. My dates suggest that this was an ongoing process. The plazas both imbued themselves with the sacredness of the *w'aka* and controlled access to it, incorporating the Inka into community-building rituals.

Continuities in ritual: ceramics in Canchaje

The analyzed sample of sherds from Canchaje made up a total of 1,445 diagnostic fragments. Five fragments of colonial “vidriado” fragments were recovered, distributed between the Semi-Circular Plaza (Unit 8) and the attached room (Unit 7), which seem to be late 18th century and probably part of colonial herding in the site (Table 7.2).

Table 7.2: Distribution of sherds per excavation units.

Unit	Description	Count	Percentage
1	Trapezoidal Plaza	34	2.4%
2	Trapezoidal Plaza	13	0.9%
3	Orthogonal Complex	230	15.9%
4	Orthogonal Complex	40	2.8%
5	Rock Outcrop	709	49.0%
6	Rock Outcrop Plaza	263	18.2%
7	Room 1	122	8.4%
8	Semi-Circular Plaza	34	2.4%

The Rock Outcrop Plaza (U5) had the greatest quantity of fragments (n=709, 49% of the total count) with the plazas having a markedly less count of sherds (n=47, 3.3% of the total count in the Trapezoidal Plaza; n=34, 2.4% of the total count on the Semi-Circular Plaza). However, considering that the excavation of the Semi-Circular Plaza consisted of only a 3 x 3 m unit, the density of materials surpasses that of the Trapezoidal Plaza. I hypothesize that the plazas were likely thoroughly cleaned after their use, explaining the lack of associated materials. Conversely, I hypothesize that the Rock Outcrop was not cleaned in the same manner and, moreover, there is evidence that the structures at the Rock Outcrop were intentionally closed and abandoned, so that could account for the density of sherds (Figure 7.40).

In order to best compare the results from the materials recovered in Canchaje with those of Ampugasa I followed the same process and chose a sub-set of the total of sherds that was categorized with a greater degree of accuracy and confidence. I eliminated the colonial sherds from the sample since they were part of post-occupational levels. I also eliminated the production and non-vessel fragments so that I could have a good representation of the functional types of vessels in the different excavation units (

Table 7.3). The subset of the diagnostic vessel sherds was of 1,309 (91%).

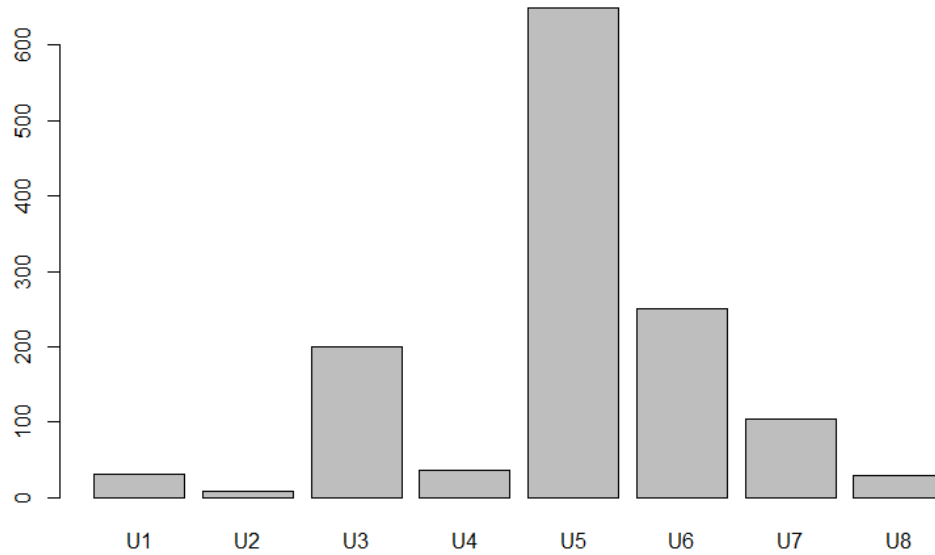


Figure 7.40: Distribution of ceramic sherds per excavation unit.

Table 7.3: Distribution of functional type per excavation unit.

	Abierta	Botella	Cantaro	Cerrada	Cuenco	No determinado	Olla	Otro	Plato	Tazon	Tinaja	Vaso
U1	3	0	1	12	0	13	2	0	0	0	0	0
U2	1	0	0	1	1	5	1	0	0	0	0	0
U3	10	0	4	22	15	100	46	0	1	0	0	2
U4	1	0	1	5	4	20	4	0	0	0	1	0
U5	38	1	18	98	74	234	169	1	3	4	5	4
U6	19	0	8	48	23	84	63	0	2	0	1	3
U7	9	1	0	15	5	54	17	0	0	0	0	3
U8	3	0	1	5	1	14	4	0	0	1	0	0

I then ran the same Chi-square pairing tests in the sample as with Ampugasa in order to investigate whether there were dependent variables. Some of the results were different between both sites. In the first place, there was not a significant correlation between the excavation units and the sherd types (p -value = 0.0885). In order to best edit these results, I modified the data to focus on the architectural context rather than the unit. When changing the parameters of the analysis the sample was distributed in the following way: Orthogonal Complex = 236 sherds (18% of the sample), Rock Outcrop Complex = 900 sherds (68.8% of the sample), Room 1 = 104

sherds (8% of the sample), Semi-Circular Plaza = 29 fragments (2.2% of the sample), and Trapezoidal Plaza = 40 sherds (3% of the sample). In this new classification, distribution and sherd sample were significantly correlated (p-value = 0.003889) (Figure 7.41).

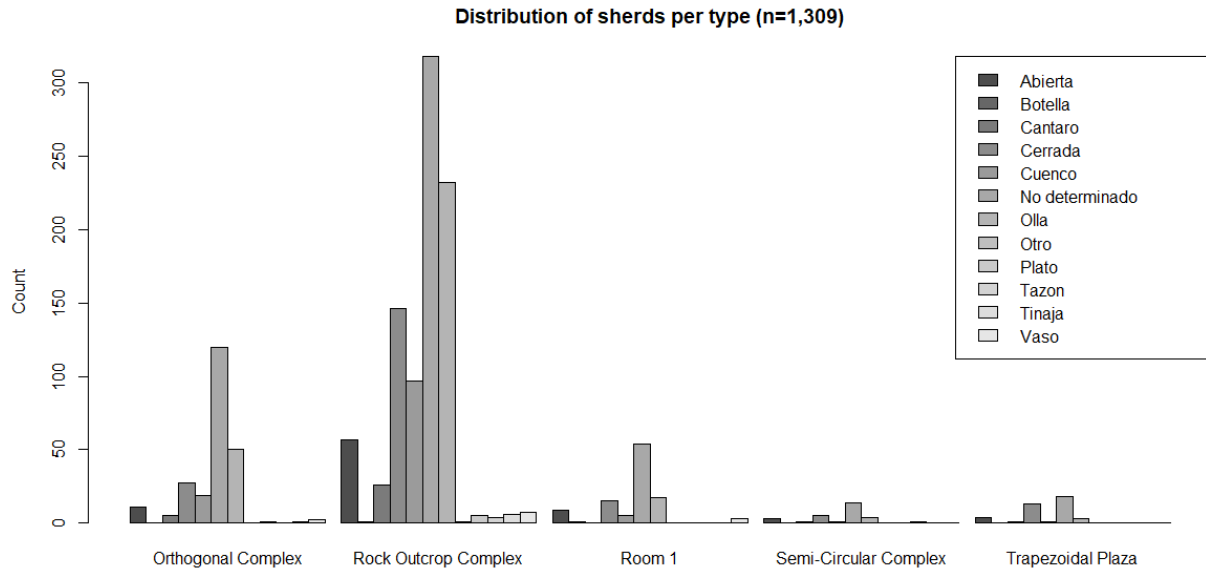


Figure 7.41: Distribution of functional type per site sector in Canchaje.

The most widely represented functional type were cooking pots (sherds identified as “Cerrada” could be either cooking pots or jars). Jars were less represented. Interestingly, the major conglomerate of sherds came from the Rock Outcrop and the Orthogonal Complex. I have argued that the plazas were likely cleaned, which is why so few materials were recovered. In comparison with Ampugasa, the Rock Outcrop of Canchaje has an astounding density of vessel sherds found. I argue that this confirms that the Rock Outcrop in Canchaje was intentionally closed as the plazas became the focal space of interaction. In closing the outcrop, the Chaucarima people took a lot of care, which supports abandonment was not sudden. This reading supports the idea that while the Inka recognized the sacredness of the outcrops as *w’akas*, they did pursue different strategies at the co-residential and local community levels. The *w’aka* of

Canchaje became tied to the plazas, nominally honored by the Inka, while at the same time co-opted into state-sponsored rituals.

I continued analyzing the potential correlations between selected pairs of the qualitative variables my team and I recorded during the analysis. The results showed that the following pairs were significantly correlated: excavation unit and firing (p-value = 0.000143), excavation unit and inclusions (p-value = 0.003727), excavation unit and primary decoration technique (p-value = 0.037775), and the type of vessel and texture (p-value = 0.0003787). The variables that are dependent on one another are consistently associated with the distribution of wares and decorative styles. This is a result unlike that of Ampugasa and suggests that there was a greater emphasis on the exclusivity of certain types of vessels in specific sections of the site.

In Ampugasa we found evidence of Inka-style ceramic sherds throughout the site. This was not the case in Canchaje where only 1 sherd could be identified as Inka-style. Unlike Ampugasa, however, we found more evidence of incipient decorative techniques in these sherds; a total count of 29 fragments. Paint on these fragments was very simple and without clear designs. Motifs are limited to bands, drips, and slip; the most common color is a dark shade of red, occasionally black or white. Distribution is general in most of the excavation units; sherds are only missing in units 2 and 4. However, there is a clear trend towards a larger representation in the units associated with the rock outcrop, making up over 70% of the decorated Yauyos-style fragments. The most interesting of the Yauyos-style decorated sherds are those with a mixture of incision, pinched, and digit-pressed lineal sequence. We found 5 fragments with this decoration: two from the rock outcrop, two from the room associated with the semi-circular plaza, one from the semi-circular plaza, and one from the orthogonal structure (Figure 7.42).

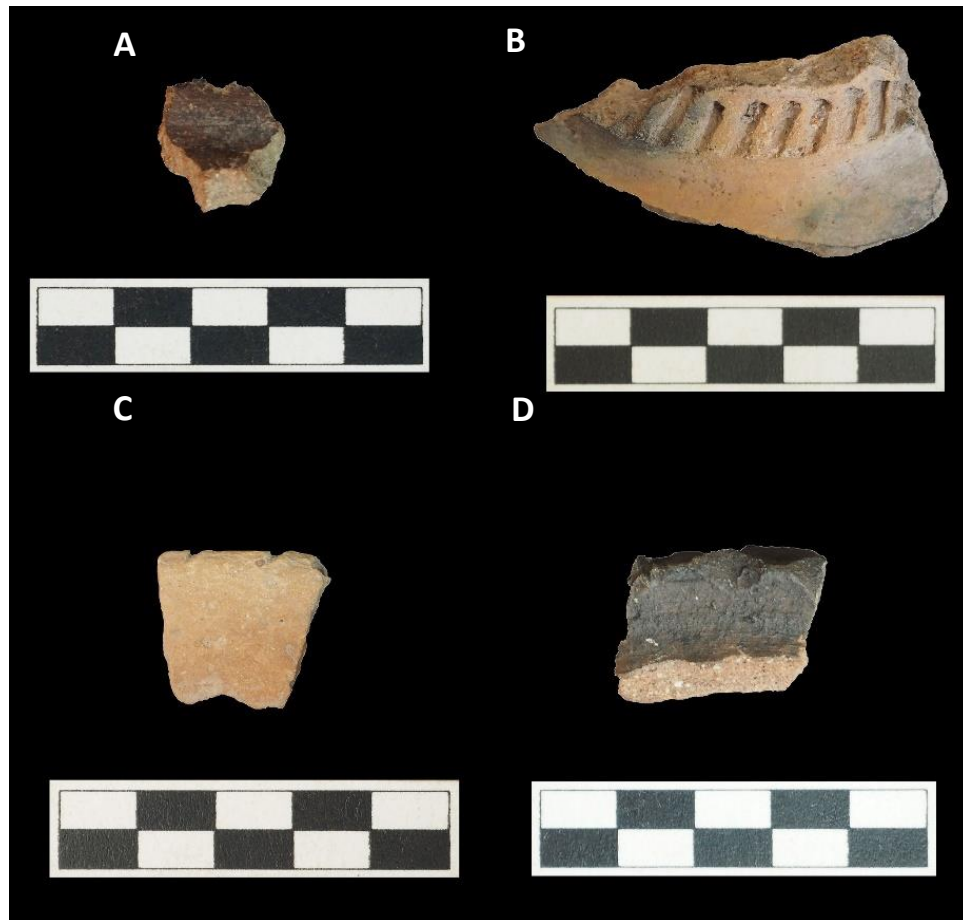


Figure 7.42: Examples of the Yauyos decorative style from Canchaje. A. Fragment C-3-571.1-20, recovered from the rockfall of the patio of the orthogonal structure. B. Fragment C-5-548.1-05, recovered from the steps of Trench 2 on the rock outcrop. C. Fragment C-6-780.1-15, recovered from the rock and plaster fall from Trench 1 on the outcrop. D. C-8-681.1-01, recovered from one of the levelling fills at the base of the stone pillar in the semi-circular plaza (photographs by author).

I have compared the results of these decorated sherds with Feltham's (1983) collections from the survey of the middle Lurín valley and Chase's (2016a) survey of the San Damián region. I have not found comparable fragments in either case. I also used the unpublished reports from Thomas Patterson's 1968 expedition up the Mala river. None of the ceramic drawings resemble the ones I recovered. However, there is a letter appended to the end of John Thatcher's report dated May 28, 1969, entitled "A Seriation of the Ceramics from Huarochirí", about samples recovered by the author and Nicholas Hellmuth south of the towns of Huarochirí, Huanchac, and Huancata which reads:

“Dear Tom

Relvant [sic] notes on Huarochirí collections:

PV50-16

Some EH-looking sherds, with the pinched type rim found from the Mantaro to

Ayacucho

PV50-105

A notched rim like my early EIP materials

PV50-103

Stamp circles, large (1.5-2.5 cm) around neck base, seems to be MH-LIP idea same as Mantaro, but execution different; possibly a bit earlier (?) than Mantaro manifestations

PV50-208

Many sherds similar to my Tunanmarca material (A.D. 1535-1650), but also has many large cane-stamps, is likely mixed

PV50-209

Appears like Pv50-105; most sherds appear EH-EIP like, but also the stamp circles—circles could be from intrusive or mixed materials—but many belong as the stamp circles here are around the rim of an enclosed bowl such as occurs in the Highlands from Jauja to Ayacucho

Perhaps these notes will be of some use to John. I think that 1:100,000 scale map is with the box of material that is coming up with some Peace Corps luggage the end of June.

Dave”¹⁰¹

This letter comes with a couple of drawings that reflect the description of the sherds from Canchaje (Figure 7.43). However, its early dates caught my attention as my dates and analysis of other materials in Canchaje did not suggest early contexts. In the notes the sites are identified as follows: PV50-103: unnamed large site in Huancata; PV50-105: unnamed large hilltop site in Huancata; PVV50-208: site of Llumpo, described as large ridge top site, in San Lorenzo; PV50-209: unnamed large ridge top site in San Lorenzo. Not all the descriptions were equally detailed.

¹⁰¹ There is no clear mention in the field notes about who “Dave” is. Looking through Earle’s and D’Altroy’s publications on the Mantaro Valley Project, two students are identified as David Bulbeck and David Hearst. Either of them could be the author of the letter.

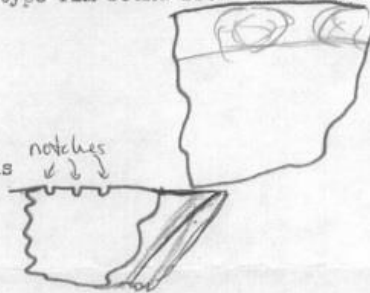
Dear Tom

Relevant notes on Huarochiri collections:

PV50-16
some EH-looking sherds, with the pinched type rim found from the Mantaro to Ayacucho

✓ PV50-105
a notched rim like my early EIP materials

Open bowl form →



PV50-103
stamp circles, large (1.5-2.5 cm) around neck base, seems to be MH-LIP idea same as Mantaro, but execution different; possibly a bit earlier(?) than Mantaro manifestations

✓ PV50-208
many sherd similar to my Tunanmarca material (A.D. 1535-1650), but also has many large cane-stamps, so likely mixed

✓ PV50-209
appears like PV50-105; most sherds appear EH-EIP like, but also the stamp circles--circles could be from intrusive or mixed materials--but may belong as the stamp circles here are around the rim of an enclosed bowl such as occurs in the Highlands from Jauja to Ayacucho

Perhaps these notes will be of some use to John. I think that 1:100,000 scale map is with the box of material that is coming ~~out~~ up with some Peace Corps luggage the end of June

Paul

Figure 7.43: Letter attached to the end of John Thatcher's 1969 ceramic seriation report.

Hellmuth describes PV50-103 as two hills joined together by a shallow draw (Figure 7.44). The north hill had a large “boulder area” associated with a “burial crypt area” characterized by structures roofed with slabs. The south hill had “lots of stone which has here when the soccer [sic] field was cleared of ruins” associated with a human jaw that suggested to the author that there were more funerary structures. Hellmuth also observed a stairway leading to the upper part of a rock outcrop (Figure 7.45). Both the description and the sketches suggest similarities with Canchaje, except for the addition of the plazas in the latter. These similarities could be correlated to the presence of such distinctive ceramic styles.

PV50-105 does not include a sketch but the description reads “PV50-105 covers the top and upper [sic] slopes of a 20 m. high hill which rises out of an otherwise rolling plateau” in poor preservation. At the top of the site Hellmuth mentions several large boulders although there were no observable burial crypts. Some of the structures were built against the boulders.

PV50-208 (Figure 7.46) and PV50-209 (Figure 7.47) are probably two components of the site of Llumpo. The site possessed three peaks surrounded by structures and the author hypothesizes that there could have been funerary areas attached to the peaks. There was little architecture on top of the hill, with most on the eastern slopes.

Finally, the only reference I was able to find in the notes about site PV50-16 was in John Thatcher’s seriation. The site is dated to the Early Horizon and the earliest period pottery in a site near Huarochirí where 95 fragments were collected. Through his seriation Thatcher also dates site PV50-105 or Cotaypampa possibly to the Early Intermediate Period, and PV-103 to the Middle Horizon. He does not date Llumpo.

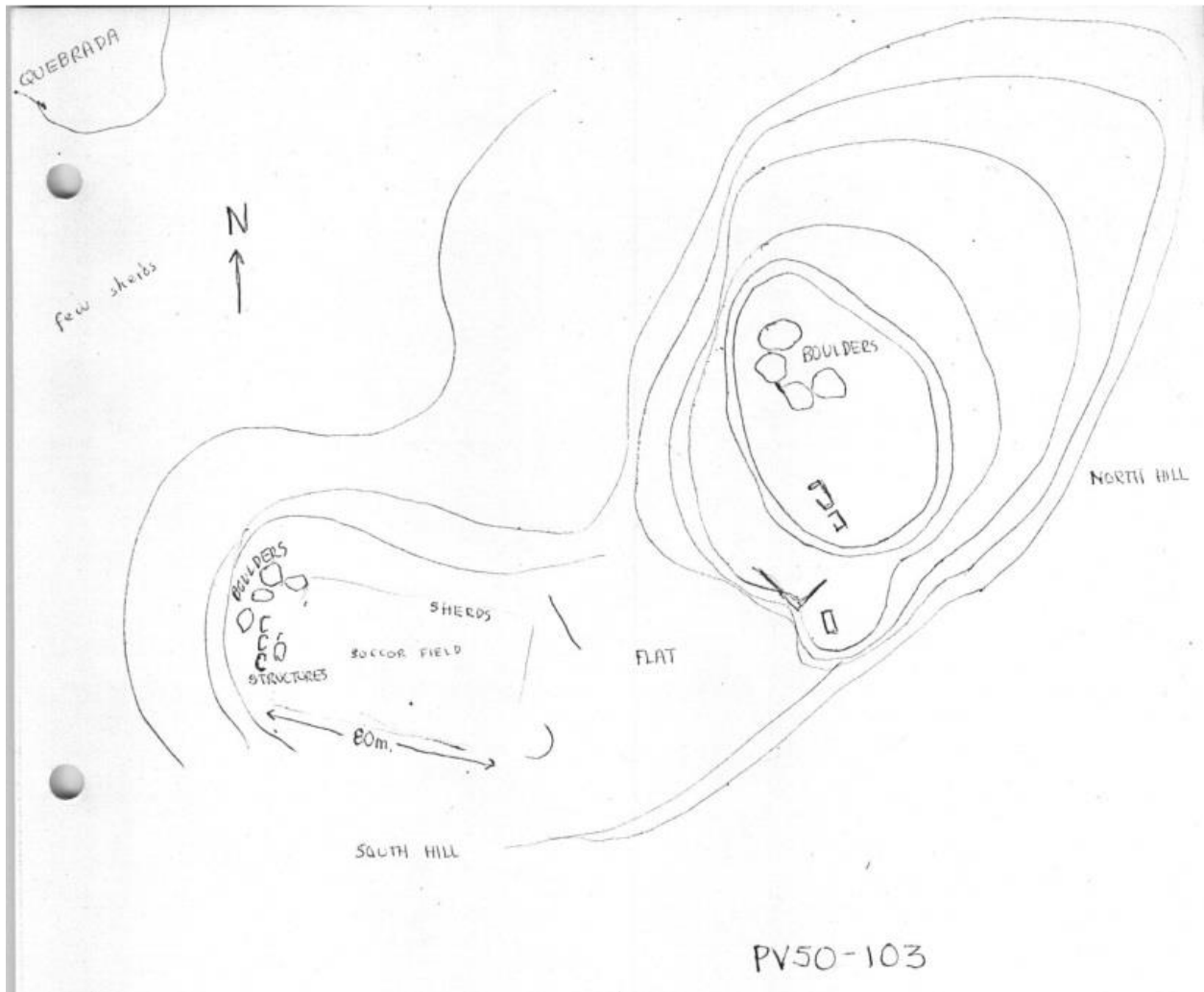


Figure 7.44: Nicholas Hellmuth's 1969 sketch of site PV50-103.

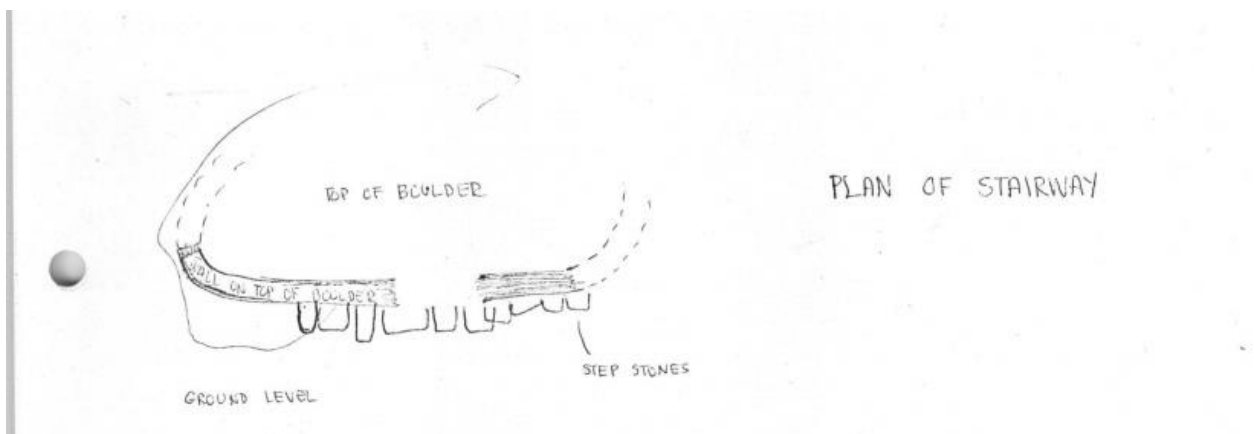


Figure 7.45: Nicholas Hellmuth's 1969 sketch of the rock outcrop and stairway in PV50-103.

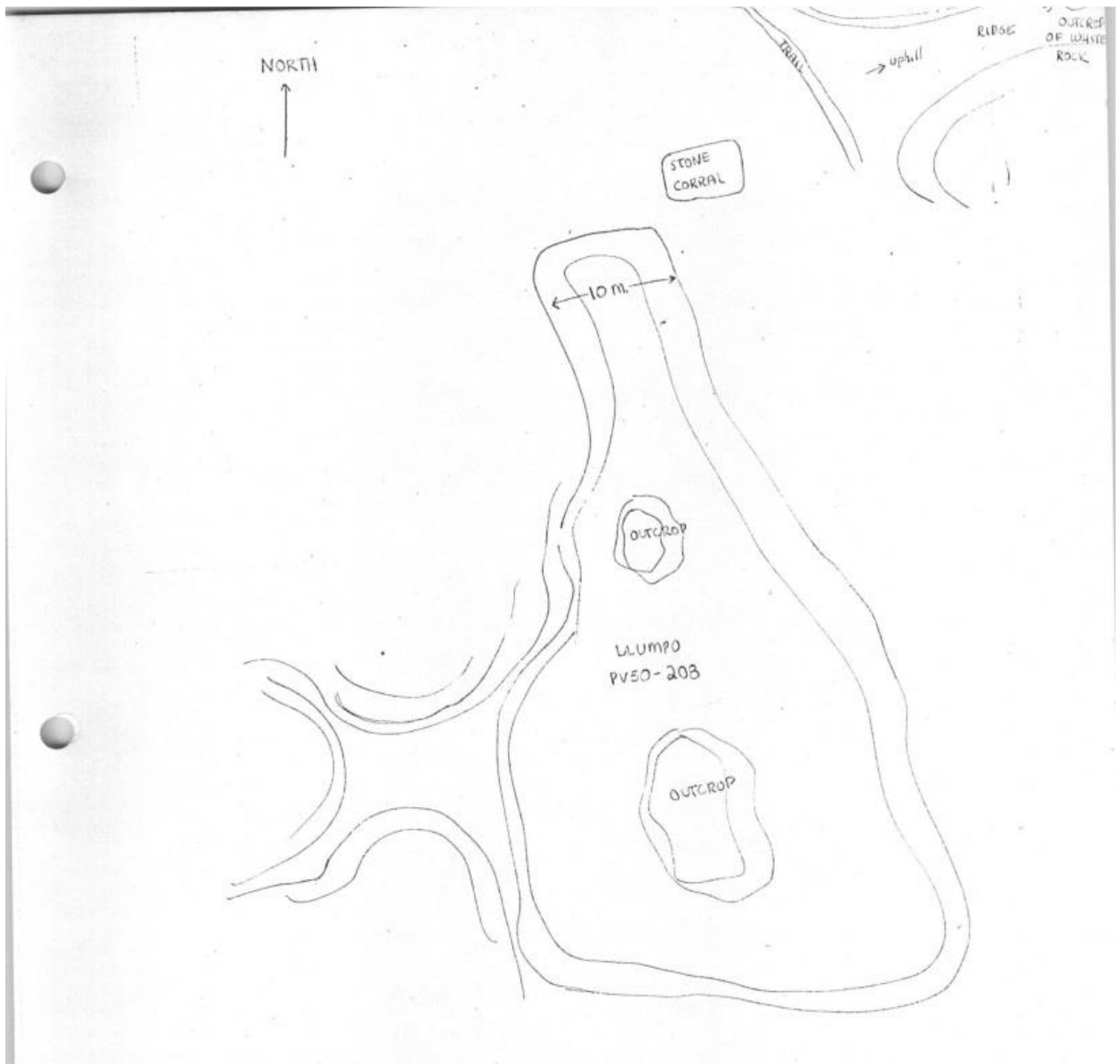


Figure 7.46: Nicholas Hellmuth's 1969 sketch of site PV50-208.

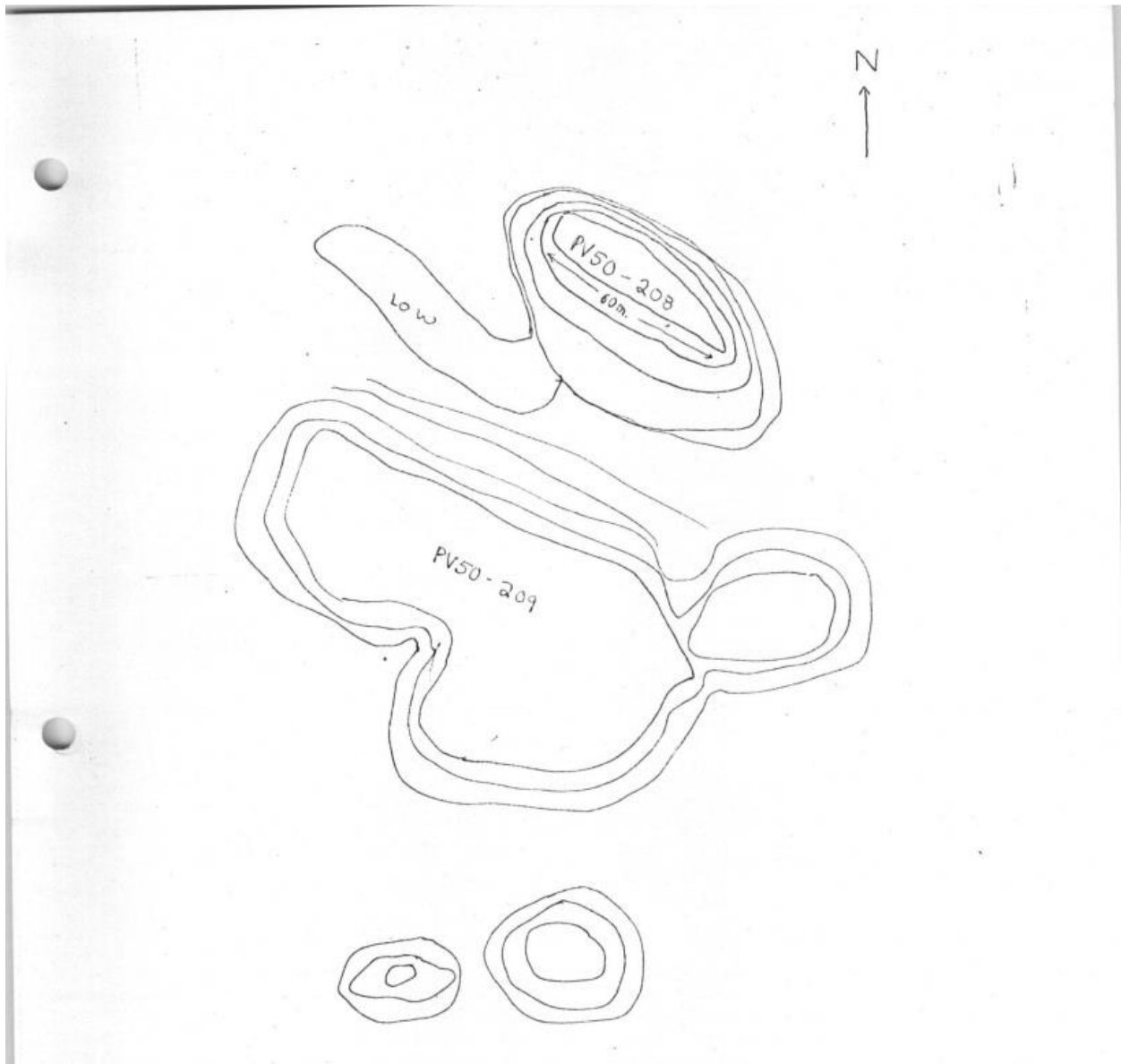


Figure 7.47: Nicholas Hellmuth's 1969 sketch of sites PV50-208 and PV50-209.

Building on this comparison it is possible that the pinched, stamped, and incised sherds were part of a ceramic tradition that pre-dated the LIP period. It is not clear why they were found in Canchaje: were they stylistic archaisms? Or were they an example of a continued ritual style? It is important to note that we have not recorded these styles in the domestic settlement of Ampugasa and that the sites recorded during Patterson's expedition had a similar layout to Canchaje, emphasizing the role of the rock outcrops as central to the site. The fact that some of

these sherds also appear in the Inka-period dated plaza suggests artifacts used during the ceremonies at the outcrop were incorporated into the activities performed in the Inka plazas. It also reopens the question of whether the Inka built the plaza and then added the pillar wall or whether they built the plaza to encompass a feature that was already present.

The “undetermined” decorated fragments are a more heterogeneous group than in Ampugasa, and from the style alone it is not possible to directly relate them to any type of Late Horizon style. I identified 24 fragments in this category. The painted decoration is as non-defined as the case of the Yauyos sherds, with lines and/or bands, squirts, and slip making up a total of 13 sherds. The variability of decoration could potentially reflect the varied material culture of the different *ayllus* that participated in the ceremonies of Canchaje. Not all incisions and impressions match the decorations in the Yauyos style either; two of the fragments found at the outcrop do replicate the incisions in the lip pattern discussed above. Out of the 11 sherds with this type of decoration, 8 were recovered in the rock outcrop, 1 in the orthogonal complex, and 1 in the room associated with the semi-circular plaza. Consistently, the major variability of styles came from the outcrop suggesting there were specific vessels used in ritual practices in this area (Figure 7.48). Interestingly, the decorated sherds were present in both orange and brown-color wares which matches the results from Patterson’s expedition.



Figure 7.48: Examples of the Undetermined decorative style from Canchaje. A. Fragment C-3-571.1-19, recovered from the rockfall of the patio of the orthogonal structure; notice a horizontal incised line at the base of the neck and the diagonal incised line above it. B. Fragment C-5-535.1-04, recovered from the surface of Trench 2 of the rock outcrop; notice the horizontal line across the fragment. C. Fragment C-7-512.2-04, recovered from the surface of Room 1 near the semi-circular plaza; notice the impressed circles on the exterior face of the fragment. D. Fragment C-5-545.1-07, recovered from the surface of Trench 2 of the rock outcrop; notice the incised rectangular-like shape on the body. E. Fragment C-5-640.1-03, recovered from the rockfall of Room 2 of the rock outcrop; notice the incised line at the base of the neck and the stepped incision above it. F. Fragment C-6-780.1-16, recovered from rock and plaster fall of Trench 1 of the rock outcrop; notice the incised “x” (photographs by author).

Summary: Yauyos and Inka and the waranqa level

The main argument throughout this chapter is that Canchaje was originally a ritual emplacement closely linked to the mythological origins of the Chaucarima *waranqa*, a macro-*ayllu* level shrine through which the *waranqa* enacted and maintained their relationship to Pariacaca and standing among the other communities. Building back into the concept of legibility, there is a pan-Andean understanding –more so among highland groups– that looks at rocks of different types –natural outcrops, carved boulders, idols– as avatars of their original ancestor, their tutelary deity. While there may be differences in the syntax and semantics of how the Inka saw the outcrops and how the Yauyos did, they were part of the same ritual language

that was mutually familiar between them. For the Yauyos these outcrops were probably the place of interaction through which they re-enacted and re-affirmed their own historical consciousness. In other words, they were the places where they performed and negotiated their relationship with other communities descended from Pariacaca. The Inka were not incorporated into the site as invaders but rather as another kin group.

The plazas were a later addition to the site. Thinking back to the issue of the timing of the Inka expansion and the dates of the site (O, p.77), we can speculate that there were at least 10 or 20 years between the Inka incorporation of Huarochirí and the construction of the plazas. The close spatial relationship between plazas and outcrops suggests an attempt to imbue state-sponsored ritual spaces with local value. I interpret the contexts recorded at the outcrop as a progressive and intentional closure as the ritual center of the site was moved into the plaza. However, there was not outright rejection of the practices associated with Pariacaca's worship but rather a channeling of them through the plazas, Inka-style spaces.

There is a difference between ritual spaces, however, that harken back to local vs. Inka ritual: the outcrop was a place of worship, associated with funerary contexts, and probably the scenario of races, dancing, and performance. The plazas were associated with storage areas, feasting, and commensal politics. The performance to observe in the plazas is that of Inka power and luxury and the way in which community links of reciprocity are created in different parts of their provincial Empire.

I propose that the Inka had a stronger impact and investment in mediating the ritual spaces of interaction among Huarochirí communities (Canchaje) than in residential-site rituals (Ampugasa). So far, I have only analyzed ceramic and architectural remains, which are the canonical markers of Inka presence in the provinces used consistently by scholars. There is an

impact at both sites, however, upon the way in which communities are conceptualized. There is a reinforcement of boundaries and formalization of spaces of interaction in a manner that the peoples of Huarochirí had not fully pursued before. In Ampugasa this materialized as a shift in the logics of domestic life from aggregations of families around patios to well-defined compounds. In Canchaje this led to the moving of ritual practices to the plazas while the outcrop remained a venerated and recognized *w'aka*.

The spatial analysis of emplacement and material distribution in Canchaje suggests that while the outcrop was never abandoned, it was slowly becoming secondary to the plazas. It is not clear, however, that Canchaje was fully built by the time that the people of Chaucarima were moved to the Spanish reduction towns. In looking at the materials associated with specific ritual emplacements we find that at the outcrop the main elements positioned in ritual contexts are varieties of cobbles and lithic artifacts whereas the Inka areas show their traditional emphasis on storage and feasting. Moreover, many of the ceremonies and rituals described in the Manuscript could be partly immaterial since dancing and racing would not leave a strong mark on the material record. In the next section I will further this argument by an in-depth comparison of the materials recovered from Ampugasa and Canchaje.

CHAPTER 8

CONTEXTUALIZING INTERACTION: COMPARISONS BETWEEN AMPUGASA AND CANHAJE

The previous two chapters presented excavation data focused on two scales of ritual and interaction: intra-settlement ritual and daily practice at Ampugasa and intermediate-scale ritual honoring Pariacaca and the production of supra-local identity among the Chaucarima people from Canchaje. I investigated the presence of Inka material culture at both sites and proposed a model to account for their distinct distributions as correlates of correspondingly distinct interactions among the peoples of Huarochirí and Inka imperial agents and institutions.

In order to investigate how the Inka managed the newly incorporated province of Huarochirí, I discussed two standard markers of Inka presence in provincial settings throughout the Andes: ceramics and spatial design (layout and masonry). In doing so, I attempted to investigate the role of standardization of use of Inka-style canonical artifacts and spaces. In the case of ceramics, the distribution of vessels in the domestic level seems to be limited to ritual spaces that were not the scenario of constant public display, in particular burial contexts that dated to the LIP. In the case of Canchaje, as part of structures associated with displays in the plazas, such as feasting events and storage units. This distribution could be related to what Tamara Bray (2018) calls “the work of objects in the imperial Inca project”. When focusing on the aesthetic of Inka-style vessels in provincial settings, Bray argues that their distribution was not only a consequence of a specific imperial design, but rather a way of enacting a worldview and instilling it in the minds of subject populations. In this manner: “Together with the bodies this imagery adorned, the visual design system of the Inca helped to enact a material-semiotic of

power that foregrounded the significance of ancestry and origins in important commensal contexts” (Bray 2018:253). In other words, if the ceramic vessels can be interpreted as an embodiment of the Inka, then the analogy of the Inka feeding people -storing for feasting- or honoring the dead -through its inclusion in LIP funerary contexts- is part of a process in which the Inka are becoming part of the social practices through which local kinship was built.

In the case of the architecture, I found no observable difference in the masonry patterns and building technologies at either the residential or shrine level. Inka technological insertions are present in the layout: domestic space is moving to reinforce the bounded quality of domestic life in Ampugasa and adapt it to Inka standards. This change is significant, as it brings local architecture closer to the model of Inka *kanchas* (see: Gasparini and Margolies 1980) from Cusco: bounded domestic spaces connected through internal patios and with a single access; the new rectangular compounds from Ampugasa follow this general concept. On the other hand, while in Canchaje the plazas are supplanting the outcrop as the central space of ritual enactments while still drawing from the power and agency imbued in the outcrop. Even in these shifts, Inka architecture is grounded on local worldviews. Standardization, therefore, is built on the existing variability through a negotiated incorporation of local into state and vice-versa. While the Inka are slowly moving into Huarochirí some of the characteristic institutions and material forms we see in other regions, it seems that they are doing so in negotiation with existing local forms that had served an analogous function. This slow pace and accommodation on the part of the empire could be a consequence of the political moment of Inka expansion when they arrived in Huarochirí, as I previously discussed (see: p.86).

This chapter presents the results of the analyses carried out on the archaeological materials recovered from excavations at Ampugasa and Canchaje. In the first section I focus on

the results of AMS radiocarbon dating as they relate to my hypothesis and the interpretation of material culture. Second, I present the results of analyses focusing on stable isotopes in human remains, zooarchaeological analysis, flotation and residue analysis, malacological analysis, and p-XRF analysis on lithic artifacts. Overall, the findings show that Inka performance of political control in Huarochirí focused on the standardization of ritual spaces rather than the content of the rituals in themselves. In other words, ritual paraphernalia and practices were incorporated into Inka ritual spaces. Finally, I discuss these results harkening back to the description of ritual practices proposed in the previous chapters and relate it to the concept of legibility (sensu Scott 1998) as an avenue of negotiation between imperial policies and local agency. I take a comparative view when possible and relate these results to the colonial written record—in particular the Huarochirí Manuscript—and ethnographic research. It is important to note that the observations drawn from these analyses are built upon a very small sample—the targeted excavations in two sites—and therefore are preliminary in nature. Future research and further excavations are needed in order to fully verify or negate the hypotheses presented in the following pages.

AMS dating

In 5, I discussed the chronology of the LIP and LH in the Lurín valley, and problems of chronology during the LIP and LH generally, (see: Chapter 5, p.102). Relative dating of this long sequence is complicated by a number of factors, including a lack of baseline for local Lurín Yauyos material culture, including ceramics and architecture, which limits our ability to date sites from surface materials and layouts.

In order to address the limitations of relative dating in Huarochirí, my research prioritized radiocarbon dating. An accurate dating of contexts in Ampugasa and Canchaje was limited for the lack of stratigraphic depth of the units excavated. Domestic contexts in Ampugasa with a slightly deeper sequence were still defined by architectural fills suggesting refashioning rather than multiple occupations of single spaces (6, p.171). Stratigraphy in Canchaje is shallow as well, even though we registered succession of floors. This may be a consequence of the ritual focus of the site (7, p.249). Floors were not deep since constructions were close to the bedrock and even those prepared with clay were not well preserved.

In order to complement stratigraphic observation, I selected samples from different sectors of the site to conduct AMS Radiocarbon dating at the W. M. Keck Carbon Cycle Accelerator Mass Spectrometry Laboratory at the University of California, Irvine. The analysis was directed by Dr. John Southon. I sent a total of 18 samples; of this total, 4 faunal remains yielded no results as it was impossible to extract collagen from them and one date from organic residue did not provide positive values. The three dated shell samples will be reported on in the next section.

In the following table (Table 8.1) I present the values of the remaining ten dates. The dates are calibrated through OxCal 4.3.2, reported with a 68.2% one sigma and 95.4% two-sigma confidence in BCE/CE. The median date for each measurement is also reported. For calibration I used the SHCal 13 atmospheric curve which corrects limitations of IntCal13 for the Southern Hemisphere. I do not provide an average of both calibration curves because Huarochirí is not part of the mixed area (Hogg et al. 2013; Marsh et al. 2018).

Table 8.1: AMS calibrated radiocarbon dates for Canchaje and Ampugasa.

Name				Unmodelled (BCE/CE)						
	Site	Location	Description	from	to	%	from	to	%	median
R_Date C-28	Canchaje	Unit 5	Residue	1321	1395	68.2	1315	1401	95.4	1341
R_Date C-29	Canchaje	Unit 6	Residue	1297	1384	68.2	1287	1391	95.4	1350
R_Date A-10	Ampugasa	Unit 4	Bone	1305	1389	68.2	1300	1392	95.4	1349
R_Date A-11	Ampugasa	Unit 4	Bone	1318	1391	68.2	1306	1396	95.4	1344
R_Date C-22	Canchaje	Unit 5	Corn cob	1325	1398	68.2	1319	1404	95.4	1342
R_Date A-18	Ampugasa	Unit 5	Residue	1418	1440	68.2	1409	1446	95.4	1428
R_Date C-21	Canchaje	Unit 5	Corn cob	1430	1445	68.2	1420	1450	95.4	1437
R_Date A-20	Ampugasa	Unit 1	Residue	1456	1497	68.2	1450	1617	95.4	1481
R_Date C-27	Canchaje	Unit 3	Residue	1455	1619	68.2	1450	1627	95.4	1516
R_Date A-17	Ampugasa	Unit 1	Corn cob	1509	1627	68.2	1500	1635	95.4	1558

The dates from both sites are mixed which supports the hypothesis that they were in use at the same time for at least part of their occupations. There seems to be continued use between 1331 and 1558 (taking the medians reported in the previous table) (Figure 8.1).

When looking at the data in detail and the breaks between the dates and using 1-sigma reporting, at least three groups are visible: first, a range of dates between 1300-1400 calCE that correspond with the late LIP. These dates are distributed between the Rock Outcrop in Canchaje and the Funerary Area in Ampugasa. We were unable to get accurate dates for the Rock Outcrop in Ampugasa. However, given the consistent association between the rock outcrops and the funerary structure in Huarochirí, I suggest that the Rock Outcrop functioned as the mortuary and ritual center of the site. Consequently, the dates so far confirm the early use of rock outcrops – *w'akas* in my approach – by the people of Huarochirí.

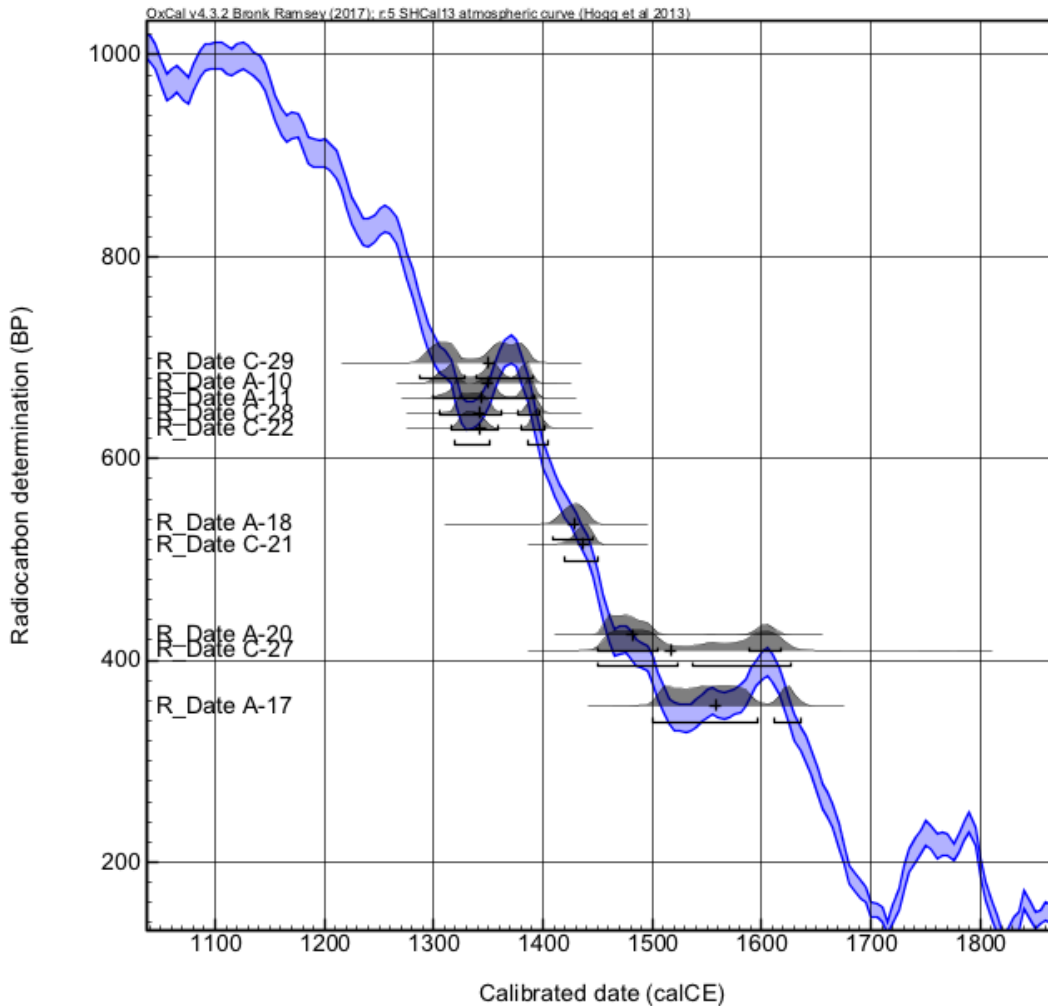


Figure 8.1: Calibrated radiocarbon dates from Ampugasa and Canchaje. Graph from Oxcal v4.3.2.

The second break in dates is in the 1400-1450 calCE intersection, which likely represents the intersection between the LIP and LH in the region. The date from Ampugasa comes from the Circular Structures which I have identified as the original residential occupation before changes during the LH. The date in Canchaje comes from the Rock Outcrop, which is consistent with my proposal of slow abandonment.

Finally, the third break is between the 1450-1600 calCE mark, which dates into the LH and possibly Early Colonial period. The dates from Ampugasa come from the Rectangular Residential Compounds confirming the LH shift towards more separation in domestic life. The

date from Canchaje comes from the Orthogonal Complex, which is a proxy for the plazas as they functioned together. This sample comes from residue on one of the jars recovered from the storage unit, confirming that the date speaks directly to the period in which the plaza complex was in use. These dates fully reflect my interpretation of the sites' occupation.

While the sigma on the dates are very close together for the period under study, it is important to note that the architectural and ceramic analysis previously discussed support the chronological break of both sites. This chronology remains preliminary as more dates are needed to have a greater degree of certainty. In the next year further excavations should focus on investigating potential differences in dates among the different floors in order to confirm whether the occupation was longer or if the floors were cyclically cleaned and refurbished. The dates correspond to the analysis of the relative dating indicators, and with the stratigraphy recorded during the excavations.

Comparative material analyses: ritual and legibility in Ampugasa and Canchaje

In this section I present a summary of the results from the material analyses carried out of the collections recovered from Ampugasa and Canchaje. I present both the results from comparisons between the sites, and from the local material culture with Inka-style artifacts. This chapter directly addresses my second research question: if local ritual practices and places were still in use during the Inka period, was there a shift in the ritual paraphernalia associated to them? Specifically, my focus is on the resignification of specific artifacts and materials, abandonment or incorporation of new artifacts during the Inka-period. Detailed analyses reports are found in the Appendices. I focus on the results of isotope analysis on human remains from Ampugasa, distribution and taxa identification of faunal remains, distribution and taxa identification of

botanic remains through soil flotation and residue analysis, distribution, taxa identification and absolute dating of shell remains, and p-XRF analysis of a sample of lithic points from Canchaje.

*Stable isotope analysis*¹⁰²

Our excavations in Ampugasa recovered four funerary contexts; two of these were incomplete secondary contexts and one had infant burials that were in poor preservation and therefore would be impossible to date through the bones. The core of the bioarchaeological analysis consisted in the individualization within each context, identification of biological sex and age at the time of death, and the paleopathology analysis. Standard bioarchaeological techniques were used in this study (see: p.68). The specific distribution of these morphological traits was presented above (Chapter 6). Consequently, in this section I focus on the results of the isotopic analysis carried out in sampled individuals from Burial 1. I focus on diet, locality, and health. Since we do not have a comparable sample from the site of Canchaje, I present a limited sample from the site of Pueblo Viejo-Pucara; I excavated this sample in 2007 as part of my Bachelor's thesis.¹⁰³

¹⁰² The bioarchaeological analysis and sample selection was carried out by M.A. Martha Palma (Arizona State University). Lic. Ana Valdivia (Universidad Nacional Mayor de San Marcos) recorded non-metric traits in teeth. The stable isotope analysis was carried out at the Vanderbilt Bioarchaeological and Stable Isotope Lab in Nashville, TN. The following section is based upon Palma's final report.

¹⁰³ I thank my undergrad and master's thesis adviser, Krzysztof Makowski from the Pontifical Catholic University of Peru, for giving his permission to export these samples, conduct isotope analysis, and use them as part of my dissertation. Tiffany Tung from Vanderbilt University carried out the analysis at no cost for me under her own research grant as part of the final project for her Bioarchaeology graduate seminar in 2013.

We conducted carbon and nitrogen stable isotope analysis on a sample of 8 teeth and 4 bones sampled from the funerary context and selected from different individuals.¹⁰⁴ We tried to sample the same type of tooth to confirm that we were testing different individuals from the comingled burial. The bones yielded no results as it was impossible to extract collagen from them.¹⁰⁵ The distribution of the sampled teeth was as follows (Table 8.2):¹⁰⁶

Table 8.2: List of tooth samples sent to the Vanderbilt Bioarchaeological and Stable Analysis Research Lab at Vanderbilt University for stable isotope analysis.

Sample	Tooth description	Individual's age	Sample Weight (g)
MU-005	1 st inferior left molar	18-25	1.1
MU-006	1 st inferior left molar	8	1.6
MU-007	1 st inferior left molar	6-7	1.8
MU-008	1 st inferior left molar	16-18	1.7
MU-009	2 nd inferior left molar	24-30	1.4
MU-012	1 st inferior left molar	7-8	1.8
MU-013	1 st inferior left molar	18-20	1.7
MU-014	1 st inferior left molar	18-20	1.6

The main goal of isotopic analysis was to investigate the daily diet of the individuals in Ampugasa. Specifically, I had access to a comparative sample from the site of Pueblo Viejo – Pucara, a LH site built by Huarochirí migrants in the lower Lurin Valley. Through this analysis, I wanted to investigate differences in consumption practices before (Ampugasa) and after (Pueblo Viejo – Pucara) Inka incorporation.

Oxygen isotopes determine consumption of meteoric water among individuals. The signature of meteoric water is determined by geographic and environmental local conditions; it is

¹⁰⁴ The sampling was conducted by M.A. Martha Palma in order to maximize the information that could be garnered from the analysis.

¹⁰⁵ This problem was also recorded for the zooarchaeological specimens sent for radiocarbon dating.

¹⁰⁶ This section is based on Tiffany A. Tung's (Director of the Bioarchaeology and Stable Isotope Research Lab at Vanderbilt University) final report.

best measured through hydroxyapatite carbonate and tooth enamel and the resulting ratio corresponds to the mark of the water sources individuals had access to in their formative years. An important hindrance in using Oxygen isotopes is that there is not as of yet a regional map for Oxygen values in the Andes. When the main question is mobility and migration¹⁰⁷ it is necessary to also analyze local water sources to gauge the correspondence between the isotopic ratios (Buzon, Conlee, and Bowen 2011; Knudson 2009; Knudson and Price 2007).

Carbon isotopes are used to reconstruct dietary practices¹⁰⁸. Carbon values reflect the photosynthetic pathways of different plants. This is particularly relevant in the Andes: while most plants follow a C3 pathway, the main C4 staple in the region is maize (Knudson and Torres-Rouff 2009). As archaeological and ethnographic research suggests that a rise in maize consumption –an elite foodstuff more commonly occurring in *chicha*, the famed ritual Andean drink– could be tied to strong political changes such as the Inka conquest (Dillehay 2007)¹⁰⁹.

¹⁰⁷ Oxygen isotopes could also potentially stand alone as method for inferring mobility if water sources could be well identified and their baselines were accurately measured. For example, (Ugan et al. 2012) used Oxygen alone to demonstrate the constant mobility of prehistoric groups in Mendoza. Using both bone and tooth enamel carbonate they determined that their samples were highly mobile and accessed different water sources within a defined geographic region throughout their lives. Knudson and Torres-Rouff (2009) analyzed a sample population from the site of Caspana in the Loa River valley through O isotope samples of enamel hydroxyapatite carbonate in addition to Sr. This resulted in the discarding of the migrant colony hypothesis for Caspana despite the affinity in material culture they shared with San Pedro de Atacama. Similarly, Buzon et al. (2012) have used both values to demonstrate that several individuals in the Middle Horizon site of La Tiza, on the southern coast, had signals(signs?) compatible with those of the Wari heartland in Ayacuho.

¹⁰⁸ Carbon isotopic values are a good complement for migration studies. For instance, Slovak et al. (2009) used Sr isotopic values from bone-tooth pairs to determine if the coastal site of Ancón was a Wari colony. However, the values of most of the sampled individuals were slightly higher than the rates available in the local bedrock at the time of their death. This raised questions about the origin of the sampled population: bone collagen isotopic ratios of C and N matched a diet based on C4 plants and maritime resources. Moreover, the ratio also matched the signature of similar coastal signs up the north coast making it unlikely that the population represented a highland migrant population despite the gap in the Sr ratios. This proved that the heavy consumption of marine resources could potentially alter the Sr results and lead to the mistaken identification of migrants.

¹⁰⁹ Of particular importance for this research is the application of this method to the study of Inka migration patterns. Turner et al. (2009) studied migration patterns into one of the royal states of the Inka, Machu Picchu, where ethnohistoric evidence pointed towards the presence of more than one social class of foreign origin. While originally

However, parallel botanic and residue analysis are critical to determine whether or not a certain foodstuff was available in the region.

The results of the analysis carried out in the Ampugasa sample are summarized in the following graphic (Figure 8.2):

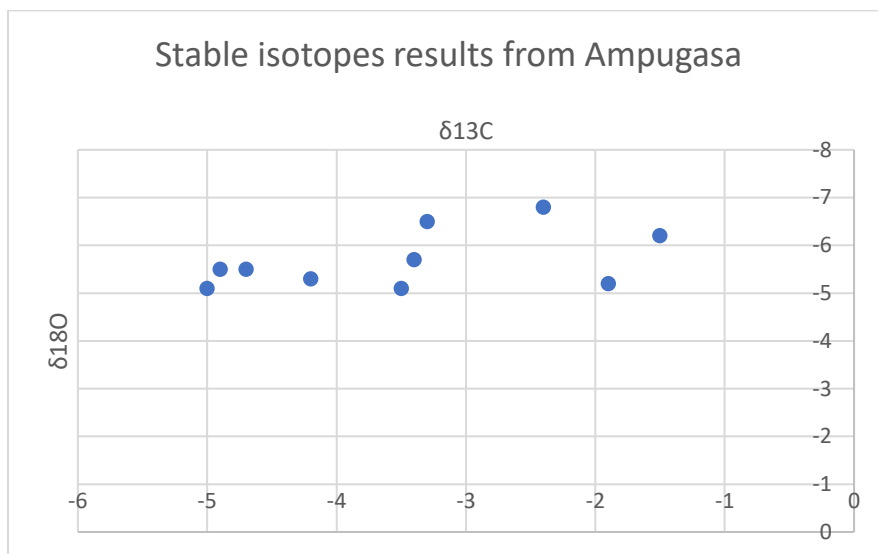


Figure 8.2: Scatter plot of the stable isotopes results for Carbon and Oxygen from Burial 1, Ampugasa, Huarochiri (graph by Tiffany A. Tung).

The results from this small sample suggest consistency between the individuals in the burial. For the Carbon isotope values the mean is $\delta^{13}\text{C} = -3.5\text{‰}$ ($\text{sd}=1.2$) and the range is -1.5‰ to -5.0‰ . This is consistent with a childhood diet rich in maize. For the Oxygen isotopic values, the mean is $\delta^{18}\text{O} = -5.7\text{‰}$ ($\text{sd}=.7$) and the range is -5.0‰ to -6.8‰ . These results are tightly clustered which suggests that the individuals in the burial shared the same locale and water sources during their childhood years.

her research focused on Strontium, Oxygen, and Lead values, she further broadened her model to include Carbon enamel and dentin and Nitrogen dentin in order to tie dietary migration to residential displacement (Turner and Armelagos 2012). Her argument was that health issues were also a consequence of initial dietary patterns in infancy and therefore serve as a proxy for residential mobility.

Moreover, we conducted radiocarbon dating on two teeth from two randomly selected individuals in the context. The dates were also consistent: one ranged between 1300-1392 caCE and the other between 1306-1385 calCE (95.4%, 2-sigmas). This suggests that the bodies were likely deposited within a generation or two, likely in the lapse of around 20 to 30 years. The comingling of the bones indicates it was not a single funerary event. These contexts date well into the LIP and directly correspond to the period before the Inka incorporated the Yauyos population. Interestingly, the results from this context do not support the idea inferred from the ethnohistoric record that the Yauyos were a bellicose population; in fact, the individuals were in good health with only one case that could be attributed to malnutrition and only one individual showing evidence of interpersonal violence.

Building on the isotopic and bioarchaeological results, as well as the radiocarbon dates, it is possible these individuals are representative of the original population of Ampugasa before they became entangled with the Inka Empire. The results also show that the diet of the inhabitants of Ampugasa was already rich in maize before their incorporation into the Inka empire. I will further elaborate this point in the discussion of botanic remains.

Given the lack of comparative isotopic analysis in Huarochirí I decided to compare these results with a lower valley population from an alleged migrant group from Huarochirí, the site of Pueblo Viejo-Pucará (Makowski 2002) (see: Chapter 5, p.123). The samples came from the main political and administrative building in the site, which probably included the household of the ruling lord. The sampled population was selected from an extended household with up to four residential units enclosing a small triangular patio (Makowski et al. 2012). Two female adults, two male adults, and two infants were sampled. For each individual I sampled two teeth with different growth rates and a small bone (Table 8.3; Figure 8.3).

Table 8.3: Samples analyzed from Pueblo Viejo-Pucar.

Individual	Age	Sex	Burial	Sample	Description
1	21-23	M	ET.19	1.1	Maxillary left first incisive
				1.2	Maxillary right first molar
				1.3	Proximal foot phalange
2	25-30	M	EA.58	2.1	Mandibular left first premolar
				2.2	Maxillary left second molar
				2.3	Hand phalange
3	1-2	F?	EA.58	3.1	Maxillary right first incisive
				3.2	Mandibular right second molar
				3.3	Metatarsal
4	18-23	F	ET.25	4.1	Maxillary left first incisive
				4.2	Maxillary left third molar
				4.3	Hand phalange
5	25-32	F	ET.25	5.1	Maxillary right second incisive
				5.2	Maxillary left second premolar
				5.3	Clavicle
6	2-4	I	EA.61	6.1	Maxillary left canine
				6.2	Mandibular right second molar
				6.3	Humerus

Individual #1 was located in a superficially built stone structure and was a single secondary burial. Individuals #2 and #3 were located in a small walled area within a residential room. It was composed of two adults and one infant, associated with metal pieces and *Spondylus* shells. I chose one of the adults and the infant for this sample. Individuals #4 and #5 were located in a superficially built stone structure and the burial was composed of two adults and one infant. I chose both adults for this sample. Individual #6 was located in a specially built niche in the corner of a broader room in close proximity to dog and guinea pig bones. The context was composed by two infants, one of which was selected for this sample. The resulting $\delta^{13}\text{C}$ values range from -6.7 to -3.9 with a mean of $\delta^{13}\text{C} = -4.98$ (s.d.=.895; N=15). The $\delta^{18}\text{O}$ values range from -7.5 to -1.3 and the mean is $\delta^{18}\text{O} = -3.473$ (s.d.=2.33; N=15) (Figure 8.4).

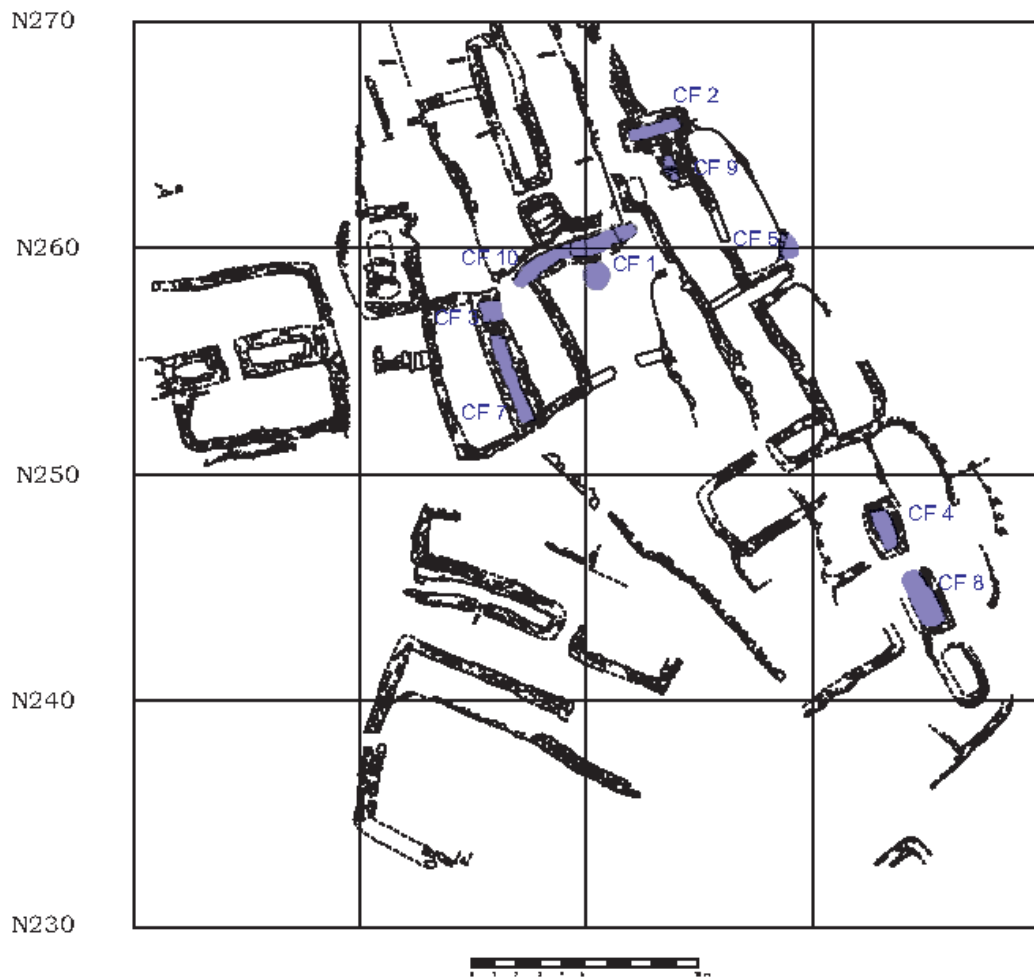


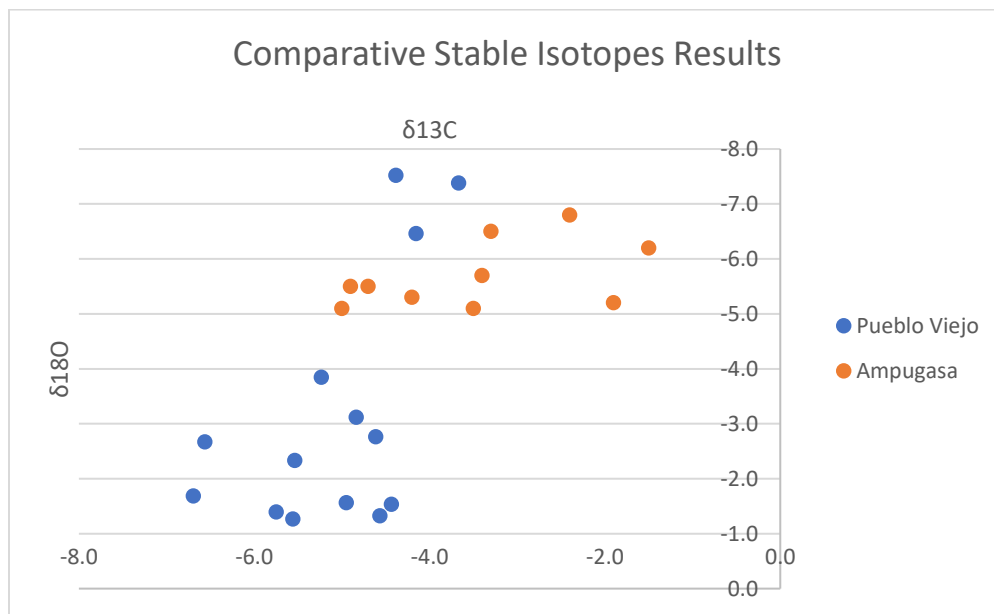
Figure 8.3: Location of samples from funerary contexts from Pueblo Viejo - Pucará (map by the author).



Figure 8.4: Funerary contexts from Pueblo Viejo-Pucará (photographs by Marina Ramirez and by the author)

While Ampugasa is located at an approximate altitude of 1500 masl, Pueblo Viejo-Pucar is significantly lower at 400-600 masl. Whereas the main water source for Ampugasa is the river, Pueblo Viejo-Pucar used water from seasonal rain. Finally, Pueblo Viejo-Pucar had greater access to maritime goods than Ampugasa although maize was important in both sites. In looking at the comparative isotopic ratios there are two clusters, one for each site. Oxygen isotopes showed that both populations had access to different water sources during their childhood. Carbon isotopes ratios for both sites fall within the maize consumption spectrum, but it seems that the Ampugasa population had better access to carbon enriched foods (Table 8.4).

Table 8.4: Comparative Stable Isotopes Results from Ampugasa and Pueblo Viejo-Pucar.



An interesting outlier for Pueblo Viejo-Pucar, however, is Individual #3. This burial fell within the range for Ampugasa, and the difference with the burials from Pueblo Viejo-Pucar was statistically significant. This burial was associated with *Spondylus* shells and metal tweezers in a building-closing event. It is possible that this was a high-status individual and/or the burial was of ritual significance. Despite the small sample it is possible to hypothesize that either: 1)

atypical burials –not in funerary structures– in Pueblo Viejo-Pucará were given to individuals that had been part of the original migrations from Huarochirí or 2) if migrations were continuous people who were born and grew up in Huarochirí retained a different status when moved to the lower valley, hence their ritual burial. The second hypothesis seems likely based on the system of forced migration implemented by the Inka (Hyslop 1990).

In summary, there seems to be a strong consistency among the Lurin Yauyos populations at the isotopic level with a signature closer to Huarochirí inhabitants likely related to a different status in the scion settlement of Pueblo Viejo-Pucará. Additionally, the individuals in the Ampugasa sample were in very good health, without significant evidence of inter-personal conflict, and burials were consistently associated with important ritual events or locations.

I have argued that kinship and ancestor worship were mediums for creating ties between communities and landscapes. Building on the isotopic results, I hypothesize that individuals from the first migrant generation of Huarochirí to the lower valleys were interred in ritually charged contexts (i.e. closing of a residential unit). This is a pattern partially recorded in Ampugasa and Canchaje (i.e. burials as closing events) and at the same time it could be creating ancestors for the newly moved lineage. Pueblo Viejo-Pucará, unlike Ampugasa, was likely a more closely monitored center by the Inka since the community had a role to play in the general geopolitics of the valley. It is possible that Yauyos compliance with the Inka would still be interpreted through their own understanding of landscape and kinship. This would be a practice legible between them and the Inka and we do not see in Pueblo Viejo-Pucará any evidence of the Inka curtailing Yauyos rituality and process of history-making in this new geographical context.

*Zooarchaeological analysis*¹¹⁰

The analysis was conducted on the total faunal remains recovered from Ampugasa and Canchaje. The main objective was the identification of species and evidence of consumption (i.e. cutting marks, burning). We aimed to investigate whether there were any differences in consumption patterns between different households in Ampugasa and if there were specific species associated with ritual or ceremonial contexts. We used two different measures: the number of identified specimens (NISP) which identifies the lowest possible taxonomic level (Reitz and Wing 2008) and the minimum number of individuals (MNI) using symmetry, size, and fusion as the main variables for calculation (Reitz 1988; White 1953). The analysis followed Kennedy and VanValkenburgh’s (2016) proposed seven anatomical units, which include: head (skull, mandible, and teeth), axial (ribs and vertebrae), forequarter (scapula, humerus, radius, and ulna), hindquarter (innominate, sacrum, femur, patella, and tibia), forefoot (carpal and metacarpals), hindfoot (tarsals and metatarsals), and foot (phalanges) (Table 8.5; Table 8.6).

Table 8.5: Summary of faunal remains from Ampugasa (adapted from Carlos Osores).

Class	Order	Family	Genus	NISP	% NISP	MNI	% MNI
Bird	Accipitriformes	Cathartidae		3	0.93	2	2.56
	Unidentified large bird			1	0.31	0	0.00
Mammal	Unidentified large mammal			53	16.41	16	20.51
	Artiodactyla	Camelidae		80	24.77	24	30.77
	Artiodactyla	Cervidae		10	3.10	3	3.85
	Unidentified Artiodactyla			76	23.53	11	14.10
	Carnivora	Carnivora	Lycalopex	2	0.62	1	1.28
	Unidentified medium mammal			81	25.08	15	19.23
	Unidentified small mammal			3	0.93	1	1.28

¹¹⁰ The zooarchaeological analysis and sample selection was carried out by Lic. Carlos Osores Mendives (Pontifical Catholic University of Peru; Director of the Ventanillas Archaeological Project). Faunal identifications were carried out using the comparative collection at the Museo Nacional de Sicán (Ferrefañe, Lambayeque) and the Carlos Osores’ faunal collection.

	Rodentia	Caviidae	Cavia	4	1.24	4	5.13
	Unidentified Rodentia			9	2.79	0	0.00
Fish	Unidentified small Osteichthyes			1	0.31	1	1.28
Total				323		78	
% Total					100		100

Table 8.6: Summary of faunal remains from Canchaje (adapted from Carlos Osoros).

Class	Order	Family	Genus	NISP	% NISP	MNI	% MNI
Bird	Unidentified medium bird			1	0.11	1	0.67
	Unidentified small bird			3	0.32	3	2.00
Mammal	Unidentified large mammal			191	20.43	32	21.33
	Artiodactyla	Camelidae		268	28.66	55	36.67
	Artiodactyla	Cervidae		27	2.89	15	10.00
	Unidentified Artiodactyla			127	13.58	16	10.67
	Unidentified medium mammal			12	1.28	9	6.00
	Carnivora	Carnivora	Felidae	275	29.41	3	2.00
	Unidentified small mammal			5	0.53	3	2.00
	Rodentia	Caviidae	Cavia	16	1.71	6	4.00
	Rodentia	Muridae		6	0.64	4	2.67
Unidentified Rodentia			4	0.43	3	2.00	
Total				935		150	
% Total					100.00		100

Both samples are similar in the species represented and their distribution. In order to better present contextual data and make the comparison between both sites clearer I will present data from each genus separately. I centered on *Artiodactyla camelidae* as a food staple in the region. Building on the data there was not a significant change in access to goods or lifeways between the occupants of both residential sectors.

According to research by the Archaeological Program Pachacamac Valley, the main species found throughout the valley and in their archaeological samples are: Andean cat (*Felis colocolo*), vizcachas (*Lagidium peruanum*), gray deer (*Odoncoileus virginianus*), guanacos (*Lama guanicoe*), and pumas (*Felis concolor*) (Jimenez 2008). It is very probable that these are

the same species we identified during our excavations since most of them live in the same type of environment and tend to migrate to the lower sections of the valley seasonally.

When looking at the comparative distribution of camelids between both sites, and subdivided by specific sectors, the results using the MNI are as follows (Table 8.7):¹¹¹

Table 8.7: Comparative distribution of *Artiodactyla* remains in Ampugasa and Canchaje.

		Ampugasa				Canchaje				TOTAL
		Camelidae	Cervidae	N.I.	Sub-Total	Camelidae	Cervidae	N.I.	Sub-total	
Rock outcrops		2	0	0	2	42	12	5	59	63
Plazas	Circular	2	2	2	6	1	1	1	3	15
	Trapezoidal					2	0	3	5	5
Residential Structures	Circular	10	1	4	15				0	30
	Orthogonal	10	1	5	16	5	1	3	9	41
Administrative building						1	5		6	6
		24	4	11	39	51	19	12	82	160

While in Ampugasa the major concentration of camelid bones is in the residential structures, with a very even representation between circular and rectangular residential sectors, Canchaje’s sample is clearly centralized in the Rock Outcrop. *Artiodactyla Cervidae* is not prominent in either sites although there is an increase in sample representation in Canchaje. As with camelids, Cervidae is better represented in the outcrop than in the plazas or residential areas. In order to investigate the use of these remains we compared burning patterns between the sites.

The original MNI of *Artiodactyla* remains from Ampugasa was of 39; of this sub-sample almost 70% of the cases showed evidence of thermo-alteration. In Canchaje the original sub-sample was of 82 and only 46% of the cases were thermo-altered. At both sites there was almost

¹¹¹ I am intentionally reporting the following tables using the MNI count rather than the percentage because the sample in both sites is so small that the percentages could be misleading and suggest that zooarchaeological remains in both sites were found in greater density that they actually were.

no evidence of cutting marks on the bones. Most burned remains in Ampugasa were in the domestic areas while in Canchaje they were in the Rock Outcrop (Table 8.8).

Table 8.8: Comparative distributions of thermo-altered *Artiodactyla* remains in Ampugasa and Canchaje.

		Ampugasa				Canchaje				
		Camelidae	Cervidae	N.I.	Sub-Total	Camelidae	Cervidae	N.I.	Sub-total	TOTAL
Rock outcrops		2	0	0	2	26	0	11	37	41
Plazas	Circular	2	1	0	3					6
	Trapezoidal					0	0	0	0	0
Dental Struct	Circular	6	1	3	10	0	0	0	0	20
	Orthogonal	7	1	4	12	0	0	1	1	25
Administrative building						0	0	0	0	0
		17	3	7	27	26	0	12	38	92

Camelids were an abundantly available resource in both sites, very likely guanacos. Guanacos, unlike alpacas and llamas, are wild. There is no evidence of corrals at either site. That could explain why they were not overly represented as foodstuffs. For the case of Ampugasa, which is at a lower altitude, it seems likely that they did not consume as much camelid as other types of locally available game. In Canchaje the presence of guanacos in the Rock Outcrop suggests that they may have been considered as an offering or were mostly consumed in ritual settings. Inka presence in this latter site does not seem to have affected access to camelids for consumption. Associated with the prominence of camelid bones in the Rock Outcrop of Canchaje was the presence of lithic points (see discussion below). This would support the hypothesis that the camelids were wild game hunted in Huarochirí since before the Inka's arrival.

On the other hand, deer remains were thermo-altered in Ampugasa but not in Canchaje. While this could be part of an issue in sampling or representation, it is interesting to note that neither camelids nor deer seem to have been consistently cooked at either site. It is possible, then, that diet was strongly influenced by crops rather than wild or domestic game.

The Manuscript mentions two types of deer: the brocket deer and the taruka deer. The Manuscript states that in the past, brocket deer used to eat men, before a transformation that

made them scared of people. Both guanacos and deer figure prominently in Pariacaca's cult. The description of the Chanco dance in honor of his son Tutayquiri reads:

On that day, they would trap guanacos, brocket deer, or other animals. Regardless of who did the actual catching, if the successful hunter happened to have a *huacsa* in his own *ayllu*, he'd give the animal to him first, so that he might perform the Ayñu dance displaying its tail. Those who didn't capture anything would likewise dance but performed only in the Chanco (Salomon and Urioste 1991:80).

Building on this description and the analysis results it is possible to surmise that guanacos and deer were primarily consumed in ritual contexts and not a central part of domestic life.

In Ampugasa we found evidence of *Lycalopex* and *Cavia*. *Lycalopex* is the general genus of the South American fox, still present in the surrounding hillsides of Ampugasa. According to Jimenez (2008), species of Andean foxes were registered in the region even in early 16th century written colonial accounts. They were considered sacred animals in the Andes. The species present were *Dusicyon culpaeus* and *Canepatus rex inca*. Foxes also feature prominently in the Manuscript where they are identified as coming to meet in the middle valley from the lower and higher floors to have conversations about some of the narratives of the Manuscript (Argüedas 1986). In another episode a fox also discourages Cuniraya Viracocha's race to reach Cavillaca and is cursed by the god to be hated and hunted by humans (Millones and Mayer 2012; Salomon and Urioste 1991). The presence of fox, therefore, is hard to date for the site. It was found in the plaza of the second peak, an area relatively free of architecture.

Cavia porcellus or guinea pig has a very low presence at either site. We know that this specimen was used for both ritual and domestic consumption and that it was not indigenous to the Huarochirí region. They were found in very low densities in Ampugasa but they were distributed between both types of domestic units, the second plaza, and the main Rock Outcrop plaza. It is not possible from this sample to date the presence of guinea pigs in Ampugasa yet

their use cannot be considered exclusive to a specific type of residential structure of public plaza context. In other words, this was not a restricted-access good. In Canchaje they were found in the plaza in front of the Rock Outcrop and in association with rooms next to the Rectangular and Semi-Circular plazas. They were not part of any ritual context or burnt offering associated with the top of the rock outcrop. Even though the sample is very low, it is possible that guinea pig is an item directly related to the Inka presence in the region and which would explain why their distribution was so limited, if not restricted.

Finally, in Canchaje we also found remains of three Felidae individuals. The feline species most commonly identified in the research area are the Andean cat (*Oreailurus jacobita*), puma (*Puma concolor*), or the bighorn cat (*Lynchailurus pajeros*) (SERNANP 2015). Although analysis is ongoing, it is possible at this time to consider that the individual buried in Canchaje was a common cat (*Felis catus*) which is surprising considering the depth of the burial and that the context was undisturbed. In this latter case it could be a Colonial period context, which is still supported by the dates in the Orthogonal Complex.

Similar contexts have also been identified in neighboring sites but the analyzed data has not been published (Chase 2017, personal communication). We found one of the felines in the patio within the orthogonal structure next to the Trapezoidal Plaza (Unit 3) as part of the fill between two floor levels. This individual had evidence of peri-mortem handling of the scapula (Carlos Osorez, personal communication) which further supports the intentionality of its burial (see: Chapter 7, p.260).

Felines have a very important ritual value in Huarochirí. In his seminar article, “*How the huacas were*”, Salomon (1998:13) presents a modern-day photo of a Tupicocha community member dancing during the Easter celebration (Figure 8.5). According to Salomon, “The skin of

a dead animal also empowered a person to approach the sacred patron or owner of the animal and was among the most common ritual gestures; it is still practiced in at least one of Huarochiri's communities today. Paria Caca consoled his people for the loss of a treasured headdress by giving them a wildcat skin" (Salomon 1998:12).



Figure 8.5: Dancer from Tupicocha donning a feline head-piece (Salomon 1998:Fig.2).

In the Manuscript the species identified is a “spotted wildcat”, which could be consistent with an Andean cat (Figure 8.6), was specifically used as a dance garment. If a cat skin empowers humans to approach the deities, the owners of the animals, it is interesting that this offering was placed between floors of an Inka-shaped space. This could serve as an indication of Inka space incorporated into local Yauyos ritual lore. In other words, the Yauyos were making the Inka legible by incorporating them into their ritual practices.



Figure 8.6: Andean Cat (*Leopardus jacobita*). Photograph by Jim Sanderson. Wikicommons license.

Dancing was a critical part of Yauyos ceremonies and specifically addressed in Pariacaca's worship (Chapter 5). The Andean cat is a specimen directly associated with Pariacaca and, if the Inka were to serve as the deity's *huacsa*, it could be argued that their plazas and ritual emplacements should also be considered part of local ritual. In that sense, through the presence of feline offerings in Inka spaces the state-sponsored practice of feasting becomes incorporated into local ritual. In other words, it is possible that standardized Inka spaces were subverted and re-appropriated as part of Pariacaca's local cult.

*Flotation and residue analysis*¹¹²

I selected a total of 40 soil samples for flotation and microscopic analysis (average weight of 3.5 kg each); 18 of the individual samples came from Ampugasa (approximately 46.4 kg) and 22 from Canchaje (approximately 96.2 kg) (Appendix). Additionally, I also selected

¹¹² Botanic remains and flotation of selected samples were carried out at the ARQUEOBIOS laboratory of Chiclayo (Peru) under the direction of Victor F. Vásquez Sánchez and Teresa E. Rosales Tham.

eleven ceramic sherds and six lithic artifacts to conduct residue analysis. The ceramics were distributed as 6 sherds from Ampugasa and 5 from Canchaje and the fragments were not washed to maximize the potential results. Of the lithic artifacts, 2 came from Ampugasa and 4 from Canchaje. Sample selection was directly influenced by the interpretation of individual strata during the excavation (Figure 8.7; Figure 8.8).

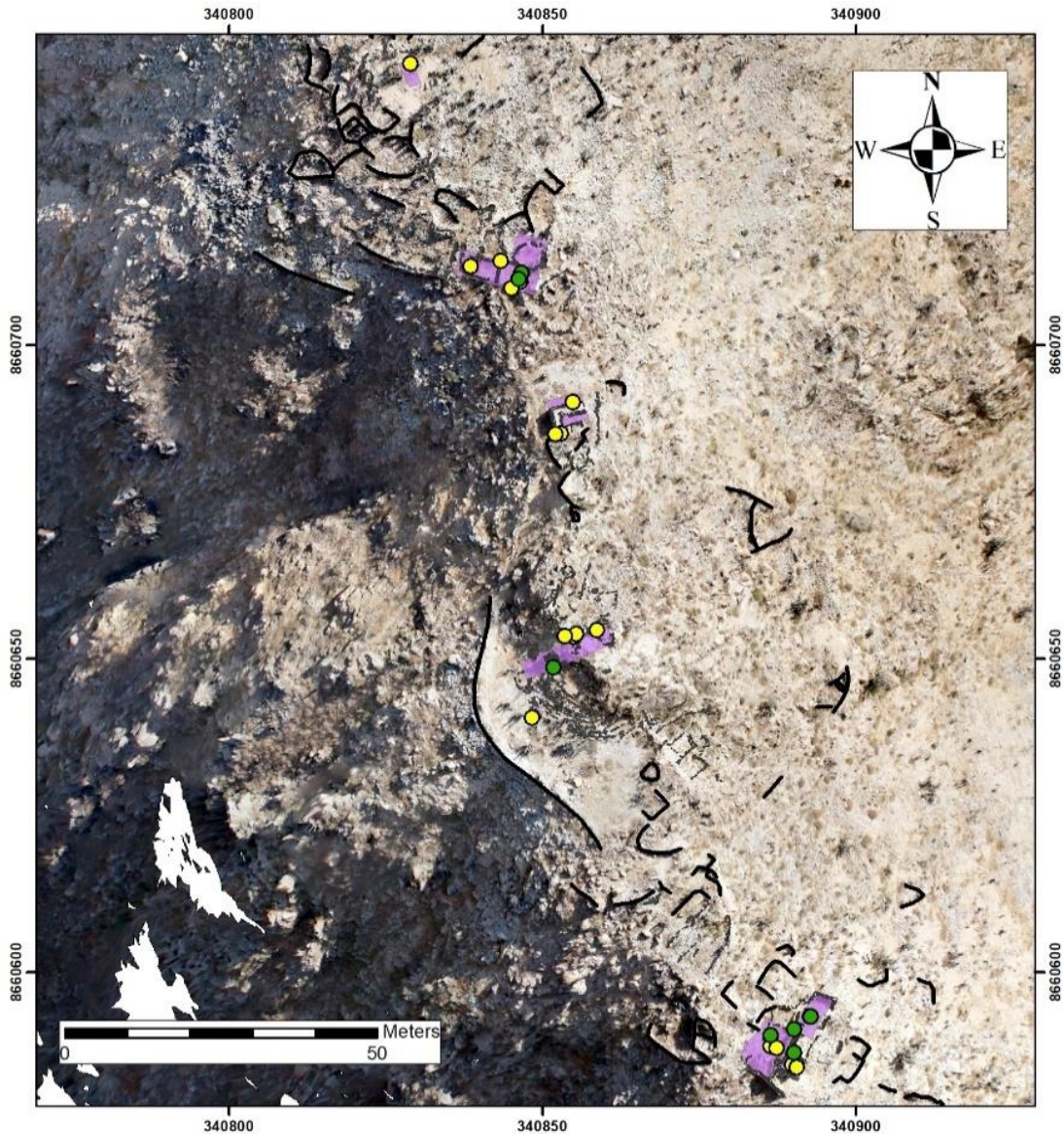


Figure 8.7: Spatial distribution of the soil and residue samples from Ampugasa. Yellow dots indicate the soil for flotation and green dots indicate artifacts with residue analyzed (map by the author).

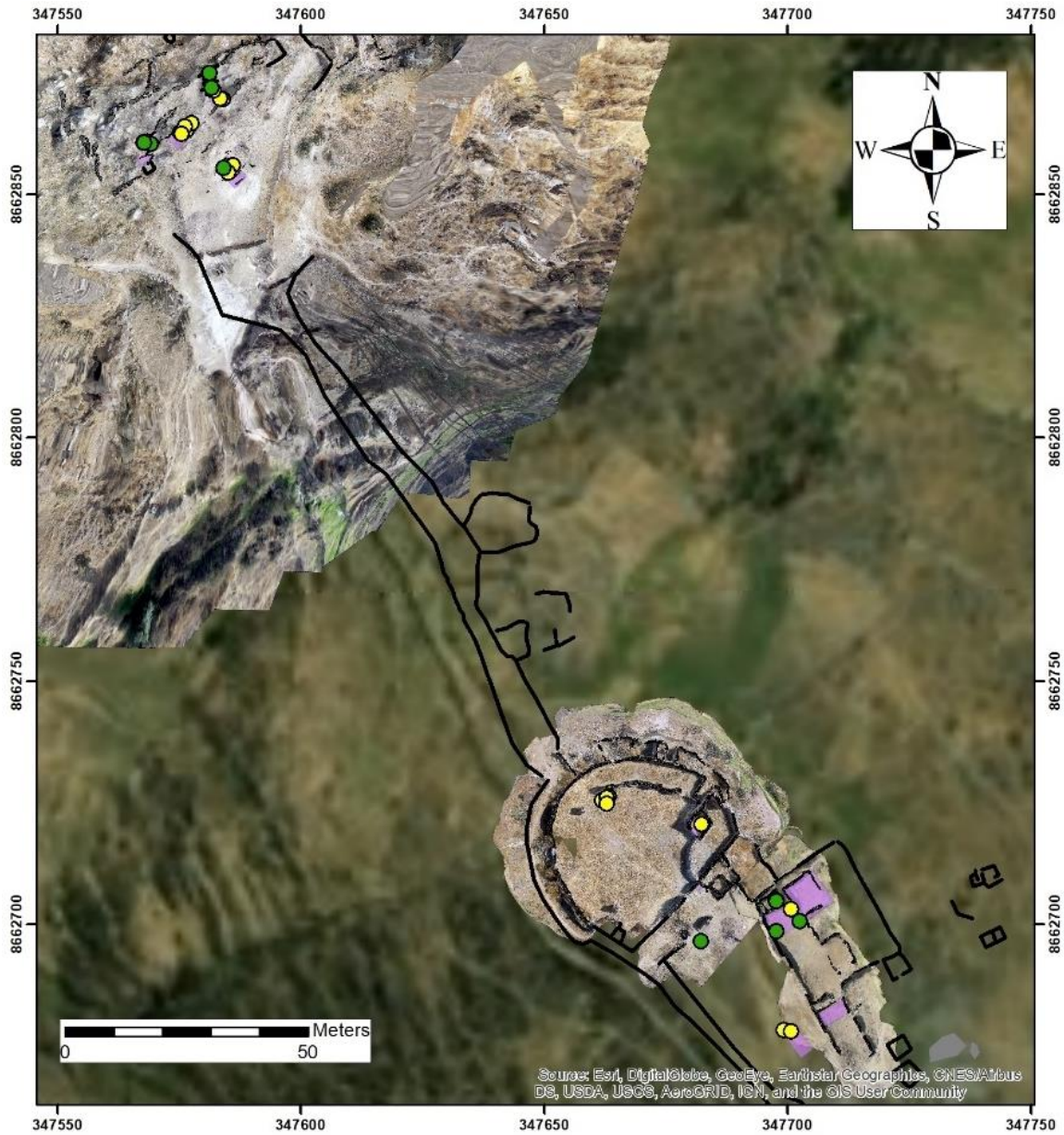


Figure 8.8: Spatial distribution of the soil and residue samples from Canchaje. Yellow dots indicate the soil for flotation and green dots indicate artifacts with residue analyzed (map by the author).

From these samples I selected a total of 294 remains. Out of these 69 corresponded to faunal specimens while 225 came from plants. Interestingly, even though there was a significant difference in sample density between both sites, a larger quantity of remains was recovered from Ampugasa. Figure 8.9 shows the percentile representation of each taxa per site.

Table 8.9: Summary of specimens recovered from the flotation samples from Ampugasa and Canchaje.

	Faunal	Plants	
Ampugasa	58	194	252
Canchaje	11	31	42
	69	225	

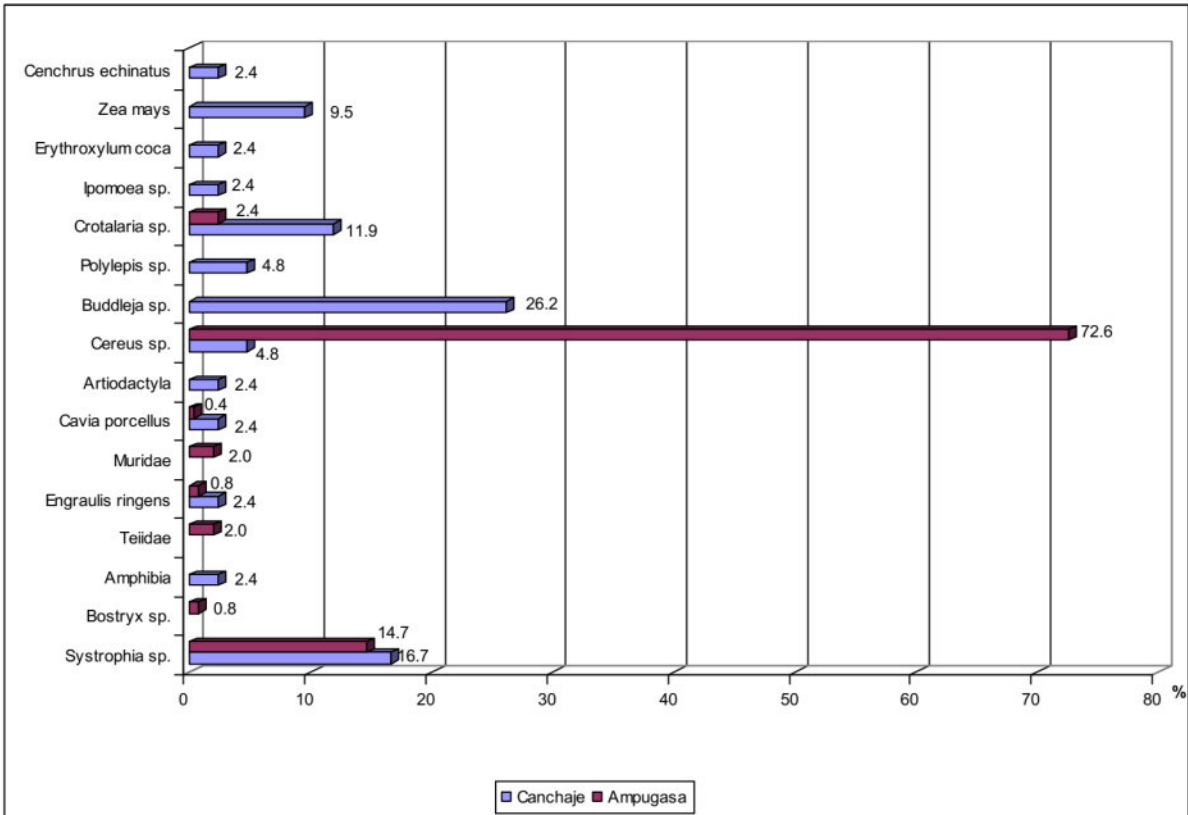


Figure 8.9: Percentage distribution of faunal and plant remains recovered from the flotation samples in Ampugasa and Canchaje (graph by Vásquez and Rosales 2016).

Looking first at the samples from Ampugasa, the most recurrent taxa identified is *Cereus sp.*, a genus of cacti, a type of plant that is abundant in the site. As a matter of fact, Ampugasa is roughly translated from quechua as “mountain of thorns” so this can be confidently identified as a modern species. The second most common taxa are *Systrophia sp.*, land snails, and again confidently identified as modern. We also registered a second type of land snail, *Bostryx sp.* *Teiidae sp.* is a type of lizard commonly identified as whiptail or racerunner and are also a modern species in Ampugasa. Members of the *Muridae sp.* taxa are rodents, likely modern mice.

Two varieties of *Crotalaria sp.* were domesticated in Pre-Columbian times and they are tropical legumes that could be used as both drink and food. They are commonly known as rattlepod. However, they seem to have a very limited consumption value. Interestingly, the flotation analysis did recover remains from *Cavia porcellus*. These remains were recovered from a soil sample from the Rock Outcrop plaza, further reinforcing the ritual importance of this location. Additionally, the analysis also recovered remains of *Engraulis rigens* or the Peruvian anchoveta. This species lives exclusively in the Pacific Ocean on the coasts of Peru and Chile. Therefore, its presence in Ampugasa can only be explained through exchange or trade with coastal people. These remains were located in the Rock Outcrop exclusively, which could further indicate it was a highly valued good and one that was not commonly accessible to the people of the settlement.

In the case of Canchaje, the three most numerous samples correspond to species I have already identified as modern: *Cereus sp.*, *Systrophia sp.*, and *Crotalaria sp.* The next most common taxon was *Zea mays* or maize and it was recovered from the Rock Outcrop plaza. This is consistent with the residue analysis I will discuss in the following paragraphs. There are other modern species as well which include *Cenchrus echinatus*, a type of grass known as southern sandbur, *Ipomoea sp.*, or the flower known as morning glory, *Buddleha sp.*, also called the butterfly bush, and *Polylepis sp.*, a type of tree or shrub well distributed in the modern Andes. There were also unidentified Amphibia remains likely related to modern species. As with Ampugasa, the analysis recovered remains of Peruvian anchoveta exclusively in the Rock Outcrop plaza. Additionally, other species already identified for the site were found, *Artiodactyla sp.* and *Cavia porcellus*, the latter also in the Rock Outcrop. Finally, in Canchaje the soil analysis also recovered remains of *Erythroxylum coca*. Coca leaves were a critical element of Andean

ritual practices. While we have not found more evidence of coca among the analyzed samples this one was found in the base of the Rock Outcrop plaza.

Residue analysis was conducted on diagnostic ceramic sherds, six in Ampugasa and five in Canchaje. These sherds had evidence of burned residue attached to their interior walls. The laboratory carried out a comparative analysis using a collection of modern starches to observe the qualities of the samples recovered from the ceramics. The laboratory used a stereoscopic microscope with a 20X amplification to recognize the surface of the vessels and parse out posterior adherences. A sample was selected from the middle of the residue after removing the first layer and sterilizing the sample to avoid contamination. Small samples were taken from the section of the residue directly attached to the artifact and observed under a 1000X microscope with both standard and polarized lights and then recorded with a digital camera Sony DSCW200 with a resolution of 12 MP (Table 8.10).

Table 8.10: Vegetable species identified in residue from ceramic sherds from Ampugasa and Canchaje (table based on 2016 report by Victor Vásquez and Teresa Rosales).

ID	Site	Type	Taxa	Measures (LxA μ)	Observations
A-3-61.1-15	Ampugasa	Starch	Zea mays	18.2 x 15.6	2 polyhedral grains
A-5-108.1.15	Ampugasa	Starch	Zea mays	13 x 13	Spherical grain, perforated hilum
				15.6 x 13	Elliptical grain
		Phytolith	Pooideae	41.6 x 13	Wild grass
A-1-140.1-22	Ampugasa	Starch	Zea mays	15.6 x 13	Grouped polyhedral grains
				23.4 x 15.6	Polyhedral grain
A-1-223.1-9	Ampugasa	Starch	Solanum tuberosum	67.6 x 46.8	Typical “potato” grain
A-5-102.6-13	Ampugasa	Phytolith	Pooideae	33.8 x 13	Wild grass
		Starch	Zea mays	20.8 x 16.9	Polyhedral grain
A-1-131.1-01	Ampugasa			Starch	Zea mays
		13 x 13	Hemispherical grain		
C-5-547.1-35	Canchaje	Starch	Zea mays	15.6 x 13	Damaged grain
				18.2 x 15.6	2 polyhedral grain
		Pollen		13 x 10.4	Group of grains
C-5-545.1-66	Canchaje	Starch	Zea mays	13 x 13	Polyhedral grain
				13 x 10.4	Polyhedral grain

				23.4 x 20.8	Polyhedral grain
				18.2 x 15.6	Polyhedral grain
C-3-566.1-66	Canchaje	Starch	<i>Solanum tuberosum</i>	33.8 x 26	Typical “potato” grain
		Pollen	<i>Zea mays</i>	15.6 x 15.6	Grouped grains within sediment
C-3-575.1-73	Canchaje	Starch	<i>Zea mays</i>	15.6 x 15.6	Polyhedral grain
				18.2 x 15.6	Polyhedral grain
C-5-640.1-19	Canchaje	Starch	<i>Zea mays</i>	18.2 x 18.2	Elliptical grain

Residue analysis results on lithic artifacts are summarized in Table 8.11:

Table 8.11: Vegetable species identified in residue from lithic artifacts from Ampugasa and Canchaje (table based on 2016 report by Victor Vásquez and Teresa Rosales).

ID	Site	Artifact	Type	Taxa	Measures (LxA μ)	Observations
166.03.01	Ampugasa	Mortar	Starch	<i>Zea mays</i>	20.8 x 18.2	Polyhedral grain
					13 x 13	Polyhedral grain
					15.6 x 13	Polyhedral grain
166.04.01	Ampugasa	Grinder	Starch	<i>Zea mays</i>	13 x 13	Spherical grain
			Phytolith		18.2 x 16.9	Polyhedral grain
					18.2 x 13	Leaf
503.03.01	Canchaje	Small lithic	Starch	<i>Zea mays</i>	15.6 x 13	Polyhedral grain
					13 x 13	Polyhedral grain
					13 x 13	Polyhedral grain
571.07.01	Canchaje	Grinder	Starch	<i>Zea mays</i>	18.2 x 15.6	Polyhedral grain
					18.2 x 18.2	Polyhedral grain
					18.2 x 15.6	Polyhedral grain
780.08.01	Canchaje	Point	Starch	<i>Zea mays</i>	15.6 x 15.6	Spherical grain
					13 x 13	Spherical grain
806.03.03	Canchaje	Grinder	Starch	<i>Zea mays</i>	13 x 13	Polyhedral grain
					13 x 13	Spherical grain
					14.3 x 13	Polyhedral grain

Besides wild grass, which grows in the site to date, ceramic sherds present evidence of *Zea mays* or maize and *Solanum tuberosum* or potato. While most of the species were identified through starch, there was also evidence of pollen and phytolith for maize. In the case of the ceramics most of the samples were clearly subjected to high temperatures as demonstrated by the formation of very coarse sot. Consequently, we interpret the residue remains as evidence of

cooking and consumption. An important observation made by the Arqueobios laboratory is that some of the maize grains had fissures in the hilum, which is a product of milling.

Additionally, there is a difference in how maize was consumed in regards to starch shape: polyhedral grains are associated with species used for porridges while spherical grains are associated with species used for flour. It is important to note that in Lahuaytambo, the town closest to Canchaje, the consumption of maize as porridge is considered traditional and is even part of the name of the town; “Lahuay” is a type of porridge made with white corn. Interestingly, the grains from Ampugasa show a higher degree of shape variety than Canchaje which could suggest a wider array of uses for maize. The presence of potatoes could be a sign of trade since the altitude of the sites is not good for their production; however, the type of storage units roofed with slabs and with flat stones under the clay floor do support their storage.

In the case of the lithic artifacts, it is interesting to know that most grinders, mortars, or small pieces show a primary presence of polyhedral grains and some spherical ones as well. The only exception is the point, which shows no evidence of having been used in the preparation of porridges. It is possible that they were deposited in a context that also included maize, which would explain the presence of spherical starch grains.

As far as the distribution of the starches within each site, I looked at the shape of the starch grain to parse out potential differences in the uses of maize within areas. In Ampugasa spherical, elliptical, and polyhedral starches were distributed along the different sections of the site without any observable limitation (Figure 8.10). In Canchaje, I found a similar variety of starch shapes in the Rock Outcrop while in the Plazas the only distinguishable grain shape is polyhedral which, as I have previously discussed, is associated with porridge (Figure 8.11). This could suggest that there was a difference in the way in which maize was consumed in Inka ritual

spaces that was not present in the Inka-period domestic spaces of Ampugasa. However, the sample is very small and further analysis is necessary to confirm or discard this observation.

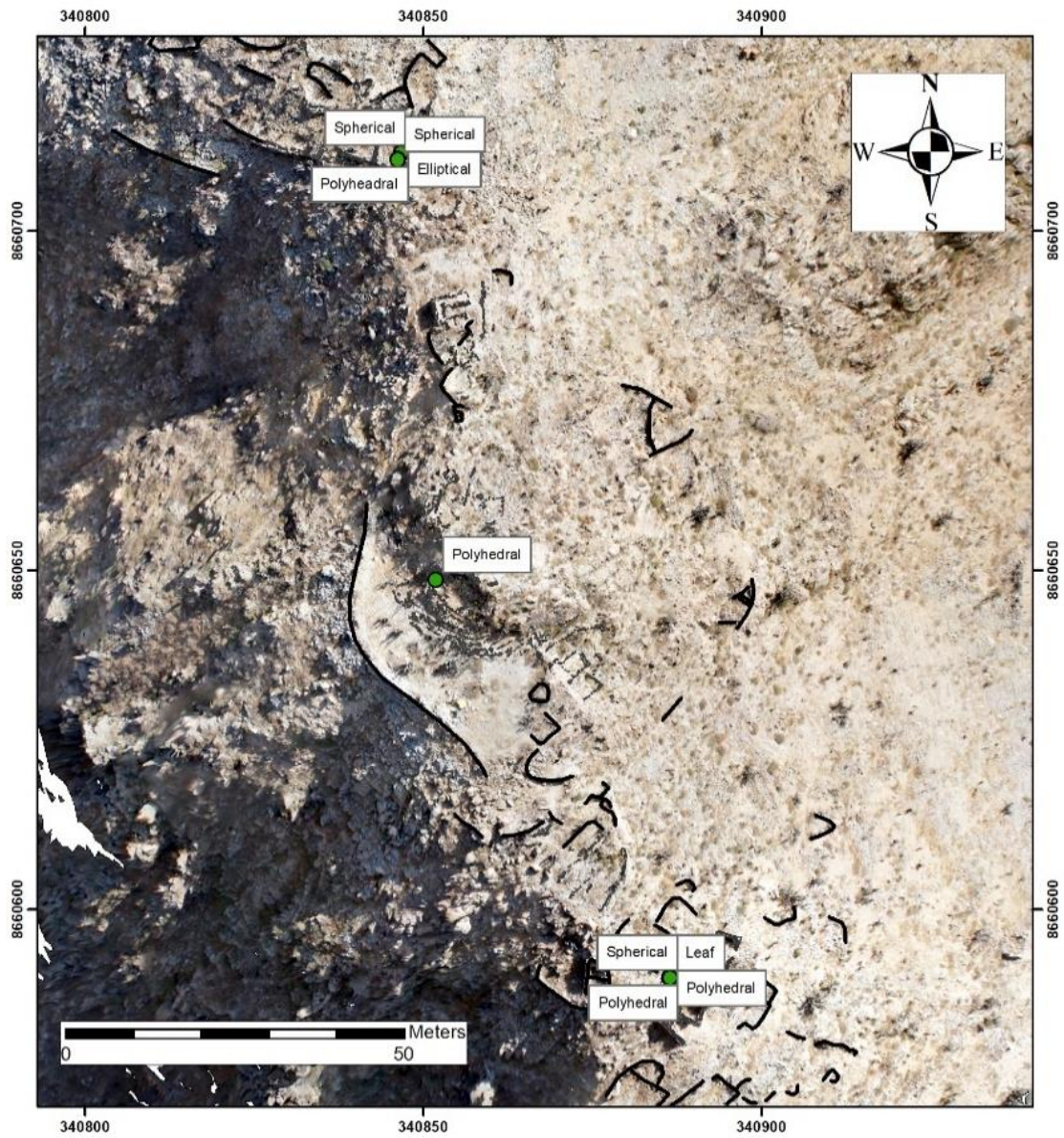


Figure 8.10: Distribution of starch grain shape from the maize samples from Ampugasa (map by the author).

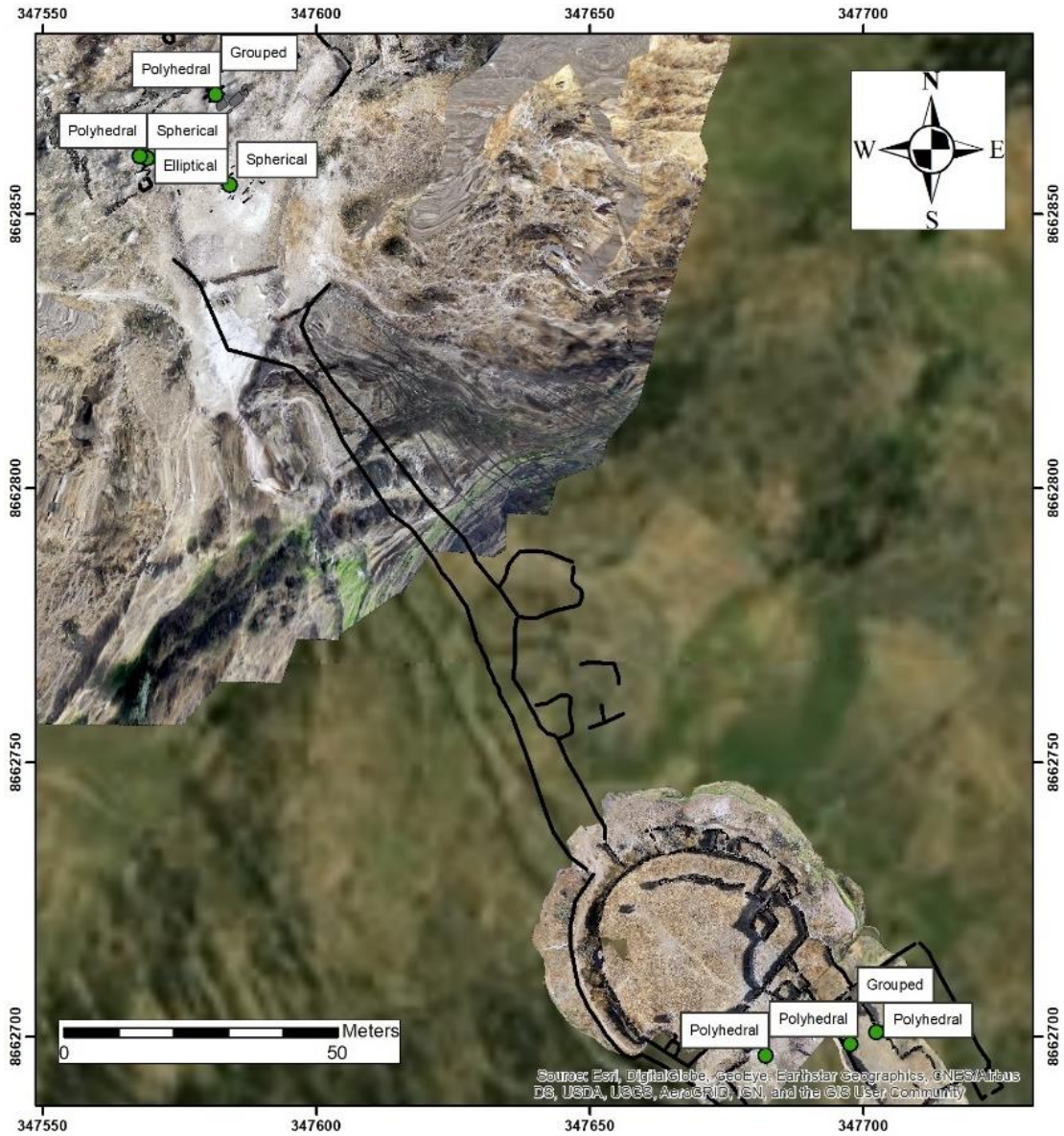


Figure 8.11: Distribution of starch grain shape from the maize samples from Canchaje (map by the author).

*Malacological analysis*¹¹³

Malacological analysis of Ampugasa and Canchaje could hint towards an emphasis on consumption of shells rather than sumptuary artifacts. First, I will discuss the distribution of

¹¹³ Malacological remains were analyzed by the author. The analysis was limited to identification of species.

shells related to foodways in both sites and focus on unworked shells. Then I will discuss the shell artifacts found in Burials 1 and 3 of Ampugasa. The total distribution of malacological species in each site is minimal, which was expected from their inland locations. I separated the taxa between bivalve (Table 8.12) and univalve (

Table 8.13) species. Ampugasa reports an MNI of 85 individuals with a total weight of 116.2 g; in Canchaje there is an MNI of 6 individuals with a weight of 2.7 g. From the low quantities, I hypothesize they were accessed through limited trading and not a substantial part of the diet of the Huarochirí people (Figure 8.12).

Table 8.12: Taxa and distribution of bivalve shells recovered from Ampugasa and Canchaje.

	Ampugasa						Canchaje							
	U1	U2	U3	U4	U5	U6	U1	U2	U3	U4	U5	U6	U7	U8
<i>Argopecten circularis</i>	2		1		1									
<i>Aulacomya ater</i>	2		2		1									
<i>Brachyura sp.</i>					1									
<i>Choromitylus chorus</i>	11		4	1	5	6					2			
<i>Crepidula sp.</i>						1								
<i>Crepipatella dilate</i>					1	1								
<i>Mesodesma donacium</i>					1									
<i>Pecten perulus</i>			1	1	1									
<i>Perumytilus purpuratus</i>			1			4								
<i>Semele sp.</i>					1									
N.I.	2			2	3	6								
	17	0	9	4	15	18	0	0	0	0	2	0	0	0

Table 8.13: Taxa and distribution of univalve shells recovered from Ampugasa and Canchaje.

	Ampugasa						Canchaje							
	U1	U2	U3	U4	U5	U6	U1	U2	U3	U4	U5	U6	U7	U8

<i>Architectonica nobilis</i>										1					
<i>Conus sp.</i>	1					2									
<i>Coriallophila sp.</i>	1				1										
<i>Helix sp.</i> ¹¹⁴	3		2	7	1					2		1			
<i>Oliva peruviana</i>	2			1											
<i>Thais sp.</i>	2														
N.I.	1														
	10	0	2	8	2	2		0	0	3	0	1	0	0	0

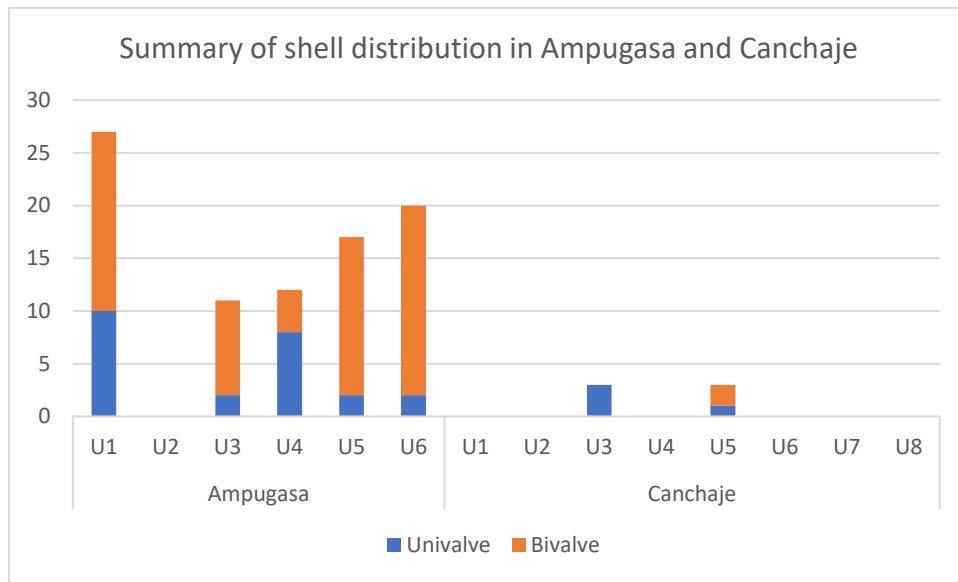


Figure 8.12: Summary of shell distribution in Ampugasa and Canchaje, divided between univalves and bivalves.

There are two types of shells evenly distributed between the residential components of Ampugasa: *Argopecten circularis* and *Aulacomya ater*. *Argopecten circularis*, also known as the scallop, ranges from the Pacific coast of Mexico to Peru. The scallop reaches its adult size of 56 mm in a year and its recruitment size is 30 mm (Fay, Neves, and Pardue 1983). Although no

¹¹⁴ While recorded during the excavation, *Helix sp.* corresponds to a taxa of land snails which are abundant on modern Huarochirí hilltops.

whole samples were recovered in the site, scallops were only present in Ampugasa (n=5), a very low quantity to suppose it had an important role in consumption.

Aulacomya ater is known as the ribbed mussel. It is a species native to South America, reaching a size of up to 170 mm in length (SAUP Database 2018). It is accessible from the coast of Callao towards the south, a close and accessible point from the Lurin valley. The only complete individual recovered from Ampugasa measured 40 mm in length. This is a common shell found in the valley and in our sample. Importantly, we registered a shift in mussel consumption in Ampugasa. When looking at the general trends there is a spike in shell consumption associated with the Rectangular compounds. This spike is mostly associated with the consumption of *Choromytilus chorus* which appears in the other excavation units but almost doubles its presence among the Rectangular compounds.

Choromytilus chorus, also known as the chorus mussel, has a similar distribution to the ribbed mussel yet its habitat starts on the north coast of Peru. It can reach a very large size, up to 200 mm in length (Cabezas 2012). Although the sample we recovered from Ampugasa is too small to strongly support any argument, it is possible that this change has to do with the opening of a wider network of interaction and exchange after Huarochirí was incorporated into the Inka Empire. This potential interpretation could be supported by investigating the types of shells that may have become more accessible after the Inka incorporation in the central coast valleys.

Next, I examined the distribution and presence of shells associated with burials. Two species could have served as accepted sumptuary goods: first, *Oliva peruviana* or Peruvian olive, a type of sea snail commonly found in archaeological contexts as it can be easily worked as pendants. In Ampugasa only one individual was recovered and it was associated with the multiple individuals of Burial 1; as discussed, this burial predates the incorporation of Huarochirí

into the Inka Empire. The second one is *Spondylus sp.* and was only found as a pendant associated with Burial 3 of Ampugasa. Unlike other species the distribution of *Spondylus* to the southern Peruvian area seems to be well dated into the Inka period and, in particular, after the conquest of the Chimu people of the North Coast.

Recently Sandweiss and Reid (2016) presented a model of incorporation of the *Spondylus* shells into the Inka Empire. Their overall argument is that while ethnohistory assumed that the southern coastal polity of Chincha was responsible for the trade of *Spondylus* before the Inka period, there is no archaeological evidence of this fact. Moreover, since the distribution of *Spondylus* in the Pacific Ocean was centered on the north coast of Peru and Ecuador, and the presently known distribution of *Spondylus* artifacts in pre-Inka periods reaches the site of Pachacamac in the modern city of Lima, this interpretation needs revising. The authors conclude that *Spondylus* trade was always controlled and executed by the Chimu people of the north coast and that the association between Chincha and the shell was likely a consequence of the Inka conquest and further disassembling of the Chimu state. It is likely this is a practice the Chimu may have inherited from the Moche. In shifting maritime trade to the south coast, the Inka would have likely given a deathly blow to Chimu power, honored an ally on the south coast, and moved the epicenter of trade closer to Cusco.

In other words, the use of *Spondylus* in the central and lower highlands can be dated to the Inka post-Chimu conquest period (Moore and Mackey 2008). Rowe (1948) dates this conquest to 1470 CE exclusively through ethnohistory, leaving room for leeway. Interestingly, the range of dates for the second period of occupation for both sites is 1430-1540 CE. In order to investigate whether *Spondylus* artifacts dated to the second period of occupation of the sites, and therefore date Burial 3 to the Inka period, I conducted AMS radiocarbon dating on three shell

samples. Two of them correspond to *Aulacomya ater* recovered from the Rock Outcrop in Canchaje. The third is one of the Spondylus pendants from Burial 3 in Ampugasa.

I used OxCal v4.3.2 with the Marine 13 correction curve. To estimate the reservoir effect¹¹⁵ I consulted the Marine Reservoir Correction Database (<http://calib.org/marine/>) and used as a proxy Jones et al. (2007). These authors used a collection from Callao Bay and are currently hosted by the Smithsonian Institute. The result from the analysis was the closest possible estimate to my study area. The average result was a Delta of 45 years with an error of 82. I ran radiocarbon corrections using this estimate (Figure 8.13).

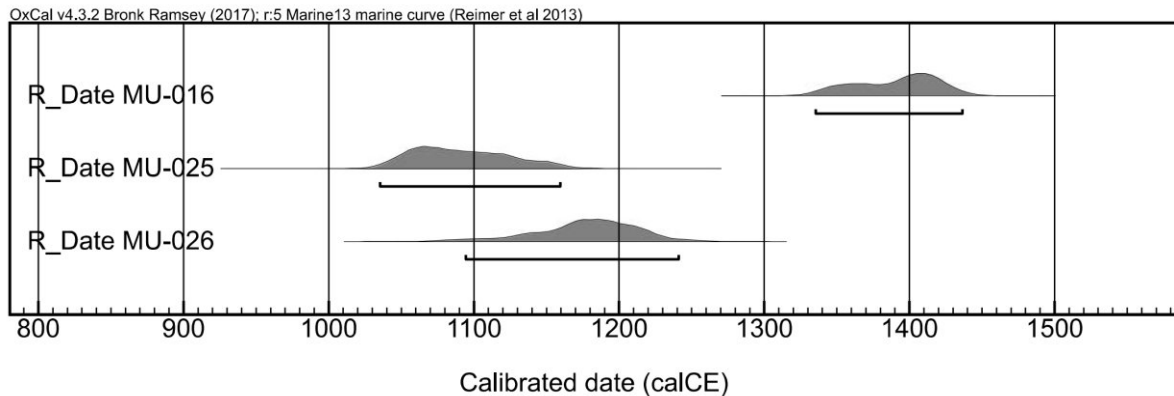


Figure 8.13: Calibrated radiocarbon dates for shell specimens. Graph from Oxcal v4.3.2.

MU-025 and MU-026 correspond to *Aulacomya ater*. These dates fall well within 1050-1250 CE, a date related to the early LIP. This could suggest an early access to maritime goods by the people of Huarochirí that pre-dates the Inka incorporation. MU-016 corresponds to one of the Spondylus pendants associated with Burial 3. This date falls within 1350-1450 CE, that is, right in the interface between LIP and LH discussed in the previous section and directly within the

¹¹⁵ According to Jones et al. (2007:880): “Marine reservoir age reported as “the difference between contemporaneous marine and atmospheric ¹⁴C ages.”

dates estimated for use of the Circular Structures in Ampugasa. Since the *Spondylus* is associated with a burial offering that closes the use of the excavated circular residences, it is possible that this was a ritual good introduced in Huarochirí funerary practices by the Inka while other shells like *Oliva peruviana* were the preferred malacological ritual association used before. However, this is a very small sample and the results are inconclusive.

*Results from p-XRF analysis*¹¹⁶

Lithics had a central role in the activities associated with the rock outcrop. As I previously discussed (7, p.290), rock outcrops and stone artifacts could serve as direct avatars from the origin deities of a community and they could also actively create –or recreate– bonds between land and people. Rock outcrops, in this manner, were very much live members of the community. The repertoire of lithics from both sites includes forms such as grinders, millstones, and cobbles used in ritual closings, such as in Canchaje, or as burial beds, as in Ampugasa. My analysis centered on the presence of lithic points associated primarily with the Rock Outcrop plaza of Canchaje. This type of artifact was not found in Ampugasa (Figure 8.14).

First, I conducted p-XRF (portable X-ray Fluorescence) on this sample. According to Shackley (2011:8–9), the use of X-ray analysis in archaeology offers a number of important gains including: it is non-destructive, it requires minimal preparation, the process is fast, the equipment easy to use, and it is cost-effective. While it will not provide a characterization of

¹¹⁶ Analysis was carried out using a p-XRF lend by Luis Jaime Castillo, Professor at he Pontifical Catholic University of Peru (PUCP) and Director of the Archaeological Program “San Jose de Moro”, with support from Francesca Fernandini from PUCP, and Hugo Ikehara from the Pontifical Catholic University of Chile.

small components, like other methods of mass spectrometry do, XRF has proved particularly apt for the study of volcanic rocks, metalwork, and paint composition.¹¹⁷



Figure 8.14: Sample of the lithic artifacts analyzed through p-XRF (photographs by the author).

¹¹⁷ Shackley (2011:16) further explains: “The analysis of major and trace elements in geological materials by XRF is made possible by the behaviour of atoms when they interact with radiation. When materials are excited with high-energy, short wavelength radiation (e.g. X-rays), they can become ionized. If the energy of the radiation is sufficient to dislodge a tightly-held inner shell electron, the atom becomes unstable and an outer shell electron replaces the missing inner electron. When this happens, energy is released because the inner shell electron is more strongly bound compared with an outer one. The emitted radiation is of lower energy than the primary incident X-rays and is termed fluorescent radiation, often called fluorescence in the vernacular. Energy differences between electron shells are known and fixed, so the emitted radiation always has characteristic energy, and the resulting fluorescent X-rays can be used to detect the abundances of elements that are present in the sample.

The sample was composed of lithic points and debitage; we included the debitage because the points were made up of materials that were quite distinct from other artifacts recovered during the excavation. Consequently, we could associate this debitage directly with the knapping and manufacture of the points (Table 8.14).

Table 8.14: Samples of lithic artifacts from Canchaje analyzed with p-XRF.

Context	Unit	Code	p-XRF Code	Description		
Trapezoidal plaza	Unit 1	501.02.01	PL1	Point		
		503.03.01	PL2	Scraper		
		503.03.02	PL3	Flake		
	Pit 1	556.04.01	PL4	Flake		
		557.02.01	PL5	Flake		
	Unit 2	620.02.01	PL6	Point		
		622.03.01	PL7	Flake		
		622.03.02	PL8	Flake		
	Semi-circular plaza	Unit 7	508.02.01	RO1	Flake	
508.02.02			RO2	Flake		
508.02.03			RO3	Flake		
519.02.01			RO4	Flake		
519.02.02			RO5	Flake		
519.02.03			RO6	Spindle whorle		
Unit 8		674.03.01	PL10	Flake		
		674.03.02	PL11	Flake		
		676.02.01	PL12	Flake		
		679.04.01	PL13	Point		
		680.04.01	PL14	Flake		
		Orthogonal complex	Unit 3	560.03.01	OR1	Flake
				564.05.01	OR2	Point
				571.06.01	OR3	Flake
571.06.02	OR4			Flake		
571.06.03	OR5			Flake		
603.05.01	OR6			Flake		
607.02.01	OR7			Obsidian flake		
607.02.02	OR8			Point		
609.03.01	OR9			Point		
Unit 4	651.03.01		OR10	Point		
	651.03.02		OR11	Flake		

		651.03.03	OR12	Flake
		653.03.01	OR13	Flake
		655.03.01	OR14	Flake
		655.03.02	OR15	Flake
		655.03.03	OR16	Flake
Rock Outcrop plaza	Unit 5	528.02.01	OU1	Scraper
		528.02.02	OU2	Flake
		533.02.01	OU3	Scraper
		535.02.01	OU4	Flake
		543.05.01	OU5	Point
		543.05.02	OU6	Flake
		545.03.01	OU7	Mace head
		545.03.02	OU8	Flake
		545.03.03	OU9	Point
		545.03.04	OU10	Point
		545.03.05	OU11	Polisher
		545.03.06	OU12	Scraper
		637.01.01	PL9	Flake
		637.01.02	OU13	Flake
		637.01.03	OU14	Point
		638.04.01	OU15	Flake
		639.01.01	OU16	Scraper
		639.01.02	OU17	Point
		639.01.03	OU18	Scraper
		639.01.04	OU19	Flake
		639.01.05	OU20	Flake
		640.03.01	OU21	Point
		640.03.02	OU22	Point
		640.03.03	OU23	Flake
		642.03.01	OU24	Flake
		645.12.01	OU25	Point
		685.03.01	OU26	Flake
		685.03.02	OU27	Flake
		685.03.03	OU28	Flake
		685.03.04	OU29	Grinder
		686.02.01	OU30	Scraper
		686.02.02	OU31	Flake
		686.02.03	OU32	Flake
		686.02.04	OU33	Flake
		686.02.05	OU34	Buril
686.02.06	OU35	Flake		

		686.02.07	OU36	Flake
		686.02.08	OU37	Flake
		686.06.01	OU38	Pendant
		688.04.01	OU39	Point
		688.04.02	OU40	Flake
		688.04.03	OU41	Grinder
		689.07.01	OU42	Point
		689.09.01	OU43	Obsidian flake
		695.03.01	OU44	Scraper
		695.03.02	OU45	Flake
		695.03.03	OU46	Flake
		759.03.01	OU47	Flake
		778.02.01	OU48	Flake
		806.03.01	OU53	Cobble
		806.03.02	OU54	Cobble
		806.03.03	OU55	Grinder
	Unit 6	780.08.01	OU49	Point
		780.08.02	OU50	Point
		780.08.03	OU51	Flake
		780.08.04	OU52	Disk

I ran compositional analysis of the samples using R Studio. We had a total of 91 artifacts (recorded in R Studio as observations) and each one included 34 variables or, in this case, components identified from the analysis. The results from the analysis are presented in the Appendices. I was interested to see if there were groupings among the artifacts that could be related to either where they were found on the site, their function, or the available raw matter available near Canchaje. In order to do so I conducted Principal Component Analysis (PCA) in the sample. I explored the importance of the components using R and I was able to identify that the most important components of the sample were: Si, S, Ar, K, Ca, Ti, V, Cr, Mn, Fe, Ni, Zn, and Pr. These components made up over 99% of the cumulative proportion of the PCA analysis. In order to avoid noise in the analysis I used only these components (Figure 8.15).

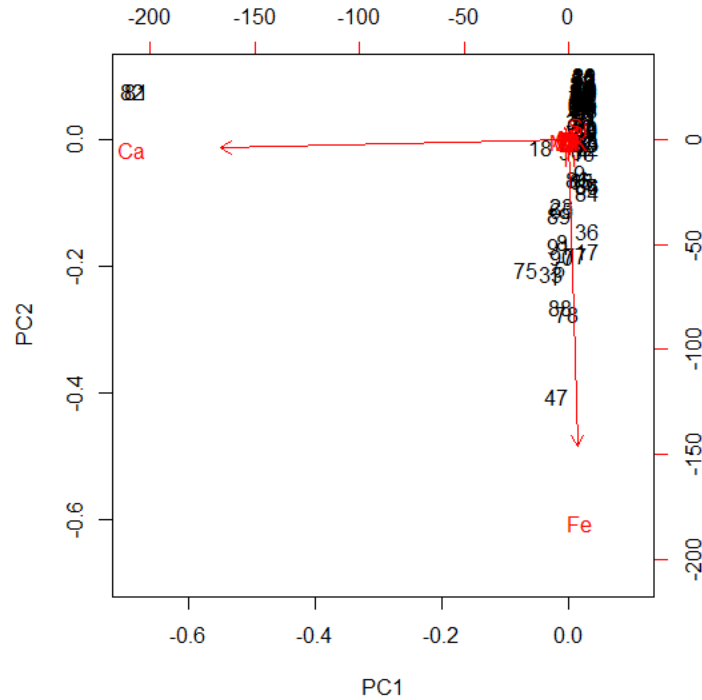


Figure 8.15: Biplot representing the results from the compositional analysis of the lithic sample.

These results suggested that Ca and Fe were the main elements defining the sample. I included in the analysis samples from artifacts made with stones commonly found in the area in order to investigate whether this created different groupings within the sample. However, my analysis showed that both elements were very tightly clustered which suggests that the lithics analyzed mostly came from the same area (Figure 8.16). In other words, composition was not a critical element defining the selection of the raw materials from the artifacts. Moreover, it is more likely that these stones were locally available.

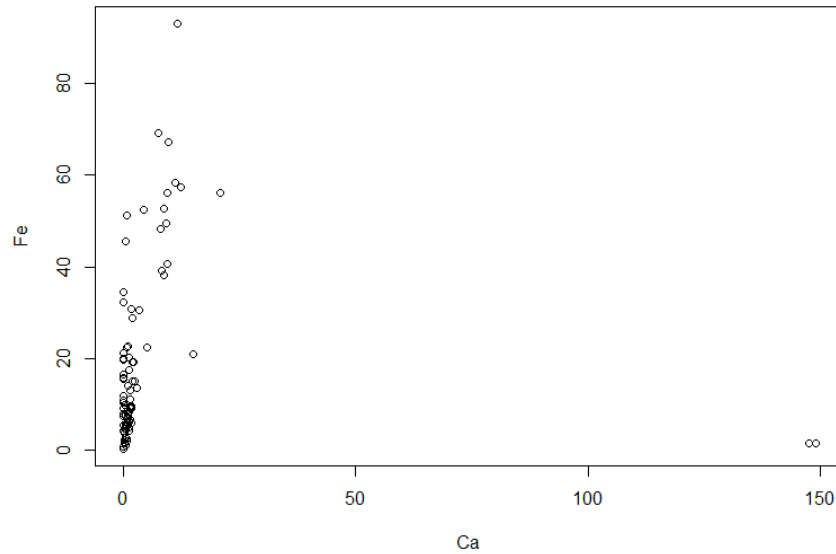


Figure 8.16: Correlation between Ca and Fe in the lithic sample.

I suggest these results confirm the hypothesis of hunting as part of the ceremonies associated with the plaza rituals described in the Manuscript. This is supported by the distribution of the artifacts across the site (Figure 8.17) which shows a higher density and variability of shapes in the outcrop and an almost complete lack of forms other than flakes in the plazas and Orthogonal complex is limited. One possible interpretation is that the production of lithic artifacts of highly ritual value to the Yauyos was taking place in Inka-style spaces. This would be another element to support that rather than a strong imposition of the Inka into ritual, they were actively presenting themselves as new kin group under Pariacaca. In other words, they were not attempting to change local ritual or restrict it even while they built the plazas.

Additionally, if correct, my interpretation highlights the difference between ritual spaces at the settlement level and at the *waranqa* level in the relationship between Huarochirí and the Inka. While the Rock Outcrop of Ampugasa was an avatar of the same ritual sphere as the one in Canchaje, some of the rituals in honor of Pariacaca were exclusive to the latter. More research is needed to confirm or deny this hypothesis.

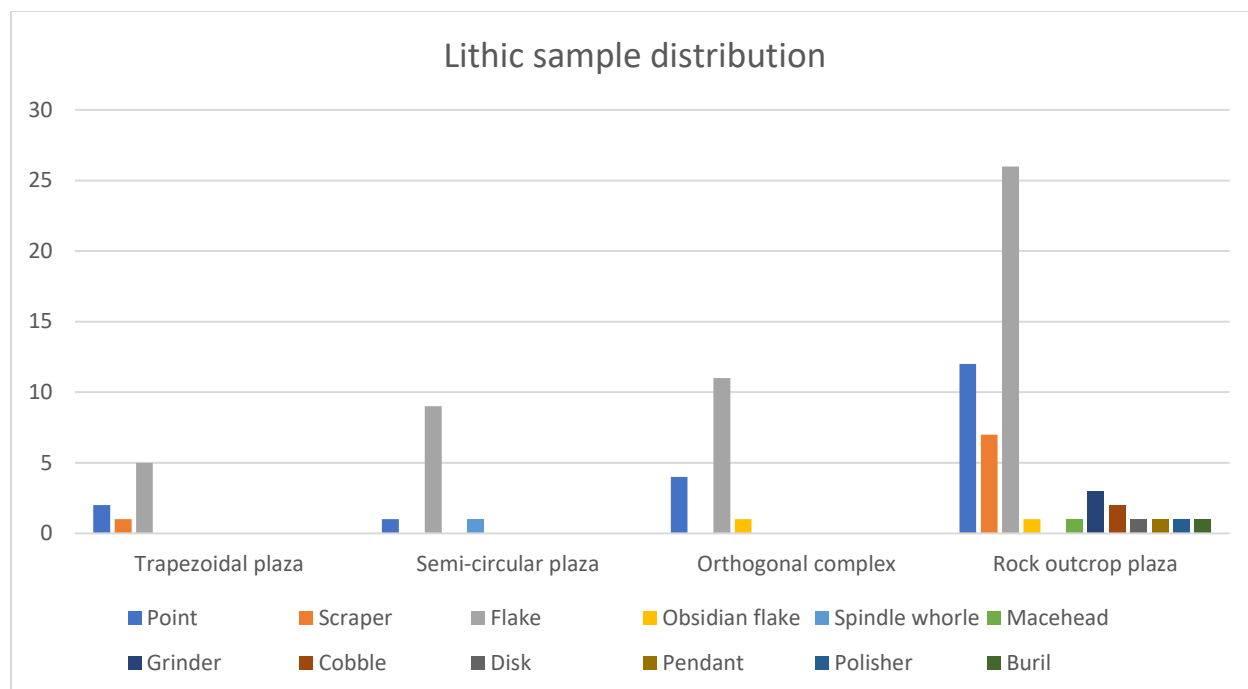


Figure 8.17: Distribution of the lithic sample across the site.

Summary: Materiality and time as dimensions of interaction

In this chapter, I have attempted to correlate the idea of standardization -the replication of specific forms and decorative motifs of ceramic and architecture as part of the materialization of a specific worldview. I argue that while the Inka pursued different forms of standardization at the domestic site of Ampugasa and the ritual site of Canchaje, it was built as to be engrained in existing local practices. In this chapter, the analyses carried out in different materials suggest that local artifacts which were part of ritual paraphernalia that in some cases pre-dated the Inka, were still in use even in the spaces that were built in both sites after their incorporation by the Inka Empire. The fact that they were never abandoned even while new architectural areas and ritual plazas were built, could suggest that their function and meaning had been negotiated as to be able to fluidly move into Inka standard rituals. My analysis results also suggest that that process of building legibility was different between Ampugasa and Canchaje:

As I previously discussed, there is an expectation that specific types of artifacts will serve to absolutely date archaeological contexts by their mere presence. This expectation, however, grossly oversimplifies the creative capacities of material culture. I have presented the results from material analysis by emphasizing context over form, I have questioned why specific artifacts or remains were found in one place and not in another, and I have looked at the Huarochirí Manuscript as a guide. Through these lenses the analyses presented in this chapter work together to answer one of the earliest questions I posed: what is local?

The first argument I defend is that ceramics were not an informative element of this discussion. In Chapter 5 and 6 I discussed in detail the different questions relevant to my work that could be addressed through ceramic distribution. In the first section of this chapter I argued against the simplification of chronology to a “before and after” of Inka-style sherds. I consider it important to make this point because ceramic analysis looms over Andean archaeology like the most basic material correlate of most research questions. Through my analyses I can argue that ceramic ware –brown and coarse, before and after the Inka– was not a significant identifier for the different Yauyos groups and seems to have become important as a ritual element after the Inka incorporation. This could explain why most of the decorated sherds from Canchaje come from the plazas and buildings that are closer to the Inka-style layout than to the local one.

Second, I propose that it is possible to distinguish paraphernalia associated with different types of ritual practices among Inka and Yauyos. The Inka are well-known for their emphasis on feasting and using spectacle to create bonds of reciprocity between themselves and their subjects. Both the documentary record (Chapter 5) and my excavation findings suggest a different emphasis in Huarochirí. The rituals are less about creating indebtedness and more about celebrating a common ancestor and using performance to re-establish and/or negotiate the

position of each group within their macro-community. If my hypothesis is correct, it would explain why Canchaje is such a unique site. While in Ampugasa the same ritual space had only a domestic reach, through Canchaje the Inka could maximize the association between plazas an outcrop to incorporate different *ayllus*. This is probably why Canchaje was favored by the Inka attempts to incorporate standard plazas in local space. The material repertoire discussed in this chapter is better related to descriptions of rituals in the Manuscript than to feasting and redistribution from the Inka Empire. Curiously, residue analysis suggest continuity between the forms of maize consumed in Canchaje (as porridge, still consumed today). However, the overall quality of access to botanical goods remains the same.

Third, while I have presented a proposal for different ritual practices, this does not make them illegible. The Inka were familiar enough with the artifacts, spaces, and practices of Yauyos ritual life to make themselves a part of it. They slowly left their imprint on ritual spaces, not as a takeover but rather as members of Pariacaca's kin. For example, they built the plazas in Canchaje yet accommodated to Yauyos material culture. by the time they built plazas in Canchaje they were accommodating to Yauyos rituals and embedding themselves in the new ritual spaces through material culture (for example, through the use of lithic points). More than a difference of rituals, this may be a continuation of ritual worldviews complementing each other.

In sum, I propose that the incorporation of Huarochirí rested on a mutual legibility that first allowed for the incorporation of the Inka into the local world and only later a negotiation of new state practices into local space. Building on the data analyses, I suggest that standardization at the ideological level -the incorporation of Pariacaca into the Inka system that related them to regional *w'akas* and, by the same token, subjected the Inka to local ritual - was better manifested to the standardization of ritual spaces rather than the content of the rituals in themselves.

CHAPTER 9

SUMMARY AND CONCLUSIONS: LEGIBILITY AND INTERACTION IN THE CONSTRUCTION OF ANDEAN EMPIRES

In my dissertation I have used a multi-scalar and interdisciplinary approach to investigate whether familiarity and the construction of mutual cultural and ritual legibility (*sensu* Scott 1998) in the Andes played a role in facilitating the Inka expansion in Huarochirí during the 16th century. I have proposed that a theoretical reframing of the concept of legibility to incorporate two-way interaction and a mutual familiarity between the Inka and subjected Andean polities to understand the other's social idioms and practices created space for both the empire's institutions and local agency. My research centered on the region of Huarochirí, in the Peruvian central highlands and I looked at different scales of interaction between the Huarochirí communities and the Inka Empire (*sensu* Knappett 2011): on a micro-level investigation of a co-residential community in the settlement of Ampugasa, on a meso-level through excavation of a regional shrine in Canchaje, and on a macro-level through spatial analysis and investigation of the colonial documentary record. This chapter is meant to be a summary of the main results of my research and point towards the next directions of my work.

Did local ritual practices and places influence the way in which Inka-sponsored rituals were performed in Huarochirí?

In order to address this question, I first used archival colonial documents to characterize and investigate the role of ritual in the pre-Hispanic occupation of Huarochirí. I compiled information from individual surveys and site recordings carried out by the Peruvian Ministry of

Culture in the region. I am working with published sources, in particular those with rough estimates of UTM coordinates for the sites. Not all the sites had information on the type of settlement or temporal affiliation. While the map I present is incomplete, reflecting the quality of the raw data, it also shows the diversity of occupation in the region.

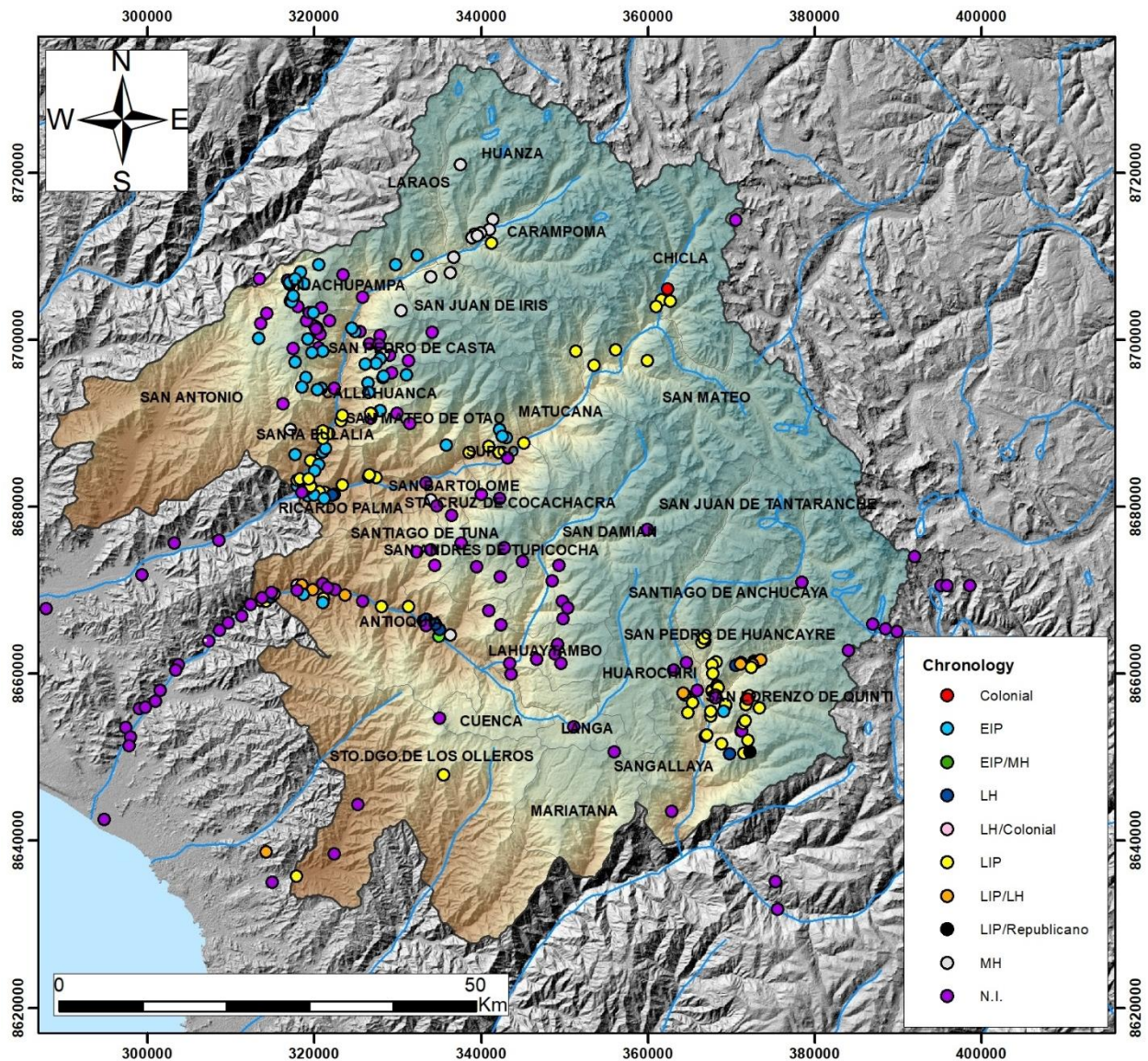


Figure 9.1: Archaeological sites recorded in the province of Huarochiri. Sources: Inventory by the National Institute of Culture 2001; Reports from the Qhapaq Ñan Project 2003; Bueno (2014); Salomon (1991); Van Dalen and Patrocino (2014a) (map by the author).

From this map we can also identify a very dense occupation in the LIP and LH. As I argued before, there are a lot of uncertainties on surface dating as the Inka material record is very subtle in the region. However, we can sustain Dávila Briceño's claim that there were a number of small settlements without a central core. The Yauyos, even under the Inka, existed in a decentralized and discontinuous pattern that challenged Spanish understandings of space. This is evident in the tensions about settlement and movement present in the documentary record.

I used survey and excavation data to find specific trends for site emplacement and characteristics. First of all, I found accord with the observation made by several scholars that the Yauyos, as many LIP highland societies, preferred to live on hilltops and in areas of difficult access in order to maintain visibility connections to sacred features in the landscape; in other words, the *w'akas* that tied the people of Huarochirí to their faraway ancestor, Pariacaca (Buono 2012; Chase 2014; 2016a; van Dalen 2014a; Feltham 1983; Salomon and Urioste 1991; Spalding 1984). My excavation in the settlement of Ampugasa (Chapter 6) demonstrates this choice is not made according to defense needs; we found no evidence of weapons or injuries among the population that could signal constant inter-ethnic conflict. The results from the survey, on the other hand, and comparisons with Canchaje (Chapter 7) showed that settlements were preferably located on top of hills that overlooked intersections between rivers –*tinkus* in Andean lore– and that established visual connections with important sacred places and shrines in the landscape. Consequently, my work supports Feltham's (2005) observation that site-emplacement depended on connections to the ritual landscape rather than warfare. This also demonstrates that the ritual sphere of Yauyos interaction had enough importance to permeate every aspect of the life of the Huarochirí people, even determining where they would live

Huarocharí was composed of five specific macro-communities or *waranqas*: Colcaruna, Quinti, Checa, Langasica and Chaucarima. I do not have enough data to support whether this organization predated or not the Inka incorporation. However, the fact that the people of Huarocharí continued using the self-identifier of “Five Waranqas” well into the 17th century suggest this demographic organization was at least partly reflective of their indigenous community arrangement. Each macro-community comprised a number of smaller communities or *ayllus* and they held their own independent leaders arranged in a typical dual mode as outlined by Netherly (1984). While Dávila Briceño states that there were over 200 settlements before his reorganization of Huarocharí we have no sources identifying these sites.

As I argued before, there are some repetitive patterns in site emplacement and distribution that, based on radiocarbon dating in Ampugasa and Canchaje, seems to predate the Inka period. These patterns include: a de-centralized settlement system, a preference for hilltop occupation, and the centrality of rock outcrops in residential and ritual emplacements. Overall, mine and others fieldwork in Huarocharí show a very scant evidence of Inka-style architecture and material remains. Settlement was deeply affected by the location of sacred mountains or *apus* and rivers which were identified with both *waranqas* and *ayllus*. Inka built spaces seem to have been ground on local forms and adapting them to the standardized forms that characterize the empire. I argued this point through the incorporation of new forms of households in Ampugasa (6, p.216), and the association between plazas and rock outcrop in Canchaje (7, p.299). Actions at these micro and meso levels reflect the association between the Inka and the *w'aka* Pariacaca inferred from the Huarocharí Manuscript (5, p.149).

At the three levels of analysis I proposed, it seems that existing local ritual emplacements were incorporated and came to have a different meaning during the Inka period. Interestingly,

this meaning could have been created through the process of abandonment of some ritual spaces that were not specific *w'akas*. In both Ampugasa and Canchaje, I found evidence of closing rituals associated to rock altars. These rituals involved the deposition of materials; in Ampugasa's case, the burials of children and the intentional covering of the floor with ceramic sherds. In the case of Canchaje, the abandonment was marked by burning events and the deposition of lithic artifacts and animal bones.

I have not encountered a direct correlate to interpret these altars in the Huarochiri Manuscript. However, I found references to possible stone altars in a 1660 criminal case against a woman from San Lorenzo de Quinti accused of witchcraft.¹¹⁸ In this case, the woman speaks of several large stones where libations were made as part of healing rituals, for divination, and for asking for favors such as productive cattle to the *w'akas*. They are described as *mochaderos*, or places for the performance of rituals related to begging for mercies.¹¹⁹ What is interesting in this example is that there seems to be a generalization of *mochaderos* and ritual specialists. It is plausible to think that the abandonment of the stone altars was an attempt to centralize ritual specialization into the local forms of the huacas, which conversely, also made the Inka part of the officials in charge of Pariacaca's cult. The abandonment of the altars, however, was honored through offerings and at no point was any attempt at destroying them. Rather, it is possible that by the proximity of Inka structures and materials, the power of the altars was incorporated into the paraphernalia still in use. If this reading is correct, this could be a specific case of local rituals

¹¹⁸ ALL, Hechicerias Legajo 3, Expediente 15, Año1660.

¹¹⁹ Gonzales Holguin (1989:176) defines *muchhani* as: "Adorar, rogar, reuerenciar, honrar, venerar, o besar las manos."

changing meaning and being negotiated into Inka ritual practices. Consequently, I suggest my first hypothesis was supported through the excavations conducted on Ampugasa and Canchaje.

If local ritual practices and places were still in use during the Inka period, was there a shift in the ritual paraphernalia associated to them?

One of the first observations recorded during my fieldwork was that there is no single design for either type of architecture across Huarochirí. For instance, the rectangular rooms we registered in Canchaje were very different from the ones we found in Ampugasa and were not grouped in independent enclosures. What Yauyos settlements shared, however, was the centrality of Rock Outcrops at the highest point of their emplacements. I have argued that these spaces in particular were highly familiar between the Yauyos and the Inka.

I have argued that these outcrops created a network of *w'akas* that were all part of the Pariacaca narrative. These features were part of a single mytho-history and were the critical elements in defining site emplacement. They were also the scenarios of performances and festivities in honor of Pariacaca that were critical to the construction and maintenance of community identity and hierarchies. I have supported this interpretation through the analysis of the Huarochirí Manuscript, the bibliographical review of studies centered on the text, and archaeological evidence from systematic surveys and excavations.



Figure 9.2: Rock outcrops in different sites of Huarochirí. A. Rock Outcrop in Ampugasa, district of Cuenca. B. Rock Outcrop in Puntón, district of Cuenca. C. Rock Outcrop of Canchaje, district of Lahuaytambo (photographs by the author).

Through the analysis of different artifacts (Chapter 8) I was also able to compare many of our findings with specific passages of the Huarochirí Manuscript describing Pariacaca’s cult. This further supports the hypothesis that the Yauyos were not a centralized polity, a *señorío*, or any type of state-level political aggregation before the Inka. Rather it seems possible that they were loosely associated -in the manner of mutual obligation of reciprocity through kinship that characterizes *ayllus*- through ritual. This interpretation could potentially defy archaeological narratives from research in the lower central coast valleys that cast the Yauyos as necessary antagonists for the local macro-ethnic groups (Marcone and López-Hurtado 2015). I contend that this depiction of highland aggression on lowland populations may be a creation of the Inka

empire as a way to neatly separate populations into ethnic categories and minimize horizontal interaction between the local lords (Ogburn 2008).

In looking at specific examples of ritual paraphernalia and their potential shift in meaning, I found evidence for both abandonment and resignification of specific artifacts. For example, it seems that the lithic points recorded in Canchaje were a unique feature, likely associated to some of the hunting ceremonies in honor of Pariacaca. However, we found their distribution limited to Canchaje and they seem to have almost disappeared in the site with the abandonment of the outcrop. This could suggest that these lithic points held not enough ritual embeddedness to have been incorporated into the activities of the plazas. Moreover, they could potential be in opposition to the intention of feasting performed in them: this was the occasion for the state to honor with food and drink their subjects, not for the locals to perform acts of physical prowess like hunting.

Interestingly, I found in Canchaje evidence of a traditional -maybe even archaic- form of ceramic decoration that was directly associated to the rock outcrop and the stone pillars in the plaza. These amount and distribution of the sherds was limited and further comparative analysis is necessary in order to fully investigate their function between ritual spaces. However, their presence in the plazas and absence in the domestic spaces of Ampugasa, suggest their incorporation into Inka rituals.

Consequently, I suggest that the second hypothesis is also supported by the results from the material analysis. However, further research is necessary to fully distinguish the materials and artifacts that were chosen to be incorporated and those that were discarded. Comparative research will also inform us of the use of these artifacts before their abandonment.

If local rituals in Huarochirí were geared towards creating a shared identity among different communities, what was the impact of Inka incorporation into community building?

This question builds on a reading of the Huarochirí Manuscript that suggest the Inka were addressed as kin by the people of Huarochirí by their incorporation into Pariacaca's veneration. In order to explore this question, I will present the results from the three different levels of analysis I proposed above. My fieldwork shows that the impact that the Inka had in community building processes at each of these levels was grounded on existing social practices negotiated and incorporated into Inka standard institutions.

Micro-level: Ampugasa

Ampugasa is a residential settlement constructed during the LIP period but continually occupied well into the LH (8, p.327). Ampugasa was built as a splinter community from Santo Domingo de los Olleros, identified as the Avichuca *ayllu* of the Langasica *waranqa*. Excavation of this site was geared towards investigating whether the Inka incorporation had a significant impact on the daily lives of the occupants of the settlement as has been found in other areas (Hastorf 1990). The excavations and material analyses suggest this was not the case. The residential areas of the site, while different in masonry, showed no evidence of restricted artifacts, a better diet, or the import of new sumptuary goods. A potential difference could be the *aryballos*; however, they do not seem to have created a special distinction for the occupants of the residential spaces by the mere fact of their existence.

In Ampugasa we also found a coexistence of domestic and ritual space. Both domestic units, for example, were associated with spaces that could be repurposed for burial after their abandonment. When the Circular Structures we excavated were abandoned a complex burial and intentional deposition of ceramic sherds on the floor marked the abandonment of the stone altar. This burial, however, is associated with a Spondylus pendant that seems related to the Inka incorporation. We also see in the Rectangular Compound that the construction of domestic architecture is anteceded by the deposition of thick levels of fill that are associated with large numbers of ceramic sherds. We did not find this practice associated with other areas of Ampugasa but a similar pattern of construction was found in Pueblo Viejo-Pucará.

The most important impact of the Inka incorporation of Huarochirí in Ampugasa is not at the ritual level but rather in the re-structuring of community life within the settlement as evidenced through the layout (see: Chapter 6, p.217). While archival and ethnographic research suggest that there was a single *ayllu* inhabiting Ampugasa, there is a shift in the structuring of domestic life. Residences move from a pattern of circular structures facing internal patios and with shared spaces for food-processing to individualized compounds with internal patios that could be used for food production. While the ceremonial center of the site, the rock outcrop *w'aka*, was still in use and accessible to the population, the shift suggests an adjustment of residential life into the Inka pattern of formalizing community boundaries.

In the Rock Outcrop Plaza and associated Funerary Area, however, we found a prominence of local ritual, using very few artifacts or materials associated with the Inka style. In particular the burials in the Funerary Structure were not disturbed and it seems that when post-burial offerings were made some integrated Inka artifacts. Besides that, there was no marked change in the ritual center of the settlement.

I interpret these results to mean that at the micro-level of co-residence the Inka incorporation did not have an important influence on the ritual life of the occupants. There is a temporal jump between the construction of both domestic areas which suggests that a new form of community relationship was developing, maybe the Inka were emphasizing a distinction between residential compounds and specific familiar groups. However, there was no attempt to influence the center of the site or to formally appropriate the Rock Outcrop and alter the ritual practices of the community.

In sum, rather than experience a takeover of a foreign group, the Inka incorporation of Huarochirí in Ampugasa was most likely manifested as the settlement's incorporation of another kin-group into the settlement's life. This may be a case for the traditional definition of legibility as posited by Scott (1998): empires and states cannot bother themselves with the myriad of local practices of their subjected populations and instead simplify local variability through their institutions in order to make them legible from their centralized view. However, as I argued in Chapter 2, there is a mutual legibility of some pan-Andean principles of interaction among the Yauyos and Inka. Therefore, since this region did not require a military presence or coercive means to maintain order, there is no reason why the simplest course of action for the Inka would be to let the Yauyos incorporate them through these familiar practices into their lives.

In this manner, legibility also becomes a way through which the Yauyos' smallest communities could maintain a level of autonomy within the Empire and make their political subjugation appear like an extension of their community boundaries and ethnic identities (which becomes a more important factor at the macro-level) to incorporate the Inka.

Meso-level: Canchaje

Canchaje was originally a rock promontory used as a ritual axis for the ceremonies in honor of Pariacaca among the Chaucarima *waranqa*. I have proposed that we could identify the site with the mountaintop of Acu Sica (mentioned in the Huarochirí Manuscript). Unlike Ampugasa, the Rock Outcrop of Canchaje was not the ritual center of a single community but of a whole sub-set of what would become the Yauyos ethnic identity: one of the Five Waranqas of Huarochirí. Consequently, I proposed that investigation of Canchaje could serve to research how the Inka incorporation was manifested in a *w'aka* that was specifically used as a point of meeting and interaction among communities to strengthen their own bonds, those they had to their tutelary deity, and the maintenance of local hierarchies among themselves. My results show that while the Inka may have had little effect on the residential rock outcrops, they did have a direct engagement with local *w'akas* as they tried to use them to materialize the practices and spaces through which they created territorial cohesion along the Empire.

Archaeological research at this level –in sacred mountains or shrines among provincial landscapes– centers on the idea of appropriation by the Inka of ritual space in order to materialize their political control and communicate their power to their subjected communities (Acuto 2005; Acuto, Troncoso, and Ferrari 2012; Kosiba 2012; Ogburn 2004). Through my research I have tried to investigate the specific mechanisms through which this appropriation took place; I have focused on the issue of mutual legibility to question what the role of the local population of Huarochirí was in maintaining their own practices and ritual spaces during this process of appropriation.

Through the analysis of material remains and spatial connections, I suggest that the Inka did not fully divest themselves of the influence of the *w'aka* of Canchaje. However, there is a

direct relationship between the closure of the outcrop and the implementation of the plazas. These latter, however, were never physically disconnected from the *w'aka*. They funneled access to it by a well-defined corridor. The contexts my team and I recovered from the outcrop further suggest that this closure was not a single event but rather a process through which the people of Huarochirí had the time and means necessary to fully honor the *w'aka*. When the plazas were built, Yauyos practices and artifacts became part of the whole design; this is the case I have argued when investigating the pillars in the Semi-Circular Plaza (see: Chapter 7, p.299). Plazas are scenarios for feasting, commensal politics, and display of power and richness. In these provincial plazas Inka administrators would honor local leaders with food, drink, and gifts, creating a fictive reciprocity between them that masked the fact that local lords had become dependent on the Inka administration to access luxury goods (D'Altroy et al. 1985; D'Altroy et al. 2000). In my analysis of the artifacts associated with the outcrop in Canchaje and comparisons with descriptions of the Huarochirí Manuscript I have argued for different activities at the core of Yauyos rituality such as offerings, dances, drinking, and races (5, p.116). While these activities are not mutually exclusive, there seems to be a recognized difference in the practices better suited for each ritual space.

When investigating this data, I did not aim to just focus on how the Inka incorporated Yauyos practices into their provincial plans but also to recognize that the Yauyos inserted themselves in the local ritual spaces as well. They tied their own rituality to these spaces and became active agents and not mere participants in the most important spaces of state politics. Going back to the discussion surrounding the stone pillars, at their base and in other sectors associated with Inka buildings, we found evidence of a local type of decorated wares that seem to have deep roots in sites of similar layout to Canchaje at the eastern boundary of the province

(7, p.309). These ceramic sherds are not present in my excavations in Ampugasa nor in surface collections I have carried out in the valley. Could this ceramic style speak to a purposeful attempt to mark Inka ritual spaces with their presence and emphasize their own agency in the construction of new ritual spaces? While they may have been limited to rock outcrops across Huarochirí, in Canchaje they are also found within formally designed Inka plazas.

In summary, my research at the meso-level suggests that this was the critical social –and geographical– space of negotiation and interaction between the Inka and Yauyos. However, there is not an emphasis on power displays but rather a slow-building process of negotiation and purposefully working in the realms that were familiar and legible to both actors.

Macro-level: the Lurin Yauyos

Finally, the macro-level can only be recognized through tying the results from Ampugasa and Canchaje into the broader narrative of Lurin Yauyos and the overall Yauyos ethnic identity as constructed during the LIP and LH. I have argued that before the Inka the aggregation of communities from Huarochirí were loosely tied through their kinship to a single ancestor-*w'aka*. Discussion of the colonial written record informs our understanding of how the Inka actively used this fictive kinship to bring the people of Huarochirí and Yauyos into a single broad ethnic community – in other words, they made the province legible from the synoptic view of the state. But they did so through the language of the local.

According to Spalding's seminal research in Huarochirí, kinship played a central role in creating a vocabulary through which performative practices maintained and reproduced both the physical setting and social life of the communities. In her words (Spalding 1984:23), kinship "links small groups of people with larger groups, thus providing the rationale for political

organization. They can link past and present, providing an ideology to explain and justify the distribution of access to productive resources, the organization of ritual, and the participation of the people in maintaining and preserving the social order.” The malleability of kinship and its terminology enabled their usefulness in framing the worldview of community members.

Community then is defined as follows:

The Andean community was a social group of varying size whose members were linked by their common claim to access or the resources of production held by the group and the goods and foodstuffs produced by it. The community was a landholding unit at all levels, and it claimed access to resource areas of "islands" more or less distant from its core territories that were exploited by some of its members sent to those areas for a purpose. Membership in the community was defined in terms of kin ties, although at the maximal level the ideology of proper behavior among kinsmen must have become so attenuated as to be little more than a political fiction, an ideology that carried with it a set of norms structuring political behavior within the group (Spalding 1984:52).

This is evident in the ritualization of the landscape that directly speaks to the territorial performance of community boundaries and identity. Salomon (1998:11) argues that *w'akas* “were cultural postulates whose interest were rooted precisely in the fact that they united in ‘persons’ heterogeneous percepts of reality as substance, event, category, and so on”. The relationship between *w'aka* as place, and place as people, is integral to understanding the Huarochirí communities (Salomon and Urioste 1991; Salomon 1995).¹²⁰ According to Salomon (1995:321) the concept of “*llaqta*” brought the ancestors, living communities, and landscapes together:

Each small ayllu was affiliated with a local ceremonial center. The set of ayllus whose cults, and whose entitlements of resources, were celebrated at such a center is typically the unit called *llacta* in colonial usage. Many ceremonial or *llacta* centers were still

¹²⁰ As Salomon (1998:16) explains, materialization of huacas in the landscape defined social organization: “The passage to durable being was accordingly distributed unequally through society in favor of persons through whom interests of kinship corporations were effectively transmitted. And the landscape over which ancestor shrines, huacas, and deified land features were spread could be taken as an integrally naturalized map of social hierarchy, so that one lived enclosed by an all-encompassing correspondence structure across ontological levels.”

known and honorifically used ca. 1600. (...) Such centers housed among other sacred things the mummified ancestors of one or more small ayllus. Sometimes the respective ayllu-“founding” ancestors had common parents, that is, mummies ancestral to the whole *llacta*, but more typically ayllu-founders were said to be descendants of superhuman beings, *huacas*, shows physical substance inherited in monoliths, statues, or other sacred objects. The *huacas* in turn were sometimes imagined as the progeny of major permanent land features or natural forces such as great snowcapped mountains or lightning. In this fashion ancestry could be imagined as a seamless web expanding from family organization to geographic and even cosmological order.

The categories that link *ayllu*, *waranqa*, and ethnic identity are the same. The basic principles tie them together in an aggregation that can be used as a political currency by different actors at different scales. The replication of *w'akas*, from Ampugasa to Canchaje to Pariacaca, materialized this narrative. In doing so, it is possible that the Inka selectively inserted themselves within this lineage. This also could open the door to the people of Huarochirí selectively accepting the new kin group of the Inka and their performance as *w'akas*, potentially as a means to maintain those practices and worldviews that made them “one people”.

Legibility and familiar idioms: a model of mutual interaction

At the beginning of this dissertation I outlined two central research questions and four variables of investigation: 1) Kinship, 2) Community organization, 3) Ritual practices and emplacements, and 4) Sacralization of geographic landscapes. I have already elaborated on the way in which the four research variables were mutually familiar between the people of Huarochirí and the Inka. In this section I will briefly review them through the archaeological, historical, and ethnographic data recovered during my fieldwork.

Kinship and community organization

Community, *ayllu*, even ethnic identity is all grounded in the understanding of kinship in the ancient Andes. Silverblatt (1988:85) put it best already 30 years ago:

The Incas spoke the language of kin –kin terms, kin idioms, and kin expectations– in the complex processes of creating the largest empire known in the Andes before the coming of the Spanish. One prospect of their kin-phrased cultural acrobatics was to refashion Andean histories: Lords would project a shared past with tribute-bearing enclaves under their dominion. The Incas would attempt to accomplish such historical reconstructions by capturing their subordinates' ideologies of descent, the ideologies that voiced social time and gave human significance to the past. Selecting and reworking those histories –along with the widespread custom of deifying ancestors– Cusco was intent on transforming the familiar into a flattering, novel, imperial fantasy in which kings became kin of those they ruled.

For Silverblatt this was a way of ideological standardization that fits right into Scott's contentions. She argued that the Inka Empire “froze the distinctiveness of what had been culturally autonomous groups into administrative units fit for imperial bureaucracy”. I agree with the contention that the “restructuring of genealogical history legitimized their dominance through a deceptive model of social hierarchy, for the equivalencies that it flaunted were false” (Silverblatt 1988:86–89). It is undeniable that implicit in imperialism is the development of unequal relations of subjection and that the Inka were not the rare empire that exerted no influence over their subjects. As the Spanish themselves, the Inka saw their control over the world as a God/*Apu* given fact, a manifest destiny of sorts. But I do question the central mind proposed for the Inka project and ultimately the capacity of the Inka to use their “kin-phrased cultural acrobatics” with the powerful and strong control over their subjects that Silverblatt posits. This is particularly interesting outside of Cuzco. The Inka were already part of an unstable landscape that they could hardly fully dominate. The language of kinship, and thus ancestry, was a political tool to capture history but polities that lived mostly outside the empire

by virtue of resistance, distance, or even lack of importance for the empire may have been able to entangle the Inka in the exact same process of kin-based subjugation.

During the LIP there was not a centralized apparatus of political control in Huarochirí. The material link that brought the Yauyos people together was their site emplacement in locations that exhibited avatars of their ancestor body, Pariacaca. The rock outcrops were not exactly like the plazas; they were not only places of reunion, they were kin. Community was built upon them. In Ampugasa and Canchaje we recovered evidence of funerary contexts directly associated with the rock outcrops, further reinforcing this idea of kinship.

During the LH the people of Huarochirí did not abandon their outcrops, they remained the places that bound them to the land and a shared history. In Ampugasa the Inka may have seen no use in acting upon the outcrops. At Canchaje, however, they directly asserted themselves in a place where different micro-communities met and came together to perform their affiliation at the meso-level. The Inka themselves had a long trajectory with stone and it was an easily grasped concept for them that the outcrops were the way and space to establish mutual kinship.

The closing or potential decommissioning of the Rock Outcrop at Canchaje was a heavily ritualized process. It is unlikely that it was a single forced event since all the different fills, contexts, offerings, and access closings suggest that the people that did them had the time and resources to do so. Building on the material remains and form of abandonment, it seems possible that the Inka may have been able to spin a narrative of the plazas as reinforcing the worship of Pariacaca and their association with the pillar wall was a direct materialization of this.

At the domestic and local levels, the Inka were also reformulating local understandings of community life. In Ampugasa they did so by moving residential areas from the Circular Structures to the Rectangular Compounds, as I have previously discussed. In Canchaje, I argue

that the building of the plazas and channeling of the outcrop were the means through which a broader identity, the Chaucarima *waranqa* identity, was reinforced, controlled, and formalized.

In summary, I propose that the practices related to kinship, and implicitly to community-building, were a legible idiom between the Inka and Yauyos and they served very similar roles. The Inka did intervene on one level of kinship—that of ethnic identity. They created a province of Huarochirí and reorganized different communities as *waranqas* that were part of a shared ritual program. However, this difference did not seem to completely impact or alter the identifiers used among the Yauyos themselves. Even though the creation of provincial macro-communities for the sake of Inka administration (Julien 1988) can be considered as a type of standardization that erased or reduced local variability, it can also be understood as a new level within an existing system of kinship organization. The Inka built upon practices and views of kinship vis-à-vis population organization to be able to account for the different territories under their yoke. However, the principles behind any changes were readable and embedded in local worldviews.

Additionally, familiarity and legibility also engender local agency. I propose that the language of kinship was engaged by the Yauyos through their own creation of the Inka as subjects of Pariacaca. The Inka Empire became appropriated within a local system that defined their idea of kinship and community through their relationship to their deity. The Inka, nominally at the very least, were part of the Children of Pariacaca.

Ritual practices and sacred landscapes

One of the aspects of Inka provincial strategies that has received most attention by current archaeology is, undoubtedly, their construction of and interaction with sacred landscapes

(Acuto 2005; Christie 2015; Dean 2010b; Guchte 1999; Kosiba 2012; Meddens et al. 2014; Niles 1999). The Inka had a complex and mutually dependent relationship with their landscapes. Through its sacred nature, the capital city of Cuzco was a theater in which the Inka legend was consistently enacted and reenacted, where their claim to power was stronger, and where everything was designed to show their power (Farrington 2013). The ritualized landscape surrounding Cuzco was marked through the *ceque* system, a network of *wa'akas* united through imaginary lines, each one charged to the care of a specific *ayllu* (Bauer 1992; 2004; Zuidema 1964). Most of the places marked as sacred by the *ceque* referred to specific episodes of the Inka's own history, the mythology of their lineage, and the wars they won. The landscape surrounding the sacred landscape was a network of places that sacralized the Inka and legitimated their rule. However, all these processes of marking the landscape predate the Inka, and can be considered, albeit through different material enactments, pan-Andean worldviews.

Across the provinces, however, the Inka did not mark the landscape with their own history but rather aggrandized local histories in a way in which they could become actors in them. The performative and visual aspect of Inka sacralization of the landscape is a critical aspect of their expansion (Coben 2012). When talking about carving the world *sensu* Guchte, Kaulicke (2015:252) points out that “This landscape is by no means a timeless construction but rather the sum of aggregated memory places and paths as monuments for and constructed by the ancestors, who might even be present in them”. I discussed the carving of the world as a form of imperial transformation of the world; I also argued that in Huarochirí we have a unique opportunity to compare the state and local worldviews.

In Huarochirí the Manuscript directly relates the relationship between existing *w'akas* – most of them mountain tops, lithified ancestors, or existing landscape features– through the

hierarchies of kinship and replication. In the Manuscript Pariacaca is born from five different eggs and has five different bodies, these bodies can all undertake different missions and become lithified in the landscape as well. He has sons like Tutayquiri or Macahuisa that have their own episodic conquests and become the ancestors of different Yauyos communities. There are other deities across the landscape, such as Chaupiñamca in the middle valley or Huallallo Carhuincho, who was expelled from Mount Pariacaca by the Yauyos forefather. The history of the Yauyos and the relationships of subjugation, alliance, or shared history were clearly manifested in the landscape. The rituals of the Yauyos, such as those performed by the Inka in Cuzco and in the *ceques*, were meant to reenact and affirm these relationships.

I have argued that the outcrops reflected different scales where ceremonies in honor of Pariacaca were performed. This network of rock outcrops harkened back to the same ideology, the one that made the communities of Huarochirí belong within the nested hierarchies of the children of Pariacaca. This replication and standard use of landscapes is well recorded in different aspects of Inka ideology.

One example is the body of the Inka himself (Curatola and Szemiński 2016). The Inka is by definition a *w'aka* himself. His body is sacred and shares the same qualities as other *w'akas* do (Dean 2007). The chroniclers identify different bodies of the Inka that were worshipped in the same way as the Inka themselves were; these were stone idols called *huauques*, considered Inka siblings who could travel across the empire in his name (Kaulicke 2015; Ziolkowski 1996). Mountain untain *w'akas* were also divisible and parts of themselves could be worshipped as if it were the whole; this is what happened after the destruction of Apu Catequil (Castro de Trelles 1992). The Manuscript gives a similar example through the appearance of Llocllay as a son of

Pachacamac. I propose that it is in this sense that we should look at the Rock Outcrops: a replication of the sacred bodies of Pariacaca.

The Inka policy among their subjected landscapes was to establish local *w'akas* within their pantheon through fictitious kinship. As I have argued in this section, these practices were legible idioms between the Inka and other Andean societies; they were familiar to Inka and Yauyos in Huarochirí. In the same way in which the Inka maximized kinship to create ethnic identities, they maximized the relationship between people, land, and *w'aka* to become part of imperial landscape narratives. Astuhamán (2008) explored the replication and integration of the Yauyos ritual system into the Inka networks through the development of “other Pariacaca’s” in regions far from Huarochirí. According to the author, these new namesakes were given to mark new territories the Inka gifted the *w'aka* and therefore a new avatar of the *w'akas* was put in place. Pariacaca was raised to a state-level *w'aka* under the Inka.

This Inka practice has a direct correlate to the appropriation of the Inka body by the Yauyos and Pariacaca. In Chapter 4 I detailed specific mentions of the Inka in the Manuscript. In these episodes the Inka is compelled to become a *huacsa*, a dancer in the ceremonies dedicated to Pariacaca’s cult. The Inka, the avatar of the Inka Empire, a *w'aka* and sacred body, serves local *w'aka* Pariacaca, the one the Yauyos thought existed before and after the Inka.

In summary, there is an ongoing process of building mutual legibility between Yauyos and Inkas. The appropriation of the Inka by the Yauyos may be fictional and part of a narrative told to the Spanish well after the fact. It may have brought no differences to the Yauyos as a subjected polity and subject to the same levies and tribute. Nevertheless, this incorporation may have informed the Yauyos historical consciousness and allowed them to position themselves within the empire without a collapse of their worldview and even an expansion of it. Finally,

there remains one question: what did the Yauyos and Inka each get from this type of interaction? I suggest that in a context of not outward resistance to imperial annexation, a process of colonization through ideological legibility and building on local practices that were legible to the empire, created spaces that facilitated the least-cost establishment of state institutions and the maintenance of local cultural practices.

Coda: A case of continued legibility?

Building on the previous discussion, I propose that the next step is to investigate the way in which legibility may have been reenacted by local communities during the Spanish Colony. A large body of research investigates indigenous appropriation of Spanish institutions such as literacy (Adorno 2000; Salomon 2011), conversion (Estenssoro 2003; Mills 1997; Ramos 2010; Taylor 2003), and use of the judicial system (Ruiz and Kellog 2010), which enabled Andean people to maximize potential gains even under subjection. What has not been explored in depth, however, is the history of these communities engaging the Inka Empire and the lessons they learned through it. Spanish colonialism did not take place in a historical vacuum and in turning our attention to the previous experiences of the Andean communities we may be able to tease out important forms and local agency from the colonial texts

My analysis of colonial sources shows that the people of Huarochirí presented themselves as the “Five *waranqas*”. For simplification’s sake I present the bounded territory of each *waranqa* using the modern boundaries of the districts. Mobility and different pre-Hispanic boundaries are marked by points of different colors within the districts (Figure 9.3).

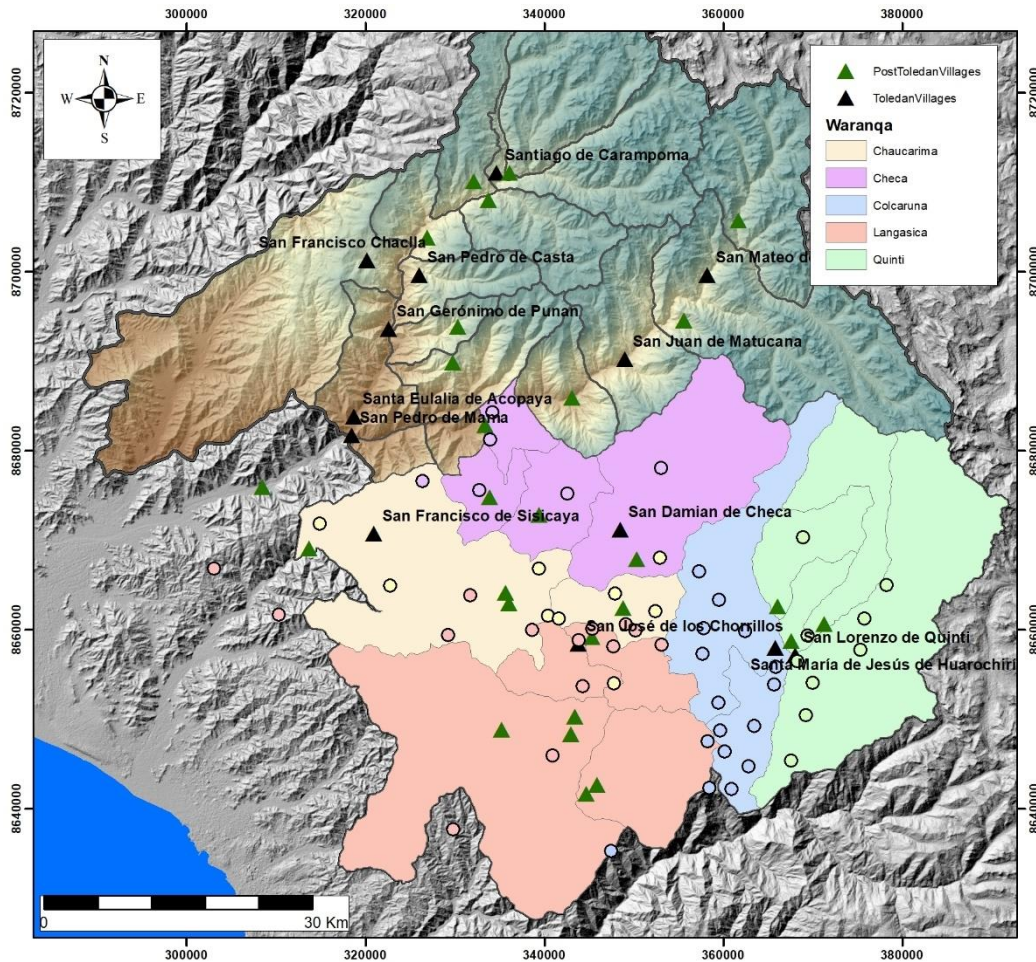


Figure 9.3: Depiction of the distribution of the Five Waranqas of Huarochiri using the modern district boundaries. Note the small dots color-coded by waranqa and how some of them spill from these boundaries and the triangles showing the toledan and post-toledan towns (map by the author).

The map shows significant movement of specific *ayllus* from most of the *waranqas* with Quinti as the exception. However, in reviewing the colonial documents Quinti is consistently associated with *ayllus* of Anan Yauyos and one of the areas with most internal conflicts. In the Manuscript the Quinti are presented as the older siblings of the Checa people and consequently have a higher ranking and a closer kinship to Pariacaca. Archaeological research in the area also found a high density of archaeological sites. I interpret these different sources as supporting Quinti as one of the older –if not the oldest– of the Five Waranqas. If the Yauyos name indeed came from the Anan Yauyos region, and if these groups had a closer kinship to Pariacaca, it is

possible that Quinti was the first of the splinter groups that took over Huarochirí from the yungas. In all likelihood, this could explain the short stratigraphic deposits found in the excavations at my two sites as well as Chase's work in Llaqsatambo.

The Colcaruna *waranqa* was consistently extending to the southwest by the time the colonial boundaries were instituted (e.g. Chatacancha and Calaguaya) and the way in which this migration was manifested was through the creation of new *ayllus*. It is possible that Colcaruna became the head of the Five Waranqas under the Inka rather than through the pre-Inka Yauyos occupation. This is suggested by how close it is to Quinti and by how heavily involved it was in the Yauyos expansion to the south. However, these were then overtaken by the Langasica *waranqa*. Langasica is rather interesting in relation to Chaucarima as it seems as though there are very fuzzy boundaries between them, as reflected by *ayllu* spill-over. These fuzzy boundaries were probably mutually beneficial as they both held lands in the most fertile areas of the Lurin valley. Chaucarima is often identified as the "Inka thousand", suggesting a latter creation as a *waranqa*. The last *waranqa* is the Checa people who also shared a fuzzy boundary with Chaucarima. Permeability of community boundaries was likely the norm before the Inka.

My spatial mapping of the documentary record also shows the importance of specific areas in the interaction between communities. Interaction could be through shared ritual places, through conflict areas, or areas of joined labor. The overall point in looking at these maps is that communities remained well-rooted in their own identities and affiliations even after the fall of the Inka and the move to Spanish colonialism (Figure 9.4).

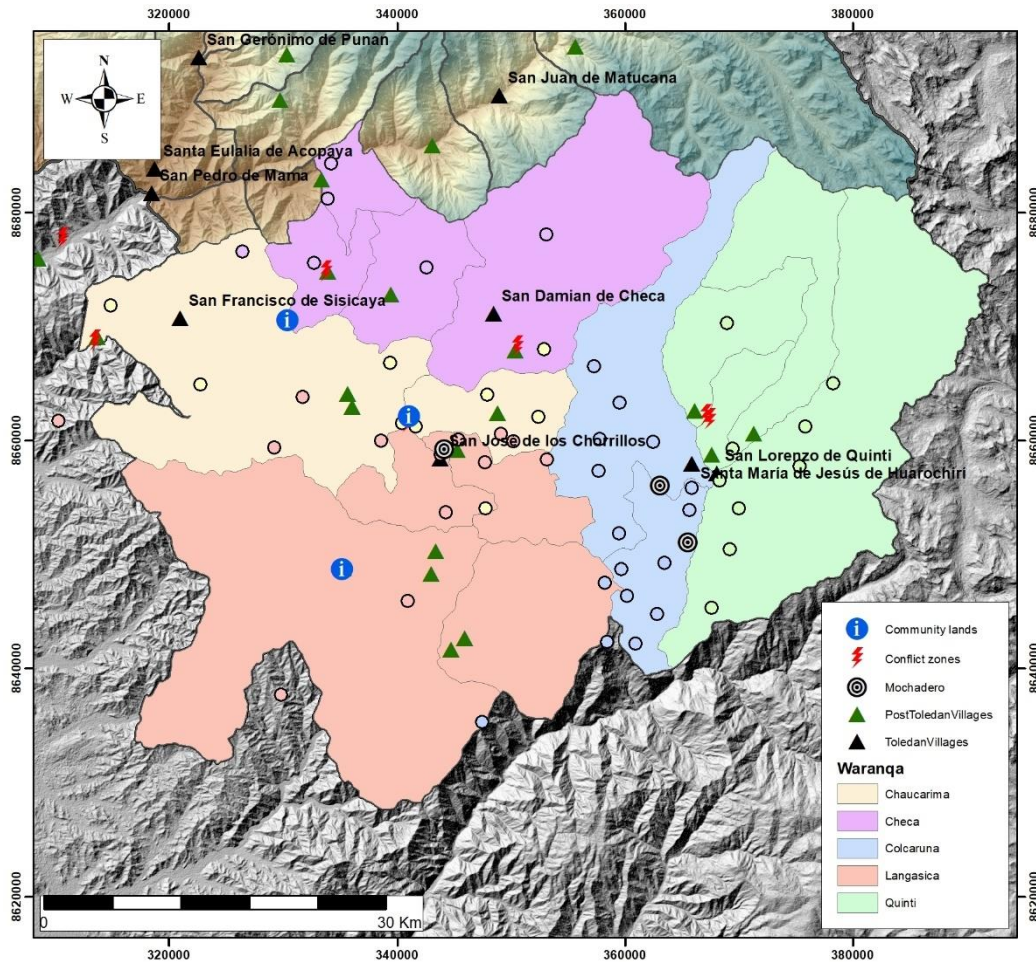


Figure 9.4: Location of identified community lands, conflict zones, and mochaderos within the territory of the Five Waranqas. The divisions correspond to the modern district boundaries (map by the author).

Through my historical research I have found two cases that suggest that the way in which rock outcrops served as a *w'aka* mediating the Inka and Yauyos interaction was replicated –or attempted to be replicated– by the Five Waranqas under the rule of the Spanish.

In 1594 the people from the towns of Calaguaya and Chatacancha in southern Huarochiri were requesting exoneration from the Spanish ecclesiastical authorities from attending mass three times a week. The Calaguaya were reduced in Santa María de Jesús de Huarochiri while the Chatacancha were reduced in San Joseph del Chorrillo.¹²¹ The argument of the petition was

¹²¹ ALL, Papeles Importantes, Leg.3, Exp.13, 1594-1617.

that the reduction towns were very far away from their original lands or *chacras*, between 5 to 6 *leguas* away. Consequently, it was virtually impossible for the people to make the constant treks back and forth while also attending to their fields. Arguably, such a demand for constant movement to a religious center is an example of lack of legibility between the Spanish and Andean groups, that had found ways to replicate their ritual spaces closer to their settlements.

In order to make their judicial case to the Spanish, the Chatacancha people took it upon themselves to construct a chapel in what the Spanish called a *rancherío*. While there were diverging versions about whether they had asked permission to do so or not, there was agreement that the chapel met the Spanish requirements of ornamentation and dedication (in this case to Saint Francis). The whole petition was for a priest to come and give mass at this new chapel.

A similar case takes place in 1631 in Guamachica, part of doctrine of San Damián.¹²² The only name I have been able to correlate as a toponym for this rancheria is Guamansica or Guamanchica, where the post-toledan town of Espíritu Santo de Antioquía was founded. As in other cases, this coincides with the modern boundary between the district of Antioquía and San Damián in the location of the archaeological site of Cinco Cerros (see: p.307). During my conversations with community members from different towns, Cinco Cerros was always mentioned as a place where they used to take their cattle to pasture. It is only in recent decades that the route was abandoned as communities relied less in herding than agricultural production.

The Checa were slowly abandoning these lands after their first attempt at reclaiming them through the chapel. It may not be a coincidence that this town was under heavy surveillance by Francisco de Avila and that Cinco Cerros was an identified shrine in Huarochirí Manuscript.

¹²² AAL, Visitas, Leg.9, Exp.12, 1661.

This also coincides with the development of new post-Toledan towns that would take control over some lands as is the case of Huamansica. This could be an example of where direct Spanish surveillance curtailed the attempts of the Checa people to reclaim lands through the creation of a mutually legible ritual place. The Spanish administration was more interested in founding a more accessible town in the middle valley to control fertile lands.

In the case of the chapels built under indigenous requests, and the initiative of indigenous populations in building them without requesting permission from ecclesiastical authorities, I propose a two-fold attempt at 1) reclaiming the lands they had lost during the drawing of the Spanish towns and 2) using ritual places –like the Rock Outcrop plazas among themselves or the plazas in Canchaje later on with the Inka– as a necessary arena in which the cultural forms of both communities –Yauyos and Spanish– could interact with one another.

An unexpected result of the illegibility between the Yauyos' actions and the Spanish interpretation could be that once new towns were recognized by the colonial administration the potential also developed for internal conflict between *ayllus* or within *waranqas* inasmuch as the new group solidarities that developed rested on township rather than community. Building on this premise I propose to investigate the negotiation of the colonial landscape as a continuation of using ritual and cultural legibility as a political currency through which local agency within state imposition developed in Huarochirí. While my archaeological work makes this case for the relationship between the Yauyos and Inka, upcoming research will investigate how their experience with the Inka and deployment of mutual legibility served the Yauyos interaction with the Spanish colonial authorities.

Intellectual significance, future research directions, and broader impacts

Intellectual significance

My dissertation centers on a canonical issue in Andean archaeology: the Inka expansion and imperialism. Research on this topic started in the earlier years of Peruvian archaeology (Murra, Wachtel, and Revel 1986; Rowe 1944) and remains a focal point until today (Malpass and Alconini 2010). However, this scholarship remains unidirectional: either scholars center on the Empire, the methods through which they conquered the Andes, the reasons behind their strategies, or the mechanisms through which they controlled local elites (e.g. D'Altroy and Schreiber 2004) or the focus is on local resistance or in the specific benefits local elites may have garnered from their acquiescence to the Empire (e.g. Ogburn 2004). I have discussed this focus as influenced by the artificial separation between top-down and bottom-up approaches of archaeological research. My use of legibility as a driving concept was instrumental in bridging these scholarly focuses. Rather than look at top-down and bottom-up as reactionary approaches, in my dissertation I have investigated them as mutually informing and shaping one another. Local agency and state institutions are not only in constant negotiation between Yauyos and Inka but they are always expanding and reshaping themselves through the process of interacting with one another under long-standing and mutually legible rules of social encounters.

According to Scott (1998), in order to create legibility states first need to simplify local diversity and impose standard institutions on the conquered provinces. These institutions must be constructed in spite of the practical knowledge of the communities under the state; practical knowledge means the localized knowledge a community has of their own institutions and how they maximize the returns they get over the productive landscape. I argue that the practical knowledge of the communities under the Inka was not a hindrance but rather a shared idiom

through which political institutions could be asserted. At the same time, local communities engaging with the Inka through social practices resting on reciprocity also created the spaces where the Inka could be indebted to them.

My research aimed at investigating these potential idioms and the material correlates of shared cultural practices through a multi-scalar and interdisciplinary research program. Implicit in my model was questioning the role of materiality and the traditional correlates of Inka conquest in the context of a shared social space of interaction. In 8 I tried to look at the materials as more than just chronological or ethnic indicators. In this manner, and through an approach that contextualizes materiality in order to investigate the meanings and values they brought forth, I have problematized the way in which standard representation of the Inka state-ideology interacted with local contexts.

In the previous section I have tried to present specific mutually legible idioms. While there are others that could be explored, I centered on those related to ritual life and ritual places. I have investigated the rock outcrops as the local analogous space of Inka plazas, arenas of social processes of community building. Rituals are the manifestations of worldviews that inform different aspects of societies' lives (Rosenfeld and Bautista 2017). Ritual creates special conditions in which those social constructs that could be considered bounded become permeable and allow for the transformation and development of new relationships; in this manner ritual is practice (Bell 2009). I propose that the ever-growing body of research on ancient Andean ritual must turn to recognize the ritual as a process of becoming something new that explains - and potentially legitimized- the socio-political context experienced by Andean populations. Ritual is ever changing, ever fluid and has a creative capacity that other spheres of social life may lack. Research on ritual and the impact of ritual in the development of new socio-political

relationships during the Inka Empire must be refocused and centered on materiality-based approaches.

Finally, I recognize that the greatest risk of my work is to make imperialism, colonialism, and subjugation appear as a shared relationship in which all the actors willingly cooperate. I have tried to offset this risk throughout my dissertation but acknowledge my attempts may have fallen flat. Inka imperialism was not a choice made by their subjects and, familiar in cultural idioms or not, their loss of political autonomy under the empire had strong and, in some cases, catastrophic results. Through my use of legibility, I do not intend to recreate the long-abandoned view of the Inka empire as a benevolent land where no one was ever hungry. My research goals veered towards investigating, through systematically-recovered archaeological data and historical research, the mechanisms through which empire was enacted. My objective was not to explain how the Inka came to conquer Huarochirí but rather to recognize that the voices of the Yauyos – the voices of the Manuscript–, still heard in the 21st century, didn't present themselves as victims of the Inka Empire. By following their lead, my dissertation explored the creative ways in which the Yauyos incorporated the Inka into their own historical narratives. In doing so, my research also brings to the forefront the social spaces, built spaces, practices, and idioms of interaction through which the Yauyos became part of the Empire and the Inka became part of the Yauyos.

Future research directions

In Chapter 8, I used colonial documentary records to investigate the macro-level of cultural legibility among the Yauyos. I debated whether this chapter belonged in this dissertation. However, I contend that it becomes an integral part of investigating the history of how the Yauyos came to deal with imperialism and the avenues through which they displayed their own

understanding of how colonial relationships were formed. In other words, I aimed to investigate if cultural legibility as a medium of negotiation and recreation of local consciousness was integral to how the Yauyos performed their identity. For instance, Gose (2008:20) argues that

As an indigenous political idiom, the ancestral origin narrative significantly shaped Andean responses to Spanish colonialism. First, it normalized the notion of intrusive conquest, and so made the Spaniards' remote origins and colonizing agenda intelligible in Andean terms. Spaniards did not introduce empire and colonization to the Andes: there were indigenous phenomena fully developed and comprehensible within Andean culture.

Wernke (2007a; 2013) has argued successfully for the need to investigate Andean late societies through a transconquest approach. There is surprisingly little attention paid to the fact that Andean societies experienced two different forms of colonialism within the lapse of 100 years; it is even possible some people experienced both processes in a single lifetime. By focusing on all the spaces between colonial imposition and local agency, my research suggests that the memory and history of Andean communities with imperialism created a deep and defining mark on how they interacted with Spanish colonialism. In Chapter 8 I proposed that the Yauyos tried to engage the Spanish in similar terms as they did with the Inka; current research is centering on the importance of *w'akas* and rituality during the Spanish Colony (Brosseder 2014). In the coming years I will investigate the role of history, memory, and their recreation in the Andean world as a framework of archaeological investigation.

Broader impacts

Huarochirí is a small town in the highlands of the Peruvian capital of Lima. The towns peppered across the landscape are disconnected from one another, hard to access, and remain at

the periphery of national development, even though they are part of the most important city in the country. They do not consider themselves part of Lima, they are part of Huarochirí.

During the last eight years that I have conducted research in the region I have come across different towns that are mostly abandoned. On any given day there can be less than 100 people living in the towns. The hardships of transportation between towns or accessing urban areas is shockingly similar to the movement problems I presented in Chapter 8.

I have spent most of my time in Huarochirí in San Juan de Lahuaytambo and observed first-hand the almost constant emptiness of the plaza. However, every June 24, during the festivity of San Juan, the town becomes alive. Lahuaytambinos that live in Lima, others resident in different provinces, young people that refuse to live in town because “there is nothing there”, come in the early mornings to be part of the celebration. The *mayordomos* prepare the shared meal and their kin help in preparing everything necessary to feast the town. The church opens – which is rare– as a priest arrives to tell mass and then direct the procession of San Juan’s effigy around the small plaza. In the middle of this plaza sits the bust of Francisco Inka, a rebel lahuaytambino that attempted to rise against colonial yoke in 1750.

Kinship, community, ritual, ancestry, feasting, pilgrimage: all come together and are strong enough in the consciousness of the townspeople to travel for hours and a rough drive through the mountains to perform their town’s identity (Fig.117). The study of ritual and shared idioms of interaction in the Andes is not limited to the study of the Inka or the Yauyos. These shared idioms remain active and creative among the people of Huarochirí. Once a year, all the different scales of community are present in the same space to celebrate a community identity that is abandoned most of the year. The reason behind these processes is built in the transconquest approach: who the people of Huarochirí were, the redefinition of their ethnic

identity under the Inka, the political abandonment under the Spanish, and their continued cutoff from the urban center of Lima. The story of these legible pan-Andean practices of interaction, through the lenses of the history of subjections and negotiations of Andean communities, is a critical enterprise to recognize that they are still posing the question of interaction, their position within the national government, and the development of new idioms (e.g. tourism, transportation, education) through which to carve a new identity for themselves within the nation state.



Figure 9.5: Images from the celebration of San Juan in Lahuaytambo in 2013. A. People in the plaza before the procession. B. Start of the procession of the effigy of San Juan. C. Communal cooking. D. Band of musicians arriving to town (photographs by the author).

APPENDIX A

BIOARCHAEOLOGICAL REPORT BY MARTHA PALMA

Introducción

El siguiente informe se refiere al material óseo humano recuperado durante las excavaciones arqueológicas procedentes del Proyecto Arqueológico “Sierras de Lurín” PASL durante la temporada de excavaciones 2015. Durante esta temporada de excavaciones, el equipo de trabajo liderado por la estudiante de doctorado Carla Hernández Garavito identificó cuatro contextos funerarios los cuales son materia de este informe.

Materiales

Se realizó el análisis osteológico del material óseo humano recuperado con la finalidad de obtener el perfil biológico de los individuos enterrados en una estructura funeraria (CF 1), conglomerado de restos óseos en una estructura rectangular (CF 2), restos de contextos funerarios hallados en capas de relleno debajo del piso de una plaza circular (CF 3) y en la superficie de un altar de piedra (CF 4). Paralelamente, se buscó identificar el número mínimo de individuos (NMI), la composición demográfica (edad al momento de la muerte y sexo biológico), información adicional sobre cada individuo acerca de la posible incidencia de patologías, traumatismos, entre otros; así como también información tafonómica sobre los contextos funerarios.

Finalmente, se formuló la estrategia de muestreo de fragmentos de huesos y piezas dentales recuperadas del CF 1, con la finalidad de obtener mayores datos respecto a la datación del citado contexto funerario y la obtención de datos que nos indiquen los probables patrones de dieta de los individuos recuperados.

RESULTADOS

Contexto Funerario 1:

El Contexto Funerario 1 consistía en un entierro múltiple de individuos adultos y subadultos que se encontraba muy removido (ver Figura 1). El análisis de este contexto se inició desde la observación de las fotos de campo y el registro detallado de los elementos óseos excavados. Afortunadamente el registro de excavación fue muy detallado y esto permitió trabajar con las fotos digitalizadas, los datos de la excavación por varios niveles y loci al interior del contexto funerario y las reconstrucciones 3d que hicieron posible visualizar en el laboratorio las capas excavadas y correlacionarlas con los elementos óseos excavados. Cada elemento o grupo de elementos óseos relacionados fue levantado con un número único de registro, el cual se encontraba ubicado en las fotos digitales de las respectivas capas. Esta disponibilidad de múltiples recursos para la reconstrucción de las excavaciones hizo posible la individualización de algunos individuos que se visualizaban articulados en los niveles inferiores. En base a la evaluación de las fotos digitales y reconstrucciones 3D se pudo distinguir la existencia de al menos 4 agrupaciones de individuos parcialmente articulados en los niveles inferiores.



Figura 1.- Vista general de la estructura Funeraria que contenía el CFI.

En la Figura 2 se observa la ubicación de estas cuatro agrupaciones, cada agrupación estuvo formada por varios elementos óseos que se encontraban articulados parcialmente o cercanos espacialmente y fueron analizados a la vez para comprobar si es que pertenecerían a uno o más individuos. En el caso del Individuo 1, que se encontró articulado en la mayoría del esqueleto axial, columna vertebral (dorsal a lumbar), pelvis y algunos elementos óseos de ambos pies se pudo establecer el sexo y la edad del mismo con mayor nivel de confianza. Sin embargo, en el agrupamiento de elementos óseos analizados se encontraban otros individuos que no correspondían al individuo 1, estos fueron retenidos y reevaluados las otras agrupaciones más cercanas (Individuo 3a o 4b) para establecer si podrían corresponder a estos individuos.

En el caso del individuo 2, los elementos óseos recuperados no parecían corresponder a la misma persona, a pesar de estar aparentemente en posición anatómica correcta, es por esto que no se pudo realizar la individualización de los elementos óseos. En el caso de los individuos 3a y 3b se trataba de dos adultos cuya individualización se realizó por el criterio de mayor robusticidad de los elementos óseos al tratarse de un individuo probablemente masculino y el otro probablemente femenino. Finalmente, el individuo 4a fue diferenciado debido a que se trata de un niño de 7 años +/- 9 meses, mientras que los individuos 4b y 4c fueron diferenciados solamente por medio de la existencia de dos coxales, uno de un individuo masculino y el otro femenino respectivamente.

A continuación se presentan los resultados del perfil biológico por individuo, así como también el análisis de los cráneos y coxales recuperados que no pudieron ser individualizados o adjudicados a algún individuo.

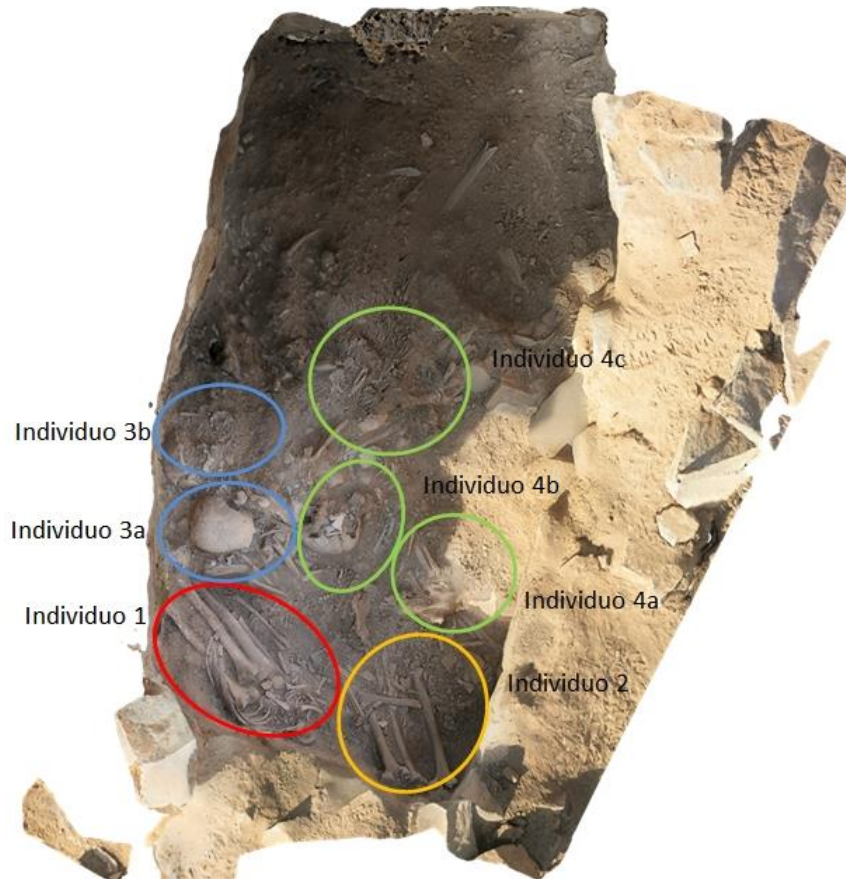


Figura 2.- Esquema de ubicación de los cuatro grupos de individuos que pudieron ser visualizados.

Individuo 1:

Presentó ambas piernas con algunos tarsos, fragmentos del coxal, brazo izquierdo, ambas manos, esternón, ambos omóplatos y clavículas. Por medio de los coxales se pudo establecer que se trata de un individuo *femenino* (escotadura siática), mientras que por medio de las clavículas (epífisis medial en proceso de fusión) fue posible establecer que se trataba de un individuo adulto joven no *mayor a 32 años*. Existen dos cráneos (Cráneo 1 y 2) que probablemente corresponderían al individuo 1 ya que se encontraban cercanos a los elementos óseos articulados, sin embargo, debido a que las capas más superficiales del contexto se encontraban removidas y que ambos cráneos son femeninos, no se pudo establecer su correspondencia con el Individuo 1. Estatura: entre **1.44 mts a 1.49 mts**. Entre los elementos óseos analizados no se encontraron evidencias de indicadores de salud afectada. Se tomó un fragmento de costilla derecha para análisis isotópicos (A-CF1-Ind 1-M01).

Individuo 2:

No se pudo asignar la correspondencia de los elementos óseos seleccionados a un solo individuo. Mediante las fotos de capas se apreciaba que podrían corresponder a un mismo individuo, sin embargo no se encontraban elementos óseos que nos ayuden a establecer esta correspondencia con cierto grado de certeza, por ejemplo mediante la articulación de algunos huesos largos, coxales con sacros, etc.

Individuo 3a:

Representado por las diáfisis completas de ambos fémures, ambos peronés, tibia derecha, radio y cúbito derecho, fragmento proximal de humero derecho, tres vértebras cervicales y clavícula izquierda. Se trata de un individuo **Adulto** de sexo **masculino probable** estimado en base a la mayor robusticidad de los elementos óseos en comparación con los individuos adultos femeninos que se pudieron determinar en base

a caracteres morfológicos estandarizados. Debido a que los fémures estaban incompletos no se pudo estimar la estatura. Entre los elementos óseos analizados no se encontraron evidencias de indicadores de salud afectada. Se tomó un fragmento de la diáfisis media del fémur izquierdo para análisis isotópicos (A-CF1-Ind 3a-M02).

Individuo 3b:

Representado por las diáfisis del humero izquierdo, radio y cubito izquierdo, diáfisis de radio derecho y las dos primeras vértebras cervicales. Se trata de un individuo **Adulto**, el cual de la misma manera que el individuo 3^a, se estimó el sexo por medio de la observación y comparación de la robusticidad de las diáfisis de los huesos largos. De esta manera se estimó que este individuo sería **femenino probable**. Debido a que no se encontraron los fémures no se pudo estimar la estatura. Entre los elementos óseos analizados no se encontraron evidencias de indicadores de salud afectada. Se tomó un fragmento de la diáfisis del radio derecho para análisis isotópicos (A-CF1-Ind 3b-M03).

Individuo 4a:

Representado por ambos fémures, ambos húmeros, cúbito izquierdo, ambas tibias, peroné derecho, fragmentos de ambos coxales y cráneo fragmentado. Debido a que se trata de un **subadulto** no se pudo determinar el sexo del individuo, pero sí se pudo establecer un rango de edad (**7 años +/- 24 meses**) por el método de edad dental. Entre los elementos óseos analizados no se encontraron evidencias de indicadores de salud afectada. No se tomaron muestras.

Individuo 4b:

Representado por ambos coxales fragmentados y el segmento proximal del fémur derecho. Debido a los rasgos diagnósticos que se preservaron en el coxal derecho, se pudo determinar el sexo del individuo y la edad por medio de la sínfisis púbica. El individuo es de sexo **masculino**, con rango de edad **21-46 x: 28.7 años**. Debido a que no se encontró el fémur derecho completo no se pudo estimar la estatura. Entre los elementos óseos analizados no se encontraron evidencias de indicadores de salud afectada. Se tomó un fragmento de la diáfisis del fémur derecho para análisis isotópicos (A-CF1-Ind 4b-M04).

Individuo 4c:

Solamente representado por ambos coxales. Con las características morfológicas de los coxales se pudo estimar el sexo del individuo como **Femenino**. Lamentablemente los rasgos morfológicos que otorgan datos para estimar la edad por medio de la sínfisis púbica y la superficie auricular no se hallaron conservados. Es por esto que se le otorgó el rango de individuo **Adulto**. Debido a que no se encontró el fémur de este individuo no se pudo estimar la estatura. Entre los elementos óseos analizados no se encontraron evidencias de indicadores de salud afectada. No se tomaron muestras.

Análisis de Conglomerado óseo:

Sumado al proceso de individualización de los elementos óseos agrupados, los elementos óseos que no pudieron asignarse a un individuo (conglomerado) pasaron por el proceso de análisis que tenía como objetivo llegar a determinar el número mínimo de individuos total que contenía la estructura funeraria, así como también recopilar datos de rangos de edades más precisos por medio de las piezas dentales (desarrollo dental, erupción dental y desgaste) e identificar indicadores de salud que pueda ser evidenciada en el tejido óseo.

Número mínimo de Individuos (NMI):

Mediante la evaluación de los restos óseos se pudo establecer el NMI en **11 individuos adultos, 5 niños, 2 infantes y 1 perinatal**, dando un **total de 19 individuos**. El NMI de los adultos fue establecido mediante el hallazgo de 11 cuartos metacarpos derechos y 11 escafoides de pie derechos. Cabe mencionar que se encontraron también 10 astrágalos de adultos, 10 porciones de tercio proximal de diáfisis de fémures izquierdos, 10 segmentos proximales de diáfisis de cúbitos derechos, 10 mitades laterales de clavículas

izquierdas, 8 axis, y 8 segmentos –ilión, isquion– de coxales derechos. Lo que denota que el NMI establecido por medio de los 11 cuatros metacarpos derechos –huesos de la mano- y los escafoides de pie - 11 piezas- no se encuentran muy lejos al NMI establecido por los segmentos de diáfisis de huesos largos – fémures y cúbitos– o porciones del esqueleto axial como coxales o clavículas que estiman el NMI entre 10 y 8 individuos.

Mediante la evaluación de las **piezas dentales** halladas al interior de la estructura funeraria, ya sean las piezas completas o incompletas in situ y sueltas, se pudo establecer el NMI de 11 individuos, de los cuales 7 son adultos y 4 son niños. Este NMI dental fue establecido por medio del conteo de todos los primeros molares inferiores izquierdos de la muestra. Piezas que han sido consideradas para las muestras de análisis de isótopos estables. Cabe resaltar que entre los materiales del conglomerado se encontró una mandíbula de adulto con edentulosis (Figura 3), lo que aumentaría el **NMI a 12 individuos en total –por conteo de piezas dentales-** ya que este individuo adulto no posee piezas dentales inferiores por haberlas perdido tempranamente.

Pieza Dental	Rango de edad	Código de muestra
1 ^{er} molar inferior Izquierdo	18-25 años	A-CF1- M05
1 ^{er} molar inferior Izquierdo	8 años	A-CF1- M06
1 ^{er} molar inferior Izquierdo	6-7 años	A-CF1- M07
1 ^{er} molar inferior Izquierdo	16-18 años	A-CF1- M08
1 ^{er} molar inferior Izquierdo	24-30 años	A-CF1- M09
1 ^{er} molar inferior Izquierdo	30-32 años	A-CF1- M10
1 ^{er} molar inferior Izquierdo	18-25 años	A-CF1- M11
1 ^{er} molar inferior Izquierdo	7- 8 años	A-CF1- M12
1 ^{er} molar inferior Izquierdo	18- 20 años	A-CF1- M13
1 ^{er} molar inferior Izquierdo	18-20 años	A-CF1- M14
1 ^{er} molar inferior Izquierdo	18 meses	—
NMI Total: 12 individuos (11 individuos por piezas dentales encontradas:7 adultos, 4 niños + un adulto con edentulosis en la mandíbula–sin dientes-)		

Tabla 05.- Listado de primeros molares inferiores tomados en cuenta para establecer el NMI dental.



Figura 3.- Vista frontal(a) y lateral izquierda (b) de mandíbula de individuo adulto con edentulosis. Material analizado del conglomerado óseo del CF 1.

Pelvis 01 (Conglomerado Óseo):

Pelvis con características morfológicas de un individuo **femenino**, sólo se pudo observar la amplitud de la escotadura ciática. Por otro lado, los rasgos morfológicos de la superficie auricular y la sínfisis púbica otorgaron los rangos de edad: **40 a 44 años** y **25-83 años** con un **promedio de 48.1 años**, respectivamente.

Pelvis 02 (Conglomerado Óseo):

Fragmentos de dos coxales que solamente conservaban gran parte de la escotadura ciática, lo que permitió estimar que el individuo sería de sexo **femenino probable**. No se disponen de mayores elementos para establecer rangos de edad, es por esto que se le otorgó la categoría etaria de **Adulto**.

Pelvis 03 (Conglomerado Óseo):

Fragmentos de dos coxales que conservaban la escotadura ciática y la superficie auricular izquierda. De esta manera el sexo del individuo se estimó como **Femenino de 30 a 34 años**.

Pelvis 04 (conglomerado Óseo):

Un fragmento de coxal izquierdo que conservaba parte de la escotadura ciática, con lo cual fue posible estimar el sexo del individuo como **Femenino probable**. No se pudo establecer un rango de edad, es por esto que se le clasificó como **Adulto**.

Pelvis 05 (Conglomerado Óseo):

Coxal derecho casi completo y fragmentos del coxal izquierdo, se pudo estimar que se trata del coxal de un individuo de sexo **Masculino**. Por medio de la morfología de la superficie de la sínfisis púbica se estimó el rango de edad de 21-46 años, con un promedio de 28.7 años.

Cráneo 01 (Conglomerado Óseo):

Cráneo fragmentado de sexo **femenino** (por arcos superciliares, proceso mastoideo y borde supraorbital), no se encontraron otros indicadores relevantes que nos ayuden establecer algún rango de edad –como dientes asociados para aplicar el método de desgaste dental-, es por esto que se le otorgó la categoría de **Adulto**.



Figura 4.- Vista general del cráneo 1.

Cráneo 02 (Conglomerado Óseo):

Cráneo fragmentado de sexo **femenino** (por cuerpo de mandíbula-mentón-, mastoideos, líneas nucales, arco superciliar y borde supraorbital), se encontraron algunos dientes asociados al cráneo lo que hizo posible estimar un posible rango de edad probable de **18-25 años**, por medio del método de desgaste dental.



Figura 5.- Vista general del cráneo 2.

Cráneo 03 (Conglomerado Óseo):

Cráneo totalmente fragmentado de un individuo **adulto**, de sexo **femenino probable** (por porcosos mastoideos y bordes supraorbitales).



Figura 6.- Vista general del cráneo 3.

Cráneo 04 (Conglomerado Óseo):

Cráneo totalmente fragmentado de un **adulto**, de sexo **masculino probable** (por medio de proceso mastoideo derecho y líneas nucales).

Cráneo 07 (Conglomerado Óseo):

Cráneo fragmentado de un **adulto** de sexo **femenino** (por arcos superciliares, borde supraorbital y procesos mastoideos). Se identificó la presencia de criba orbitalia bilateral, activa, la cual no se encuentra relacionada a hiperostosis porótica en la bóveda del cráneo. Cabe resaltar que el traumatismo que se observa en el lado izquierdo del frontal es de naturaleza post-deposicional.



Figura 7.- Vista general del cráneo 7.

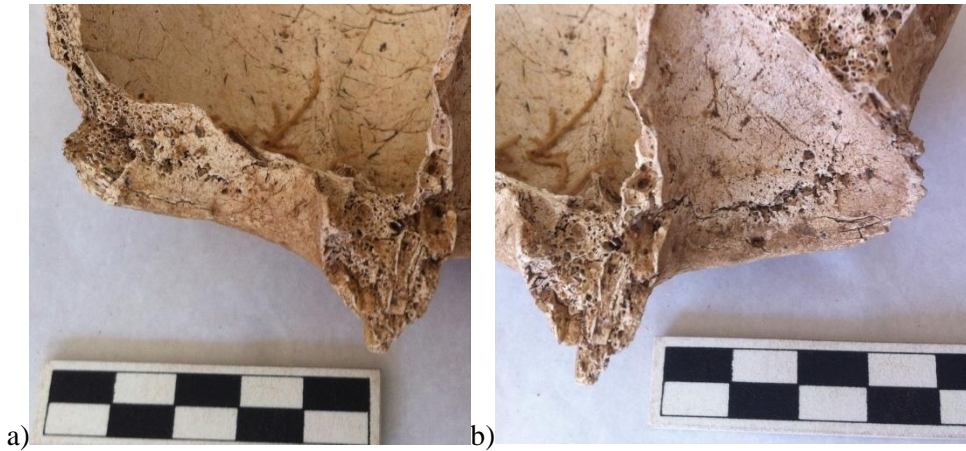


Figura 8.- vista de techos de orbitas oculares izquierda a), y derecha b) en el cráneo 7.

Cráneo 08 (Conglomerado Óseo):

Cráneo fragmentado de un **subadulto**, **sexo no estimable**.

Cráneo 09 (Conglomerado Óseo):

Cráneo de **Niño**, fragmentado, de **sexo no estimable**. Afortunadamente se encontraban ambos maxilares superiores, lo que permitió estimar un rango de edad dental de **8 años +/- 9 meses**.

Cráneo 10 (Conglomerado Óseo):

Fragmentos de cráneo de **subadulto**, de **sexo no estimable**.

Cráneo 11 (Conglomerado Óseo):

Cráneo fragmentado de un **adulto**, de **sexo masculino** (arcos superciliares, borde supraorbital, procesos mastoideos y relieve nucal). Los fragmentos del cráneo se encontraron asociados a un segundo premolar superior derecho y en base al método de desgaste dental se pudo establecer un rango de edad de **35-40 años**.



Figura 9.- vista general del Cráneo 11.

El frontal de este cráneo presenta una fractura en proceso de remodelación, ubicada en la región izquierda del frontal. La lesión es de forma circular y presenta una depresión de la misma forma. El traumatismo ha

ocasionado la fractura de la tabla externa del frontal, el tejido remodelado ha cubierto parcialmente e irregularmente el diploe, dejando ver una depresión circular y una superficie irregular.

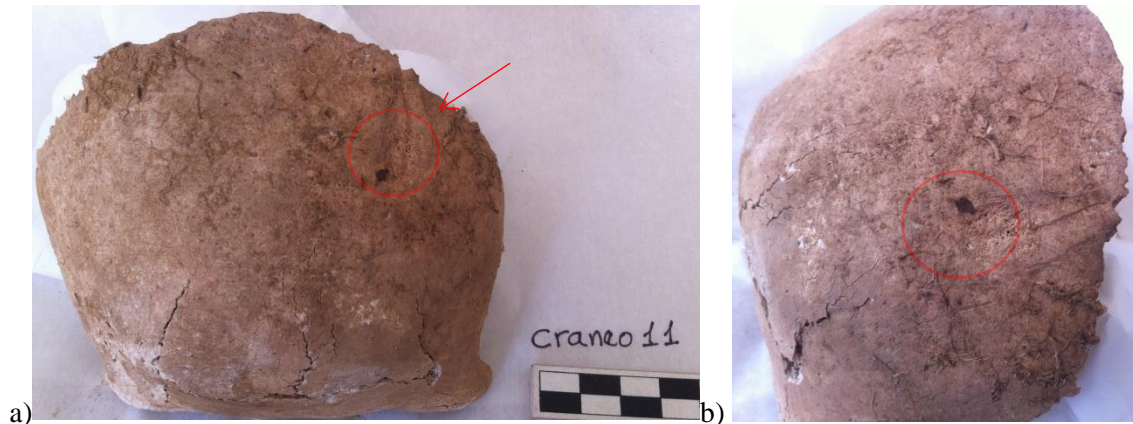


Figura 10.- Vista de a) ubicación de la fractura en el frontal y b) detalle de fractura.

Cráneo 12 (Conglomerado Óseo):

Fragmento de cráneo de un **adulto, masculino probable** (por proceso mastoideo izquierdo).

Cráneo 13 (Conglomerado Óseo):

Fragmento de cráneo de un **adulto de sexo masculino** (por proceso mastoideo, arcos superciliares y bordes supraorbitales).

Cráneo 14 (Conglomerado Óseo):

Cráneo fragmentado de individuo adulto de sexo **masculino** (por procesos mastoideos y relieves nucales). Se estimó un rango de **18 -22 años** de edad por medio del desgaste dental de los dientes asociados al cráneo.



Figura 11.- Vista general de los fragmentos del cráneo 14.

Considerando los rangos de edad estimados para los fragmentos de pelvis y cráneos la presencia de individuos femeninos y masculinos es análoga. Ya que si consideramos las estimaciones de individuos femeninos versus los masculinos por medio de los fragmentos de pelvis, tendríamos 4 individuos femeninos y uno masculino. Sin embargo, si consideramos el análisis de las estimaciones de individuos femeninos versus masculinos en los cráneos encontrados, tendríamos **cuatro individuos femeninos** y **cinco individuos masculinos**. Considerando que el NMI de individuos adultos es 11, tendríamos sólo dos

individuos adultos con sexo no estimable. Por lo tanto, la diferencia entre el número de hombres y mujeres sepultados en esta estructura no sería significativa.

De la misma manera, por medio de los rangos establecidos por el método de desgaste dental de los dientes sueltos, se puede apreciar que en la estructura se habrían enterrado individuos de diversas edades. Desde los primeros meses de edad (6 meses +/- 2 meses como el menor rango de edad estimada por medio del método dental y un individuo perinatal según el análisis óseo) hasta individuos adultos de más de 40 años (promedio de 48.1 años según rango de edad establecido por la sínfisis púbica de una pelvis femenina).

La muestra en general no presenta evidencias de condiciones de salud crónica que hayan dejado huellas en los tejidos óseos, con excepción de un individuo que presentaba criba orbitalia bilateral. La cual no es un signo específico de alguna condición de salud en especial, sino por el contrario es indicador no específico de anemia crónica de diversos orígenes entre los cuales se puede encontrar deficiencia alimentaria, procesos infecciosos crónicos y hasta factores genéticos. Se suma a estos el probable hallazgo de una fractura antemortem en el lado izquierdo del frontal, fractura que probablemente se correlacione con eventos de violencia interpersonal.

Posición y características del entierro: El depósito funerario parecen ser de tipo primario, en base a la visualización de las fotos de registro de campo y la posición de los individuos que se encontraban parcialmente articulados en los niveles inferiores. Sin duda, existió un evento –o varios- que provocaron que las capas superiores se encuentren disturbadas y no haya sido posible la individualización de los restos óseos desde el inicio de las excavaciones.

Contexto Funerario 2:

Materiales fragmentados que fueron hallados con fragmentos de huesos óseo animal quemado. El análisis de los materiales dio como resultado el hallazgo de partes de un individuo **adulto** (manos, pies, clavícula, rótula), un **niño de 3 a 4 años +/- 1 año** (un canino decíduo, vértebras, iliones, algunas costillas y falanges de mano) y un **perinatal** del cual se encontraron fragmentos de cráneo, vértebras, coxales, humero, falanges de mano y metatarsos). El NMI de este contexto es 3. No se observaron patologías en el tejido óseo.



Figura 12.- Vista general de CF con los tres individuos identificados.

Contexto Funerario 3:

Restos óseos fragmentados con NMI: 5. Se encontraron dos perinatales, dos infantes y un niño. El individuo 1 se trataba de un **perinatal no viable –o feto-** representado por un arco neural de atlas, fragmentos de cráneo, costillas, temporal y fragmento de ilión.



Figura 13.- Individuo 1-CF 3.



Figura 14.- Detalle de temporal del individuo 1, con evidencias de pigmento rojizo.

El Individuo 2, del CF 3 está representado por fragmentos de cráneo, fragmentos de la mandíbula sin la presencia de los gérmenes dentales, ambos húmeros, fragmentos de costillas, radio y cubito izquierdos, masa petrosa izquierda, fragmentos de mitades neurales de vértebras y algunos cuerpos de vértebras y falanges de pies y manos. Este individuo también fue categorizado como **perinatal**.



Figura 15.- Vista general del Individuo 2-CF 3.

El individuo 3, un **infante** talvez **recién nacido** –por las dimensiones de la tibia, 6.5 cms- está representado por algunos fragmentos de cráneo, masas petrosas, apófisis basilar, fragmentos de costillas y algunos huesos largos, ambos fémures, ambas tibias, peronés y fragmentos de los dos iliones.

El individuo 4, **un infante** está representado por fragmentos de costillas, ambas masas petrosas de los temporales, humero derecho, cúbito derecho, radio izquierdo, fragmentos de cráneo y cuerpos de vértebras y fragmentos de arcos neurales de cervicales. Además se encontraron dos segmentos de la mandíbula con algunos dientes en crecimiento, lo cual permitió estimar el rango de edad en: **6 meses +/- 2 meses**.

El individuo 5, **un niño**, está representado por fragmentos de fémur, peroné, radio y cúbitos, además de un incisivo lateral derecho, y fragmentos de arcos neurales. Con el diente decíduo presente se pudo estimar un rango de edad de 12 meses +/- 3 meses.

Cabe resaltar que muchos de los fragmentos del cráneo o huesos largos de todos los individuos de este contexto se encontraban con manchas rojizas de algún tipo de pigmento que habría sido aplicado sobre los restos de estos individuos. A su vez, uno de los fragmentos de peroné presenta, además de estas manchas, agujeros circulares que podrían haber sido causados por insectos.



Figura 16.- Vista general del Individuo 3-CF3.



Figura 17.- Vista general del Individuo 4-CF 3.



Figura 18.- Vista general de Individuo 5-CF3.



Figura 19.- Detalles de fragmentos de cráneo con manchas rojizas.



a)



b)

Figura 20.- Detalles de fragmentos a) varios con manchas rojizas y b) peroné con manchas rojizas y agujeros.

Contexto Funerario 4:

Este contexto funerario contiene los restos óseos de dos individuos adultos. El NMI de los restos óseos es 1, mientras que por medio del conteo de los segundos y terceros molares superiores del lado izquierdo, se pudo determinar que el NMI es 2. En suma, se trata de un conglomerado óseo de dos adultos que además mostraban signos de manipulación postmortem.



Figura 21.- Vista general de los restos óseos del CF 4.

Las evidencias de manipulación post-mortem se encuentran en el corte de la diáfisis de una clavícula izquierda y un pequeño agujero.



Figura 22.- Vista superior de clavícula izquierda de individuo adulto.



Figura 23.-Vista en detalle del corte realizado en la mitad de la diáfisis de la clavícula.

Conclusiones:

En general, los materiales se encuentran en regular estado de conservación y en algunos casos muy fragmentados (afectados por la humedad, erosión y/o daños ocasionados por la remoción de los restos). En el caso del contexto Funerario 1, durante el proceso de análisis de las fotos de los diferentes niveles de excavación, se puede comprobar que el ordenamiento original de los cuerpos fue sentado flexionado con la espalda pegada a las paredes, patrón que se observa también en las estructuras funerarias del Sitio Arqueológico de Pueblo Viejo Pucará. Esta posición es congruente con el hallazgo de cuatro pelvis halladas articuladas en los niveles inferiores -asignadas a cuatro de los cuerpos individualizados- además de otras cinco pelvis halladas en los niveles inferiores sin articulación directa con los segmentos óseos cercanos. La ausencia de los textiles que probablemente se hallan usado de envoltorios se podría deber al alto grado de acidez que presentan los suelos altoandinos, en donde los materiales orgánicos (textiles en los que podría haber estado envuelto el individuo y los tejidos blandos del cuerpo) son afectados rápidamente.

Por otro lado, el contexto funerario 3 contiene 5 individuos subadultos que se encontraron articulados parcialmente y con un pigmento rojizo que haría sido aplicados a todos los individuos del contexto funerario, ya que se encontraron fragmentos de cráneo y huesos largos de los 5 individuos con manchas de este pigmento. Finalmente, el contexto funerario 4 se trata de un conglomerado óseo de dos adultos que además mostraban signos de manipulación postmortem en una clavícula.

APPENDIX B

ISOTOPIC ANALYSIS REPORT BY TIFFINY A. TUNG

Amugasa, Peru: Stable carbon, nitrogen, oxygen, and hydrogen isotope results.

Tiffany A. Tung
Bioarchaeology and Stable Isotope Research Lab (BSIRL), Vanderbilt University
May 4, 2017

Eleven human dental enamel samples and five bone collagen samples were chemically prepared at BSIRL and were subsequently analyzed on a Thermo Delta Plus Advantage at the University of Wyoming Stable Isotope Facility. The stable carbon isotope ratios are reported in VPDB, stable nitrogen is reported in AIR, and stable oxygen and hydrogen of the water samples are reported in VSMOW.

Among the five human bone collagen samples, only one yielded possible results, but the percentage of carbon (3.1%) and nitrogen (4.9) present in the bone renders the data unreliable. (These results accords with what you had said UC-Irvine concluded about the samples you sent them for AMS dating.) If you encounter bones in other contexts at Amugasa, it may be worth trying again to see if a different burial group yields more collagen. The datapoint from the collagen should not be used for interpretive purposes, though we should report the results, so other researchers can see the poor yield in the percentage content of carbon and nitrogen.

Recommendation: Given the near-absence of organic components in the bone (i.e., collagen), we may be able to obtain carbonates from the bone. This will reveal information about whole diet (not specific aspects of protein in diet, as the collagen would have done).

The dental enamel yielded much better results. The mean $\delta^{13}\text{C} = -3.5\text{‰}$ (sd=1.2) and the range is -1.5‰ to -5.0‰. This suggests that carbon enriched foods, such as maize, were a significant part of the childhood diet for those buried at Amugasa. (The mean and standard deviation includes the replicates.)

The mean $\delta^{18}\text{O} = -5.7\text{‰}$ (sd=.7), and the range is -5.0‰ to -6.8‰. This is a tightly clustered group of stable oxygen isotope values, and suggests that the individuals are from the same locale (or at the least, they consumed similar water sources during their childhood years). (The mean and standard deviation includes the replicates.)

See Table 1 for the itemized results and see Figure 1 for the graphical presentation of the stable isotope results from the dental enamel carbonates.

The invoice will be emailed to you within three days.

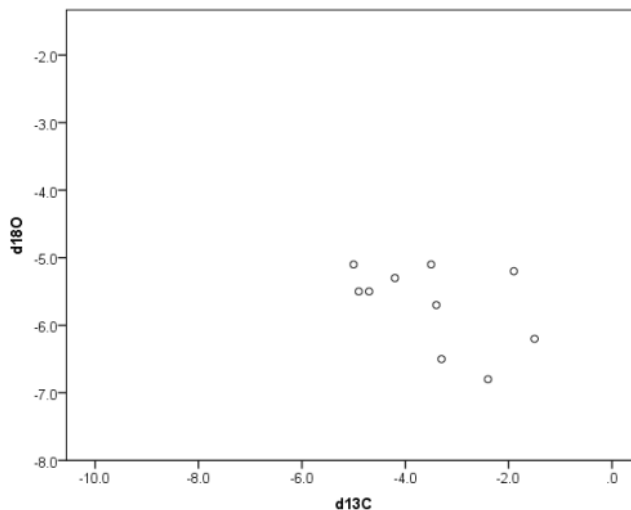


Figure 1. The stable carbon and oxygen isotope results from the dental samples from Amugasa. Replicates are not depicted in this graph.

Vandy Lab Code	Export Code	Bone Code	Bone, Tooth, or Material	Quad: Mx or Md	Side	Tooth section (OCC, CEJ, BULK)	Arch Codes	Bone sample weight (g)	$\delta^{13}C_{ap}$	$\delta^{14}C$ carb PDB	Comments	C:N	$\delta^{15}N$	$\delta^{13}C_{collagen}$	Wt% N*	Wt% C*
1129	010	CF01-M10	LM1	Md	L	BULK	18-25 yrs		-4.7	-5.5						
1136	011	CF01.M11	LM1	Md	L	BULK	18-25 yrs		-4.2	-5.3						
1138	MU.008	CF01.08	LM1	Md	L	BULK	16-18 yrs		-2.4	-6.8						
1138rep	MU.008	CF01.08	LM1	Md	L	BULK	16-18 yrs		-2.4	-6.8	Replicate to validate results					
1140	MU.007	CF01.M07	LM1	Md	L	OCC	6-7 yrs		-4.9	-5.5						
1140rep	MU.007	CF01.M07	LM1	Md	L	OCC	6-7 yrs		-4.9	-5.4	Replicate to validate results					
1141	MU.005	CF01.M05	LM1	Md	L	BULK	18-25 yrs		-1.9	-5.2						
1143	MU.014	CF01.M14	LM1	Md	L	BULK			-3.4	-5.7						
1145	MU.012	CF01.M12	LM1	Md	L	BULK	7-8 yrs		-3.5	-5.1						
1145rep	MU.012	CF01.M12	LM1	Md	L	BULK	7-8 yrs		-3.5	-5.0	Replicate to validate results					
1146	MU.009	CF01.M09	LM2	Md	L	BULK	24-30 yrs		-1.5	-6.2						
1148	MU.006	CF01.M06	LM1	Md	L	OCC	8 yrs		-3.3	-6.5						
1149	MU.006	CF01.M06	LM1	Md	L	CEJ	8 yrs				No sample detected.					
1150	MU.013	CF01.M13	LM1?	Md?	L?	BULK			-5.0	-5.1						
1376		A-CF01-Indv.1-M01	Rib frag		R		MU-001	0.250			No sample detected.					
1376rep		A-CF01-Indv.1-M01	Rib frag		R		MU-001	0.250			No sample detected.					
1377		A-CF01-Indv.3a-M02	Femur frag		L		MU-002	0.280			No sample detected.					
1378		A-CF01-Indv.3b-M03	Radius frag		R		MU-003	0.285			Amplitudes below threshold for reliable isotopic data	1.6	12.6	-11.7	4.9	3.1
1379		A-CF01-Indv.4b-M04	Femur frag		R		MU-004	0.376			No sample detected.					

APPENDIX C

ZOOARCHAEOLOGICAL ANALYSIS REPORT BY CARLOS OSORES

1.- METODOLOGÍA

Para realizar el conteo, se tomó como referencia el Número de Especímenes Identificados (*Number of Identified Specimens*, NISP) y el Mínimo Número de Individuos (MNI). En nuestro caso, tomaremos como principal fuente para la interpretación final los datos del NISP, pero su información será contrastada con los resultados del MNI.

Debemos mencionar que existe un constante desafío y crítica entre los defensores de cada uno de estos métodos de cuantificación por probar cuál de estos funciona es el más adecuado para la cuantificación y sobre todo para la interpretación de los datos zooarqueológicos (Reitz y Wing 2008: 202-213; Lyman 2008: 27-71; Orchard 2000:27-28); es así, por ejemplo, que unos prefieren el uso del NISP sobre el MNI o viceversa.

El NISP se basa en la cuenta y caracterización de cada espécimen, es decir de cada elemento óseo; si bien es un dato primario, ha sido utilizado para calcular la frecuencia relativa de cada taxón (Reitz y Wing 2008: 202). El MNI en nuestra muestra de vertebrados fue calculado de una manera comparativa, usando la simetría, tamaño y fusión de los restos óseos.

Del mismo modo, nuestro trabajo tuvo como objetivo reconocer cada elemento óseo hasta nivel taxonómico más preciso (es decir, el establecimiento de la Especie). No obstante, existen casos que no hay consenso sobre el reconocimiento de la Especie según el dato óseo, como, por ejemplo, el caso de los camélidos (llama, vicugna, alpaca y guanaco). Cuando aún la discusión persiste, en nuestra base de datos aparecerá las dos opciones posibles, en este caso, "*Llama sp. o Vicugna sp.*". Así también, cuando no se pueda reconocer, en su gran mayoría de veces por lo fragmentado del hueso, la especie o familia, se dará un nombre genérico como, por ejemplo, *Artiodactyla ni* (significa que es una especie de *Artiodactyla* – como un cérvido o camélido – *no identificable*) o

Mamífero grande ni (es un mamífero grande no identificable). Todos estos datos nos permitieron tener el mejor acercamiento a los restos zooarqueológicos para su futura interpretación.

Para poder realizar la identificación tuvimos como base nuestra colección personal y la colección del Museo Nacional Sicán. Asimismo, usamos diferentes guías o manuales de vertebrados (Pacheco *et al.* 1979; Peña y Pinto 1996; Stucchi, M. 2011; Wheeler, 1982).

Por otro lado, se reconoció cada elemento según su Clase, Orden, Familia Género, Especie, su nombre común, zona del hueso, porción, lado, Tafonomía (huellas de corte, termoalteración) y fusión.

Específicamente sobre la termoalteración, se tomó el óseo quemado según su coloración: gris; negra; blanca; y, negra y blanca. No obstante, existen algunas críticas a esta es una visión clásica de la termoalteración por la coloración, ya que al parecer no todos los cambios de color en el hueso se deben a procesos asociados al fuego o quema (Ramos y Campos 2014). Nosotros mantenemos estos indicios por la coloración, ya que aún es válido trabajar bajo ese supuesto para acercarnos mejor a una visión sobre la termoalteración.

Del mismo modo, para uniformizar la información taxonómica se usó el Sistema Integrado de Información Taxonómica (*Integrated Taxonomic Information System*, ITIS, <http://www.itis.gov/>).

Por otro lado, antes de empezar con la contabilización, se realizó un proceso de limpieza de todo el material excavado (fotos 1, 2 y 3).



Foto 1: Cráneo de roedor antes de ser limpiado; se puede observar tierra adherida en tanto en la parte interna como externa y la presencia de raíces de plantas.



Foto 2: Proceso de limpieza del cráneo de roedor.



Foto 3: Cráneo de roedor luego de ser limpiado.

2.- RESULTADOS

2.1.- Canchaje

En Canchaje se analizaron un total de 935 especímenes con principal presencia de mamíferos y una menor cantidad de aves. A continuación se hará una descripción específica de cada clase de animal.

Clase	Orden	Familia	Genus	NISP	% NISP	MNI	% MNI
Ave	Ave mediana ni			1	0.11	1	0.67
	Ave pequeña ni			3	0.32	3	2.00
Mamífero	Mamífero grande ni			191	20.43	32	21.33
	Artiodactyla	Camelidae		268	28.66	55	36.67
	Artiodactyla	Cervidae		27	2.89	15	10.00
	Artiodactyla ni			127	13.58	16	10.67
	Mamífero mediano ni			12	1.28	9	6.00
	Carnivora	Carnivora	Felidae	275	29.41	3	2.00
	Mamífero pequeño ni			5	0.53	3	2.00
	Rodentia	Caviidae	Cavia	16	1.71	6	4.00
	Rodentia	Muridae		6	0.64	4	2.67
	Rodentia ni			4	0.43	3	2.00
Total				935		150	
% Total					100		100

Cuadro 1: Resumen de fauna del sitio de Canchaje según su NISP y MNI.

2.1.1.- Mamíferos

Los mamíferos representan la mayor cantidad de animales encontrados en Canchaje, al representar el 99.57 (NISP=931) de la fauna (ver Cuadro 1). Dentro de los mamíferos más importantes se encuentran aquellos que pertenecen a la familia *Carnivora*, específicamente, del Género *Felidae* (Foto 4) con un 29.41% (NISP=275) y un 2% (n=3) según su MNI; la familia *Camelidae* representa un 28.66% (NISP=268) y un 36.67% (n=55) según su MNI; la familia *Cervidae* representa el 2.89% (NISP=27) y 10% (n=15) según su MNI; la familia *Caviidae*, específicamente con su Género *Cavia* representa el 1.71% (NISP=16) y 4% (n=6) según su MNI; y, finalmente, la familia *Muridae* representa el 0.64% (NISP=6) y el 2% (n=3) según su MNI.

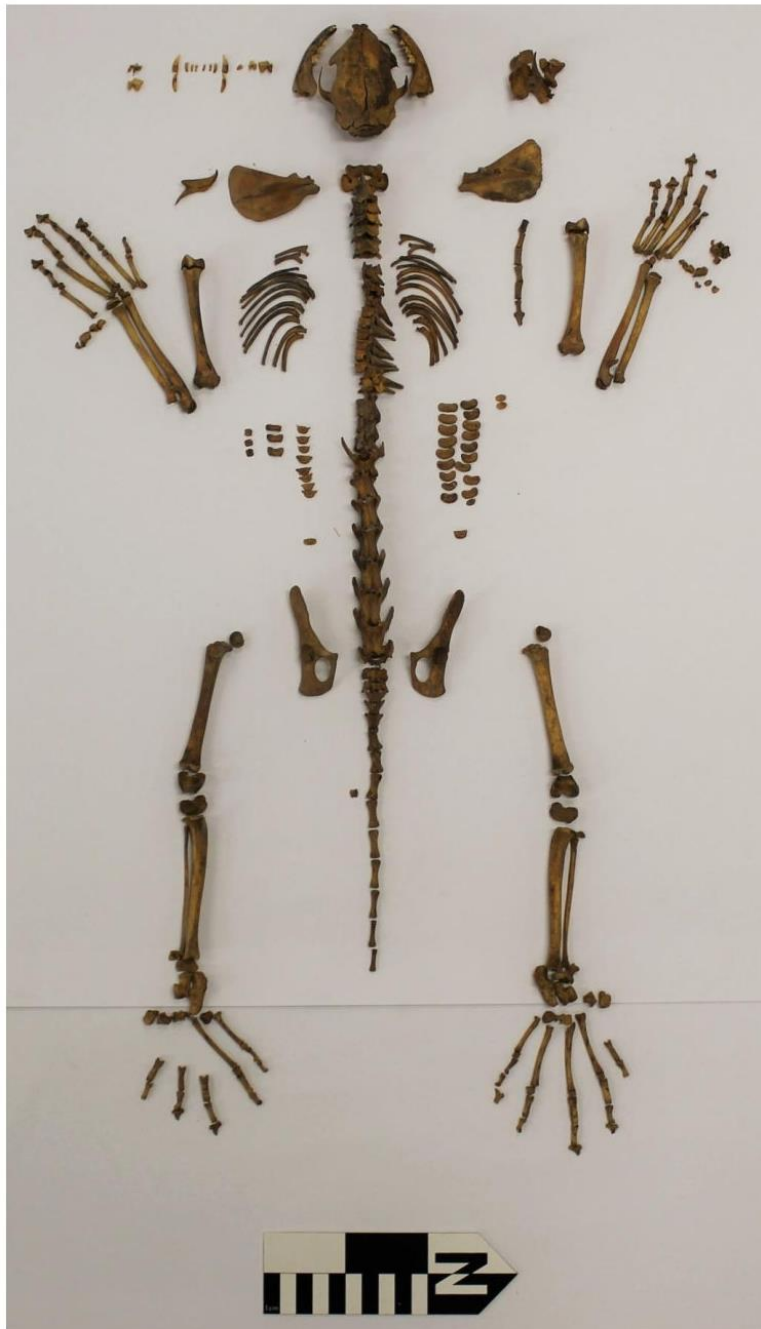


Foto 4: Felino completo ubicado en Canchaje.



Foto 5: Fractura en la parte posterior de la escápula del Felino.

2.1.2.- Aves

Dentro de los mamíferos más Las aves representan un 0.11% (NISP=4) del total de fauna encontrada para Canchaje. Se encontraron dos tipos de aves no identificadas que ocupan el total de este tipo de vertebrado: medianas y pequeñas. Las *aves medianas ni* representan el 0.11% (NISP=1) y las *aves pequeñas ni*, el 0.31% (NISP=3).

2.1.3.- Modificaciones en hueso

Por un lado, se ha podido observar las huellas de corte en algunos elementos. Por ejemplo, se ha identificado cortes en la familia *Camelidae* (NISP=10) y Mamífero grande ni (NISP=5). Para el caso específico de la familia *Camelidae* los cortes se ubicaron en los siguientes elementos: vértebra cervical, vértebra lumbar, cuarto tarsiano, húmero, fémur y costilla.

Por otro lado, otra importante modificación es la termoalteración; esto consta de 128 elementos (NISP). Según la coloración del hueso; tenemos que el 53.91% (NISP=69) es gris; el 32.81% (NISP=42) es negra; y el 13.28% (NISP=17) es blanca.

Del mismo modo, la termoalteración según familias muestra que *Camelidae* representa el 40.75% (NISP=56). Del mismo modo, los *mamífero grandes ni* representan el 43.75% (NISP=56) de termoalterados; *Artiodactyla ni*, el 14.84% (NISP=19); y *mamífero mediano ni*, el 0.78% (NISP=1).

Específicamente sobre el felino, existe una modificación, exactamente una fractura en ambas escápulas (Foto 5). Esta se ubica en la parte posterior central.

Clase	Orden	Familia	Genus	Termoalteración						Total	% Total
				Gris	% Gris	Negra	% Negra	Blanca	% Blanca		
Ave	Ave mediana ni			-	-	-	-	-	-		
	Ave pequeña ni			-	-	-	-	-	-		
Mamífero	Mamífero grande ni			28	21.88	19	14.84	9	7.03	56	43.75
	Artiodactyla	Camelidae		29	22.66	18	14.06	5	3.91	52	40.63
	Artiodactyla	Cervidae		-	-	-	-	-	-		
	Artiodactyla ni			12	9.38	4	3.13	3	2.34	19	14.84
	Carnivora	Carnivora	Felidae	-	-	-	-	-	-		
	Mamífero mediano ni			-	-	1	0.78	-	-	1	0.78
	Mamífero pequeño ni			-	-	-	-	-	-		
	Rodentia	Caviidae	Cavia	-	-	-	-	-	-		
	Rodentia	Muridae		-	-	-	-	-	-		
	Rodentia ni			-	-	-	-	-	-		
Total			69		42		17		128		
% Total				53.91		32.81		13.28		100	

Cuadro 2: Elementos termoalterados de la fauna de Canchaje.

Finalmente, existen modificaciones en dos maxilares inferiores izquierdas de *Camelidae* (Fotos 6 y 7). Ambas presentan modificaciones en la parte donde se ubican los dientes molares, en la apófisis coronoides y en la zona vertical cercana a la fosa masetérica; en este último se puede observar una forma dentada que modifica el maxilar inferior. Dichas zonas fueron altamente tratadas y trabajadas logrando un aspecto pulido.



Foto 6: Modificación de maxilar inferior de camélido.



Foto 7: Modificación de maxilar inferior de camélido. Se muestra la zona del borde anterior vertical cercana a la fosa masetéica.

2.2.- Ampugasa

En Ampugasa, se analizaron un total de 323 especímenes con principal presencia de mamíferos y una menor cantidad de aves. A continuación se hará una descripción específica de cada clase de animal.

Clase	Orden	Familia	Género	NISP	% NISP	MNI	% MNI
Ave	Accipitriformes	Cathartidae		3	0.93	2	2.56
	Ave grande ni			1	0.31	0	0.00
Mamífero	Mamífero grande ni			53	16.41	16	20.51
	Artiodactyla	Camelidae		80	24.77	24	30.77
	Artiodactyla	Cervidae		10	3.10	3	3.85
	Artiodactyla ni			76	23.53	11	14.10
	Carnivora	Canidae	Lycalopex	2	0.62	1	1.28
	Mamífero mediano ni			81	25.08	15	19.23
	Mamífero pequeño ni			3	0.93	1	1.28
	Rodentia	Caviidae	Cavia	4	1.24	4	5.13
	Rodentia ni			9	2.79	0	0.00
	Peces	Osteichthyes pequeño ni			1	0.31	1
Total				323		78	
% Total					100		100

Cuadro 3: Resumen de fauna del sitio de Ampugasa según su NISP y MNI.

2.2.1.- Mamíferos

Los mamíferos representan la mayor cantidad de animales encontrados en Ampugasa, al representar el 98.45% (NISP=318) de la fauna. Dentro de los mamíferos más importantes se encuentran aquellos que pertenecen a la familia *Camelidae*, al representar el 24.77% (NISP=80); asimismo, según su MNI representa el 30.77% (n=24). Por otro lado, se encontraron las familias *Cervidae*, *Canidae* y *Caviidae*. Es así que el género *Cervidae* representa el 3.10% (NISP=10); *Canidae*, el 0.62% (NISP=2) que está representado por el zorro (*Lycalopex sp.*); y *Caviidae*, el 1.24% (NISP=4) que está representado por el cuy (*Cavia sp.*).

2.2.2.- Aves

Estas representan una mínima cantidad de la fauna del sitio con el 1.24% (NISP=4). El 0.93% (NISP=3) representa a la familia *Cathartidae*, y se trata una especie de Gallinazo como *Cathartes atratus* (Gallinazo de cabeza roja) o *Coragyps atratus* (Gallinazo de Cabeza Negra).

2.2.3.- Peces

Los peces representan el 0.31% (NISP=1) y se trata de una vértebra de un *Osteichthyes*, es decir, es un pez óseo.

2.2.4.-Modificaciones en hueso

Por un lado, se ha podido observar las huellas de corte en algunos elementos. Por ejemplo, se ha identificado cortes en la familia *Camelidae* (NISP=8), *Cervidae* (NISP=), en *Artiodactyla ni* (NISP=3) en un tipo de mamífero mediano (NISP=2). Para el caso específicamente de la familia *Camelidae*, a modo de ejemplo, los cortes se concentran en la los siguientes huesos: rótula, tibia, astrágalo (Foto 8), fémur, falange anterior y vértebra cervical.

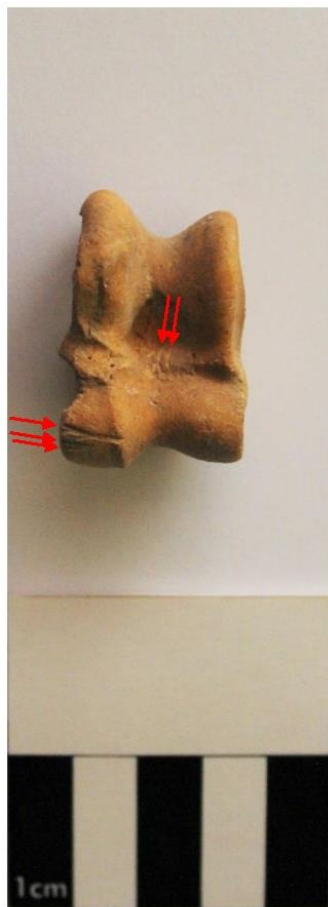


Foto 8: Astrágalo de *Camelidae* mostrando algunas huellas de corte.

Por otro lado, se hallaron un total de 172 especímenes identificados (NISP) termoalterados. Según la coloración del hueso (foto 9); tenemos que el 46.51% (NISP=80) es gris; el 22.09% (NISP=38) es negra; el 3.49% (NISP=6) es negra y blanca; y el 27.91% (NISP=48) es blanca.

Del mismo modo, la termoalteración según familias es la siguiente: *Camelidae* representa el 19.77% (NISP=34), *Cervidae* con 5.81 (NISP=10) y *Caviidae* con 1.16% (NISP=2). Del mismo modo, las Aves grandes no identificadas representan el 0.58% (NISP=1) de termoalterados; los *mamíferos grandes ni*, el 13.37% (NISP=23); *Artiodactyla ni*, el 25.59% (NISP=44); *mamífero mediano ni*, el 26.75% (NISP=46); *mamífero pequeño ni*, 1.74% (NISP=3); *Rodentia ni*, el 4.65% (NISP=8); y *Osteichthyes pequeño ni*, el 0.58% (NISP=1) .



Foto 9: Diferentes tipos de coloración de hueso.

Clase	Orden	Familia	Género	Termoalteración								Total	%Total	
				Gris	% Gris	Negra	% Negra	Negra y Blanca	% Negra y Blanca	Blanca	% Blanca			
Ave	Accipitriformes	Cathartidae		-	-	-	-	-	-	-	-	-	-	
			Ave grande ni	-	-	1	0.58	-	-	-	-	1	0.58	
Mamífero			Mamífero grande ni	6	3.49	11	6.40	-	-	6	3.49	23	13.37	
		Artiodactyla	Camelidae	18	10.47	12	6.98	2	1.16	2	1.16	34	19.77	
		Artiodactyla	Cervidae	3	1.74	1	0.58	1	0.58	5	2.91	10	5.81	
			Artiodactyla ni	22	12.79	7	4.07	3	1.74	12	6.98	44	25.59	
		Carnívora	Canidae	Lycalopex	-	-	-	-	-	-	-	-	-	
				Mamífero mediano ni	29	16.86	5	2.91	-	-	12	6.98	46	26.74
				Mamífero pequeño ni	-	-	-	-	-	-	3	1.74	3	1.74
		Rodentia	Caviidae	Cavia	-	-	-	-	-	-	2	1.16	2	1.16
				Rodentia ni	2	1.16	-	-	-	-	6	3.49	8	4.65
	Peces			Osteichthyes pequeño ni	-	-	1	0.58	-	-	-	-	1	0.58
			Total	80		38		6		48		172		
			% Total		46.51		22.1		3.49		27.9		100	

Cuadro 4: Elementos termoalterados de la fauna de Ampugasa.

3.- Discusión

Al comparar la información de ambos sitios, podemos notar la gran importancia (con un promedio aproximadamente del 98%) de mamíferos, principalmente mamíferos grandes; entre los cuales destaca la familia *Camelidae*. Asimismo, en ambos sitios se ha modificado, muy posiblemente con fines de comida, a las especies de esta familia. Es así que se encuentran no sólo huellas de corte sino también termoalteración. Si se tiene como idea que la carne de los camélidos para épocas tardías o prehispánicas en general es de un alto valor y de un acceso restringido, entonces estaríamos ante la evidencia de comida de personas ligadas a la élite. Este supuesto es confirmado con otros trabajos previos como el de Goepfert (2010) en el cual se enfatiza el carácter especial de los camélidos en cuanto a su consumo.

Es interesante notar que existen animales como el zorro (*Lycalopex sp.*), felino (*Felidae*) y gallinazo (*Cathartidae*) que no presentan ningún tipo de corte o termoalteración. Desde nuestro punto de vista, estos datos dan fuerza a la idea que estos animales contenían o reflejaban una significancia simbólica lo cual impedía su consumo como alimento.

Existen procesos tafonómicos interesantes como las huellas de corte y la termoalteración. Estos datos nos permiten hablar sobre la evidencia directa de consumo o uso del animal luego de su muerte. Como se mencionó anteriormente, existe una clara evidencia del uso de *Camelidae* tanto por las huellas de corte como su termoalteración. Del mismo modo, existe evidencia sobre el mismo tratamiento para aves, mamífero grandes, mamíferos medianos y mamíferos pequeños (principalmente *Cavia sp.*, es decir, cuy).

Por otro lado, se ha observado dos maxilares inferiores de camélido modificados con una clara intención de que servía para una función especializada. Según información de un estudiante de arqueología de pregrado (voluntario en el proceso del análisis zooarqueológico) que proviene de la serranía de Ferreñafe (Inkawasi) donde aún se habla quechua, los lugareños de Inkawasi usaban una mandíbula modificada muy parecida a la que se encuentra en nuestros datos de oveja. Nosotros creemos que sería un uso prehispánico adaptado a los nuevos animales traídos con la colonia como la oveja. Según las descripciones, se

modificaba tanto la parte de donde se ubican los molares, puliéndolo para poder colocar una especie maderera que va atado al hueso para que funcione como un mango; asimismo, se modifica la parte vertical del maxilar para lograr hacer una sección dentada con la cual permitiría hacer cortes al pasto (principalmente hierbas o arbusto, es decir, que no sean de un tallo fuerte). Otro dato adicional es que la madera que se ata a la zona de donde se ubican los molares es unida por medio de una especie de cuerda, pero no de textil, sino de intestino de un animal. Esta herramienta agrícola se conoce como “calabozo”.

Finalmente, debemos enfatizar la importancia del registro en los datos de los felinos, ya que tenemos por lo menos 3 individuos. Uno de ellos está completo; es un felino subadulto pequeño. Si bien no se ha establecido Género, dentro de las opciones son *Puma sp.*, *Leopardus sp.* y *Felis sp.* Según datos del Servicio Nacional de Áreas Naturales Protegidas por el Estado-SERNANP (2015), los felinos que se pueden encontrar en la Reserva Paisajística de Nor-Yauyos son el gato de las pampas (*Leopardus pajeros*), el gato andino (*Leopardus jacobitus*) y puma (*Puma concolor*). Por otro lado, existe un tratamiento perimortem o postmortem del felino observado desde el tratamiento de las escápulas; creemos que dicha fractura está relacionada con un carácter ritual asociado al momento de morir o inmediatamente luego de este. Se debe remarcar que los felinos no son animales comestibles para tiempos prehispánicos, sino netamente rituales (Giraldo 2015). Creemos estar ante la evidencia de un uso del felino con una ideología interesante detrás.

4.- Conclusión

En primer lugar, en Canchaje, se analizaron un total de 935 especímenes. Los mamíferos representan la mayor cantidad de animales encontrados, es decir, el 99.57 (NISP=931) y las aves representan un 0.11% (NISP=4).

En segundo lugar, existen modificaciones de dos maxilares inferiores de *Camelidae* que posiblemente sirvieron como una herramienta agrícola conocida como "calabozo".

En tercer lugar, en Ampugasa se analizaron un total de 323 especímenes con principal presencia de mamíferos representando el 98.45% (NISP=318), luego las aves con un 1.24% (NISP=4) y finalmente los peces con un 0.31% (NISP=1).

En cuarto lugar, las modificaciones en los huesos de ambos sitios como huellas de corte y termoalteración confirman que había un consumo importante de las especies de la Familia *Camelidae* que normalmente se asocia a comida o carne de acceso restringido.

En quinto lugar, existen animales como los gallinazos, zorros o felinos que representan su uso de forma ritual y no de consumo. El tratamiento del felino, como la evidencia de las escápulas, podría indicarnos un manejo altamente cuidadoso y calculado. En este contexto, existiría una idea de sacralidad detrás de cada uno de estos animales.

APPENDIX D

FLOTATION ANALYSIS REPORT BY VÍCTOR VÁSQUEZ AND TERESA ROSALES

(ARQUEOBIOS)

1. MÉTODOS DE ESTUDIO

a. ANÁLISIS ARQUEOZOOLOGICO

i. Acondicionamiento e Identificación Taxonómica:

La identificación taxonómica de los restos de gasterópodos terrestres aislados de las muestras de flotación se realizó utilizando manuales, colecciones comparativas y trabajos especializados sobre este grupo de invertebrados como: Breure (1978, 1979) y Ramírez *et al*, (2001).

La utilización de la bioinformática mediante la consulta con los bancos de datos de Animal Diversity (<http://www.animaldiversity.ummz.umich.edu>), FAO (<http://www.fao.org>), ITIS (<http://www.itis.usda.gov>) entre otras, permitió acceder a las muestras de esqueletos craneales y post-craneales de fauna Neotropical, para su comparación respectiva en cuanto a datos morfológicos y osteométricos.

b. ANÁLISIS ARQUEOBOTÁNICO

i. Restos Microbotánicos: Acondicionamiento e Identificación Taxonómica, Cantidad de Restos.

Todas las evidencias fueron acondicionadas para su identificación taxonómica. Los criterios adoptados para la identificación taxonómica de los diversos restos botánicos abarcaron lo siguiente:

a) la morfología externa: la identificación taxonómica se realizó mediante el microscopio estereoscopio, y se basa en el examen global sobre un conjunto de muchos caracteres de la variabilidad biológica de los restos, estas se fundamentan sobre los principios de la anatomía comparada.

b) la comparación de algunos caracteres biométricos de los restos.

El examen de los restos botánicos a partir de los caracteres morfológicos permitió discernir los rasgos característicos del género o especie vegetal a que pertenecen. También se utilizó bibliografía especializada como: Bonavía (1982), Buxo (1997), Esau (1977), Macbride (1943), Mostacero y Mejía (1993), Metcalfe (1960), Pearsall (1989, 1992), Sagástegui (1973), Sagástegui y Leiva (1993), Soukup (1987), Towle (1961), Weberbauer (1945) e Yacovleff y Herrera (1934-35), Ugent y Ochoa (2006), Martín y Barkley (2000).

La identificación taxonómica de los restos se realizó mediante el uso de un Microscopio Estereoscópico de 50X y la mayoría de las especies fueron fotografiados para su validación taxonómica. Todos los restos identificados fueron cuantificados según su proveniencia estratigráfica y contextual. Al final se agruparon todas las cantidades de restos microbotánicos identificados.

2. RESULTADOS

Se presenta a continuación los resultados obtenidos de los análisis de los restos de fauna y vegetales, aislados de las muestras de flotación de las excavaciones arqueológicas realizadas en Ampugasa y Canchaje.

2.1 Restos de Fauna

Sistemática y Taxonomía

A continuación se presenta la sistemática y taxonomía de la fauna identificada a partir de los restos de fauna recuperados en Ampugasa y Canchaje, mediante la flotación.

Phyllum Mollusca

Clase Gastropoda

Sub-Clase Pulmonata

Familia Bulimulidae

Bostryx sp.

Familia Systrophiidae

Systrophia sp.

Phyllum Chordata

Clase Amphibia "sapos" "ranas"

Clase Reptilia

Familia Teiidae "lagartijas"

Super-Clase Pisces

Familia Engraulidae

Engraulis ringens

"anchoveta"

Clase Mammalia

Orden Rodentia

Familia Muridae

Familia Caviidae

Cavia porcellus

"cuy"

Lagidium peruanum

"vizcacha"

Orden Artiodactyla

2.2 Restos Vegetales

Sistemática y Taxonomía

Se presenta la sistemática y taxonomía de los restos de vegetales recuperados de las muestras de suelo procesadas mediante flotación de Ampugasa y Canchaje.

División XVII Angiospermae

Clase I: Dicotyledoneae

Familia Juglandaceae

Juglans sp.

"nogal"

Familia Cactaceae

Cereus sp.

Familia Scrophulariaceae

Buddleja sp.

Familia Rosaceae

Polylepis sp.

"queñoa"

Familia Fabaceae

Crotalaria sp.

Familia Convolvulaceae

Ipomoea sp.

Familia Erythroxylaceae

Erythroxylum coca

"coca"

Clase II: Monocotyledoneae

Familia Poaceae

Zea mays

"maíz"

Cenchrus echinatus

"cadillo"

2.3 Cuantificación según Sitios

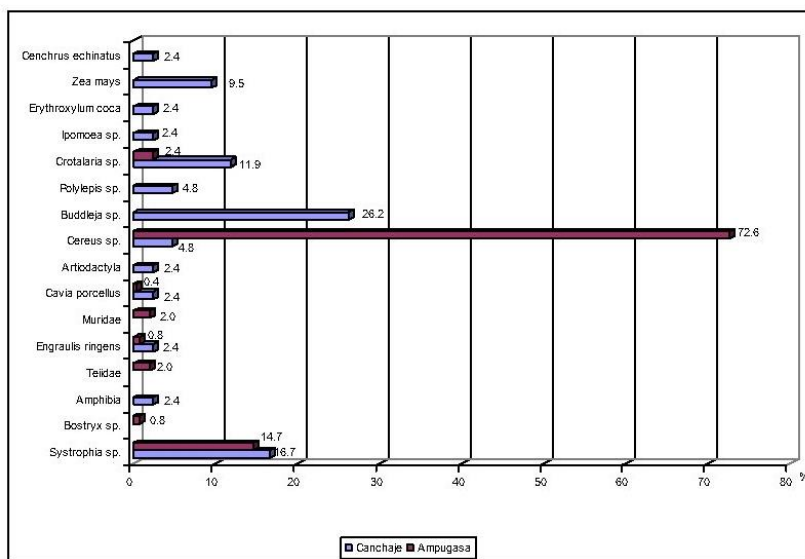
Tabla Nº 1. Fauna y vegetales aislados e identificados de las muestras de flotación de Ampugasa y Canchaje

Taxa	CANCHAJE															AMPUGASA														
	U1	U2	U3	U4	U5					U6	U8					U1	U3			U4	U5									
	Loc 503	Loc 624	Loc 508	Loc 668	Loc 533	Loc 541	Loc 647	Loc 682	Loc 684	Loc 687	Loc 688	Loc 700	Loc 750	Loc 782	Loc 784	Loc 678	Loc 679	Loc 183	Loc 195	Loc 218	Loc 87	Loc 88	Loc 39	Loc 41	Loc 104	Loc 117	Loc 121	Loc 127	Loc 164	
Systrophia sp.				1			3	3										3	2	2	10		5			1	3	11		
Bostryx sp.																			1										1	
Amphibia				1																										
Teiidae																		5												
Engraulis ringens												1									2									
Muridae																					5									
Cavia porcellus													1										1							
Lagidium peruanum										Coprolito								Coprolito	Coprolito											
Artiodactyla					1																									
Mamífero N/I																			2							4				
Juglans sp.																														1
Cereus sp.	1		1															20	3	1		7		2		102	6	4	30	
Buddleja sp.			5			1							5																	
Polylepis sp.																2														
Crotalaria sp.	1	1	1														2					6								
Ipomoea sp.						1																								
Erythroxylum coca															1															
Zea mays							1			3										2										
Cenchrus echinatus													1																	
Carbón N/I									1	2					1											4				
Total	2	1	7	2	1	2	3	4	1	2	3	1	7	1	1	2	2	20	10	3	17	14	5	2	4	107	9	15	40	

Tabla Nº 2. Frecuencias relativas de la fauna y vegetales aislados e identificados de las muestras de flotación de Canchaje y Ampugasa

Taxa	CANCHAJE		AMPUGASA	
	N	%	N	%
Systrophia sp.	7	16.7	37	14.7
Bostryx sp.			2	0.8
Amphibia	1	2.4		
Teiidae			5	2.0
Engraulis ringens	1	2.4	2	0.8
Muridae			5	2.0
Cavia porcellus	1	2.4	1	0.4
Lagidium peruanum	Coprolitos		Coprolitos	
Artiodactyla	1	2.4		
Mamífero N/I			6	2.4
Juglans sp.			1	0.4
Cereus sp.	2	4.8	183	72.6
Buddleja sp.	11	26.2		
Polylepis sp.	2	4.8		
Crotalaria sp.	5	11.9	6	2.4
Ipomoea sp.	1	2.4		
Erythroxylum coca	1	2.4		
Zea mays	4	9.5		
Cenchrus echinatus	1	2.4		
Carbón N/I	4	9.5	4	1.6
Total	42		252	

Figura 1.- Distribución porcentual de los restos de fauna y vegetales de Ampugasa y Canchaje



3. COMENTARIOS

De todas las muestras de flotación obtenidas de las excavaciones, se han aislado e identificado un total de 294 restos, de los cuales, 69 restos corresponden a fauna, y 225 restos a vegetales. En Canchaje hay 42 restos, de los cuales 11 restos son de fauna, y se incluye coprolitos de "vizacacha" y 31 restos son vegetales, donde a partir de fragmentos de carbón se ha identificado dos árboles utilizados como combustible como es el caso de *Buddleja sp.* y *Polylepis sp.* "queñoa". Para el sitio Ampugasa hay un total de 252 restos, de los cuales 58 son restos de fauna y 194 restos son de vegetales, donde abundan semillas de un cactus *Cereus sp.* con 183 semillas.

La diversidad de taxas identificados para ambos tipos de restos (fauna y vegetales), indica que se han identificado un total de 18 taxas, de los cuales 9 taxa son de fauna (moluscos terrestres, peces marinos y mamíferos) y 9 taxa son de vegetales (hierbas, árboles y dos plantas cultivadas).

De los moluscos terrestres identificados, *Bostryx sp.* habita sobre la superficie de los promontorios rocosos de ambientes xerofíticos o secos, y presentan gran actividad con episodios de lluvias y humedad.

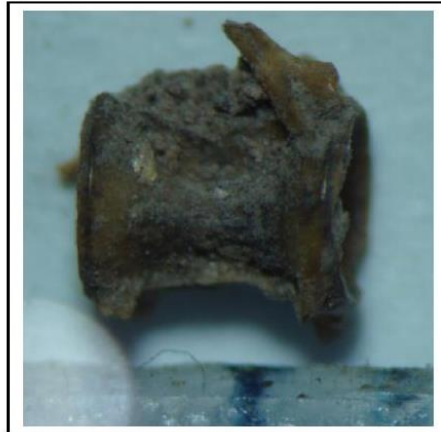
Luego tenemos los pequeños caracoles terrestres como *Systrophia sp.*, los cuales habitan los suelos de zonas boscosas húmedas. Observamos que esta especie de micromolusco terrestre viven en climas húmedos, posiblemente con suelos con hojarasca.



Fotografía 1.- *Systrophia sp.* (conchilla bajo microscopio estereoscópico a 20X)

En Canchaje se aislaron e identificaron restos de anfibios (posiblemente restos de alguna rana) y en Ampugasa se aislaron e identificaron restos de *Teiidae*, posiblemente alguna "lagartija". En este caso podría tratarse de restos de una lagartija que podría haber quedado atrapada en tales contextos.

De algunos contextos de Canchaje y Ampugasa se pudo aislar e identificar pequeñas vértebras de una especie muy común de los cardúmenes de la fría corriente peruana, se trata de *Engraulis ringens* "anchoveta". La presencia de esta especie en ambos sitios indican contactos con las poblaciones costeras.



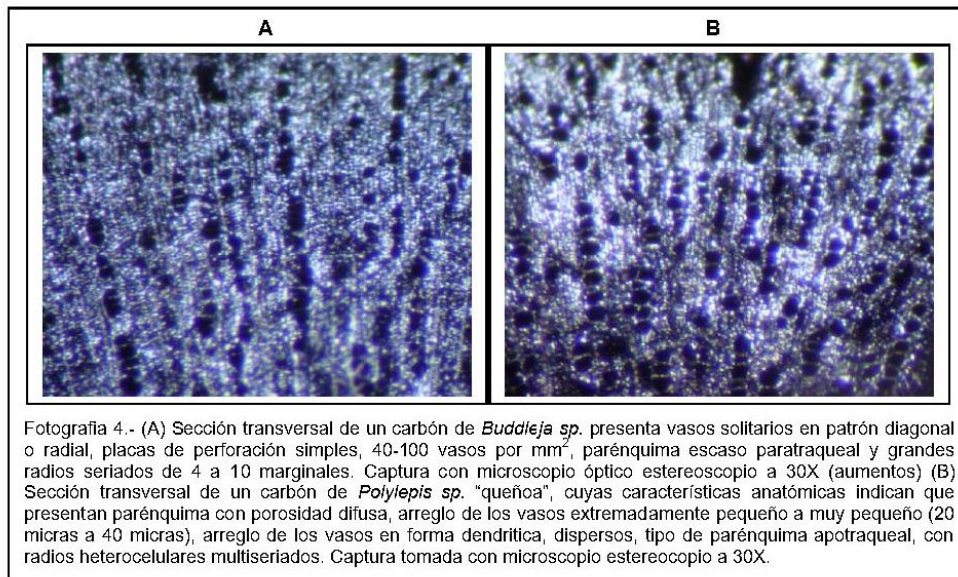
Fotografía 2.- vértebra de *Engraulis ringens* "anchoveta"

Adicionalmente con los restos de fauna, se identificaron algunos restos de dientes de *Cavia porcellus* "cuy" y algunos fragmentos de huesos asignados a Artiodactyla (podrían ser camélidos y/o cérvidos) pero ser muy pequeña la evidencia es preferible utilizar una categoría taxonómica general).



Fotografía 3.- Diente en vista oclusal de *Cavia porcellus* "cuy"

En relación a los restos vegetales, estos han sido posible identificarlos por la presencia de sus semillas y también por el análisis de la anatomía vascular de algunos carbones que tuvieron buena conservación, como es el caso de carbones identificados como *Buddleja* sp. y *Polylepis* sp. "queñoa", dos árboles que conforman los bosques enanos de los andes entre los 2000 y 3500 msnm, y que han sido utilizados como combustible.



Fotografía 4.- (A) Sección transversal de un carbón de *Buddleja* sp. presenta vasos solitarios en patrón diagonal o radial, placas de perforación simples, 40-100 vasos por mm², parénquima escaso paratraqueal y grandes radios seriados de 4 a 10 marginales. Captura con microscopio óptico estereoscopio a 30X (aumentos) (B) Sección transversal de un carbón de *Polylepis* sp. "queñoa", cuyas características anatómicas indican que presentan parénquima con porosidad difusa, arreglo de los vasos extremadamente pequeño a muy pequeño (20 micras a 40 micras), arreglo de los vasos en forma dendrítica, dispersos, tipo de parénquima apotraqueal, con radios heterocelulares multiseriados. Captura tomada con microscopio estereocopio a 30X.

Del total de plantas identificadas, las especies silvestres son: *Juglans* sp., "nogal" del cual se ha identificado un fruto (tipo drupa), se

trata de un árbol que vive en los andes, luego semillas de una cactácea *Cereus sp.* cuyos restos están en ambos sitios, pero en mayor abundancia en Ampugasa, donde posiblemente los frutos de esta cactácea fueron consumidos.



Fotografía 5.- Semillas de *Cereus sp.*

Luego tenemos otros dos árboles silvestres que componen los bosques enanos, como aquellos identificados mediante la anatomía vascular de los carbones de *Buddleja sp.* y *Polylepis sp.* (Fotografía 4)

Las siguientes plantas silvestres son *Crotalaria sp.* una leguminosa herbácea, *Ipomoea sp.* otra herbácea que crece en sitios húmedos y *Cenchrus echinatus* "cadillo" una gramínea silvestre que crece en bordes de cauces de canales.

En relación a plantas cultivadas, se han identificados dos especies: *Erythroxylum coca* "coca", de la cual se aisló e identificó una semilla en Ampugasa, y restos de cúpulas de las corontas de *Zea mays*. "maíz", de la cual también hay evidencias microbotánicas (almidón, fitolito y polen).



Fotografía 6.- Semilla de *Erythroxylum coca* "coca"



Fotografía 7.- Cúpulas carbonizadas de *Zea mays* "maíz"

Esta es la historia natural del material identificado a partir de las semillas y los restos de fauna aislados de las muestras de flotación, que muestran el acceso y manejo de los pisos ecológicos, la colecta de diversas especies vegetales, así como el uso histórico como combustible de las especies maderables andinas.

APPENDIX A

RESIDUE ANALYSIS REPORT BY VÍCTOR VÁSQUEZ AND TERESA ROSALES

(ARQUEOBIOS)

1. MÉTODOS DE ANÁLISIS

Se estudiaron los restos de almidones adheridos a fragmentos de cerámica que proceden de 11 muestras, de las cuales 5 son de Ampugasa, 5 de Canchaje, y una muestra tiene un código 131.01-XX. En relación a las herramientas líticas, se estudiaron un total de 6 líticos, cuya procedencia por sitio no estuvo consignada en las etiquetas. Los análisis microscópicos y registro microfotográfico se realizaron en el Laboratorio del Centro de Investigaciones Arqueobiológicas y Paleoecológicas Andinas "ARQUEOBIOS". Se utilizó para el análisis comparativo una colección de láminas con montaje de granos de almidón de especies modernas de cultivos de raíces, tuberosas, cereales y leguminosas andinas nativas, la utilización de claves taxonómicas y trabajos relacionados (Reichert 1913; Loy 1990; Piperno 2006; Torrence & Barton 2006).

Análisis Microscópicos: Microscopia Simple y de Luz Polarizada

Primero se realizó una observación panorámica bajo un microscopio estereoscopio a una magnificación de 20X, para visualizar la superficie interior del fragmento de cerámica y la superficie de los líticos, que contenían los probables residuos de almidón. Esta observación nos permitió reconocer el aspecto físico (textura y color) de la adherencia en el interior de la superficie del fragmento cerámico y la herramienta lítica, así como observar las adherencias posteriores a la deposición de la adherencia o sedimento principal. Los residuos que contenían granos de almidón aparecen generalmente luego de remover la capa negra que se ha formado por el uso de la vasija, y son generalmente sedimentos de color marrón amarillento, y en otros casos como sedimentos de marrón claro. Para controlar los análisis microscópicos de mayor aumento, se esterilizó todo el material de laboratorio implicado en estos análisis, para evitar posibles contaminaciones con materiales modernos y antiguos. Estas precauciones se mantuvieron hasta el final del análisis de todas las muestras.

Posteriormente y con una fina hoja de bisturí nueva (una para cada caso), y luego de remover la capa oscura, se tomó una pequeña muestra del sedimento marrón amarillento, o en algunos casos marrón, adherido a la superficie mas interna del fragmento de cerámica. Para el caso de los líticos, las muestras fueron seleccionadas de aquellas secciones que tenían sedimentos y preferiblemente de aquellas donde hay huellas de uso (esto se hizo a 20X). Las muestras extraídas de la cerámica y lítico, las cuales fueron puestos en una luna portaobjetos y disuelta en solución salina fisiológica al 5% y glicerina (v/v) previamente esterilizadas, para tratar de no alterar la morfología de las estructuras microscópicas presentes en la muestra. Posteriormente se hicieron observaciones a 1000X para tratar de identificar bien las estructuras microscópicas de los granos de almidón que estaban presentes en las muestras adheridas al interior de los sedimentos del fragmento cerámico y lítico, tomándose en consideración datos básicos morfológicos tales como forma, posición del hilum, facetas, patrones de fisuras, entre las más importantes.

Para verificar que estábamos ante la presencia de granos de almidón en el análisis microscópico con luz simple, empleamos microscopia de luz polarizada. La luz polarizada se utiliza típicamente para detectar la presencia de los cuerpos del almidón. Con luz polarizada, los granos de almidón demuestran una figura de interferencia en la forma de una "cruz", lo cual es el resultado de la doble refracción de la luz a través de las estructuras laminares cilíndricas o esféricas que presentan los granos del almidón. El punto de la intersección de las dos partes de la cruz corresponde generalmente a la posición del hilum. Este es una abertura o sección transversal del tubo o pasaje hacia el interior del grano, y por la cual la materia amilácea, forma la lámina interna que traspasa. Así, un examen microscópico de los granos de almidón con el microscopio de polarización, es una evidencia inequívoca que su doble poder refractivo puede ser obtenido y confirmar su presencia.

Se tomaron medidas de los granos de almidón identificados y de aquellos sin identificar y/o dañados, mediante un dispositivo o retículo de medición calibrado a micras, que fue acoplado al ocular del microscopio. Se tomaron como medidas el largo máximo (L) y el ancho máximo (A) de cada grano de almidón identificado y de aquellos no identificados. Los granos de almidón identificados mediante características morfológicas, microscopia de polarización y posteriormente medidos en micras en su largo y ancho, fueron registrados con una cámara digital SONY DSCW200 de 12,1 megapixel. Posteriormente las imágenes obtenidas fueron otra vez analizadas en una computadora para su verificación. Todos los datos obtenidos fueron ingresados en una hoja de cálculo Excel 2003 para su procesamiento.

2. RESULTADOS

Fragmentos de Cerámica

A continuación se presentan los datos obtenidos de los análisis microscópicos para las 11 muestras de fragmentos de cerámica que provienen de Ampugasa y Canchaje. Mediante la identificación de los granos de almidón aislados de los sedimentos, se reportan la identificación de dos especies cultivadas: *Solanum tuberosum* "papa" y *Zea mays* "maíz", se presentan a continuación las medidas y características de estos granos de almidón antiguos.

Tabla N° 1. Especies vegetales identificadas mediante granos de almidón, medidas y procedencia en los sedimentos de fragmentos de cerámica de Ampugasa y Canchaje.

AMPUGASA - CANCHAJE: Almidones en Fragmentos de Cerámica					
N°	N°	Evidencia	Taxa	Medidas	Observaciones
Muestra	Registro	Identificada		bxh (µ)	
1	A-3-61.1-15	Almidones	<i>Zea mays</i>	18.2 x 15.6	dos granos almidón poliédricos con iguales medidas
				13 x 13	grano almidón esférico, hilum perforado
				15.6 x 13	grano almidón elíptico
		Almidones	<i>Zea mays</i>	14.3 x 13	grano almidón esférico
2	A-5-108.1-15	fitolito	<i>Poideae</i>	41.6 x 13	fitolito de gramínea silvestre
				15.6 x 13	granos almidón agrupados poliédricos
3	A-1-140.1-22	Almidones	<i>Zea mays</i>	23.4 x 15.6	grano almidón poliédrico
4	A-1-223.1-9	Almidones	<i>Solanum tuberosum</i>	67.6 x 46.8	grano almidón "papa" típico
		fitolito	<i>Poideae</i>	33.8 x 13	fitolito de gramínea silvestre
				20.8 x 16.9	grano de almidón poliédrico
5	A-5-102.6-13	Almidones	<i>Zea mays</i>	15.6 x 13	grano almidón esférico
				15.6 x 13	grano almidón maíz dañado
		Almidones		18.2 x 15.6	granos de almidón maíz, ambos poliédricos
6	C-5-547.1-35	Polen	<i>Zea mays</i>	13 x 10.4	grupos de granos de polen de maíz
7	C-5-545.1-66	Almidones	<i>Zea mays</i>	13 x 13	grano almidón poliédrico
				13 x 10.4	grano almidón poliédrico
				23.4 x 20.8	grano almidón poliédrico
				18.2 x 15.6	grano almidón poliédrico
8	C-5-566.1-66	Almidones	<i>Solanum tuberosum</i>	33.8 x 26	grano almidón de papa, típico
		Polen	<i>Zea mays</i>	15.6 x 15.6	granos de polen de maíz agrupados y dentro de sedimento
		Sedimento			visita del color de sedimento que contenía almidón y polen
9	C-5-575.1-73	Almidones	<i>Zea mays</i>	15.6 x 15.6	grano de almidón poliédrico
				18.2 x 15.6	grano de almidón poliédrico
10	C-5-640.1-19	Almidones	<i>Zea mays</i>	18.2 x 18.2	grano de almidón poliédrico
				15.6 x 14.3	grano de almidón elíptico
11	131.01-xx	Almidones	<i>Zea mays</i>	13 x 13	grano de almidón hemiesférico

ALMIDONES DEL SITIO AMPUGASA

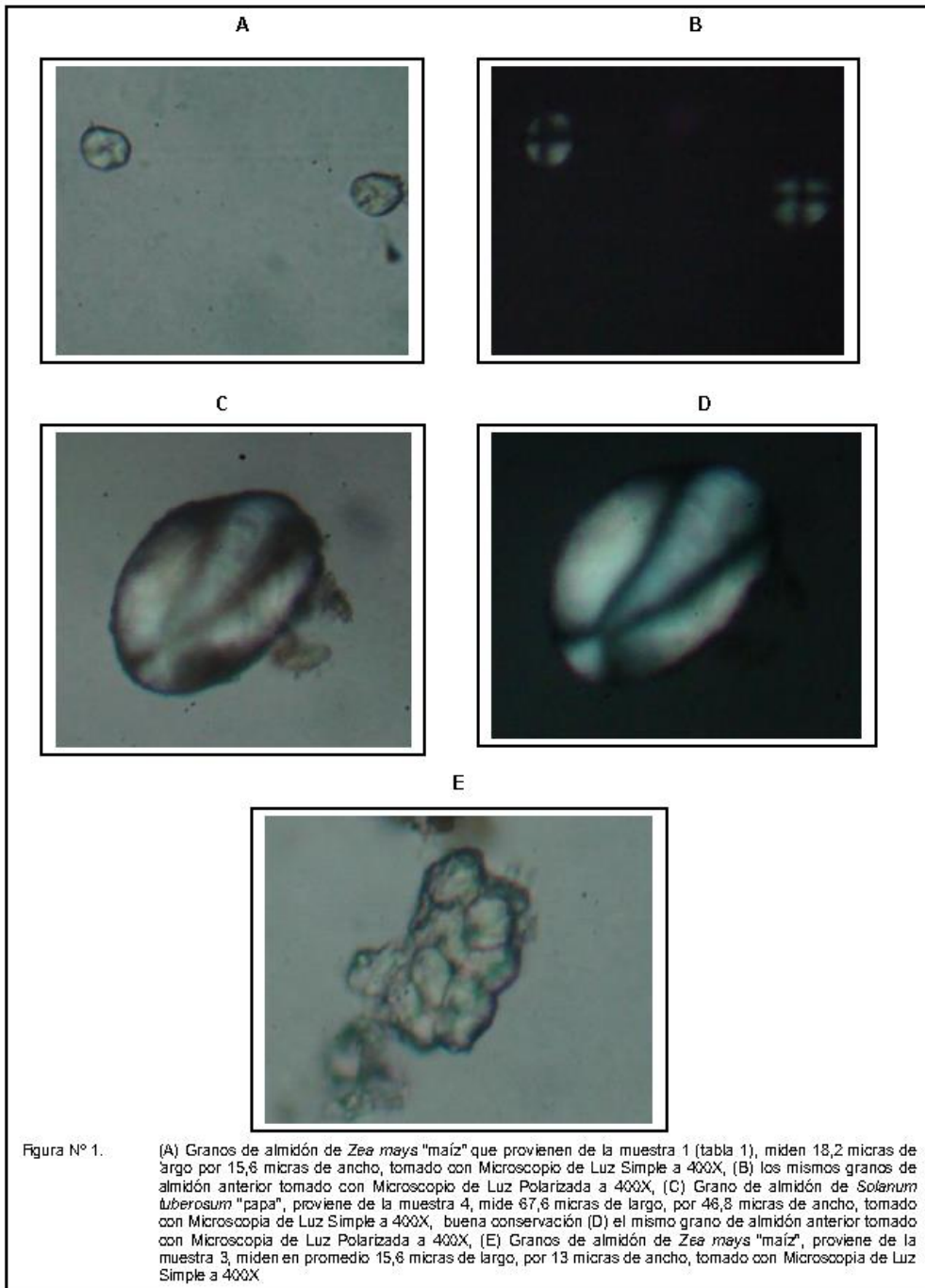
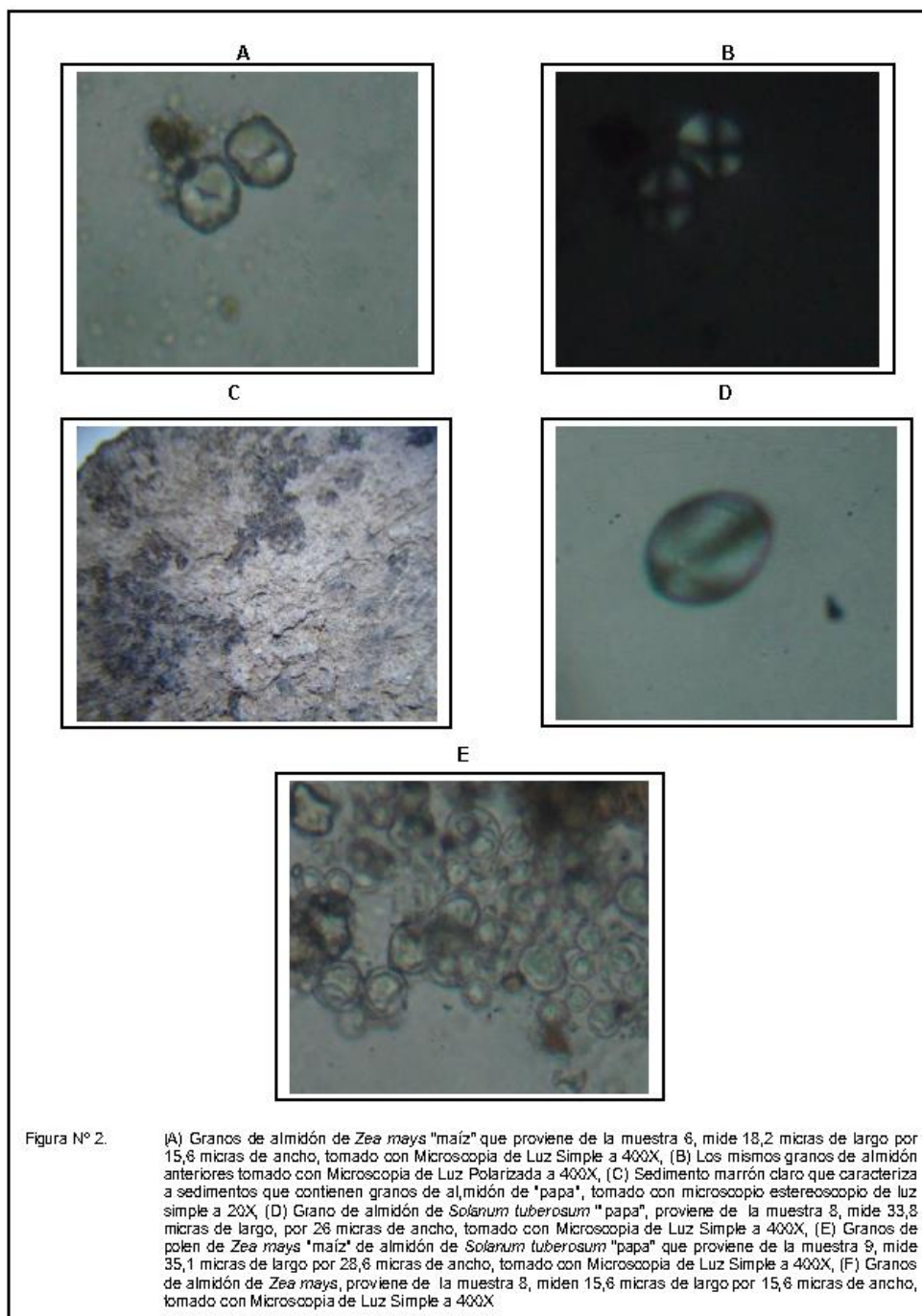


Figura N° 1.

(A) Granos de almidón de *Zea mays* "maíz" que provienen de la muestra 1 (tabla 1), miden 18,2 micras de largo por 15,8 micras de ancho, tomado con Microscopio de Luz Simple a 400X, (B) los mismos granos de almidón anterior tomado con Microscopio de Luz Polarizada a 400X, (C) Grano de almidón de *Solanum tuberosum* "papa", proviene de la muestra 4, mide 67,6 micras de largo, por 46,8 micras de ancho, tomado con Microscopio de Luz Simple a 400X, buena conservación (D) el mismo grano de almidón anterior tomado con Microscopio de Luz Polarizada a 400X, (E) Granos de almidón de *Zea mays* "maíz", proviene de la muestra 3, miden en promedio 15,6 micras de largo, por 13 micras de ancho, tomado con Microscopio de Luz Simple a 400X.

ALMIDONES DEL SITIO CANCHAJE



Herramientas Líticas

El análisis de 6 herramientas líticas arroja la identificación exclusiva de granos de almidón de *Zea mays* "maíz", lo cual concuerda con los resultados obtenidos con el aislamiento de granos de almidón de "maíz" de los sedimentos de los fragmentos de cerámica.

Tabla N° 2. Especies vegetales identificadas mediante granos de almidón, medidas y procedencia en los sedimentos de las herramientas líticas de Ampugasa y Canchaje.

AMPUGASA - CANCHAJE. Almidones en Lítica					
N° Muestra	N° Objeto	Evidencia identificada	Especie	Medidas (µm)	Observaciones
1	Lítica piquero	Almidones	<i>Zea mays</i>	15,8 x 13	grano almidón polidédrico
				13 x 12	grano almidón polidédrico
				13 x 12	grano almidón polidédrico
2	Lítica forma punta	Almidones	<i>Zea mays</i>	15,6 x 15,6	grano almidón esférico
				13 x 13	grano almidón esférico
				13 x 13	grano almidón esférico
3	Mazo molar grande	Almidones	<i>Zea mays</i>	13,2 x 18,2	grano almidón polidédrico
				18,2 x 13	grano almidón polidédrico
				18,2 x 13	grano almidón polidédrico
4	Molero	Almidones	<i>Zea mays</i>	18,2 x 13,2	grano almidón polidédrico
				13,2 x 13,2	grano almidón polidédrico
				13,2 x 13,2	grano almidón polidédrico
5	Mazo de Moler	Almidones	<i>Zea mays</i>	13,2 x 15,6	grano almidón polidédrico
				13,2 x 13	grano almidón polidédrico
				13,2 x 13	grano almidón polidédrico
6	Mazo de Moler	Almidones	<i>Zea mays</i>	14,2 x 13	grano almidón polidédrico
				14,2 x 13	grano almidón polidédrico

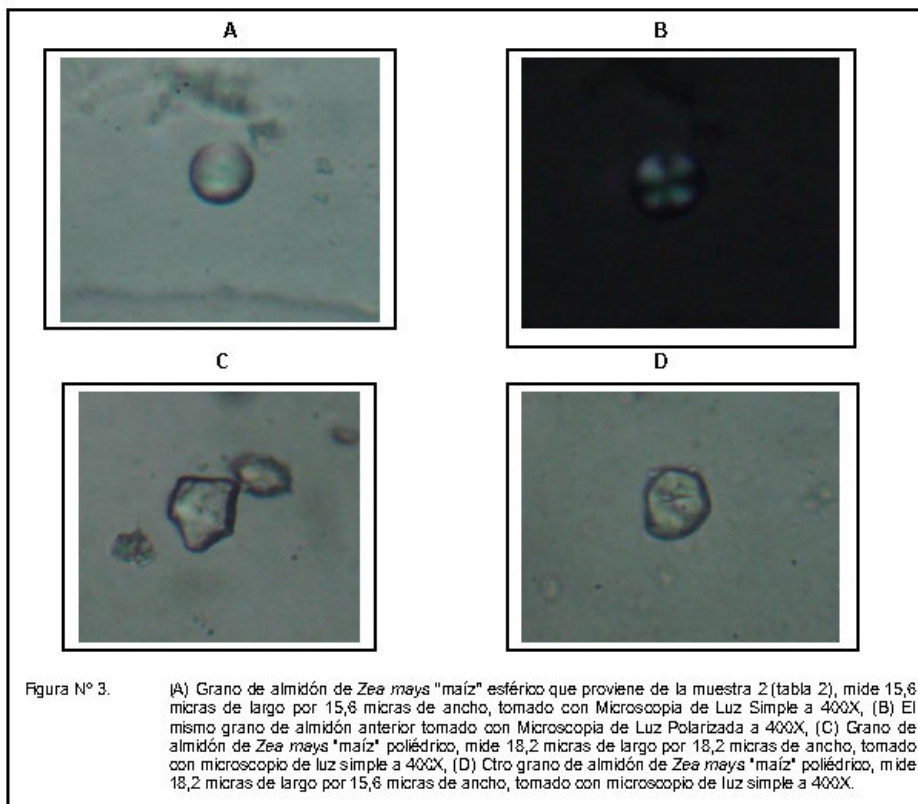


Figura N° 3. (A) Grano de almidón de *Zea mays* "maíz" esférico que proviene de la muestra 2 (tabla 2), mide 15,6 micras de largo por 15,6 micras de ancho, tomado con Microscopia de Luz Simple a 400X, (B) El mismo grano de almidón anterior tomado con Microscopia de Luz Polarizada a 400X, (C) Grano de almidón de *Zea mays* "maíz" poliédrico, mide 18,2 micras de largo por 13,2 micras de ancho, tomado con microscopio de luz simple a 400X, (D) Otro grano de almidón de *Zea mays* "maíz" poliédrico, mide 18,2 micras de largo por 13,2 micras de ancho, tomado con microscopio de luz simple a 400X.

3. COMENTARIOS

Los datos obtenidos de los análisis microscópicos para los sedimentos de 11 muestras de fragmentos de cerámica indican que del aislamiento de sus granos de almidón, se han identificado dos especies vegetales: *Solanum tuberosum* "papa" y *Zea mays* "maíz" (tabla 1). Además entre los sedimentos se aislaron fitolitos de *Pooideae*, que son gramíneas silvestres que por alguna razón se mezclaron en estos sedimentos y solo tiene valor informativo para saber el tipo de vegetación silvestre. Estos fitolitos se encontraron en la muestra 2 y muestra 5 (tabla 1).

Adicionalmente las muestras 6 y 8 presentaron dentro de los sedimentos unos grupos de granos de polen de *Zea mays* "maíz" (figura 2E), lo que indicaría que algunas partes de las inflorescencias masculinas de esta planta, habrían estado contenidas en las vasijas.

La mayoría de las muestras analizadas, presentaban huellas de haber estado sometido a altas temperaturas y se había formado una capa de hollín muy compacta y dura, de la cual se pudo aislar almidones en buen estado de conservación, pero también dañados por este factor tafonómico.

Los granos de almidón aislados y que presentan formas típicas en su forma antigua (por alteraciones tafonómicas) y comparable con las formas modernas, son aquellos de *Zea mays* y *Solanum tuberosum*, lo que permite indicar que en estas vasijas se prepararon alimentos en base a los almidones que proporcionan los granos del "maíz" y los tubérculos de la "papa" (figuras 1A y 1C). Todos estos granos de almidón aislados, se encontraron en un grado de conservación aceptable, además representaban a las formas típicas de las especies identificadas (figuras 1A, 1C, 2A y 2D).

Según los datos de la tabla 1, es posible que los almidones de *Zea mays*, sean los más frecuentes, porque solo encontramos granos de almidón de *Solanum tuberosum* "papa" en la muestra 4 y la muestra 8, que curiosamente también contenía granos de polen de "maíz" (tabla 1). Al respecto hay que señalar un detalle importante de los sedimentos que contenían granos de almidón de "papa", en ambas muestras el color en superficie y al interior era de color marrón claro (figura 2C), a diferencia de los sedimentos negros de donde se aislaron los granos de almidón de "maíz".

Por otro lado hay granos de almidón de "maíz" que presentan fisuras en su hilum (el orificio central del grano de almidón), producto de la molienda. Es posible que el consumo del maíz haya sido obteniendo una masa almidonosa, es decir que los granos hayan sido molidos (*milling*), lo cual trae como consecuencia que los granos de almidón presente fisuras (Zarrillo *et al*, 2008), tal como se presentan en la muestra 6 (figura 2A).

Para el caso de los almidones aislados de los líticos, solo se han identificado granos de almidón de "maíz", lo que indica que estos artefactos habrían sido utilizados exclusivamente para procesar este cereal.

Así tenemos que en la muestra 1, que es un lítico pequeño de forma semilunar facetada, tiene exclusivamente granos de almidón poliédricos de "maíz", a diferencia del lítico en forma de punta de proyectil (muestra 2) que tiene granos de almidón de maíz de forma esférica. En relación a las formas de los granos de almidón de maíz, los especialistas indican que los granos de almidón esféricos pertenecen a razas de maíz harinosas, y aquellos almidones poliédricos están asignados a razas de maíz vítreas, que generalmente se utilizan para preparar mazamoras.

Las restantes herramientas líticas son 3 manos de moler (muestra 3, muestra 5 y muestra 6), todas albergaban en sus sedimentos granos de almidón de maíz, en su mayoría poliédricos. La muestra 4 que es un mortero, tiene evidencias contundentes que ahí se molieron granos de "maíz" por la frecuencia de sus granos de almidón (tabla 2).

En conclusión, los resultados de los análisis de los sedimentos de los fragmentos de cerámica y aquellos obtenidos de los líticos, concuerdan, porque el procesamiento y consumo posterior del maíz es evidente, y hay muchas posibilidades que hayan consumido dos razas diferentes de maíz, tal como se ha reportado para otros sitios andinos.

APPENDIX F
CERAMIC ANALYSIS PROTOCTOS

Adapted from: Proyecto Arqueológico Huarochirí Lurin Alto (PAHLA) 2011, designed by
Zachary Chase, Brigham Young University

Características morfológicas

Tipo de fragmento:

- A. Borde: 01 = Labio Recto o plano; 02 = Redondeado; 03 = Ojival; 04 = Medio ojiva Inter.; 05 = Medio ojiva Ext.; 06 = Biselado Inter.; 07 = Biselado Exter.; 08 = Doble biselado; 09 = Cóncavo; 10 = Acanalado; 11 = Irregular; 12 = No determinado; 13 = Redon. expandido exterior; 14 = Redon. expand. int.; 15 = Recto expand. ext.; 16 = Recto expand. int.; 17 = Expandido hacia exterior e interior; 18 = Medio ojiva exter. con surco
 - a. Tipo de borde: 01 = Recto; 02 = Evertido/divergente recto; 03 = Invertido/convergente recto; 04 = Convexo vertical; 05 = Convexo convergente; 06 = Convexo divergente; 07 = Cóncavo vertical; 08 = Cóncavo convergente; 09 = Cóncavo divergente; 10 = Reforzado externamente; 11 = Reforzado internamente; 12 = Reforzado doblado; 13 = Carenado; 14 = Divergente expandido; 15 = “Media flecha”; 16 = Irregular; 17 = No determinado; 18 = Labio evertido; 19 = Labio invertido)
- B. Cuello: 01 = No determinado; 02 = Gollete
 - a. Tipo de Gollete: 01 = Tubular; 02 = Cónico; 03 = Divergente)
- C. Cuerpo: 01 = Inflección; 02 = Otro
- D. Base/Soporte: 01 = Plano; 02 = Cóncavo; 03 = Convexo; 04 = Anular; 05 = Trípode; 06 = Tetrápode; 07 = Polípode; 08 = Pedestal; 09 = Soporte/podio; 10 = No determinado
- E. Agarradera: 01 = Asa; 02 = Mango; 03 = Agarradera
 - a. Clase de Asa: 01 = Asa canasta; 02 = Asa puente; 03 = Asa lateral; 04 = Asa tapadera; 05 = Asa agarradera; 06 = No determinado
 - b. Tipo de Asa: 01 = Cintada; 02 = Tubular macizo; 03 = Tubular hueca; 04 = Trenzada; 05 = Bifurcada; 06 = Retorcida; 07 = No determinado
 - c. Orientación: 01 = Horizontal; 02 = Vertical; 03 = Indeterminado
 - d. Perfil interior/exterior: 01 = Cóncavo/cóncavo; 02 = Cóncavo/convexo; 03 = Cóncavo/recto; 04 = Cóncavo/irreg.; 05 = Convexo/cóncavo; 06 = Convexo/convexo; 07 = Convexo/recto; 08 = Convexo/irreg.; 09 = Recto/cóncavo; 10 = Recto/convexo; 11 = Recto/recto; 12 = Recto/irreg.; 13 = Irreg./cóncavo; 14 = Irreg./convexo; 15 = Irreg./recto; 16 = Irreg./irreg.; 17 = No determinado

- e. Tipo de Mango: 01 = Tubular; 02 = Cónico; 03 = Escultórico Antropomorfo; 04 = Escultórico Zoomorfo; 05 = Escultórico ornitomorfo; 06 = Escultórico no determinado
- F. Pieza casi completa: 01 = Esférico; 02 = Cilíndrico; 03 = Elipsoide en posición vertical; 04 = Elipsoide en posición horizontal; 05 = Ovoide en posición normal; 06 = Ovoide en posición invertida; 07 = Hiperboloide; 08 = Doble cono; 09 = Escultórico; 10 = Irregular
- G. Aplicación: 01 = “Asa falsa”; 02 = “Cara” u otra figura modelada; 03 = Otro
- H. Indeterminado
- I. Otro

Tipo de Artefacto

- A. Tipo de Vasija: 01 = Abierta (Cuenco, Plato, Vaso, Taza, Tazon, Copa, No determinado); 02 = Cerrada (Botella, Cantaro/Jarra, Olla, Canchero, Cuenco, Aribalo, Tinaja, Botija, No determinado); 03 = No determinado
- B. Instrumento de Producción: 01 = Piruro/Tortero; 02 = Molde; 03 = Sello; 04 = Plato de alfarero; 05 = Otro (Piruro, Pulidor, Otro, No determinado)
- C. Instrumento Musical: 01 = Antara; 02 = Ocarina; 03 = Quena; 04 = Pututo; 05 = Otro
- D. Adorno: 01 = Mascara; 02 = Orejera; 03 = Cuenta; 04 = Colgante; 05 = Otro
- E. Figurina: 01 = Solida (Antropomorfa, Zoomorfa, Ornitomorfa, Otro, No determinado); 02 = Hueca (Antropomorfa, Zoomorfa, Ornitomorfa, Otro, No determinado)
- F. Utensilio: 01 = Cuchara; 02 = Rallador; 03 = Pulidor; 04 = Colador; 05 = Otro
- G. Otro: 01 = Arquitectónico; 02 = Miniatura (Cuenco abierto, Cuenco cerrado, Plato, Vaso, Taza, Copa, Botella, Cantaro/Jarra, Olla, Canchero, Aribalo, Otro, No determinado); 03 = Otro
- H. No determinado

Medidas

- A. Peso del fragmento (gr)
- B. Categoría de tamaño: 01, 02, 03, 04, 05
- C. Diámetro máximo de labio (cm)
- D. Diámetro máximo de base (cm)
- E. Espesor mínimo del fragmento (cm)
- F. Espesor máximo del fragmento (cm):

Características de Manufactura

- A. Cocción: 01 = Oxidante, material orgánico presente o no presente originalmente, sin núcleo; 02 = Oxidante, material orgánico presente originalmente, núcleo con márgenes difusos; 03 = Reductora, material orgánico no presentes originalmente, núcleo con márgenes difusos (fina), Sin núcleo (tosca); 04 = Reductora, material orgánico presente o

no presente originalmente; núcleo con márgenes difusos (fina), sin núcleo (tosca); 05 = Reductora, enfriada rápidamente en aire; 06 = Oxidante de temperatura variable (interior y exterior son de colores muy diferentes, como gris y rojo/anaranjado)

B. Técnica de Manufactura: 01 = Modelado; 02 = Paleteado; 03 = Moldeado; 04 = Enrollado; 05 = No determinado

C. Acabados: 01 = Alisado; 02 = Pulido; 03 = Bruñido; 04 = Paleteado; 05 = Vidriado; 06 = Brea; 07 = Sin acabado; 08 = Indeterminado

Características composicionales

Textura

- A. Fina
- B. Media (presenta inclusiones -1mm)
- C. Gruesa (presenta inclusiones de 1mm)
- D. Muy gruesa (presenta inclusiones de 1 a 2 mm)
- E. Tosco (presenta inclusiones + 3mm)

Inclusiones (clasificación de cada tipo de inclusión)

- A. Material: 01 = Calcita; 02 = Cuarzo; 03 = Mica/pirita; 04 = Piedra molida; 05 = Feldespato; 06 = Vegetal; 07 = Ceniza; 08 = Cerámica; 09 = No determinado
- B. Color: 01 = Blanco; 02 = Negro; 03 = Rojo; 04 = Marrón; 05 = Anaranjado; 06 = Gris; 07 = Sin color; 08 = Otro; 09 = No determinado
- C. Esfericidad: 01 = Alta esfericidad; 02 = Baja esfericidad; 03 = No determinado
- D. Distribución: 01 = Muy pobre; 02 = Pobre; 03 = Equilibrado; 04 = Buena; 05 = Muy buena; 06 = No determinado
- E. Porcentaje: 01 = 5%; 02 = 10%; 03 = 20%; 04 = 30%; 05 = No determinado
- F. Redondez/desgaste: 01 = Muy angulosa; 02 = Angulosa; 03 = Sub angulosa; 04 = Sub redondeada; 05 = Redondeada; 06 = Muy redondeada; 07 = No determinado

Colores de la Pasta

- A. Color exterior de la pasta (según lectura de Munsell)
- B. Color interior de la pasta (según lectura de Munsell)
- C. Color de la pasta en perfil (solo aplica a las cerámicas históricas) (según lectura de Munsell)

Decoración

- A. Técnica: 01 = Alto relieve; 02 = Aplicación; 03 = Bajo relieve; 04 = Bruñido; 05 = Calado; 06 = Chorreado; 07 = Engobe; 08 = Esmalte; 09 = Estampado; 10 = Escisión; 11

= Incisión; 12 = Molde; 13 = Peinado; 14 = Pellizado; 15 = Piel de ganso; 16 = Pintura brillante; 17 = Pintura mate; 18 = Pintura negativa; 19 = Presión; 20 = Grabado; 21 = No determinado; 22 = Baño

- B. Motivo: 01 = No determinado; 02 = Línea(s); 03 = Cuadrado(s); 04 = Rombo(s); 05 = Triángulo(s); 06 = Círculo(s); 07 = Punto(s); 08 = Cruz(es); 09 = Antropomorfo; 10 = Zoomorfo; 11 = Ornitomorfo; 12 = Icitiomorfo; 13 = Fitomorfo; 14 = Carpomorfo (fruto); 15 = Flor(es) y/o planta(s); 16 = Bandas (de mayor tamaño que la línea); 17 = Panel (sección amplia); 18 = Franjas (de mayor tamaño que la banda); 19 = Zigzag; 20 = Chevrões; 21 = Volutas; 22 = Espirales; 23 = Escalones; 24 = Media luna(s); 25 = Olas; 26 = Hoyos; 27 = No determinado; 28 = Otro
- C. Configuración: 01 = Vertical; 02 = Horizontal; 03 = Diagonal; 04 = Secuencia lineal horizontal; 05 = Secuencia lineal vertical; 06 = Paralela horizontal; 07 = Paralela vertical; 08 = Principal; 09 = Secundario/Periférico; 10 = Simétrico; 11 = Asimétrico; 12 = Irregular; 13 = Se entrecruzan; 14 = Zonal; 15 = No determinado
- D. Ubicación: 01 = Exterior; 02 = Interior; 03 = Se entrecruzan
- E. Posición: 01 = Cuerpo; 02 = Cuello; 03 = Labio; 04 = Asa; 05 = No determinado; 06 = Base; 07 = Borde
- F. Color: según Munsell

KECK CARBON CYCLE AMS FACILITY
EARTH SYSTEM SCIENCE DEPT, UC IRVINE

¹⁴C results Hernandez Aug 03 2016

UCIAMS #	Sample name	Other ID	δ ¹³ C (‰)	±	fraction Modern	±	D ¹⁴ C (‰)	±	¹⁴ C age (BP)	±
176325	MU-018 A-5-114.3-2 org. residue .21mgC		-22	0.1	0.9357	0.0018	-64.3	1.8	535	20
176326	MU-019 A-6-238.2-2 org. residue .14mgC				0.6860	0.0013	-314.0	1.3	3030	20
176327	MU-020 A-1-140.1-45 org. residue .676mgC		-22	0.1	0.9483	0.0018	-51.7	1.8	425	20
176328	MU-027 C-3-566.1-62 org. residue .065mgC				1.0292	0.0022	29.2	2.2	-225	20
176329	MU-026 C-5-691.1-3 org. residue .82mgC		-21	0.1	0.9228	0.0015	-77.2	1.5	645	15
176330	MU-029 C-6-784.5-4 org. residue .044mgC				0.9169	0.0026	-83.1	2.6	695	25
176333	MU-018 A-5-114.3-2 blank .010mgC				0.8807	0.0088	-119.3	8.8	1020	80
176334	MU-020 A-1-140.1-45 blank .019mgC				0.9399	0.0051	-60.1	5.1	500	45
176335	MU-027 C-3-566.1-62 blank .027mgC				0.9503	0.0037	-49.7	3.7	410	35

Radiocarbon concentrations are given as fractions of the Modern standard, D¹⁴C, and conventional radiocarbon age, following the convention of Stuiver and Polach (Radiocarbon, v. 19, p.355, 1977).

Sample preparation backgrounds have been subtracted, based on measurements of ¹⁴C-free coal.

All results have been corrected for isotopic fractionation according to the conventions of Stuiver and Polach (1977), with δ¹³C values measured prepared graphite using the AMS spectrometer. These can differ from δ¹³C of the original material, if fractionation occurred during sample preparation or the AMS measurement, and are not shown.

Comments:
These samples were scrapings from interior surfaces of potsherds, and no proper process blanks could be applied. The results have therefore only been corrected for combustion and graphitization backgrounds, using coal blanks.

Samples labeled "blanks" above were scraped from the exterior surfaces of the sherds in an attempt to provide some information on possible contributions from soil humin and other exogenous carbon. The initial weights of the blank scrapings before pretreatment were similar to those

KECK CARBON CYCLE AMS FACILITY
EARTH SYSTEM SCIENCE DEPT, UC IRVINE

¹⁴C results C. Hernandez Aug 11 2016

UCIAMS #	Sample name	Other ID	δ ¹³ C (‰)	±	fraction Modern	±	D ¹⁴ C (‰)	±	¹⁴ C age (BP)	±
176682	MU-010 CF01.M10 tooth		-10.7	0.1	0.9195	0.0016	-80.5	1.6	675	15
176683	MU-011 CF01.M11 tooth		-9.9	0.1	0.9213	0.0016	-78.7	1.6	660	15

Radiocarbon concentrations are given as fractions of the Modern standard, D¹⁴C, and conventional radiocarbon age, following the convention of Stuiver and Polach (Radiocarbon, v. 19, p.355, 1977).

Sample preparation backgrounds have been subtracted, based on measurements of ¹⁴C-free bone.

All results have been corrected for isotopic fractionation according to the conventions of Stuiver and Polach (1977), with δ¹³C values measured prepared graphite using the AMS spectrometer. These can differ from δ¹³C of the original material, if fractionation occurred during sample preparation or the AMS measurement, and are not shown.

Comments:
The following bone samples yielded no ultrafiltered collagen and could not be analyzed: MU-015 161.01; MU-023 655.01;

δ¹³C and δ¹⁵N values shown were measured to a precision of <0.1‰ and <0.2‰, respectively, on aliquots of ultrafiltered collagen analyzed on a NA1500NC elemental analyzer/Finnigan Delta Plus isotope ratio mass spectrometer.

UCIAMS#	Sample	>30kD collagen yield(%)	del15N (‰)	del13C (‰)	%N	%C	C/N (wt%/wt%)	C/N (atomic)
176682	MU-010 CF01.M10 teeth	4.8	13.1	-10.7	14.5	39.2	2.70	3.15
176683	MU-011 CF01.M11 teeth	4.9	13.0	-9.9	14.8	39.6	2.68	3.12

APPENDIX H

MORPHO-FUNCTIONAL CLASSIFICATION AND CERAMIC DRAWINGS

Large Cooking Pots

Type 24: convergent, concave walls, rounded lip with internal widening, slight inclination, diameter 31 cm.

Type 26: divergent, straight walls or slightly convex, flat lip, marked inclination, diameter 24-33 cm.

Type 37: convergent, straight walls with application in upper part, rounded lip, standard inclination, undetermined diameter.

Type 38: divergent, straight walls or slightly convex, rounded lip, standard inclination, diameter 24-38 cm.

Type 45: vertical or slightly divergent, straight walls or slightly convex, flat lip, slight inclination, diameter 22-56 cm.

Type 46: divergent, convex walls, flat lip, slight inclination, diameter 19-40 cm.

Type 49: divergent, straight walls or slightly convex, rounded to ogival lip, standard inclination, diameter 16-40 cm.

Type 52: divergent, straight walls, arrow-shaped lip, standard inclination, diameter 17-42 cm (This type was only found in Ampugasa and is also present in Chase's excavation in San Cristóbal).

Type 53: vertical or slightly convergent, convex or slightly straight walls, arrow-shaped lip, slight inclination, diameter 18-30 cm (only cases also from Ampugasa).

Type 57: divergent, straight or slightly convex walls, rounded lip, marked inclination, diameter 26-40 cm (the inclination is its main difference with T-38).

Cooking pots

Type 12: divergent, straight walls, flat lip and slightly widened, very marked inclination and almost parallel to the base, diameter 9-28 cm.

Type 25: vertical, slightly concave walls, rounded lip slightly slimmed in the tip, slight inclination, diameter 15-20 cm.

Type 29: divergent, concave walls, slightly flat lip, standard inclination, diameter 11-24 cm.

Type 30: divergent, straight or slightly concave walls, rounded lip with external widening, short neck, marked inclination, diameter 7-28 cm.

Type 35: divergent, straight walls, flat lip, standard inclination, diameter 26 cm.

Type 36: divergent, convex walls, rounded lip, standard inclination, diameter 14-28 cm.

Type 39: divergent, convex walls, rounded lip and slightly slimmed in the tip, medium high neck, slight inclination, diameter 8-20 cm.

Type 41: divergent, straight walls, rounded lip, very marked inclination, diameter 10-22 cm.

Type 51: divergent, straight walls, rounded lip, very short neck, very marked inclination, diameter 8-16 cm.

Type 54: divergent, convex walls, rounded lip, short neck, standard inclination, diameter 14-18 cm.

Type 59: divergent, irregular lip, irregular walls, diameter 12-16 cm.

Type 60: divergent, convex and irregular walls, standard inclination, diameter 12-16 cm.

Neckless cooking pots

Type 1: convergent, straight or slightly convex walls, rounded lip, standard inclination, diameter 8-24 cm.

Type 5: convergent, straight or slightly convex walls, flat lip, standard inclination, diameter 19-29 cm.

Type 6: convergent, straight walls, flat lip, marked inclination, thick, diameter 16-22 cm.

Type 19: convergent, straight or slightly convex walls, rounded to ogival lip, standard inclination, diameter 11-30 cm.

Type 22: convergent, concave walls, flat lip, standard inclination, diameter 20 cm.

Type 23: vertical, straight or slightly convex walls, rounded lip, slight inclination, diameter 23-30 cm.

Jars or Bottles

Type 3: vertical, concave/convex/concave walls, rounded lip and slightly slimmed in the tip, slight inclination, diameter 3-16 cm.

Type 7: convergent, straight or slightly concave walls, flat lip, standard inclination, diameter 17 cm.

Type 8: vertical, straight walls, flat lip with marked external inflexion, standard inclination, diameter 8-15 cm.

Type 21: convergent, convex or slightly straight walls, flat lip, very marked inclination, diameter 5-14 cm.

Type 34: divergent, straight wall, rounded lip, medium to tall neck, slight inclination, diameter 2-26 cm.

Type 56: divergent, concave walls, rounded to slightly flattened lip, slight inclination, diameter 5-17 cm.

Jars

Type 9: vertical, straight walls, rounded lip and slightly slimmed in the tip (internal ogival), medium tall neck, slightly inclination, diameter 9-24 cm.

Type 10: vertical, straight walls, rounded lip, medium tall neck, slight inclination, diameter 7-18 cm.

Type 15: vertical or slightly divergent, convex walls, rounded lip, tall neck, slight inclination, diameter 8-24 cm.

Type 16: vertical or slightly divergent, straight or slightly concave walls, flat lip with a slight external widening, slight inclination, diameter 14-21 cm.

Type 20: convergent, concave walls, flat lip with slight external widening, slight inclination, diameter 14-17 cm.

Type 32: divergent, concave walls, rounded lip, very marked inclination, diameter 6-22 cm (aryballos).

Type 33: divergent, concave walls, internal half ogival lip, slight inclination, diameter 11-24 cm.

Type 40: possible jars, external half ogival lip, divergent straight.

Type 58: vertical, straight or slightly divergent walls, flat lip with internal widening, slight inclination, diameter 22-26 cm.

Neckless jars

Type 4: convergent, straight or slightly concave walls, rounded lip, slight inclination, diameter 11-20 cm.

Cooking pots or jars

Type 2: convergent, convex walls, rounded lip slightly slimmed in the tip, standard inclination, diameter 8-25 cm.

Type 17: vertical, convergent walls, rounded lip slightly slimmed in the tip, slight inclination, diameter 8-20 cm.

Type 18: divergent, slightly convex walls, half internal ogival lip, slight inclination, medium to tall neck, diameter 8-24 cm.

Type 28: divergent, straight or slightly convex walls, flat lip, limited inclination, tall neck, diameter 16-18 cm.

Type 31: divergent, concave walls, rounded lip, standard inclination, diameter 16-28 cm.

Type 43: divergent, convex walls, straight flat lip, standard inclination, diameter 12-38 cm (the majority are cooking pots, one may be a jar).

Type 44: divergent, convex walls, rounded lip with external inflection, slight inclination, medium tall neck, diameter 9-24 cm.

Bowls

Type 13: vertical, convex walls, flat lip with marked external inflection, sometimes beveled, slight inclination, diameter 11-24 cm.

Type 14: vertical or convergent, convex walls, rounded lip with internal and external widening, slight inclination, diameter 10-18 cm.

Type 50: divergent, convex walls, arrow-shaped lip, standard inclination, diameter 18-30 cm.

Type 55: vertical, straight walls, rounded extended lip, very marked inclination, almost parallel to the base, diameter 26-35 cm.

Dishes

Type 27: divergent, straight walls, rounded lip, very marked inclination, diameter 16-23 cm.

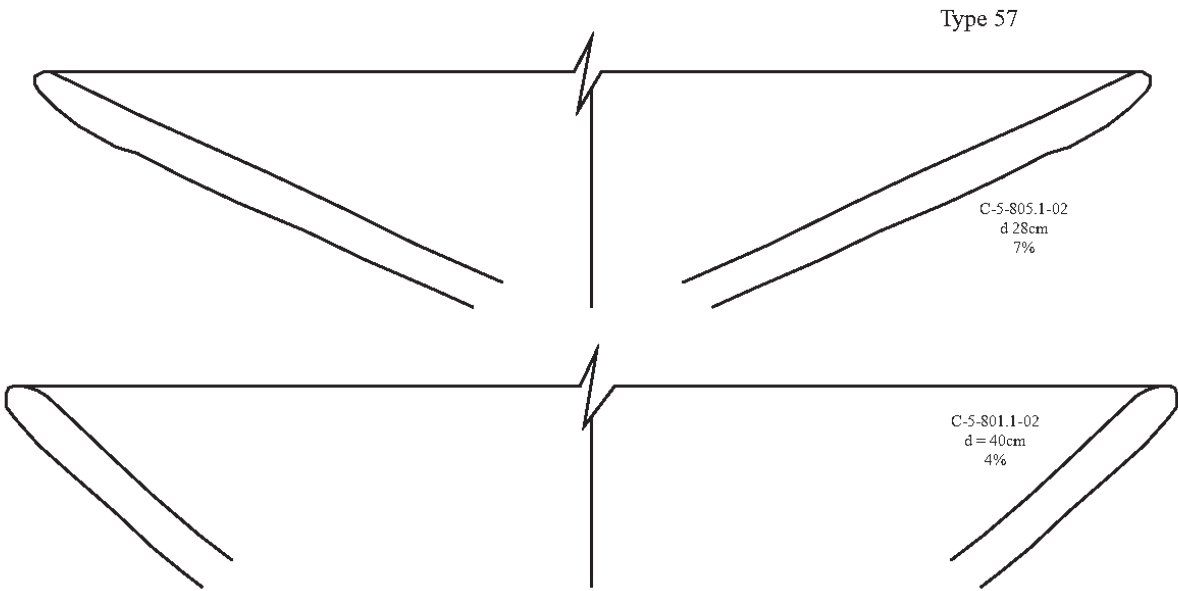
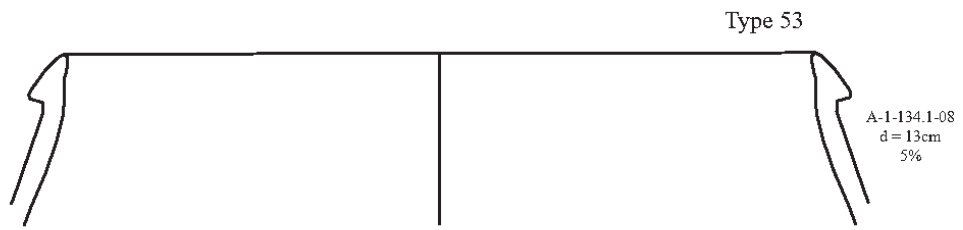
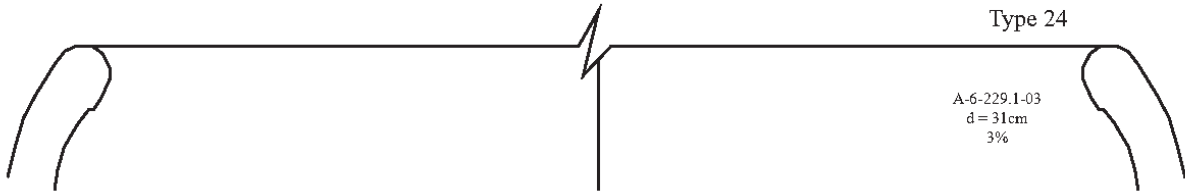
Type 42: divergent, slightly convex walls, rounded lip, very marked inclination, diameter 24-32 cm.

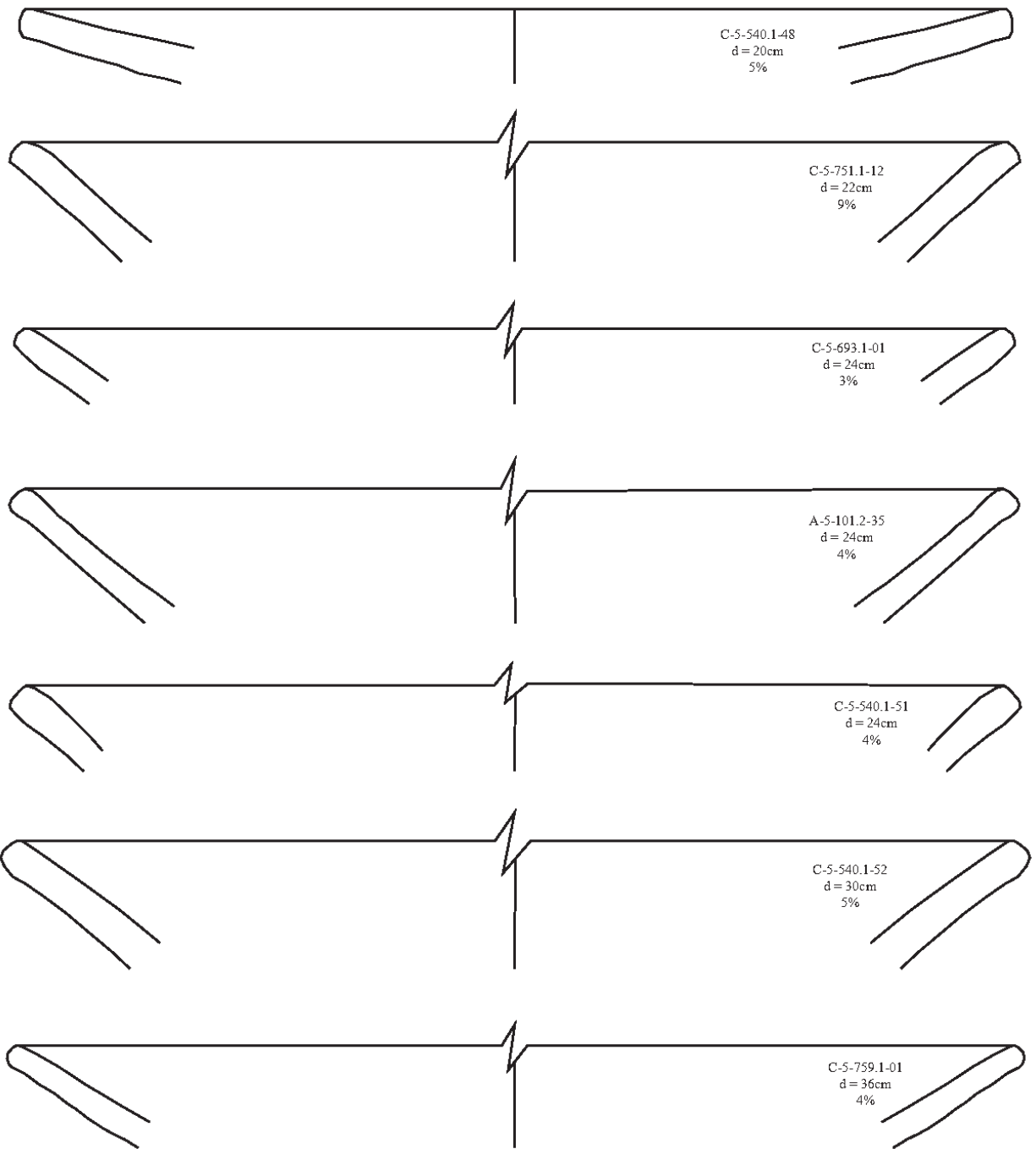
Type 48: divergent, convex walls, rounded to ogival or slightly flattened lip, very marked inclination, diameter 12-29 cm.

Type 47: divergent, convex walls, flat lip, very thick, very marked inclination, diameter 18-24 cm.

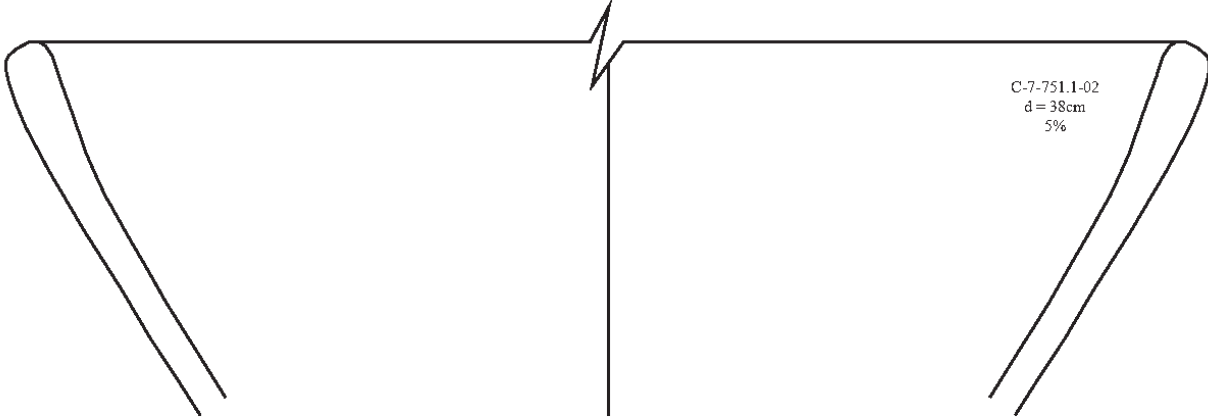
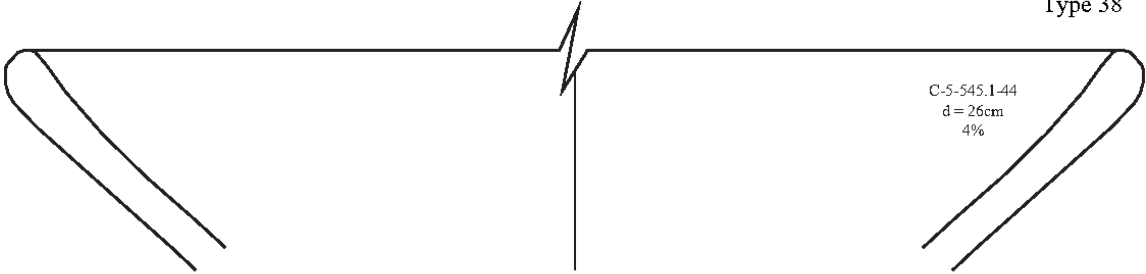
Type 11: divergent, straight or slightly convex walls, flat lip, very marked inclination, diameter 25-32 cm.

Large Cooking Pots

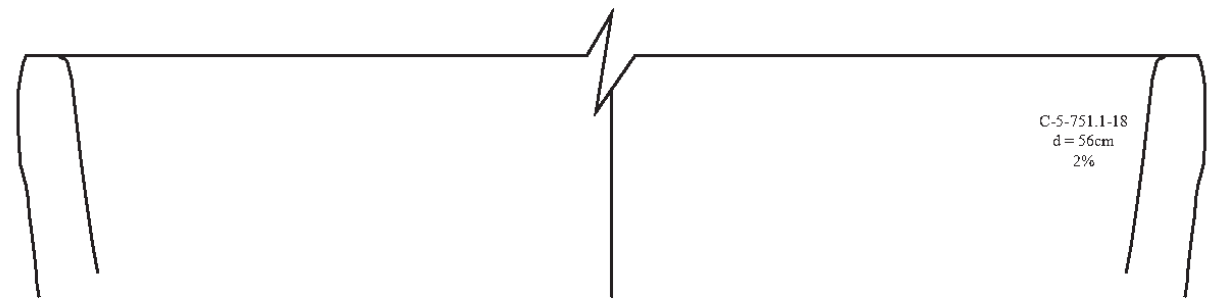
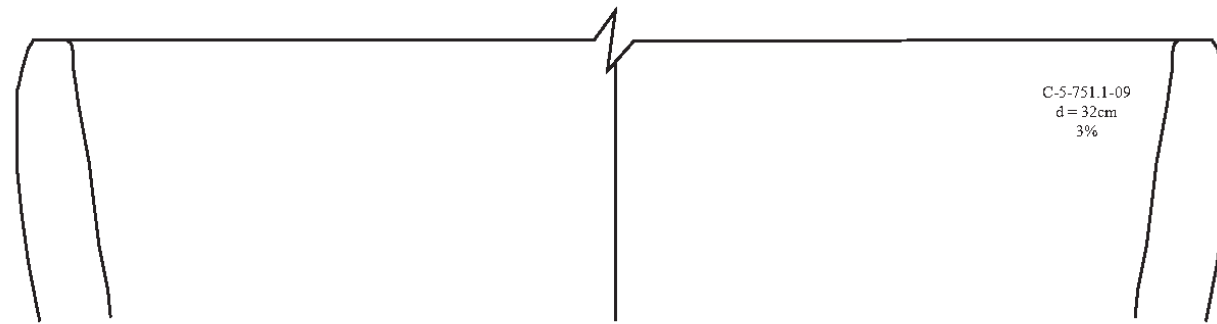




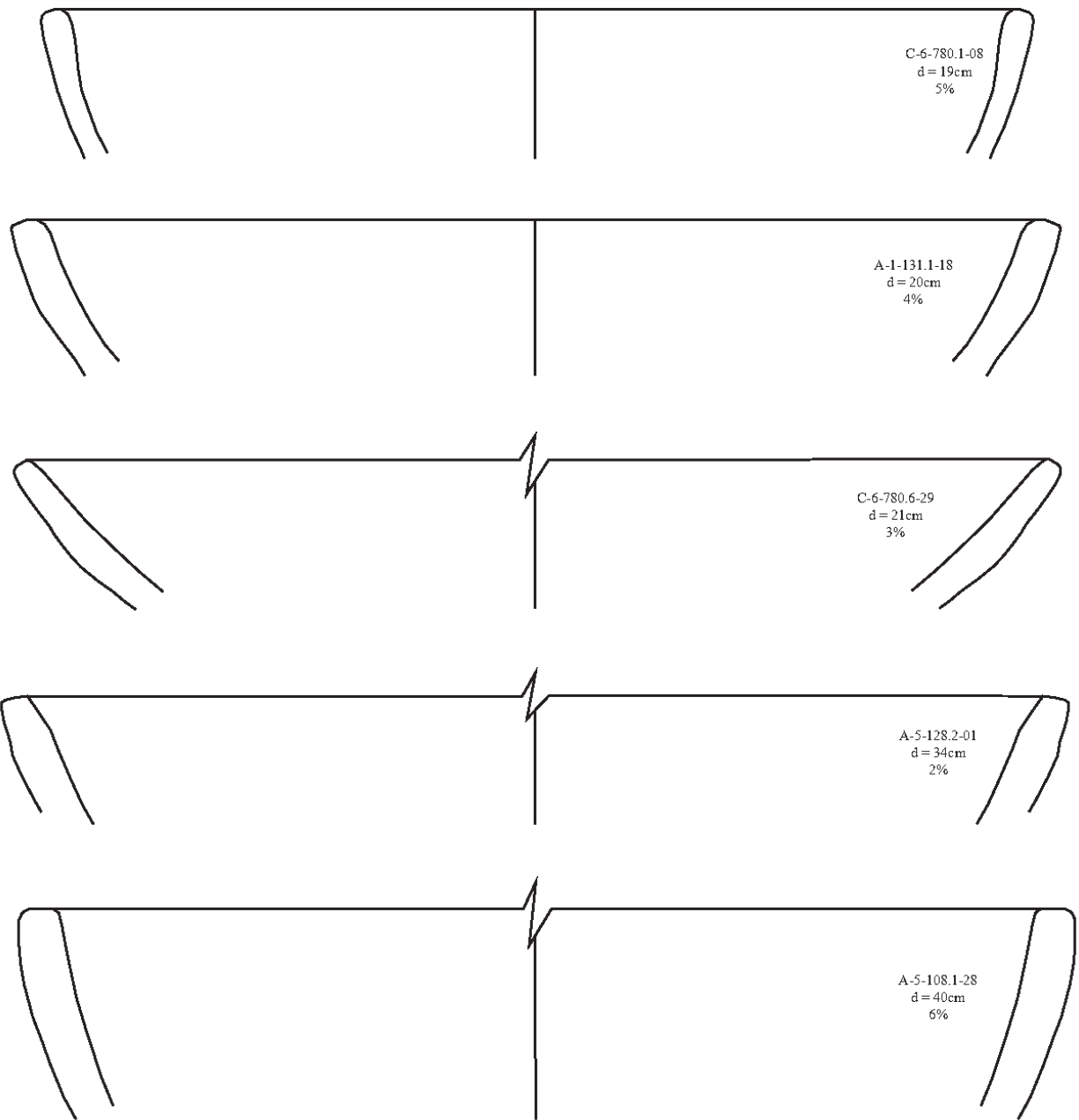
Type 38



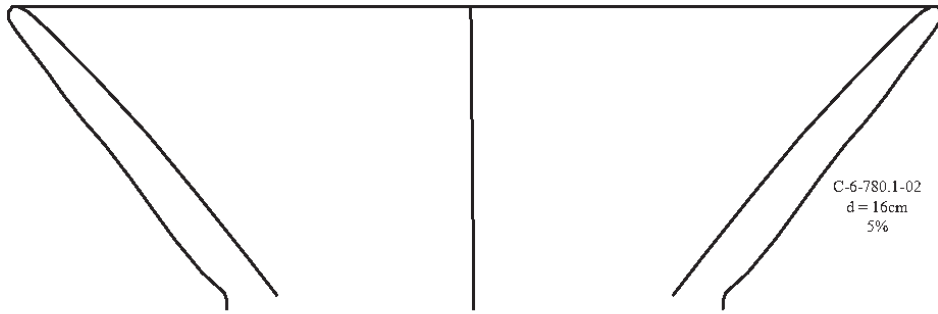
Type 45



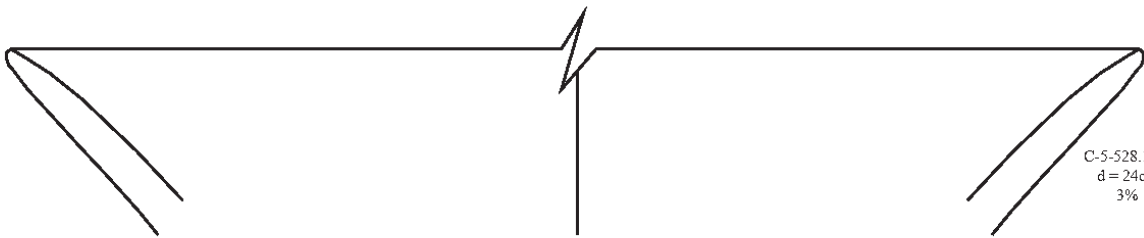
Type 46



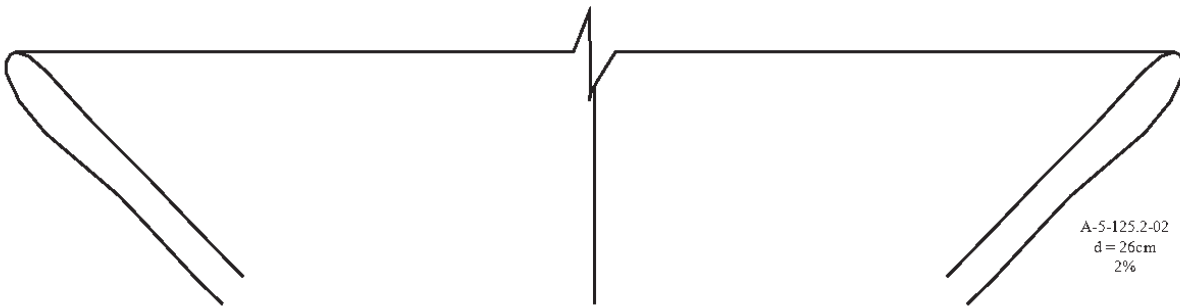
Type 49



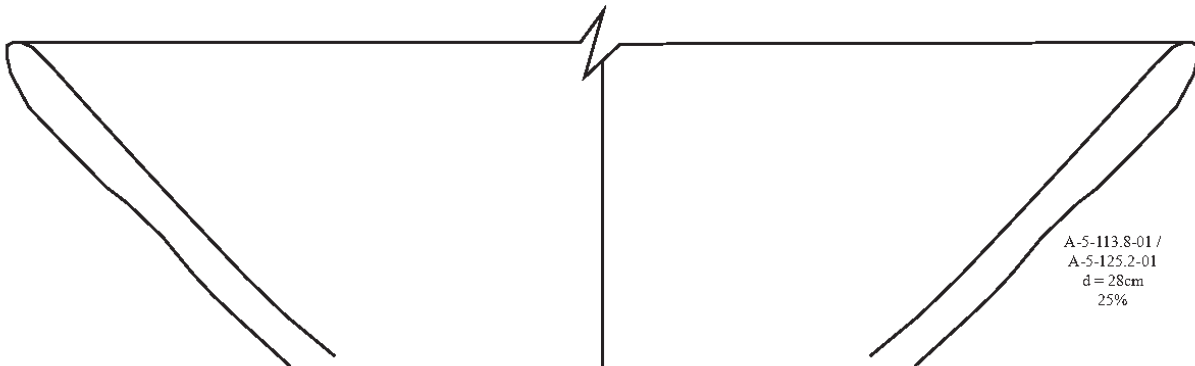
C-6-780.1-02
d = 16cm
5%



C-5-528.1-05
d = 24cm
3%

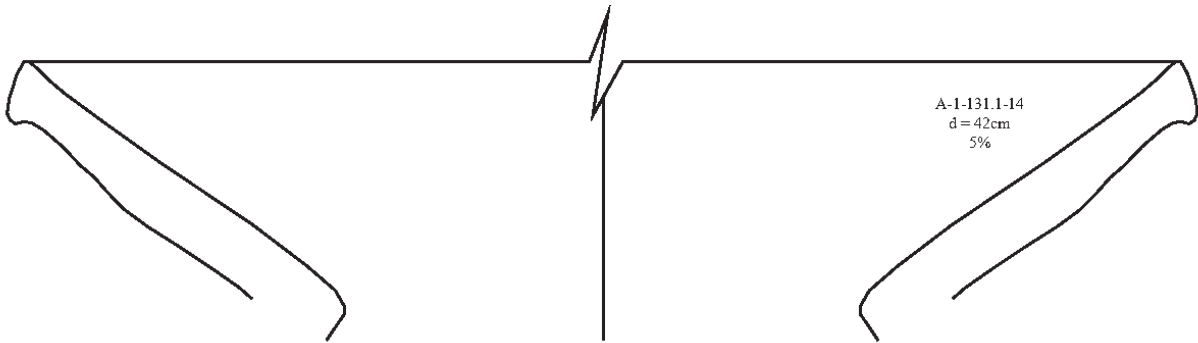
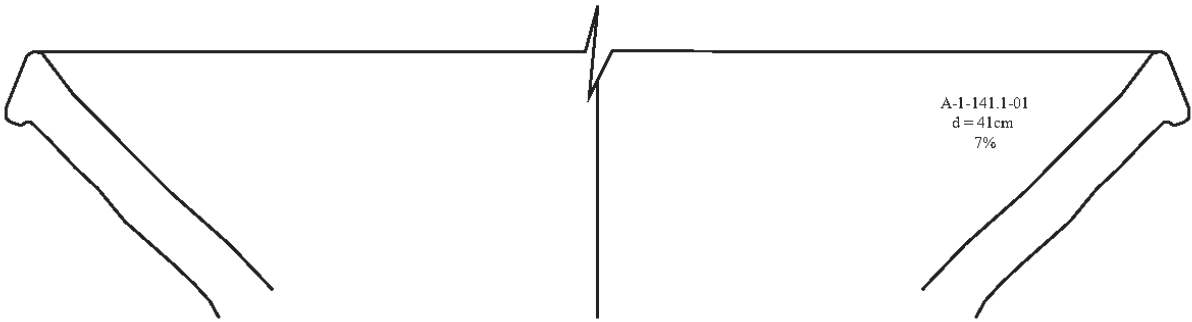
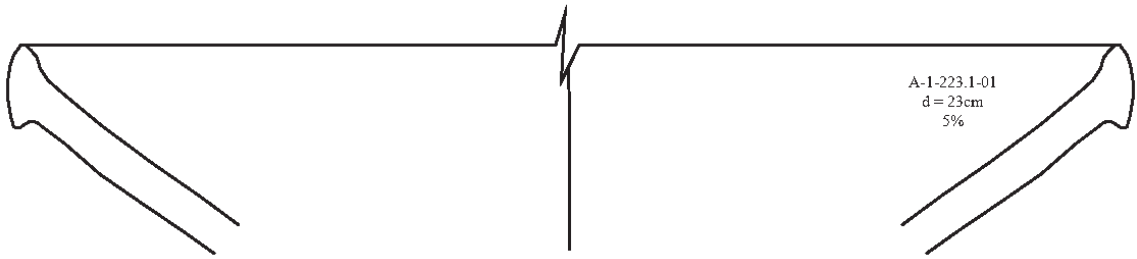
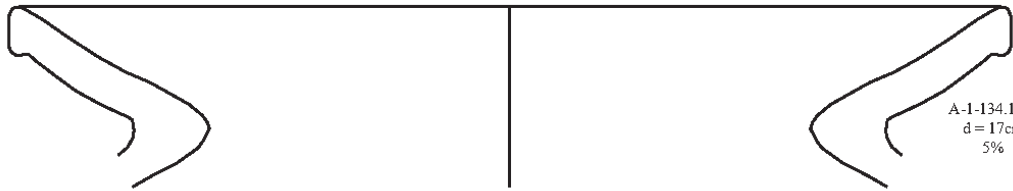


A-5-125.2-02
d = 26cm
2%



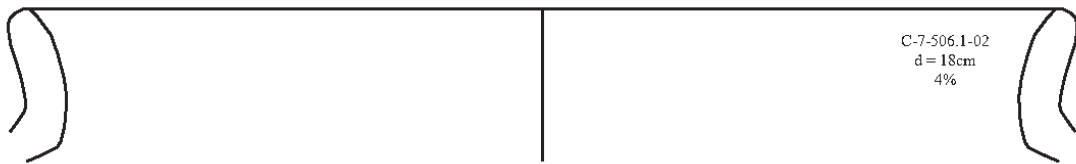
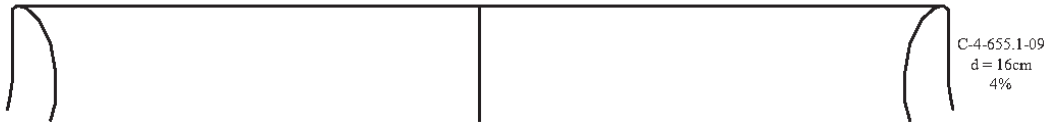
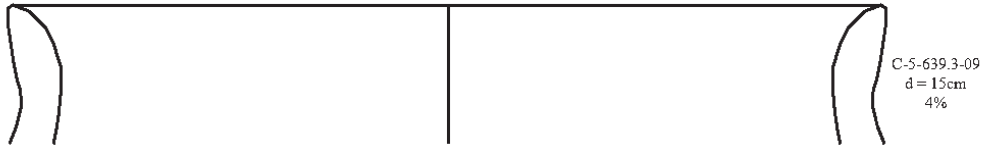
A-5-113.8-01 /
A-5-125.2-01
d = 28cm
25%

Type 52

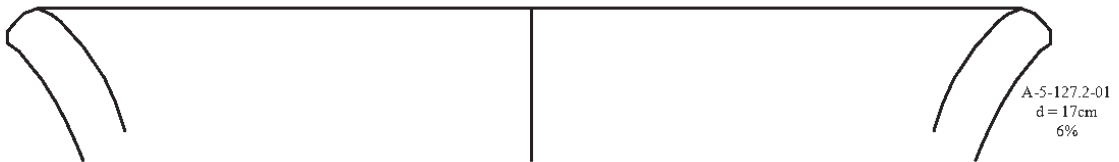
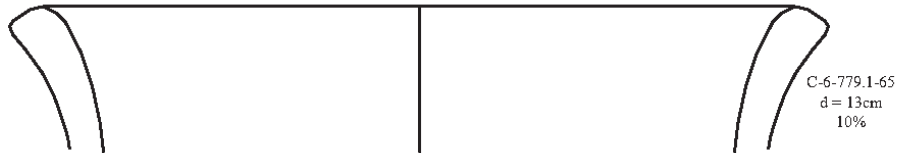


Cooking Pots

Type 25



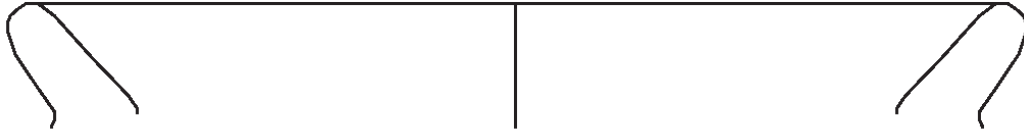
Type 29



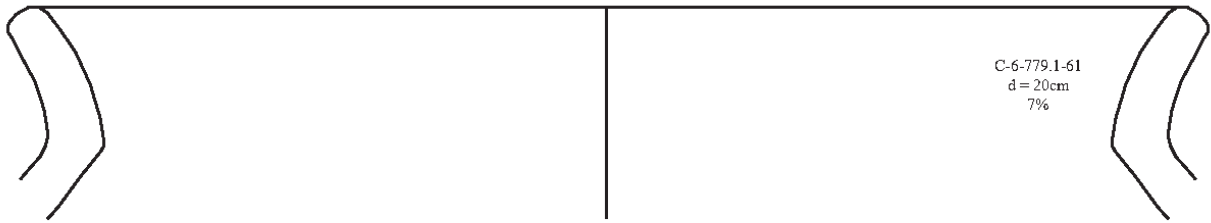
Type 35



A-1-134.1-16
d = 11cm
6%



A-5-113.1-30
d = 17cm
8%

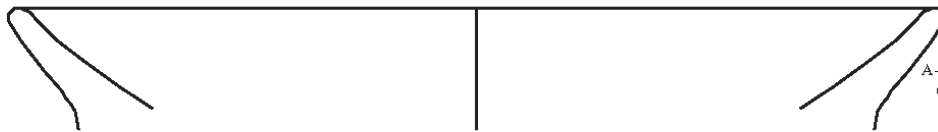


C-6-779.1-61
d = 20cm
7%

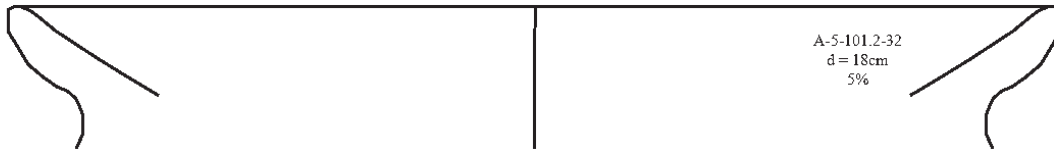
Type 54



A-5-48.2-01
d = 14cm
10%

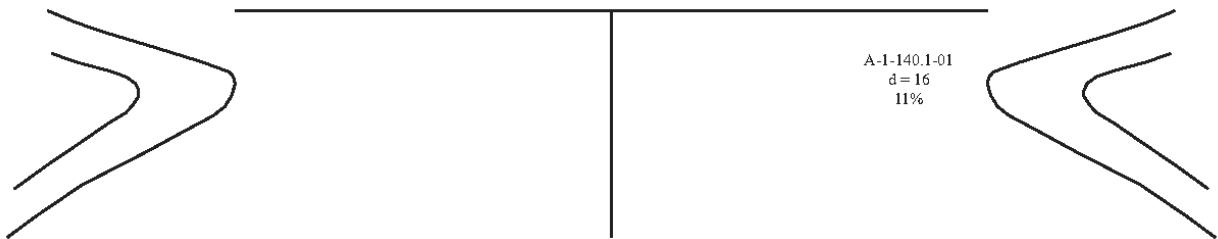
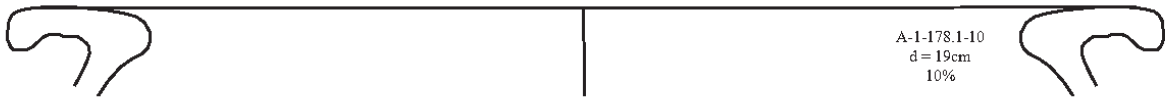
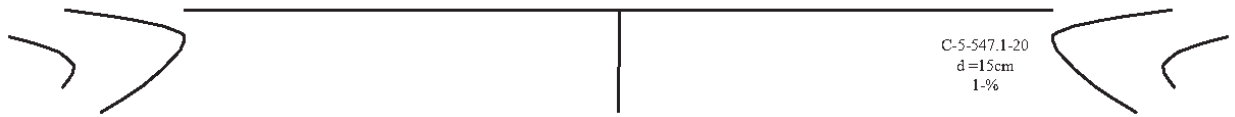
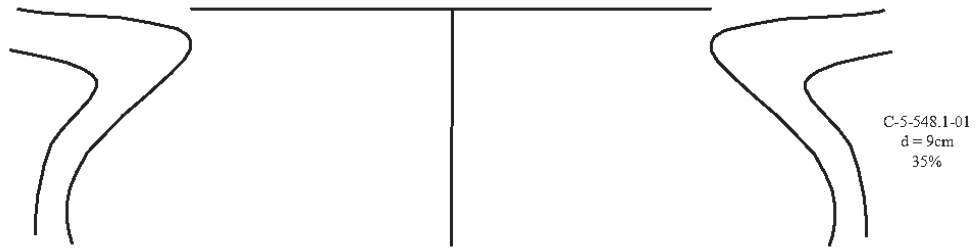


A-5-160.1-07
d = 16cm
2%

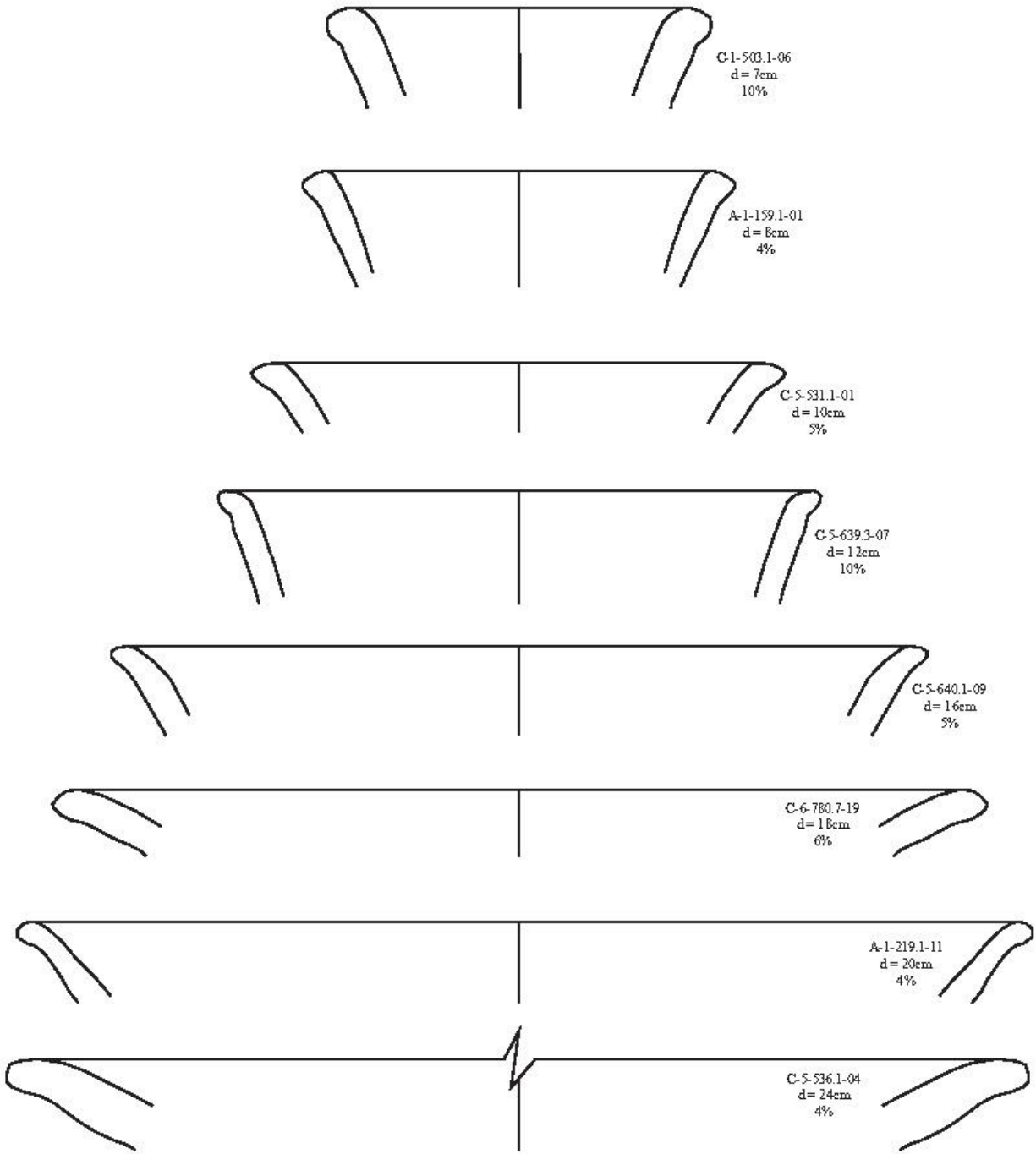


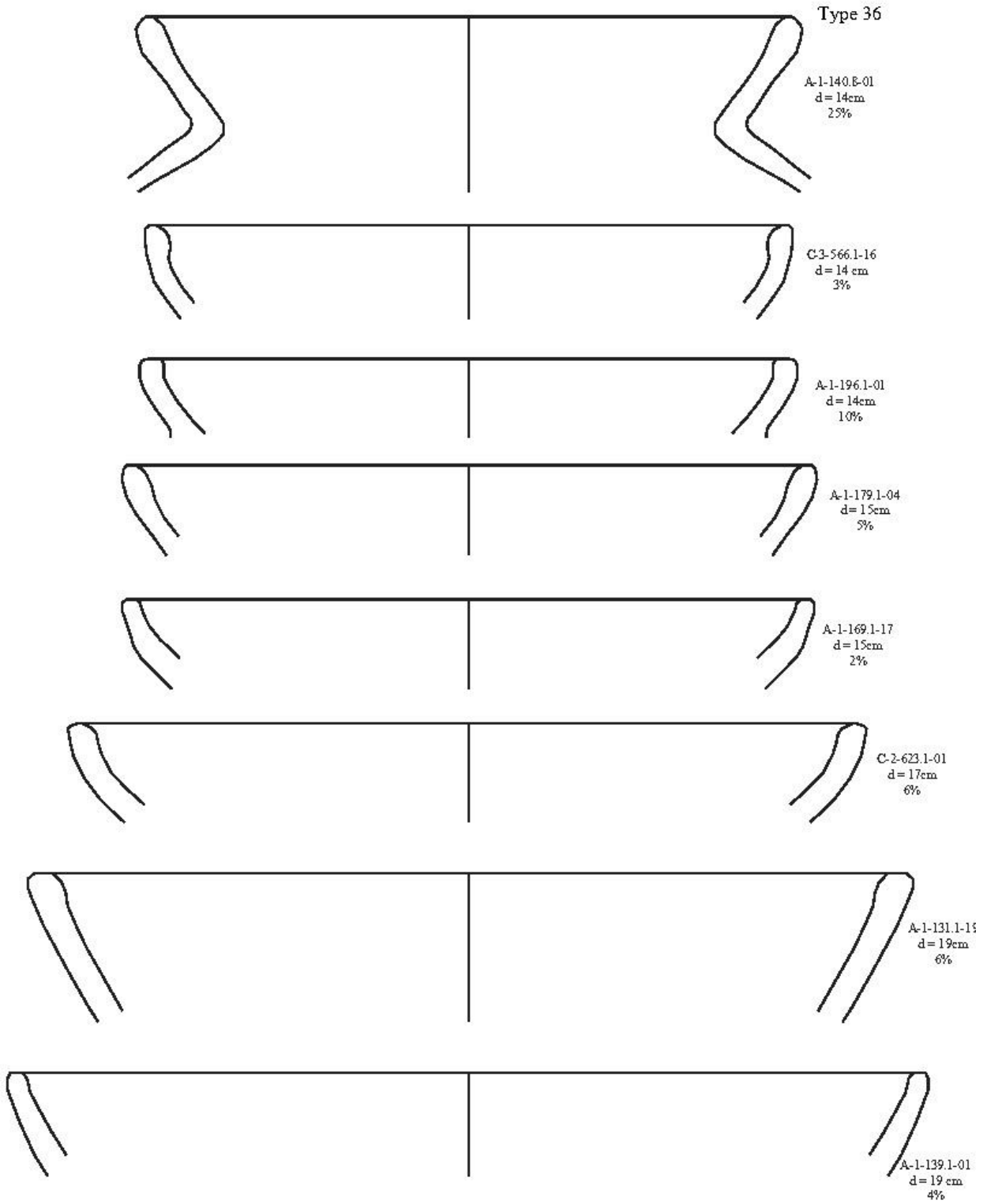
A-5-101.2-32
d = 18cm
5%

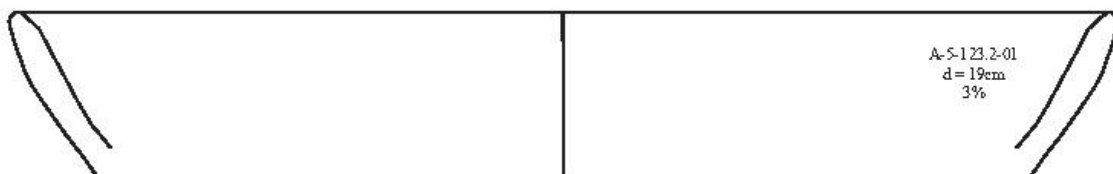
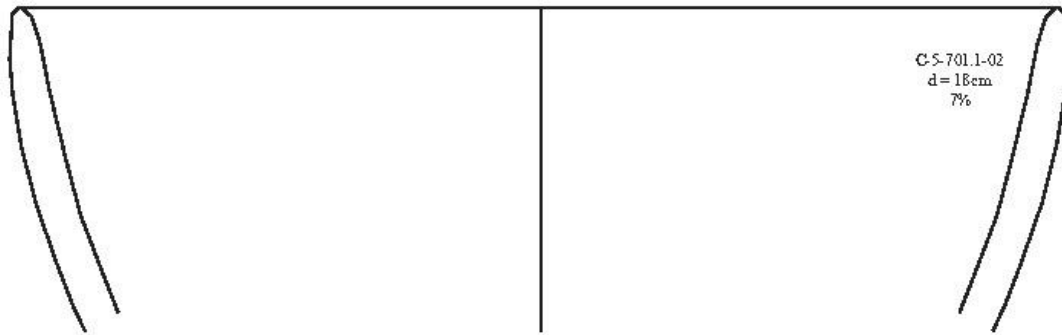
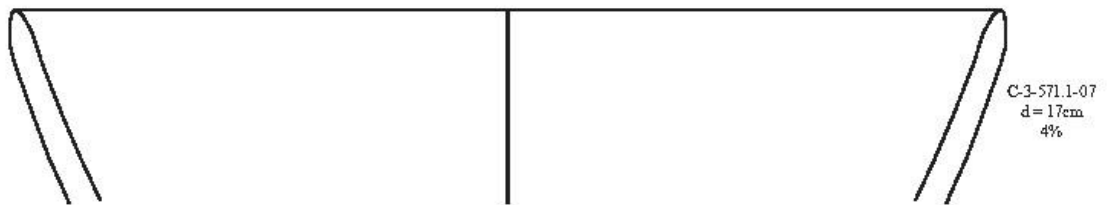
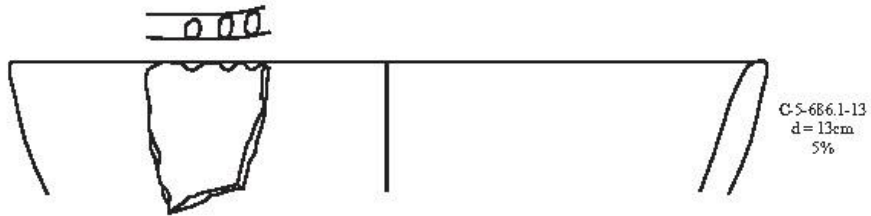
Type 12



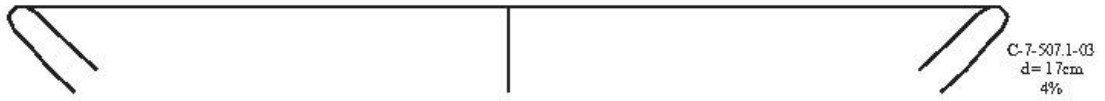
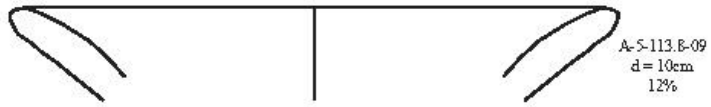
Type 30







Type 41



Type 51



C-3-571.1-20
d = 8cm
4%



C-6-779.1-62
d = 8cm
10%



A-1-178.1-20
d = 8cm
10%



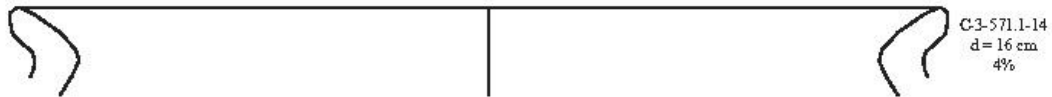
A-1-192.1-09
d = 9cm
11%



A-1-131.1-29
d = 10cm
10%

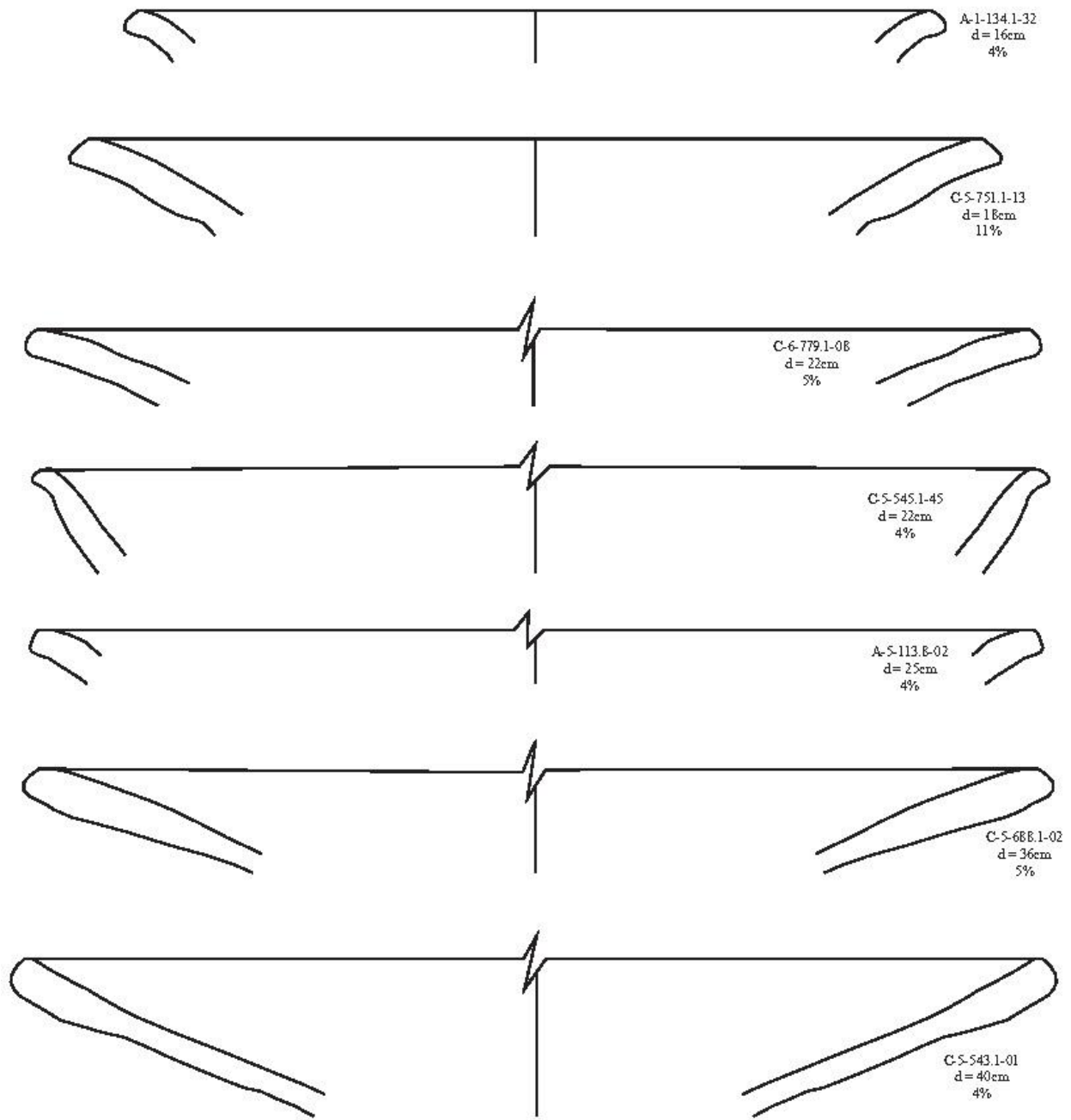


C-1-502.1-02
d = 11cm
7%

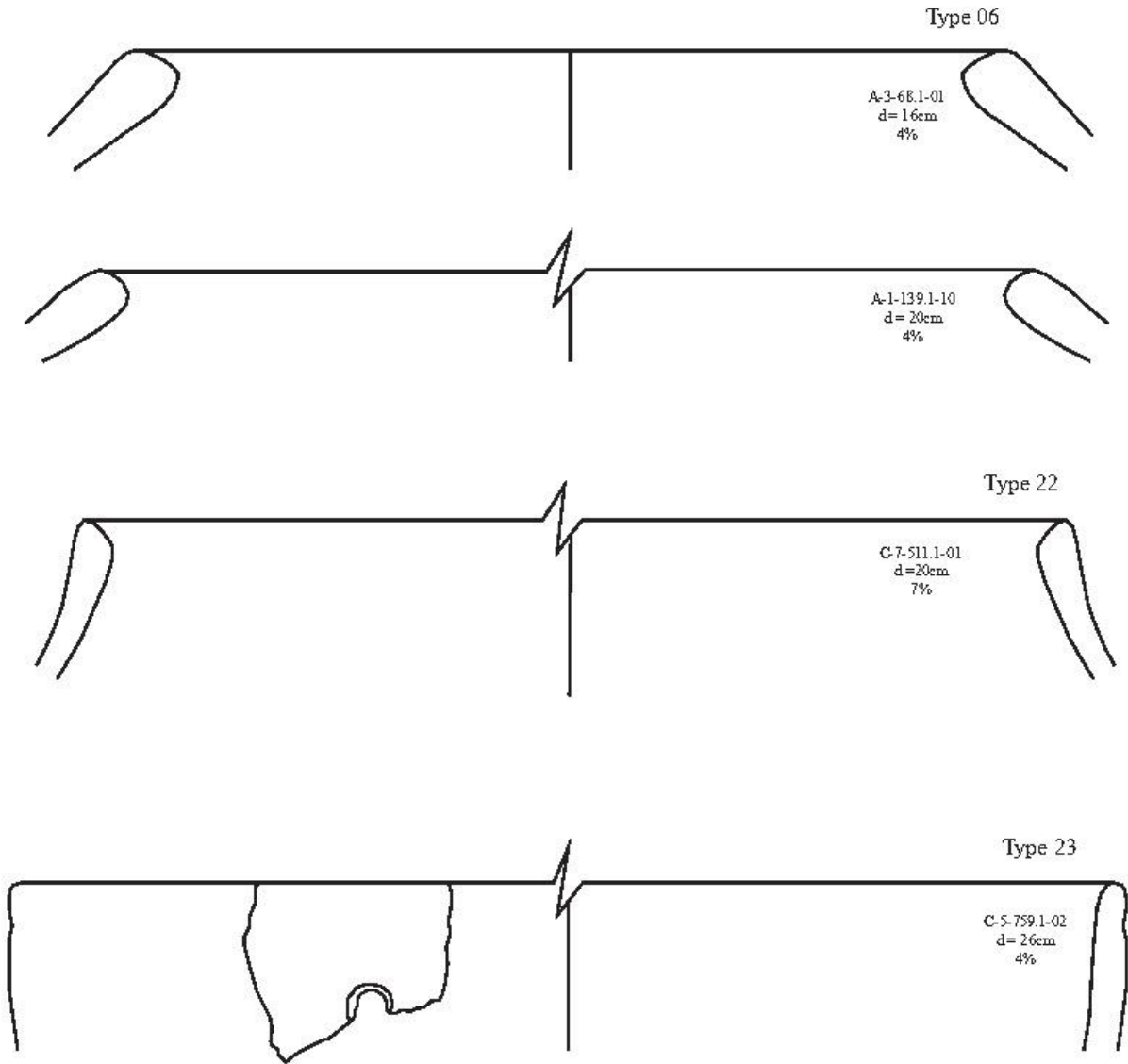


C-3-571.1-14
d = 16 cm
4%

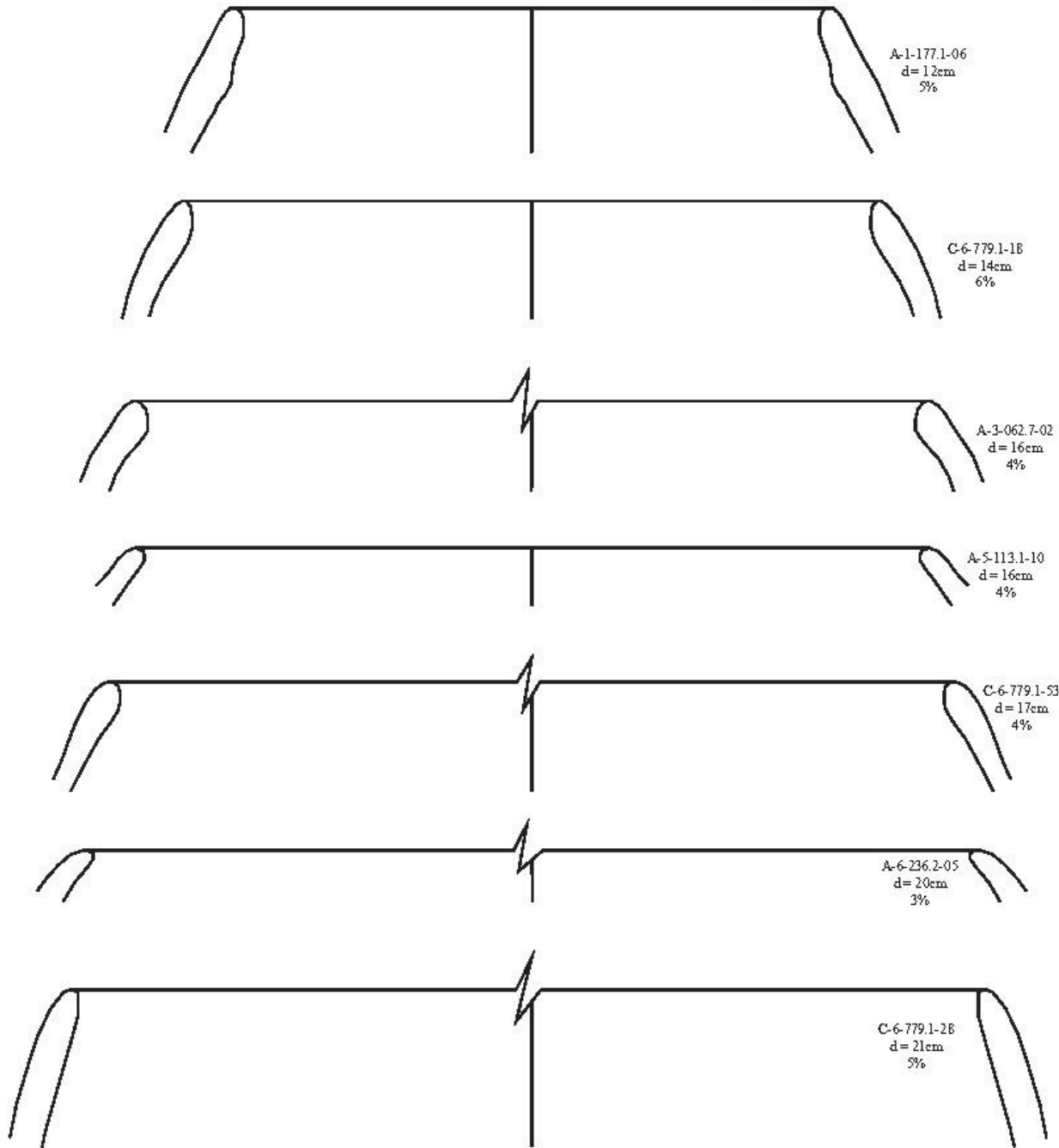




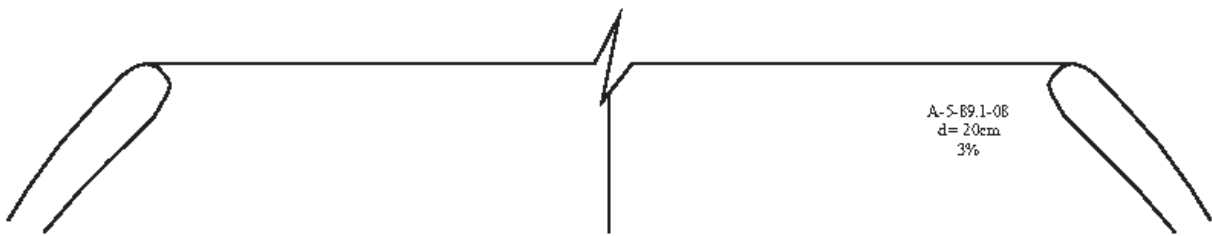
Neckless Cooking Pots



Type 01

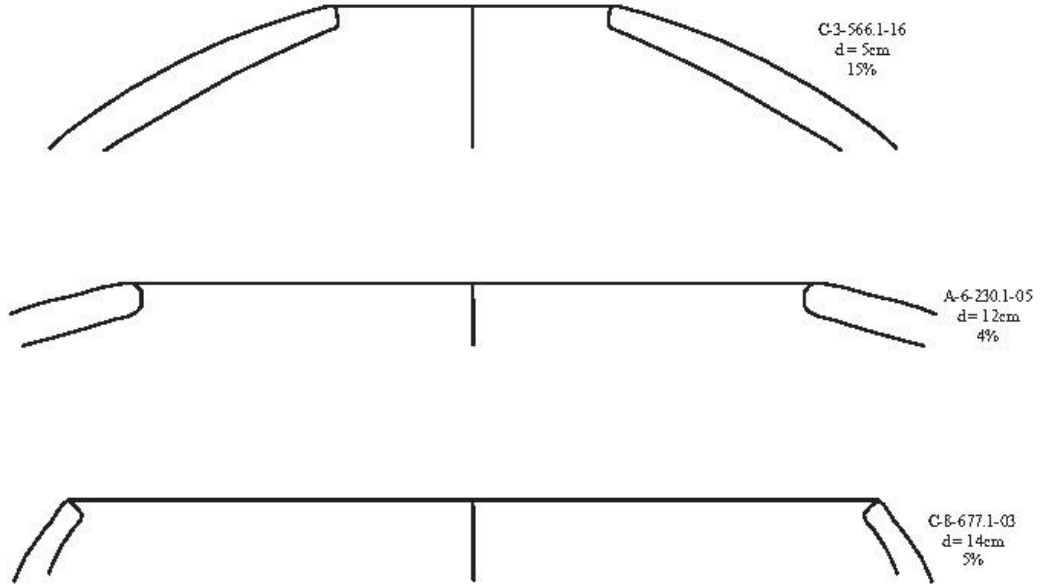


Type 05

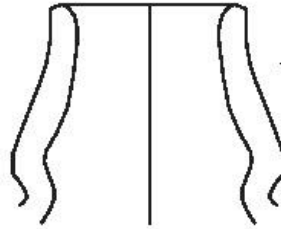


Jars and Bottles

Type 21



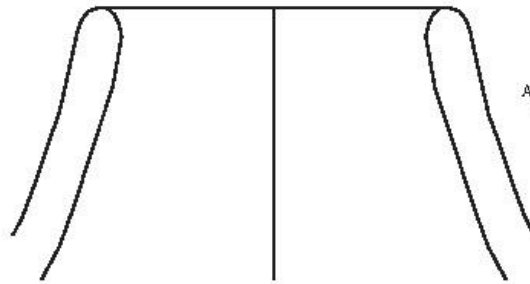
Type 03



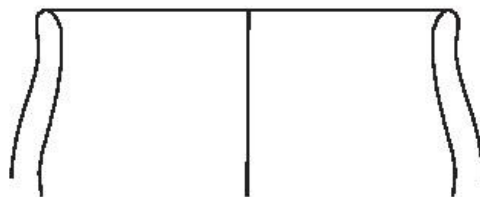
A-5-160.1-02
d=3cm
70%



C-3-566.1-12
d=5cm
7%



A-5-89.1-10
d=6cm
15%

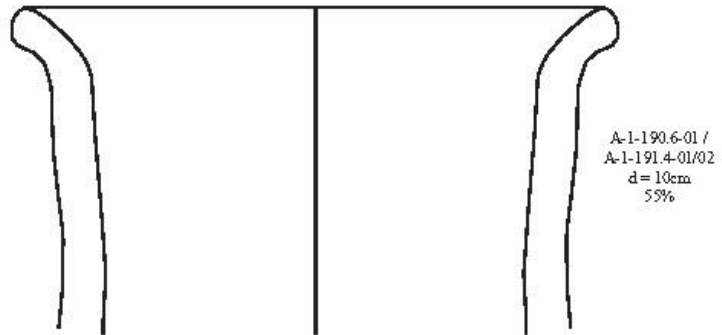
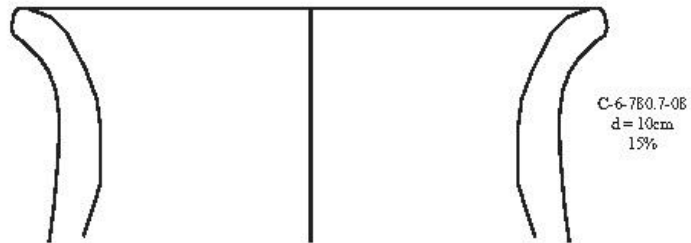


C-5-547.1-10
d=7cm
5%



C-5-686.1-15
d=8cm
8%

Type 08



Type 34



A-1-165.1-12
d = 2cm
20%



C-5-547.1-12
d = 6cm
4%



A-1-192.1-66
d = 9cm
6%



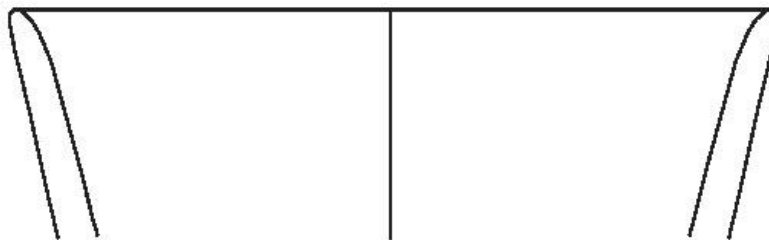
C-4-651.1-02
d = 9cm
5%



A-3-69.1-01
d = 11cm
6%

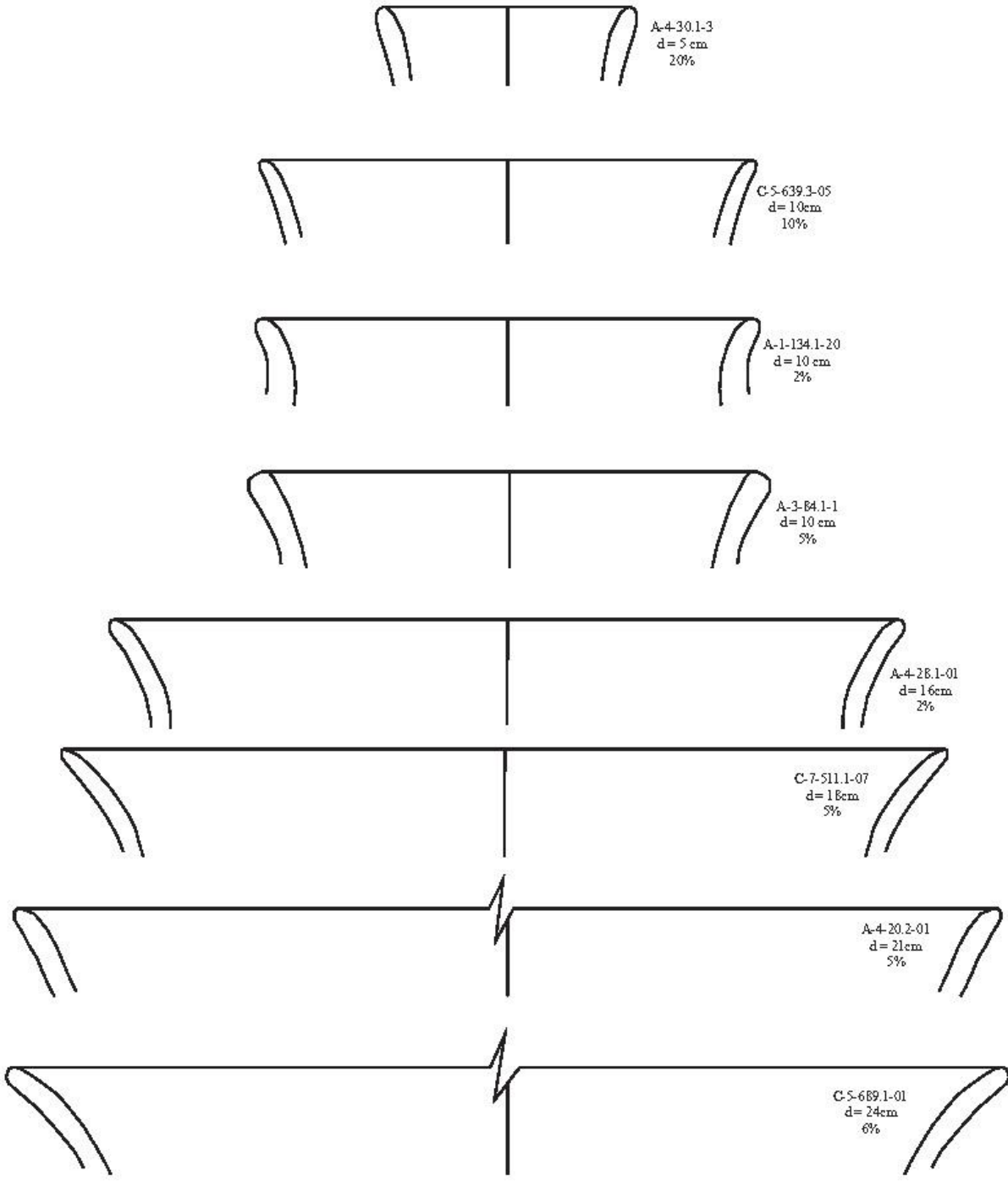


C-5-753.1-02
d = 13cm
5%



A-5-113.1-19
d = 13cm
5%

Type 56

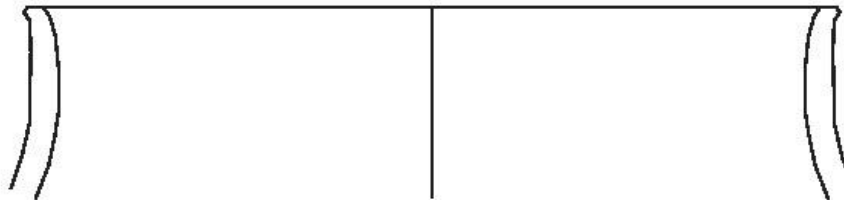


Jars

Type 20



C-6-780.7-03
d = 14 cm
5%

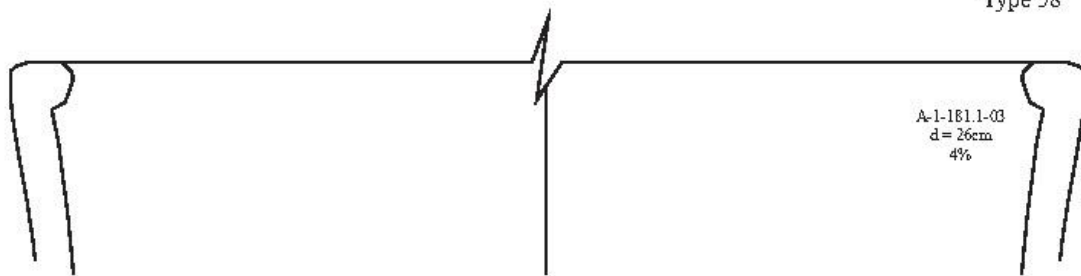


C-5-765.1-01
d = 14 cm
5%



C-6-780.1-21
d = 17 cm
3%

Type 58



A-1-181.1-03
d = 26cm
4%

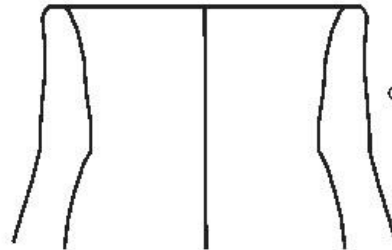
Type 09



C-5-689.1-5
d = 5 cm
15%



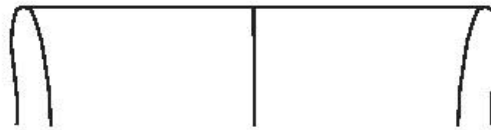
C-3-571.1-17
d = 5 cm
10%



C-5-528.1-15
d = 5 cm
1%



C-6-780.7-7
d = 8 cm
6%



C-6-784.1-3
d = 8 cm
10%



C-5-689.1-5
d = 8 cm
6%



C-6-780.1-6
d = 8 cm
10%



C-3-566.1-11
d = 8 cm
9%

Type 10



C-3-571.1-25
d = 7 cm
11%



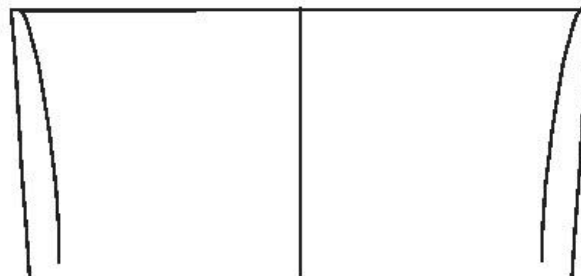
C-6-780.1-34
d = 8 cm
6%



C-5-547.1-14
d = 8 cm
5%

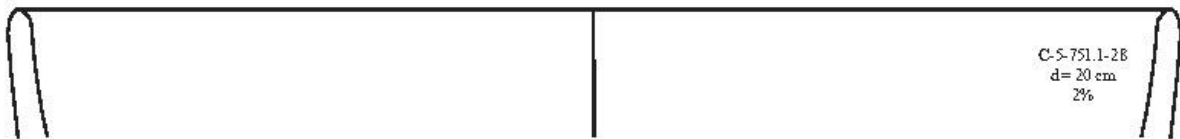
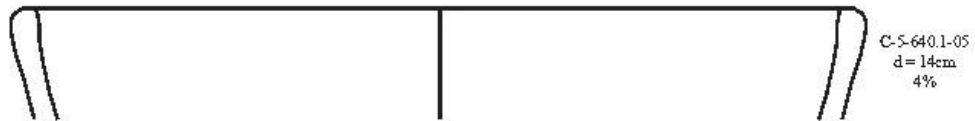
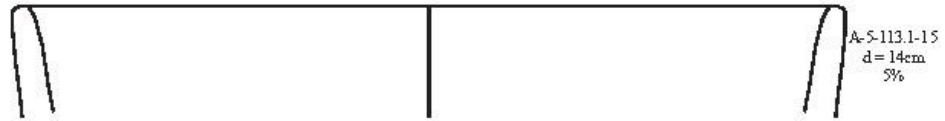


C-5-751.1-8
d = 9 cm
20%

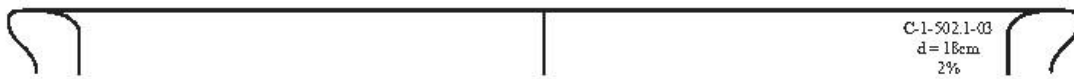


C-5-686.1-1
d = 10 cm
15%

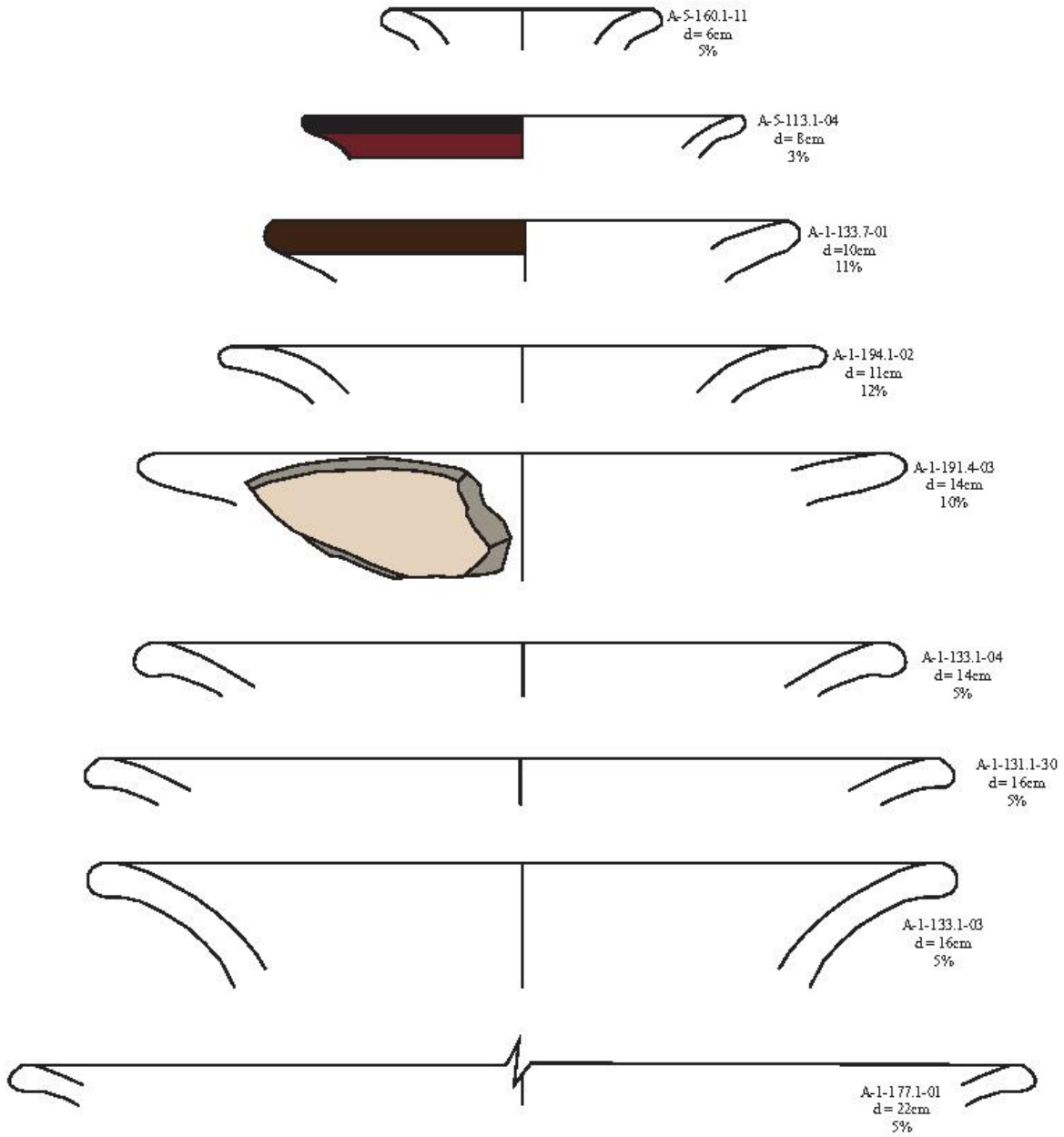
Type 15



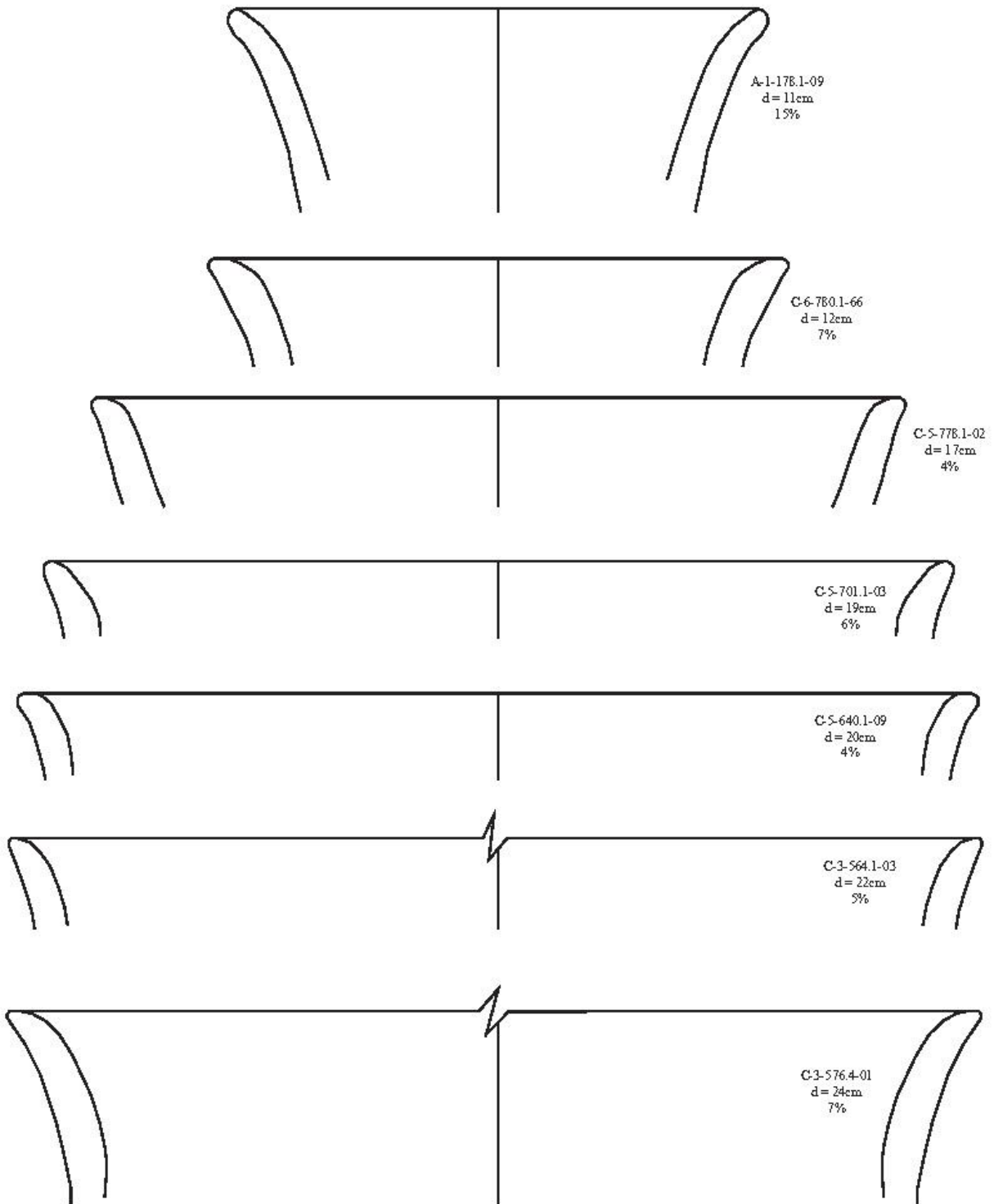
Type 16



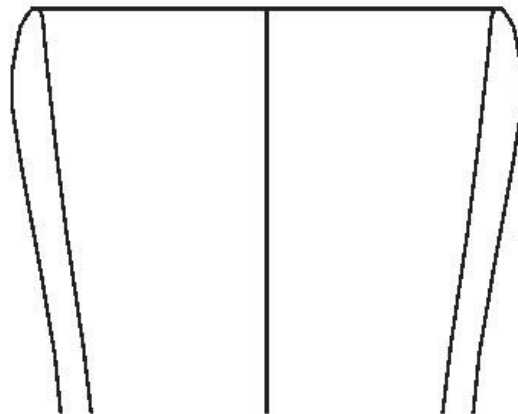
Type 32



Type 33



Type 40



A-5-113.8-05
d = 8cm
10%



A-5-162.4-01
d = 11cm
5%



C-7-512.1-02
d = 11cm
5%



C-5-638.3-04
d = 14cm
5%



A-5-102.6-02
d = 14 cm
5%



A-5-113.1-14
d = 18cm
4%

Neckless Jar

Type 04

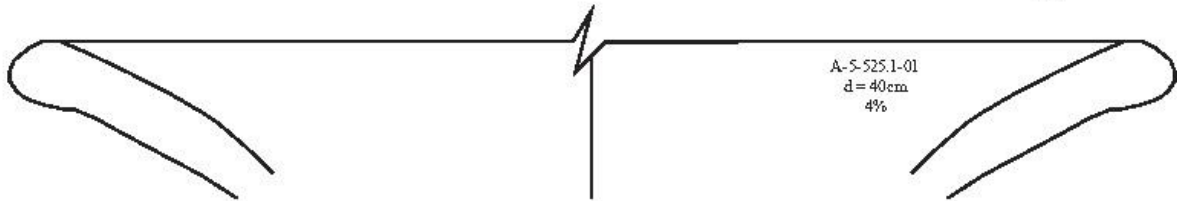


Cooking Pots or Jars

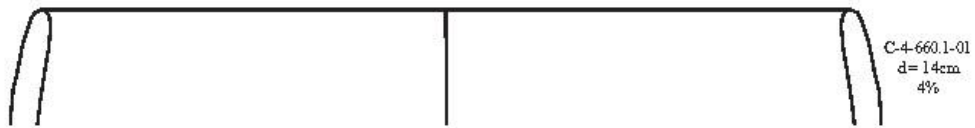
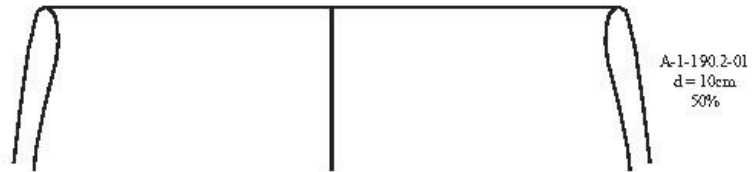
Type 18



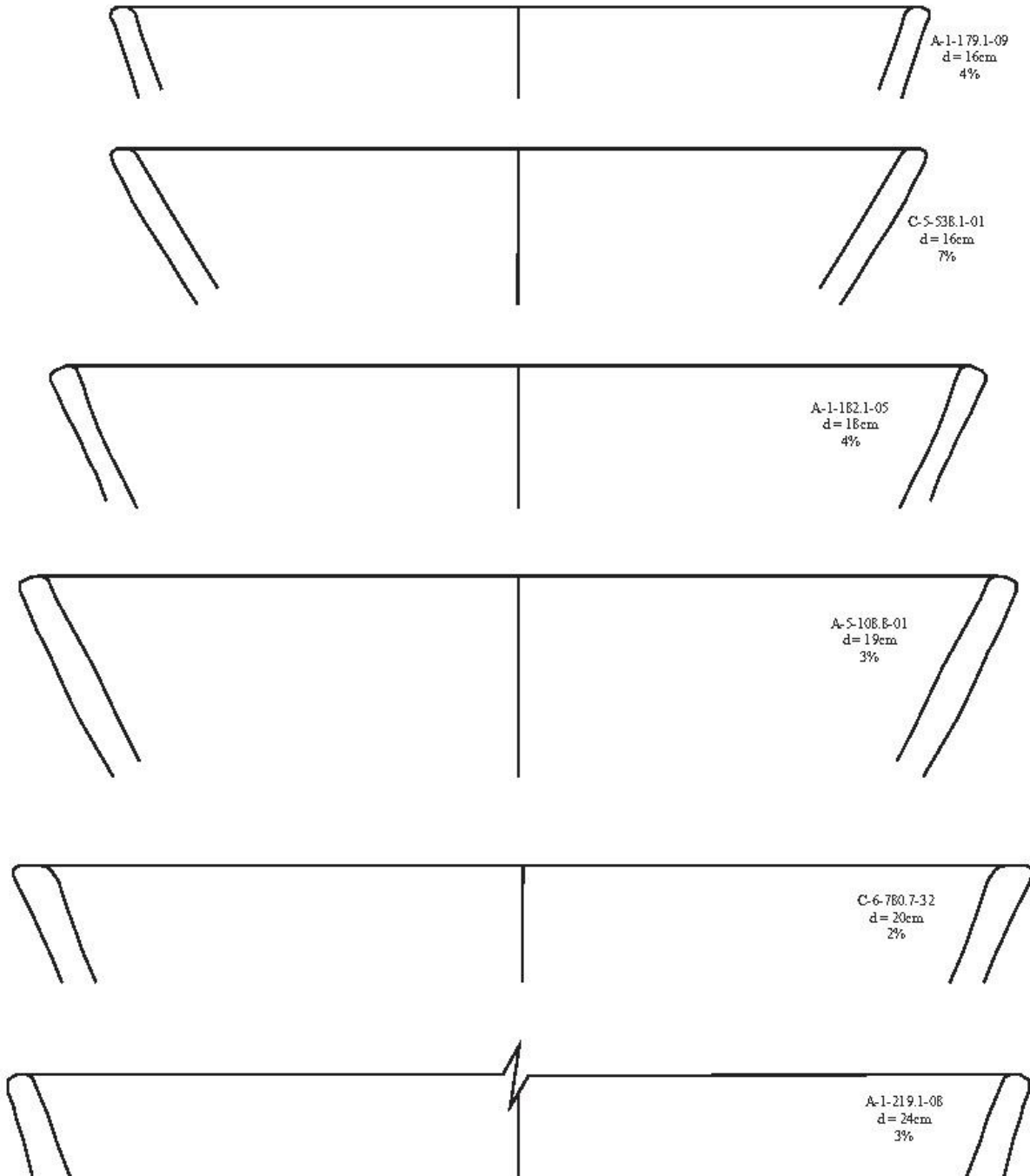
Type 31

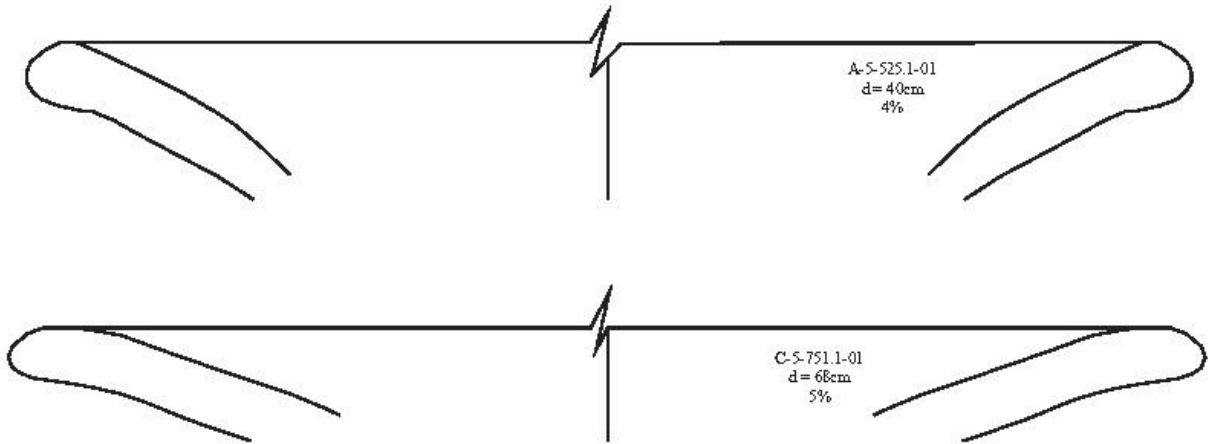


Type 02

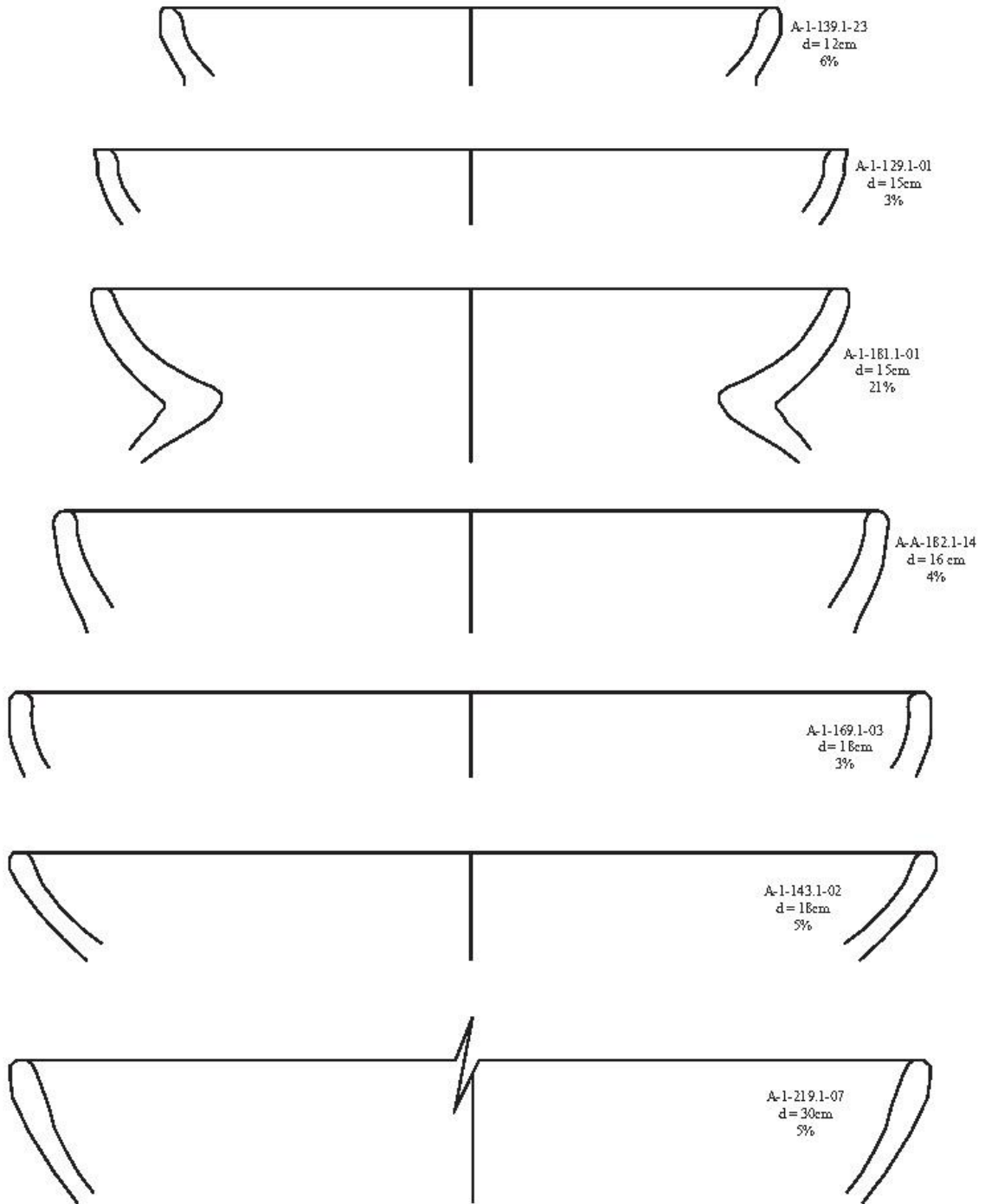


Type 28

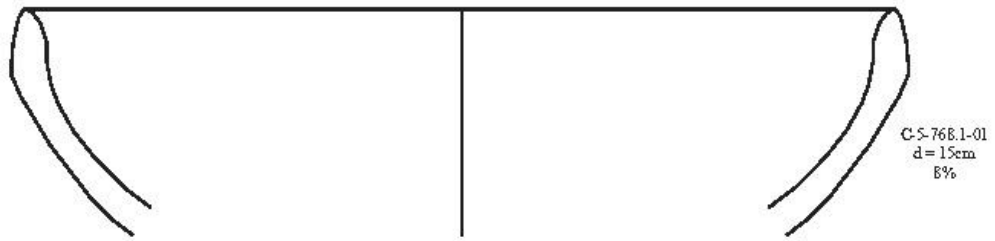




Type 43

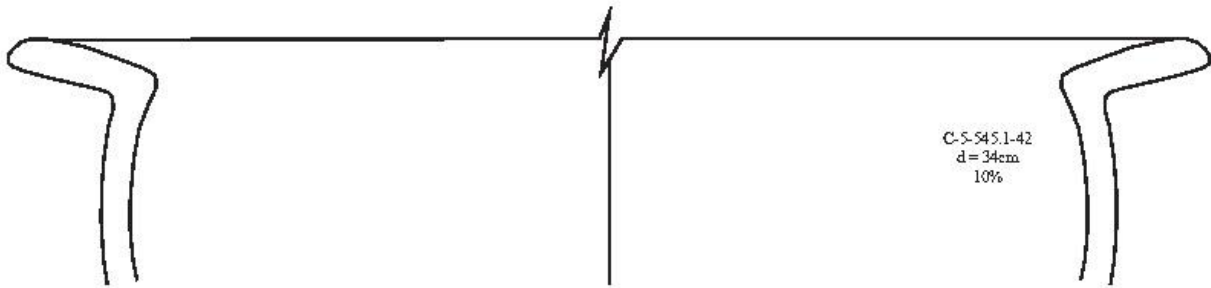
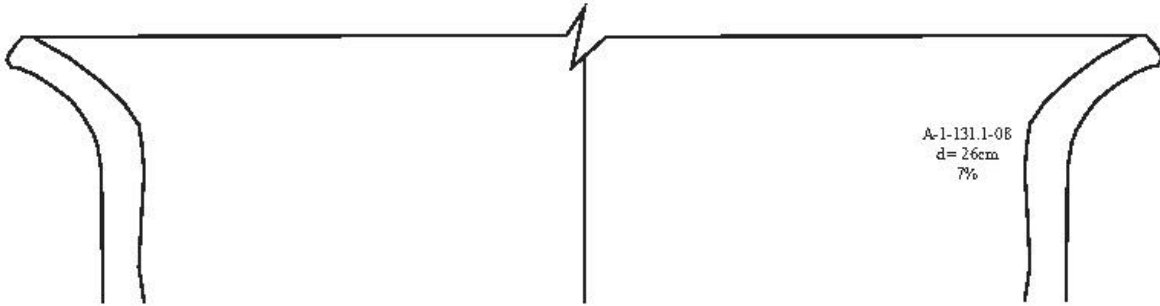


Type 44

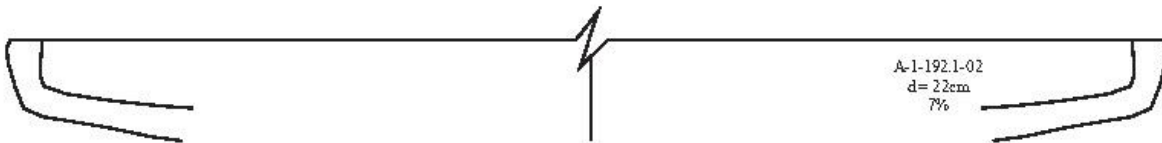
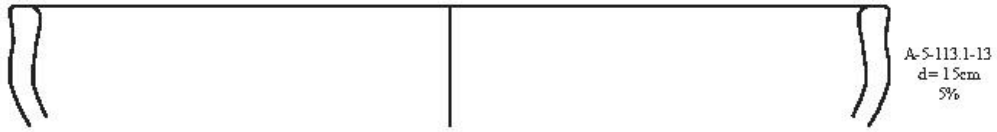


Bowls

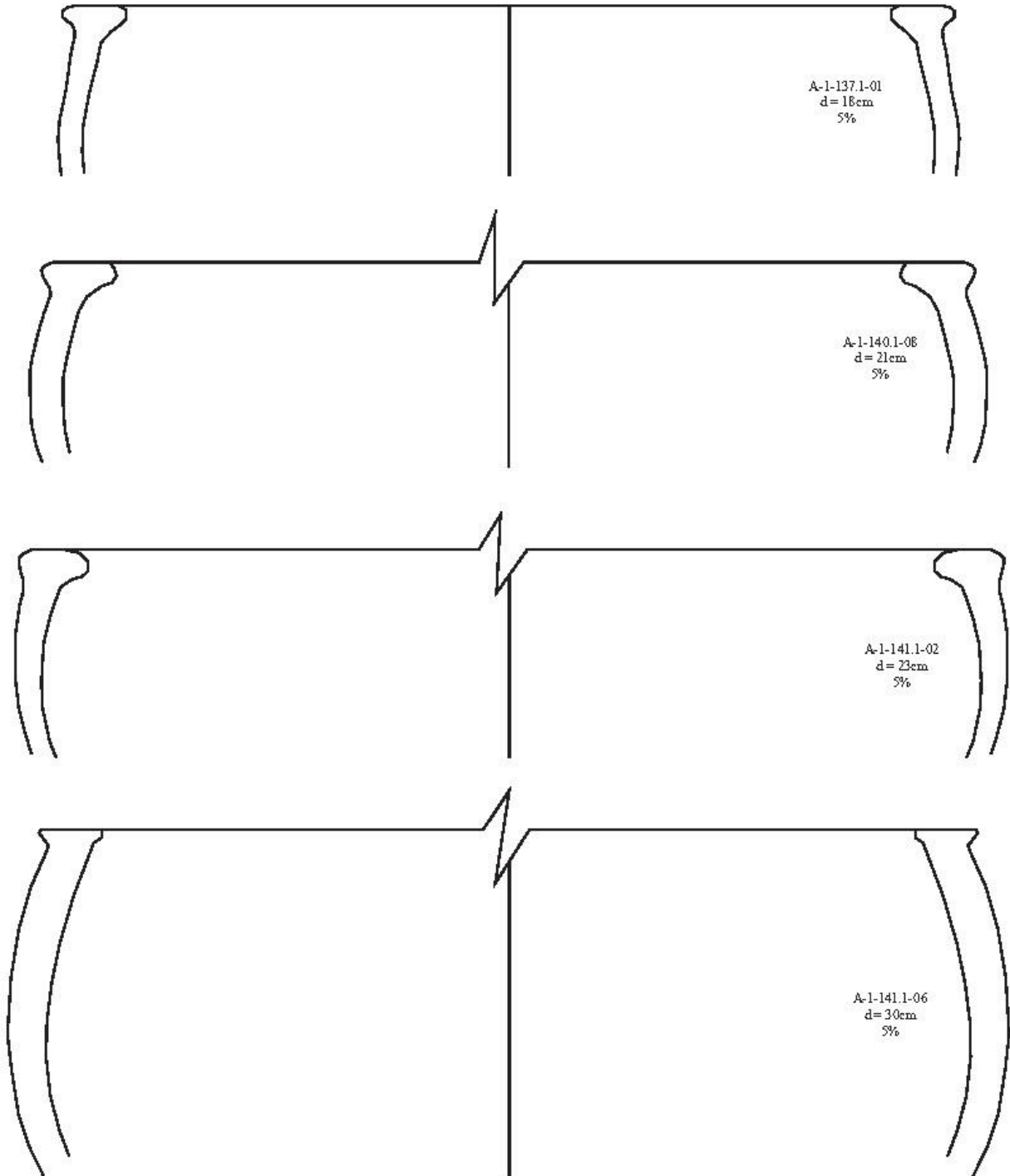
Type 55



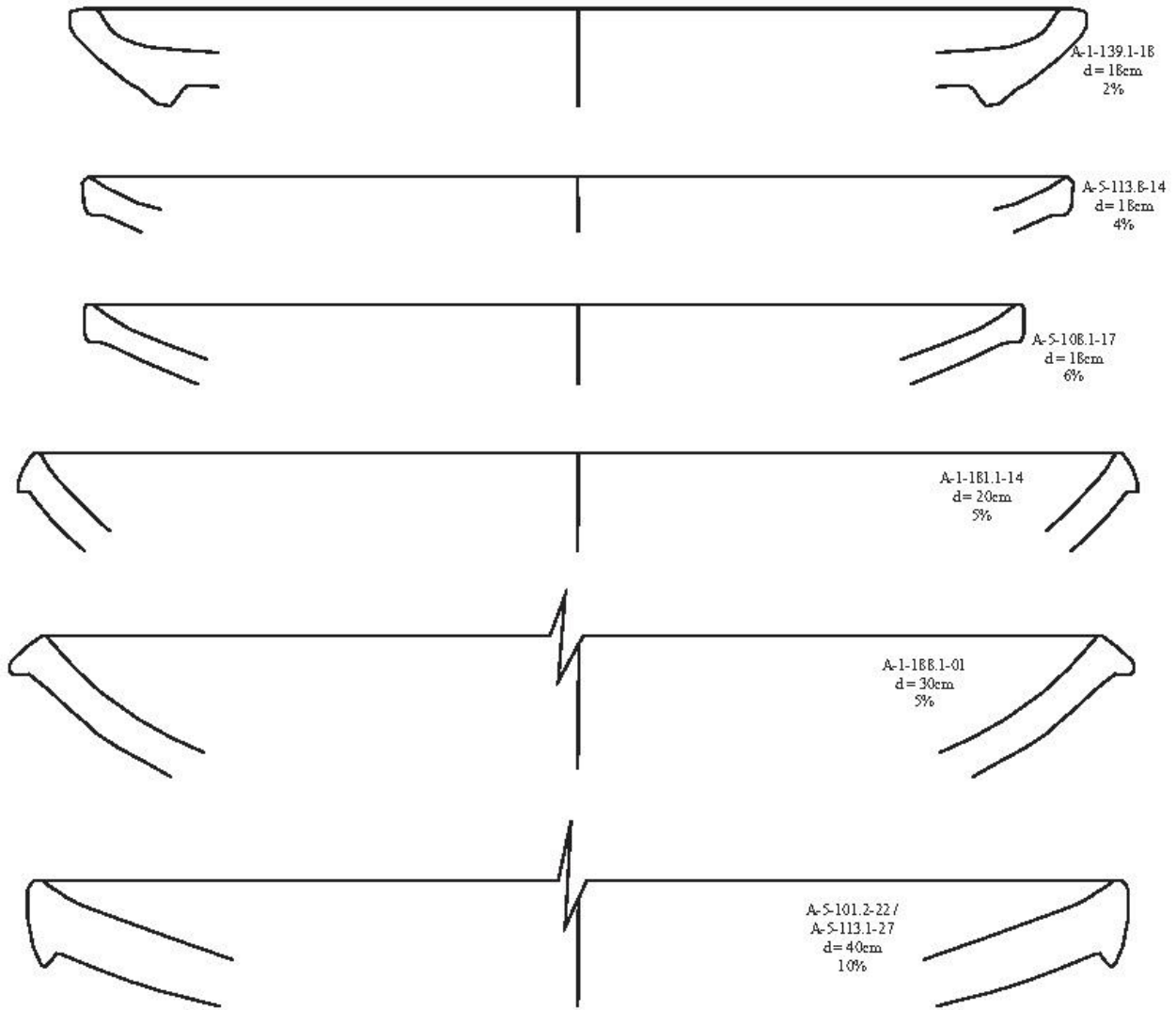
Type 13



Type 14

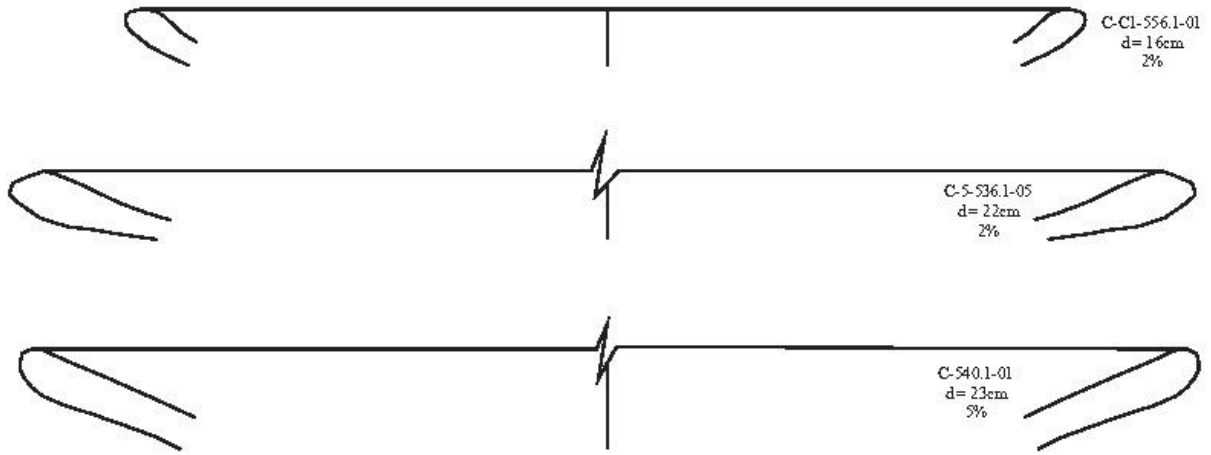


Type 50

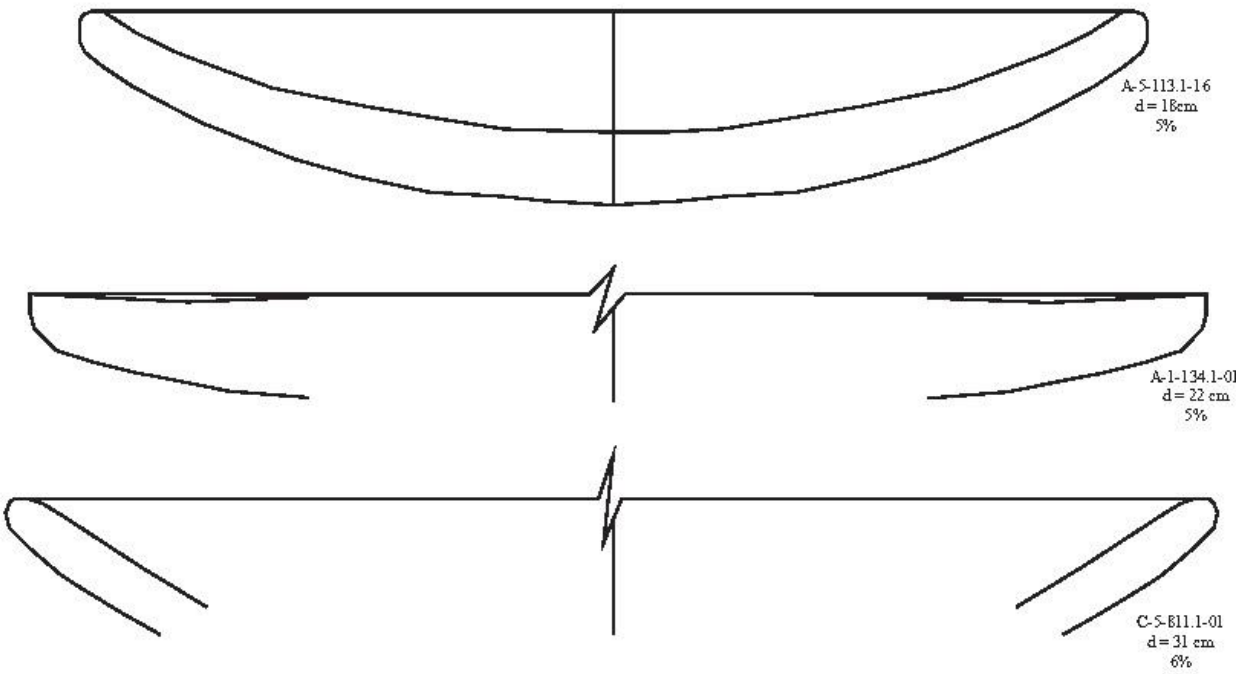


Dishes

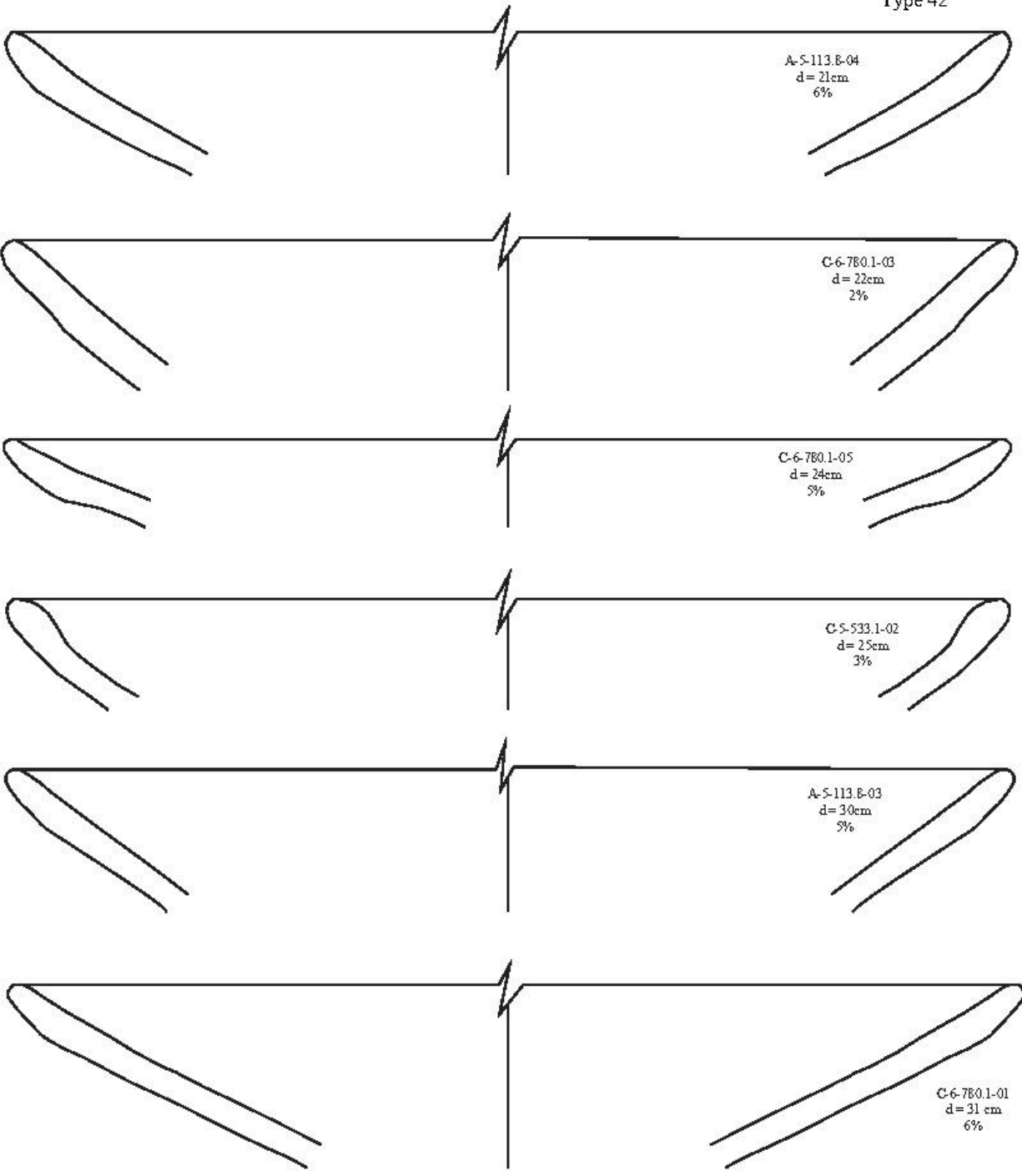
Type 27



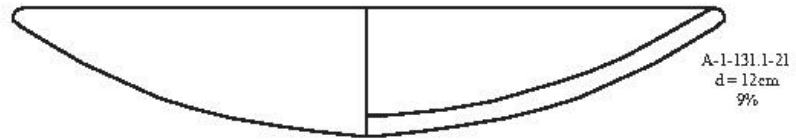
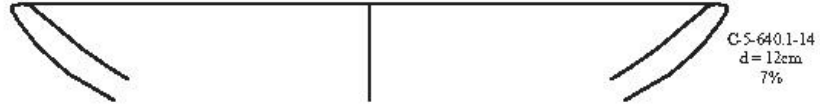
Type 47



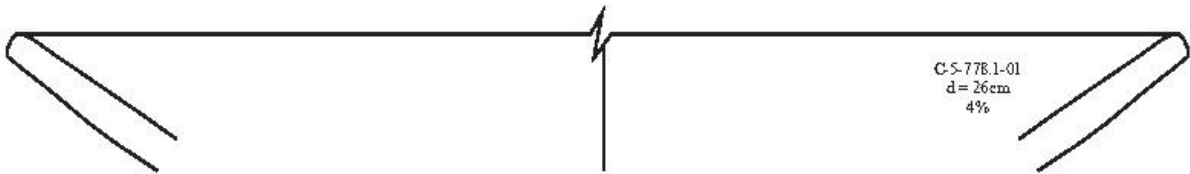
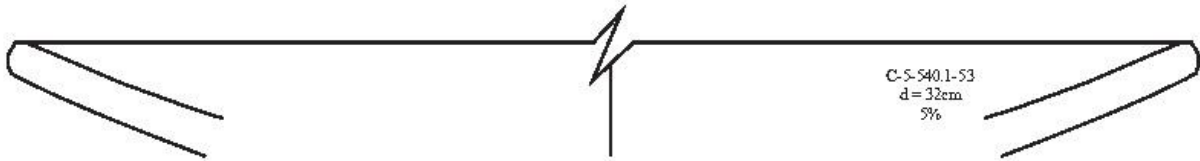
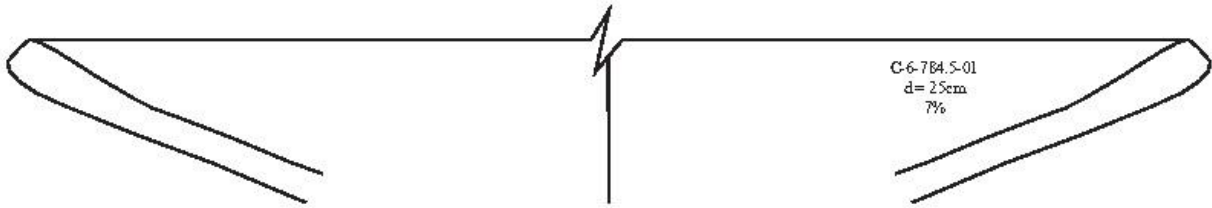
Type 42



Type 48



Type 11



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