

Plotting Abandonment: Excavating a Ritual Deposit at the Wari Site of Cerro Baúl

By: [Donna Nash](#) and Susan D. deFrance

Nash, D., & Susan D. deFrance. 2019. Plotting Abandonment: Excavating a Ritual Deposit at the Wari Site of Cerro Baúl. *Journal of Anthropological Archaeology* 53: 112-132.
<https://doi.org/10.1016/j.jaa.2018.12.002>

*****© 2018 Elsevier Inc. Reprinted with permission. This version of the document is not the version of record. *****



This work is licensed under a [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](#).

Abstract:

Ritual was an effective power building strategy in many archaic states and early empires. In this paper we describe the ritual abandonment of a palace residence at the Wari site of Cerro Baúl in southern Peru. This exclusive ritual event brought provincial and local elites together and included a funerary internment, feasting, and the intentional creation of numerous and varied offerings throughout the structure. We document the patterning and contents of these deposits including food animals, non-consumable and exotic animals, lithics, and broken ceramic vessels. We posit that lavish offerings such as the one we document here were sponsored by the state and communicated institutional facts to participants. Elements of these rituals may have been repeated across the Wari Empire and been integral to Wari institutions. As such, the study of ritual depositions and other patterned practices may be one means by which the presence of Wari elites or control by the Wari polity may be assessed through material remains. The features of ritual deposits may shed light on the strategies elites used to exert power over their subjects. This methodology may have broad application in the study of expansive polities in the Andes and elsewhere.

Keywords: Peru | Empires | Diacritical feasting | Middle Horizon | Political economy | Offerings | Elite strategies

Articles:

1. Introduction

The Wari Empire of Peru was the largest polity to develop in the Americas before the Inka. From their capital in the highlands near Ayacucho they conquered many groups and colonized far-flung regions. By CE 600 they established colonial settlements, agricultural infrastructure, and the mesa-top provincial center of Cerro Baúl in what would become their frontier in southern Peru. As part of their strategy of imperial control the Wari used rituals and commensal feasting to legitimate their political superiority and create indebtedness. Ritual sanction and social largesse were necessary because Wari-sponsored migrants did not fill an empty landscape; instead they infiltrated a multi-ethnic network composed of small local communities (Costion,

2009, Costion and Green, 2018, Green and Goldstein, 2010, Owen, 1993, Vining, 2011) and multiple, large-scale Tiwanaku settlements (Goldstein, 2005). Ritual and generosity were effective means to create alliances in this ethnically diverse setting.

Sometime after CE 750 a noble woman of significant social standing passed away (Nash, 2014). This event was marked by an elaborate funeral and feasting ritual that concluded with the abandonment of a large multi-roomed, stone masonry residential palace compound on Cerro Baúl. Invitees gathered in the inner sanctum of the elaborate palace where they ate, drank, and performed a ritual prescribed by the death of an elite woman. After the departed was interred beneath the patio, a diacritical feasting ritual (*sensu* Dietler, 2001) took place in the palace. Once the feast concluded, participants left food remains on the floors and benches. Before exiting, they burned offerings, purposefully arranged both mundane and precious goods in pits or on the floor, and destroyed numerous ceramic vessels. The summit of Cerro Baúl continued to be occupied for another two to three hundred years, but the entire compound was not reoccupied or built over by later constructions indicating it maintained revered status through time.

The participants presumably included both individuals who were Wari and those from local political groups. All in attendance shared a rich sensory experience that was probably enhanced with locally produced intoxicating beverages as well as the sounds of musical instruments, singing, dancing, and dramatic performances. The ruling elite at Cerro Baúl demonstrated not only their control of foodstuffs and sumptuary goods, but also the power to mobilize the necessary labor and their authority to orchestrate the event. The success of the gathering helped to foster Wari control in the Moquegua region, and also demonstrated their generosity. Undoubtedly, the funeral and feasting ritual satisfied reciprocal obligations and created new ones that would be called upon for fulfillment in the future.

The Wari were much like other empires and imperial polities of similar scope and complexity who used ritual among other strategies to garner and maintain power as well as to create indebtedness (e.g., Shang China (Pingfang, 2005), New Kingdom Egypt (Spalinger, 1998), Inka (D'Altroy, 2015). Here we describe the resources, activities, and possible participants involved in this performative act of celebration, ritual abandonment, and closure of a palace compound at the Wari site of Cerro Baúl. The ritual involved purposeful and patterned depositions that were created by people based on their previous experiences, expectations, and beliefs. Deposits of this kind have also been reported at other sites in the Wari Empire (Edwards and Schreiber, 2014, Cook, 1984-1985, Cook, 2001, Cook, 2004, Glowacki, 2005, Glowacki, 2012, Groleau, 2009, Isbell, 2000, Isbell and Groleau, 2010, Ochatoma Paravicino, 2007), but until recently descriptions have focused primarily on pottery. Here, in addition to ceramics, we highlight remains of food animals, non-consumable animals, lithic items used as offerings and the spatial arrangement of the ritual deposition. Given the frontier location of Cerro Baúl, Wari engagement with local populations, and the presence of Tiwanaku colonists in the valley, it is possible that some of the practices we describe were syncretic in nature and not practiced elsewhere in the empire nor again on Cerro Baúl. None the less, we suspect many features represent shared elements of Wari ideology.

Ritual data sets are important to the study of empires because identifying extraordinary or elaborate events, which were probably sponsored by the state, versus quotidian practices is one

way to help recognize intrusive imperial institutions and foreign personnel in peripheral regions. Artifacts can be traded, public architecture can be emulated, but performances such as those affiliated with the formal operation of a political institution, which typically take place in exclusive elite spaces, must be experienced to be adopted in practice. The provincial context of this ritual deposit along with the regionally available resources, local schemes of value, and the inclusion of local participants may have influenced the feast menu and the items selected as offerings; however, because the ritual we report here does not have local antecedents, it presumably was introduced by Wari elites and was part of an imperial strategy integral to Wari governance (Nash and Williams, 2009).¹

For this reason, describing this celebration and closure event in material and spatial detail is important to Wari studies, Central Andean pre-Columbian archaeology, and investigations of expansive empires in general. In particular, this research may provide a template for identifying Wari expansion and colonization, especially since the polity is only known through archaeological research and some scholars question whether specific regions succumbed to Wari control or not (e.g., Topic and Topic, 2000). More generally, we advocate the study of ritual deposits as a salient approach for gauging the infiltration of expansive polities where artifact analysis alone is equivocal. Rituals or aspects of ceremonial practices often represent institutions and essential elements of state governance. As such archaeologists can study patterned ritual depositions to define elements of the political economy underpinning political expansion and discover the elite strategies employed for incorporating subject groups.

2. Ritual and statecraft

Archaeological analyses of ritual rely on the material residues generated by a group of people conducting activities according to a shared, but negotiable, view of how, when, and where a ritual should be performed (Bourdieu, 1977). Some material remains are more tangible than others, but the documentation of multiple examples of the same practices can often allow some intangible actions to be inferred (Marcus, 2007). Salient rituals that play a role in the political economy or components of legible, state institutions (Scott, 1998; Yoffee, 2005), would be regularly repeated, thus generating the requisite multiple examples of practice. Also, ritual events and political relations are embedded in “long trajectories of the relations between states” or in this case between persons in empires, and these precedents are “brought to bear in a given incident” (Sahlins, 1991:65). According to Sahlins, rulers in the Pacific Islands relied on history and precedent to shape events. Similarly, Wari elite rulers or Wari-affiliated officials in provincial areas who performed rituals consistent with state ideology in different parts of the empire would also rely on past experiences to shape current action.²

¹ Huaracane agricultural communities occupied the zone during the Late Formative Period (ca. BCE 100- CE 520) before the Wari occupied Moquegua. In general, researchers have found that investments in ritual depositions were manifest in tomb construction and mortuary inclusions, whereas residential remains were fairly modest (Costion, 2009, Goldstein, 2000).

² We use the term Wari-affiliated colonists to acknowledge that the origin of the people and their leaders is uncertain. Those living in the palace might be from the core of the empire in Ayacucho but they could also be descendants of marriages between core and provincial elites or perhaps have some local or Tiwanaku ancestry. The latter possibility is considered in Nash, 2015.

Long trajectories of interaction should generate similar ritual deposits—even if the events occurred in very different geographic settings. Archaeologists should be able to recognize these patterned remains and draw connections between different contexts (Bell, 1997; Kyriakidis, 2007). However, the performance and material residue of ritual practice can also be situationally unique. Variation in behavior can result from what Sahlins (1991:39) views as the ephemeral and emotional conditions of specific events versus the logic and durability of deeper cultural norms or structures. Although rituals performed in different locales may have distinct elements due to the expressive behavior of short-lived occurrences, such as the funeral of a particular individual, other practices and material remains will adhere to existing conventions. Furthermore, unique or non-normative ritual behaviors may indicate a particular deposit pertains to a distinct, localized ritual event that was not widely shared as opposed to the emergence of a novel set of beliefs and cultural structures. These cultural structures apply to the material world of objects, foodstuffs, and architecture.

Formal, institutionalized practices such as ritually structured interactions serve to define the relations between people in a society (Bell, 1992, Nash and Williams, 2005). The settings of rituals are often designed in such a way as to either promote communal engagement or to be exclusionary and reinforce social differences (Hastorf, 2007, Moore, 1996, Nash and Williams, 2005). The staging of ritual events requires surplus production and other labor inputs of many kinds. These resources may be generated through cooperation within a group and may also draw on asymmetrical relations between elites and their subjects. Ritual occasions are ideal arenas to reinforce or revise the power relations between individuals and groups. Funerals, in particular, are often venues for the rearrangement of sociopolitical relations and hierarchies (Underhill, 2002), but this shuffling does not require either ritual practices or the resulting material markers to change. As such, ritual events are important subjects of study even if we cannot discern the meaning of objects and actions or the substance of religious beliefs (Fogelin, 2007).

Rituals may be repeated on an annual or predictable temporal cycle, while others pertain to singular events such as coronations, weddings, births, and deaths. These latter forms may have features specific to the individuals involved but if they are sponsored by the state they will probably include institutionalized practices that communicate “institutional facts” (Searle, 1995). As Renfrew (2006) discusses, institutional facts make community life possible; they are the underpinnings of social realities, such as hierarchical polities. In an empire that brought different groups together, especially gatherings of imperial and local elites, the performance of a ritual would have been an excellent occasion to emphasize broadly shared practices and customs. Alternatively, ceremonies may have elaborated multiple traditions in tandem.

Rituals that were essential components of one or multiple state institutions would be replicated across the domain of a particular polity. Practices such as burning or burying offerings, breaking ceramic vessels, pouring libations, and toasting other participants were probably performed on a number of occasions, in different contexts, by many groups. In the Central Andes today, these ritual behaviors are frequently directed to named landscape entities, or “place-persons” (see Mannheim and Salas Carreño, 2015), as well as ancestors. The bundling of material objects is also often associated with ritual behavior (Chacaltana Cortez and Nash, 2009, Swenson, 2015). There is archaeological evidence such as iconography, architectural orientations, and excavated offerings that may relate to similar activities dating back to the first millennium CE; however,

the rituals themselves and their material manifestations are distinct between communities (Janusek, 2015, Nash, 2015).

How the Wari realized the ritual practice we describe here was contingent on previous events, local customs, and the desires and obligations of competing individuals. All the actions we report may not be Wari in origin but the ritual activities that took place on Cerro Baúl were probably compatible with Wari cosmology and reified Wari ideology in some way. In addition, some practices may have held overlapping, but variable meanings for different participants (e.g., locals, Wari affiliated migrants from another province, Wari elite who resided on Cerro Baúl, elite Tiwanaku colonists). Furthermore, practices and meanings may have shifted or been reconstituted through each ritual experience (Bell, 1992, Bell, 1997, Berggren and Nilsson Stutz, 2010, Hastorf, 2007). However, we submit that high-cost events such as the ritual we describe, were probably sponsored by the state and played an important role in instituting Wari hegemony. Thus, we suspect that some features of the event were replicated throughout the Wari Empire and that material evidence of similar practices would be diagnostic of Wari control and/or the presence of Wari elites engaged in and participating in the state hierarchy (Nash, 2018).

3. The Wari Empire

The Wari Empire (600-1100CE) expanded to control many regions in the Peruvian Andes in the seventh century CE. At present the extent of the polity is poorly defined, however, evidence of Wari intervention is present in several regions (Isbell, 1989, McEwan, 2005, Nash and Williams, 2005, Schreiber, 2005, Watanabe, 2016; Fig. 1). Similar to other empires, the Wari polity was managed by a network of hierarchically ranked elites (Nash, 2010, Nash and Williams, 2009), some of whom probably derived from the state's heartland in Ayacucho, while others were members of subjugated groups or had hybrid identities who rose to leadership positions. In other geographic regions, instances where the colonized become colonizers are features of long-lived empires (e.g., Lightfoot, 2005, Voss, 2005).

Early in the seventh century Wari-affiliated colonists moved to the Moquegua Valley, a distance more than 500 km south of the Wari heartland in Ayacucho. At that time, locally autonomous communities inhabited the diverse settings of the drainage. Populations occupied high-altitude grasslands (above 3200 masl), the middle valley (800–2000 masl), the lower valley (below 800 masl), and coastal spring oases (Bawden, 1989, Buikstra, 1995, Goldstein, 2005, Goldstein and Owen, 2001, Owen and Goldstein, 2001, Owen, 1993, Vining, 2011). Roughly contemporaneously with the Wari expansion, distinct waves of Tiwanaku colonists settled primarily in the middle valley, but the precise timing of their migrations remains a matter of debate (Goldstein, 2005). There was no single local polity in Moquegua of great size or sufficient complexity to manage resources for the Wari Empire; therefore, the resettlement of non-local managerial elites was presumably a component of the expansion.

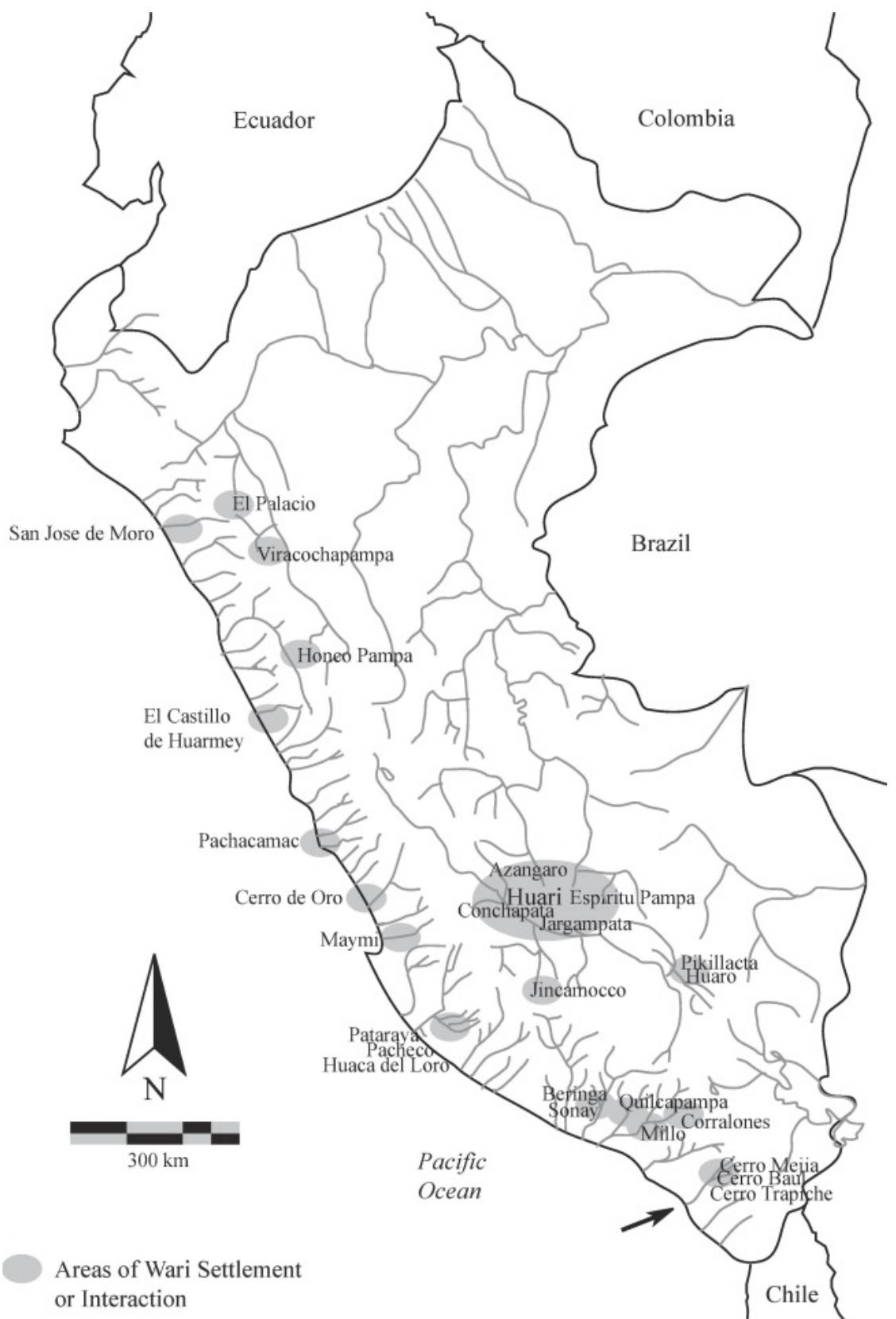


Fig. 1. The map indicates investigated sites with Wari settlement and areas with concentrations of Wari material culture.

Current settlement patterns indicate that the Wari colonizing population was relatively small and most settlements occupied a largely empty econiche in the sierra (2000–3200 masl, Owen and Goldstein, 2001). The transformation of this terrain into productive farmland required the construction of an extensive irrigation system and the terracing of vast tracts of hill slope (Moseley et al., 1991, Williams, 2006). A monumental administrative center was established atop the steep-sided mesa of Cerro Baúl. Additional settlements were founded on the slopes and summits of the surrounding hills (Moseley et al., 2005). Given the requisite labor needed to execute these projects and evidence for a relatively small colonial enclave, Wari officials presumably forged cooperative relationships with local indigenous leaders to gain additional labor, access local resources, and achieve imperial goals. This idea is supported by the comingling of Wari and local Huaracane materials at the site of Cerro Trapiche (Coston and Green, 2018, Green, 2015, Green and Goldstein, 2010) and evidence for Wari influence at the local site of Yahuay Alta (Coston, 2009, Coston and Green, 2018). It is quite possible that some elements of the ritual deposit we describe were contributed by local leaders invited to participate in the funerary celebration on Cerro Baúl.

3.1. Cerro Baúl

The administrative and cosmological capital on the summit of Cerro Baúl demonstrates that the Wari controlled labor and resources for their political economic advantage (Moseley et al., 2005, Nash and Williams, 2009). Located 600 m above the valley floor, the majority of summit architecture is situated on several monumental platforms and organized into at least ten large, agglutinated compounds, which cover roughly three hectares (Fig. 2; Nash, 2018: Fig. 5). Smaller terraces descend the north and south slopes of the mesa. Additional structures are located to the west and may have been devoted to religious activity (Williams and Nash, 2006, Williams and Nash, 2016). The summit architecture is monumental, most buildings had high stone masonry walls, some of which had second stories.

Several structures have been excavated and studied including a brewery, two D-shaped temples, a plaza-platform complex for viewing a distant snow-covered mountain peak, Picchu Picchu, and a compound built around a large boulder, which is oriented toward the peaks of Arundane. Some of these structures were designed to accommodate public ceremony and signal social difference. Other ceremonial spaces had exclusive access (Nash and Williams, 2005). Today, as in the past, Cerro Baúl is revered as an *apu* or sacred mountain. During modern rituals, people call upon the sacred mountains of Arundane and Picchu Picchu, among others. Cerro Baúl is the preferred setting for these rites because the summit is the only place in the valley where both mountain peaks are visible (Williams and Nash, 2006). The Wari may have selected the site for this reason, especially since the temples were located to ensure a clear view of these sacred mountains. Thus, the economic control of water and productive agricultural lands in the high sierra were inextricably linked with access to powerful landscape entities. In this distant southern frontier, both water control and successful farming were strategies that played an important role in the Wari political economy. Hosting gatherings and leading rituals was a costly means through which elites could legitimize their command of labor and resources. It required extensive planning and regular engagement with subordinates charged with the production and supply of different resources.

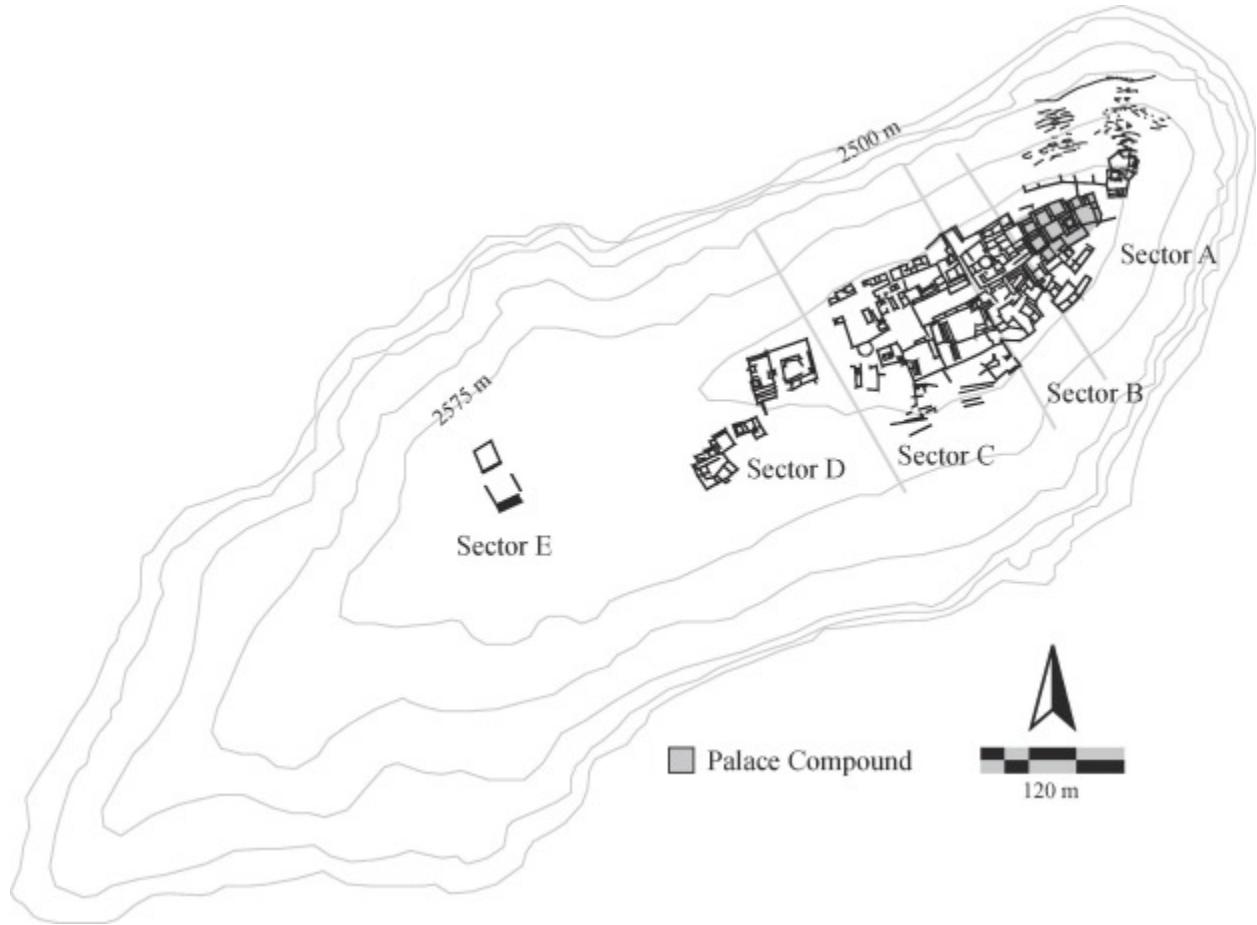


Fig. 2. The summit of Cerro Baúl is divided into five sectors using corridors between clusters of compounds and breaks in the architecture. The palace compound is in Sector A.

4. Planning, resources, and labor

Those who organized and hosted the ceremonial event, as well as the invited participants, had to draw on the labor within their households and gather resources for the feast and ritual. Guests coming from distant settings had to plan their journey and absence. Some activities certainly overlapped with the normal course of behavior executed by elites in the region, whereas others could have been unique and specific to this event. In this instance, lavish funerary rites were to transpire and a very elaborate dwelling was to be abandoned. The burial cyst and body of the deceased had to be prepared. The processing of the body was probably directed by a prescribed schedule of events preceding the burial. Meanwhile, the palace residents notified illustrious guests, gathered the appropriate feast foods and other material offerings, and made arrangements to move into a new dwelling.

Invitees may have been notified of specific expectations or participants may have known what to bring based on past engagements. The elite sponsors oversaw the procurement and preparation of local and imported foodstuffs. This included *chicha*, a fermented beverage, which on Cerro Baúl was made by female specialists using *Schinus molle* (a native evergreen with small, red drupes)

and corn (Moseley et al., 2005, Nash, 2010). Many serving ceramics were needed. Since the entrance court of the palace was presumably a regular venue for socio-political gatherings, stored ceramic wares may have been available (Fig. 3). As we describe below, extraordinary foods were served and we presume alcohol was consumed. It is possible that drugs were used to make the drink particularly potent. Knobloch (2000) suggests that the Wari added the hallucinogenic plant *Anadenanthera colubrina* to beverages. deFrance (2014) has also identified the presence of hallucinogenic toads (*Bufo cf. arequipensis*) in the palace. Additionally, many valuable and rare items were left behind as gifts or offerings. The deposit represents the expenditure of numerous resources and significant labor investments. It is probable that more food and material culture was probably amassed and consumed in association with this event, some of which may have transpired as public ceremonies in other summit locations.

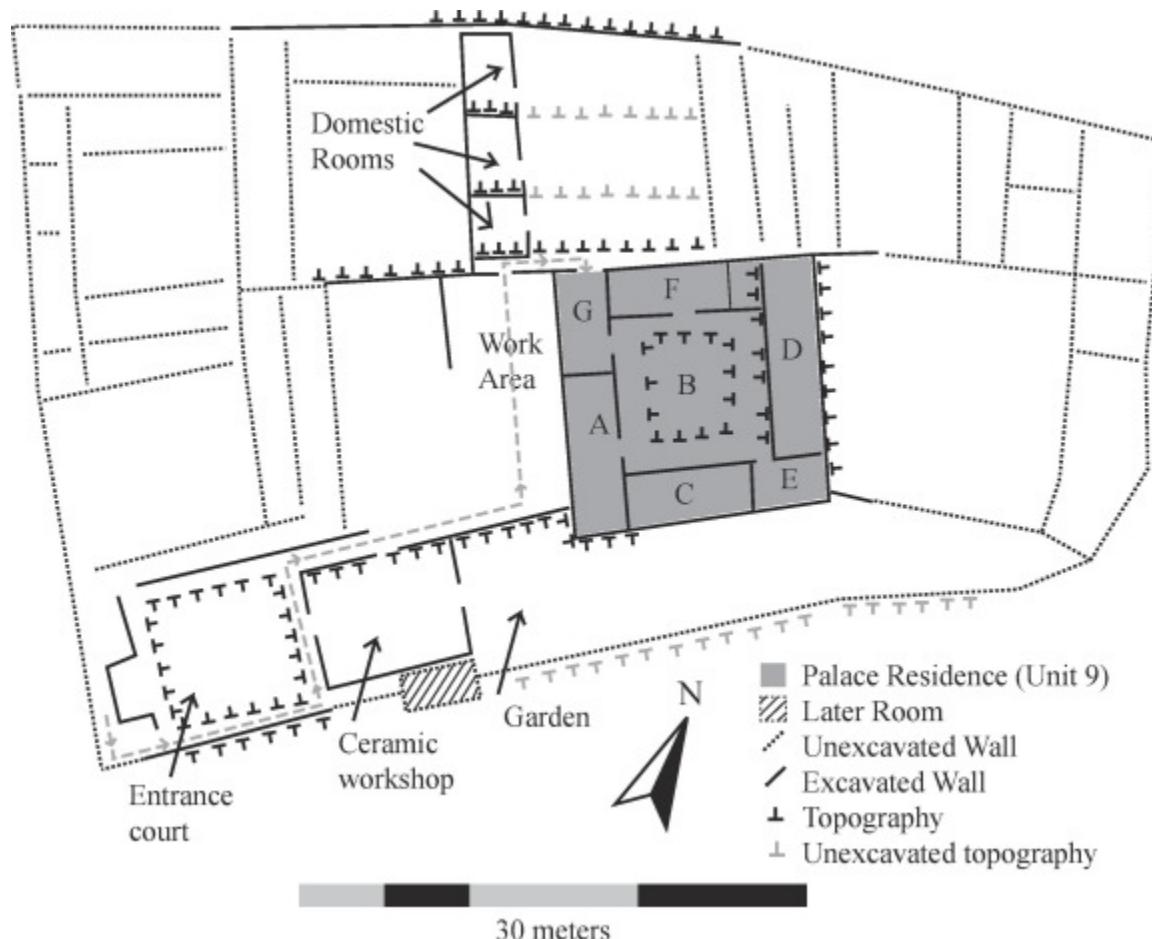


Fig. 3. The palace compound is situated on several levels. Excavated areas exhibit no indications of reoccupation; however intrusive offerings are present. Only a narrow corridor was deconstructed and built over after the abandonment of the palace.

We suspect that those who participated in the exclusive funerary ritual shared ideas based on past experiences of events of this magnitude; they anticipated much of what would take place, and how it would end. Additionally, such ceremonies would present an opportunity to acculturate the young and newcomers to the empire as is the case with many types of ritual performances in states (e.g., Coben, 2018). Although, this ritual may have admitted new or unique behaviors, it

undoubtedly included essential elements in common with other mortuary celebrations and conformed to cosmological conventions of Wari funerary ritual (see Bell, 1997) including ritualized abandonment.

The ritual closure of houses and other spaces has been reported at the Wari capital, the site of Conchopata in the heartland, and at provincial sites such as Pikillacta and Pataraya (e.g., Bragarac, 1991, Isbell, 2000, Glowacki, 2005, Edwards and Schreiber, 2014); as well as the site of Tiwanaku (Manzanilla, 1992). Earlier Andean societies also performed rituals at sites such as Chavin (Rick, 2008:25) and Chiripa (Bandy, 1999:45) that involved the deposition of offerings upon abandonment or before a new phase of construction. Interring some individuals within houses was also a widespread practice (Toohey et al., 2016). Therefore, we cannot attribute these practices (e.g., funeral feasting, subfloor burial, offerings, and structure closure) exclusively to Wari, but rather, we need to examine the specific features of the ritual as it was performed by the Wari and how it may have varied between provinces.

Wari ritual closure events have the key economic consequence of taking many resources, including sumptuary goods, out of circulation and removing sizable habitation areas of a site from use. This repercussion cannot be overstated, especially since Cerro Baúl had limited space for construction. Even though the area was converted to hallowed ground, this seems to have been a great sacrifice. The ritual would have transformed the structure from the seat of leadership and socio-political interaction to a context of ancestors, offerings, and sacred power. The exercise of salient political activity would have required a new place, possibly a new design, and presumably a new leader took charge.

Furthermore, the palace assemblage suggests that the essential equipment or paraphernalia of commensal leadership were also removed from use. The participants destroyed countless vessels used to store goods and serve food and drink. As we describe below this includes several elaborate cups that may have been used for drinking but could also have served to pour libations and make toasts for different types of ceremonies (Nash, nd). Consequently, the new leader, or leading family group, had to create or obtain a new set of items if they were to continue to serve as hosts for gatherings and perform certain rituals. As a form of conspicuous consumption, the destruction of so many goods and the abandonment of the elaborate palatial dwelling certainly demonstrated the new leader's command of labor. This is a strategy common to the Inca and other empires (Ogburn, 2005).

5. The palace

The palace is a large compound located on the northeast portion of the mesa that covers an area of approximately 2060 m square (Fig. 3). It is defined by a thick outer wall and occupies several platform levels. The elaboration of the palace represents a significant labor investment and a high degree of construction skill when compared to other summit buildings. The walls are made of double-faced stone masonry like other Wari constructions; however, some walls in the palace had adobe or *tapia* superstructures. Preserved fragments of white and reddish-orange plaster are what remains of the walls' fine finish. Excavations in the palace compound have uncovered an entrance court, a ceramic workshop, a garden, a plaza work area used for weaving and lapidary work, a subsidiary residence with a modest kitchen, and the primary residence in the form of a

patio group. We refer to the patio group as the palace residence, and this paper describes the remains of a ritual staged in this component of the palace, which were designated during excavations as Unit 9, Rooms A, B, C, D, E, F, and G.

Patio groups are a diagnostic feature of Wari provincial centers and elite residence at the Wari capital (Isbell, 1989, Isbell et al., 1991, Nash, 2012b). The lavish palace residence on Cerro Baúl follows this design and displayed the high status of its occupants. The central patio (B) has benches along all four walls that could provide seating for approximately thirty guests. The patio (B), the five contiguous roofed rooms surrounding it (Rooms A, C, E, F, G), and the eastern platform (D) all had paved rhyolite floors, which represent significant labor investment. The platform area (D) may not have been enclosed by walls on all four sides and was at least open to the patio. One threshold was visible in the patio wall about two meters from the northeast corner of the patio. The patio group was only accessible through Room G and the other rooms could only be entered through the patio. The palace residence was used for domestic, craft, and ceremonial activities. Inka era disturbances and offerings were present in three rooms (C, D, and E), but excavators were able to distinguish these later intrusions from Wari remains.

The larger palace compound represents the wealthiest household in the current archaeological sample ($n = 21$), which includes Wari-affiliated houses from the summit and slopes of Cerro Baúl and the nearby site of Cerro Mejía (deFrance, 2014, Nash, 2002, Nash, 2010, Nash, 2012b, Nash, 2017, Nash and Williams, 2009). We refer to this elite residence as a palace for several reasons. First, the structure includes venues for political activity (Christie, 2006:4). The entrance court and the more private, interior patio of the palace residence both have benches along their walls; a design that would have allowed compound residents to host gatherings of different social and political importance. The entrance court has a recessed area centrally located in the southwest wall that resembles later U-shaped administrative constructions found in Chimú palaces on the North Coast (see Moseley et al., 2005, Pillsbury and Leonard, 2004). Similar to other palaces, the compound had areas to produce decorated pottery, stone ornaments, fine textiles, and other prestige goods. It also has a garden, a noted feature of later Inka palaces (Isbell, 2004, de Murúa, 1946 translated by Morris, 2004: 300).

The palace compound was the focal point for a range of socio-political activities and performances. The entrance court could be used for somewhat public events, whereas the interior patio held more exclusive affairs. The recessed area in the entrance court and the platform in the palace residence were features that communicated status differences and empowered elite residents to host and preside over exclusive ritual gatherings (Moseley et al., 2005, Nash, 2009, Nash, 2010, Nash, 2012b, Nash and Williams, 2009, Nash and Williams, 2009), the ultimate of which is described here.

6. Archaeology of the palace residence

Four field seasons of excavation uncovered approximately 30% of the entire palace compound. The palace residence (Unit 9, Rooms A-G) is roughly 15 by 16 m in area. We exposed approximately 189.7 square meters of floor surface (Table 1). All the rooms were excavated in one by one-meter squares. Below a layer of volcanic ash from the CE 1600 eruption of Huaynaputina, strata were field-screened with 1/16th inch mesh (~1.7 mm). We recovered

intrusive offerings from later periods, as well as evidence of looting that occurred before the volcanic ash fall. These areas exhibit localized breaks in the patterned ritual deposit and have been excluded from this analysis. In addition, the excavation of several features inadvertently revealed earlier occupation surfaces. The subfloor strata from these features have also been excluded.

Table 1. Excavation area by room in the residential palace (Unit 9).

Excavated space	Averaged measurements ^a	Rounded total
Room A	2.45 m × 9 m	22.1 m ²
Room B (Patio)	8.4 m × 9 m	75.6 m ²
Room C	2.45 m × 7.25 m	17.8 m ²
Room D (Platform)	2.45 m × 12 m	29.4 m ²
Room E	2.45 m × 3.9 m	9.6 m ²
Room F1	2.75 m × 7.05 m	19.4 m ²
Room F2	2.75 m × 1.55 m	4.3 m ²
Room G	1.95 m × 5.9 m	11.5 m ²
Total Excavated Area		189.7 m ²

^a Many of the spaces are trapezoidal.

Unfortunately, the burial cyst was one of the features disturbed in pre-Hispanic times, probably after the site's abandonment ca. CE 1200. The cyst was approximately 70 cm deep and 75 cm in diameter; however, only parts of the cyst wall were preserved. Adhering to the side of the cyst is where we found several adult human teeth. Several post-cranial elements found nearby were identified as belonging to an adult woman (Deborah Blom, personal communication, July 12, 2014). Even though the burial was disturbed, the area around the tomb exhibits the highest concentration of fragmented pottery. Also, since the base of the tomb was intact, materials found in the feature were included in the analysis.

During excavations great effort was made to leave diagnostic artifacts *in situ*. For each stratum the contexts, features, and *in situ* artifacts were photographed using an overhead bipod, plotted on drawings, and elevations were documented. Decorated vessels were reconstructed in their entirety and solitary decorated sherds were photographed. Other vessels were plotted when more than 50 percent of the rim was present. Many other cultural materials were either directly on the floor or overlaid another artifact sitting on the floor. The strata and elevational information were used to reconstruct these positions and identify intrusive inclusions and disturbance.

6.1. The ritual event

Elevational data and the superposition of materials suggest the general phases of the ritual in the palace residence following the funerary interment of the body were: 1. a feast, 2. the placement of offerings, and 3. all participants exiting the central palace residence through Room G.³ Some offerings may have been made prior to the gathering or during either the interment or the feast, especially in the lateral rooms, but the stratigraphy in some areas and the practicality of moving through the structure during the ritual indicates that the feast preceded the placement of most of the offerings in the patio and Room G. In addition to materials associated with the feast and

³ The entire palace compound appears to have been abandoned all at once. This assertion is supported by the cross-mends of ritually broken pottery between those found in the palace residence and other areas in the palace compound (Table 5).

offerings, the floors across the entire palace compound exhibit *de facto* refuse (see Schiffer, 1972). This pattern is common when planned abandonment is about to occur. Several researchers have noted that people may stop cleaning up debris as they prepare to leave (e.g., Stevenson, 1982). The elaborate ritual behavior that coincided with the structure's abandonment left highly patterned remains, while the residues of quotidian life in some areas of the palace adhere to activity areas and appear to have been left *in situ*.

We describe the features and artifacts that represent an abandonment ritual, such as burnt offerings, pit offerings, broken pottery, ornaments, other valuables, and animal remains. The entire ceramic assemblage was used to determine the minimum number of vessels. Vessels were included if 50% or more of the rim was present, a substantial portion of the vessel body was present with a distinctive paste or decoration, or when nearly intact vessels lacked their rim. The minimum number of vessels destroyed in the palace residence (Unit 9) is 142. There were also three metal tupus, 42 chipped stone points of different styles, and numerous worked and unworked pieces of semi-precious blue and greenstone.⁴ Based on the arrangement of goods it appears many of these objects were deposited intentionally as part of offerings.

Table 2. Radiocarbon dates from the Palace and Brewery.

Lab and ID number	Material and association	Radiocarbon Age	Delta 13	Calibration*
<i>Palace</i>				
AA46602	Roof beam-wood-construction	1454 ± 35BP	-13.6	585–676CE, 95.4%
AA58413	Carbon from floor-occupation	1252 ± 33BP	-24.5	763–894CE, 86.9%
				688–736CE, 7.0%
				939–950CE, 1.5%
AA58414	Carbon from floor-occupation	1237 ± 41BP	-21.17	764–906CE, 77.3%
				916–969CE, 12.3%
				689–735CE, 5.8%
<i>Brewery</i>				
Beta36968	Carbon-construction	1400 ± 60BP	NA	577–780CE, 91.6%
				807–856CE, 3.8%
Beta36967	Carbon-occupation	1090 ± 70BP	NA	857–1162CE, 94.6%
				790–806CE, 0.8%
TX9280	Carbon-occupation	1070 ± 50BP	-27.10	956–1150CE, 86.3%
				895–935CE, 9.1%
TX9281	Carbon-occupation	900 ± 40BP	-26.70	1133–1272CE, 85.4%
				1046–1087CE, 9.7%
				1114–1116CE, 0.2%

* Calibrations calculated with Oxcal version 4.2.4 (Bronk Ramsey, 2013) using the SHCal13 atmospheric curve (Hogg et al., 2013). Dates originally reported in Moseley et al., 2005 but recalibrated by the authors.

Fragments of some vessels were found in more than one room, which supports the idea that the assemblage represents a single event. Cerro Baúl's brewery also exhibits this practice; however, unlike the brewery, the palace was not ritually burned, and the palace was abandoned two or

⁴ The generic term point is used in most instances because analysis suggests that the curated, chipped stone points were used for an array of different activities. A few of these items may have been projectiles, as when noted in the text, but the majority exhibit asymmetrical use wear, which indicates their use in cutting tasks. The term point is also used instead of biface because many of the artefacts in this category were made from flakes and some examples do not exhibit retouch on both sides (see Nash, 2012b). Blue stone refers to sodalite and most of the green stone is chrysocolla.

three centuries earlier (Table 2).⁵ The vessels left broken in the palace exhibit evidence of prior use and some were well worn with chipped or polished, refurbished rims. The state of the vessels, the variety of types, and the mix of production styles suggest that the assemblage was accumulated over the life of the palace; the vessels were not limited to a feasting assemblage. Nevertheless, 61% ($n = 86$ out of 142, which includes 67 bowls, 4 cups, 15 jars or pitchers designed for pouring) of the vessels could be attributed to drinking, eating, or pouring liquids. Some of the larger jars may have been used to display food or drink. These include a face neck jar, and the tall-necked, red-slipped, flaring-rim jars ($n = 18$). Most of the jars were not decorated or finely finished and likely represent the volume of resources kept in the compound.

6.2. Animals for the funerary feast and offerings

The quantity, variety, and spatial distribution of the food remains are unique in comparison to other structures on the mesa's summit (deFrance, 2014) as well as other Wari sites (see Gladwell, 2004, Rosenfeld, 2011, Rosenfeld, 2012). The faunal remains from the palace residence consist of 6402 elements representing a minimum of 137 individuals from at least 25 taxa (Table 3; Fig. 4). The identified taxa were diverse and represented seven mammals, five species of birds, one reptile, one amphibian, and at least eight species of bony marine fish. There is also a scant quantity of camarones (freshwater crayfish/river shrimp) and over 400 either complete or fragmentary remains of marine invertebrates including seven species of gastropods and at least eight taxa of bivalves, as well as small quantities of sea urchin, chiton, and barnacles. The mammals include camelids, white-tailed deer or taruca deer, guinea pigs, and vizcachas. Bats and small rodents are commensal mammals, being neither ritual nor food items. The bird remains include edible species of tinamous and doves as well as remains of birds that were acquired for their symbolic, decorative, or animistic value including Andean condor, pygmy owl, and the colorful tyrant flycatcher. Remains of small-sized lizards are present but are probable incidental inclusions since the summit continues to be part of their natural habitat. In contrast, the summit of Cerro Baúl was not hospitable for amphibians; therefore, the remains of toad are interpreted as having been brought to the summit via human agency. The diversity of marine fish in the palace residence is particularly striking. Marine taxa of anchovies, sardines, jurel, jack fish, flying fish, two taxa of blennies, and lorna drum fish are present. A diversity of animal remains is scattered across the rooms; however, the greatest quantity of remains occurs in Room A ($n = 1456$) and the central patio, Room B ($n = 1319$). Since cooking is not evident in the form of a hearth in Room A and this space received the most elaborate ceramic offerings, we interpret these remains as food offerings.

The faunal refuse in the residential patio is dominated by camelid elements from large-sized, adult individuals, presumed to be llamas, and lesser quantities of remains from a smaller camelid as well as some bones from juvenile individuals. The remains from the patio (Room B) are primarily disarticulated and butchered skeletal portions (Fig. 5). There is no evidence to suggest

⁵ The dates from the palace are difficult to interpret because of wide error ranges, but estimates can be made when these dates are considered with those from underlying strata, as well as dates from the single room built partially over the palace's outer wall (Fig. 3). It is presumed that the palace was built sometime between CE 650 and 750 and abandoned no later than CE 900. There are at least two occupation layers under the palace that appears to correspond with a different use of space. Current dates indicate Cerro Baúl was established no later than CE 676 (Nash, 2016).

Vertebrate Fauna		Room							Total
		A	B	C	D	E	F	G	
<i>Trachurus murphyi</i>	jurel, jack mackerel	12	93	30	7	9	10	5	166
Carangidae	jack	10							10
cf. Carangidae	jack		2						2
<i>Cheilopogon heterurus</i>	flying fish		4						4
<i>Labrisomus</i> sp.	blenny	1							1
<i>Scartichthys</i> sp.	blenny	2							2
<i>Sciaena deliciosa</i>	lorna	1							1
Osteichthyes uid		581	233	71	19	27	12	1	944
Vertebrate Sample Total		1457	1319	924	861	206	846	790	6403
Invertebrate Fauna		<u>Rec A</u>	<u>Rec B</u>	<u>Rec C</u>	<u>Rec D</u>	<u>Rec E</u>	<u>Rec F</u>	<u>Rec G</u>	<u>Total</u>
NISP for Recinto		9	16	34	17	3	7	8	94
Total Number of Taxa		3	4	7	5	2	7	4	16
		<u>NISP</u>							
Malacostraca									
<i>Cryphiox caementarius</i> *	freshwater shrimp/camarone	P	P	P		P			
Gastropoda									
<i>Concholepas concholepas</i> ¹	false abalone				1				1
<i>Acmaea</i> sp. ¹	limpet					1			1
<i>Tegula atra</i> ¹	tegula snail	1	6				1	2	10
<i>Turritella cingulata</i>	turret-shell		1	1					2
cf. <i>Turritella</i> sp.	cf. turret-shell			1					1
Littorinidae	periwinkle					1			1
cf. Littorinidae	cf. periwinkle				1				1
cf. <i>Thais</i> sp. ¹	rock-shell					1			1
Gastropod uid	unidentified gastropod			2			1		3
Polyplacophora									
<i>Acanthopleura</i> sp.	chiton			1					1
Bivalvia									
<i>Aulacomya ater</i>	ribbed mussel						1		1
<i>Choromytilus choros</i>	choro mussel	4	7	5	10	2	1	3	32
Mytilidae	mussels			1					1
<i>Atrina</i> sp.	pen shell		1						1
<i>Mulinia edulis</i>	dwarf surf clam					1			1
<i>Mesodesma donacium</i>	macha clam				1			1	2
Veneridae	Venus clams			1					1
<i>Protothaca thaca</i>	littleneck clam								
Bivalvia uid	unidentified bivalve	2	7		1		1		11
<i>Balanus</i> sp.	barnacle	1							1
Echinoidea	sea urchin	2		19					21
Invertebrate Sample Total		9	16	34	17	3	7	8	94

Vertebrate and Invertebrate Class names are in Bold.

¹ = perforated.

* = present.

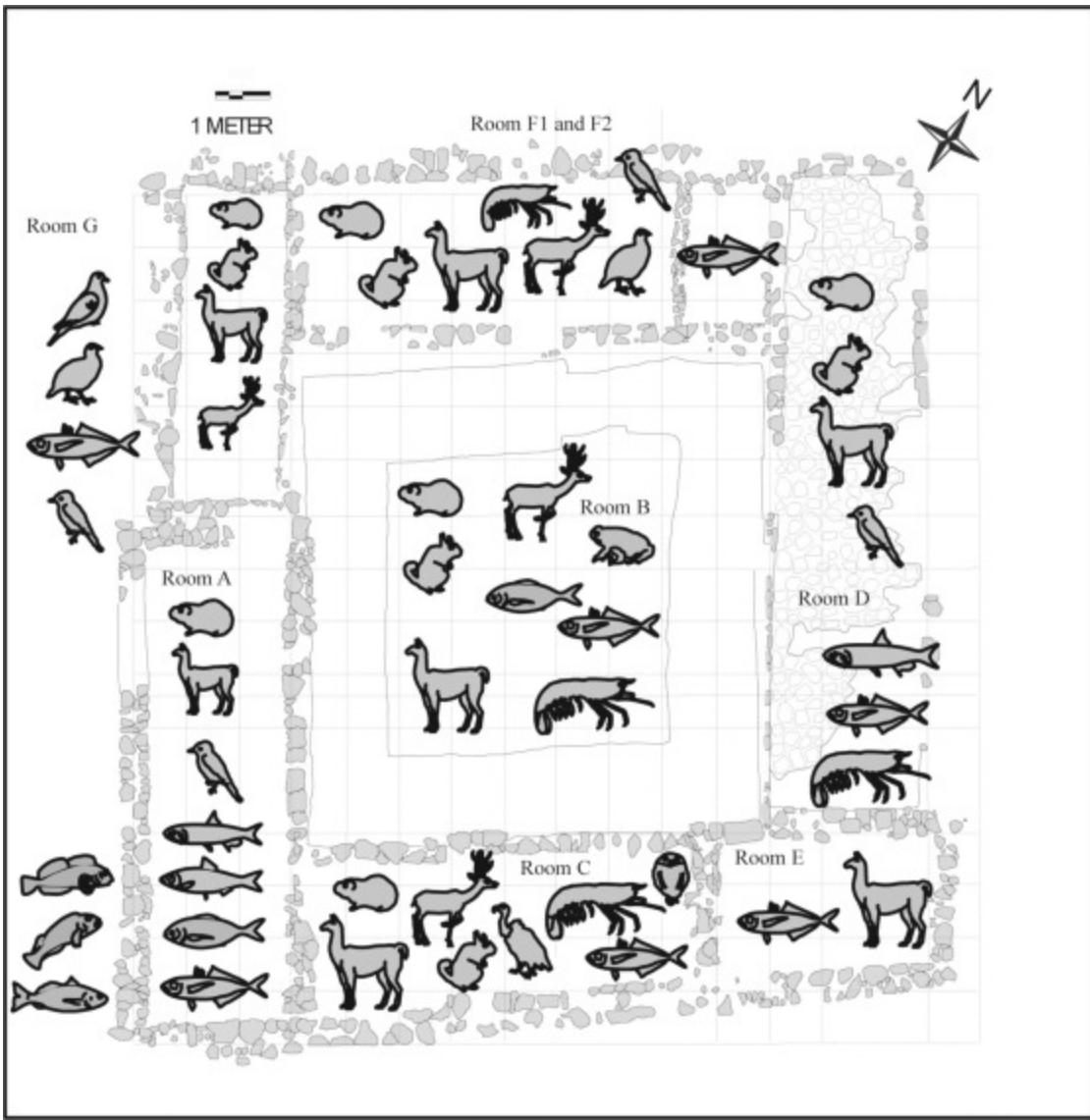


Fig. 4. Animals present in the various rooms of the palace residence (unit 9).

The patio assemblage of camelid remains is dominated by butchered and sized-portions of camelid ribs that may have served as the meat/protein components of individual meals (Table 4, Fig. 6). Throughout the patio, on both the floor and bench surfaces were the remains of forty-three rib portions ranging in size from <4 cm to 15 cm with an average size of 10 cm, which either includes the rib head or is a butchered rib portion distal to the neck of the rib. These rib portions could easily have been served in the abundant, small plainware bowls also found on the patio floor. Furthermore, the quantity of rib portions correlates well with a relatively exclusive group of participants (ca. 30). Ribs and vertebrae are also the most common camelid elements in the rooms adjacent to the patio where 33–63% of the camelid bones are from the axial portion of the body (Table 4).

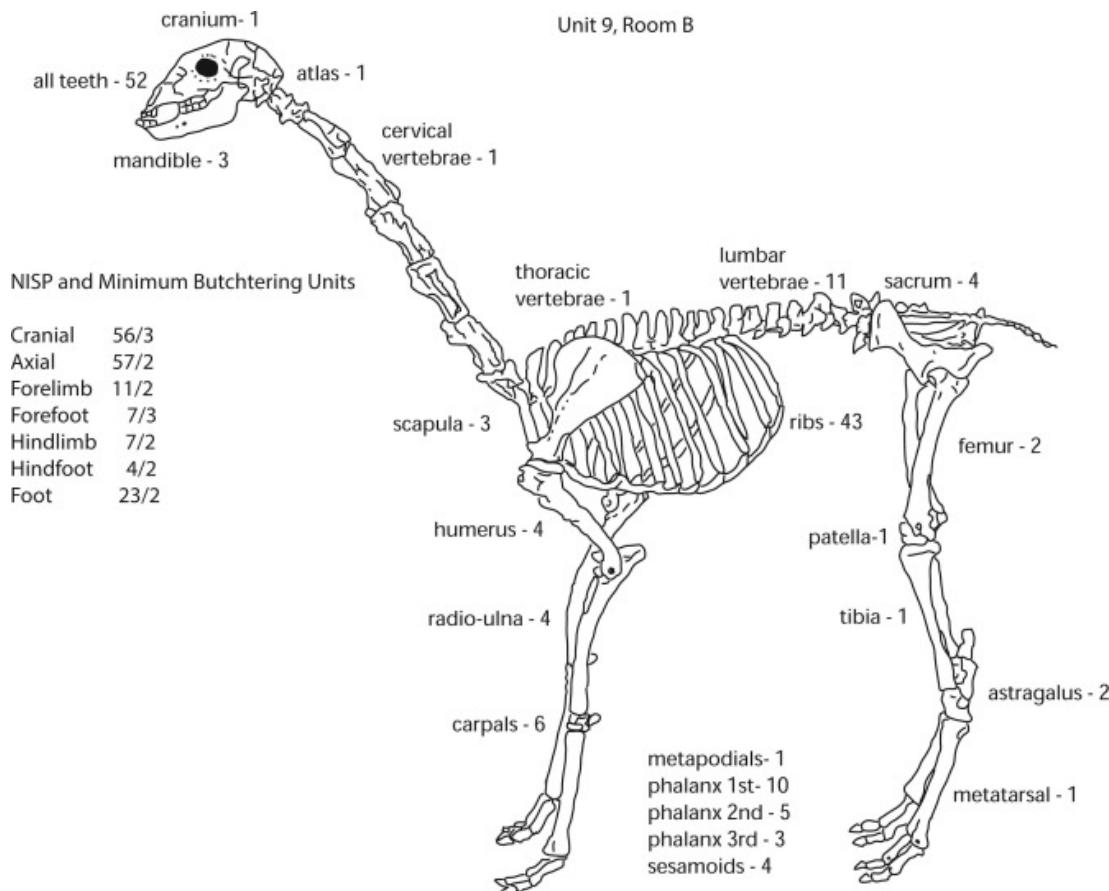


Fig. 5. Number of elements and Minimum Butchering Units (MBU) of *Lama* sp. present in the patio (Room B) of the palace residence.

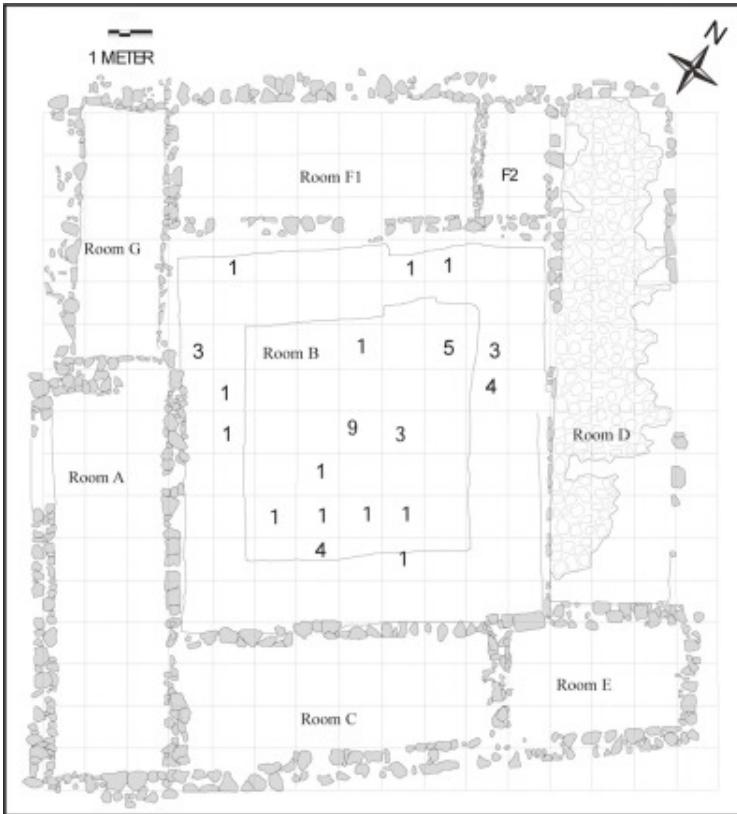
Table 4. *Lama* sp. and Camelidae skeletal part representation in the palace residence (Unit 9, all rooms).

	Room 9A	%	9B	%	9C	%	9D	%	9E	%	9F	%	9G	%
Cranial	14	16.1	56	33.9	18	15.8	18	24.0	1	5.9	12	12.2	29	20.7
Axial	47	54.0	57	34.5	46	40.4	24	32.0	10	58.8	36	36.7	50	35.7
Forelimb	10	11.5	11	6.7	2	1.8	2	2.7	1	5.9	8	8.2	6	4.3
Hindlimb	2	2.3	7	4.2	9	7.9	5	6.7	0	0.0	7	7.1	7	5.0
Forefoot	1	1.1	7	4.2	1	0.9	3	4.0	0	0.0	8	8.2	8	5.7
Hindfoot	3	3.4	4	2.4	12	10.5	1	1.3	1	5.9	6	6.1	2	1.4
Foot	10	11.5	23	13.9	26	22.8	22	29.3	4	23.5	21	21.4	38	27.1
Total	87	100.0	165	100.0	114	100.0	75	100.0	17	100.0	98	100.0	140	100.0
	9B F9			%			9B F16			%				
Cranial	1			6.3			0			0.0				
Axial	2			12.5			12			66.7				
Forelimb	1			6.3			3			16.7				
Hindlimb	0			0.0			0			0.0				
Forefoot	0			0.0			0			0.0				
Hindfoot	1			6.3			2			11.1				
Foot	11			68.8			1			5.6				
Total	16			100.0			18			100.0				

*** all rooms except 9B include the material from the Features

Juvenile specimens in Rooms F and G

Room C has hyoid specimens, some with cuts



Portion	#	Size distribution	#
proximal	14	epiphysis - 4 cm	9
<proximal	21	5-10 cm	12
central	3	11-15 cm	14
distal	5	16-20 cm	2
	43	20-26 cm	6
Average rib length = 10.4 cm			

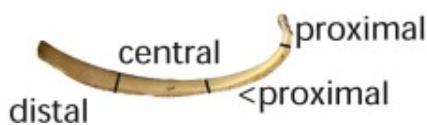


Fig. 6. Frequency and size of *Lama* sp. ribs in the patio (Room B) of the palace residence.

In addition to providing an estimated number of guests, the faunal remains indicate the geographic origins of resources were diverse. Palace guests enjoyed foodstuffs from the Pacific coast such as abundant marine fishes ($n = 1220$), marine and riverine invertebrates, and camelids from coastal herds. Three of the five camelid individuals present in the patio (Room B) had bulk carbon and nitrogen isotopic signatures that are interpreted as having subsisted on a diet of coastal vegetation (Thornton et al., 2011). Although coastal sites and occupations dating to the Middle Horizon are known (Lozada et al., 2009, Owen, 1993), Middle Horizon coastal

populations who definitively interacted with the Wari have not been identified. Nevertheless, the faunal remains suggest these connections should be investigated. The presence of coastal camelids and other coastal resources (i.e., marine fishes and shellfish) suggests these foodstuffs were valued by Wari colonists and their gifting or exchange may have played a diplomatic role in Wari relations with coastal communities. It is quite possible that coastal leaders who attended the funeral provided these resources as a form of tribute.

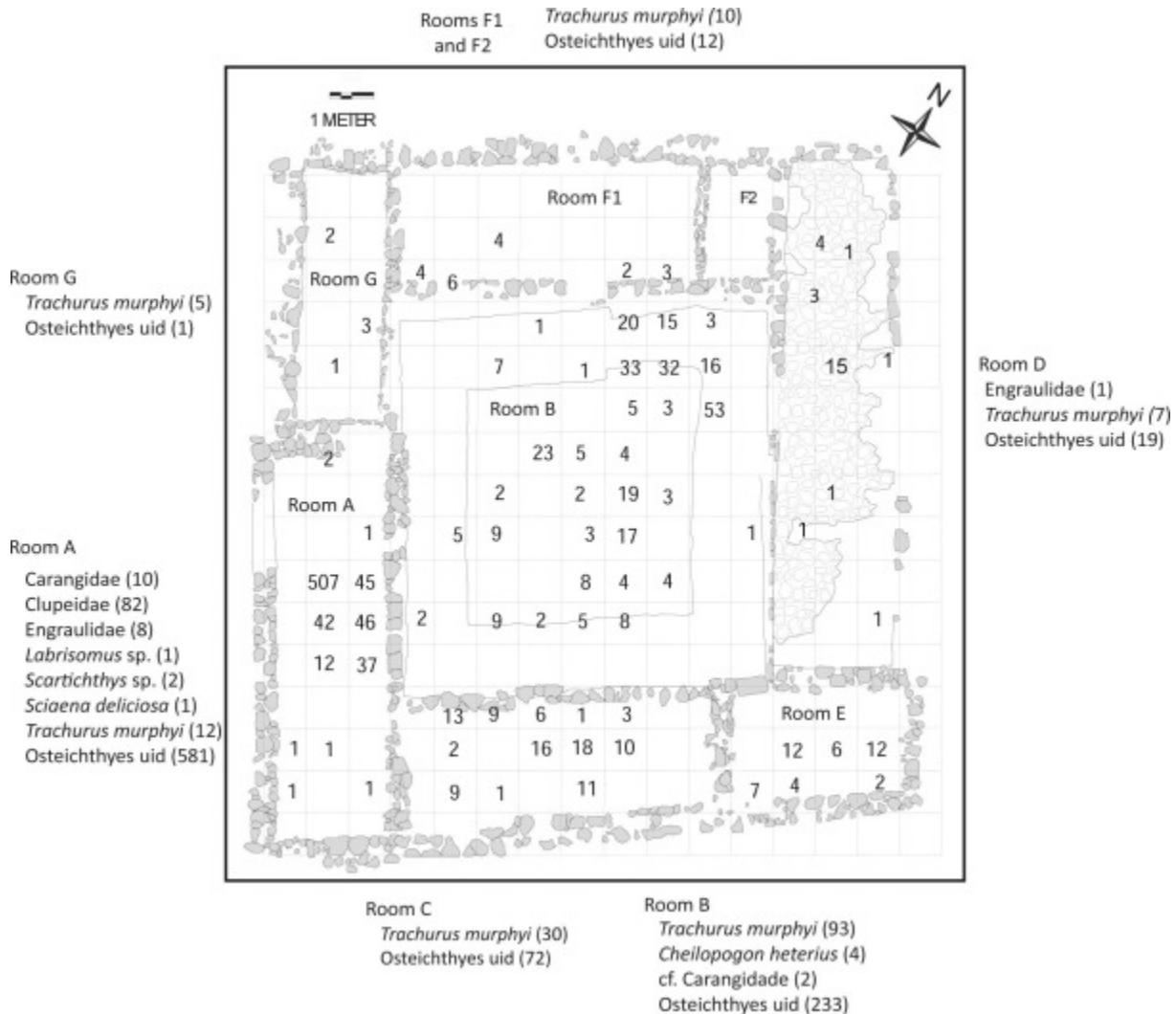


Fig. 7. Distribution of all marine fish elements in the palace residence (Unit 9); numbers in each room refer to number of fish elements per 1×1 -m square (uid = unidentified).

At least eight marine fish taxa were recovered from various palace rooms (Fig. 7). Although all of the rooms surrounding the patio have fish remains, the patio has a distinct abundance of bones from the jack mackerel or jurel. Ninety-three elements of jurel are present of which 66 are either neurocranium fragments or other cranial elements (e.g., operculum, dentary, premaxilla, hyomandibular, post-temporal) indicating that the fish arrived on the summit whole, and possibly fresh, not as dried portions of the meaty spine. As shown in the spatial distribution of jurel (Fig. 8), these fish remains are concentrated along the floor and bench in the NE corner of the patio (Room B). Fish remains were found in all of the rooms; however, the great diversity (7 taxa) and

quantity of fish remains ($n = 696$) occur in Room A where offerings of other types are also clustered.

Distribution of *Trachurus murphyi* (NISP=93; MNI =4) remains in Room B.

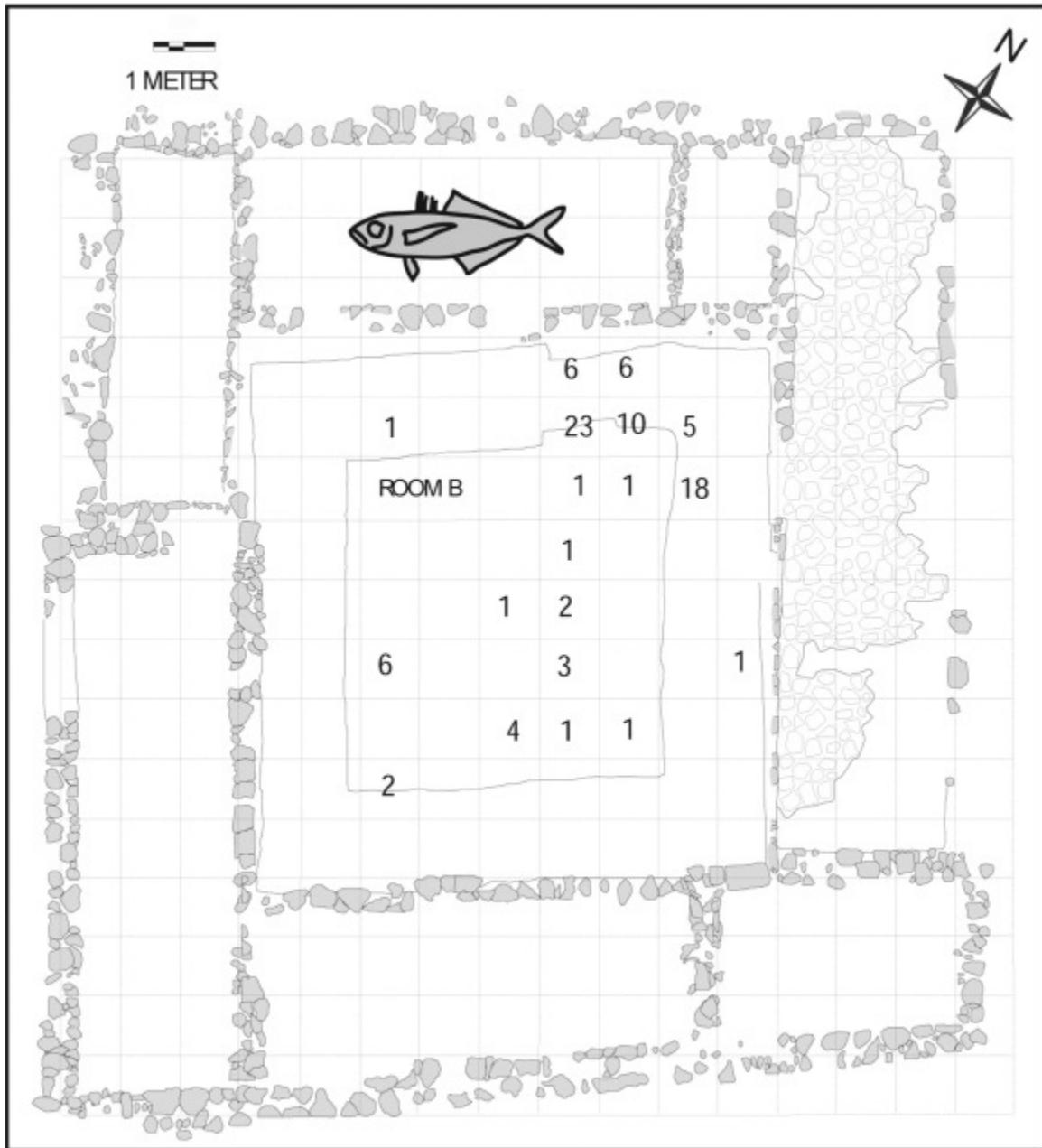


Fig. 8. Distribution of all jurel (jack mackerel, *Trachurus murphyi*) elements in the patio (Room B) of the palace residence.

The remains of other food animals are common, but less patterned across the rooms of the palace residence. Guinea pigs occur in all seven of the rooms with significant concentrations of guinea pig bones in discrete features in Rooms B and E (Table 3). Remains of the Andean hare, or vizcacha, are present in six rooms. Doves and tinamous are present in two rooms (F and G), but

they are not present in the patio where the primary feasting and funerary ritual took place. And deer remains, either white-tailed or taruca, are present in three of the rooms (C, F, G) as well as the patio, but their remains are not abundant (Table 3). Invertebrate food remains include the presence of Peruvian river shrimp (camarones) in the patio (Room B), and three of the adjacent rooms (C, D, F) and varying quantities of marine mollusks throughout Unit 9.

The direct association of food remains with other material goods suggest the funerary event and feast involved the conspicuous display of abundant foodstuffs and material goods. It is probable that the deceased symbolically took part in the feast; however, the physical association of food and drink remains with ceramic vessels is equivocal. A few bowls were found relatively intact and facing upward. Although food remains were not present in the upright bowls, these vessels may have been intentionally placed in this position rather than being broken and scattered on the patio floor. The greatest concentrations of food remains are in the northeastern corner and the center of the patio and not in direct association with particular vessel forms.

The palace residence also contains bird and amphibian remains that are interpreted as non-dietary offerings, exotic items that possibly held symbolic and/or status value. The structure contains the remains of three unique birds, the Andean condor, pygmy owl, and a tyrant flycatcher. A single terminal wing digit from an Andean condor is present (Room C). The proximal surface and shaft of the digit contain multiple cut marks indicating removal of the wing feathers. A femur fragment is present from the small tyrant flycatcher (Room A). This small songbird has colorful feathers that may have served for ornamentation. Also present is a complete lower leg bone (tarsometatarsus) from a small owl, probably the pygmy owl. Remains of other small (e.g., songbird size) unidentified birds are present in Rooms F and G, as well as the platform (D). The Andean condor, the pygmy owl, and the tyrant flycatcher inhabit the western Andean slopes; therefore, people might have either caught or killed these birds within the vicinity of the site (Ridgely and Tudor, 1994). The non-food avian fauna present at Cerro Baúl have not been previously identified in other Wari ritual contexts; therefore, the symbolism of these bird taxa may have derived from local customs. Regardless of the cultural origin, the use of non-food avian bones suggests that curated bird elements were important symbols to those who participated in this Wari ritual.

The other non-food animal present is a toad. The arid summit of Cerro Baúl is an unlikely natural habitat for *Bufo*, which are most commonly found in agricultural fields where there is enough moisture for their survival. Although the inhabitants of the summit may have created artificial habitats suitable for toads (e.g., water channels, a well-watered garden), it is unlikely that toads reached the summit of their own volition. A single femur from a toad was recovered in the patio (Room B). As described elsewhere (deFrance, 2014), the Wari may have used toads for their psychotropic effects, although their hallucinogenic status is debated (Cooke, 1989, Lytle, 1993, Lytle et al., 1996). Toads with clearly demarcated parotid glands on their backs are depicted in Wari ceramics, including those from Cerro Baúl. As with the non-food bird taxa, it is not known if toads were kept alive on the summit or only brought there once dead.

6.3. Offerings: placement and departure from the palace

The Wari participants adhered to structured patterns related to the placement of offerings. Although we cannot determine who contributed specific offerings in the palace residence or who was invited to participate, we can infer the probable sequence of events. The placement of offerings in the lateral rooms could have occurred before or during the feast. Offerings in the patio probably followed the feast because the density of pottery on the floor and the presence of clustered objects and burnt offerings on the bench would have prevented people from sitting in these areas while they ate and drank. The patio had all types of offerings: pit offerings, burnt offerings, and clusters of objects placed on the floor. Overlying all of these were fragments of broken pottery. In general, it appears that pit offerings were made first, followed by burnt offerings, the placement of items on the floor, and finally, the destruction of the ceramic vessels. It was the case that ceramic fragments partially covered many of the burnt offerings, pit offerings, and clusters of objects arranged on the floor, which were often in direct contact with the rhyolite paving stones.

6.3.1. Pit offerings

Pit offerings are features excavated into the floor where items were deposited. In the case of the palace residence where the floor was paved with rhyolite flagstones, pit offerings required the removal of paving stones. Amy Groleau (2009) describes pit features at Conchopata, where she noted that small face lugs were often missing from deposits of smashed vessels even when most of the vessel was present. She found these face lugs in pit offerings with camelid remains, blue stone, handheld grindstones, and molds used in ceramic production (Groleau, 2009:402).⁶ Similar pit offerings are found in the palace on Cerro Baúl, but there are differences in the items included.

There were at least nine pit offerings located in the patio, Room C, and Room E. Two pit offerings were in Room C, two in Room E, and five other pit offerings were found in the patio (Room B). Pit offerings contained a mix of animal remains, including camelid, guinea pig, fish and marine shell, decorated sherds that do not pertain to reconstructable vessels, tools, and semi-precious stones (Table 1 SI; Fig. 9). Most of the nearly complete decorated vessels are missing a few pieces. It is possible that individuals collected fragments during destruction events to incorporate these items in later offerings. Pit offerings are a Wari practice affiliated with funerary ritual at Conchopata (Isbell and Groleau, 2010).

⁶ Groleau (2009) calls it lapis-lazuli, but lapis lazuli must have inclusions of pyrite, which Nash has not observed thus far among prehistoric Wari assemblages. Streak tests performed on examples from Cerro Baúl identify the blue stone as sodalite.

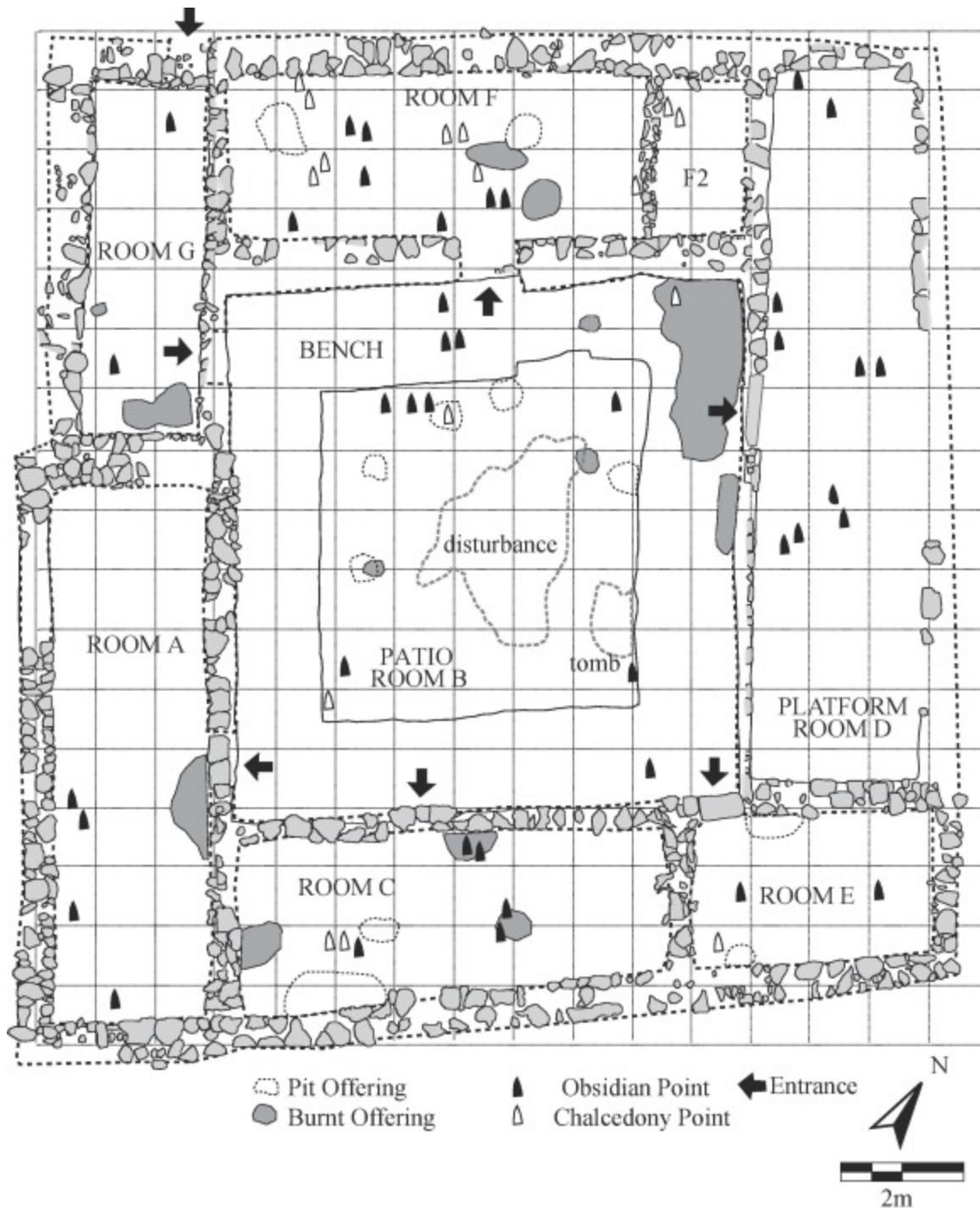


Fig. 9. The palace residence (Unit 9) showing the location of pit offerings, burnt offerings, and paired points.

6.3.2. Clustered objects on the floors

Offerings were also found on floor surfaces in multiple locations. These include the ubiquitous shattered vessels, some of which are associated with other objects. The most common among these are pairs of points, which may be made of obsidian, chert or chalcedony (Fig. 9). These

pairs usually are made in the same material and are similar in size. The only exception to this pattern is in Room A where the two sets of paired points were mismatched in the same fashion as the vessel fragments between two clusters in this space (discussed further below). Elsewhere, three decorated vessels; a front face deity tumbler and two decorated bowls were each found with a pair of points (Room C). Paired points were also found in Room G, on the platform (Room D), and in the patio (Room B) on the bench in front of the entrance to Room F. This last example was associated with a quartz crystal and a stone tool used for ceramic production. Since no textiles dating to the Middle Horizon have been recovered from the site, it is possible that some of these clustered objects were originally deposited as wrapped bundles.

6.3.3. Burnt offerings

Burnt offering were found in five rooms (Fig. 9). Although the components appear to be primarily botanical, a few offerings also contained animal remains, pottery, or semi-precious stone. In some cases, items were placed on top of burned offerings once the fire had cooled, which suggests that the ritual endured for several hours, or possibly for several days. The practice of placing objects on top of burned deposits was also found in the Cerro Baúl brewery, where several shell and stone bead necklaces evidently were placed on top of the burnt deposit after the fire cooled because the beads exhibited no evidence of charring (Moseley et al., 2005, Williams et al., 2001).

In Room A an ash feature was found partially obscuring the entrance. A hearth for cooking or warmth would not be placed in a doorway. This feature included some camelid bone and several fish remains, wood, molle, and cactus seeds (Table 1 SI). The burning of this offering was likely the final ritual activity in this room. Burnt offerings were also found just inside the doors of Rooms C and F. Both contained small quantities of burnt faunal remains (camelid, unidentified mammals, and traces of river shrimp in one of them; Table 1 SI). The largest burnt offering was located in the northern corner of the patio (Room B), where it covered a broad area of the bench, some areas of which were missing paving stones. The deposits contained burnt bone (camelid, guinea pig, vizcacha, small birds, jurel, unidentified fish, and river shrimp; Table 1 SI), semi-precious stones, and botanical materials (burnt molle, corn cobs, gourd fragments and seeds). Four smaller burnt offerings were also present in the patio. Two other burnt offerings may represent burnt textiles. One was in the southwest corner of the patio floor with a unique chalcedony projectile point and the other was found along the western wall of Room C.

6.3.4. Ceramic vessels

The destruction of ceramic vessels as a form of offering is well-documented at Wari sites (Cook, 1984-1985, Cook, 2001, Glowacki, 2012, Moseley et al., 2005). Isbell (2000:37-44) has published a typology of this activity based on the decorated vessel types in the deposit and the location of the offering. The decorated vessels destroyed in the residential palace on Cerro Baúl do not correspond to the large face neck jars and urns that Isbell describes. Instead, they are more modest and consist mostly of cups and bowls. A minimum of 142 ceramics were deposited in the palace residence (Table 5). Significantly, the individuals who broke ceramics apparently did so in a controlled manner; pieces of distinct vessels were purposely placed in specific locations, mixed, or intentionally divided across the palace complex. The location of ceramic vessels, or

portions of vessels was documented, but the significance and meaning of placement and orientation is more difficult to discern. We summarize some of the most distinct patterns of vessel fragmentation and arrangement (Fig. 10).

Table 5. The ceramic assemblage from the palace residence (Unit 9) by general category.

Vessel Type	Context by Room							Mixed ^a
	A	B	C	D	E	F	G	
Bowls	6	35	10	3	3	5	1	2-A/B 1-B/F/Plaza 1-A/F/G/Plaza
Cups	2	0	2	0	0	0	0	
Jars	12	33	10	1	3	7	2	1-B/F 1-D/E 1-F/G
Total Vessels by context	20	68	22	4	6	12	3	7

Vessels to scale within categories but not between categories. All forms are not represented.

^a Since Rooms A, B, C, and E were excavated in 2001, Rooms D, F, and G were excavated in 2002, and the Plaza was excavated in 2007, all vessels with mixed contexts cannot be attributed to lab errors.

Southwest of the patio in Room A was the greatest evidence for intentional division, clustering, and patterned deposition of ceramic fragments. At least 20 destroyed vessels including six bowls (four types), twelve jars of different sizes and forms, a front face deity tumbler and a *huaco retrato* (portrait vessel cup) are present in Room A. The fragments of the *huaco retrato* were clustered in the northern corner of the room. The other pottery is divided into two piles: one north and the other south of the room's entrance. Pieces of a fine, everted-sided bowl and a front-face deity tumbler were divided between these two clusters. Fragments of this bowl were also found in the patio (Room B). Four other vessels had fragments divided between two clusters in Room A. The northern scatter was denser and most vessels were found north of the door ($n = 15$), with only five vessels found exclusively south of the door.

Room C, southeast of the patio, contained at least twenty-two vessels. This assemblage included ten bowls of three types, ten jars, a cup, and one front-face deity tumbler. Two of the bowls were decorated and both were deposited with a pair of points as was the tumbler. These three clusters may have been distinct offerings. A fourth cluster of pottery was at the northeast end of the room.

A few broken Wari vessels were also present in Rooms D and E. Room D is an elevated platform east of the patio. Two nearly identical *tazon*-shaped bowls were found broken near the center of the south half of the platform. These bowls were found among a scatter of obsidian points and chrysocolla. Fragments of three bowls and three jars were found in Room E. Also, in this room, was an intrusive bronze plaque, identified as pertaining to the Aguada style, which is an Inka era

style indigenous to Argentina (Moseley et al., 2005: Fig. 12). This plaque indicates the enduring reverence that was associated with the summit of Cerro Baúl.

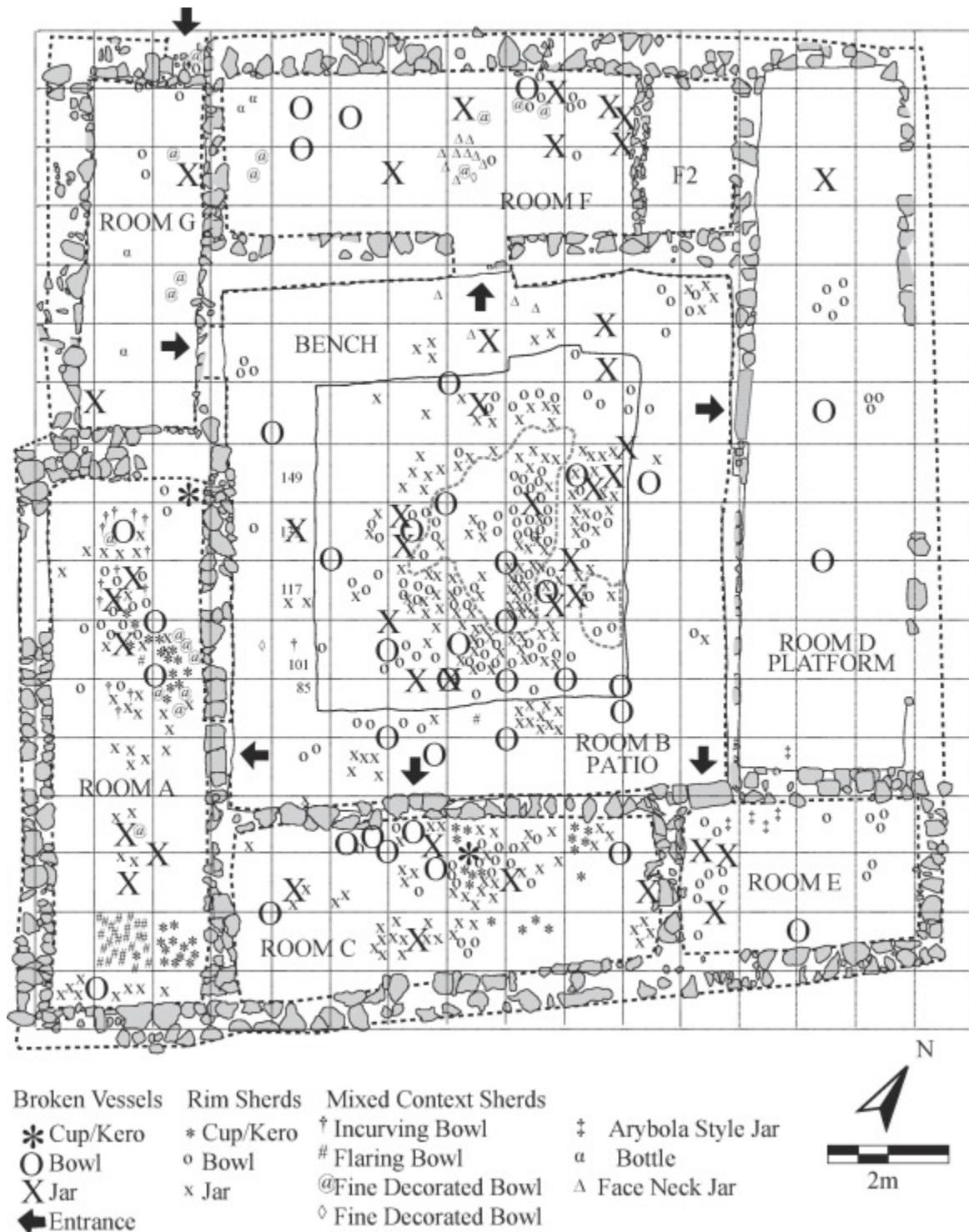


Fig. 10. The distribution of vessels and rim sherds in the palace residence (Unit 9).

North of the patio, at least twelve vessels were found in Room F. There were five bowls of three forms and seven jars. Several vessels in this room resemble forms found in the brewery, such as a distinctive type of face neck jar, a jar with a flower-pot like rim, and a spouted vessel.

Fragments of the face neck jar and flower pot jar were clustered in the center of the room, adjacent to two different types of *batanes* (*metates* or passive grindstones) and a *mortero* (a form of active grindstone with a curved edge to facilitate a rocking motion). Pieces of the face neck jar, the portion representing the headdress, were placed on the bench in the patio (Room B) in front of the entrance to Room F.

The patio (Room B) contained the largest number of destroyed vessels with at least 68. This consisted of 35 bowls of four types, and 33 jars of various forms. Most vessels were smashed on the patio floor; however, a few were broken on the bench. Approximately half of the pots were broken in such a way that their pieces are found in close proximity, whereas some vessels had pieces scattered over a wide area. At least 15 vessels followed a pattern similar to Room A and had pieces in two clusters; one in the north half of the patio and the other in the south half of the patio. A few vessels may have been left intact because they exhibit minimal breakage. These consist of two bowls on the bench, one on the south side of the patio in front of Room C and one in front of the platform (Room D). Another relatively intact bowl was near the center of the room.

At least seven vessels were broken and had pieces purposely placed in different rooms. Fragments of a very fine, thin-walled decorated bowl were found in Room A, Room F, Room G and outside the palace residence in the adjacent plaza work area (Fig. 3). Pieces of a nearly identical bowl, were also distributed between this plaza, Room F, and the patio (Room B). As described above, a fine, flaring bowl was found in Room A and the patio. Likewise, fragments of a face neck jar were divided between the center of Room F and the patio's bench outside the door to Room F.

6.3.5. Exiting through Room G

The architecture indicates that there was a single route of egress from the patio (Room B) through Room G. Most objects in Room G were clustered in the southern portion of the room and no burnt offering obscures its doorways. This would have left a clear path for participants to enter and leave the palace residence during the proceedings and at the end of the ritual. The exception were pieces of two bowls placed just inside the room and just outside Room G, the threshold of the palace residence. One of these bowls had fragments found in three other rooms. These bowls seem to represent the final offering placed in the palace residence upon its abandonment.

7. Discussion

The deposit recovered from the palace residence on Cerro Baúl is a rare, preserved trace of ritual action. One that may have been designed, in part, to mark the transition from one leader to the next and move the center of power from the abandoned palace to a new locale. We suspect that the event also included elements that reified Wari ideology. Based on our analysis of the funerary event we suggest the following scenario. Invitees gathered in the interior private space

of an elaborate palace where they celebrated the death of an elite woman, feasted, performed a complex ritual consisting of many kinds of offerings, and the abandonment of the palace. It is possible that more public rituals preceded or followed the activities in the palace or that the ritual carried over into a new palace, but we cannot be certain. Even though there are many unknown aspects of this ritual abandonment, we submit that the Wari leaders who sponsored it controlled significant resources and labor in the region.

The materials included as offerings and elements of the meal may represent the types of resources Wari officials sought to control, and what items were considered valuable. The features of the ritual deposit illuminate the palace-based elite strategies used in this frontier province. Undoubtedly these strategies overlapped those used by Wari officials in other provinces, and some surely replicate those practiced in the polity's core. For this reason, the study of patterned ritual deposits of this type can be used to identify institutionalized practices and assess the degree to which elites in a particular region are participating in the imperial political hierarchy.

The Wari celebration, funeral, and abandonment of a beautifully constructed building was accompanied by the deposition of many diverse, valuable, and exotic material objects. The event consumed imports of high value; sumptuary foods came from the coast, over 60 km away. It is possible that some of these items accompanied elite participants from the coast and other distant regions. The deposit represents a major expenditure of labor and wealth. The gathering apparently brought together provincial leaders and other elites for a shared experience. The palace residence was the focal point of a ritually-charged diacritical feasting event, but it may have also established new patron-client relations. Since the context was small with restricted access it would seem that the group of participants was quite exclusive. Although the planning and execution of feasts can be fraught with unforeseen difficulties that result in failure (Smith, 2015), all evidence from Cerro Baúl indicates this event was highly successful.

After the event concluded, the palace was ritually closed and became a revered space on the Cerro Baúl summit. Based on current radiocarbon dates, the compound was abandoned at least a hundred years before the rest of the site (Moseley et al., 2005), and it was not significantly reused through time; only a narrow corridor on the palace's south side was destroyed and built over. The ritual performance remained significant in the memory of those occupying the site and for the guests who participated. The continued occupation of Cerro Baúl's summit and the minimal disturbance of the ritually-closed structure indicates political continuity rather than disruption. The practice of vacating residential space and maintaining it as sacrosanct is not unique to either the Wari or the Central Andes; this practice is referred to as reverential termination in the Maya region (Chase and Chase, 1998, Lamoureux-St-Hilaire et al., 2015).

We interpret this elaborate ritual deposition as an act of focused intentionality, rather than haphazard actions taken under the influence of alcohol or hallucinogenic drugs. The event was more aligned with doctrinal practices as opposed to imagistic ones (*sensu* Whitehouse, 2002). The deliberate deposition reflects organization and patterning that is not found in arbitrary or unplanned discard. Some of the practices at the palace occur elsewhere in the Wari Empire. For example, certain types of offerings resemble those reported at Conchopata in the Wari heartland. At Conchopata some of these were also associated with burials in elite residences but confined to

single rooms. Others coincided with the abandonment of structures where no burials were apparent (Isbell, 2000, Isbell and Groleau, 2010).⁷ The example on Cerro Baúl appears to involve an entire compound and it commemorated an elite, noble woman or her family. It also included an array of local and non-local food animals and animals of symbolic value.

The long-term political consequences of this celebration and funerary event are more difficult to discern. Yet, the large outlay of food, material goods, and human effort indicate the event was very costly. The ritual commemorated an important person and, in the process, probably communicated institutional facts. The death of an elite official in the Wari political hierarchy would have been a tenuous time in this frontier province. A shift in leadership and a change in the political architecture of that leadership may have reconfigured the relationship between provincial officials and their subordinates. These new interactions would have required clear communication and reification of the institutional relationships between people in the Wari province while legitimizing the new leader and/or a new space, possibly the brewery compound, as the new locale designated for socio-political activities.⁸

It is possible that by attending this event and contributing certain resources the relationship between the new leader and subordinate elites was transferred and renewed. Although we do not have empirical evidence that the participants left with gifts after the event, the palace had facilities for creating prestige goods some of which may have been bestowed on attendees. Gifts may have solidified new relationships and allegiances. The Inka distributed textiles and other goods at elite gatherings (Murra, 1962). Wari textiles have been found in coastal deposits (Owen, 2012) and in a Tiwanaku tomb at the site of Omo M16 (Oakland, 2012). Subordinate rulers who returned home with objects made on Cerro Baúl would be able to demonstrate to others that they had participated in the event, thus enhancing both their status and authority. The prestation of commodities consumed in the feast may have been reciprocated with prestige goods as a means to establish new relations, but participation in the ritual would have been equally or perhaps more important.

Goods can move as part of many different types of relations and thus are not adequate indicators of imperial processes. The presence of exotics in subsidiary sites does not help us to understand the types of patron-client relations being forged in a particular province. Instead, identifying patterned actions, such as placing points in pairs, breaking pottery and arranging the pieces in specific ways, curating some pieces for later use in other rituals, or the burning of offerings in a distinct manner can only result from engagement and shared ritual participation. These stylized acts materialize institutional facts and may be diagnostic of Wari institutions and control. Also, the material elements of some ritual activities—the ways in which vessels are broken or the configurations of offerings—may be diagnostic indicators of Wari power and elites with

⁷ Brewster Wray, 1983, Brewster Wray, 1990 excavated areas in patio-group components of the Moraduchayoc Compound at the Wari capital. She presumed the materials she recovered were the result of ritual trash generated by the feasting activity of people still living in the compound who dumped their refuse in sequentially abandoned and unoccupied rooms. She found some whole valuables and thus it is possible that the deposits were generated through ritual placement rather than dumping. Since the excavations were relatively small and did not cover entire patio groups it is unclear if these deposits correspond with ritual abandonment.

⁸ Comparisons between the palace and brewery compound are revealing many similarities. It is possible that the brewery was a component of a later palace. Future research in the brewery compound will test this working hypothesis.

knowledge of imperial practices of governance. Thus, understanding the political economy goes beyond quantifying the number of decorated potsherds or imported resources (e.g., obsidian and *Spondylus*) and must include contextualized patterns of deposition. This approach has broad application for researchers studying complex prehistoric entanglements and political expansion in the Andes and elsewhere.

Beyond the site-specific details documented here and the relevance to Wari and Andean studies, the practices described at Cerro Baúl provide broad, comparative insights into the political nuances of ritual behavior in general. This single event had the potential to enact several elite strategies that were important in other complex polities. The feast and ritual offerings were a grandiose display of conspicuous consumption (see Friedman and Rowlands, 1977) in terms of both the labor needed to mount the feast and also in the wealth of items deposited as part of the ritual. It is important to point out that while some of the objects came from far afield (*spondylus*, other ornaments made from sea shells, obsidian, and blue stone) other items were probably made on the summit of Cerro Baúl from materials obtained in the region (metal objects, ornaments made from greenstone and onyx, and the vast majority of pottery). Thus, we are not outlining the contours of a prestige goods economy, but rather illuminating the importance of display and aggrandizement in general as a power strategy (Hayden, 2009).

This costly mortuary ritual might also represent the role of elites as intercessors with the supernatural (e.g., Coe, 1972). The ability to serve as intermediaries with the deceased is a strategy that legitimizes the privileged position of elite descendants in many early states (e.g., Chang, 1994, McAnany, 1995, Morris, 1991). The hosting elites, perhaps as representatives of the state, funded and performed an elaborate ritual in the palace on Cerro Baúl. Their efforts may have created a powerfully endowed ancestor, especially since highly desirable land was dedicated to veneration and removed from other types of use. As with the later Inka and other contact-period Andean groups, ancestor worship may have been a powerful elite strategy (Gose, 1996).

This study also shows how elite hosts can create a context for social engagement that forges relations with the living. One could argue that the food consumed and the elaborate context of the meal is representative of both diacritical and patron-client modes of feasting (*sensu* Dietler, 2001, Nash, 2010, Nash, 2012a). This event may have served both to inter a deceased leader and to officially shift authority to their replacement. If this is the case, this feast was the inaugural patron-client feast establishing relations between the new regional governor and their elite subordinates. Further, attending the feast and ritual also enjoined others to share in an experience, witness the same performance, perhaps jointly engage in some practice such as toasting or placing offerings. Hosting such events was a means to indoctrinate people into the empire, legitimize its power, and reproduce its institutions (see Coben, 2018). In many ancient contexts, sponsoring structured, multi-day events may have been a means to bring local elites together with state officials to inculcate institutional knowledge.

8. Conclusions

On the summit of Cerro Baúl the Wari Empire built an administrative center that oversaw a provincial enclave of migrants and local populations in the Osmore drainage of far southern

Peru. Sometime after CE 750 and likely before CE 900, a woman of high status passed away setting in motion activities and rituals that fostered Wari control and maintained stability in the region. The death and burial of this elite individual necessitated that political leaders demonstrate their political largess and generosity through commensal politics and rituals. These funerary activities and performances were carried out within the norms of Wari institutional customs, but possibly incorporated local variations in practice and their material manifestations. The archaeological record from a palatial compound on Cerro Baúl provides evidence of these ritual behaviors.

Using results from excavations and a comparative and integrated analysis of the spatial distribution of artifacts and faunal remains we document an elaborate funeral celebration that occurred in the lavish palace residence on Cerro Baúl. As shown in this analysis, the elite inhabitants of Cerro Baúl commemorated the death and burial of an important woman by hosting an exclusive, diacritical funeral feast that concluded with the abandonment and ritual closure of the entire palace compound. The Wari elites assembled a significant quantity of foodstuffs and material goods for the celebration, some of which were manufactured within the palace. Inside the palace residence, guests from communities in the region, possibly including those on the Pacific coast, dined on imported and exotic animal foods, particularly marine fish and shellfish, along with abundant camelid meat. They consumed their meal and drank copious amounts of maize beer with ceramic bowls, although a few illustrious participants used cups or tumblers. After the feast, pottery was purposefully broken, and pieces of particular vessels were placed in patterned sequences in different palace rooms. Additionally, offerings of fine goods and more mundane objects were placed on floor surfaces, and offerings were burnt in doorways or other locations. Once the event concluded, the palace was abandoned, and not used again even though the summit remained occupied for another century or two. Understanding the sequence of events and accompanying deposition was only possible through this integrated analysis of architecture and material remains in combination with documenting depositional history.

Beyond the institutionalized practices this study reveals, the archaeology of this Wari ritual is important for demonstrating how political leaders used localized ritual performance as a venue for political interaction. In the case of Cerro Baúl the orchestration of the palace feast, funeral, and abandonment activities succeeded in creating political stability since the site remained occupied and Wari control endured. This study has helped us to envision the Wari political economy in action. It demonstrates how raw materials, labor, and crafted goods were marshalled to foster joint participation in ritual acts that communicated institutional facts to maintain control during a tenuous transition. Further understanding of the strategies used by Wari elites to maintain political control or how elites in other empires effected control on subordinate populations requires large-scale excavations and the integration of multiple types of archaeological evidence to discern patterned activities across the polity.

Declaration of interest

None.

Acknowledgements

We thank the Contisuyo Museum, Peruvian Ministry of Culture, the University of North Carolina Greensboro, and the University of Florida for their support. This research would not have been possible without the collaboration of project directors Ryan Williams and Michael Moseley and the excavation assistance from Sofia Chacaltana, Robin Coleman, Kirk Costion, Caleb Kestle, James Meierhoff, Lauren Schwartz, Nicola Sharratt, and Benjamin Vining. We must also thank those students that assisted with the lab analyses such as Phillip Blattenburger, Miranda Fleming, Anna Kelley, Ann Laffey, Rachel Maass, David Reid, Erin Parson, and Adam Stack. We thank Dennis Ogburn, Prudence Rice, Charlie Cobb, and Robyn Le Blanc for preliminary comments on this article, as well as the reviewers and editors for their useful suggestions. All omissions and errors are our own.

Funding

This work was supported by the National Endowment for the Humanities (RZ-50098-04), the National Science Foundation (BCS-9907167, BCS-0226791, BCS-0074410, BCS-1430792), and the Heinz Family Foundation.

Appendix A. Supplementary material

Supplementary data to this article can be found online at
<https://doi.org/10.1016/j.jaa.2018.12.002>.

References

- Bandy, M., 1999. The Monticolo excavations. In: Hastorf, C. (Ed.), Early Settlement at Chiripa, Bolivia: Research of the Taraco Archaeological Project. Contributions of the University of California Archaeological Research Facility, Berkeley, pp. 43–50 No. 57.
- Bawden, G., 1989. Settlement survey and ecological dynamics on the Peruvian South Coast. No DOI/Available at: Andean Past 2, 39–67.
http://digitalcommons.library.umaine.edu/andean_past/vol2/iss1/6.
- Bell, C., 1992. Ritual Theory, Ritual Practice. Oxford University Press, Oxford.
- Bell, C., 1997. Ritual: Perspectives and Dimensions. Oxford University Press, Oxford.
- Berggren, A., Nilsson Stutz, L., 2010. From spectator to critic and participant: a new role for archaeology in ritual studies. J. Soc. Archaeol. 10, 171–197.
<https://doi.org/10.1177/1469605310365039>.
- Bourdieu, P., 1977. Outline of a Theory of Practice. Cambridge University Press, Cambridge.
- Bragarac, D.E., 1991. Archaeological excavations in the Vegachayoq Moqo sector of Huari. In: Isbell, W.H., McEwan, G. (Eds.), Huari Administrative Structure. Dumbarton Oaks, Washington, DC, pp. 71–80.
- Brewster Wray, C., 1983. Spatial patterning and the function of a Huari architectural compound. No DOI/Available at: In: Sandweiss, D.H. (Ed.), Investigations of the Andean Past: Papers from the First Annual Northeast Conference on Andean Archaeology and

Ethnohistory. Cornell Latin American Studies Program, Ithaca, NY, pp. 122-135.
https://digitalcommons.library.umaine.edu/andean_past_special/3/.

Brewster Wray, C., 1990. Moraduchayuq: an administrative compound at the site of Huari. State University of New York at Binghamton, Peru. PhD diss.

Bronk Ramsey, C., 2013. OxCal Version 4.2. 3: A computer program for radiocarbon calibration and analysis of archaeological and environmental chronological information: University of Oxford Radiocarbon Accelerator Unit. Available online at:
<https://c14.arch.ox.ac.uk/oxcal/OxCal.html>.

Buikstra, J., 1995. Tombs for the living...or...or the dead: the osmore ancestors. In: Dillehay, Tom (Ed.), Tombs for the Living: Andean Mortuary Practices. Dumbarton Oaks, Washington, DC, pp. 229-280.

Chacaltana Cortez, S., Nash, D.J., 2009. Analisis de las Ofrendas en los Andes Sur Centrales. Las Ofrendas como Tradicon de Origen Prehispanico: El caso de Cerro Baul, Valle Alto de Moquegua. In: Ziolkowski, M.S., Jennings, J., Belan Franco, L.A., Drusini, A. (Eds.), Arqueologia del Area Centro Sur Andino, Actas del Simposio Internacional 30 de junio-2 de julio de 2005, Arequipa, Peru. ANDES: Boletin del Centro de Estudios Precolobinos de la Universidad de Varsovia, Varsovia/Lima, pp. 155-180 No. 7.

Chang, Kwang-chih, 1994. Ritual and power. In: Murowchick, Robert E. (Ed.), China: Ancient Culture, Modern Land. University of Oklahoma Press, Norman, pp. 61-69.

Chase, Arlen F., Chase, Diane Z., 1998. The Architectural context of caches, burials, and other ritual activities for the classic period maya (as reflected at Caracol, Belize). In: Houston, S.D. (Ed.), Function and Meaning in Classic Maya Architecture. Dumbarton Oaks, Washington, D.C., pp. 299-332.

Christie, J., 2006. Introduction. In: Christie, J., Sarro, P. (Eds.), Palaces and Power in the Americas: From Peru to the Northwest Coast. University of Texas Press, Austin, pp. 1-20.

Coben, Lawrence, 2018. The Inca center of Incallacta in the Southeastern Andes. In: Alconini, Sonia, Alan Covey, R. (Eds.), The Oxford Handbook of the Incas. Oxford University Press, Oxford, pp. 137-158.

Coe, Michael, 1972. Olmec Jaguars and Olmec Kings. In: Benson, Elizabeth (Ed.), The Cult of the Feline: A Conference in Precolumbian Iconography. Dumbarton Oaks, Washington, DC, pp. 1-18.

Cook, Anita, 1984-1985. The middle horizon ceramic offerings from Conchopata. Nawpa Pacha 22-23, 49-90 No DOI/Stable URL: <http://www.jstor.org/stable/27977778>.

Cook, Anita, 2001. Huari D-Shaped structures, sacrificial offerings and divine kingship. In: Benson, E., Cook, A. (Eds.), Ritual Sacrifice in Ancient Peru. University of Texas Press, Austin, pp. 137-163.

- Cook, Anita, 2004. Wari art and society. In: Sliverman, Helaine (Ed.), *Andean Archaeology*. Blackwell, Oxford, pp. 146-166.
- Cooke, Richard G., 1989. Anurans as human food in tropical America: ethnographic, ethnohistoric and archaeological evidence. *Archaeozoologia* 3, 123-142.
- Coston, K., 2009. Huaracane Social Organization: Change Over Time at the Prehispanic Community of Yahuay Alta. PhD diss. University of Pittsburg, Peru.
- Coston, K., Green, U.M., 2018. Graphically modeling the prehistory of regional interactions in the Moquegua Valley, Southern Peru. In: Green, U.M., Coston, K. (Eds.), *Modeling Cross-Cultural Interaction in Ancient Borderlands*. University Press of Florida, Gainesville, pp. 167-191.
- D'Altroy, Terrance, 2015. *The Incas*. John Wiley, West Sussex.
- deFrance, S., 2014. The luxury of variety: animals and social distinction at the Wari site of Cerro Baul, Southern Peru. In: Arbuckle, B.S., McCarty, S. (Eds.), *Animals and Inequality in the Ancient World*. University Press of Colorado, Boulder, pp. 63-84.
- Dietler, M., 2001. Theorizing the feast: rituals of consumption, commensal politics, and power in African contexts. In: Dietler, M., Hayden, B. (Eds.), *Feasts: Archaeological and Ethnographic Perspectives on Food, Politics, and Power*. Smithsonian Institution Press, Washington, DC, pp. 65-114.
- Edwards, M.J., Schreiber, K., 2014. Pataraya: the archaeology of a Wari outpost in Nasca. *Latin Am. Antiquity* 25 (2), 215-233. <https://doi.org/10.7183/1045-6635.25.2.215>.
- Fogelin, L., 2007. The archaeology of religious ritual. *Ann. Rev. Anthropol.* 36, 55-71. <https://doi.org/10.1146/annurev.anthro.36.081406.094425>.
- Friedman, Jonathan, Rowlands, M.J., 1977. Notes toward an epigenetic model of the evolution of "civilization". In: Friedman, Jonathan, Rowlands, M.J. (Eds.), *The Evolution of Social Systems*. Duckworth, London, pp. 201-276.
- Gladwell, R.R., 2004. *Animals among the Dead: The Ritual Use of Animals at Beringa*. Undergraduate honors thesis Department of Anthropology, University of New Mexico, Albuquerque.
- Glowacki, Mary, 2005. Pottery from Pikillacta. In: McEwan, Gordon (Ed.), *Pikillacta: The Wari Empire in Cusco*. Iowa University Press, Iowa City, pp. 101-114.
- Glowacki, Mary, 2012. Shattered ceramics and offerings. In: Bergh, Susan (Ed.), *Wari: Lords of the Ancient Andes*. Thames and Hudson, London, pp. 145-158.
- Goldstein, Paul, 2000. Exotic goods and everyday chiefs: long-distance exchange and indigenous sociopolitical development in the south central Andes. *Latin Am. Antiquity* 11 (4), 335-361.
- Goldstein, Paul, 2005. *Andean Diaspora: the Tiwanaku Colonies and the Origins of South American Empire*. University Press of Florida, Gainesville.

- Goldstein, P., Owen, B., 2001. Tiwanaku en Moquegua: Las Colonias Altiplanicas. No DOI: Available online at: Boletin de Arqueologia PUCP 5, 139–168.
<http://revistas.pucp.edu.pe/index.php/boletinarcheologia/article/view/2415/2367>.
- Gose, Peter, 1996. Oracles, divine kingship, and political representation in the Inka state. Ethnohistory 43 (1), 1–32. <https://doi.org/10.2307/483342>.
- Green, Ulrike, 2015. Cerro Trapiche and the Wari frontier experience in the Middle Moquegua Valley. PhD diss. University of California-San Diego, Peru.
- Green, Ulrike, Goldstein, Paul, 2010. The nature of Wari presence in the mid-Moquegua valley: investigating contact at Cerro Trapiche. In: Jennings, Justin (Ed.), Beyond Wari Walls: Regional Perspectives on Middle Horizon Peru. University of New Mexico Press, Albuquerque, pp. 19–36.
- Groleau, A.B., 2009. Special finds: locating animism in the archaeological record. Cambridge Archaeol. J. 19 (03), 398–406. <https://doi.org/10.1017/S0959774309000584>.
- Hastorf, C., 2007. Archaeological Andean rituals: performance, liturgy, and meaning. In: Kyriakidis, E. (Ed.), The Archaeology of Ritual. Cotsen Institute of Archaeology, Los Angeles, pp. 77–108.
- Hayden, Brian, 2009. Funerals as feasts: why are they so important? Cambridge Archaeol. J. 19, 29–52. <https://doi.org/10.1017/S095977430900002X>.
- Hogg, A.G., Hua, Q., Blackwell, P.G., Niu, M., Buck, C.E., Guilderson, T.P., Heaton, T.J., Palmer, J.G., Reimer, P.J., Reimer, R.W., Turney, C.S.M., Zimmerman, S.R.H., 2013. SHCal13 Southern Hemisphere Calibration, 0–50,000 Years cal BP. Radiocarbon 55, 1889–1903.
- Isbell, W.H., 1989. Honco Pampa: was it a Huari administrative center? In: Meddens, F. M., Czwarno, R.M., Morgan, A., (Eds.) The Nature of Wari: a Reappraisal of the Middle Horizon Period in Peru. British Archaeological Reports, International Series, vol. 525. British Archaeological Reports, Oxford, pp. 98–113.
- Isbell, William, 2000. Repensando el Horizonte Medio: El caso de Conchopata, Ayacucho, Peru. No DOI/Available online at: Boletin de Arqueologia PUCP 4, 9–68.
<http://revistas.pucp.edu.pe/index.php/boletinarcheologia/article/view/2177/2107>.
- Isbell, W.H., 2004. Palaces and politics in the Andean Middle Horizon. In: Pillsbury, Joanne, Evans, Susan Toby (Eds.), Palace of the Ancient New World. Dumbarton Oaks, Washington, DC, pp. 191–246.
- Isbell, W.H., Brewster-Wray, C., Spickard, L., 1991. Architecture and spatial organization at Huari. In: Isbell, W.H., McEwan, G. (Eds.), Huari Administrative Structure. Dumbarton Oaks, Washington, DC, pp. 19–53.
- Isbell, W.H., Groleau, A., 2010. The Wari brewer woman: feasting, offerings, and memory. In: Klarich, E. (Ed.), Inside Ancient Kitchens: New Directions in the Study of Daily Meals and Feasting Events. University of Colorado Press, Boulder, pp. 191–220.

- Janusek, J., 2015. Of monoliths and men: human-lithic encounters and the production of an animistic ecology at Khonko Wankane. In: Bray, T.L. (Ed.), *The Archaeology of Wak'as*. University of Colorado Press, Boulder, pp. 335-366.
- Knobloch, P.J., 2000. Wari ritual power at Conchopata: an interpretation of *Anadenanthera colubrina* iconography. *Latin Am. Antiquity* 11, 387-402.
<https://doi.org/10.2307/972003>.
- Kyriakidis, E., 2007. Finding ritual: calibrating the evidence. In: Kyriakidis, E. (Ed.), *The Archaeology of Ritual*. Cotsen Institute of Archaeology, Los Angeles, pp. 9-22.
- Lamoureux-St-Hilaire, Maxime, Macrae, Scott, McCane, Carmen A., Parker, Evan A., Iannone, Gyles, 2015. The last groups standing: living abandonment at the ancient Maya center of Minanha, Belize. *Latin Am. Antiquity* 26 (4), 550-569.
- Lightfoot, Kent G., 2005. Indians, Missionaries, and Merchants: The Legacy of Colonial Encounters on the California Frontiers. University of California Press, Berkeley.
- Lozada, M.C., Buikstra, J.E., Rakita, G., Wheeler, J., 2009. Camelid herders: the forgotten specialists in the coastal senorio of Chiribaya, Southern Peru. In: Marcus, J., Williams, P.R., (Eds.), *Andean Civilization: A Tribute to Michael E. Moseley Monograph 63*. Cotsen Institute of Archaeology Press, Los Angeles, pp. 351-364.
- Lyttle, T., 1993. Misuse and legend in the “toad licking” phenomenon. *Int. J. Addict.* 28 (6), 521-538.
- Lyttle, T., Goldstein, D., Gartz, J., 1996. Bufo toads and bufotenine: fact and fiction surrounding an alleged psychedelic”. *J. Psychoact. Drugs* 28 (3), 267-290.
- Mannheim, B., Salas Carreno, G., 2015. Wak'as: entifications of the Andean sacred. In: Bray, T.L. (Ed.), *The Archaeology of Wak'as*. University of Colorado Press, Boulder, pp. 23-46.
- Manzanilla, Linda, 1992. Akapana: una Piramide en el Centro del Mundo. Universidad Nacional Autonoma de Mexico, Mexico City.
- Marcus, J., 2007. Rethinking Ritual. In: Kyriakidis, E. (Ed.), *The Archaeology of Ritual*. Cotsen Institute of Archaeology, Los Angeles, pp. 43-76.
- McAnany, Patricia, 1995. Living with the ancestors: kinship and kingship in ancient Maya society. University of Texas press, Austin.
- McEwan, G. (Ed.), 2005. Pikillacta: The Wari Empire in Cuzco. Iowa University Press, Iowa City.
- Moore, J.D., 1996. Architecture and Power in the Ancient Andes: The Archaeology of Public Buildings. Cambridge University Press, Cambridge.
- Morris, C., 2004. Enclosures of power: the multiple spaces of inca administrative palaces. In: Evans, S.T., Pillsbury, J. (Eds.), *Palace of the Ancient New World*. Dumbarton Oaks, Washington, DC, pp. 299-324.

- Morris, Ian, 1991. The archaeology of ancestors: the Saxe/Goldstein hypothesis revisited. *Cambridge Archaeol. J.* 1, 147-169.
- Moseley, M.E., Feldman, R.A., Goldstein, P.S., Watanabe, L., 1991. Colonies and conquest: Tiahuanaco and Huari in Moquegua. In: Isbell, W.H., McEwan, G. (Eds.), *Huari Administrative Structure: Prehistoric Monumental Architecture and State Government*. Dumbarton Oaks, Washington, DC, pp. 121-140.
- Moseley, M.E., Nash, D.J., Williams, P.R., deFrance, S.D., Miranda, A., Ruales, M., 2005. Burning down the brewery: establishing and evacuating an ancient imperial colony at Cerro Baul, Peru. *PNAS* 102 (48), 17264-17271.
<https://doi.org/10.1073/pnas.0508673102>.
- Murra, John V., 1962. Cloth and its functions in the Inca state. *Am. Anthropol.* 64, 710-728.
- Murua, M. de (1590-1609) 1946. *Historia del Origen y Genealogia Real de los Reyes Incas del Peru*. Introduction, notes, and arrangements by Constantino Bayle. Biblioteca Missionalia Hispanica 2. Consejo Superior de Investigaciones Cientificas, Instituto Santo Toribio de Mogrovejo, Madrid.
- Nash, Donna J., 2002. The Archaeology of Space: Places of Power in the Wari Empire. PhD diss. University of Florida.
- Nash, D.J., 2009. Household archaeology in the Andes. *J. Archaeol. Res.* 17, 205-261.
- Nash, Donna J., 2010. Fine dining and fabulous atmosphere: feasting facilities and political interaction in the wari realm. In: Klarich, E. (Ed.), *Inside Ancient Kitchens: New Directions in the Study of Daily Meals and Feasting Events*. University of Colorado Press, Boulder, pp. 83-110.
- Nash, Donna J., 2012a. The art of feasting: building an empire with food and drink. In: Burgh, S. (Ed.), *Wari: Lords of the Ancient Andes*. Cleveland Museum of Art and Thames & Hudson, New York, pp. 82-101.
- Nash, Donna, 2012b. El Establecimiento de Relaciones de Poder a Traves del Uso del Espacio Residencial en la Provincia Wari de Moquegua. *Bulletin de l'Institut d'Etudes Andines* 41 (1), 1-34. <https://doi.org/10.4000/bifea.1003>.
- Nash, Donna J., 2014. House Burials or Burying Houses: Elite Wari Mortuary Practices at Cerro Baul, Peru. Society for American Archaeology, Austin.
- Nash, Donna J., 2015. Evidencia de Uniones Matrimoniales entre las Elites Wari Y Tiwanaku de Cerro Baul, Moquegua, Peru. In: Korpisaari, Antti, Chicama, Juan (Eds.), *El Horizonte Medio: Nuevos aportes para el sur de Peru, norte de Chile y Bolivia*. Travaux de l'Institut Francais d'Etudes Andines tomo 330, Instituto Frances de Estudios Andinos, Lima, pp. 177-200.
- Nash, Donna J. 2016. Colonization as Imperial Strategy: Generations of Wari Settlement in Moquegua. Paper presented at the 81st Annual Meeting of the Society for American Archaeology, Orlando.

- Nash, Donna J., 2017. Clash of the cosmologies: vernacular vs. state housing in the Wari empire. In: Halperin, C., Schwartz, L. (Eds.), Vernacular Architecture of the Pre-Columbian Americas. Routledge, London, pp. 91-112.
- Nash, Donna J., 2018. Art and elite political machinations in the Middle Horizon Andes. In: Isbell, W.H., Uribe, M., Tiballi, A., Zegarra, E. (Eds.), Images in Action: The Southern Andean Iconographic Series. Cotsen Institute of Archaeology at UCLA, Los Angeles, pp. 469-487.
- Nash, Donna J. nd. Craft production as an empowering strategy in an emerging empire. *J. Anthropol. Res.* (in press).
- Nash, Donna J., Williams, P.R., 2005. Architecture and power: relations on the Wari-Tiwanaku frontier. In: Vaughn, K., Conlee, C., Ogburn, D., (Eds.), The Foundations of Power in the Prehispanic Andes, Archaeological Papers of the American Anthropological Association, No. 14, pp. 151-174.
- Nash, Donna J., Williams, P.R., 2009. Wari political organization on the southern periphery. In Marcus, J., Williams, P.R., (Eds.), Andean Civilization: A Tribute to Michael E. Moseley, Monograph 63. Cotsen Institute of Archaeology Press, Los Angeles, pp. 257-276.
- Oakland, Amy, 2012. A Wari tapestry textile in a Tiwanaku tomb from the Osmore Valley, Moquegua, Peru. *Textile Society of America Symposium Proceedings*. 719. No DOI: Available online at: <http://digitalcommons.unl.edu/tsaconf/719>.
- Ochatoma Paravicino, Jose, 2007. Alfareros del Imperio Huari: Vida Cotidian y Areas de Actividad en Conchopata. Universidad Nacional de San Cristobal de Huamanga, Lima.
- Ogburn, D., 2005. Dynamic display, propaganda, and the reinforcement of provincial power in the Inca Empire. In: Vaughn, K., Conlee, C., Ogburn, D. (Eds.), The Foundations of Power in the Prehispanic Andes. American Anthropological Association, pp. 225-239.
- Owen, B., 1993. A Model of Multi-ethnicity: State Collapse, Competition, and Social Complexity from Tiwanaku to Chiribaya in the Osmore Valley. PhD diss. University of California, Los Angeles, Peru.
- Owen, B., 2012 Ceramic and textile evidence of Wari interactions with Osmore drainage populations from the sierra to the coast. Paper presented at the 77th Annual Meeting of the Society for American Archaeology, Memphis.
- Owen, B., Goldstein, P., 2001. Tiwanaku en Moquegua: Interacciones Regionales y Colapso. No DOI/Available online at: Boletin de Arqueologia PUCP 5, 169-188.
<http://revistas.pucp.edu.pe/index.php/boletinearqueologia/article/view/2419/2372>.
- Pillsbury, J., Leonard, B., 2004. Identifying Chimú palaces: elite residential architecture in the Late Intermediate Period. In: Evans, S.T., Pillsbury, J. (Eds.), Palaces of the Ancient New World. Dumbarton Oaks, Washington, DC, pp. 247-298.

- Pingfang, Xu., 2005. The formation of the empire by the Qin and han dynasties and the unification of China. In: Allan, S. (Ed.), *The Formation of Chinese Civilization: An Archaeological Perspective*. Yale University Press, New Haven, CT, pp. 289-294.
- Renfrew, C., 2006. Becoming human: the archaeological challenge. In: *Proceedings of the British Academy 139: 2005 Lectures*. Oxford University Press, Oxford, pp. 217-238.
- Rick, J., 2008. Context, construction, and ritual in the development of authority at Chavín de Huantar. In: Conklin, W., Quilter, J. (Eds.), *Chavín: Art, Architecture and Culture*. Cotsen Institute of Archaeology, Los Angeles, pp. 3-34.
- Ridgely, R.S., Tudor, G., 1994. *The Birds of South America. Vol. 2: The Suboscine Passerines*. University of Texas Press, Austin.
- Rosenfeld, Silvana A., 2011. Foodways and Sociopolitics in the Wari Empire: Examples from the Heartland and the Province (Ayacucho and Cuzco, Peru AD 600-900). Paper presented at the 2011 Society for American Archaeology Meetings, Sacramento, CA.
- Rosenfeld, S., 2012. Animal wealth and local power in the Huari empire. *Nawpa Pacha: J. Andean Archaeol.* 32 (1), 131-164.
- Sahlins, M., 1991. Return of the event, again; with reflections on the beginnings of the great Fijian war of 1843 to 1855 between the kingdoms of Bau and Rewa. In: Biersack, A. (Ed.), *Clio in Oceania: Towards a Historical Anthropology*. Smithsonian Institution Press, Washington, DC, pp. 37-100.
- Schiffer, M.B., 1972. Archaeological CONtext and SYSTEMIC Context". *Am. Antiq.* 37, 156-165. <https://doi.org/10.2307/278203>.
- Schreiber, K., 2005. Sacred landscapes and imperial ideologies: the Wari empire in Sondondo, Peru. *Archeol. Papers Am. Anthropol. Assoc.* 14 (1), 131-150. <https://doi.org/10.1525/ap3a.2004.14.131>.
- Scott, J.C., 1998. *Seeing like a state: How Certain Schemes to Improve the Human Condition Have Failed*. Yale University Press, New Haven, CT.
- Searle, J., 1995. *The Construction of Social Reality*. Free Press, New York.
- Smith, Monica L., 2015. Feasts and their failures. *J. Archaeol. Method Theory* 22 (4), 1215-1237.
- Spalinger, A., 1998. The limitations of formal ancient Egyptian religion. *J. Near Eastern Stud.* 57, 241-260.
- Stevenson, M.G., 1982. Toward an understanding of site abandonment behavior: evidence from historic mining camps in southwest Yukon. *J. Anthropol. Archaeol.* 1, 237-265. [https://doi.org/10.1016/0278-4165\(82\)90014-9](https://doi.org/10.1016/0278-4165(82)90014-9).
- Swenson, Edward, 2015. The archaeology of ritual. *Ann. Rev. Anthropol.* 44, 329-345. <https://doi.org/10.1146/annurev-anthro-102214-013838>.

- Thornton, E.K., deFrance, S.D., Krigbaum, J., Williams, P.R., 2011. Isotopic evidence for Middle Horizon to 16th century camelid herding in the Osmore Valley, Peru. *Int. J. Osteoarchaeol.* 21 (5), 544-567. <https://doi.org/10.1002/oa.1157>.
- Toohey, J., Geddes, b., Murphy, M., Pereyra Iturry, C., Bouroncle, J., 2016. Theorizing residential burial in Cajamarca, Peru: an understudied mortuary treatment in the Central Andes. *J. Anthropol. Archaeol.* 43, 29-38.
- Topic, J.R., Topic, T.L., 2000. Hacia la Comprension del Fenomeno Huari: Una Perspectiva Nortena. No DOI: Available online at: Boletin de Arqueologia PUCP 4, 181-217. <http://revistas.pucp.edu.pe/index.php/boletinearqueologia/article/view/2210/2140>.
- Underhill, A., 2002. Craft Production and Social Change in Northern China. Kluwer/Plenum, New York.
- Vining, B.R., 2011. Ruralism, Land Use History, and Holocene Climate in the Suches Highlands. PhD diss. Boston University, Southern Peru.
- Voss, B.L., 2005. From casta to Californio: social identity and the archaeology of culture contact. *Am. Anthropol.* 107, 461-474.
- Watanabe, S., 2016. Cronologia y Dinamica Social Durante el Periodo Wari: Nuevos Descubrimientos en el Sitio Arqueologico El Palacio, Sierra Norte del Peru. In: Giersz, M., Makowski, K., (Eds.), Nuevas Perspectivas en la Organizacion Politica Wari. ANDES-Boletin del Centro de Estudios Precolombinos de la Universidad de Varsovia N° 9. Varsovia/Lima, pp. 263-286.
- Whitehouse, Harvey, 2002. Modes of religiosity: towards a cognitive explanation of the sociopolitical dynamics of religion. *Method Theory Study Religion* 14 (3-14), 293-315.
- Williams, P. Ryan, 2006. Agricultural innovation, intensification, and sociopolitical development: the case of highland irrigation agriculture on the pacific andean watersheds. In: Marcus, J., Stanish, C. (Eds.), Agricultural Strategies. Cotsen Institute of Archaeology at UCLA, Los Angeles, pp. 309-333.
- Williams, P.R., Isla, J., Nash, D.J., 2001. Cerro Baul: Un Enclave Wari en Interaccion con Tiwanaku. NO DOI: Available online at: Boletin de Arqueologia PUCP 5, 69-88. <http://revistas.pucp.edu.pe/index.php/boletinearqueologia/article/view/2352/2300>.
- Williams, P.R., Nash, D.J., 2006. Sighting the Apu: a GIS analysis of wari imperialism and the worship of mountain peaks. *World Archaeol.* 14, 455-468. <https://doi.org/10.1080/00438240600813491>.
- Williams, P.R., Nash, D., 2016. In: Religious Ritual and Wari State Expansion In Ritual and Archaic. University Press of Florida, Gainesville, pp. 131-156.
- Yoffee, N., 2005. Myths of the Archaic State. Cambridge University Press, Cambridge.