

THE AYLLUS OF THE CHANKA HEARTLAND: AN INTERDISCIPLINARY ASSESSMENT

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INTRODUCTION

The Andean *ayllu*, often synonymous with the Andean community, has received much attention over the last half century from numerous cultural anthropologists and ethnographers (e.g., Allen 1988; Bastien 1985; Skar 1982; Weismantel 2006), as well as from ethnohistorians (e.g., Rowe 1946:252–256; Salomon and Urioste 1991; Salomon 1995; Spaulding 1984; Zuidema 1990). By comparison, the *ayllu* has received less attention from Andean archaeologists, since its critical analysis has been challenged by problems of identification and interpretation of material correlates. As a result, the archaeological examinations of the *ayllu* that do exist are typically subsumed under the rubric of ethnic identity and community (Goldstein 2005, 2015; Reyecraft 2005; Stovel 2013). In spite of this fact, there have been some successes, especially for those working in late Andean prehistory and the early colonial period, where ethnohistoric information can supplement archaeological approaches (for highland examples see Arkush 2011, 2022; D'Altroy and Hastorf 2001; Wernke 2006, 2007, 2013). Additionally, ongoing advances in archaeological science including ancient DNA (Baca *et al.* 2012; Sandoval *et al.* 2018), biogeochemical (Torres-Rouff and Knudson 2017), and bio-distance (Herrera 2016; Kurin 2016; Torres-Rouff and Knudson 2017; Velasco 2016, 2018)

analyses offer new approaches to studies of the *ayllu*.

The Chanka, one of several well-known ethnic groups of the south central highlands, (Figure 1), offer a useful case study in which to evaluate Andean social organization (*i.e.*, *ayllu*, moiety) across the late prehistoric and early historic periods. They are known as those who challenged the Incas for power, but lost the Chanka-Inca war on the plains of Anta to the west of Cusco. The event marked the defeat of the Chanka, and the subsequent transformative rise and expansion of the Inca empire (e.g., Bauer *et al.* 2010; González Carré and Pineda 1988; Meddens and Vivanco 2005; van Dalen 2016). The chroniclers paint a picture of the Chanka as a bellicose people who lacked sophistication or complex cultural forms (Cieza de Leon 1984 [1553]:115; Garcilaso 1961 [1609]:140). Thankfully, two decades of research have now confirmed the Andahuaylas region (Department of Apurímac) as the ethnic heartland of the Chanka; made inroads towards disentangling their mythology, ethnohistory, and archaeology; and begun to reconstruct their unique individual lives.

Recent archaeological (Bauer and Kellett 2010; Bauer *et al.* 2010; Kellett 2010), bioarchaeological (Gómez Choque 2009; Kurin 2012, 2013, 2016; Kurin *et al.* 2014), and ethnohistoric work (Bauer *et al.* 2010; Hyland 2016;

Julien 2002) offers a robust data set to explore the development of the ten original Chanka *ayllus*. I present a range of direct (*i.e.* colonial records) and more indirect (*i.e.* archaeological, bioarchaeological) evidence to offer an interdisciplinary assessment of our current understanding of Chanka social organization.

I begin by offering a general introduction to the *ayllu* and how it has been defined by a range of Andean scholars. Next, I consider some of the ongoing methodological and conceptual problems with the archaeological and ethnohistorical study of the *ayllu*. Using William Isbell's (1997) archaeological model of the *ayllu* as a partial guide, I present an overview of the archaeological and bioarchaeological knowledge of the Chanka *ayllus* after the fall of the Wari empire through the Late Intermediate Period (LIP hereafter, 1000–1400 C.E.), Inca dominated Late Horizon (1430–1532 C.E.), and the first two centuries of the Colonial Period (sixteenth and seventeenth centuries C.E.). I shift to the ethnohistoric information from Andahuaylas, which offers the most detailed information about the Chanka *ayllus* during and after Spanish contact. I then use existing archaeological data to evaluate LIP and colonial *moiety* divisions, including the herder/agriculturalist division among the Chanka. I conclude the paper with a discussion of the strengths and weaknesses of an interdisciplinary approach, and argue that the Chanka serve as a valuable case study to understand the dynamic, yet resilient nature of the *ayllu* through time and space.

INTRODUCTION TO THE AYLLU

For nearly a century, Andeanists have employed an interdisciplinary approach which relies on colonial accounts and ethnography, and, to a lesser extent, archaeology, to examine how the *ayllu* has changed from prehistoric to colonial times (*e.g.*, Bastien 1985; B.J. Isbell 1978; W. Isbell 1997; Murra 1972; Rowe 1946; Weismantel 2006; Zuidema 1990). Given the broad understanding of the *ayllu*, there are

numerous definitions. However, there are some common themes which can help define the term. Hyland (2016:12) points out these themes and offers a useful definition:

Ayllus are malleable, nested social formations that can be considered as groups of individuals joined by real and imagined kinship; as people who share the same mythical origin place and ancestor; and as people who form corporate groups with rights to communal land holdings.

In general terms, the extended kin group is the building block of the *ayllu*, which together with other *ayllus*, is arranged in asymmetrical paired groups called *moieties*. *Moieties* have been confirmed through a range of cultural and ethnohistoric sources as asymmetric social divisions, which define status and descent and are organized into upper (*hanan*) and lower (*hurin*) halves or *saya* (Mumford 2012:29).

As discussed in detail below, the Chanka and their neighboring ethnic groups were organized into *ayllu*-based *moieties* (Rowe 1946: 252–256). Within this social structure, there is a differential rank with higher status assigned to the *hanan* moiety and associated leadership. For example, Cobo (1979 [1653]:195, Book 12, Chapter 24) describes the *moiety* division in which the leader of Hanan Cusco retained preferential seating and access to speaking. Similarly, the Spaniards identified ethnic leaders of *hanan* *moieties* as *caciques principales* (principal leaders) while the *segunda personas* (second persons) belonged to the *hurin* moiety. Within these *moieties* were complementary, yet unequal sets of *ayllus*.

A range of anthropological, archaeological and ethnohistoric data, demonstrates the inherent scalar quality to the *ayllu*, in which minimal (micro/sub) *ayllus* may coalesce to form maximal (macro) *ayllus* (W. Isbell 1997:13). The essentialized structure of the *ayllu* is elegant, yet, in practice, it can be much more difficult to con-

firm on the ground. This is due in part to the fact that as a classificatory term, *ayllu* can be defined in a multitude of ways linguistically and geographically. For example, the *ayllu* can be equated with a single settlement or community, a scatter of settlements, or even an entire region (Beaule 2016:603; W. Isbell 1997:13; Murra 1972). A related challenge is to identify how *ayllus* mapped themselves onto the landscape. While *ayllus* tend to be spatially defined by topographic features such as ravines, mountain ridges, and rivers (B.J. Isbell 1978; Wernke 2013), they are often imprecisely defined in general cultural terms or vague local geographies, which can change over time.

One reason for this confusion is that the Inca and then the Spanish used the *ayllu* as an administrative unit, which may confuse and conflate older forms of the *ayllu* (W. Isbell 1997:13–14). argues that we cannot assume that the *ayllu* remains unchanged in modern times and that “. . . a search for the essence of the *ayllu* precludes a theory of culture that recognizes heterogeneity of informed action by individuals, or, more simply stated, the contingency of history” (*ibid.*:14). Recognizing the likely diversity of the *ayllu* in the ancient past, he presents a methodological problem, which this paper does not intend to resolve. Here, I use a generalized working definition of the *ayllu* as a flexible social unit that has direct ties to land and particular ancestors, which typically include multiple communities and prehistoric settlements. As such, I do not treat the terms “community” and “*ayllu*” as interchangeable within the archaeological context, but instead treat the former as a typical nucleated residential settlement or a closely associated cluster of prehistoric structures.

So what is it about the *ayllu* that is so alluring to Andeanists? Weismantel (2006) suggests that for Andeanists, the *ayllu* still holds as an essential, ancient, and elegant model of social organization which continues to attract aca-

ademic attention. She insists that, “the *ayllu* matters because of its political-economic functions as a unit that controls, manages and defends productive resources” (Weismantel 2006: 95). She argues that the *ayllu* was and remains a model that functions to defend indigenous territory. This concept of defense is especially apt when we consider the highland ethnic groups and the *ayllus* that composed them. In the face of imperial expansions and subsequent occupations, the *ayllu* was an important tool to defend and retain cohesive Andean communities. While we can be certain that the *ayllu* fulfilled an important social function, it was also not necessarily rigid, or incapable of change. In fact, as other Andeanists have noted, *ayllus* were resilient through the flexible ways in which they responded to profound changes such as climate change, warfare, and colonialism (Arkush 2011; Kurin 2016; Lane 2007; Mumford 2012; Wernke 2013). For example, on the eve of the momentous Chanka-Inca war, all Chanka *ayllus*, as well as neighboring allied ethnic groups, may have coalesced into what has been termed the Chanka Confederation in the face of a common enemy, the Inca^{1, 2, 3} (Bauer *et al.* 2010; González Carré and Pineda 1988; González Carré *et al.* 1988; Meddens and Vivanco 2005; Figure 1).

¹ Neighboring Chanka allies to the west, such as the Soras (Meddens and Vivanco 2005) and Lucanas were organized into similarly structured *ayllu*-based moieties (Meddens and Schreiber 2013:131–134), but it is still unclear how they integrated into Chanka social organization.

² In Andahuaylas today, the commonly used term “Nación Chanka” (Chanka Nation) reflects this social and ethnic coalescence on the eve of the conflict, but also reflects the strong local identity and perceived power of the Chanka ancestors even today.

³ While not discussed in detail here, the Chanka-Inca war is referenced in numerous colonial sources. However it is best treated as mytho-history, since there is an absence of archaeological evidence confirming the event (Bauer and Kellett 2010:109; Bauer *et al.* 2010:3–10).

Colonial documentary evidence has been especially important in stimulating *ayllu* studies. Most commonly, archaeologists and ethnohistorians have used these accounts to track changing *ayllu* make-up before, during, and after Inca and Spanish incursions across many different regions in the central Andes (e.g., Bauer *et al.* 2010; Spaulding 1984; Wernke 2013). As discussed later, Chanka researchers are fortunate to have located an ample amount of primary and secondary colonial sources. However, we also know that such information can be biased and incomplete, and may not necessarily be appropriate for reconstructing the past. Additionally, it is well-known that the powerful forces of the *encomienda* and *reducción* eras in the early colonial period altered the cultural landscape. As a result, associated documentary sources pertaining to these periods may misrepresent late Andean (Mumford 2012), including Chanka prehistory (Sabine Hyland personal communication 2018).

ARCHAEOLOGICAL APPROACHES TO THE STUDY OF THE AYLLU

Archaeological approaches toward understanding the *ayllu* have been fraught with conceptual and methodical challenges, and with good reason. With a lack of documentary evidence, it is difficult to use diagnostic material remains (e.g., ceramics, textiles) to identify specific *ayllus*. This is largely due to two problems, the first of which is that archaeologists cannot necessarily assume certain material attributes that coincide with *ayllu* designations. Secondly, archaeologists often encounter a highly uniform material culture across a broad geographic area which precludes the reliable identification of individual *ayllus*.

In the case of the Chanka heartland for example, there were ten original Chanka *ayllus* (Table 2), but the ceramic styles are so similar that identifying individual *ayllus* is nearly impossible. While macroregional ceramic styles for Chanka affiliated and “Chanka-like” groups do

demonstrate some regional variation (see Meddens and Vivanco 2018) across the greater Chanka culture region (western Apurímac Department and central/eastern Ayacucho Department) the spatial resolution of the ceramic analysis is typically too coarse to currently identify individual Chanka *ayllus*.

William Isbell is one of the few Andean archaeologists who has attempted to reconceptualize and operationalize the archaeological study of the *ayllu*. Using a postmodern theoretical perspective, Isbell (1997) argues that Andean social organization, embodied by the *ayllu*, must be reexamined in the context of ancestor worship, rather than within more traditional processual models (e.g., economics, demography). He attempts to address two critical questions concerning the *ayllu*: how old is the *ayllu*?; and how can Andean archaeologists identify the *ayllu*? He argues that ancestor worship and the appearance of burial monuments are the critical signifiers of the *ayllu* which he characterizes as happening relatively late in the prehistoric sequence, some time in the Early Intermediate Period in the central and northern highlands. This contrasts with a belief held by other Andean scholars who posit that the *ayllu* is a much older cultural tradition, which may date to the Preceramic Period (e.g., Matsumoto 2014: 39–40; Moseley 1992:51, 94; Nielsen 2008: 214; Shimada *et al.* 2015, Zoubek 1999).

Isbell’s (1997) argument that the *chullpa* (an above ground mortuary structure) is an archaeological correlate for the origins and functioning of the *ayllu* in the highlands is especially compelling. In this context, we can understand that the *chullpa* embodies the salient role that mortuary traditions play in Andean sociocultural traditions and organizations of past and present peoples (Dillehay 1995; Hyslop 1977; Isbell 1997; Kaulicke 1997; Mantha 2009; Nielsen 2008; Shimada and Fitzsimmons 2015; Stanish 2012; Velasco 2014, 2016, 2018). In a broader context, “Andean peoples used mortuary monu-

ments and bodies of the dead to create new social space as well as new social and political relations” (W. Isbell 1997:16). In particular, Isbell suggests that founding (apical) ancestors, typically mummies, housed in *chullpas*, can aid in identifying lineage-based *ayllus*.

Therefore, recording *chullpa* locations and their highly variable construction styles across the landscape can aid in comprehending how a given highland valley may have been spatially structured based on local kin groups (Salomon 1995; Velasco 2014). Such divisions were flexible, dynamic, and may have corresponded with specific economic (e.g., agricultural, pastoral), political, or culturally defined spaces, such as territories (Bongers *et al.* 2012; W. Isbell 1997; Kurin 2016; Mantha 2009; Nielsen 2008; Velasco 2016). Mantha (2009:161) states that,

during periodical ceremonies held throughout the year at the location of above-ground mortuary structures, the *malquis* were recalled as being the group’s original progenitor, as the creator of agriculture and as the owners of land and resources. They incarnated the group’s collective memory and bound together the peoples’ past, present and future.

Nielsen goes even further and argues that burial monuments such as *chullpas* were,

monumental embodiments of the ancestor itself, capable of doing what ancestors do, that is, guard the fields and herds, and promote their fertility; protect the harvest; bring prosperity to their descendants and provide them with food, water, and other (stored) goods; represent the group before outsiders; defend the community and its territory; fight their enemies; inspire political decisions; attend the pledge of the community gathered at the plaza; and so on (Nielsen 2008:220).

In this way, burial monuments were much more than static locations to house the dead, but rather places with agency and power, which helped demarcate an active cultural landscape.

Regrettably, most *chullpas* of the central highlands are looted. However, Andeanists can still use their location and study any existing remains to begin to understand how Andean social organization may have changed over time and space. As discussed below, *chullpa* use reached a zenith across a wide swath of the central Andes during the LIP, an indication of more formal *ayllu* development (W. Isbell 1997). In conclusion, while Isbell’s model is not a panacea for the archaeological study of the *ayllu*, it does provide a useful theoretical and heuristic tool in which to examine ancient Andean social organization.

What about employing settlement patterns as an indicator of the *ayllu*? Since many regional archaeological projects include archaeological surveys, settlement data could be an indirect indicator of social organization. Research by Parsons *et al.* (1997, 2000) and Perales (2016) integrate some of Isbell’s (1997) expectations about *chullpas* with general settlement archaeology. Research from Junín also attempts to link social structure with economic groups, specifically detailing the interactions between pastoralists and agriculturalists during the LIP. In the Ricrán Valley in the central highlands, Perales (2016) has recently argued that the clustering of large LIP settlements (with limited public architecture) with nearby mortuary structures in the lower *puna* (4,000–4,700 masl) reflects sociopolitical structure, but not necessarily individual *ayllus*.

In the Tarama-Chinchaycocha region, Parsons *et al.* (1997, 2000) noted the distinct clustering of valley and *puna* sites with a buffer space between clusters during the LIP. They also argue that “special function sites” located near the *kichwa-puna* ecotone may have served as

important public spaces for interactions (e.g., ritual fighting, exchange) between more specialized valley agriculturalists and pastoralists. Parsons *et al.* (2000:181) argue that paired pastoral, agricultural, and special function sites between the Early Intermediate and Late Horizon are “suggestive of local-level (sub-community) dual divisions, or moieties.”

Studies by Wernke (2006, 2013) in the Colca Valley “raise the bar” on new, novel, theoretical, and methodological approaches towards the study of the *ayllu* and community by integrating GIS, settlement archaeology, architectural analysis and ethnohistory. He combines a landscape and “emplaced” theoretical approach to track how the pre-existing *ayllus* of the Collaguas and Cabanas were altered from the late prehistoric to the early colonial period. Especially powerful is the use of GIS and geospatial modeling to integrate archaeological and ethnohistoric data to illuminate the changing cultural and economic landscape of the Colca valley.

Finally, while traditional archaeological approaches offer particular limitations, Andeanists are fortunate that there are techniques emerging from the field of bioarchaeology. Indeed, the chroniclers were among the first observers of cranial modification, which was immediately recognized as an important indicator of social identity, including status (for detailed discussion see Hoshower *et al.* 1995: 145–148; Kurin 2016:52–60. As discussed below, biodistance, specifically the study of cranial metrics including cranial modification patterns, may be able to identify ancient ethnic groups and their interactions, although, in some cases, specific patterns can be more reflective of social class and privilege (e.g., Black 2014; Kurin 2016; Mackey and Nelson 2010:271–294; Manheim *et al.* 2018; Torres-Rouff and Knudson 2017; Velasco 2016, 2018; Verano 1997).

Stable isotope analysis (C, N, O, Sr) of skeletal remains is another promising avenue of research which can provide coarse-grained analysis of subsistence organization and diet, population origins and movement, as well as local and non-local community membership (Torres-Rouff and Knudson 2017; see Kurin 2016 for an example with the Chanka). The new field of ancient DNA analysis also offers the potential to understand the macro-scale demographic and mobility trends in the Andes (Bongers *et al.* 2020; Fehren-Schmitz *et al.* 2014), as well as to elucidate kin relations within and across *ayllu* boundaries using human skeletal material from *machays* (caves) and *chullpas* (Baca *et al.* 2012). In the next section, I consider the relevant proxies of *ayllu*, primarily mortuary data, settlement patterns, and bioarchaeological data across the late prehistoric sequence in Andahuaylas.

INTRODUCTION TO CHANKA ARCHAEOLOGY

Building on Joel Grossman’s pioneering work in the 1970s (Grossman 1972, 1983, 2013), a flurry of archaeological (e.g., Bauer and Kellett 2010; Bauer *et al.* 2010; Kellett 2010), bioarchaeological (Gómez Choque 2009; Kurin 2012, 2013, 2016; Kurin *et al.* 2014), and ethnohistoric research (Bauer *et al.* 2010; Hyland 2016) has been completed since 2002 in the greater Chanka heartland (Figure 3). The development of a local ceramic chronology (Bauer *et al.* 2010; Grossman 1972, 1983; Grossman and Kenna 2017; Figure 2) in combination with recent archaeological survey work (Andahuaylas Archaeological Project [PAA], Chanka Settlement Project [PAC], and Andahuaylas Puna Project [PAPA]), now provide a robust settlement data set in which to begin to explore a range of questions on the origins and changing make-up of the *ayllu* in the Chanka heartland (Figure 3).

In this paper, the term LIP is synonymous with the Chanka phase and extends from ap-

proximately 1000 C.E. to 1400 C.E (Bauer *et al.* 2010). However, as has been done in other regions of the central highlands, researchers working in Andahuaylas (Kellett 2017; Kurin 2016; Meddens and Vivanco 2018) have divided the long LIP into two sub-periods, with Chanka I extending from ~1000–1250 C.E. and Chanka II extending from ~1250–1400 C.E. Most current archaeological knowledge of the Chanka pertains to Chanka I, with relatively little known about the Chanka II period.⁴ As discussed below, the limited extant data on the Chanka II Period indicates a partial demographic collapse with local populations relocating downslope, or even out of the valley.

During the previous Qasawirka Phase (300 B.C.E.–1000 C.E.), a time period which is still being defined,⁵ Andahuaylas experienced population growth with the “filling up” of the valley floor and a focus on valley bottom agriculture (especially maize) which was organized around hundreds (n=405) of small hamlets and villages (Bauer *et al.* 2010:57–64). In the overlapping Wari phase (600–1000 C.E.), one can see a similar settlement pattern when compared to that of the Qasawirka Phase, but with noticeably fewer (n=66) lower valley villages containing imperial Wari ceramics. This limited imperial influence is reflected in the absence of a

regional Wari center built in the main valley, and supports Schreiber’s (1992) classic “mosaic of control” model, which predicts indirect administrative control across most of Wari territory.⁶ After the dissolution of the Wari empire ~900–1000 C.E., one can see cultural and settlement transformations in the valley which coincide with the Chanka occupation there (Bauer and Kellett 2010).

In the following Chanka I period, one can note a reduction (~50 percent) in the number of total sites from the Qasawirka Phase (n=405) to the Chanka Phase (n=202). However, correcting these numbers to overall phase length reflects trends of demographic growth and aggregation⁷ (Bauer *et al.* 2010:78–93). This aggregation is confirmed by the increase in the large (>5 hectares), densely occupied ridgetop sites found along the upper rim of the valley (*ibid.*:79; Figure 4). Survey results confirm a broad scale movement of populations from lower to mid-valley regions of the *quechua* zone to higher elevation areas in the *suní* and puna terrain (3,700–4,100 masl) with the aggregation of populations (~500–>1500 residents) into dozens of large ridgetop settlements. Survey data by Bauer *et al.* (2010; Bauer and Kellett 2010), and Kellett (2010) indicate the natural defensive features and man-made fortifications (e.g., protective walls, ditches) that are present at some, but not all large Chanka residential hilltop sites. These features are suggestive of increasing threats of raiding by local or outside

⁴ Indeed, among fifteen calibrated (2σ) radiocarbon dates from nine different Chanka residential sites, only two sites (Luisinayoc [PAA-220 and Achanchi [PAA-220]) date post 1300 cal CE (Bauer and Kellett 2010:103; Kellett 2010:374–380).

⁵ The Qasawirka phase remains a long, poorly defined cultural phase in Andahuaylas, and has been established on the existence of red painted pottery (Bauer *et al.* 2010; Bauer and Araújo Silva 2010), from dated contexts (Bauer *et al.* 2010; Grossman 1972; Kellett 2010). Using new and recalibrated AMS dates from the Waywaka and other sites in the valley, Grossman and Kenna (2017) argue that the Qasawirka phase may, in fact, be much shorter and coincide with the Middle Horizon (c. 600–1000 CE; Grossman, personal communication, 2017).

⁶ The closest example of a Wari outpost is the site of Patahuasi, located 30 kilometers to the west of Andahuaylas, at the edge of Chanka territory near the Pampas River (Kurin 2016:40).

⁷ Based on the current chronology, a simple ratio of total number of sites to phase length (century) shows that the Qasawirka Phase has an average of 31.2 sites per century (n=13) while the Chanka Phase has an average of 50.5 sites per century. This reflects demographic growth with some amounts of population aggregation into distinctly larger sites.

groups, a pattern also confirmed by Kurin (2016).

Despite the fact that work to refine the Andahuaylas chronology is ongoing (especially relating to the overlapping and variable length Wari and Qasawirka Phases), the documented demographic (*i.e.* growth) and settlement (*i.e.* aggregation) trends between the Middle Horizon and the LIP have been confirmed across the greater Chanka affiliated region (Gómez Choque 2009; Meddens and Vivanco 2005; Schreiber 1992; Valdez and Vivanco 1994; Valdez *et al.* 1990).

Existing evidence suggests that these clusters of ridgetop sites were socially organized in a heterarchal (Crumley 1995; see also Arkush 2011; Kohut 2016; Lane 2007), rather than hierarchical fashion, in which adjacent ridgetop sites represented small communities of approximately equivalent rank. Chanka heterarchal social organization is reflected through absence of status differences within or between Chanka ridgetop sites in the form of modest architectural constructions (*i.e.*, *pirka* masonry), repetitive architectural design, (similar sized circular houses and patio groups, lack of public spaces), and uniform material remains such as ceramics of similar quality and comparable faunal elements (Kellett 2010). Excavations at the large hilltop sites of Achanchi (PAA-225) (Figure 5) and Luisinayoc (PAA-220) have also yielded virtually no evidence of internal status differentiation akin to an elite/commoner divide (*ibid.*), which has been argued to exist in other areas of the central highlands during the LIP, such as the Wanka region (D'Altroy and Hastorf 2001). In this way, these neighboring Chanka ridgetop sites functioned more like peer (micro) polities, which coordinated communal defense and raiding activities (Arkush 2017 a or b?).

RISK IN ANDAHUAYLAS

A combination of recent survey, excavation, and bioarchaeological work confirms that the Chanka were confronted with a series of overlapping and convergent social and economic risks (Bauer *et al.* 2010; Bauer and Kellett 2010; Kellett 2010, 2013a, 2013b, 2017; Kurin 2016), which coincide with similar patterns identified across a broad region of the central Andes (*e.g.*, Arkush 2011, 2017a; Arkush and Tung 2013; Covey 2008; Dillehay and Kolata 2004; Moseley 1997; Zori and Brandt 2012). The suite of risks initiating c. 1000 CE stems from two major sources, the first of which is the political demise of the Wari empire, which based on current chronometric dates, occurred locally in Andahuaylas c. 900–1000 C.E. This period of state collapse appears to have stimulated increased competition among micro-polities and local ethnic groups in the context of a residual political vacuum.

The second dynamic is the start of a prolonged period of aridity (LIP drought), which began in the mid-eleventh century and climaxed in the mid-thirteenth century C.E. This drought is confirmed by a range of environmental proxies both regional (Abbott *et al.* 1997a, b; Binford *et al.* 1997; Chepstow-Lusty *et al.* 2003, 2009; Thompson *et al.* 1985) and local (from Laguna Pacucha in Andahuaylas) (Hillyer *et al.* 2009; Valencia *et al.* 2010). Overall, this drought caused increased agricultural risk, which is reflected by a decreased reliance on maize and slight increase in the cultivation of tubers (*e.g.*, ulluco, oca, potato) and higher elevation crops including amaranth and chenopods (*e.g.*, quinoa, kiwicha) (Kellett 2010). While Kellett (2010) hypothesized that maize cultivation organized out of hilltop settlement would all but disappear at this time, test excavations yielded a moderate amount of carbonized maize. Using isotopic (C, N, O) analyses of bone collagen and teeth, Kurin (2016:155–177) also confirmed increasingly diverse diets and the continued

cultivation and consumption of maize during Chanka I.⁸ Thus, it appears that maize cultivation at lower altitudes remained a dietary and economic fixture during the Chanka I Period despite the risks of traveling and cultivating lower valley slopes (Kellett 2017).

Furthermore, the high density of camelid corrals surrounding large defensive hilltop residential sites above the north side of the main valley, indicates an increased reliance on camelid husbandry during the LIP, which was likely a risk reduction strategy in the face of these convergent risks in Andahuaylas (Kellett 2010, 2013a, 2013b, 2017) and elsewhere (e.g., Capriles and Tripcevich 2016; Graffam 1992; see also Browman 1987). The expansive puna on the south side of the main valley also contains evidence reflective of intensive camelid production during the LIP (Berrocal and Kellett 2019; Kellett *et al.* 2019). This intensification of camelid pastoralism during this period has been confirmed in other areas of the central Andes including the Mantaro region (Parsons *et al.* 1997, 2000; Perales 2016) and the Colca Valley (Wernke 2013).

In what ways did elevated risk and demographic change during the LIP affect Chanka *ayllus*? The settlement data suggests that threats of raiding and interpersonal violence stimulated the coalescence of new communities and their defense (Bauer and Kellett 2010; Kellett 2010). The previous social landscape was transformed from a pattern of small villages defined by extended kin groups, which were required to merge and consolidate into larger social units in response to threats of violent attack. As aforementioned, Weismantel (2006; see Isbell 1997)

argues that one of the principal functions of the *ayllu* even today is community defense. As such, it is likely that neighboring *ayllus* in the Chanka heartland were required to come together for mutual defense and safety. Viewshed analysis conducted by Kellett (2010:170–173) shows that inter-site visibility was a clear priority during the increasing threats of violence at this time, a pattern noted in many other areas of the central highlands during this period (e.g., Arkush 2011; Kosiba and Bauer 2013).

Arkush (2011) articulates the effects of warfare on the social organization of Colla hillforts (*pukaras*) of the Titicaca Basin. She states:

Clearly, warfare is structured by ideas of shared ancestry, patterns of social interaction, and alliances built on perceived relatedness. This structured violence in turn reinforces and reproduces the social group as a meaningful entity (Arkush 2011:178).

In the same way, large Chanka residential ridgetop sites created a new social landscape where differences in ancestry-derived social identities prior to the LIP were overcome, thereby anchoring these new socially diverse communities.

Additionally, a range of data suggests that Chanka populations living in the large hilltop sites that ring the main valley were dependent on an integrated form of agro-pastoralism, which was more spatially restricted around these large settlements (Kellett 2010). As part of this social and demographic reformation, partially or fully autonomous agriculturalists and pastoralists were now housed together in large, defensible settlements and were required to redesign daily subsistence activities and mutually coexist, culturally and economically.

While the fusion settlement dynamic brought more Chanka populations “under one roof,” it is probable that corresponding territo-

⁸ Based on variability in carbon and oxygen isotope values, Kurin (2016:167–169) finds differences in diet and water availability within individuals buried in the same *machay*, which reflects that members of the same *ayllu* occupied different altitudinally defined ecological zones, especially during childhood.

ries were redefined during a time of increased threats of raiding by neighboring groups. The clustering of large ridgetop sites appears to resemble defensive coalitions, a pattern noted by other scholars as well (Arkush 2011, 2017a; Kohut 2016). Nearest neighbor analysis on Chanka settlements recorded by the PAA (Bauer *et al.* 2010) and PAC (Kellett 2010), confirm a similar pattern and show that among all Chanka sites, there tends to be a pattern of settlement clustering at different spatial scales based on survey zone (PAA, $n=210$, Z score of -7.3 , $p<0.01$; PAC, $n=74$, Z score of -4.38 , $p<0.01$) (Kellett 2010:173–174).⁹

The establishment of large, aggregated residential sites in the Chanka heartland would have altered previous vertically arranged agro-pastoral territories (across *quechua*, *suní* and *puna* zones). The settlement data from the PAA may suggest that before 1000 C.E., smaller social units organized vertically defined communal territories from the lower and mid-valley villages. Abundant supporting ethnographic data confirms that mid-elevation villages in Andean valleys formed the geographical and social center of traditional *ayllus* and their vertically arranged territories (Brush 1977; B.J. Isbell 1978). In the LIP, we see a reverse scenario in which communal agro-pastoral territories were squeezed and stretched to fit the locations of newly constructed defensive ridgetop sites. These ridgetop sites would have functioned as important new loci from which all local subsistence, as well as social and cultural practices were collectively managed. As such, the consolidation and splintering of Chanka *ayllus* and their corresponding territories were remapped to fit a new landscape of risk. Of course, these

temporary social formations would unravel later after these impressive sites were abandoned in the Chanka II Period sometime after 1300 C.E. (Bauer *et al.* 2010:80). What caused these sites to be abandoned? As aforementioned, this time period is still not well understood in Andahuaylas, but site abandonment does not appear to have been sudden (*i.e.* absence of high value items such as whole ceramic vessels or metal objects [Kellett 2010]) and was likely a planned retreat in the face of increasing threats by neighboring groups or even by the intrusive Inca state¹⁰ (see Arkush 2017b).

A CONSIDERATION OF CHANKA BURIAL MONUMENTS

Survey based settlement data from Bauer *et al.* (2010), Kellett (2010), and Berrocal and Kellett (2019) detail a distinct growth in the density and distribution of typically poorly preserved above ground extramural *chullpa* monuments and cist tombs located along upper ($\sim 3,700$ – $4,100$ masl) ridges in the *suní* and *puna* of the valley (Figure 6). The large majority of these sites in Andahuaylas date to the Chanka Phase (based on diagnostic surface ceramics), but it should be mentioned that a single *chullpa* ($n=1$ of 5 burial structures) recorded by the PAC, and two cist tombs ($n=2$ of 17 burial structures) recorded by the PAPA exhibit diagnostic Qasawirka Phase ceramics. While further confirmation is required, this may support Isbell's (1997) hypothesis that the open sepulcher monumental tradition embodied by

⁹ However, the same nearest neighbor analysis using only residential site location from the PAC showed less clustering and more regular spacing of large aggregated residential sites, which suggest adjacent territories, but of variable sizes.

¹⁰ This interpretation is challenged by the current lack of radiocarbon dates from excavation contexts at large residential hilltop sites that date to late Chanka II and early Late Horizon in Andahuaylas. Nevertheless, excavations by Kellett (2010:401–451) show very little Inca presence. Only 15 out of a total of 22,400 diagnostic sherds found at the hilltop site of Luisinayoc (PAA-220) are Inca, and no Inca sherds were found at Achanchi (PAA-225). This tentatively supports a pre-Inca abandonment scenario.

the *chullpa*, may have originated in the Early Intermediate Period or later.¹¹

Given the intensive land use in Andahuaylas, the majority of above ground burial structures have been looted and damaged. However, many retain intact circular stone foundations. Because of the preservation of these structures, we can distinguish between *chullpas* and cist tombs through detailed measurements. Typically, *chullpa* foundations are between 1.5 and 3 meters in diameter, often cluster in groups of 4 to 10 structures, and are located on elevated hills and ridges above 3,600 masl. Conversely, in-ground cist tombs are typically between 0.5 and 1.5 meters in diameter, and often extend up to 2 meters below the ground surface (Figure 6). Cist tombs can occur in small clusters (3–7 structures) or as single structures, and are found at higher elevations (>3,600 masl) on ridges and hilltops, as well as on flat areas and even in ravines.

A third burial tradition among the Chanka is the widespread use of *machays*, small rock shelters or caves, which have been well documented by Kurin¹² (2016:71–76). Built from naturally formed concavities, or constructed with internal walls and/or exterior patios, *machays* functioned as group internment locations for mummies and burial goods, most of which have now been looted. Kurin (2012) argues that

the placement of above ground *chullpas*, typically on windy saddles, may have served as locations to desiccate mummies, which were later moved to nearby *machays* for secondary, collective burial. Taken together, one can understand that Chanka social groups, including *ayllus*, were in part defined by a network of contemporaneous, spatially defined nodes of *chullpas*, cist tombs, and *machays* which created an important “landscape of death” (Bongers *et al.* 2012).

Among all Chanka Phase sites, these burial sites make up 11 percent (n=9 of 69) of all PAC sites recorded on the north side of the valley and are approximately evenly divided among cist tombs, *chullpas*, and *machays* (Table 1). Recorded burial sites which date to the Chanka Phase also make up a similar proportion of total recorded PAPA sites (11 percent, n=18 of 159), but the frequency of mortuary site types is quite different. In the southern Andahuaylas puna, *machays* are much less common, with approximately equivalent proportions of sites with *chullpas* and cist tombs. This could indicate that puna pastoralists of the southern puna had a burial tradition, which was more dependent on above ground burial structures, or it may partially be the result of an absence of natural *machays* in which to bury deceased individuals.¹³ Alternatively, it could also reflect the increased importance of identifiable burial structures visible from far distances and well into *suní* and higher puna zones. As discussed below these markers could have been especially important in order to distinguish territorial boundaries among neighboring social groups, including *ayllus*.

¹¹ Some Andeanists have also asserted that *ayllu*-centered ancestor veneration may have become ritualized and institutionalized during the Middle Horizon by the Wari (Giersz and Malkowski 2014) and Tiwanaku (Malkowski 2009) polities.

¹² Kurin (2016:78–80) analyzed skeletal material from nine *machays* in Andahuaylas, which indicate that the local *machay* burial tradition began after 700 cal CE during the Middle Horizon (n=4 of 16 radiocarbon dates), but reached a climax (n=8 of 16 radiocarbon dates) during the Chanka I Phase, with few dates pertaining to Chanka II (n=2 of 16 radiocarbon dates) and the Late Horizon (n=2 of 16 radiocarbon dates).

¹³ The low relief topography in the southern Andahuaylas puna contains very few natural rock shelters. This pattern contrasts with the high relief topography on north side of main valley, which contains numerous natural rock shelters on mountain slopes which accommodated communal burial.

Unfortunately, we do not have detailed records of burial structures from the large PAA survey project. However, the project did record the best-preserved *chullpa* complex in Andahuaylas, a site called Usma Pata (PAA-893). Located only 1.5 kilometers west of the large residential Chanka hilltop site of Usma (PAA-057), this impressive burial complex contains 30 well-preserved *chullpas* (Allecca Ossorio 2017; Figures 6, 7). There can be little doubt that this burial site was actively used by the Chanka residing at Usma for the desiccation of countless deceased individuals over the centuries.

Taking a closer look at results from the recent PAPA project, one can see that the mortuary sites concentrated along the NE/SW axis of the ridge in the upper *suní* and lower puna zones and the transition zone between agricultural and camelid pastoral zones (Figure 7). The concentration of *chullpas* and cist tombs along the highest margin of the ridge (Cerro Atoghuachanan) suggests a possible social, if not *ayllu* boundary, which distinguished adjacent groups of camelid pastoralists along coinciding mountain ridges or watersheds. The *chullpas* may have also designated approximate territories between *suní*-based agriculturalists and puna-based camelid pastoralists. In all but a single case, these cist and *chullpa* sites are in elevated locations with large viewsheds. This pattern is similar to what Parsons *et al.* (1997, 2000; Perales 2016) recorded in Junín, which they argue may reflect visually based territorial markers for distinct social groups of farmers and herders and may “have linked puna and *kichwa* agriculturalists through shared burial rituals” (Parsons *et al.* 2000:180).

In addition, the PAPA project recorded two “special use sites” that consist of a single enclosure with a central rock pile (*apacheta*; PAPA-051) and one platform site (PAPA-046) along an upper ridgeline in the lower puna zone (Figure 7). These spatially proximate structures have a panoramic view of the main Chumbao

Valley and the expansive puna lands above it. These sites echo the small shrines described by Parsons *et al.* (2000:179–180) who argue that these structures may have been located along sociopolitical borders and used for local, as well as more interregional, higher-order public functions between different agricultural and pastoral groups. The spatial distribution of mortuary and special use sites on the southern side of the valley reflects a similar pattern in which these sites mark and territorialize these upper elevations among interacting groups of agriculturalists and pastoralists (Figure 7).

Finally, additional mortuary evidence comes from the large Chanka hilltop site of Achanchi, where, by chance, investigators encountered an intramural communal burial along the modern path across the site. Excavations uncovered over 40 individuals across a range of burial ages and sexes, which likely correspond to an extended kin group (Jolly and Kurin 2017; Kellett *et al.* 2015). This burial site contained camelid and possible puma offerings in the lowest excavation levels, which appear to have served as founding offerings for the burial ground. Even more, they may symbolize a founding or apical ancestor for a local lineage or *ayllu*, which resided in and around the residential site of Achanchi during this time. At present, we are unable to confirm whether these offerings link to a specific *ayllu* or pair of *ayllus* (*i.e.* puma *ayllu*, llama *ayllu*). While this burial does not neatly conform to Isbell’s model for the *ayllu*, it is suggestive, and contributes additional evidence towards the practice of ancestor worship among the Chanka.

BIOARCHAEOLOGICAL EVIDENCE OF CHANKA SOCIAL ORGANIZATION

In addition to economic risk, the Chanka experienced increased social risk during this time, but how was it reflected biologically and across different social and kin groups? In this section, I discuss local and regional bio-

archaeological research, to elucidate the salient social risks experienced by local Chanka populations. Broad scale patterns tend to be clearer with increasing interpretive problems as one examines smaller scales of social organization.

In Andahuaylas, bioarcheological and skeletal data show a dramatic increase in interpersonal violence between the Wari occupied Middle Horizon (8 percent, $n=2$ of 26) and Chanka I Period (49 percent, $n=131$ of 267), evidenced by a widespread presence of trauma induced perimortem and/or trepanation cranial lesions (Kurin 2016, 2020). Kurin (2016) offers an important first look at the intersection of interpersonal violence and identity during the LIP, specifically within the Chanka, as well as between the Chanka and resident Quichua populations in Andahuaylas.¹⁴ Based on rates and location of skeletal trauma across sex and age classes, she posits that the Quichua enclave endured repeated raids by neighboring Chanka groups.

Kurin's analysis (Kurin 2016:121–123) of Chanka crania demonstrated that there existed high rates (~76 percent) of cranial modification with main three main types (erect, oblique, and unmodified) which she argues may be linked to distinct kin categories—*Piwi* (local and higher status) and *Wakcha* (non-local and lower status). In particular, she argues that foreign *Wakcha* individuals, who tended to have high rates of cranial modification, were also those who demonstrated higher rates of traumatic cranial lesions, while portions of Chanka society (*Wakcha* individuals with long-headed crania) experi-

enced ethnocide by other Chanka peoples (possibly higher status *Piwi* with unmodified crania). In a broader context, Kurin (2016:21) argues that this potential ethnocide may have been used as a strategic mechanism of terror to gain access to resources, build alliances, eliminate rivals, and legitimate an emerging Chanka authority and worldview. She also concedes that her analysis does suggest

violence [among the Chanka and Quichua] did not single out individuals associated with a specific *ayllu*, lineage or gender. Rather, violence targeted individuals who used cranial modification to denote their biologically and socially reckoned identity. . . (*ibid.*:149).

In other words, the violence recorded on ancient skeletons *does not* follow any particular social grouping like the *ayllu*, but *does* generally correlate with broad cultural affiliation, as demonstrated in part by cranial modification.

Kurin also notes different frequencies of cranial modification types between communal *machay* burial sites, which she aligns with the larger *Hanan/Hurin* moieties. For example, the site of Cachi in the upper *moiety* (Hanan Chanka) showed a 75 percent ($n=129$ of 171) cranial modification rate; the site of Ranracancha, in the lower *moiety* (Hurin Chanka), showed 100 percent ($n=41$ of 41); and the site of Pucullu, which is affiliated with an endemic Quichua population in Andahuaylas, showed a 62 percent ($n=21$ of 34) rate of cranial modification (Kurin 2016:115, table 5.1). Complicating these patterns, Kurin (2016:115) states that “. . . the placement of bindings on the cranium was no different between [Chanka] moieties or between Chanka and Quichua sites.” In other words, while patterns of violence may be contrasted among broader ethnic groups in Andahuaylas, to date the existing data does not clearly connect cranial deformation patterns to smaller, distinct social units, such as the *ayllu*.

¹⁴ As discussed in detail below, Kurin (2016:60–65) argues that the Quichuas were a distinct, endemic, ethnic group who lived alongside the intrusive Chanka in Andahuaylas. She also insists that the Quichua can be reliably identified using modern toponyms which can be spatially correlated with particular *machay* burial sites. To date, their material culture (*i.e.* ceramic styles) does not appear distinct from that defined for the Chanka (Bauer *et al.* 2010; Kellett 2010; Kurin 2016).

What happened to head shape in the late LIP (Chanka II [1250–1400 C.E.]) Period? Unfortunately, Kurin's (2016) insightful analysis is primarily limited to the early LIP (Chanka I [1000–1250 C.E.]). As mentioned above, the diversity of cranial modification types (including no alteration) appears to be relatively high during Chanka I, a similar pattern observed in the Colca Valley, which Velasco (2018:105) argues may suggest "situational or unmarked social boundaries". However, during the late LIP in the Colca Valley, there is increasing homogeneity in head shape, suggestive of ethnic and social consolidation. He asserts that a distinctive head shape "set apart" select individuals, and may have conferred on them high social status and privilege, furthering internal socio-ethnic divisions within Collagua society (*ibid.* 2018:106). While still unconfirmed, it is possible that a similar pattern occurred in the Chanka heartland, with social differentiation (reflected by cranial modification styles) becoming more consolidated or homogenized in the latter part of the LIP as well. Overall, Kurin (2012:23) argues for the close association between the LIP and the rise of the *ayllu*. She asserts that after the Wari collapse, "new people and new groups are created. Andahuaylas witnessed the crystallization of the *ayllu* and genesis and performance of a new social identity based on kin category, lineage and gender."

Finally, while not fully explored here, it is important to note that the ancient DNA analysis of individuals buried at Chanka Phase *machays* and other locations could offer much higher resolution analysis concerning relationships among familial and kin groups during the Chanka occupation of the region. Recent genetic evidence establishes both matrilineal and patrilineal descent among late prehistoric Andean populations (Sandoval *et al.* 2018). Baca *et al.* (2012), for example, were able to establish that more closely related kin organized by patrilineal descent tend to be buried in the same *chullpa*, generally confirming *ayllu* based social organiza-

tion during the LIP. Ancient DNA continues to offer a promising approach towards delineating actual genetic relationships among individuals with various cranial modifications, thereby evaluating whether cranial modifications were indeed lineage or even *ayllu*-based within the Chanka heartland (Valda Black, personal communication, 2018).

THE INCA PHASE (1400–1532 C.E.) IN ANDAHUAYLAS

With the arrival of the Inca in Andahuaylas in the early fifteenth century, we see a change in the social and economic landscapes. Bauer *et al.* (2010:95–110) documented a low number of sites ($n=76$) with diagnostic Inca pottery, which is surprising, given the notoriety of the Chanka as enemies of the emerging Inca empire. The settlement data indicate that the Inca began a campaign to resettle local Chanka populations, who previously resided at higher elevation slopes of the *suní* and puna down into the quechua zone. The local imperial presence is most conspicuous at the site of Sondor¹⁵ (PAA-200), a remodeled ceremonial center, along the major highland Inca road (into *Chinchaysuyu*) which was previously a large Chanka settlement (Bauer *et al.* 2010:95–110).

Similar to the *reducciones* that the Spanish would enact a century later, the Inca resettlement of Late Horizon populations into the more agriculturally productive zones of the lower valley (ostensibly to aid in intensive maize production and more close oversight of subject populations) had a profound effect on commu-

¹⁵ There are two other small sites, one of which is Queshuarpata, an Inca administrative site located just opposite (one kilometer north) of Sondor, as well as the Inca tambo of Andahuaylas, which is now destroyed and likely existed close to the modern town of Andahuaylas (Bauer *et al.* 2010:101–111; Kurin 2016:64). Additionally, a site called Wayau, located down valley and west of the modern town of Andahuaylas, contains remains of a large ashlar masonry wall, and may represent an additional tambo in the main valley.

nity and *ayllu* organization. One of these impacts is what Neilson (2008:227) terms the Inca's systematic "forgetting campaign" in which ancestor monuments were destroyed and ancestral images were abducted. While it is still unknown to what degree the Inca may have destroyed Chanka mortuary sites (*i.e.* *chullpas*), it is likely that some, but not all, were altered or destroyed. In this way, the Inca transformed power relations and associated memory without challenging the principles on which they were based (*ibid.* 2008:227). This "remaking" of Inca society in the Chanka heartland was thus characterized by the realignment and alteration of *ayllu* based social boundaries, but could not fully erase them.

What is clear is that the former Chanka population centers in the form of large residential hilltop sites in the *suní* and *puna* zones were abandoned after 1300 C.E. The regional settlement distribution reflects that the local Andahuaylas population was noticeably reduced during the Chanka II Period before the arrival of the Inca. The dual effect of a partial demographic collapse and the down slope resettlement under Inca rule between ~1350–1450 C.E. likely stimulated the alteration of the social landscape in new and unexpected ways. Yet, as discussed below, colonial descriptions suggest that, under Inca rule, the Chanka *ayllus* stayed mostly intact, despite the resettlement of local populations into lower valleys.

A final component of the Inca occupation of the Andahuaylas region was the Inca sponsored intrusion of foreign communities including the Aymaraes (living to the southeast of the valley), Yungas, and Chachapoyas. These colonists or *mitimaes* were immigrants to a rapidly changing social landscape, especially during the reign of Tupac Inca Yupanqui and his son Huayna Capac (Julien 2002; Bauer *et al.* 2010:111–112; Hyland 2016:11). Conversely, a number of Chanka groups living in Andahuaylas were also relocated outside of Andahuaylas and resettled

in new areas including Andahuaylillas (southeast of Cusco), Lucanas (southern Ayacucho), and the Titicaca Basin (Bauer *et al.* 2010:111–112). Taken together, it is likely that the in-migration of outsiders and the forced out-migration of a portion of resident populations provided a further destabilizing factor to traditional *ayllu* based community organization (Mumford 2012:27–39).

ETHNOHISTORIC PERSPECTIVES ON CHANKA SOCIAL ORGANIZATION

Having summarized the archaeological and bioarchaeological context for Chanka social organization, I now turn to the ethnohistoric information to provide a more granular view of the Chanka *ayllus*. To begin, Hyland (2016:1–13; see also Bauer *et al.* 2010:38–43) states that, under Inca hegemony, there were ten original Chanka *ayllus*, of which five composed the lower Chanka moiety (Hurin Chanka) and the other five composed the upper moiety (Hanan Chanka) (Table 2). These twin moieties were likely founded by the pair of mythical brothers Uscovilca and Ancovilca, who are mentioned by numerous chroniclers. While the existing *ayllu* lists date to the Early Colonial Period, it appears that the member *ayllus* remained only slightly modified between the late Prehistoric and subsequent Colonial Periods. This may be in part due to the fact that the wealthy encomendero of Andahuaylas, Diego Maldonado, was largely hands-off in his management of local Chanka populations, and did not undertake major restructuring of existing social organization (Sabine Hyland, personal communication, 2018).

The Inca installed leaders in both moieties, no doubt to ensure compliance by local, former enemy populations of the Chanka. The leader of the Hurin Chanka was Tomay Guaracas and the leader of the Hanan Chanka was Astoy Guaraca. These two Chanka leaders or chiefs (*kurakas*) can be thought of as brothers of these

asymmetrical halves, but it is unlikely that they were actual kin (Hyland 2016:12). The upper moiety consisted of the five *ayllu*s including Guasco, Malma, Apras, Moros and Pachacaruas, which were headed by Diego Condor Huacho of the Guasco *ayllu* (Table 2). At some point between the defeat of the Chanka and Inca dominance of the valley, this *cacique principal* of the Hanan Chanka had replaced the previous one, Astoy Guaraca. According to Hyland (2016:12), the lower moiety or Hurin Chanka also witnessed changes under Inca rule. The Hurin Chanka were led by the *cacique principal* Tomay Guaracas of the (Tomay) Guaracas *ayllu*, but by the 1570s this *ayllu*'s leadership had been demoted, and the Guachaca *ayllu* took power over the lower moiety (Bauer *et al.* 2010:42; Hyland 2016:12; Table 2, Figure 8). Hyland (2016:12) argues that the resettlement of some of the Chanka under Inca rule likely removed or broke down this previous leadership structure. An important *encomienda* document¹⁶ studied by Julien (2002) outlines a list of Chanka towns that were under the control of Diego Maldonado. The list of 63 old Chanka *pueblos* or towns in the 1539 *encomienda cédula* (legal document) is very valuable, and work by Julien (2002), Bauer *et al.* (2010), and Kurin (2016) has been able to match toponyms for ~70 percent of the listed towns (see Kurin 2016: table 3.3 for an updated list). While some have questioned the document's validity,¹⁷ it is significant, because it verifies the geographic extent of the ethnic Chanka heartland. This is an important contribution, as a number of scholars refer to a much larger geographic area (and associ-

ated ethnic groups) as Chanka, when they are really part of a larger regional amalgamation of Chanka related social groups referred to as the Chanka Confederation^{18,19,20} (Bauer *et al.* 2010; van Dalen 2016; Figures 1, 8).

In 1539, Maldonado's *encomienda* in Andahuaylas included the "hananchanca, hurinchanca y los quichuas de Vilcaparo" (Julien 2002:183). This reference is significant, because it confirms that the Chanka moieties of Andahuaylas were accompanied by a local Quichua population. Kurin (2016:64) argues that these Quichuas of Andahuaylas were distinct from the Quechuas of the (Inca) Cusco region, and formed a culturally distinct enclave in the Andahuaylas area. According to Kurin (*ibid.*: 53) this enclave endured after a bloody battle between the Quichuas and Chankas at the time of the latter's arrival into the valley.

Kurin (2016:54) posits that these Quichua were subjugated and ultimately incorporated as

¹⁸ Among colonial writers, only Garcilaso de la Vega (1961 [1609]:98, Book 4, Chapter 15)) provides a list of confederation members who include the Chanka, Hancohuallas, Utunsullus, Uramarcas [Uranmarcas], Uillacas [Vilcas] and possibly other unmentioned groups which lived to the west the Andahuaylas (see Bauer *et al.* 2010:25–29; Figure 1).

¹⁹ Although unconfirmed, Anders (1991:193–194) suggested that the Chanka confederation may have had a quadripartite structure spatially delineated by four sacred mountains (*wamanis*), including three (Rasuwilka, Carahuarazo, Apacheta) in the Ayacucho Department, and one (Ampay) in the Apurímac Department.

²⁰ Based on Quintana (1967), Skar (1982: 36) has argued that there were nine Chanka *ayllu*s extending from the Departments of Huancavelica, Ayacucho, and Apurímac, likely a conflation with described Chanka confederation members. Although unverified, he also argues that the "Antahuayllas *ayllu*" was divided into *ayllu*s and sub-*ayllu*s, which aligned with upper (*Hanay*) and lower (*Uray*) moieties, and was geographically centered among the communities of the greater Pincos Valley, 25 kilometers to the east of Andahuaylas.

¹⁶ *Cedula de encomienda de Francisco Pizarro a Diego Maldonado . . . de los Hananchangas y Orinchangas con los Quichuas de Bilcaporo* [1539].

¹⁷ Hyland and Kurin hypothesize that the original *encomienda* document listing Chanka towns could be an elaborate fake (which is not unheard of in early colonial Peru), although most of the place names indeed correspond to modern toponyms (Kurin 2016:64).

a member *ayllu* (*Achan Quichuas*) of the lower Chanka moiety in 1594 (Table 2). Using recently transcribed documents from Andahuaylas (Hostnig *et al.* 2007), Kurin suggests that these Quichua populations lived near the modern towns of Pucullu and Andarapa to the northwest of Laguna Pacucha along the Toxsama River valley. Kurin (2016:61–63) argues that among the 63 original Chanka towns recorded in 1539, three were likely culturally and ethnically Quichua, and two of those have been identified on the ground.²¹ An additional eighteenth century reference also mentions a Quichua *kuraca* named Coicca [Coyca] who refers to himself as the cacique and governor of the town of Andarapa Vilcaporo (Hostnig *et al.* 2007, cited in Kurin 2016:54). In summary, the colonial document offers tentative support for Quichua populations living side-by-side with Chanka populations, at least through the Early Colonial Period. In addition, it is evidence of one of the few cases where we can identify the traditional territory of one of the Chanka *ayllus*.

THE REDUCCIÓN PERIOD IN ANDAHUAYLAS

An assessment of the impact of the Spanish *reducción* on the Chanka *ayllu* is supported by work by Bauer *et al.* (2010), Kurin (2016), Hyland (2016), and, more generally, by Mumford (2012). Mumford's (2012:3) invaluable work on Toledo's *reducción* campaign, documents the complex effects of the forced downward resettlement of existing highland populations. More specifically, he argues that the colonial resettlement campaign was violent and exploitative, yet recuperative at times, permitting the repositioning of indigenous lords under this order. Thus, there were convergent dynamics of erasure and upward social mobility, as well as cultural permanence. The Spanish colonial campaign "was designed to transform indigenous

society—but not entirely" (*ibid.*: 2012:2) and was built on existing Andean institutions. In addition, through resettlement, the Spanish tried to eradicate pagan, non-European religious and cultural traditions. However, as Nielsen (2008:229) asserts, while Toledo ordered local officers to destroy burials in towers and vaults in their districts,²² "fragments of ancestral memory survived in spite of repression and indoctrination" and miraculously remain inscribed on the landscape to this day.

The *Reducción* Period in Andahuaylas concentrated a depleted population in lower valleys, which forced different peoples of various social affiliations to live side-by-side during the late sixteenth century (Bauer *et al.* 2010:46). This concentration reflects a diverse cultural and ethnic landscape, the result of over three millennia of human occupation. The *encomienda* document of 1539 confirms a diverse local population, which crosscut various social classes and identities. Documentary evidence confirms that Andahuaylas included the various Chanka *ayllus*, Inca nobility (*orejones*, *tucuyrico*), Quichuas and *mitma* colonists (Aymara, Yungas, Chachapoyas) relocated from across the central Andes (Julien 2002). In this way, the *Reducción* Period produced a melting pot of peoples and cultures, which are still reflected in local toponyms and surnames in Andahuaylas.

The *reducción* campaign also resulted in the growth in number of member *ayllus* within Chanka moieties. As aforementioned, this is likely the result of collapsing and consolidating *ayllu* structure amidst a demographic decline (Bauer *et al.* 2010:42). Similarly, Mumford (2012) asserts that colonial period *ayllus* in the highlands were not static, but "survived while changing. *Ayllus* shrank, vanished or merged

²¹ Kurin (2016:61–63) has matched toponyms for three Quichua towns including Pocollo [Pucullu], Guarillane, and Tororo [Toruru].

²² Between 1569 and 1571, Cristóbal de Albornoz personally visited Andahuaylas and destroyed over 2,000 shrines (see Bauer *et al.* 2010: 39; Hyland 2016:119–120).

due to reducciones' depopulation, while new ones sometimes appeared" (*ibid.*:165). This quotation highlights the flexible nature of the *ayllu*, especially in the face of numerous pressures during the Colonial Period, and during Chanka times.

Through early colonial descriptions,²³ a 1570 census, and later *visitas* (inspection tours) in the sixteenth century (1568, 1573, and 1594 tribute lists) we are fortunate to see the changing makeup of the local Chanka *ayllus* (Table 2). As mentioned earlier, the 1573 tribute list mentions that the most powerful *ayllu* of the Hanan Chanka was the Guasco *ayllu*, and for the Hurin Chanka it was originally the (Tomay) Guaracas *ayllu* (Table 2, Figure 8). Between 1573 and 1594 we see additional *ayllus* added to the original set of five. Bauer *et al.* (2010:42) attribute the growth of member *ayllus* to the collapse and consolidation of some neighboring social systems amidst the demographic decline in the Chanka heartland. Kurin (2016:64) argues that the Colonial Period depopulation was largely due to repeated epidemics as well as to proto-historic imperial policies by the Inca (*mit'a* [labor tax] and *mitimaes* [subjugate populations resettled in new lands]) and by the Spanish (forced labor), rather than a self-directed mass out-migration away from Andahuaylas. In fact, colonial *visitas* document a drastic decline in population on the order of ~2 percent per year

in the Andahuaylas region (Julien 2002; Kurin 2016:64), a trend seen in other areas of the central highlands (Cook 1981).

Finally, the notable change in power within the Hurin Chanka moiety (from the [Tomay] Guaracas to Guachaca *ayllu* during Inca times) may, at first glance, suggest a short-lived struggle amidst a tumultuous colonial period.²⁴ However, Hyland's (2016) work in Pampachiri, at the southern frontier of the Chanka territory, suggests that this power struggle did not disappear, but rather worsened over several centuries, and was amplified by the abusive Catholic priest, Father Juan Batista de Albadán. This example highlights the impacts on Chanka social organization of the Inca and, subsequently, the Spanish occupation, and how shifting power among local ethnic lords would continue to play out for centuries.

CHANKAS OF THE PUNA, CHANKAS OF THE VALLEY

In the late seventeenth century, Chanka populations begin to be referred to as the "Chankas de la puna" and "Chankas del valle" and are described in local legal (ADC, Corregimiento de Andahuaylas, Legajo 1 [1626–1672]; ADC, Corregimiento de Andahuaylas, Legajo 2 [1680–1699]; Visita de 1684; AGN, Superior Gobierno, Legajo 10, Cuaderno 210) and in regional land claim documents (Bauer *et al.* 2010:42–46; Hostnig *et al.* 2007). The latter corresponds to the southern region (modern Huancaray, Cachi, Huayana, and Pampachiri districts) with higher altitude terrain, and the latter includes the northern region (modern Andahuaylas, Talavera, San Gerónimo and

²³ For example, in his description of the battle at Chuquinca in 1554, Guaman Poma de Ayala (1980 [c. 1615]:400–401 [432–433]) states that the Chanka were organized into the Hanan Chanka and Hurin Chanka. During the battle, the Chanka warriors allied with the Spanish crown to fight against the Spanish rebellion in Peru led by Francisco Hernandez Girón. In recounting the battle, in which the Spanish separatists prevailed, Guaman Poma de Ayala states that the Hanan Chanka were led by León Apo Huasco while the Hurin Chanka were led by Juan Huaman Guachaca. At that time, the former was the designated leader of the entire Chanka ethnic group, while the latter was the leader of the lower Hurin moiety.

²⁴ Bauer *et al.* (2010:45) also note that in 1606, because of a flawed tributary census, the leader of the upper moiety was removed and replaced by his nephew. At the same time, the leader of lower moiety was elevated to cacique principal, leader of all the Chanka, a reversal of power between moieties that became permanent.

Pacucha Districts) with lower altitude, valley terrain (Figure 9).

It is helpful to understand the historical context of this phase of the Colonial Period. It was during this time that “the Spanish clergy invented a kind of missionary ethnography for researching non-Christian beliefs of Andean ‘Indians’” to further the campaign of the extirpation of idolatry (Salomon 2018:24; Hyland 2016:119–120). It was through these closer observations of Andean highlanders that the Spanish began to hear of the lowland or valley based agriculturalists and town dwellers (*llactayoc*) called *huaris*; and the more uncivilized puna herders referred to as *llacuaz*. Citing Arriaga (1968 [1621:116]), Pierre Duviols (1973) describes how Indians in the highlands were asked by the Spanish to define themselves as *llacuaz* or *huari*, with the latter considered as autochthonous and the former believed to be outsiders who originated from far away places, often to the west (Salomon 2018:25–27). According to Arriaga (1968 [1621:116] cited in Salomon 2018:25), the *llacuazes* fervently worshiped their mummified ancestors (*malquis*) as well as the *huaris*, the founders of the earth or the persons to whom it first belonged. Based on this evidence, Salomon (2018:25) argues that generally there were distinct sets of *huari* and *llacuaz ayllus*, with the former believed to be descendants of the ancient dwellers in the western valleys, who worshiped a range of local shrines (*huacas*), such as monoliths, cliffs, springs, and caves. Conversely, the *llacuaz* viewed as outsiders, were believed to descend from llamas and alpacas and worship the “power of the sky and altitude” (*ibid.*: 2018: 25–26).

Do the traditionally conceived Chanka moieties of Hanan and Hurin geographically correspond to the “Chankas of the Puna” and “Chankas of the Valley” and, by extension, to broader cultural divisions (*llacuaz/huari*, *Piwi/Wakcha*)? We can, for example, see that according to Kurin (2016:61–63), the Quichua enclave

and *ayllu* was part of the Hurin moiety (Table 2) and was located in the northern part of Chanka territory, in a low valley near the town of Pucullu. Additionally, Kurin (*ibid.*:84) argues that human remains from a *machay* in Ranracancha, near the small modern town of Ocobamba, were also likely members of the lower moiety in far northwestern Apurímac. Conversely, the towns of Cachi to the west of Andahuaylas (*ibid.*: 82–84) were of the Hanan moiety, as were towns in higher puna terrain to the south. Skar’s (1982) ethnographic work in the nearby village of Matapuquio, in the Pincos Valley, also suggests that the puna pastoralists were also members of the upper moiety, even in the Hacienda Period.

In fact, the pattern of pastoralists belonging to the upper moiety and agriculturalists belonging to the lower moiety has been noted elsewhere in the central Andes. In Cordillera Negra in northern Peru, Lane (2007:79) describes that *Llacuaz* herders in the Huaylas region as representing the upper moiety (in comparison with *Huari* agriculturalists) since they had preferential access to highland water and were able to command labor for the repair and maintenance of hydraulic structures (e.g., silt reservoir dams) in the puna. While similar hydraulic structures have not been recorded in the Andahuaylas region, these data nevertheless indicate that Chanka pastoralists belonged to the *Hanan* moiety at least in the late seventeenth and early eighteenth centuries and likely earlier. In this case, it appears that the colonial Indian parish or *doctrina* (Chankas of the Puna, Chankas of the Valley) corresponds to traditional moiety divisions, which could be much older.

While the traditional *huari/llacuaz* model outlined by Duviols (1973) emphasizes the spatially and culturally dichotomous natures of agriculturalists and pastoralists, in cases where there was separation, there remains to this day an interdependent relationship among both groups (Lane 2006, 2007; Murra 1972; Parsons *et al.* 1997, 2000). In fact, the colonial record

also confirms the existence of what Salomon (2018:27) terms “bi-ethnic” communities of agriculturalists and pastoralists, who lived together (permanently or semi-permanently) and have been confirmed both archaeologically (e.g., Kellett 2010; Parsons *et al.* 1997, 2000) and ethnographically (i.e., Brush 1977). This scenario reflects the opposite end of the agro-pastoral spectrum in which single settlements housed communities of more homogenous populations of agro-pastoralists, a pattern widely noted ethnographically in the central Andes (see Masuda *et al.* 1985). Overall, interdisciplinary research confirms an agro-pastoral spectrum with variable integration among communities of late prehistoric agriculturalists and pastoralists in the central highlands (Capriles and Tripcevich 2016; Kellett 2010; Lane 2006; Masuda *et al.* 1985; Parsons *et al.* 1997, 2000).

BIOARCHAEOLOGICAL AND ARCHAEOLOGICAL EVIDENCE OF THE HERDER/ AGRICULTURALIST DICHOTOMY

In this section, using archaeological and bioarchaeological data, I briefly assess the reality of separate Chanka moieties, which may have been defined along the traditional farming and herding economies, during the LIP. In the Colca Valley, for example, a range of interdisciplinary research testifies that upper valley Collagua pastoralists and lower valley Cavana agriculturalists were culturally and economically distinct, and even practiced different forms of cranial modification to clearly mark each population (Velasco 2018; Wernke 2013).

In the Andahuaylas region, there are two main forms of cranial modification among Chanka populations, which are argued to potentially correspond to moiety divisions linked to higher elevation, *puna* pastoralists and lower elevation *quechua* and *yunga* agriculturalists. Using cranial data from Cachi (25 kilometers to the west of Andahuaylas), Peña del Castillo and Altamirano (2020; see Kurin 2016) find that Chanka individuals from higher elevations had

a higher rate (21 percent) of vertico-bregmatic cranial modification, while those from lower valleys had higher rates (79 percent) of semi-horizontal cranial modification. These categories may be similar to broad categories previously discussed by Kurin (2016) and suggest that regional social groups, specifically moieties aligned to herding and farming populations, may be identifiable through the application of cranial metrics.

Are there traditional archaeological correlates that correspond to distinct pastoral and agricultural groups among the Chanka? Recent survey work by the Andahuaylas Puna Project (PAPA) (Berrocal and Kellett 2019) did not find noticeable differences in material remains (e.g., corral construction style, ceramic styles) between those recorded in the higher puna and the lower valley (Bauer *et al.* 2010). Similarly, archaeological differences were absent among higher and lower elevation Chanka sites on the north side of the Chumbao Valley (Kellett 2010). While these types of meaningful social differences in the material record can be challenging to assess archaeologically, it does not necessarily mean they did not exist.

Can archaeological settlement data reflect the existence of *moiety*-based divisions between agriculturalists and pastoralists in the Chanka heartland? The answer depends in part, on which area of the Chumbao Valley one is examining (Figures 3). The main valley and terrain to the north is a very dissected, high relief landscape which contains long ridgelines, steep slopes, and limited puna grasslands.²⁵ The Chanka Phase settlement pattern recorded by Bauer *et al.* (2010) and by Kellett (2010) reflects the aggregation of populations into large (1–>5

²⁵ Within the PAC project area at the northern margin of Andahuaylas, Kellett (2010:28) calculates that only 12 percent of terrain is puna (>3800 masl). This contrasts sharply with the PAPA project area on the southern side of the valley, which contained 76 puna sites.

hectares) settlements along narrow high elevation ridges (Figure 4). As I have argued elsewhere, spatially constrained populations relocated to high elevation ridges primarily for defensive purposes, resulting in the transformation of these new settlements into more integrated and cohesive communities of agro-pastoralists (Kellett 2010, 2017). Bauer *et al.* (2010; Bauer and Kellett 2010) confirm the widespread movement and relocation of populations uphill to newly constructed fortified sites which were occupied for up to three centuries (Chanka I Period). The “situational cooperation” (Kohut 2016) required during this risky period appears to have blurred the prior social and economic boundaries. Excavations at the large hilltop settlement of Luisinayoc (PAA-220) and Achanchi (PAA-225) do not demonstrate internal sociocultural (*ayllu* or moiety based) differences that could be expressed by ceramic styles or architectural forms. Furthermore, the spatial proximity of camelid corrals to the residential sector (e.g., patio groups) at the site of Luisinayoc, for example, do not support the spatially distinct *huari/llacua* model described by Duviols (1973), at least for the north side of the valley.

On the south side of the valley, the topography is quite different, and there exists a vast, low relief expanse of high altitude puna, which reveals a different pattern (Figure 9). In this area (which generally coincides with the territory of the “Chankas of the Puna”) there is an abundance of puna grazing land and water, allowing for spatial separation from valley agriculturalists and stimulating the development of more separate, specialized socio-ethnic groups, as noted elsewhere in the central Andes (Parsons *et al.* 1997, 2000).

Recent survey work completed as part of the Andahuaylas Puna Project offers new settlement and landscape data from the high puna to the south of the main valley (Berrocal and Kellett 2019; Kellett *et al.* 2019) (Figures 3, 11). First,

it appears that there was an intensive occupation and use of the puna, which climaxed during the LIP of the Andahuaylas sequence (Figure 11). Among 159 sites recorded by the project, 68 percent ($n=107$) date to the Chanka Period, of which 67 percent ($n=72$ of 107) include some type of stone-built corral structure (Figure 11). There are a broad range of sites which contain corrals, including small (0.1 hectare) single corrals, all the way up to large residential herding sites (>5.0 hectares) with numerous houses and animal enclosures. The most common type of corral contains between 2 and 10 camelid enclosures, and is no larger than 2.0 hectares. Given the somewhat regular and high density of small-to-medium size corral structures, it is highly likely that camelid pastoralism was decentralized, and was organized at the level of the household or extended family, similar to the pattern documented ethnographically in the region (Flannery *et al.* 1989; Skar 1982). In addition, the survey team recorded only 14 percent ($n=12$ of 84) of corral sites which yielded obvious house structures ($\sim 3\text{--}5$ meters in diameter), which were attached to corral structures. An exception to this non-residential pattern at corrals were the two large residential sites of José Laimi [PAPA-071]) and Chaja (PAPA-097), each of which likely housed no more than a few hundred people at a time (Figure 11). While preservation bias and the high mobility of camelid pastoralists may distort the picture, this evidence reflects a high camelid population, but only a modest herding population that resided permanently (or seasonally) in the southern Andahuaylas puna during the LIP.

To assess whether these puna pastoralists were more autonomous or more integrated with agriculturalists closer to the main valley, we must examine the settlement pattern in the main valley. Figure 12 shows total sites (displayed by differing site areas) recorded by the PAA (2002–2004) by Bauer *et al.* (2010), as well as those recorded by the more recent PAPA

(2018) by Berrocal and Kellett (2019). One can see that the combined settlement distribution is somewhat continuous from the valley bottom (2,900 masl) to the upper margin of the lower puna (4,400 masl), but with a denser concentration of sites in the puna. I argue that this pattern reflects neither full integration, nor full specialization by Chanka agriculturalists and pastoralists. Even more, these essentialized categories mask the archaeological variation on the ground. For example, the diverse residential site of José Laimi (PAPA-071) located at the *suní*/lower puna ecotone (3,900 masl) contains camelid corrals, residential terraces, and houses and reflects a diverse, yet integrated agro-pastoral community. Conversely, the site of Chaja (PAPA-097), located much higher (4,200 masl) in the puna contains numerous houses and corral enclosures, but reflects a more specialized pastoral community. In this way, Chanka pastoralists were highly variable in their economic approach and social makeup, especially in an era of heightened social and economic risk. Nielsen (2009:30) aptly articulates this period in the *altiplano* region of N. Argentina:

During the thirteenth and fourteenth centuries when segmentary polities formed in the lower regions in a climate of increasing hostilities, many herders were absorbed into corporate and hierarchically organized agro-pastoral economies based on reciprocity and redistribution, but high-altiplano pastoralists kept a relative autonomy and continued their specialized and relatively acephalous way of life in the interstices of this conflict-ridden geopolitical mosaic.

In a similar way, we can see that pastoralists were far from homogenous, and the degree of articulation with lower valley lifeways was dependent on numerous social, cultural, economic, and environmental factors. Even so, the settlement data suggest that the most likely area of interaction and integration was the lower

margin of the PAPA survey area and upper part of the PAA survey area where groups came together for the exchange of goods and information and mutual social and ritual activities, including burial rites (black box in Figure 12). Even today, this area of the upper *suní* and lower *puna* in Andahuaylas displays a unique combination of agro-pastoralism with intensive quinoa and potato cultivation, as well as the mixed herding of native and Old World grazing animals. In summary, the analysis of settlement data on the south side of the Chumbao Valley does not currently reflect a clear, spatially defined agriculturalist/herder dichotomy, nor clear moiety divisions for Chanka populations during the LIP. Rather, the settlement data reflect a more complex picture with variability in agro-pastoral integration and specialization across the upper *suní* and lower puna zone.

DISCUSSION AND CONCLUSIONS

Using an interdisciplinary perspective, this paper has explored the origins and changing makeup of Chanka social organization in the Andahuaylas region. As is clear from the discussion, such an approach offers strength as well as weaknesses for the identification and comprehension of prehistoric and historic social organization, in particular *ayllu* and moieties. In this section, I offer some conclusions on the study of Andean social organization.

To begin, it is clear that there are a number of continuing challenges in tracing the origins and shifting nature of the *ayllu* in the archaeological record. Ethnohistorical data, in particular, are essential for identifying and mapping social units across space, since material evidence can be limited in its ability to clearly distinguish social groups such as the *ayllu*. In the case of the Chanka, we have a list of affiliated towns, as well as various sixteenth and seventeenth century descriptions of the changing make-up of the *ayllu*-based moieties in the Colonial Period. However, existing research completed by Julien (2002), Bauer *et al.* (2010), and Kurin (2016)

has been unable to spatially define these social units “on the ground”. The challenge remains to clearly connect the Chanka archaeological record to the colonial information which spans generations and centuries.

Bioarchaeology offers some promise through the morphological analysis of skeletal remains. Cranial shape, including types of deformation, can distinguish between larger scale social groups. In the case of the Chanka, it appears that specific types of cranial modification were linked more closely to ranked kin groups rather than specific *ayllu* (Kurin 2016). However, regional bioarchaeological research supports the potential to distinguish between cranial forms among puna pastoralists and quechua agriculturalists, which may distinguish general moiety divisions linked to these socio-ethnic groups (Kurin 2016; Peña de Castillo and Altamirano 2020; Velasco 2018). The rapidly expanding field of ancient DNA offers particular promise towards elucidating kin relations among those interred among several types of mortuary structures.

The archaeological evidence in Andahuaylas offers a broad view of changing social organization; however, to date, material correlates, such as ceramic styles, have yet to be refined to allow for the identification of individual *ayllu*. However, existing settlement data generally support Isbell’s (1997) thesis, which argues that *chullpa* (and *machay*) focused mortuary traditions become commonplace during the early part of the LIP (Chanka I). Although still unconfirmed, the distribution of mortuary sites in Andahuaylas may indeed correlate with social divisions (e.g., *ayllu*, moiety) across the cultural landscape. The risk-laden social and environmental landscape appears to have altered life significantly in the Chanka I Period with increasing levels of economic stress and threats of interpersonal violence, especially within the main Chumbao Valley. The data suggest that local *ayllus* and their territories were fragmented in some cases,

and consolidated in others, via the fission-fusion settlement dynamic and construction of new residential hilltop settlements. These temporary multi-century *ayllu* formations provided “situational cooperation” (Kohut 2016) within and among hilltop sites. They formed unique collectives, inhabited by a melting pot of agro-pastoralists, which supported the diverse subsistence and defensive needs of these essential communities. There can be no doubt that the temporary aggregation of different peoples and the experiences of living in these large settlements would not be forgotten and would be recalled for subsequent generations.

This paper also highlights how prehistoric agriculturalists, pastoralists and agro-pastoralists, contributed to the make-up of Chanka social organization. Settlement data from previous survey work support the notion of an agro-pastoral spectrum, which was variable and adaptive in the face of changing environmental, social and economic conditions. Recent survey data from the southern puna do not support a clear *huari/llacua* dichotomy, or distinct prehistoric moieties (“Chankas of the Puna”, “Chankas of the Valley”) as described by the colonial documents. Instead, the archaeological record reflects a more complex picture including a wide range of communities made up of varying combinations of agriculturists, agro-pastoralists and pastoralists.

Finally, the chronological examination of Chanka *ayllus* highlights the dynamic nature of Andean social organization. While Weismantel (2006) is correct that the community-based *ayllus* were resilient because they had to be in the face of larger, potentially threatening forces, we can also accept that their resilience was expressed through their adaptive and flexible nature (Lane 2007). On some level, traditional structuralist notions of the *ayllu* (e.g., B. J. Isbell 1978; Zuidema 1990) have translated to a more rigid, static, and essentialized understanding of Andean social organization including the long-

term social relationships between pastoralists and agriculturalists. The chronological examination of Andahuaylas peoples and cultures over the long term highlights the impacts that changing environment and shifting political landscape can have on local and regional social and economic organization. The Chanka, in particular, embody a more dynamic view and flexible understanding of the *ayllu* since they (like other prehistoric groups in the central highlands) were required to confront a multitude of risks in an exceptionally volatile social and physical environment between ~900–1250 C.E. In the face of salient demographic and settlement change and their subsequent defeat by the Inca and the Spanish, social and ethnic identities were splintered and rearranged, but stayed largely intact. Over the last millennium, the Chanka *ayllus*, and the communities of agriculturalists, pastoralists and agro-pastoralists that composed them, remained flexible, yet resilient, in the face of these powerful and dynamic forces.

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Site type	Cist tomb		Chullpa		Machay		TOTAL	
	n	%	n	%	n	%	n	%
Chanka Settlement Project (PAC)	2	25.0	3	37.5	3	37.5	8	100
Andahuaylas Puna Project (PAPA)	9	50.0	8	44.4	1	5.6	18	100
Total	11	42.3	11	42.3	4	15.4	26	100

Table 1. Frequency of Chanka Phase (1000–1400 C.E.) mortuary sites from the Chanka Settlement Project (PAC [2005–2006]; Kellett 2010) and the Andahuaylas Puna Project (PAPA [2018]; Berrocal and Kellett 2019).

1568		
	HANAN CHANKA	HURIN CHANKA
Caciques	Diego Condor Guacho (Cacique Principal)	
Ayllus	Guasca(o)	?
	Malma	?
	Apras	?
	Moros	?
	Pachuacarua	?
1573		
	HANAN CHANKA	HURIN CHANKA
Caciques	Francisco Condor Guacho (Cacique Principal)	Luis Tomay Guaracas (Segunda Persona)
Ayllus	Guasca(o)	Guachaca
	Malma	(Tomay) Guaracas
	Apras	Quichuas
	Moros	Caha
	Pachacaruas	Yana (Yanec)
1594		
	HANAN CHANKA	HURIN CHANKA
Caciques	León Apu Guasco (Cacique principal)	Luis Tomay Guaraca (Segunda Persona)
Ayllus	Guasco	Guachaca
	Macma	(Tomay) Guaracas
	Moros	Cachacc
	Pachacarua	Yanac
	Abras	Marma
	Inga	Achan Quichua
	Churichayo	Bilca Poros
	Yunga	

Table 2. Changing makeup of the Chanka moieties during the sixteenth century (adapted from Bauer et al. 2010:41; see also Hyland 2016:12–13).

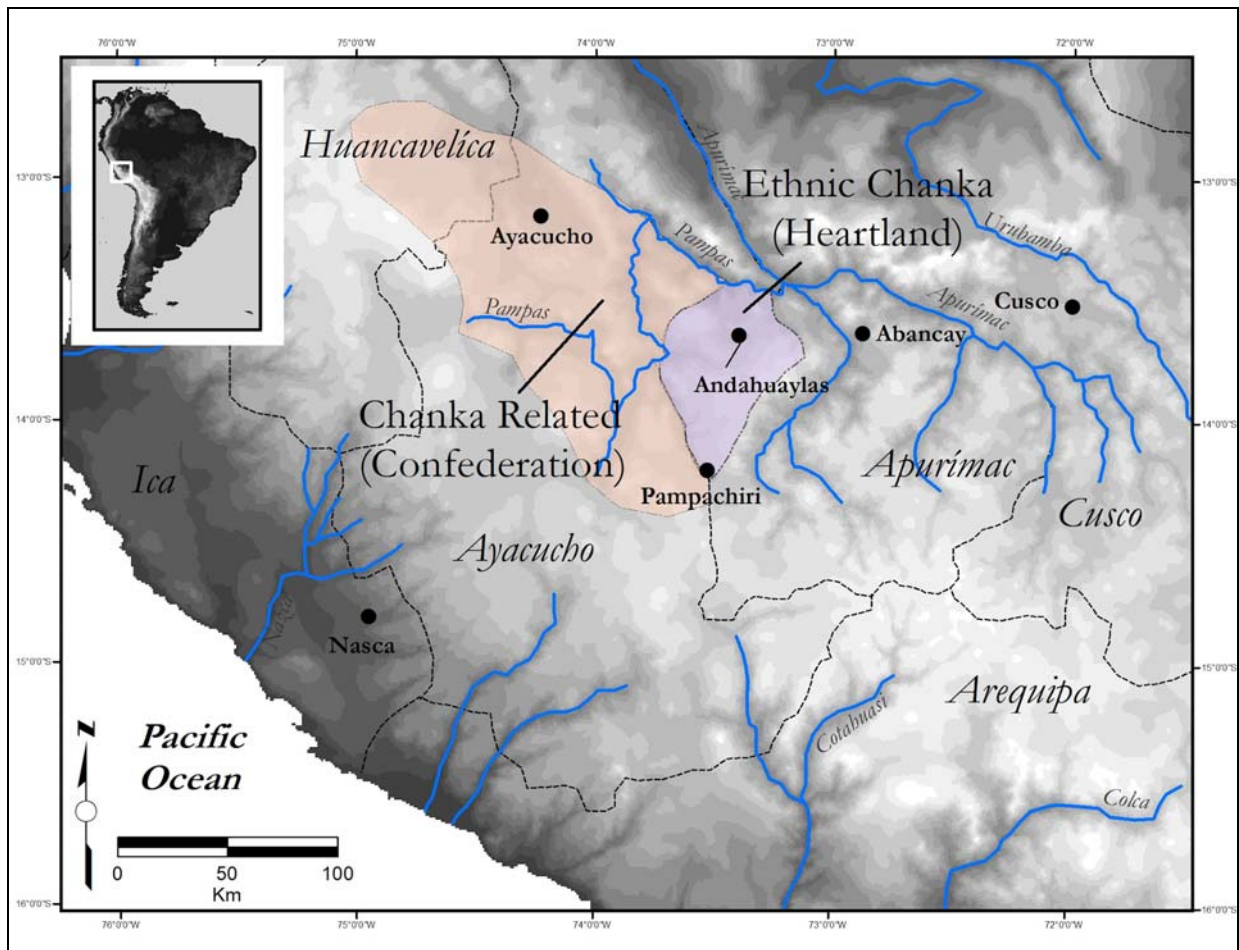


Figure 1. Map of the Andahuaylas region in the south central Andes showing the Chanka heartland and the approximate extent of the Chanka Confederation.

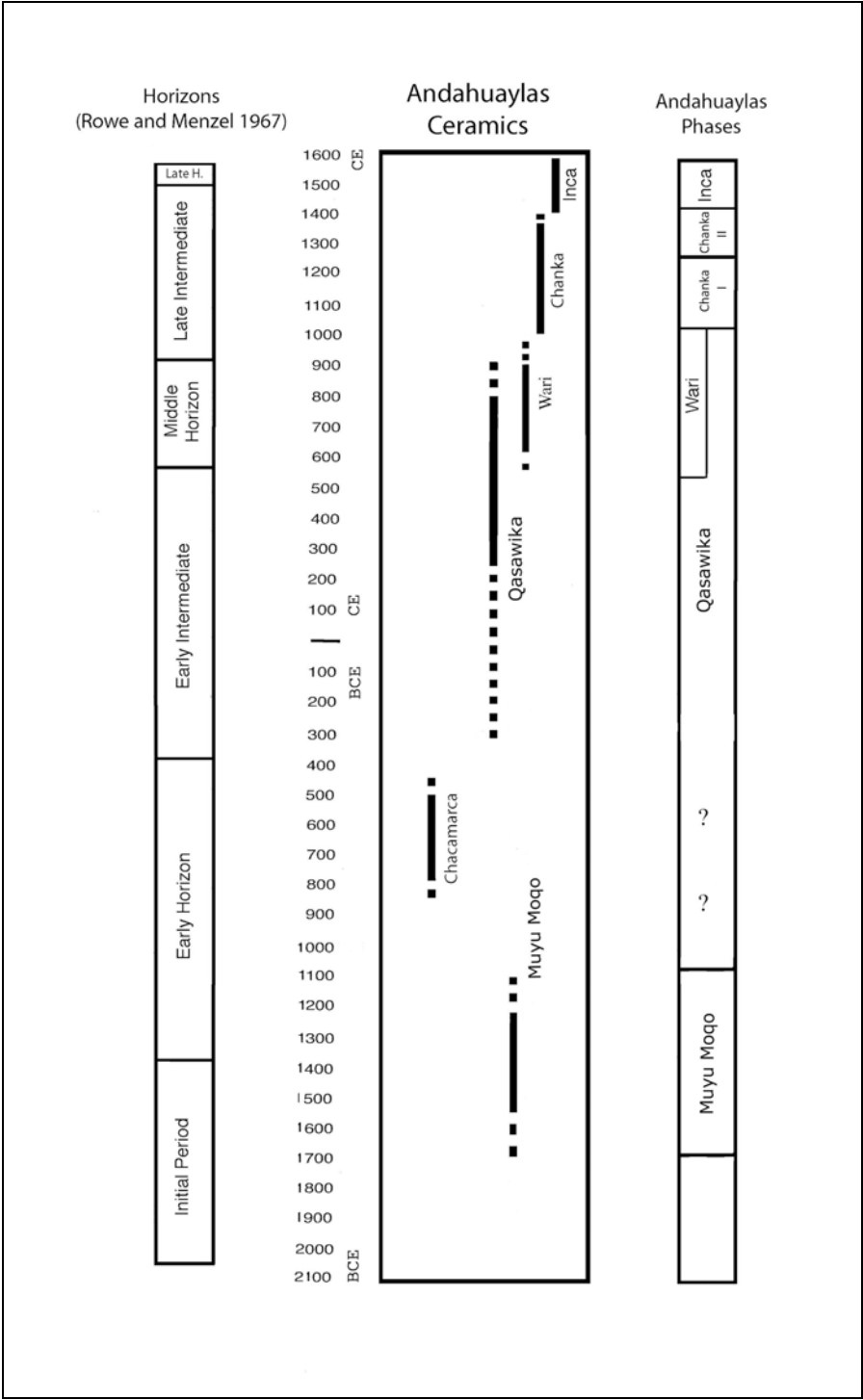


Figure 2. Andahuaylas chronology (adapted from Bauer et al. 2010:21).

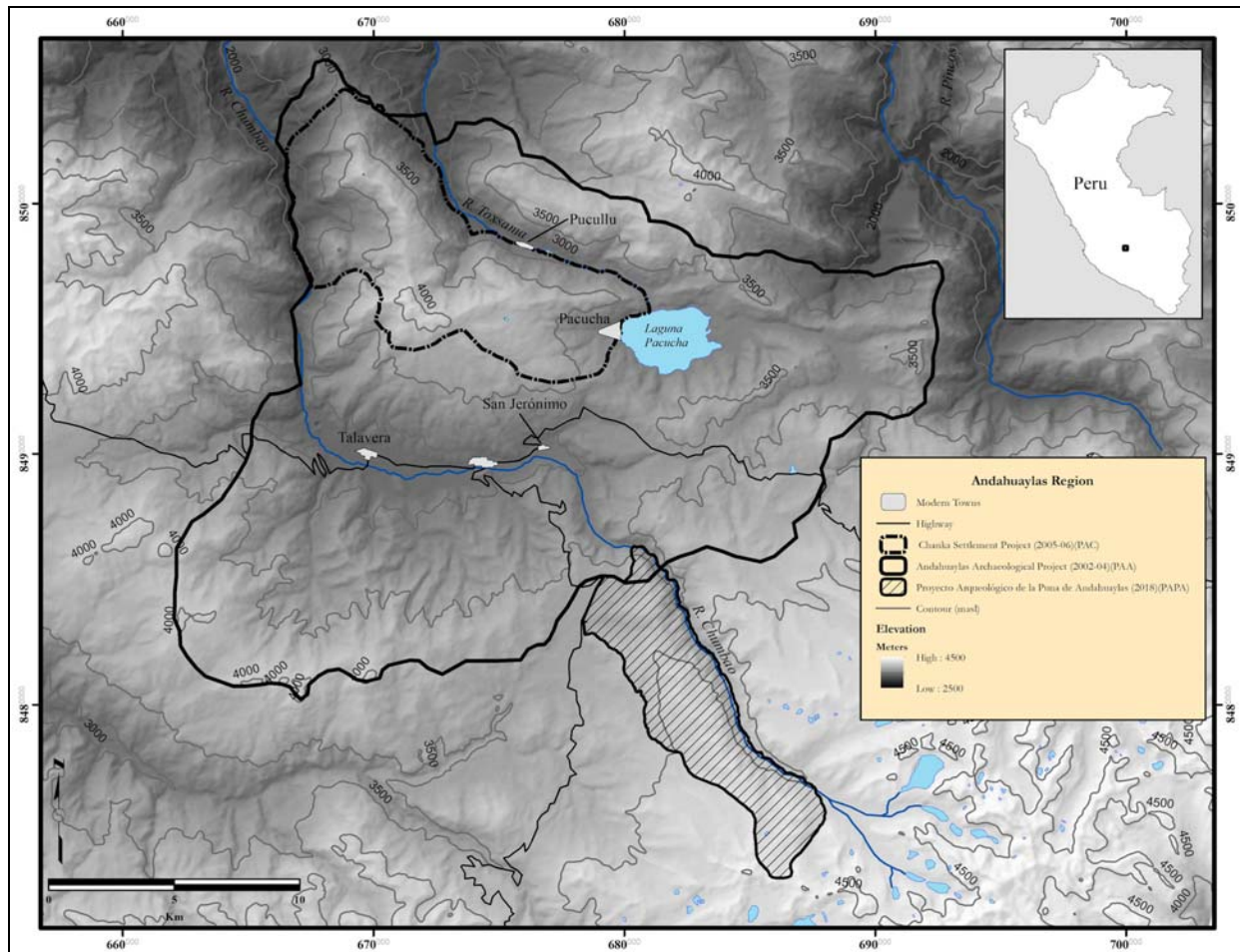


Figure 3. Map of recent archaeological survey projects in Andahuaylas.

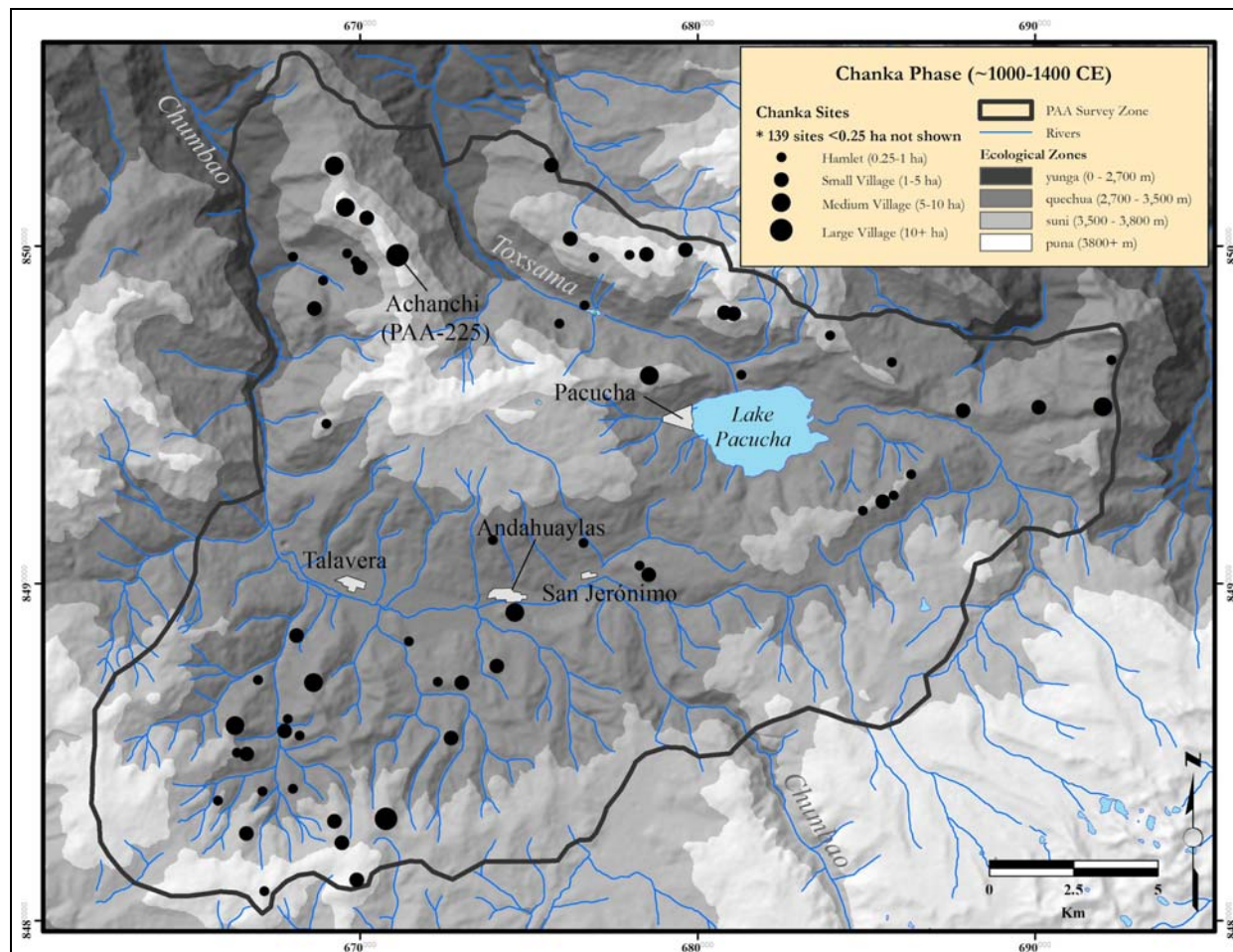


Figure 4. Chanka Phase (1000–1400 C.E.) settlement distribution in the Andahuaylas region recorded by the Andahuaylas Archaeological Project (PAA, 2002–2004; adapted from Bauer et al. 2010:74).



Figure 5. Large, fortified ridgetop site of Achanchi (PAA-225) recorded by Bauer et al. (2010) and excavated by Kellett (2010; Kellett et al, 2015).

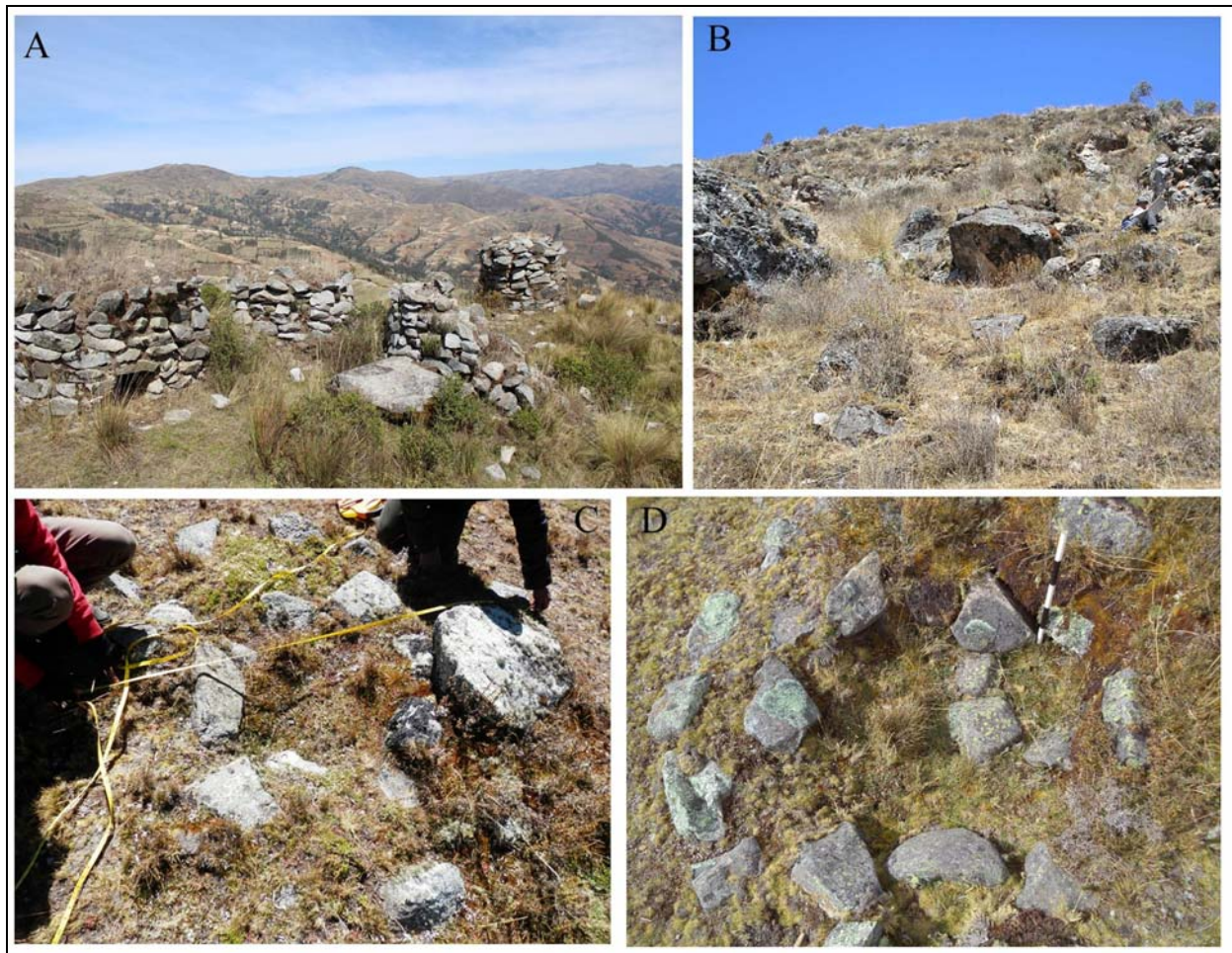


Figure 6. Sample of Chanka Phase burial sites recorded in the Andahuaylas region. A: site of Usuma Pata (PAA-893), the best-preserved chullpa complex in the Andahuaylas heartland (Photo courtesy of Villma “Patricia” Allcca Ossorio); B: small machay burial site (PAC-15) under large limestone boulder in center of photo; C: small, looted cist tomb (PAPA-051); D: example of double coursed chullpa foundation (PAPA-100).

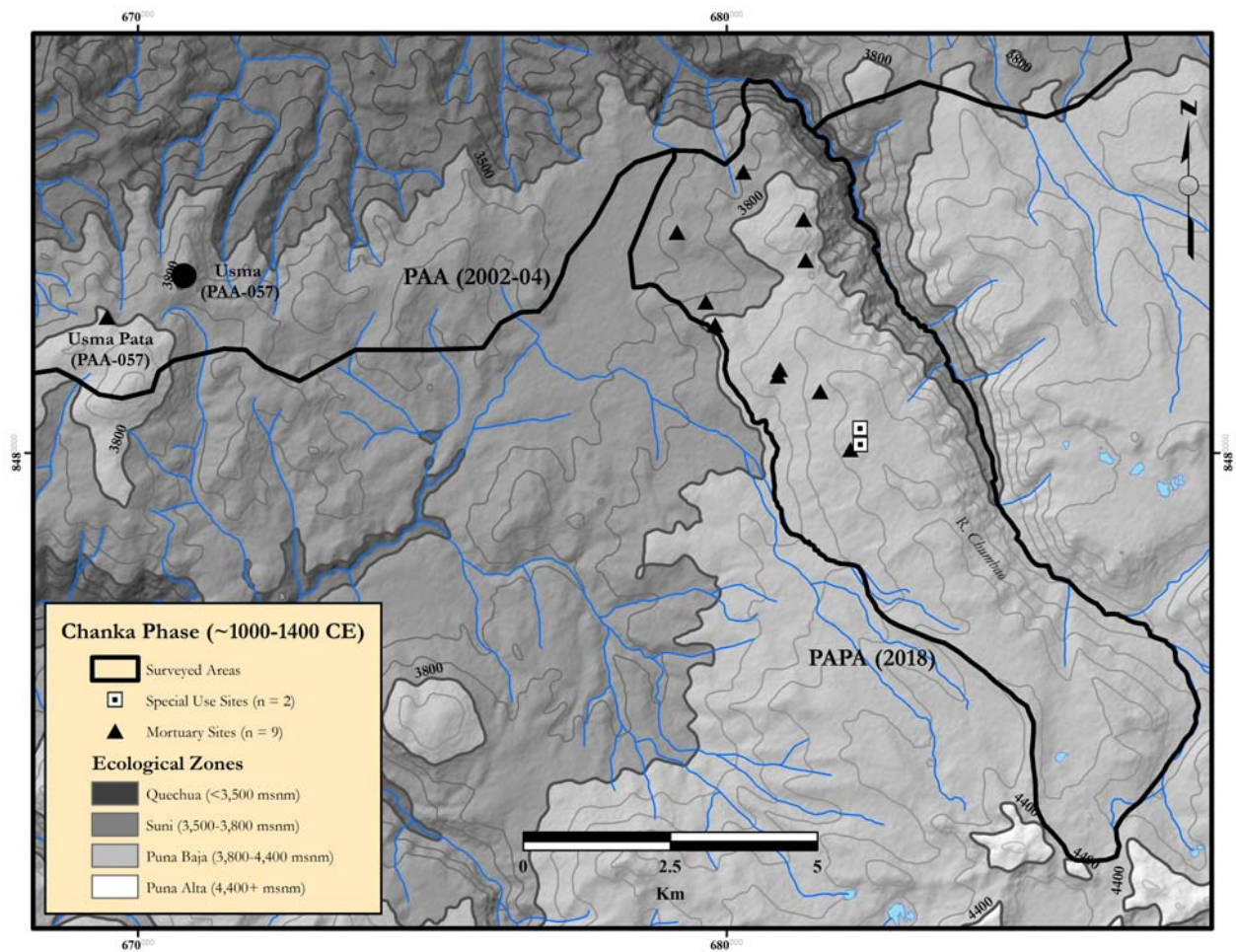


Figure 7. Map of the upper Chumbao Valley and puna lands with combined project areas from PAA (2002-2004) and PAPA (2018). Note locations of mortuary sites, which cluster near the suni/lower puna ecotone.

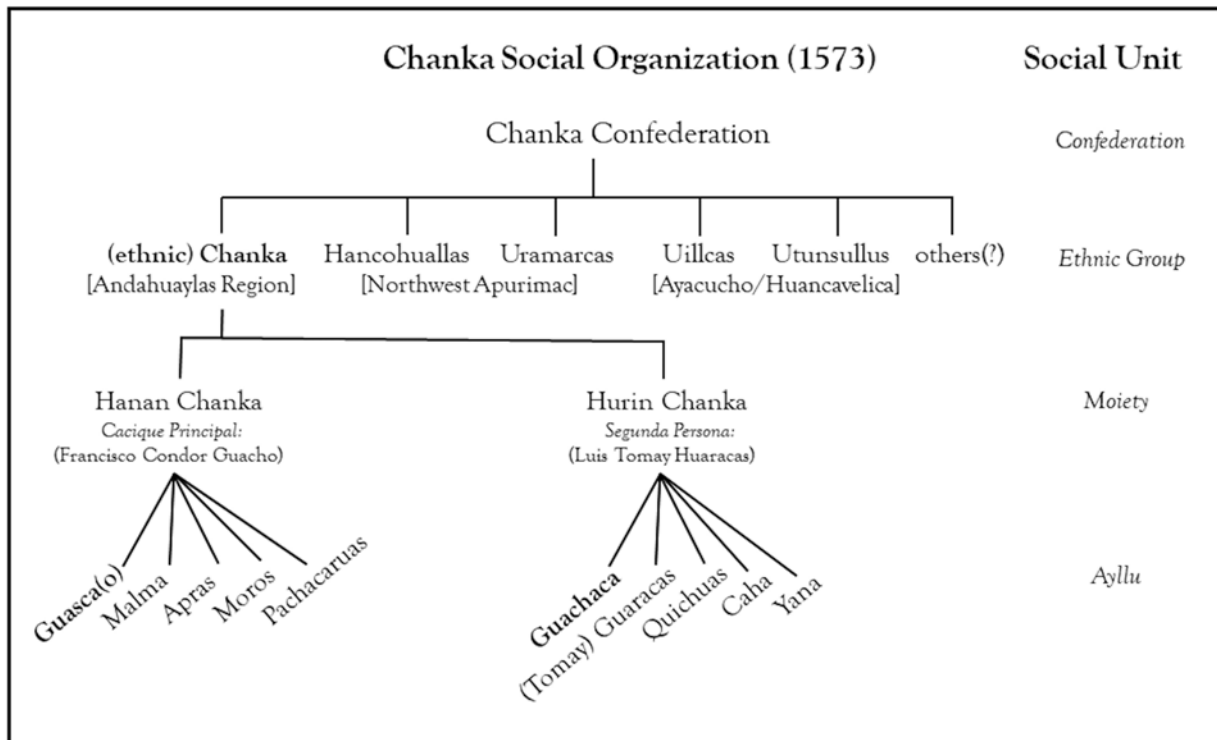
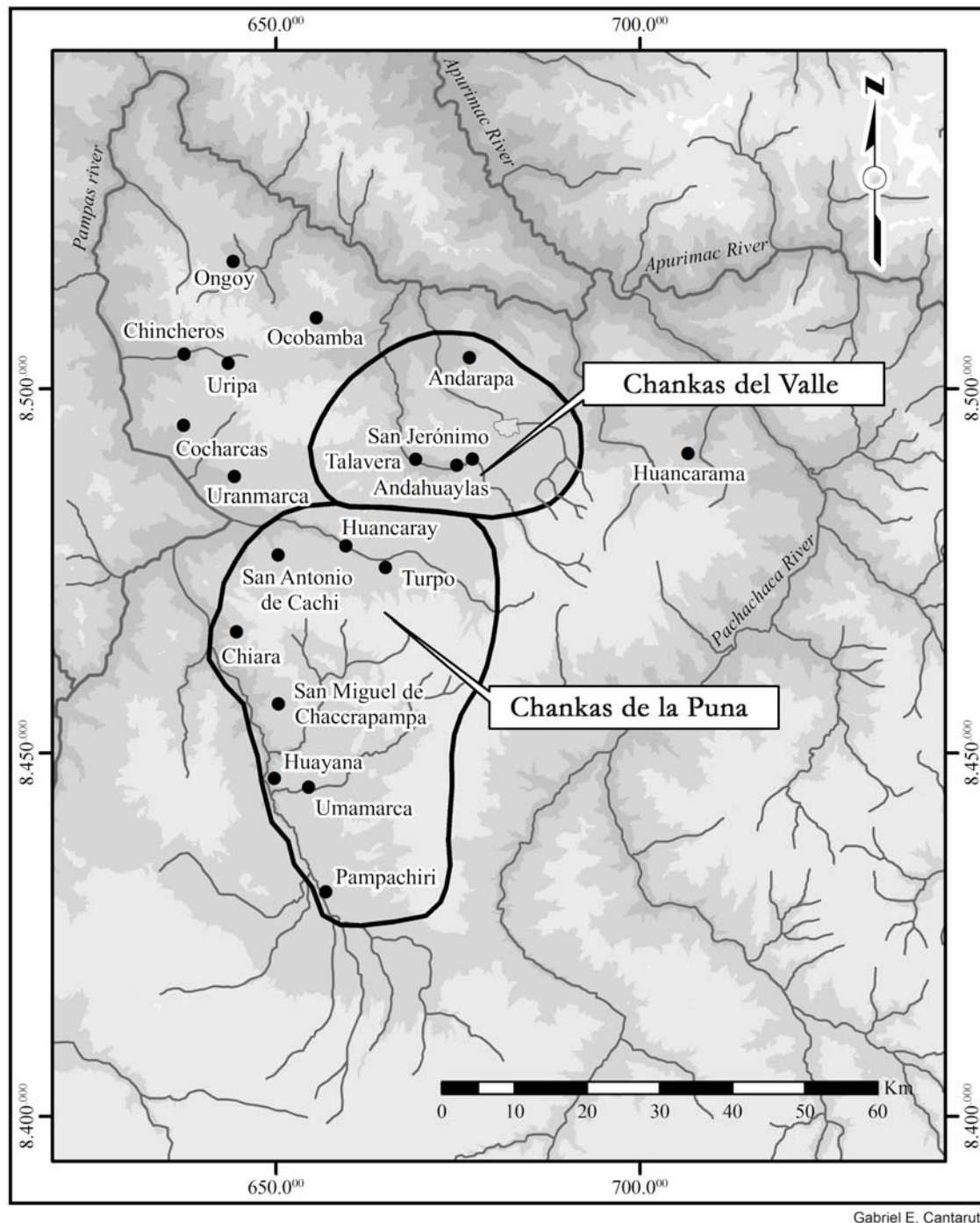


Figure 8. Diagram of Chanka social organization in 1573 based colonial documents (after Nielsen 2009:25).

Chanka confederation listed by Garcilaso de la Vega (1961[1609]:98, Book 4, Chapter 15) and ayllu membership listed in the national archives in Lima (AGN, Derecho Indígena, Legajo 3, Cuaderno 17; see Bauer et al. 2010:40–43). Ayllus dominant in 1574 are denoted in bold text.



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Figure 9. During the late seventeenth century, the Chanka are described as the “Chankas of the Valley” and “Chankas of the Puna” a designation that may stem from an older moiety division that distinguished between Chanka agriculturalists and pastoralists (reprinted from Bauer et al. 2010:42 with the permission of the Cotsen Institute of Archaeology, UCLA).

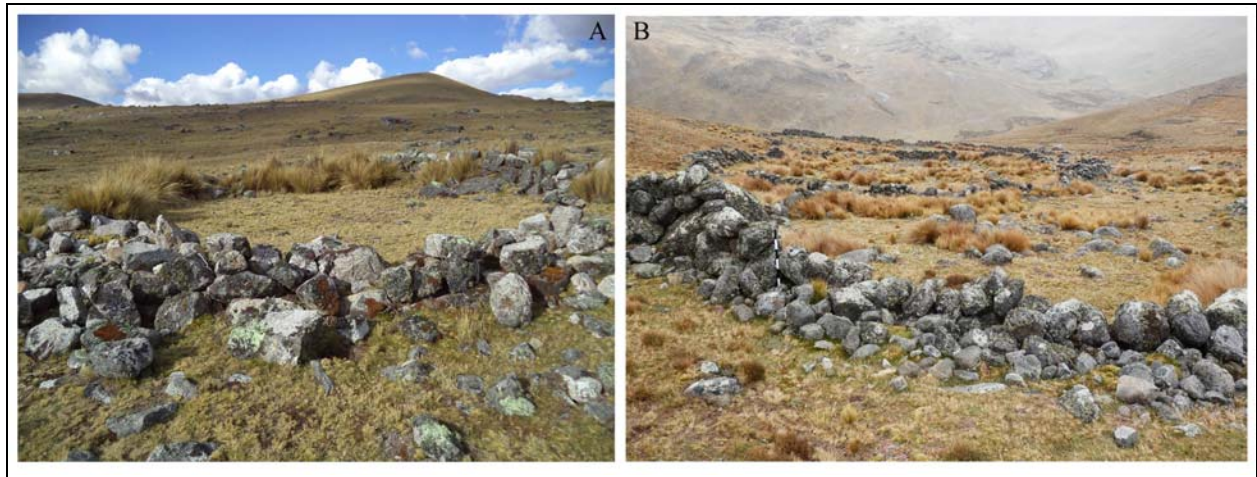


Figure 10. Examples of camelid corrals (A: small corral complex [PAPA-135]; and B: large corral complex [PAPA-010] recorded in the southern puna of Andahuaylas. Most of these pastoral structures date to the Chanka Phase (presence of diagnostic surface ceramics) and have been reused and altered during historic and modern periods.

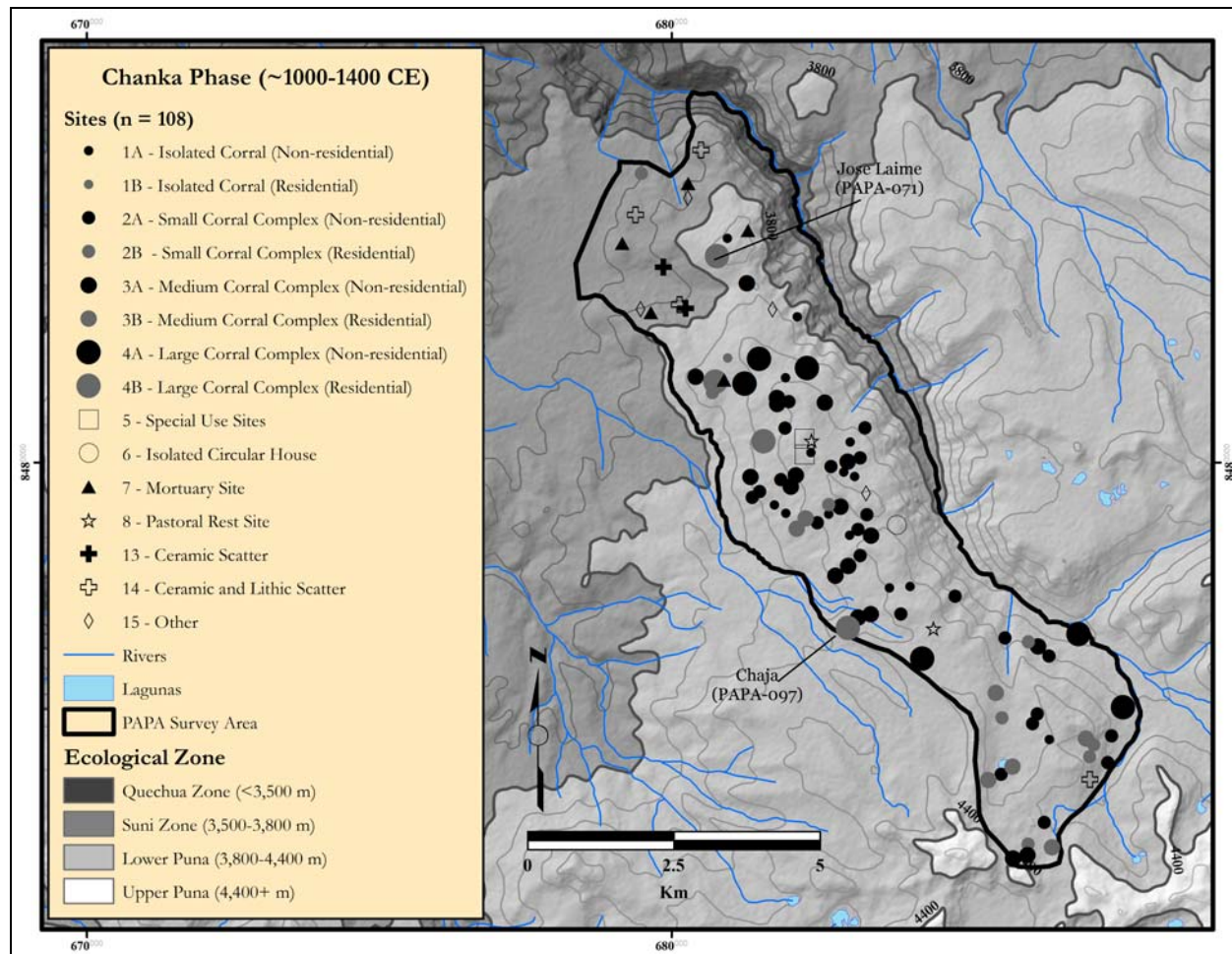


Figure 11. Chanka Phase (100–1400 C.E.) site distribution from the Andahuaylas Puna Project (PAPA-2018). Note dense distribution of camelid corrals and mortuary sites.

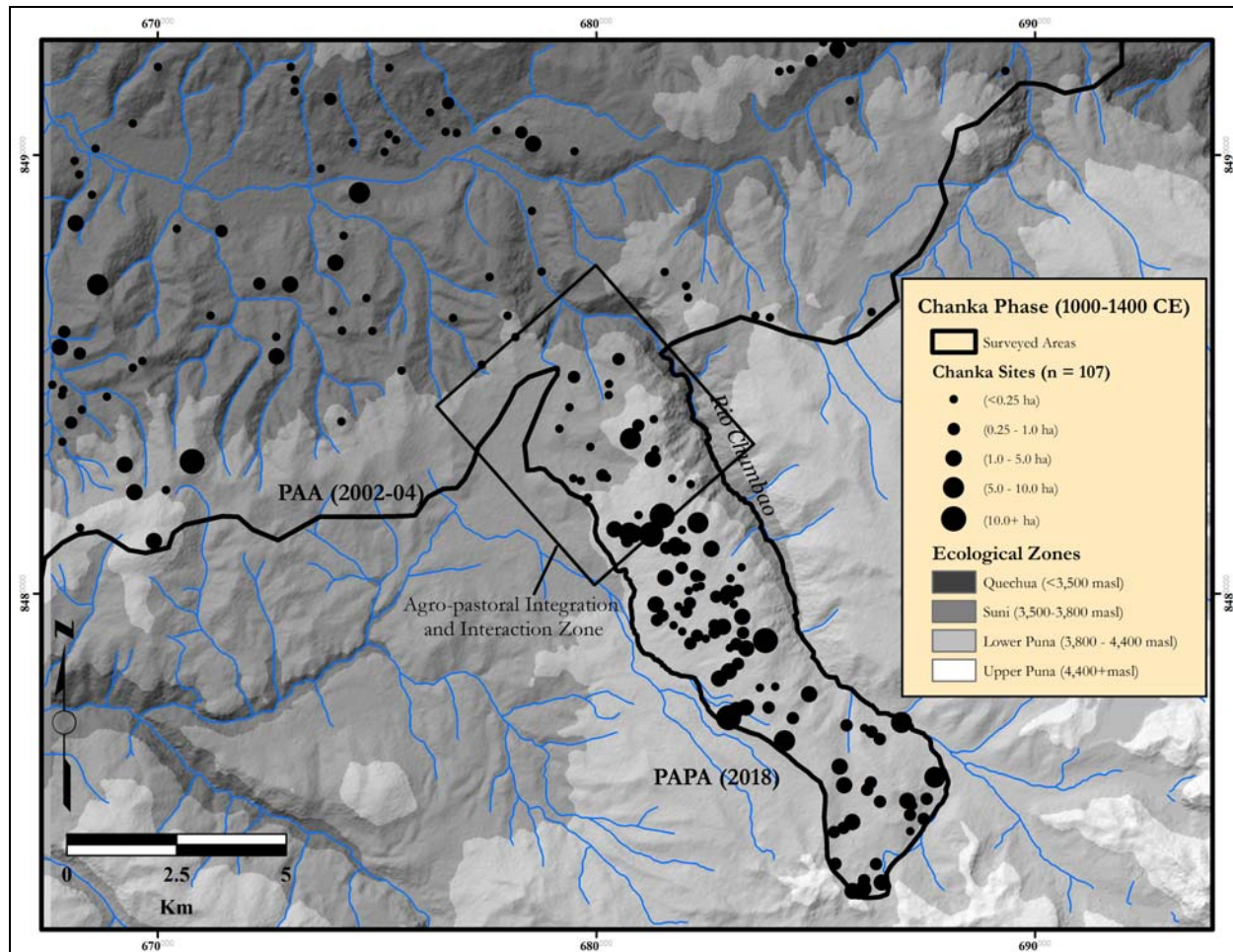


Figure 12. Map of upper Chumbao Valley and puna lands with combined project areas from PAA (2002–2004) and PAPA (2018) and recorded sites (shown based on site size only). A transitional zone in the upper suni and lower puna zone (shown as black box on map) likely served as an agro-pastoral integration and interaction zone between groups of Chanka farmers and herders.

