

A Reevaluation of Human Remains from Tiwanaku

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Human skeletal remains hold great potential for understanding various aspects of pre-Hispanic societies, including issues of diet, health, genetic relationships, warfare, social organization, and inequality. This chapter draws on an intensive analysis of human remains from the urban center of Tiwanaku and an evaluation of the treatment of the human body in specialized burial contexts.¹ For the most part, Tiwanaku burials are primary interments of recently deceased individuals. In certain contexts, however, the body was treated differently, in a fashion that left distinct markings on the bones when interred. These special cases were found in two areas at Tiwanaku: the Akapana, the largest monumental structure at the site, and Akapana East, a residential area about 200 meters to the east of the Akapana. Results from the analysis of these remains challenge previous studies of Tiwanaku human osteological materials. Taphonomic evidence for defleshing, exposure, and dismemberment require reevaluation of the archaeological data and the formulation of new interpretations of Tiwanaku burial rituals, human sacrifice, and political power.

The Akapana Burials

The Akapana, an extensive monumental structure occupying the core of Tiwanaku, is a stepped platform consisting of seven superimposed terraces (Kolata 1993; map 5b). Its design correlates with Tiwanaku iconography (e.g., the stepped structure on which the principal deity on the Gateway of the Sun stands; chapter 7). Kolata and Ponce (1992; Kolata 1993:99) suggest that the Akapana, paired with Puma Punku, a similar stepped platform to the southwest of Akapana, marked a cosmologically based, dual spatial division in Tiwanaku. Each structure represented the visual and symbolic center of its own "ceremonial core" of monumental complexes. Kolata (1993) argues that a massive, artificial canal surrounding the Akapana and its adjacent complexes established the physical boundary of a "concentric cline" of ritual status within this sacred geography, distinguishing the civic-ceremonial center from the urban residential peripheries (see also chapters 10 and 15).

Under the aegis of the Proyecto Wila Jawira, Linda Manzanilla and María Renée Baudoin supervised excavations in the Akapana in 1988 and 1989 (Manzanilla 1992; Manzanilla, Barba, and Baudoin 1990). Analysis of the ceramics from these excavated contexts by Sonia Alconini (1993, 1995; Janusek and Alconini 1994) suggests that the Akapana was constructed and first used in the Early Tiwanaku IV phase, around A.D. 500. For the next few hundred years (ca. A.D. 500–900), surfaces at the base and on top of the lowest terrace became the site of elaborate ritual offerings. These terraces were literally covered with the residue of complexly structured ritual offerings.

Ten human bodies were found strewn at the base of the Akapana adjacent to the first terrace wall (figs. 18.1 and 18.2). The platform of the first terrace was covered with a massive offering of broken ceramics upon which a partial adult human was splayed (fig. 18.3; see also figs. 7.2, 7.8, and 7.12; Manzanilla 1992). Five carbonized wood samples were retrieved from associated contexts, two from the base of the



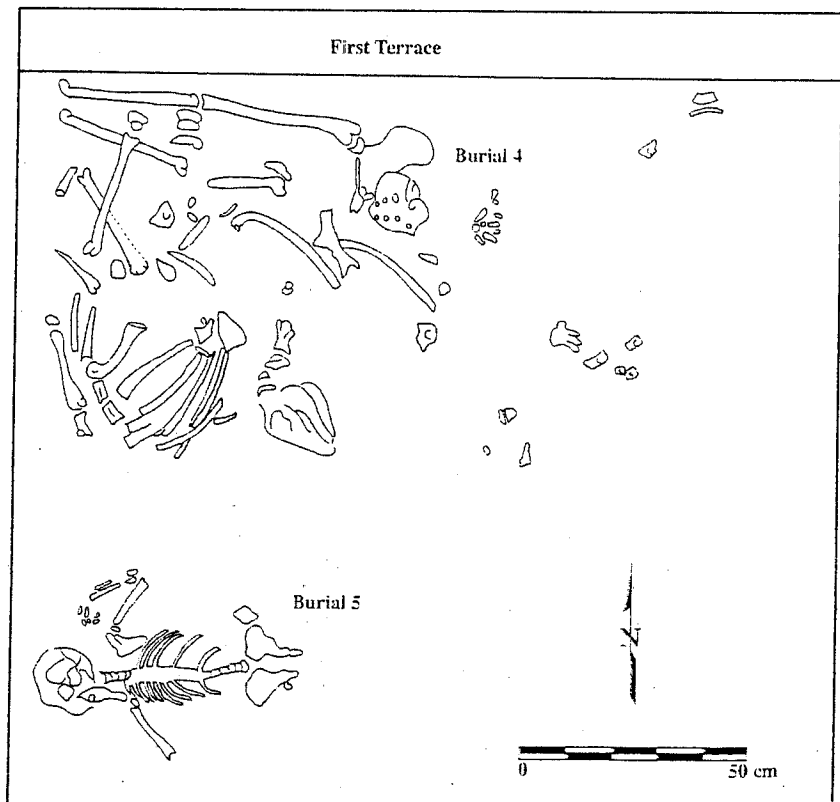
Figure 18.1. View showing the excavated remains of burials 1 and 2 (N8042 E5026, feature 8, level 2a), which formed part of a series of ten human offerings placed at the base of the first terrace wall at the Akapana.

first terrace, two from the ceramic smash on the terrace platform, and one from an offering superimposed on the ceramic smash. The centroids of these radiocarbon dated samples range between A.D. 590 and 640 (chapter 3). Adult llama and alpaca remains were also well represented. Most camelid skeletons were partially or completely disarticulated, consisting in some cases of nearly complete bodies in anatomically impossible positions and in others of nothing more than articulated body parts (chapter 14). The camelids were often thoroughly mixed with human remains. The adult camelids were unusually large, suggesting that they

were specifically bred for ritual sacrifice or were culled from special, perhaps elite-managed herds. Freshly killed adult camelids are much too difficult to simply pull apart, and even the most skilled butchers would have left butchering marks inside of key joints. The camelid remains showed no clear evidence of butchering, however (chapter 14). Therefore, the dismemberment must have occurred after the bodies had partially decayed and could be disarticulated without cutting.

The human burials found during the Akapana excavations were analyzed in the early 1990s by Eric Woodard and

Figure 18.2. Illustration of Burials 4 and 5 (N8027 E5025, feature 8), part of a series of human offerings placed at the base of the first terrace wall at the Akapana.



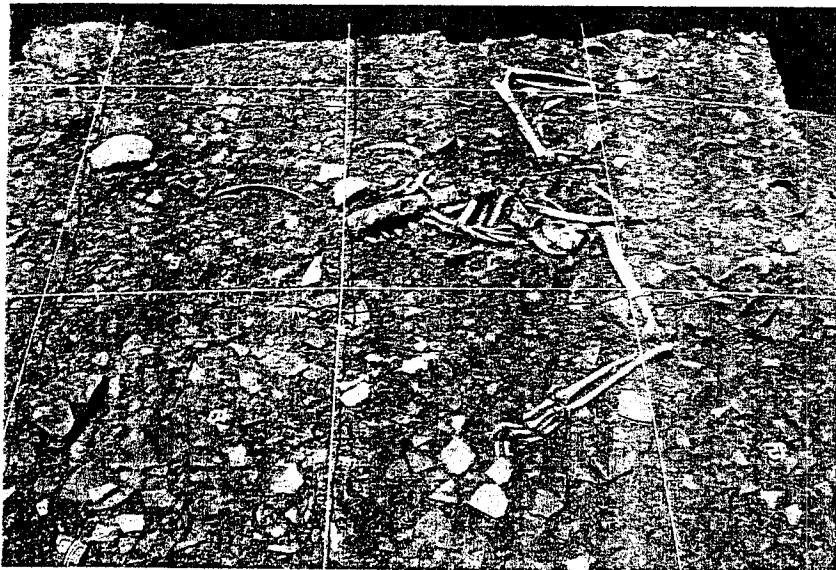


Figure 18.3. View showing part of a human offering, Burial 11 (N8026-28 E5030, feature 18) associated with the ceramic smash, located on the top of the first terrace at the Akapana.

Linda Manzanilla (Manzanilla and Woodard 1990). After the analysis of the 21 human remains found at the base of the Akapana and on the surface of the first terrace, Manzanilla and Woodard reported that none of the remains showed evidence of cut marks or contusions, citing a fractured femur on one individual as the only indication of possible violence (Manzanilla and Woodard 1990:140). Much of the subsequent interpretation of the burials was based on their report. Considering that most of the human skeletons are incomplete but correctly articulated and, in some cases, mixed with camelid bones, Manzanilla and Woodard (1990) suggested that the human remains represent secondary interments and that they were the expression of a Tiwanaku mummy cult or a sequential set of ritual offerings. Further, they noted that 18 of the individuals lacked skulls. Skulls were found isolated or, in one case, clustered as a group (most without mandibles). Manzanilla and Woodard (1990: 144–45) interpret this pattern as physical evidence for a trophy head cult ostensibly represented on some associated Tiwanaku ceremonial vessels. They intimate that this pattern of offerings represents a metaphor for ritual warfare.

Building on these observations, Kolata (1993) suggested that the remains may represent the ancestral mummy bundles of a conquered ethnic group appropriated by Tiwanaku warlords, much as foreign monoliths were incorporated into Tiwanaku's Semi-subterranean Temple: "few acts in the ancient Andean world could have been more intensely charged with the symbolism of domination than scattering the relic remains of ancestors and relatives at the foot of the conqueror's principal earth shrine" (Kolata 1993:127–28). Conquest would have meant political and social subordination. The physical incorporation of one or several groups' ancestors into the main temple manifested the ritual assimilation of the groups' identities into the Tiwanaku "body politic" (Kolata 1993:128). Separating the heads from the bodies of the individuals completed the symbolism of conquest as a loss of autonomous social identity. The temporal data from the offerings support this view. The suite of radiocarbon samples taken from this secure ar-

chaeological context dates to the Tiwanaku IV phase, when Tiwanaku leaders were consolidating their authority at home and potentially abroad (chapters 9, 10, and 19).

Osteological Analysis of the Akapana Burials

The skeletal remains at the base and on the first terrace of Akapana examined by Woodard (Manzanilla and Woodard 1990) as well as those from other Akapana contexts excavated by Manzanilla and Baudoin (Manzanilla, Barba, and Baudoin 1990) were analyzed by Blom. In contrast with the analysis published by Manzanilla and Woodard, the following burials were found to contain culturally modified bone.

The first burial from the base of the first Akapana wall (N8042 E5026, level 2a, feature 8, burials 1–2) contains the partial remains of two males in their late teens to early twenties (fig. 18.1). The eastern (lower) individual (specimen 3188) is a partial skeleton of a 22–30-year-old male² placed on his stomach and consisting of the lower back to the knees (i.e., the last two vertebrae, the pelvis, sacrum, and both patellae and femora).

The other individual (specimen 3189), a more robust, male 17–21 years old, also includes the left patella, both femora, the sacrum and pelvis, and the last two vertebrae. This male was placed on his back, however, with his right leg under that of the first (lower) individual and slightly separated from the rest of the body. In addition, the burial contained his left arm below the elbow (the left radius, ulna, and most of the left hand). Within the pelvis, a partial, disarticulated left foot (specimen 3193) was found. A right humerus and ulna were located on the left and right sides, respectively, of the lower individual. Rib shaft fragments of a human or small camelid were also present. Because the individuals were both male and of the same approximate age, it is not certain to whom these disarticulated bones pertain, if either.

Contained in the burial also were the remains of two camelids semiflexed with their heads to the south, three polychrome *keros* (one lying under the pelvis of the first in-

dividual and two associated with the second individual), fragments of an *incensario*, a bead, carbonized wood, fish scales, and a fragment of an obsidian projectile point (Manzanilla 1992; Proyecto Wila Jawira burial forms on file at the University of Chicago).

Based on the condition of the remains, the pattern of cut marks found on these skeletons is not surprising. The older individual (specimen 3188) presents two cut marks and crushing damage on the anterior portion of the body of his fourth lumbar vertebra, the most superior vertebra present (fig. 18.4). Both femora of the other individual (specimen 3189) were broken at midshaft in antiquity, and the right femur is severely damaged at the knee with several cut marks medially and laterally (fig. 18.5) and crushing on the medial side (fig. 18.6). Moreover, the right greater trochanter and the left femoral head possessed carnivore damage.³ The disarticulated humerus (specimen 3193) was also cut near the elbow, along distal anterior medial ridge. It should be noted that "cut marks" that occurred during the excavation process are readily discernible by their lighter-colored borders.

Another burial (N8027 E5025, feature 8, burial 4, specimens 9941 and 9942), also located at the base of wall one, is of a 16–19-year-old probable male placed on his back (fig. 18.2). The body consists of a sacrum articulated with the right half of the pelvis and right leg (femur and partial tibia and fibula), and a partially disarticulated left leg (partial femur, tibia, and fibula). The fragmentation of these bones occurred during or after excavation. In addition, portions of the trunk (right scapula and ribs), a right proximal humerus fragment,⁴ and a right hand were found out of anatomical position. Also interred in burial 4 was a right first metacarpal from another individual. In addition, the disarticulated bones of an older adult included one cervical vertebra, five thoracic vertebrae, and four lumbar vertebrae. A



Figure 18.4. Close-up showing cutmarks and crushing damage on the anterior portion of the body of the fourth lumbar vertebra.

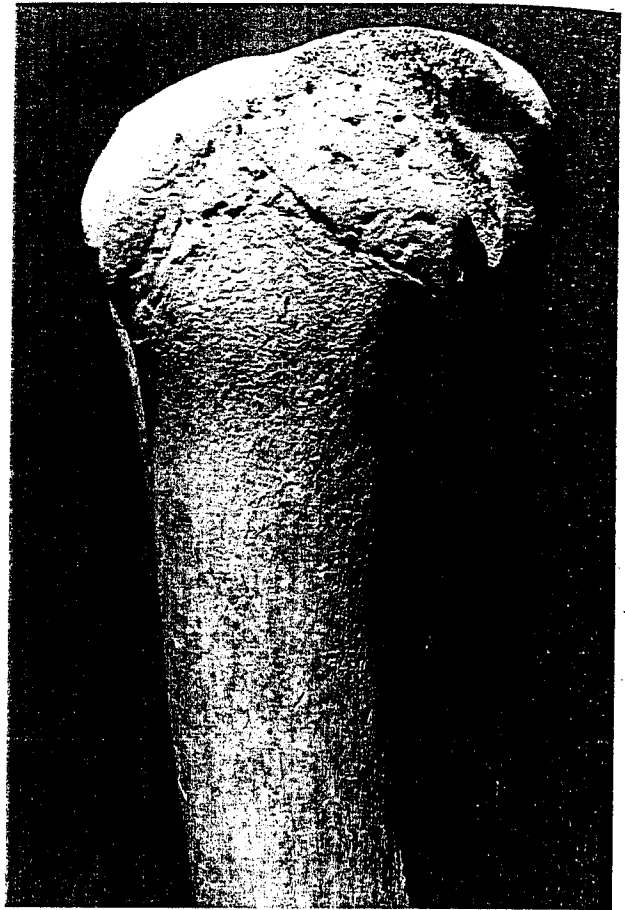


Figure 18.5. Close-up showing cut marks on a right distal femur.

partial camelid skeleton and some ceramic sherds were also present in this feature (Manzanilla 1992; Proyecto Wila Jawira burial forms on file at the University of Chicago).

As in the first burial, cut marks were found on these remains and were located on the dorsal spine (fig. 18.7) and the left inferior articular facet of one of the superior lumbar vertebrae (fig. 18.8) and possibly on the right ilium (lateral sciatic notch and internal fossa). Clear carnivore damage was present on the anterior midline body of a midthoracic vertebra and the left femoral head (fig. 18.9).

The Akapana burial found splayed across the ceramic smash, an offering consisting of hundreds of purposely broken, iconographically rich polychrome vessels on the surface of the first terrace (N8026–28 E5030 feature 18, level 6a, burial 11, specimen 4931; fig. 18.3), also exhibited taphonomic changes of note. The body, which was part of a larger offering context, was of a 17–30-year-old individual. The parts of the body maintained in anatomical position consist of a partial left scapula, right and left clavicle, a partial sacrum, one cervical vertebra, all twelve thoracic and five lumbar vertebrae, the right and left humeri, radii, and ulnae, the left hand, and the manubrium and the majority of the ribs. Disarticulated remains comprise the partial skull vault (partial frontal, parietal, and occipital) to the lower right and the first three metacarpals of the right hand and half of a left foot. Additional fragments from a right occipital of young juvenile were also present. On this skeleton cut



Figure 18.6. Close-up showing crushing damage on a right distal femur.

marks or carnivore damage are lacking; instead, there is evidence that the body was exposed to the elements. We observed weathering of the cranium, a foot phalanx, some hand bones (fig. 18.10), and very lightly on the vertebrae and sternum.

Of the individuals examined, one other burial in the Akapana collection had evidence of cut marks (N7947 E5074, feature 18, level 1d, specimen 5188). Possibly related to nearby feature 19, this offering consisted of camelid bones and portions of human diaphyses from a right humerus and left tibia. The right distal humerus presented light cut marks on the lateral posterior metaphyseal region. While direct confirmation of cutting is not evident on the other bodies buried in the Akapana, most were found to have body parts missing in ways that could not be explained solely by differential preservation.

The data presented here differ substantially from those published previously (Manzanilla 1992; Manzanilla and Woodard 1990). These reports concluded that the bodies found in the Akapana were separated into parts long after the individuals were dead and the decay of soft-tissue was well advanced. But Blom's detailed osteological analysis reveals clear evidence for dismemberment, violent cutting, and exposure to the sun, wind, and carnivores in the Akapana's offerings. Most of the cut marks are clearly visible and deep and would have required relatively forceful blows. The compression fracture marks were clearly made on fresh bone. These types of marks are generally associated with hacking apart the body with some type of heavy blade. Therefore, the people of Tiwanaku were very likely participating in rituals that involved the violent and (in view of the architectural context) public dismemberment of the



Figure 18.7. Close-up of cutmarks on the dorsal spine of a lumbar vertebra.

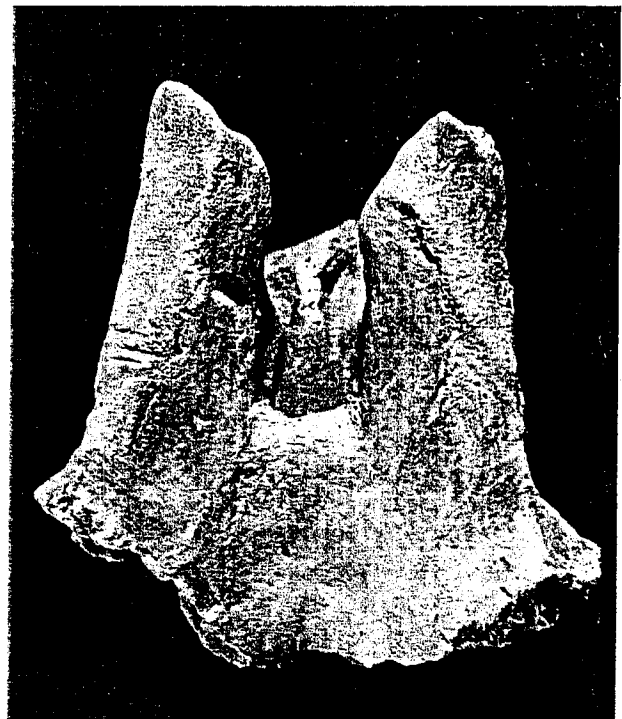


Figure 18.8. Close-up of cutmarks on the left inferior articular facet of a lumbar vertebra.



Figure 18.9. Image showing carnivore damage to a left femur head.

dying or recently dead. The burials and associated contexts of the Akapana contrast in many ways with those found in the area of Akapana East, 200 meters to the east of the Akapana. Further cultural interpretation of the remains from the Akapana will be discussed after we present the osteological analysis of those from Akapana East, which provide a comparative example.

The Akapana East Mortuary Complex

Evidence for entirely distinct mortuary activities exists farther out into the settlement periphery (maps 1a and 6). Directly east of the Akapana, in the Akapana East sector, excavations along the raised west bank of the moat and within the area it enclosed revealed residential occupations and other activity surfaces dating to the Late Formative 2 and Tiwanaku IV phases (Janusek 1994; chapter 10). The earliest occupation, about 1 meter below the present surface, consisted of a semicircular structure foundation with a compacted floor covered with thin ashy habitation deposits and scattered utilitarian ceramics showing affinities to ceramics of the Late Formative 2 phase (A.D. 100–400). This area appears to be an early domestic occupation.

The compact, 15-centimeter thick floor that capped this domestic occupation marked a complete change in the nature of local activity. This surface was not simply trampled; it was elaborately prepared. Two adobe structures with

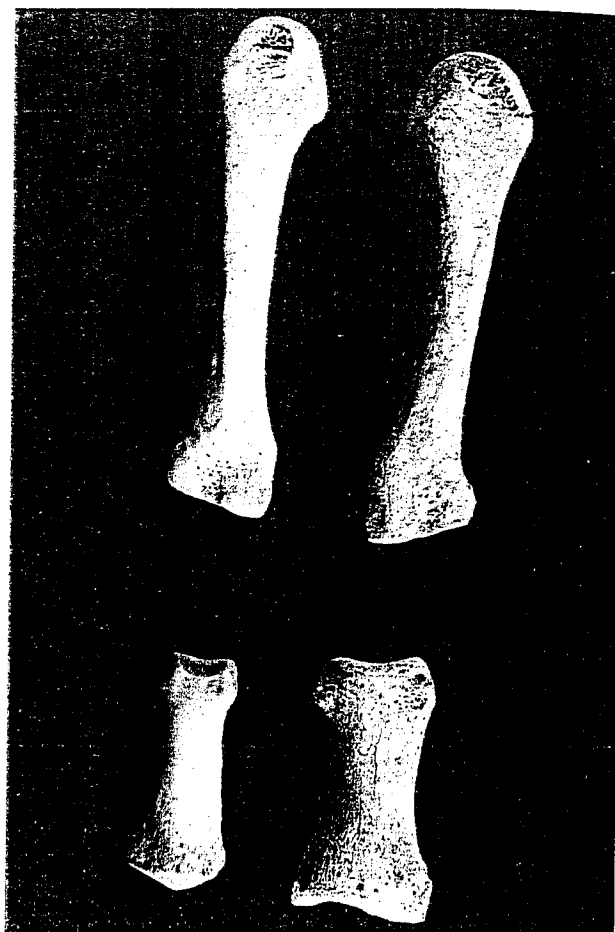


Figure 18.10. Photograph of taphonomic alterations ("weathering") to the fourth metacarpals and foot phalanx. Observe the well-preserved bones from the articulated left hand on top and a weathered foot phalanx and the matching metacarpal from the right hand.

eroded foundations rested on this prepared surface. Individual adobe bricks were definable in the foundations of the east structure (structure 1). Individual bricks measured $15 \times 25 \times 5$ centimeters and were made of a fine reddish-brown sandy clay loam (5yr 5/4). Each structure measured approximately 4×5.5 meters. The orientation of the structures followed a common alignment between six and eight degrees east of north, the same alignment evident in the construction of Tiwanaku's monumental architecture (chapters 7 and 10).

This compacted surface presented an array of unique patterns. Inside and outside space showed clear distinction in soil color and texture. The floors inside of the buildings consisted of a yellow sandy clay loam (10yr 5/3), while the outside floor consisted of a red silty clay loam (5yr 5/4). The fine, homogeneous texture of the surfaces distinguished them from other residential surfaces in Tiwanaku and Lukurmata, indicating that the soils were specially selected (perhaps carefully mixed) and transported to the construction site. The floors inside of both structures contained well-defined, shallow depressions, ovoid or roughly rectangular in shape. The narrow space between the two structures consisted of finely laminated layers of sandy loam, a pattern typical of outdoor areas exposed to water

erosion, suggesting that it served as a shared, central drainage gutter.

One particularly elaborate feature was found in the floor in the northeast corner of structure 1. Here, a slightly raised section of the floor was composed of diagonally oriented bands of alternating yellow sand (like the interior floors of the structures) and red clay (like the exterior floors of the structures). The bands themselves, like the wall foundations, were neither entirely straight or consistent in width. The most striking feature of the floors was their exceptional cleanliness. Because of this, they were easy to follow during excavation. Unlike the offering surfaces on the Akapana terraces—in fact, unlike any other surface excavated to date at Tiwanaku, whether residential, ceremonial, or otherwise—the surfaces both inside and outside of the buildings were entirely free of ash, stains, pits, artifacts, or any other remnants of domestic or ceremonial activity. They were literally sterile. Only one significant artifact was located 2 centimeters above the surface of the floor a few meters east of structure 1: a single rim of a scalloped Qeya-style incensario, a ceremonial vessel diagnostic of the Late Formative 2 phase (see Bermann 1994; Mohr Chávez 1985).

At some point, this occupation was renewed. The old surface was covered with 5–10 centimeters of culturally sterile clay and then capped with a new floor nearly identical to the original floor, about 75 centimeters below the present surface. Unfortunately, postdepositional disturbances destroyed much of the occupation. The fill below the floor was relatively clean, but did contain a few camelid bone splinters and small ceramic sherds, including one or two redware serving vessel fragments. The elaborate banded surface in structure 1 was rebuilt, although somewhat more haphazardly, and some sections of the structure foundations were reconstructed. The indoor and outdoor surfaces remained distinct. Interior surfaces displayed a new configuration of the shallow, ovoid, and rectangular depressions, this time accompanied by long rectilinear depressions, which may have supported internal, cut-stone wall divisions long since removed. Again, the floor surfaces appear to have been sterile, aside from a single eroded llama astragalus embedded into the floor of structure 2.

Several depositional patterns distinguished this new structure from the earlier floor. First, a hard white precipitate covered many areas of this surface. This precipitate may have developed as mineral-bearing water percolated down through the soil and reached this stratum, spreading horizontally between the durable surface and its looser overburden. Another possibility, though, is that the buildings were covered with some type of plaster, which eroded onto the surfaces below. Trace evidence for plaster is commonly found around residential structures, and broken adobe bricks in an elite residential structure in the Putuni complex displayed traces of blue, yellow, and red pigment (chapter 9).

Second, coating the floors inside of the structures was a fragile lens of partially preserved *ichu*, a hardy grass common to the altiplano. *Ichu* grass is bunched together today to cover the wood and reed supports of house roofs, filling in open spaces and averting rain while trapping heat. It ap-

pears that the grass in the Akapana East buildings fell to the ground from their roofs, suggesting that they had been standing for some time without being maintained. Some of the *ichu* was carbonized, raising the possibility that the roofs had burned and collapsed at some point. There was no other confirmation of burning in or around the building foundations, however.

Third, two shallow oval pits originated just below the surface of the floor outside of structure 1. That is, the floor capped the two pits, sealing them into the stratum of fill below the surface. These undoubtedly represented a unique offering. Each of the shallow pits was filled with clean silty clay, but lining the base of each pit was a thin, evenly distributed layer of finely pulverized bone. Much of the bone was discolored and encrusted in a light green precipitate, suggesting that the powdered remains were placed along with some type of liquid or vegetal substance. A third, deeper pit simply contained clean fill.

At some point, the second surface was also capped with a mound of clean homogeneous reddish-brown silty clay (5yr 5/4). This mound was highest (50 cm thick) over the two building foundations. The mound fill contained several chunks of adobe brick, indicating that it represented the collapsed walls. The unsullied condition of the last surface suggests that the buildings were purposefully destroyed in a single event.

Within this mounded area, we encountered several ceramic fragments that date to the Early Tiwanaku IV phase, between about A.D. 500 and 600. The most likely interpretation is that these sherds were incorporated into the adobe bricks during their manufacture. The east surface of the mound revealed two superimposed, sloping surfaces. The lower surface was covered with charcoal fragments, possibly representing a burnt offering dedicated to the same closing event. These charcoal fragments yielded a corrected, calibrated radiocarbon date of A.D. 609 ± 88. Combined with the diagnostic ceramic sherds between and below the two surfaces, the date effectively locates the occupation sequence in the Late Formative 2 (transitional Tiwanaku III to Tiwanaku IV) and Tiwanaku IV phases, contemporaneous with the ritual offerings located at the base of the Akapana.

At least five human bodies were found within the Akapana East mound above the final surface. Although one context seems to have been disturbed and redeposited during the digging of an ash pit, none were encountered within any visibly intrusive burial pit or tomb structure. Since there was no evidence that the actual interment of the bodies created any disturbance in the mound, it appears that these bodies were placed there when the buildings collapsed or, more likely, were destroyed or had been placed within the walls, perhaps in niches, prior to collapse.

Osteological Analysis of the Akapana East Mortuary Contexts

The first remains (N7857 E5430, feature 1, specimen 20676) were those of a nearly complete infant skeleton between three and nine months old. The bones, while exhibiting an

active pathological condition (periostosis), displayed no cut marks or taphonomic changes of any kind. A few meters to the south of this subadult, several bones represented incomplete remains of one or more adolescents or young adults (15–18 years old) that were placed into a shallower area of the fill (N7853 E5432, feature 5, specimen 23580). The remains were somewhat confusing and consisted of a frontal and sphenoid fragment with much collagen, appearing almost modern, and other bones (fragments of the right humerus, left mandible and right maxilla) that are covered with a hard, cementlike dirt. These concretions made observation of the mandible difficult. It appears, however, that there are two or three light cut marks on the coronoid process. Two unidentified fragments (one possibly a cranium or mandible, the other from a long bone or mandible) also had cut marks. The humerus had many cuts on the distal metaphyseal region, the most obvious of which were along the medial crest medially and posteriorly, running perpendicular to the shaft. A few lateral marks and a crush fracture on the medial side were also present.

A third individual, found near the infant and less securely within the mound (N7857 E5432, feature 3, specimen 20042), was an 18–22 year old represented by a fragmented partial skeleton. These skeletal remains included fragments of the cranial vault, teeth, pelvis, one lumbar vertebra, the right patella, both femora and tibiae, and part of the right capitata. No cut marks were observed on the elements present for this individual. This could be explained by the lack of the mandible and the poor preservation of the long bone epiphyses. From excavation photos, however, this burial appears to have been a primary interment. The individual was partially articulated and seated with the legs flexed. Excavations in this area uncovered two isolated mandible halves of a probable male (left: specimen 20800 N7853 E 5432, level 1, feature 1; right: N7855 E5432, level 9, specimen 24605) that fit together. One half (specimen 20800) was found in an ash pit intrusive to the mound. The other was located in the mound just on the border of the pit. This suggests that the entire mandible was within the mound and then one half was pulled out during subsequent occupations. The halves were clearly broken in antiquity and contain cut marks along both coronoid processes, the right ramus posteriorly, and the right mental region.

Another group of bones was found in the fill of an intrusive pit (N7862 E5424, feature 4, specimen 8908). At least one male from 18 to 21 years of age was represented by several fragments broken in antiquity. These fragments are from the cranium, skull, right and left scapulae, pelvis, one thoracic vertebra, ribs, humerus (side indeterminate), right and left femora, left fibula, the right fifth metatarsal, and one foot phalanx. The long bone fragments are very dense. Several cut marks were visible on these remains. Most prominent were curvilinear marks running perpendicularly to the shaft around the neck of the right femur (fig. 18.11). Four to five small cut marks were found on the inferior superior portion of the midshaft of a fragment of a right rib, and three deep cuts were present along the spine of the left scapula. Several marks were found on the pelvis. These include: (1) two small perpendicular cuts dorsally near the



Figure 18.11. Close-up of cutmarks on a right femur neck from Akapana East, N7862 E5424, feature 4.

posterior obturator tubercle of the right ischium; (2) several cut marks around the sacroiliac joint and greater sciatic notch of the left ilium; (3) a peri- or post-mortem compression type fracture near arcuate line of the left ilium, 3 centimeters from the sacroiliac joint surface; (4) several along the inferior gluteal line of the right and left ilia (fig. 18.12); (5) a few around the sacroiliac joint and between anterior iliac spines of the right ilium. The mandible also contained cut marks along the coronoid processes (fig. 18.13).

The bodies interred in the mound at Akapana East displayed entirely distinct types of treatment from those of the Akapana. Most obvious was the consistent evidence for light, repeated cutting commonly associated with defleshing, suggesting that flesh was purposely scraped off the bones. The Akapana East cut marks exhibit less forceful cuts and scrapes with crushing designed to pull apart bones held by strong ligaments, such as at the sacroiliac joint. The practice of disinterring and sometimes defleshing dead relatives or leaders has strong parallels covering areas from the Andes to Europe (Danforth and Tsiaras 1982; Sokal et al. 1993). Further, the more isolated, internal location of the Akapana East remains suggests that the mortuary treatment they were subjected to was of a more intimate and private nature, in profound contrast to those of the Akapana. Therefore, we interpret those in the mound at Akapana East as physical evidence for ancestor worship.

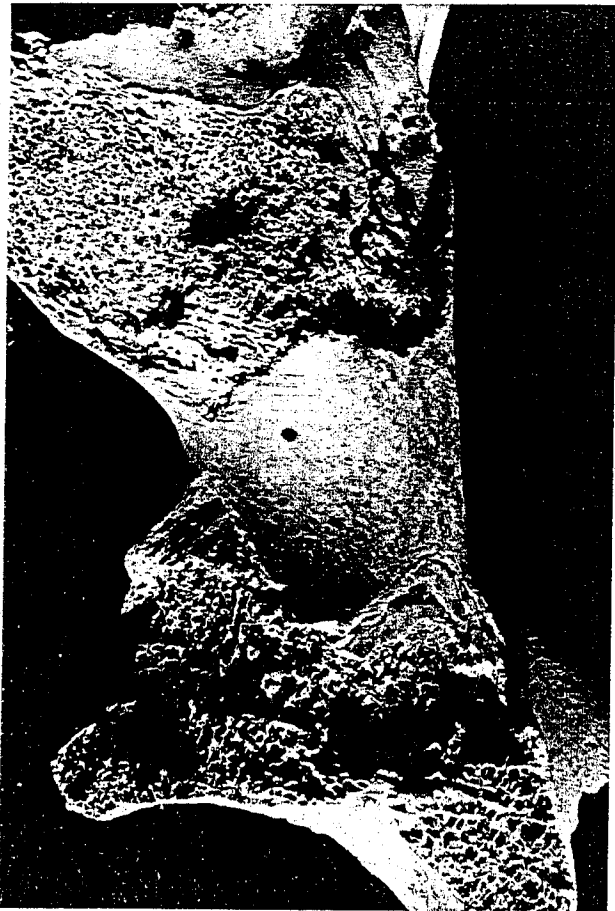


Figure 18.12. Close-up of compression-type fractures and cutmarks on a pelvis from Akapana East, N7862 E5424, feature 4.

Interpretation of the Akapana Remains

In interpreting the remains from the Akapana, one must consider the broader sociocultural context. One explanation often invoked to explain cut marks on human bone is cannibalism (e.g., Turner 1983; White 1992). While acts of

cannibalism cannot be entirely discounted, they do not provide a satisfactory explanation for the overall patterns that we see in the Tiwanaku remains. First, Spanish colonial descriptions of Andean indigenous populations do not commonly portray or condemn these societies as cannibalistic, despite the ideological incentive to present them as "barbarous." Second, little support for cannibalism in Andean groups is documented ethnographically or archaeologically. Although Shimada (1994:240) suggests that evidence for cannibalism exists at the Moche site of Pampa Grande because some human bone in subfloor contexts is burnt, he finds no indication of butchering or any other explicit justification for this claim. Finally, besides the cut marks, the osteological patterning at Tiwanaku does not fit any of the other characteristics outlined in landmark studies by Turner (1983) and White (1992) on cannibalism. These diagnostic traits include breakage, burning, disarticulation, and gnawing of most elements.

Although they do not conjure an image of Aztec-style mass sacrifice, the dismembered remains buried at the base of the Akapana are consistent with incidences of human sacrifice or ritual homicide in other societies. Other archaeological contexts provide information regarding sacrifice and preparation of sacrificial bodies in the ancient Andes. Sacrifice appears very early in the archaeological record. Human remains found beneath one floor at Kotosh (1700 B.C.) and iconography on stone sculpture at the Peruvian north coast site of Cerro Sechín (1500 B.C.) provide evidence for ritual killing of humans (Burger 1992). Many iconographic and archaeological studies on the Moche are also available, including those at Huaca de la Luna (Bourget 1990, 1994; Verano 1996; Verano et al. 1999), at Pampa Grande (Shimada 1994), and at Sipán (Alva and Donnan 1993; Alva and Donnan 1993 citing Verano ms.), among others (Hill 1998). Notably, studies of the human skeletal remains by John Verano have contributed substantially to our knowledge of body treatment in Moche society. Accounts of Inka sacrifice, the *capac hucha*, also provide sub-

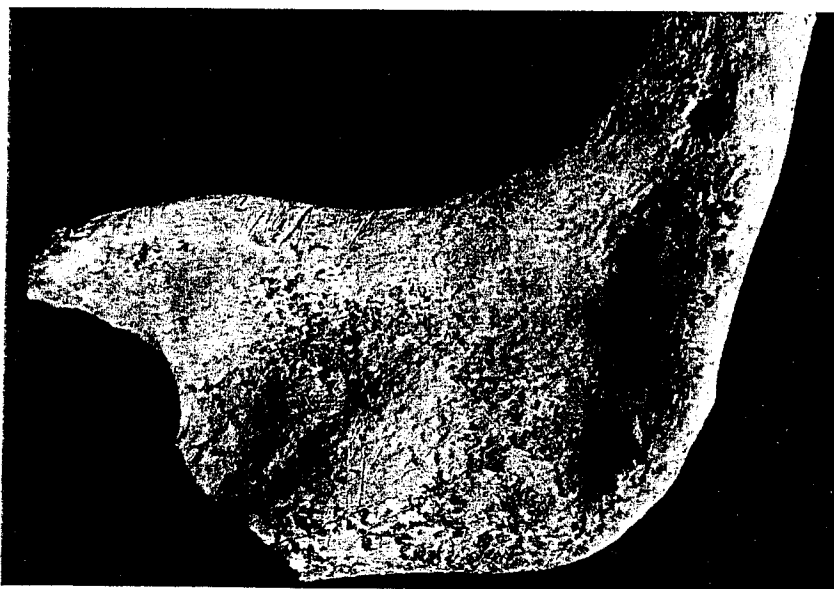


Figure 18.13. Close-up of cutmarks on the coronoid process of a mandible from Akapana East, N7862 E5424, feature 4.

stantial information on sacrifice in the Andes (MacCormack 1991; McEwan and Van de Guchte 1992; Silverblatt 1987; Verano 1995; Zuidema 1978, 1982).

The question of who the sacrificial victims at Tiwanaku were is critical in interpreting the remains. In contrast to accounts of the *capac hucha* describing the Inka sacrificial victims as beautiful children or young women, the demographic analysis of the individuals buried in the Akapana indicate that their profile is consistent with that found in the Moche sites, in which males are the more common victim. Moche researchers have suggested that sacrificial victims were, symbolically or in reality, captive warriors. This conclusion is based on both iconographic evidence and the presence of healed injuries, presumably incurred during previous battles. Therefore, sacrifices may have been of foreign individuals. For the Inka *capac hucha*, disagreement exists concerning the identity of the victims and whether they were Inkas, from conquered groups, or both (e.g., MacCormack 1991; McEwan and Van de Guchte 1992; Reinhard 1991; Silverblatt 1987; Zuidema 1978, 1982). Unfortunately, the Tiwanaku sample is not sufficiently large for epigenetic analyses that might indicate whether Tiwanaku sacrifices were of foreigners (see Blom 1999, Blom et al. 1998). Therefore, the identity, foreign or local, of the Tiwanaku sacrificial victims remains unknown at present.

Evidence for human sacrifice in other societies also shows that victims are often elaborately prepared before sacrifice during a liminal state when social roles change prior to death (Hill 1998; Valeri 1985). Moche iconography displays these individuals as nude, with their hands tied, and often mutilated and bloodied. Skeletal analyses indicate that Moche victims sustained numerous injuries just prior to death. Unlike the Moche remains, those at Tiwanaku show little direct evidence of sustained warfare or violence in general (Isla et al. 1998). Further, because of the poor preservation characteristic of highland archaeological contexts, whether sacrificed victims were tortured or beaten before death cannot be discerned in the Tiwanaku remains.

Moreover, the precise cause of death is difficult to determine at Tiwanaku. Although the preferred manner of ritual homicide varies among cultures in general, human sacrifices in the Andes were performed by burning, strangulation, breaking the neck with a stone weapon, removal of the heart, and live burial. Moche iconography depicts sacrifice that was performed by cutting the throat. Cut marks on the anterior portion of the upper cervical vertebrae of human victims verify that this practice actually occurred. No such marks to the neck region are visible on the Tiwanaku remains. The cut marks that do exist would very likely have happened just after death because of their locations deep in the body tissue.

Many of the human remains found in the Akapana indicate that the bodies of the dead sacrificial victims were processed. We find isolated limbs, torsos, and heads, as well as other elements. Dismemberment and using body parts as "trophies" has many correlates in other Andean cultures. Throughout the Andes, body parts are often found deposited as ritual offerings. The early site of Kotosh contained a "dedicatory offering" of three headless bodies

(Burger 1992:118, citing Izumi and Terada 1972), and the taking of heads in battle was a common practice among the Inka (Rowe 1963:279). In addition, iconography on stone sculpture at Cerro Sechín displays stacks of heads and other dismembered parts (Burger 1992 citing Tello 1956). Moche iconography displays dismembered corpses, and actual partial bodies, some with cut marks, are found in archaeological contexts.

In Tiwanaku, we see cases in which the dismembered body was often processed into other objects such as tools, vessels, and trophies. A trophy head cult is represented iconographically on various media at Tiwanaku. Tiwanaku stone sculpture often depicts feline-human warriors (*chachapumas*) or sacrificers holding battle axes and trophy heads. A particularly fine basalt *chachapuma* was recovered near the base of the stairway on the west side of the Akapana (fig. 7.22). As noted by Manzanilla and Woodard (1990) the concentration of isolated crania uncovered in Akapana contexts is suggestive of a trophy head cult and is consistent with remains found at other sites in the Lake Titicaca Basin, such as Chiripa (Blom and Bandy 1999). In a symbolically rich act, drinking vessels were also made from human crania at Tiwanaku and exhibit clear polishing from long-term use. Moche also kept crania as vessels and reused them over time (Verano et al. 1999). Curating trophy heads was common in many ancient Andean cultures (e.g., Cordy-Collins 1992; Proulx 1989; Silverman 1988; Shimada 1994; see also, for North America, Pickering 1985; and, for the Aztecs, Cabrera 1993; Pijoan and Mansilla 1997; and Serrano 1993).

Nevertheless, the offerings of crania alone do not provide sufficient evidence that Tiwanaku victims of sacrifice or warfare had their heads removed as trophies. Decapitation is not substantiated in Tiwanaku in the form of cut marks to the cervical vertebrae. This could very well mean that the heads were taken from bodies that had decayed. Although direct evidence for decapitation is lacking, the cut marks on many postcranial elements cannot be ignored, indicating that recently dead individuals were dismembered and portions of their bodies were finally disposed of at the base of the Akapana. The foot found in burial 1-2 is an example of a potential trophy, and Blom has also observed a weaving implement crafted from a human tibia in the collections from Lukurmata. Although perhaps rare, this evidence indicates that the people of Tiwanaku were using human body parts as trophies from the deceased.

Taphonomic analyses can also illuminate the reason for the carnivore bite marks and weathering on the bones from the Akapana, neither of which are surprising when placed in the context of other Andean sites. As Verano suggested, scavenging animals may have played a part in the taphonomic processes. These animals, including vultures, carrion flies, and carnivores, are often incorporated in the iconography of the Moche sacrifice ceremony (see also Rea 1986; Schaffer 1983). Dogs and felines are continually represented in the form of the "feline captor" and the Warrior Priest's "companion dog" (Alva and Donnan 1993:134, fig. 145). Although not found at Moche, carnivore gnawing of human bones, possibly by dogs, is documented at Pampa Grande (Shimada 1994). Unless carefully controlled, these animals

would have played a significant role in the dismemberment of exposed bodies. Once the flesh was removed or decayed, exposure to the sun and wind would have resulted in additional changes to the bones. Along with the rich material offerings of llamas and elegant smashed vessels filled with food and beverages, the Tiwanaku sacrificial human remains were clearly left exposed to the climate, to scavengers, and likely to observation for some time after death.

Why people were being ritually killed at Tiwanaku is a much more difficult question to answer. Sacrifices of some sort exist in all cultures, and various theorists have grappled with the meaning of sacrifice (Barnes 1993; Carrasco 1982, 1999; Clendinnen 1991; Frazer 1890; Freud 1918; Hocart 1970; Hubert and Mauss 1964; MacCormack 1991; Mauss 1950; McEwan and Van de Guchte 1992; Mizruchi 1998; Silverblatt 1987; Smith 1892, 1894; Tylor 1877; Valeri 1985; Verano 1995; Westermarck 1906; Zuidema 1978, 1982). The Akapana sacrifices may represent enemies taken in battle, ritually killed and then deposited as offerings at the foot of the temple, representing the commemoration of one or more military victories, similar to the elite-sponsored ritual acts that followed decisive battles between the Inka and Chanka (Bauer 1992; Rowe 1946:204). The incorporation of such captives with the offerings would be a potent metaphor for the domination and assimilation of a defeated ethnic group or groups into Tiwanaku's social order (Kolata 1993), symbolically linking conquered and conquering groups and reinforcing the hierarchical arrangement of these groups. Through this act, Tiwanaku elite publicly displayed their superior power and wealth.

The sacrifice would have also symbolically reinforced the relationship between the Tiwanaku people and the sacred ancestors, deities, and forces of nature on which their reproduction depended. Through the offerings at the base of the Akapana, Tiwanaku elite were engineering a reciprocal relationship with the ancestors and restoring balance to the natural and social orders. This cyclical view of cosmic reproduction is evident in the historic and contemporary Andean belief that the dead push up the potatoes that feed the living. By staging such ostentatious displays of generosity, the offerings' sponsors ensured the well-being of the earth and the Tiwanaku people.

The location of the sacrificial remains at the base of one of the largest monuments in the Andes is also illuminating. Today, it is customary to place a llama fetus under the foundation of one's house upon construction, a practice that we also find in the archaeological record at Tiwanaku. The dedicatory human and llama burials associated with several stages of construction and renewal at the Putuni complex and in the Akapana appear to be a Tiwanaku elite version of the foundation sacrifice (chapter 9). Placing the remains of the sacrificial victim in the base of the Akapana served to consecrate the monument by appeasing the deities associated with that place and indeed to "create" such place spirits by providing individuals to sanctify the building. Because of the importance of the Akapana, at the center of the Tiwanaku world, and the status of those sponsoring its construction, the only offering sacred enough was the gift of human life.

Conclusions

In contrast to previous reports on skeletal remains, data presented here reveal unequivocal evidence that human bodies were dismembered through cutting and crushing and exposed to the sun, wind, and carnivores before being placed as offerings in the Akapana. Cut marks and compression fractures are clearly visible, deep, and made on fresh bone. These marks and other taphonomic and contextual analyses illustrate that the people of Tiwanaku were taking part in rituals that involved the violent, forceful, and public dismemberment of the dying or recently dead. The terraces of the Akapana were a specific type of sacred place in Tiwanaku. These places were devoted to sacrifices of humans, llamas culled from elite herds, and food and drink in containers specially prepared and displaying explicit images of Tiwanaku elite culture.

The offerings at the base of the Akapana clearly reflect ritual consumption, the destruction of material objects with religious meaning. This is particularly apparent in the offering of hundreds of polychrome vessels along with the human sacrifices. Undoubtedly, the Tiwanaku elite sponsoring this event achieved their goal by destroying valuable material objects. If we assume, however, that human lives were valued above material remains, the Akapana remains indicate that much more than conspicuous consumption was at work. The inclusion of human bodies in the Akapana sacrifices reinforces the importance of the sacrifice and the identity of its sponsors.

The construction of the Akapana was itself a feat of conspicuous consumption meant to impress on a public scale. Lines of site around the Akapana were not restricted by the adjacent residential compounds, and the important, central location itself suggests a relatively inclusive audience, even if limited to high-status groups resident in the immediate vicinity. The sacrificial rituals generating the terrace offerings were likely dynamic and open, geared toward pomp and public display, something not to be hidden from the eyes of the majority but rather a justified, "moral" act of the ruling elite.

In contrast, the remains and archaeological context of Akapana East differ fundamentally from those of the Akapana. In Akapana East we encounter defleshed, carefully curated human remains, which appear to have been formed in bundles and associated with extraordinarily clean ritual space. We suggest that the Akapana East remains were directly incorporated into the structure, perhaps set into their walls or eaves as ancestral bundles or fetishes, and so were an elemental component of the space when functioning. Moreover, some of the remains were manipulated by later occupants, either disturbed through renewed construction in the Akapana East sector or potentially purposely placed in the mound after the collapse or destruction of the structures as periodic offerings or as offerings dedicated to the area's final closing. Whatever the precise nature of the rituals performed in the enclosed, clean spaces of Akapana East, spatial patterns suggest that they involved a strong sense of privacy and exclusivity. The cleanliness of the area suggests continual, even obsessive maintenance. The area

itself was isolated from the rest of the growing urban center by the large, adobe compound walls that we located during excavations. Ceremony entailing these human remains, then, was most likely conducted in enclosed buildings within an isolated compound. This ritual space was located some distance from the Akapana and was separated from the monument by a contemporaneous domestic compound. This suggests that the specialized Akapana East structures were associated with the rituals of a local resident group or groups. We argue here that the osteological remains and archaeological contexts at Akapana East demonstrate that not all cut marks on bone indicate human sacrifice at Tiwanaku. Rather, the cut marks found on the human bones from Akapana East derive from curation of human bones, perhaps representing the remains of venerated ancestors held by their descendants.

In the offerings of the Akapana, power was woven through the acts of public sacrifice and affixed to the diverse, elaborate objects consumed in the rites. Power was inherent in the significance attributed to the place, in the center of the city demarcated from the rest of the world as a sacred space. The place, the center of divine and human power, defined the offerings placed there as sacred. Through periodic rituals of sacrifice, elite sponsors attempted to maneuver themselves into a position of mediating the generative power of the cosmos. The rituals themselves were

likely powerful experiences meant to impress on all the human senses, through the sharp sound of shattering vessels, the aroma of *chicha* mingled possibly with the acrid smell of human and llama blood, and the ostentatious public destruction of objects with great iconic meaning. In contrast, the remains of Akapana East represent another kind of sacrifice common to the Andean world: the intimate, socially internalized veneration of ancestors. Although fundamentally distinct in intent and affect, these two forms of sacrifice at Tiwanaku were both deeply social acts that mobilized and articulated belief and religious practices.

Notes

1. We are deeply indebted to Alan Kolata for his generosity in editing this manuscript and providing access to the collections, as organizer and co-director of Proyecto Wila Jawira. Our appreciation also goes to Ed Swenson and Nicole Couture for their editorial suggestions. Wolfgang Schuler provided an invaluable service in taking the photographs of the cut marks. This research was supported in part by the Wenner-Gren Foundation for Anthropological Research.

2. Determination of sex for all individuals was based on pelvic and/or cranial morphology and femur measurements. Age was based on pubic symphysis and auricular surface stages and, where applicable, epiphyseal fusion and dental development.

3. Because chemical preservative was placed on the bone upon excavation and while still covered with sediments, additional observations may have been obscured.

4. It is conceivable that the humerus is not from this individual.

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Archaeology and

Paleoecology of an

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Urban and Rural
Archaeology

EDITED BY ALAN L. KOLATA

SMITHSONIAN INSTITUTION PRESS

Washington and London

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Copy editor: Jean Eckenfels
Production editor: Duke Johns
Designer: Janice Wheeler

Library of Congress Cataloging-in-Publication Data
Kolata, Alan L.

Tiwanaku and its hinterland : archaeology and paleoecology of an
Andean civilization / Alan L. Kolata.

v. <1 >. — (Smithsonian series in archaeological inquiry)

Includes bibliographical references (p.) and index.

Contents: v. 1. Agroecology —

ISBN 1-56098-600-X (acid-free paper)

v. <2 >. — (Smithsonian series in archaeological inquiry)

Includes bibliographical references (p.) and index.

Contents: v. 2. Urban and Rural Archaeology —

ISBN 1-58834-054-6 (acid-free paper)

1. Tiwanaku culture. 2. Indians of South America—Titicaca Lake
(Peru and Bolivia)—Agriculture. 3. Indians of South America—Titicaca
Lake (Peru and Bolivia)—Antiquities. 4. Irrigation farming—Titicaca
Lake (Peru and Bolivia)—History. 5. Raised bed farming—Titicaca Lake
(Peru and Bolivia)—History. 6. Human ecology—Titicaca Lake (Peru
and Bolivia)—History. 7. Titicaca Lake (Peru and Bolivia)—Antiquities.
I. Title. II. Series.

F3319.1.T55K63 1995

984'.1201—dc20

95-5837

British Library Cataloguing-in-Publication Data available

Manufactured in the United States of America

10 09 08 07 06 05 04 03 5 4 3 2 1

Ⓢ The paper used in this publication meets the minimum requirements
of the American National Standard for Information Sciences—
Permanence of Paper for Printed Library Materials ANSI Z39.48-1984.

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