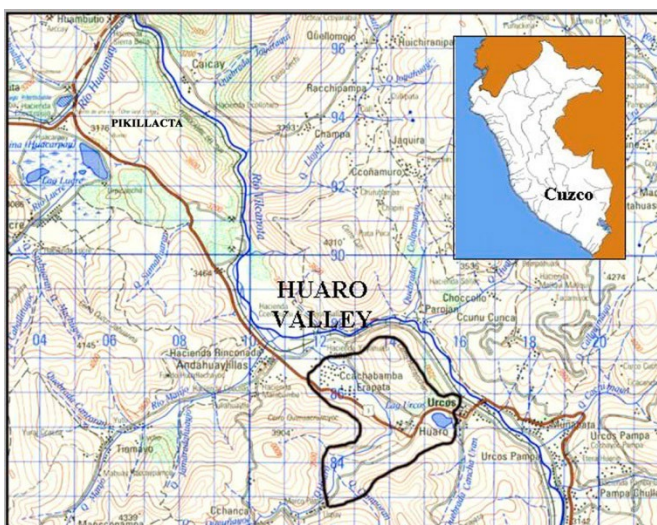


Human Remains Analysis and Cultural Data From the Huaro Valley Cotocotuyoc Site, Peru

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Introduction

Archaeological investigations were conducted during three field seasons at the Huaro Valley Cotocotuyoc site in Peru. Huaro Valley is located near the community of Urcos; 17 km southeast of the Lucre Basin and the site of Pikillacta and 46 km southeast of Cuzco. Eight locations were sampled in 2005. Field discoveries resulted in final season efforts focusing on three areas -- a Wari elite cemetery, a Lucre mortuary, and Lucre burials near a canal (Glowacki and Arredondo Dueñas 2009; Tesar 2006). During the second field season in 2006, project work focused on the Lucre mortuary and Wari elite cemetery structural area. During the final season in 2008 work focused on the southeastern and north-western extensions of the Wari elite cemetery structural area (Glowacki and Arredondo Dueñas 2009; Glowacki, Arredondo Dueñas and Tesar 2009).



Physical anthropologists Valerie Andrushko and Viviana Bellifemine (now Sanchez-Chopitea) (Andrushko 2005, 2006; Andrushko and Bellifemine 2006, 2007; Andrushko and Sanchez-Chopitea 2020) analyzed human skeletal remains collected during the first two seasons at Cotocotuyoc. In this report their findings are merged with project information on the context in which the remains were found to document Middle Horizon Wari and Late Intermediate Period Lucre human interments and associated ritual activity.

Archaeological investigations in the Huaro Valley were conducted at the Batan Urqu hillcrest mortuary complex (Zapata 1997) and four valley floor structures (Glowacki and Zapata 1998). These were followed by a valley-wide survey that recorded 23 Middle Horizon Wari sites, as well as Inca sites (Glowacki and Roman 2002; Glowacki and McEwan 2020:15).

“When the Wari entered the Cuzco region, they encountered thriving local societies. ... The largest and most productive of these were located in the areas of greatest agricultural production, including the Plain of Anta, the Cuzco Basin, the Lucre Basin, and the Huaro Basin” (Bauer 2004:54). Wari expansion from Ayacucho to the Huaro Valley began early in

the Middle Horizon during Epoch 1A (ca. A.D. 500) and that occupation continued until the early Late Intermediate Period (ca. A.D. 1000) transition to the Lucre culture when the Wari elite abandoned the valley (Glowacki and McEwan 2020:12-16; Glowacki 2020).

Mann (2006:22) notes that about A.D. 1000, both Tiwanaku and Wari societies “were reeling from a succession of terrible droughts. ... [P]unishing dry spells, many more than a decade in duration, [were] interrupted by gigantic floods. ... [S]ome climatologists believe the Pacific is subject to ‘mega-Niño events.’” Ice cores reveal “major droughts occurred between A.D. 1000 and 1100” (Bauer 2004:27). Undoubtedly, these conditions contributed to social unrest and changes in the affected populations.

Regardless, development of the Cotocotuyoc site complex (named after its many piles of collapsed structure rubble) began during the Middle Horizon Wari occupation of Huaro Valley. It occupies a mountainside plateau overlooking residential and other Wari structures (Glowacki and Roman 2002), and the Vilcanota River drainage, thus controlling the trade route through that choke point (Glowacki and McEwan 2020:16-17).

Thus far, there is no archaeological evidence that Cotocotuyoc had residential use during the Wari occupation of the valley. Rather, it likely was used as a trade center, a vantage point controlling trade through the valley, and perhaps as a chicha production and storage facility (i.e., there are numerous plain orange-ware storage vessel sherds). However, its most important function was as a religious center and a place for interring important Wari and maintaining their graves. It was expanded over several generations. Its transformation included removal of some lime-mortar (*yeso*) floors to facilitate excavation of burial pit features and construction of a drainage canal connected to one of them—a large cist-like tomb pit.

Wari elite use of Cotocotuyoc apparently ended with its burning when they abandoned Huaro Valley. The reason for this event remains unknown. It may have been in response to or the result of external threats that included ending access to exotic trade goods important to the Wari. The transition of the Huaro administrative center to the Lucre Valley had begun decades earlier when construction of Pikillacta was begun.

It is likely that during the centuries of Huaro Valley occupation that some of the Wari elite or other members of their community for various cultural reasons intermarried with children of the leaders of the resident population that had become subservient to the Wari overlords. (For example, Cotocotuyoc Fosa Funeraria 02 appears to contain the remains of a mixed heritage family [See Group E below].)

Such intermarriage, as a consequence of people interacting, would have included transformation from the material cultural items of the Wari heartland that declared their separateness (and eliteness) to a melding of items important to both the Wari and the resident culture. The nearby mortuary complex of Batan Urqu (Zapata 1997) reflects the transformation of ceramic style to that known as Lucre, which heralds the beginning of the Late Intermediate Period in the Huaro Valley.

Similar intermediate style ceramic ware was found with early Lucre burials at Cotocotuyoc, including Fosa Funeraria 02 and 03. Shortly after Wari elite abandonment, since there was no apparent accumulation of organic material on the rubble, the complex was reoccupied. That the reoccupation occurred during a period of stress is indicated by the fact that collapsed wall rubble was not removed from rooms in key structural areas—rather, it was simply leveled and Lucre stone floors placed on that rubble.

The recovered remains of community members brought to the site during its initial reoccupation were interred in mass burials. Camelid (llama & alpaca) and *cuy* (guinea pig) bone remains were no longer a feature of ritual feasting deposits in high status human burial areas or elsewhere. The quality and elaborateness of ceramic vessels also declined as their transformation to the Lucre style was completed. It is noted that early transitional Lucre ceramic vessels were of better quality than later ware that consists almost exclusively of domestic utilitarian vessels (Glowacki 2020:58-60). External exchange items were also absent.

Previous Wari Burial Type Studies

The context in which human interments occur has long been of interest to archaeologists and others. Descriptions of Middle Horizon and Late Intermediate Period burial characteristics in the Peruvian highlands are of interest with respect to comparison with Cotocotuyoc site interments. For example, Isbell (2004:8-24) described eight types of interment modes found at Conchopata and other Wari sites. However, Valdez *et al.* (2006:681) note that “mortuary information gathered from the various Wari sites of the Ayacucho Valley indicates that during the Middle Horizon there was more diversity in the way the inhabitants of this valley treated the dead than has been presented by Isbell (2004; Isbell and Cook 2002)”

Isbell (2004:10 [Figure 4] and 14 [Figure7]) provides illustrations of his Wari Interment Types 1-4, 6-7 and 5a and 5b, respectively. Generally cylindrical earthen pits with single primary flexed sitting individuals (Type 1) and multiple individuals (Type 2) are the most common type, with cylindrical stone-lined cist burials (Type 3) occurring infrequently at Conchopata. A similar interment pattern occurs in the Middle Horizon Cotocotuyoc Wari elite cemetery area, while later interments during the transition to Lucre incorporate other modes. Valdez *et al.* (2006:684) correctly observe that mortuary data from Wari sites, in addition to social hierarchy factors, should consider ethnicity factors—changes brought about through contact with other people.

A review of other reports describing Wari and Lucre interments is beyond the scope of this study. Rather, I will simply present Cotocotuyoc interment data to facilitate others interested in preparing a broader comparative synthesis.

Cotocotuyoc Excavation Grid Areas

In 2005 the project excavation grid datum was established on a utility pole located in the middle of a trail crossing the site. Excavation test areas were identified by the cardinal direction of their location with respect to that datum. The NW corner was used as the reference point for unit location designation in all of the project excavation areas.

The Northwest Area (NWA) was briefly investigated with the excavation of 2m x 2m units. Two of the four units begun in Grid Units N07-08W07-08 were completed. A tabular stone-covered Lucre burial (NWA.E1A) was excavated in N07-08W07 Levels 2-3. Burial pit fill consisted of local loose soil. The pit contained the remains of two individuals.

The Central West Area (CWA), located within the S02-05W06-11 Grid Unit area, included the (likely unplanned) occurrence of human remains with wall rubble and Lucre floors placed on leveled rubble left on earlier Wari floors. Bone remains from a camelid offering feast were found in the southeastern part of S04W10 Level 4 at the beginning Wari floor level of the room in which they occur. There are three other floor levels documented for that unit.

Investigation of the East Central Area (ECA) focused on structure walls located adjacent to a pathway crossing the site next to the datum. Four and a half 2m x 2m units encompassed the wall excavation from unit S01W02-03 through S05W02-03, and included two 1m x 1m unit excavations eastward in S02W01 and S03W01-02. Fragments of human remains (ECA.E1A) were found near the western edge of S03W01-02.

Limited excavation was conducted along the easternmost identified Wari wall in the Southeastern excavation area. Bones from a small Wari camelid offering pit feature, designated SEC.East.Hallazgo 1, were found under the bottom edge of the wall in S08E11 Level 3. The remains were accompanied by two obsidian knives. No other features of interest were found in the area.

The Southeastern Canal (SEC) area contained Wari structural remains linked to Middle Horizon food preparation activities and continued in use during the transition to the Late Intermediate Period Lucre occupation. A stone-lined canal and water retention system within the structural area passed under a wall and continued toward the Southwestern structural area, after merging with a primary east-west canal. The excavated area lies within Grid Units S09-15E04-10. The area included two Wari burials (SEC.E10A and E11A) in the Wari food preparation area and eight burial pit features (SEC.E1A through E7A and E9A) linked to the Lucre presence and also placed there as likely offerings to the powers controlling the continued flow of water to the canal system.

Excavation was begun in the Southwestern Area (SWA) in 2005. After clearing an area of piled wall-fall rubble the top of a stone-lined tomb (SWA.Tomb 1) was found and efforts to excavate that tomb begun. The area westward of SWA.Tomb 1 was cleared and

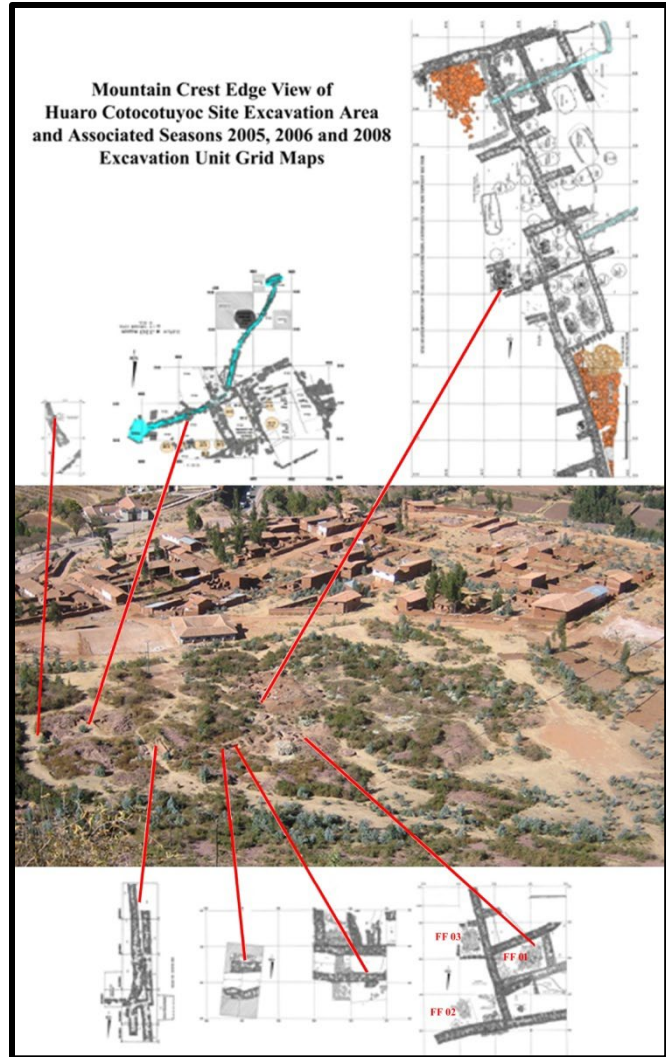


Figure 2. Cotocotuyoc excavation areas. Mountain top view of site.

excavation revealed an offering pit feature, camelid feast offerings, and a number of burial pits containing the remains and associated grave offerings of Wari elite personages.

The three seasons of excavation in the SWA revealed the primary Wari elite use of the area, followed by a limited Lucre reuse. Likewise, the structural remains show initial Wari construction and changing Wari use of the area. The southern end of the SWA structural complex includes a large room used as a shallow stone-floored pool basin drained by a rock-lined canal system. Part of the canal system flowing from the SWA pool included a lateral drainage canal that terminated with a drain into a large cist-like tomb in S20-21W20 and involved removal of older lime-mortar floors in the area. Libations for the other elite burials likely were hand carried from that pool.

The Wari presence was followed by local refugees, whose cultural attributes evolved to those known as Lucre, refurbishing structural areas damaged by fire when the complex was abandoned by the Wari elite. The mortuary data and associated reasons for this interpretation are presented below.

In the West Central Area (WCA), a mass burial of disarticulated human bones was encountered during excavation of S07-08W17-18 Levels 2-3. The WCA structural area has been co-designated as the Lucre Mortuary Area based on artifact type identification of objects included with the human bone remains. In addition to a few individual burial features the area yielded three mass burials designated Fosa Funeraria 01 to 03. Data from these and other Lucre interments at the site has furthered our understanding of the cultural transition from the end of the Wari Middle Horizon site development and occupation into the early Late Intermediate Period (LIP) occupation of the mixed population development of Lucre cultural traits.

Chronologically Ordered Burial Types and Associated Traits

The manner in which people treat their deceased is culturally determined. Archaeological data, recognizing the general loss of organic material present at the time of interment, including the deterioration of the skeletal remains, are informative and also demonstrate the limitations in understanding of the complete burial process and associated rituals. We look for patterns in the process, including the receptacle for the remains, the remains themselves, associated artifacts and so forth. Contact diffusion, available resources, and societal stress and disruption, as well as revitalization movements following disruption, are factors affecting change in people's daily lives, including the manner in which they treat their deceased.

Burial remains (*entierros*) are identified for each excavation Sector in numeric order (i.e., E#). Burials and features are recorded in numeric order during each field season. Burials have the suffix A added for 2005, B for 2006 and C for 2008. CC# applies to Cotocotuyoc site bones of individuals sorted and analyzed by Valerie Andrushko and Viviana Bellifemine (now Sanchez-Chopitea); although, they were exclusively used in only one report (Andrushko 2005).

Project field notes, burial forms, field and laboratory photographs, project reports (including those of the physical anthropologists), and other records were reviewed to assess site mortuary data. For completeness, I included the stand-alone CC#s with the burial

designation information, such as SWA.E1A.Individual 1 (CC 20), when burial descriptions matched. Also, for nine burials with Wari copper alloy female clothing pins in which the physical anthropologists indicated the “sex undetermined” I added “(female)” to the descriptive text.

The interments are organized in groups with similar attributes and burial data is presented in presumed chronological order in a format intended to facilitate its use in comparing mortuary remains from other sites, as well as any Cotocotuyoc remains excavated in future projects. Wari burials are reported first followed by Lucre burials.

The treatment of the human remains at Cotocotuyoc is revealing but (thus far) limits our understanding of its Middle Horizon Wari presence primarily to its elite personages, while it reflects the general population in the Late Intermediate Period Lucre. Sample bias, only about 5% of the site area has been excavated, and the changing function and use of the site explain part of this discrepancy. Inspection of looter disturbed locations revealed that site interments occur beyond the areas archaeologically investigated, and they may include non-elite Wari interments.

Group A. Earliest Wari Ceremonial Offering Pit and Human Burials in the Southwestern Structural Area—Wari Elite Cemetery Area

An offering pit feature and the two interment pit features included in Group A are believed to represent the earliest features identified in the Wari elite cemetery area. They occur in close proximity to each other. The pit feature and SWA.E1A interment both contained early Middle Horizon ceramic vessels. SWA.E2A, designated the Guardian Burial, is the only in-wall cist burial excavated at the site and he was killed by an atlatl dart penetrating his skull. His warrior spirit would have provided the cemetery with an important protective element. As a parallel example, the third offering level in the Pikillacta East Gate Wari figurine cache contained guardian figurines (Arriola Tuni and Tesar 2011:11-14).

Note: Excavation in the area near the offering pit and two interments yielded Black Incised, Robles Moqo, Viñaque, and other early style vessel sherds of the Wari elite use in this structural area. Together with the nearby SWA.E2A (“Guardian Burial”) and based on subsequent findings, they appear to represent the earliest burial and offering feature in the Cotocotuyoc artifact assemblage.

SWA.OfferingPitFeature 1. *Location:* Against and partially under a Wari structural wall in Grid Unit S19W19. *Offering Items:* Large Chakipampa Less Fancy 1A jar with strap handles, small Chakipampa tripod-supported bowl with an image of a swimming seal-like animal depicted on its side between chevron panels, miniature Okros Orange Plain jar, two Chakipampa Less Fancy-style ceramic spoons with appliquéd bird figurines on their handle base, an obsidian expedient flake knife, and two obsidian atlatl dart projectile points (one of which has a hafting bend-break fracture on its base). *Note:* The seal-like image suggests coastal Nasca influence in the artistic rendering on the tripod bowl.



Figure 3. Cotocotuyoc SWA. Offering Pit Feature 1 Wari elite cemetery.



Figure 4. Cotocotuyoc SWA. Offering Pit Feature 1 Chakipampa bowl with Nasca-influenced (?) seal-like image.

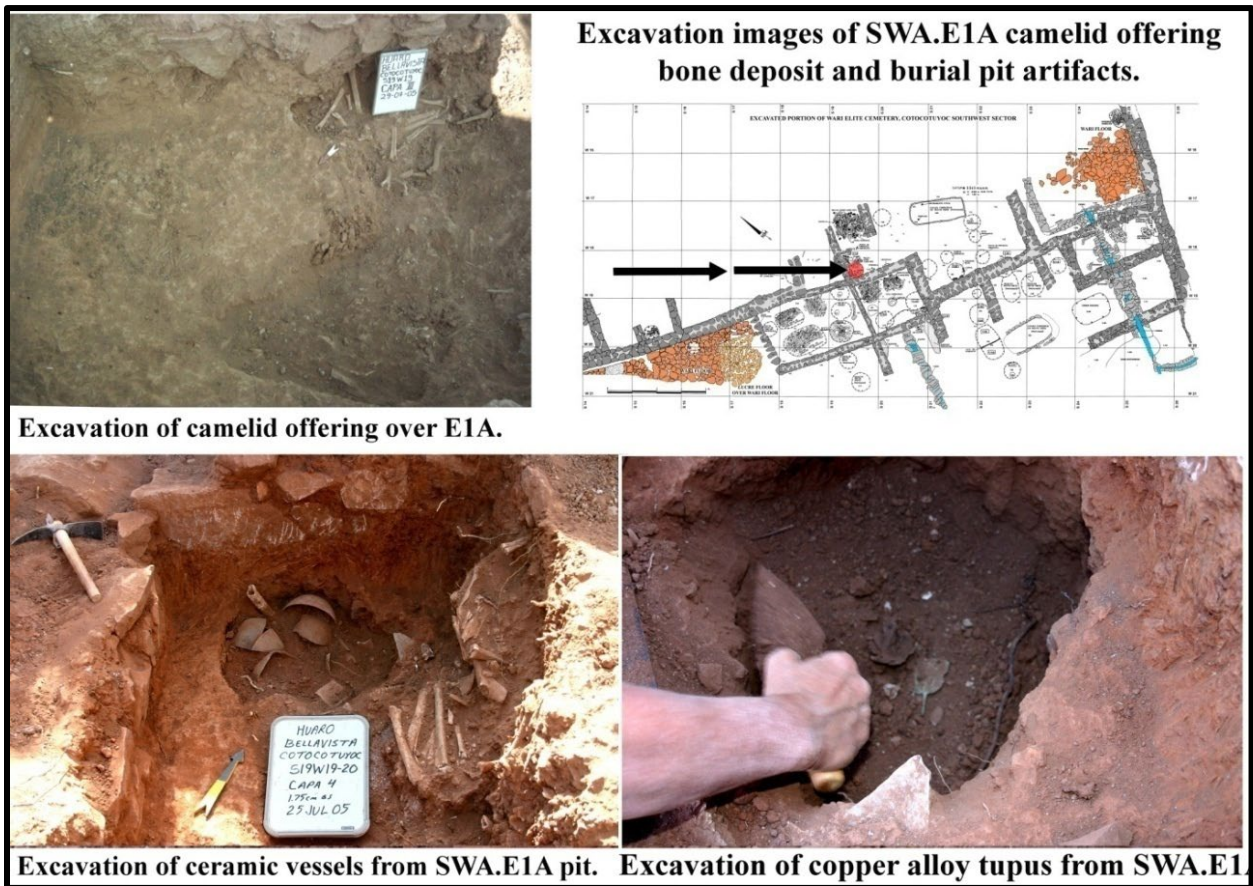


Figure 5. Cotocotuyoc SWA.E1A burial pit excavation showing beginning bones from a camelid feast offering (top left); ceramic vessels and human bones in the pit (top center in bottom left) and some of the excavated camelid offering bones extending beyond the burial pit (lower right in bottom left); and, excavation of one of the copper alloy *tupus* (center in bottom right).

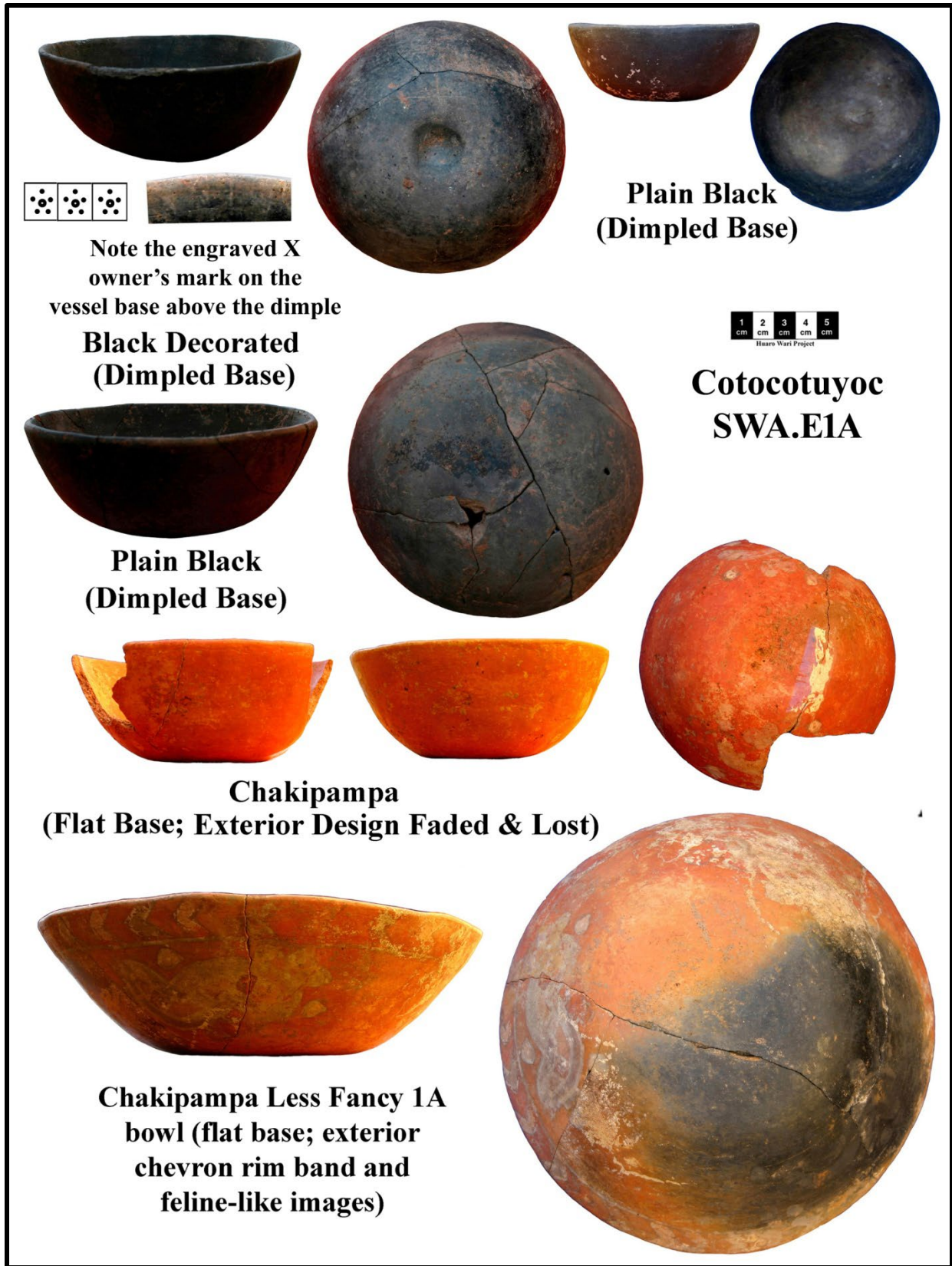


Figure 6. Cotocotuyoc SWA.E1A burial pit offering ceramic vessels.

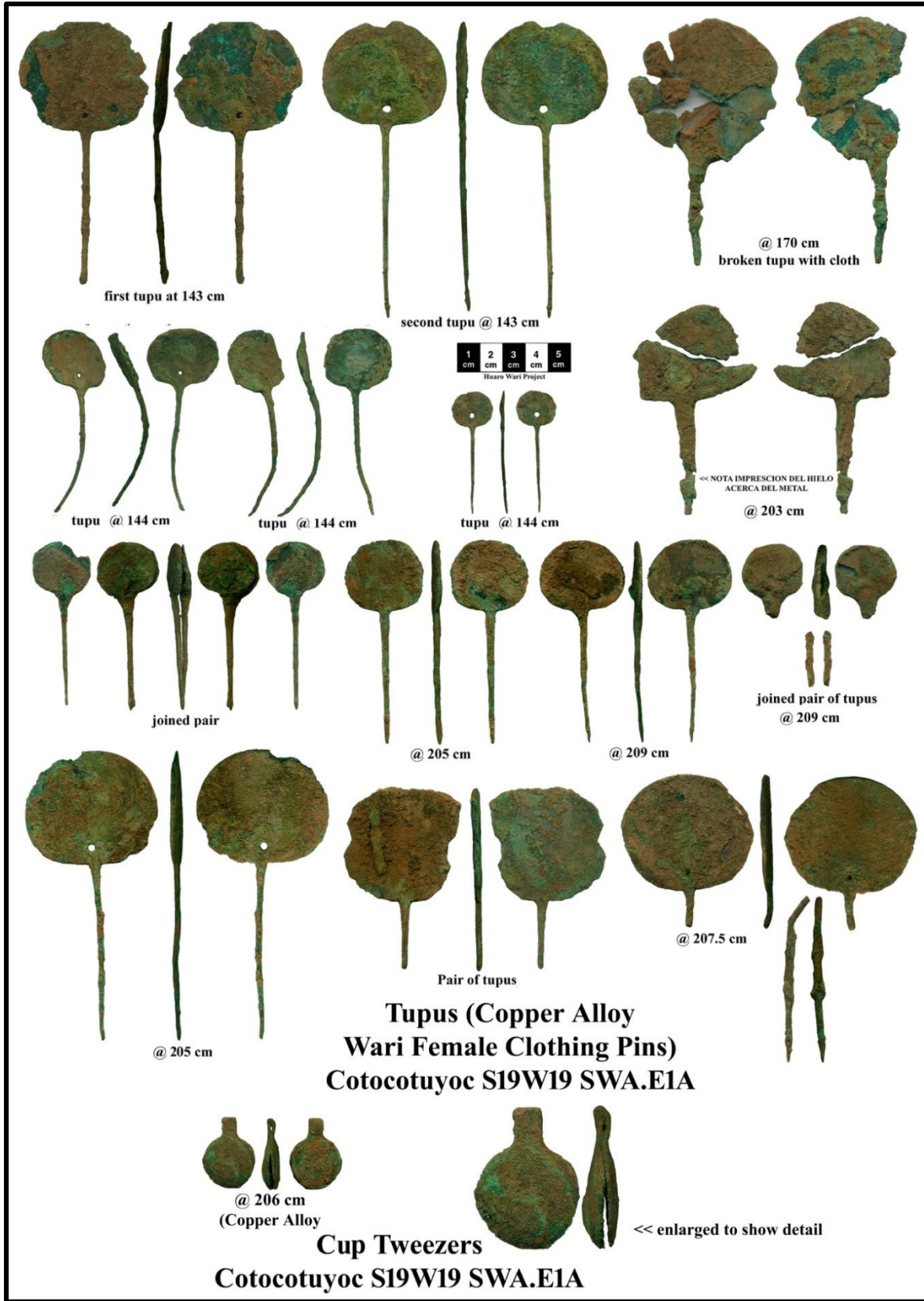


Figure 7. Cotocotuyoc SWA.E1A *Tupus* and Cup Tweezers (Copper Alloy Artifacts) from burial pit.

SWA.E1A. Location: Circular burial pit (0.60m x 0.60m; 0.40m deep) at juncture of two stone walls located in S19W19. ***Associated External Offerings:*** Pit capped with layer of camelid bones from a ceremonial feast. ***Burial Fill Soil:*** Loose light grayish cap over light brown soil. ***Interments:*** Partially disarticulated remains of four individuals.

SWA.E1A.Individual 1 (CC 20). Female (26-45 years old) with less than 7% of poorly preserved bones remaining. ***Pathologies and Trauma:*** Cavity in one tooth and abscesses resulting in loss of molar teeth and alveolar bone destruction.

SWA.E1A.Individual 2 (CC 21). Undetermined sex (female) and more than 19 years old with less than 10% of poorly preserved bones present. ***Pathologies and Trauma:*** No anomalies observed.

SWA.E1A.Individual 3 (CC 22). Undetermined sex (female) and more than 19 years old with less than 10% of poorly preserved bones present. ***Pathologies and Trauma:*** Three teeth lost during life with resulting alveolar bone loss and closure in that area.

SWA.E1A.Individual 4 (CC 23). Undetermined sex (female) and more than 19 years old with less than 10% of poorly preserved condition bones present.

Burial Offerings: Small Black Decorated bowl with dimpled bottom and geometric stylized flower image band around interior vessel rim, two Plain Black bowls (one cup-sized) with dimpled bottoms, small Chakipampa bowl with flat base and faded exterior design (pieces missing), large Chakipampa Less Fancy 1A bowl with flat base and exterior chevron rim band over faded feline-like images, small copper alloy cupped-end tweezers, and fifteen copper alloy Wari disc-head clothing pins (*tupus*; several corrosion degraded).

Comment: The disarticulated human bones represent only portions of skeletons that likely are those of ancestors previously buried elsewhere. Likewise, the artifacts probably were removed from an older Burial site for reburial at the newly established location. While only SWA.E1A.Individual 1 (CC 20) is identified by physical anthropologist Andrushko as female, the presence of the *tupus* suggests that all four individuals were female. Finally, the nearby Offering Pit feature in S19W19 with early style Chakipampa vessels and the nearby Guardian Burial likely were contemporary with SWA.E1A.

Observation: The *tupus* indicate that cloth burial wrapping and/or clothing was included with the burials. Indeed, items of cloth, animal hide, feathers, wood and other since decayed organic material likely were included with most of the Wari elite interments.

SWA.E2A.Guardian Burial (CC 35). ***Location:*** Stone and clay lined cist burial within and adjacent to an East-West wall in S19W19 starting at Levels 2-3. ***Associated External Offerings:*** Camelid feast bones over the burial pit and also in a large camelid offering bone deposit to the east. Eight complete and three broken tips of obsidian atlatl dart points from the Level 3 floor surface near the skull and eastward to the large camelid offering feast remains are likely offerings. Arredondo Dueñas (2006:43) also notes the occurrence of Incised Incenser sherds near the burial. ***Burial Fill Soil:*** Light gray lime sand mixed with reddish-brown soil. ***Burial Type:*** Primary sitting flexed. ***Individual:*** Male (26-45 years old) with less than 10% of the bones preserved in average condition. ***Pathologies and Traumas:*** Six teeth have cavities, abscesses have resulted in loss of molar teeth and alveolar bone destruction, and tartar accumulated on the teeth. Impact fracture on front of right maxilla (cheek bone). The cranium has a post-mortem rectangular hole cut in the left parietal for dart removal and perimortem atlatl dart point impact on interior of the right parietal produced radiating striations/cracks. ***Burial Offerings:*** No preserved items in the pit.



SWA.E2A "Guardian" burial excavation documentation photos.



SWA.E2A "Guardian" burial skull showing rectangular cut hole to remove dart shaft and opposite side radiating striations from dart point impact.



Obsidian dart points from floor level generally east of SWA.E2A.

Figure 8. Cotocotuyoc SWA.E2A.Guardian Burial excavation, cranium damage and dart points.



Figure 9. Incised Incenser vessel sherds from a possible offering to the individual buried in SWA.E2A. Note: Additional Black Incised Incenser sherds not depicted.

Comment 1: Andrushko (2005:17, 2006:98) makes no mention of the rectangular cut hole or the impact striations in the cranium. I added them to the above trauma description.

Comment 2: The Guardian Burial may be the remains of a founding ancestor in the Cotocotuyoc Wari elite cemetery. It is the only wall cist burial excavated thus far at Cotocotuyoc. He was certainly killed during a battle early in the site's development, perhaps during the subjugation of the local population or during a subsequent uprising. Or, perhaps

he died in a battle outside the Huaro Valley and his body was brought back for burial in recognition of his valor and/or social status.

The incised incenser sherds depicted in Figure 9 are the partial remains of two vessels. As with the obsidian dart points, it is likely (but not certain) that their presence represents an offering to the Guardian Burial (SWA.E2A). The Black Incised vessel features a portrait head of an individual with a Wari style head covering. It may depict the individual interred in SWA.E2A.

Group B. Wari Primary Flexed Sitting and Disarticulated Burials in Cylindrical Pits Under Camelid Feast Bones; Burial Offerings

Primary flexed sitting and disarticulated burials in cylindrical pits (Isbell's Wari Burial Type 1 and 2 [2004:8-9, Figure 4]) are the diagnostic Middle Horizon burial form in the Cotocotuyoc Wari Elite Cemetery. Some of the pits are clay-lined and some include a few tabular fieldstones on their sides. Remains of subsequent camelid feast bones generally cover the burial pits. Also, some camelid feast remains occur independently near them suggesting a more general and subsequent appeal to ancestral spiritual powers.

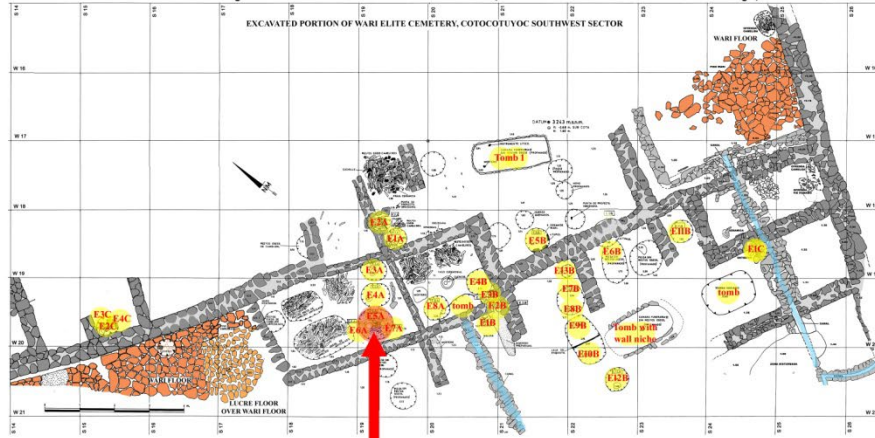
Burial offerings in the form of ceramic vessels are of note and may be used as an indicator of the time in the Middle Horizon when the burial occurred and of the social status of the individual. However, it is noted that some vessels may be heirlooms predating the burial. Disc-head copper alloy clothing pins (*tupus*) occur with Wari females, while obsidian projectile points generally occur with Wari males. Items of cloth, animal hides, feathers, wood, and other organic material have not been preserved for archaeological recovery beyond a few samples embedded on corroded copper *tupus*. Of note, the Wari burial pits were with few exceptions refilled with loose soil brought from elsewhere, rather than with the soil dug from the pit. Often the fill soil is light grey colored with small lumps and appears to be crushed *yeso* floor material likely obtained from nearby rooms.

Wari primary flexed sitting burials in cylindrical pits under camelid feast bones and with or without burial offerings are presented here as Group B. Those with early style ceramics are presented first followed by those with later style ceramics. Those with only *tupus* and/or obsidian projectile points are presented as a group, as are lastly those lacking preserved burial pit offerings.

B1. Burials with Early Style High Status Ceramic Vessel Burial Offerings Both Above and Within the Burial Pit

Note: With the possible exception of the trophy skull (SWA.E3B in S20W20) under the camelid offering that extends over the adjacent canal fed tomb in S19-20W20, SWA.E5A-E7A is one of two Wari interments at Cotocotuyoc with special offerings under the camelid feast remains thus far excavated. However, it is not the only interment featuring well-made, exotic high-status early Middle Horizon ceramic vessels. The second burial (SWA.E4A next to SWA.E5A-E7) has portions of a Cajamarca vessel under and around its camelid feast offering bones, but lacks ceramic vessel grave offerings (see B3).

Cotocotuyoc Southwest Area (Wari Elite Cemetery)



1 2 3 4 5

**Chakipampa Fancy Bowl
(Ayacucho Serpent Panels)
S19W20 Capa 3 fragmented
vessel offering above
SWA.E5A-E7A**



**Chakipampa Fancy Jar
(five applied owls and
mythical figures)**

Figure 10. Two vessels in the dedicatory offering under the camelid feast remains capping Cotocotuyoc SWA.E5A-E7A burials.



Figure 11. Sherds from remaining broken ceramic vessels, obsidian atlatl dart points, and *Spondylus* shell artifacts (including miniature figurine beads—enlarged to show details) in offering above SWA.E5A-E7A.

SWA.DedicatoryOfferingOverE5A-E7A. *Location:* In S19W20 west of SWA.E4A. *Associated External Offerings:* Camelid feast remains in Level 3 over the burial pit cover sherds from six broken ceramic vessels, five complete obsidian projectile points and two point fragments, base fragments of six cut *Spondylus* shell trapezoid shaped objects, a carved *Spondylus* shell *Coa/Koa* bead (a double river otter-like headed mythical creature), and a carved *Spondylus* shell miniature warrior bead. (A second warrior bead was found within a meter of the feature and a second *Coa/Koa* bead was found within two meters of the offering feature). With only portions of each vessel included, it is suggested that they were broken elsewhere and only the deposited sherds placed in the offering. A Chakipampa Fancy 1A bowl with Ayacucho Serpent motifs on its side, a Cajamarca influenced Huamanga basin with sideways (horizontal) strap handles, a Nievera-like Plain Black Filmed stirrup-necked bottle, a Chakipampa Fancy 1A jar with five appliquéd owl figures on its side and mythical dragon-like images on its shoulder, an Epoch 2 Okros basin bowl, and a Pachacamac basin bowl illustrate an extensive geographical ceramic vessel exchange network. Were these offerings valued possessions sacrificed by individuals requesting intercession of the spiritual forces of the individuals buried in the pit, or is there another explanation?



Figure 12. Cotocotuyoc SWA.E5A excavation photograph documenting artifacts.

SWA.E5A (CC 28). *Location:* See above. *Burial Fill Soil:* Beginning in Level 4; gray colored lime mortar sand. *Note:* SWA.E5A is above SWA.E6A and SWA.E7A in Level 5. *Individual:* Female (26-35 years old) with 50% of her bones present in average condition. *Pathologies*

and Trauma: Three teeth lost during life with alveolar bone closure over sockets. Also, three teeth have cavities and alveolar bone in the last molar area is reduced.



Figure 13. Cotocotuyoc SWA.E5A burial offering artifacts.

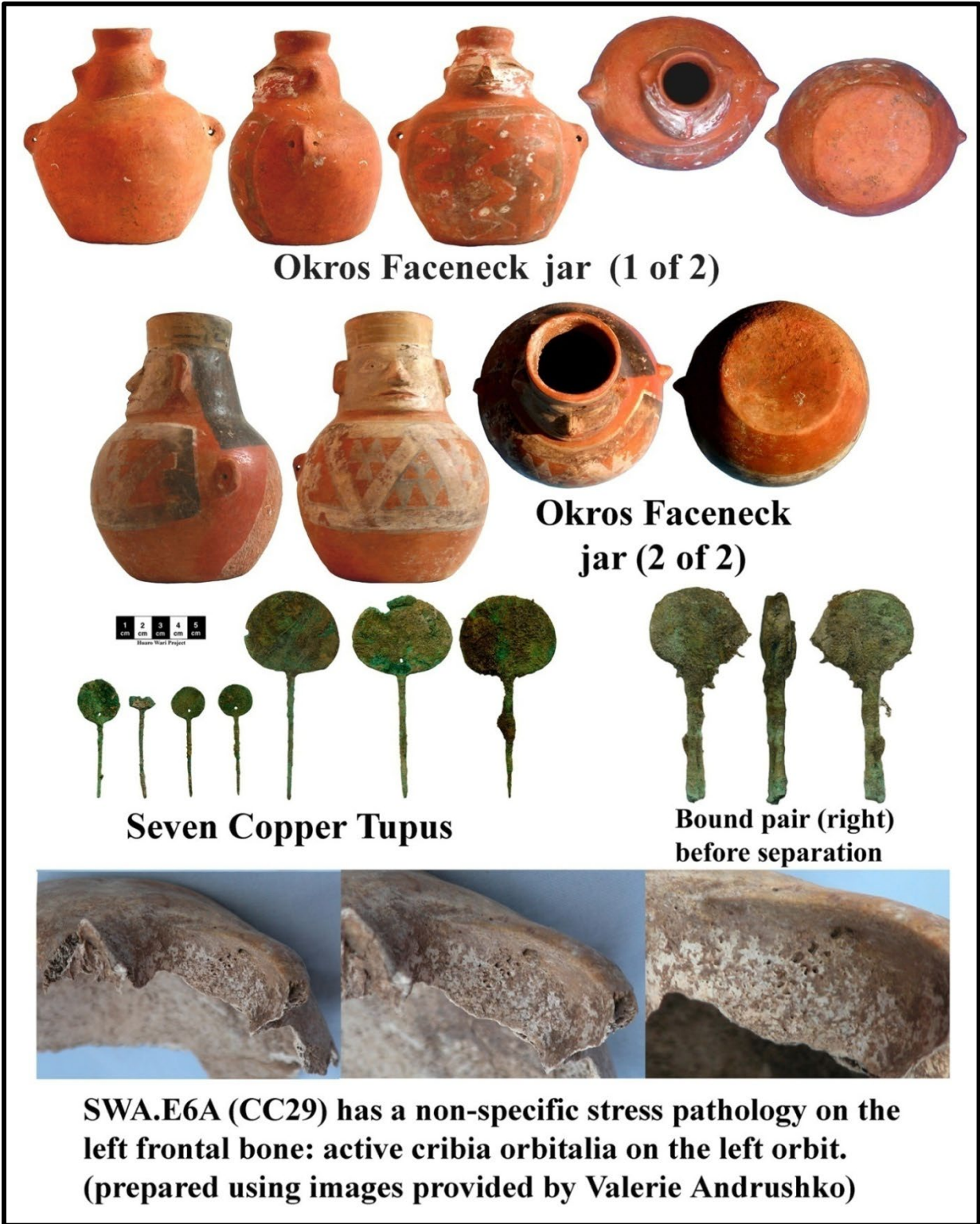


Figure 14. Cotocotuyoc SWA.E6A (CC 29) burial offering artifacts and bone pathology.



Figure 15. Cotocotuyoc SWA.E7A burial offerings and bone pathology.

Burial Offerings: Okros jar with strap handles and two matching Okros cups. All three with a white filmed rim band with black dot filled zigzag triangles. Also Chakipampa Less Fancy 1A canteen-shaped bottle, seven *tupus* (three sizes), and four (two broken) cut *Spondylus* shell trapezoid-shaped objects. (Since the trapezoid-shaped shells are not perforated or stained by adhesive substances the manner in which they were used remains undetermined.)

SWA.E6A. ***Location:*** S19W20 Level 5 under SWA.E5A and next to SWA.E7A. ***Burial Fill Soil:*** Gray colored lime mortar sand. ***Interments:*** Partial remains of two individuals in primary flexed sitting orientation.

SWA.E6A.Individual 1 (CC 29). Undetermined sex (female) (15-16 years old) with 7% of the bones present in average condition. ***Pathologies and Trauma:*** Cavity in one tooth and left eye socket has small perforations indicating *cribra orbitalia*.

SWA.E6A.Individual 2 (CC 30). (Note: Identified in draft report, but omitted in project report). Undetermined sex (female) (more than 18 years old) with 25% of poorly preserved bones present. ***Pathologies and Trauma:*** No anomalies were observed.

Burial Offerings: Two Okros faceneck canteen-jars with appliquéd perforated nubbin handles and seven *tupus*. The *tupu* presence suggests that both individuals likely were female.

SWA.E7A (CC 31). ***Location:*** S19W20 Level 5 under SWA.E5A and next to SWA.E6A. ***Burial Fill Soil:*** Gray colored lime mortar sand. ***Individual:*** Female (36-45 years old) with 65% of her bones in an average preservation condition. ***Pathologies and Trauma:*** One tooth lost during life with alveolar bone closure over socket area, cavities in five teeth, abscess resulting in alveolar bone loss of the molars. Also, healed *periostitis* bone inflammation of tibias. ***Burial Offerings:*** Eight cup-bowls (four pairs): Two Chakipampa Fancy, two Black Decorated and four Plain Black cup-bowls. Of interest, ground red ochre pigment was found in the fill soil; its restricted area of occurrence suggests that it was deposited in a small, since decayed, pouch or other small organic container. It may have been part of a since deteriorated weaving kit with wooden tools, string, etc.

SWA.E8B. ***Location:*** S21-22W20 Level 3. ***Associated External Offerings:*** None described or identified. ***Burial Fill Soil:*** Pale gray colored lime-mortar sand. ***Burial Type:*** Primary flexed sitting position. ***Individual:*** Female (18-25 years old). ***Pathologies and Trauma:*** *Periostitis* bone inflammation in one tibia and one ulna. Further, one of the left side middle ribs is fractured. ***Burial Offerings:*** Epoch 2 Viñaque basin-bowl and Chakipampa Fancy basin-cup (both with exterior abstract images of animal/dragon on their side), an Okros Plain Red basin-bowl and a pair of *tupus*. All covered with gray colored fill soil and under the SWA.E7B intrusive burial feature.

Note: SWA.E7B&E8B. Excavation revealed that this burial pit feature contained two separate burials designated SWA.E7B and SWA.E8B. The distinction is based on the different color fill soil occurring with each and the placement of SWA.E7B at a shallower level and over two ceramic basin-bowls associated with SWA.E8B. The fill soil surrounding the SWA.E7B bones and an associated ceramic bottle had a pale yellowish burnt umber color. In contrast, the burial fill soil encompassing the SWA.E8B bones and associated artifacts was a pale gray colored lime-mortar sand. The lack of mixing of the two burial fill

soils demonstrates that the burials represent two separate events. The SWA.E8B burial occurred first and the smaller pit containing the SWA.E7B burial was later placed in the same pit at a shallower elevation and to one side. SWA.E7B is described in sub-group B6.

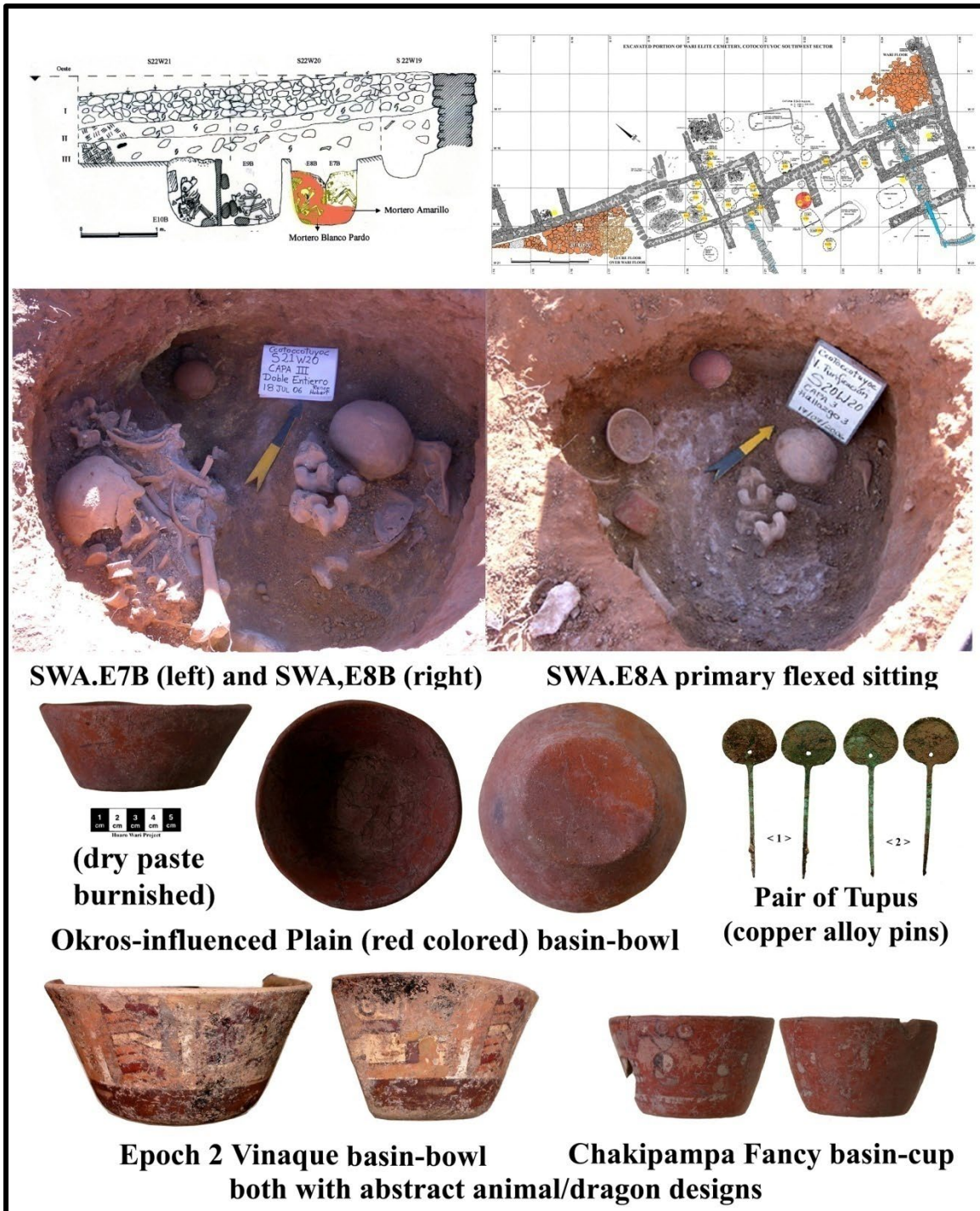


Figure 16. Cotocotuyoc SWA.E8B primary flexed sitting interment under intrusive SWA.E7B bundle burial.

B2. Wari Early Middle Horizon Ceramic Vessel Burial Offerings in Pit

SWA.E5B. Location: Next to west wall in S21W19 Level 4. **Associated Offerings:** Camelid feast offering feature designated Hallazgo 2 in Level 3 over SWA.E5B and two nearby camelid offering features designated Hallazgos 1 and 3. **Burial Fill Soil:** Loose reddish-brown soil. **Burial Type:** Bone fragments along with two incisors and a molar. **Individual:** Undetermined sex (female?) (10-15 years old). **Pathologies and Trauma:** No identified anomalies. **Burial Offerings:** Four *tupus* and five ceramic vessels of exceptional quality (Hallazgos 4A-4E), including three essentially matching Chakipampa Fancy canteen-bottles with conical bases and perforated appliquéd nubbin handles, a Chakipampa Fancy bottle with a mythical hump-backed animal motif, and a Chakipampa Fancy Paired Lutrina (River Otter) Effigy Jar.



Photo-images of excavation of camelid offering Hallazgo 2 (top left) and its underlying SWA.E5B burial and artifacts in S21W19 Level 3-and Level 4.

Figure 17. Cotocotuyoc SWA.E5B excavation documentation photographs.



Figure 18. Cotocotuyoc SWA.E5B artifact images.

Comment 1: The occurrence of *tupus* with Wari women suggests that SWA.E5B is female.

Comment 2: The bones may be the remnant of a deteriorated primary flexed sitting interment in the cylindrical burial pit.

Comment 3: The richness of the burial offerings indicates that SWA.E5B and her lineage had a very high status among the Huaro Valley Wari elite, and likely among the Wari in general. The offerings suggest a link to spiritual forces believed to assure the continuance of water, favorable animal husbandry and agricultural endeavors, and the overall well-being of the Wari community (or at least that of her lineage) was sought by those responsible for her burial and maintenance of the grave site.

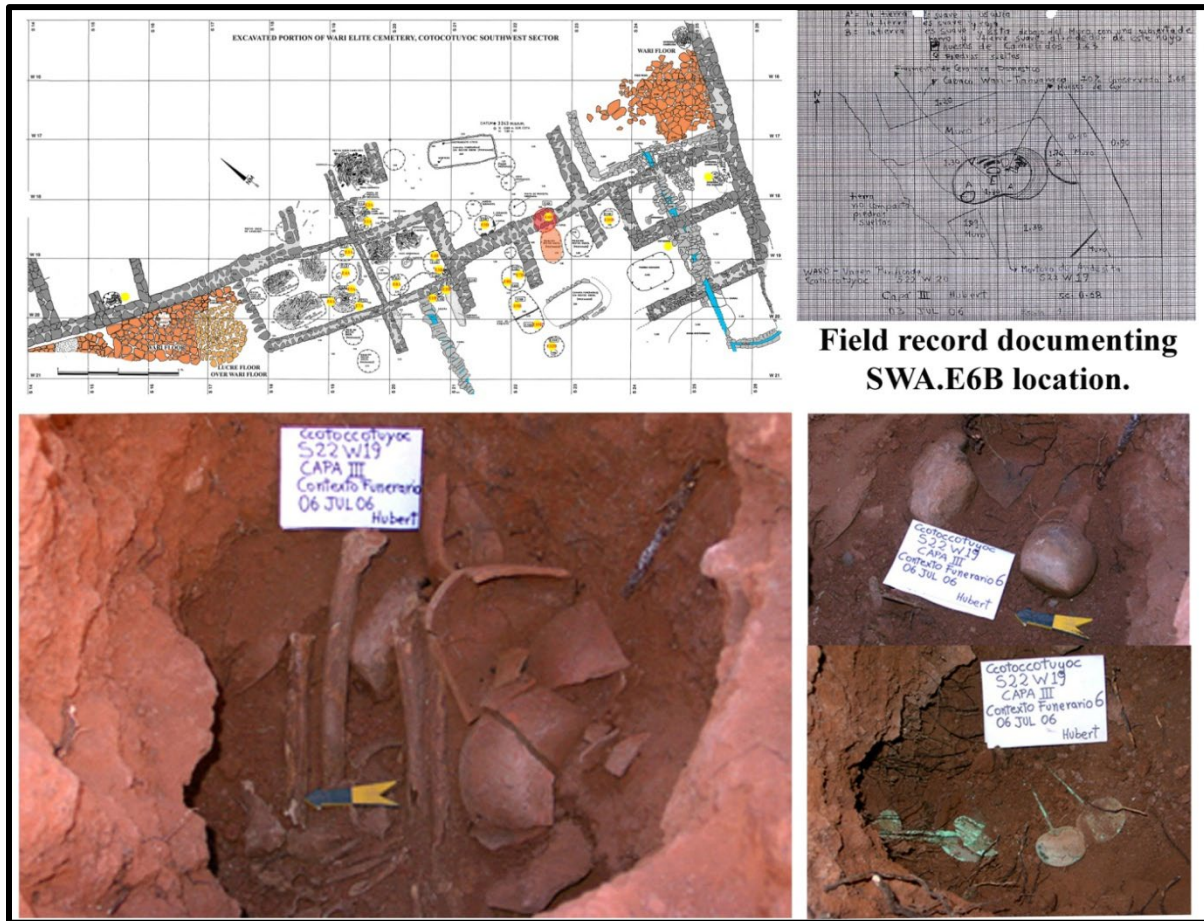


Figure 19. Cotocotuyoc SWA.E6B interment excavation photographs documenting the burial context and artifact assemblage.

SWA.E6B. Location: Partially under Wari wall in eastern half of S22W19. **Associated External Offerings:** None recorded. **Burial Fill Soil:** Soft reddish-brown colored soil. **Burial Type:** Disarticulated incomplete bones in poor state of preservation. **Individual:** Unidentified sex (female) (26-35 years old). **Pathologies and Trauma:** Tooth loss and tartar accumulation on the teeth. **Burial Offerings:** Obsidian projectile point, three pairs of *tupus*, and four ceramic vessels including a South Coast influenced Nasca-like Polychrome Faceneck bottle with a strap handle, an Okros-influenced Plain Red basin-bowl with a black-filmed interior, and two Okros Polychrome basin-bowls with interior decorative panels.

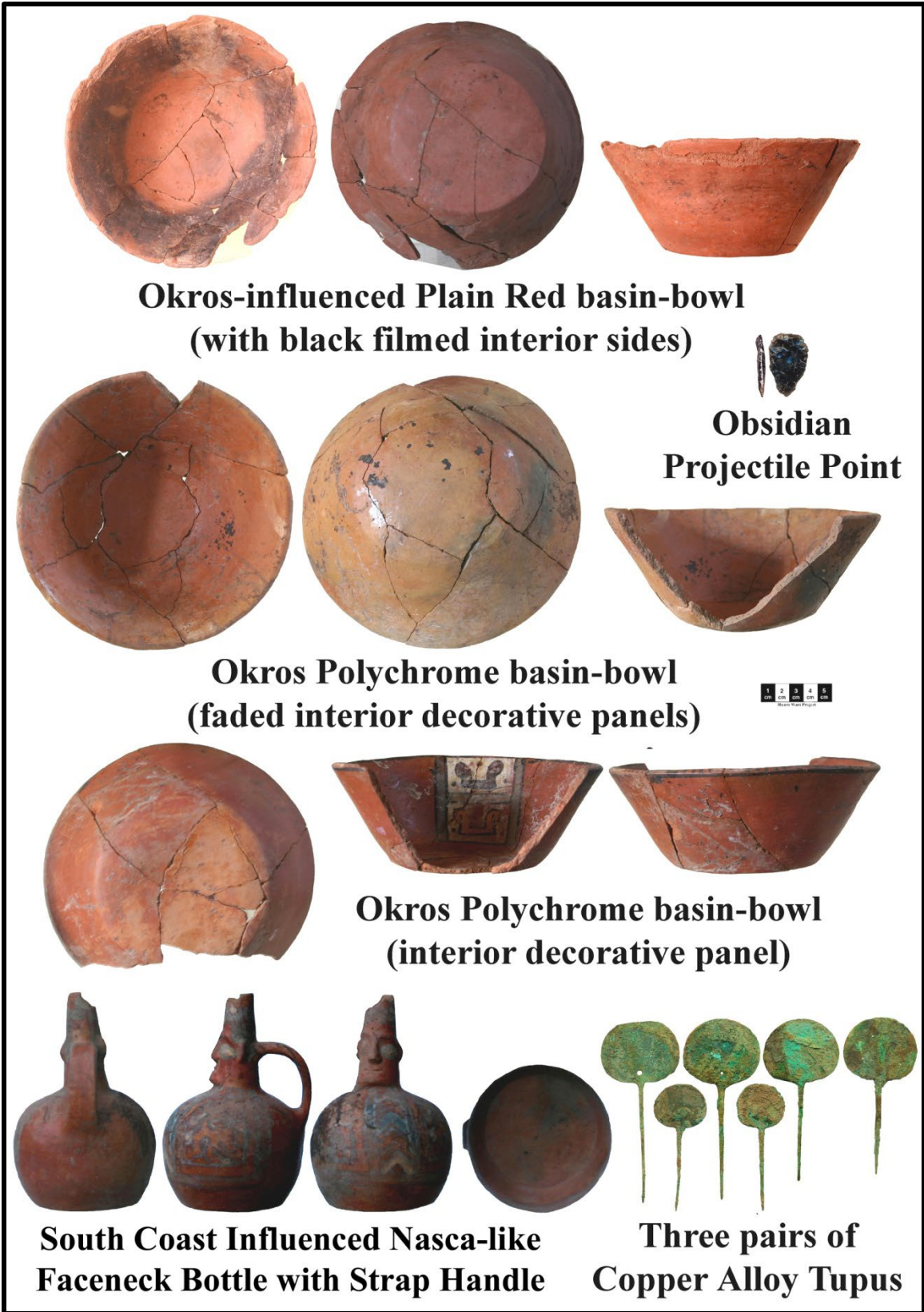


Figure 20. Cotocotuyoc SWA.E6B artifact assemblage images.

Comment 1: The *tupus* suggest that the person's sex is female, not male; although, when present obsidian points are generally found with males. However, SWA.E10B described below (Subgroup B3) is an example of a Wari female with *tupu* offerings and a rudely reworked obsidian point in the pit fill soil. Also, the obsidian dart point found in the SWA.E6B pit fill has a poorly reworked blade tip. Thus, the occurrence of obsidian points with Wari females is not considered to be exceptional. The poorly reworked points may have been considered to be non-functional keepsakes.

Comment 2: The bones may be the remnant of a deteriorated primary flexed sitting interment in the roughly cylindrical burial pit.

SWA.E8A. Location: S19-20W20 Level 4. **Burial Fill Soil:** Reddish brown colored loose soil.

Burial Type: Partially disarticulated bones of two individuals.

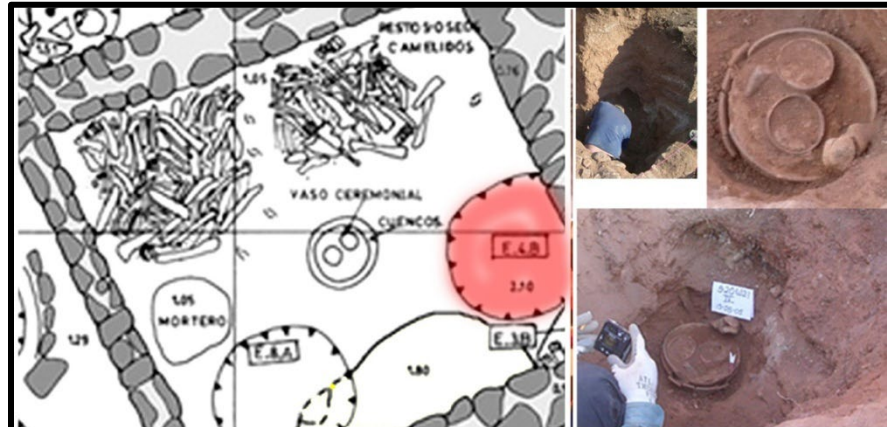
SWA.E8A.Individual 1 (CC32). Female (26-35 years old) with 36% of her bones present in average condition. **Pathologies and Trauma:** Cavities in four teeth and abscess resulting in alveolar bone loss in the molar area. Crowding in the maxilla with the upper lateral incisors displaced lingually.

SWA.E8A.Individual 2 (CC33). Male (more than 20 years old) with 15% of bones present in average condition.

Pathologies and Trauma: Moderate alveolar bone resorption in the molar area. Also, tabular erect cranial vault deformation.

Burial Offerings: Two nested Okros Plain (chicha) basins, and within the top basin two matching Okros Polychrome beakers with embossed maize kernelled-cobs on their side and three stacked triangle rows within pendant rim band triangles depicted along with peppers and other images.

Comment 1: The bones may be from deteriorated primary flexed sitting interments in the cylindrical burial pit.



Excavation grid with SWA.E8A shaded red.

Nested basins and beakers.



Rotated views of SWA.E8A (CC33) young adult male with Tabular Erect cranial vault modification. (Graphic images provided by Valerie Andrushko)

Figure 21. Cotocotuyoc SWA.E8A excavation and image of tabular erect cranial vault modification (CC 33).



Figure 22. Cotocotuyoc SWA.E8A paired basins and beakers

Comment 2: Of particular interest because of its depiction of Middle Horizon domestic agricultural activities is a panel portrait on the side of the vessel designated Beaker 1. It depicts two conical-roofed circular shaped structures with an individual in front of them. The farm worker appears to be in a field with a foot-plow of a style common in Colonial Peru that has been attributed to the Inca. This Middle Horizon Wari vessel depiction demonstrates its older origin. Next to the structure door behind the individual is what appears to be a hafted *kupana*. The *kupana* is donut-shaped pecked-and-ground stone that when hafted could be used as a weapon but is also found in Wari contexts suggesting use in breaking soil lumps into agriculturally manageable size. Finally, on the right side of the panel is an image of a llama or alpaca.

Comment 3: Post holes for the wall of a circular structure (similar to that depicted on Beaker 1 with embossed corn and the foot plow image) occur under the Wari fieldstone floor in S15W21 Level 4. However, only a portion of the floor was removed that revealed them. While Middle Horizon Wari structures are fashioned of stone, the post-mold pattern is of a circular structure undoubtedly with clay plastered sides and a thatched roof like those depicted on the beaker. The circular structure likely was constructed by individuals belonging to the Huaro Valley chiefdom made subservient when the Wari arrived, or possibly by their predecessors. Indeed, the two matching embossed beakers may have been fabricated and used to commemorate the Huaro Valley Wari leader's control over the local population agricultural production activities.

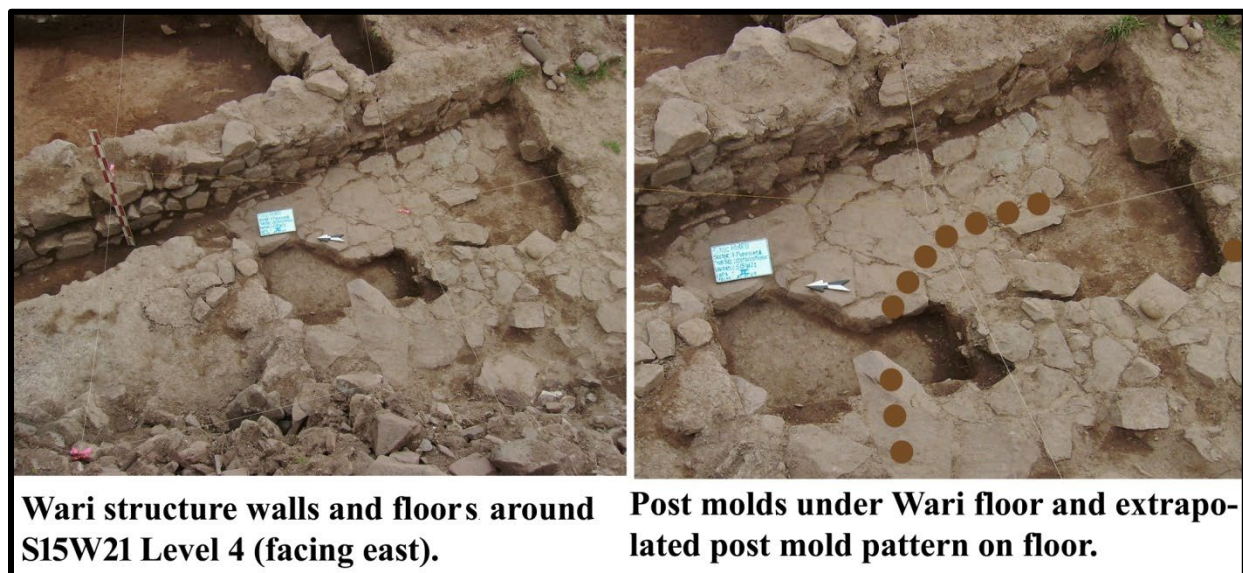


Figure 23. Post molds for pre-Wari circular structure under Cotocotuyoc SWA elite cemetery structure Wari floor in S15W21 Level 4.

B3. Burials With *Tupus* And/Or Obsidian Projectile Points, But No Vessels

SWA.E4A. *Location:* S19W20 Level 3 clay-lined ovoid pit (0.80m x 0.70m) west of SWA.E3A. *Associated External Offerings:* The partial remains of a Cajamarca vessel occurred under and around the bones of a small camelid feast offering. *Burial Fill Soil:* Reddish-brown soil mixed with lime sand. *Interments:* Partial disarticulated remains of two individuals.

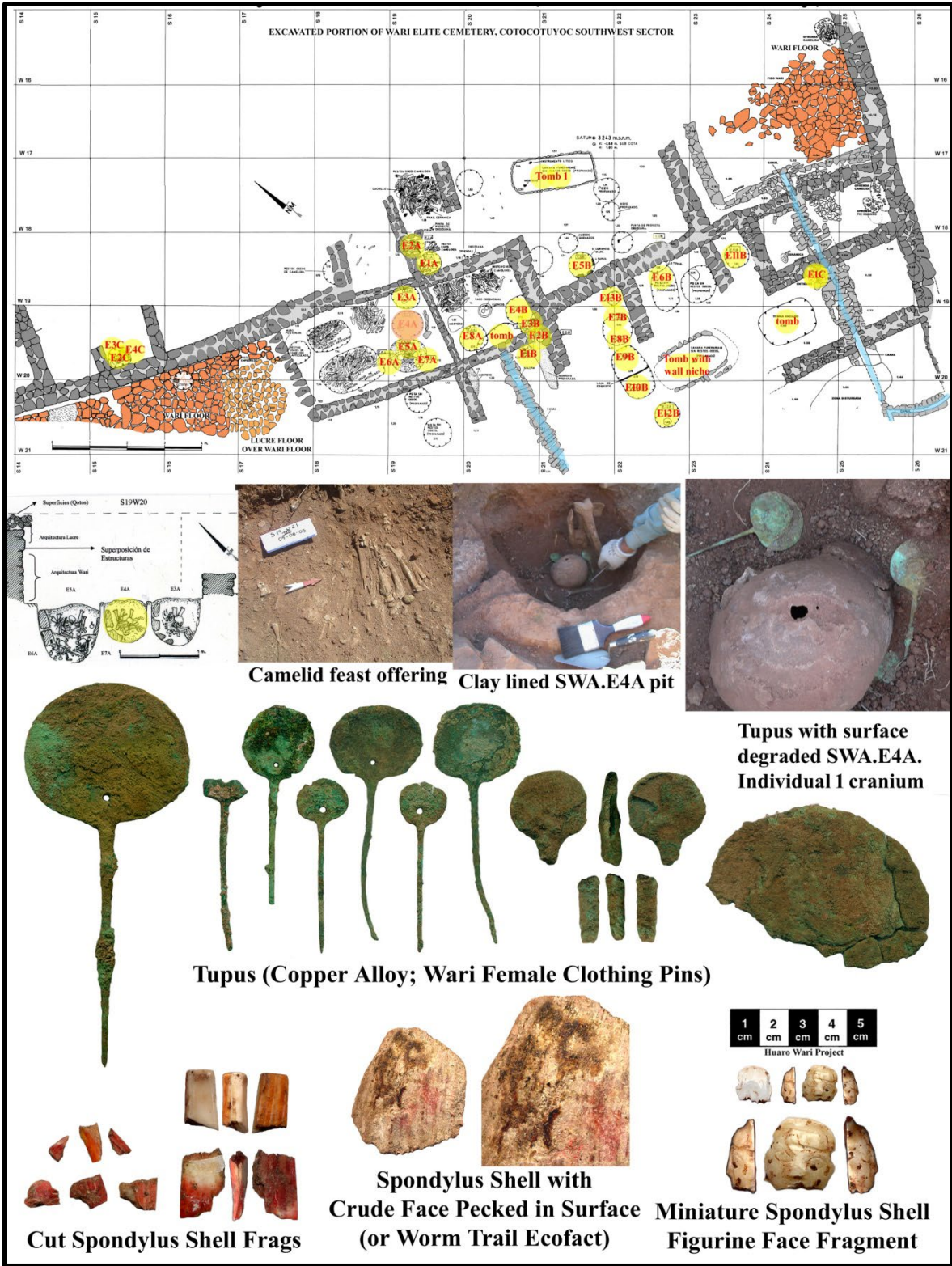


Figure 24. Cotocotuyoc SWA.E4A excavation photos documenting camelid feast remains over clay-lined burial pit with primary sitting flexed Individual 1 with skull lesions and associated *tupus*, as well as fragmented *Spondylus* shell artifacts in the fill soil.

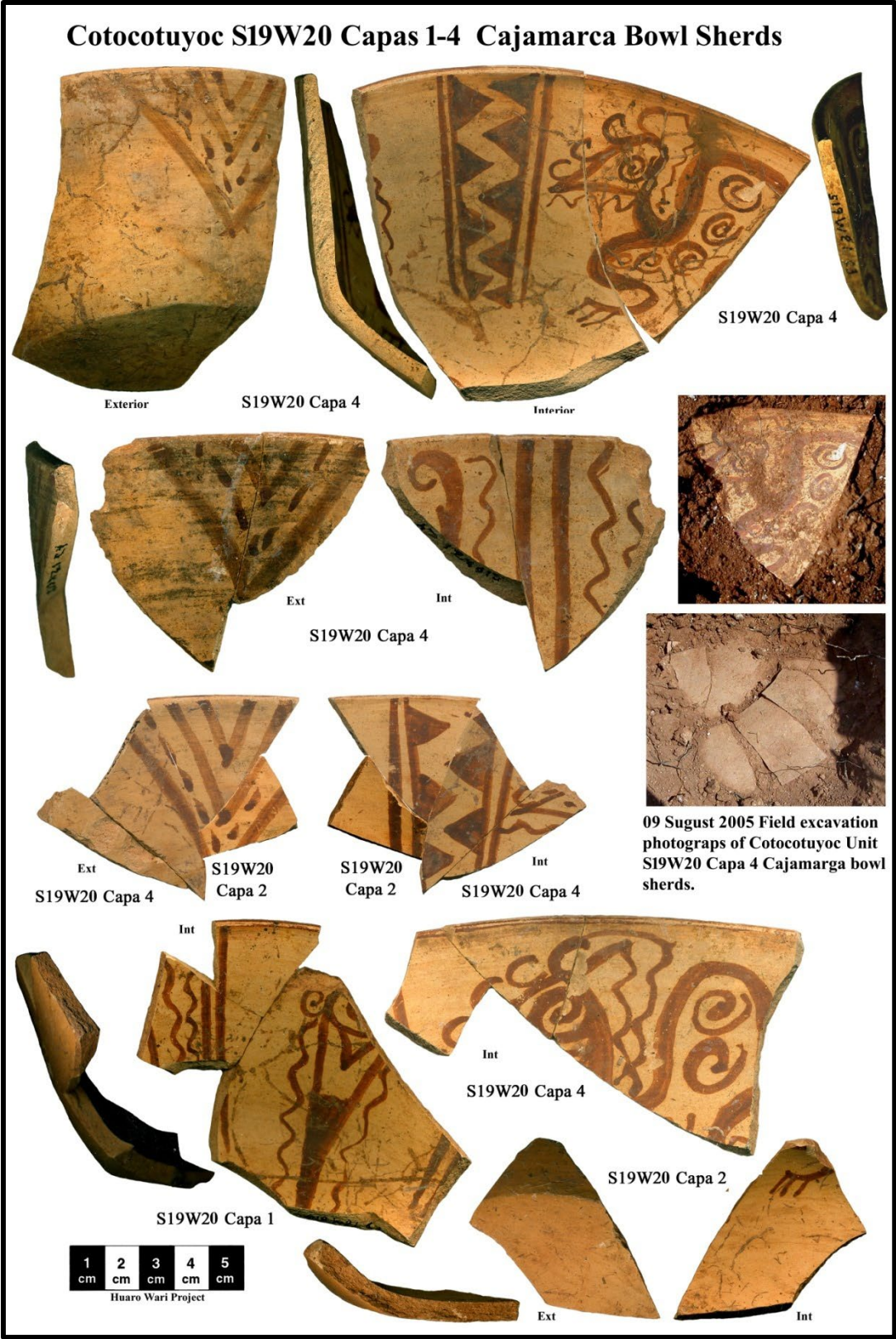


Figure 25. Cotocotuyoc S19W20 Cajamarca vessel sherds SWA.E4A external offering under and around the camelid feast offering over the burial pit.

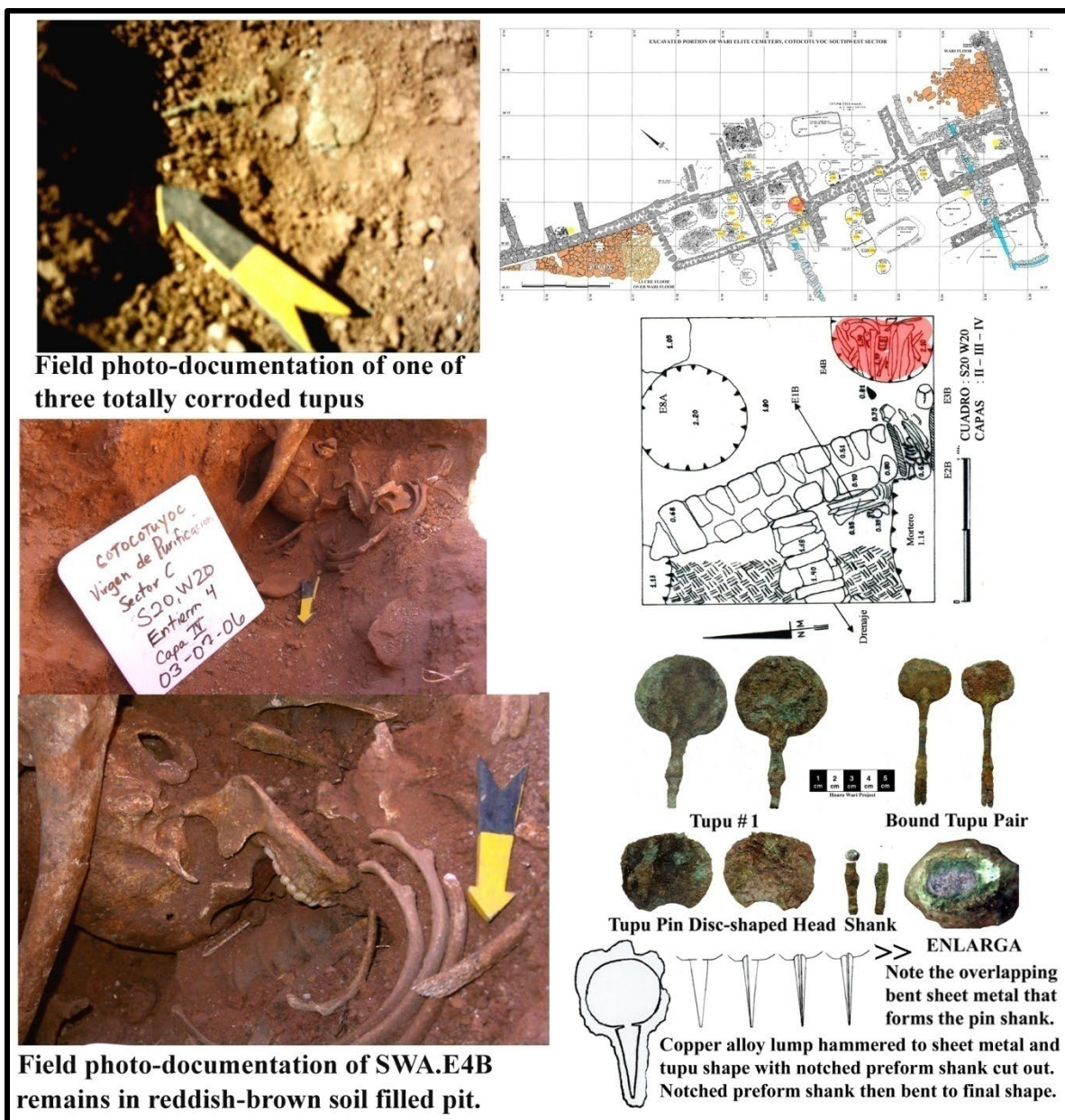


Figure 26. Cotocotuyoc S20W19-20 Capa 4 Entero SWA.E4B excavation photographs, including degraded *tupu* (top left).

SWA.E4A.Individual 1 (CC 26). Undetermined sex (female) (more than 20 years old) with 15% of poorly preserved bones remaining. *Pathologies and Trauma:* Tartar on teeth. Andrushko (2005:15, 2006:98) reports none noted for skeletal pathology and cranial vault modification.

Comment: Arredondo Dueñas (2006:45 field photograph) depicts what appears to be a scraped trepanation hole in the cranium. Other field photos show the same hole and surrounding eroded area in detail. If it is not a scraped trepanation example, then it is probably a severe cranial infection that resulted in massive bone loss lesions forming around a central circular hole; perhaps it is both. (Compare it with the Group E WCA.E11A trepanation [see Figure 53]).

SWA.E4A.Individual 2 (CC27). Undetermined sex (female?) (more than 20 years old) with 15% of poorly preserved bones remaining. *Pathologies and Trauma:* Cavity in one tooth. *Burial Offerings and Comment:* Ten Wari style *tupus* (, including one deteriorated pair and one disc head). As noted above, obsidian points are generally associated with males, while *tupus* are consistently found in association with Wari women. The sex of CC 26 with the cranial lesions is probably female because the *tupus* cluster around that individual. CC27 may also be female. Fragments of cut *Spondylus* shell trapezoid-shaped objects, a *Spondylus* shell with a possible rudely depicted face, and the fragmented face of a miniature Wari figurine were recovered from burial fill soil.

SWA.E4B. *Location:* S19W19-20. *Associated External Offerings:* Obsidian projectile point on the pit surface under the camelid bones from a dedicatory feast. Perhaps it was an offering by a male relative. *Burial Fill Soil:* Light gray lime sand mixed with reddish-brown soil. *Individual:* Post-mortem bone movement occurred when the body decayed. Female (26-35 years old). *Pathologies and Trauma:* Bone inflammation – *periostitis* in one tibia. *Burial Offerings:* Four corroded copper alloy *tupus* (including one bound pair) within the burial pit. Each has preserved fabric embedded in the corrosion. One broken shank reveals the manner in which *tupu* shanks are formed.

SWA.E9B. *Location:* D-shaped pit (west of SWA.E7B and SWA.E8B) in S22W20-21 on the east side of a slate partition. No clay pit lining is depicted in excavation photographs or recorded on the burial form. *Associated External Offerings:* None recorded. *Burial Fill Soil:* Semi-compacted light gray colored sand and silt. *Burial Type:* Primary sitting flexed position. *Individual:* Male (26-35 years old). *Pathologies and Trauma:* Fractured fourth metatarsal on left side foot. *Burial Offerings:* Obsidian projectile point (in pristine condition) found near the arm bones.

Comment: The fractured fourth metatarsal might be the result of a battle injury, or the result of an accidental fall in the mountainous terrain or elsewhere.

SWA.E10B. *Location:* D-shaped clay lined pit in S22W20-21 on west side of slate partition. *Associated External Offerings:* Large *tupu* inserted at pit top edge between unexcavated clay and light gray colored burial fill soil; apparently placed there as a burial participant's personal offering (her mother?). *Burial Fill Soil:* Different colors of fill soil were used in four layers--light gray, white, pale yellow, and reddish-brown. *Burial Type:* Primary sitting flexed position. *Individual:* Female (18-25 years old). *Pathologies and Trauma:* Cavities in six teeth and a moderate accumulation of tartar. *Burial Offerings:* Pair of small *tupus* excavated near leg bones near pit bottom and obsidian projectile point found in the pit. *Note 1:* SWA.E9B and SWA.E10B are the only excavated interments where a slate partition separates the male from the female burial.

Note 2: SWA.E10B is the only excavated interment where layers of different color fill soil were placed in the burial pit.

Note 3: The obsidian point has a poorly reworked tip as do most of the few other points found in women burials at this site.

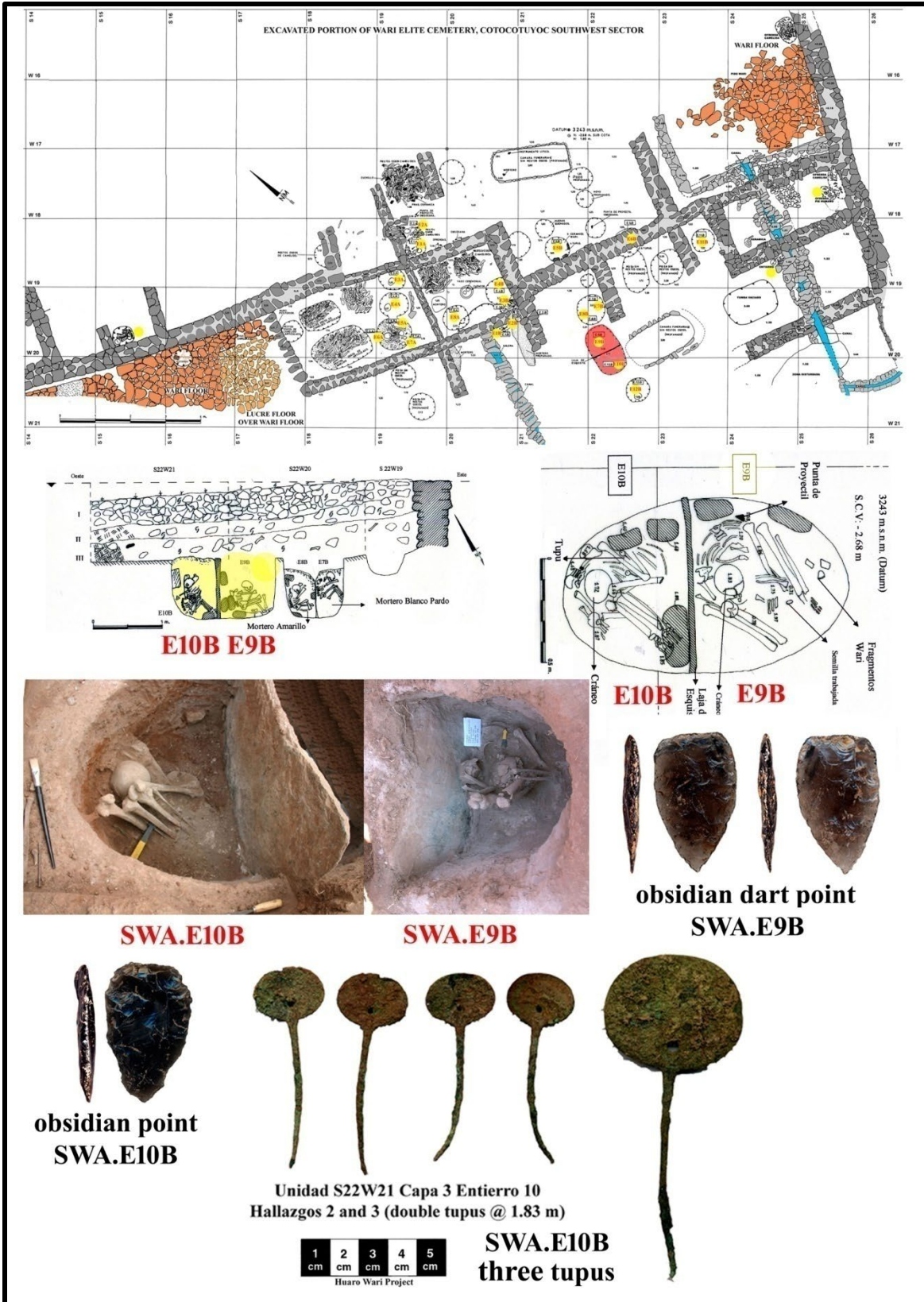


Figure 27. Cotocotuyoc slate partitioned SWA.E9B and SWA.E10B excavation that included two obsidian points and three *tupus*.

B4. Wari Trophy Skull (Ceremonial Offering; Not Burial)

SWA.E3B (Trophy Skull) (CC 48). *Location:* On a lime-mortar (*yeso*) floor remnant in the corner of S20W20—the same room in which the large cist-like tomb connected to a stone-lined drainage canal was found. *Associated External Offerings:* The skull was found under camelid bones from a feasting event that extended northward to cap the large tomb. The occurrence may be coincidental, but it is more likely that the trophy skull was placed as an offering when the camelid feast occurred, perhaps to appeal for spiritual intervention to resolve an issue of major societal concern. *Burial Fill Soil:* Reddish brown colored soil. *Type Burial:* Human cranium modified to create a unique basin-like trophy skull. *Individual:* Adult male cranium. No other skeletal elements were present. It is a trophy head that is distinct from previously reported Andean trophy heads, and its unique attributes are described by Tesar (2007) and Tesar and Arriola Tuni (2020:40-41, Figure 3.3). (Note: The skull occurs in Wari contexts, but the individual may not have been Wari.)

When the trophy skull was photographed and described in the project laboratory it revealed many interesting features associated with its transformation to a trophy head. I prepared a preliminary report on the trophy skull and, along with photo-images and drawings, sent e-mail copies of them to physical anthropologist Valerie Andrushko for review and her use, since she was analyzing Cotocotuyoc skeletal remains for Glowacki. She replied via e-mail and included digital photographs prepared during her analysis of the skull, for which she was thanked then and now (see Tesar 2006:27-28, 2007). Her comments resulted in minor changes to the draft report, which are reflected in the final version.

Based on tooth eruption and the cranial sutures and other features, Tesar (2006:28) suggested that the individual was an adult male of roughly 28-30 years of age at the time of death. Valerie Andrushko placed his age between 26-45 years (Andrushko and Bellifemine 2006:101). The teeth did not appear to me to be as worn as those of similarly aged individuals in the population. Perhaps his status merited a better diet than the norm. *Pathologies, Trauma and Cranial Modification:* Briefly, a large circular hole was cut in the skull base and the cut edges were smoothed and polished. In its inverted position the Cotocotuyoc trophy head has a distinctly bowl-like appearance. Frequent handling in that bowl-like orientation resulted in use-wear polished patches on the frontal bone. The left zygomatic arch (the cheek bone) shows impact damage. Further, the apex of the nasal bone has been cut and smoothed. There also are cut marks across the nasal bridge, the inner and outer eye orbits, and other surface areas. They are linked to soft tissue removal from the facial area.

A series of three very small (pin-size) gold-alloy tacks and tack holes are noted across each side below the scalp cut line with another three placed vertically below the rearmost tacks/tack holes. The slight gap (up to one millimeter) between the bone and tack heads indicates their function probably was to reattach portions of the scalp (with braids ?) to the skull. (Wider gaps would be expected for attached cloth or leather.)

There appear to be two additional tack holes on the left side. One is adjacent to the infra temporal line near the eye orbit, while the other is more centrally located near the squamosal suture. Both are marked by a darker stain suggesting that small brass (or at least copper alloy) tacks were used to secure the scalp. Use of the two types of metal tacks suggests that the maker of the trophy skull used the gold alloy tacks, while a third party made repairs using copper alloy tacks.

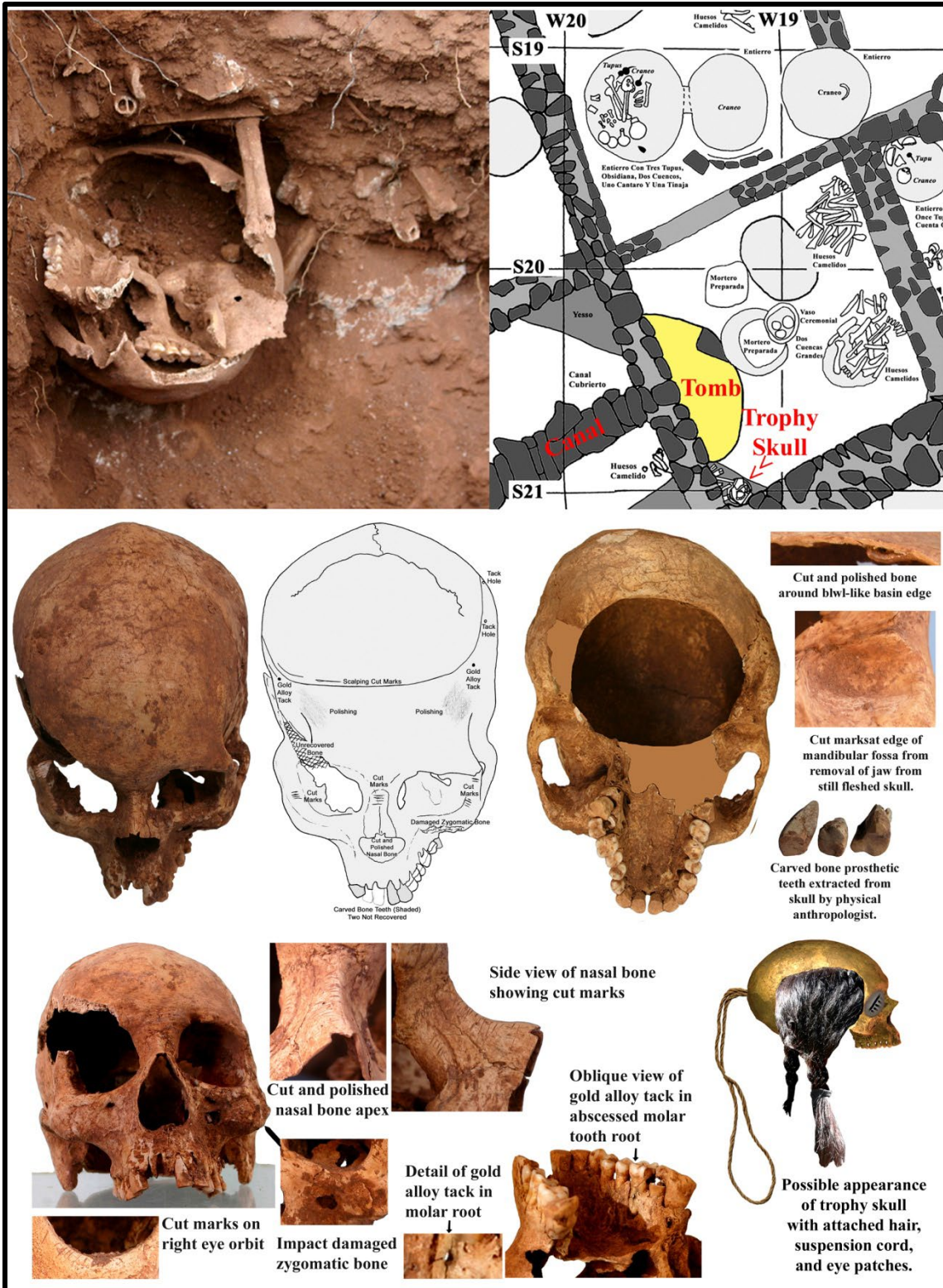


Figure 28. Cotocotuyoc SWA.E3B.Trophy Skull excavation (top left), grid map showing Trophy Skull excavation location (top right), skull top view showing scalping marks (center left), bottom view of cut basin hole (center right), and front view of damaged zygomatic bone, etc. (bottom)

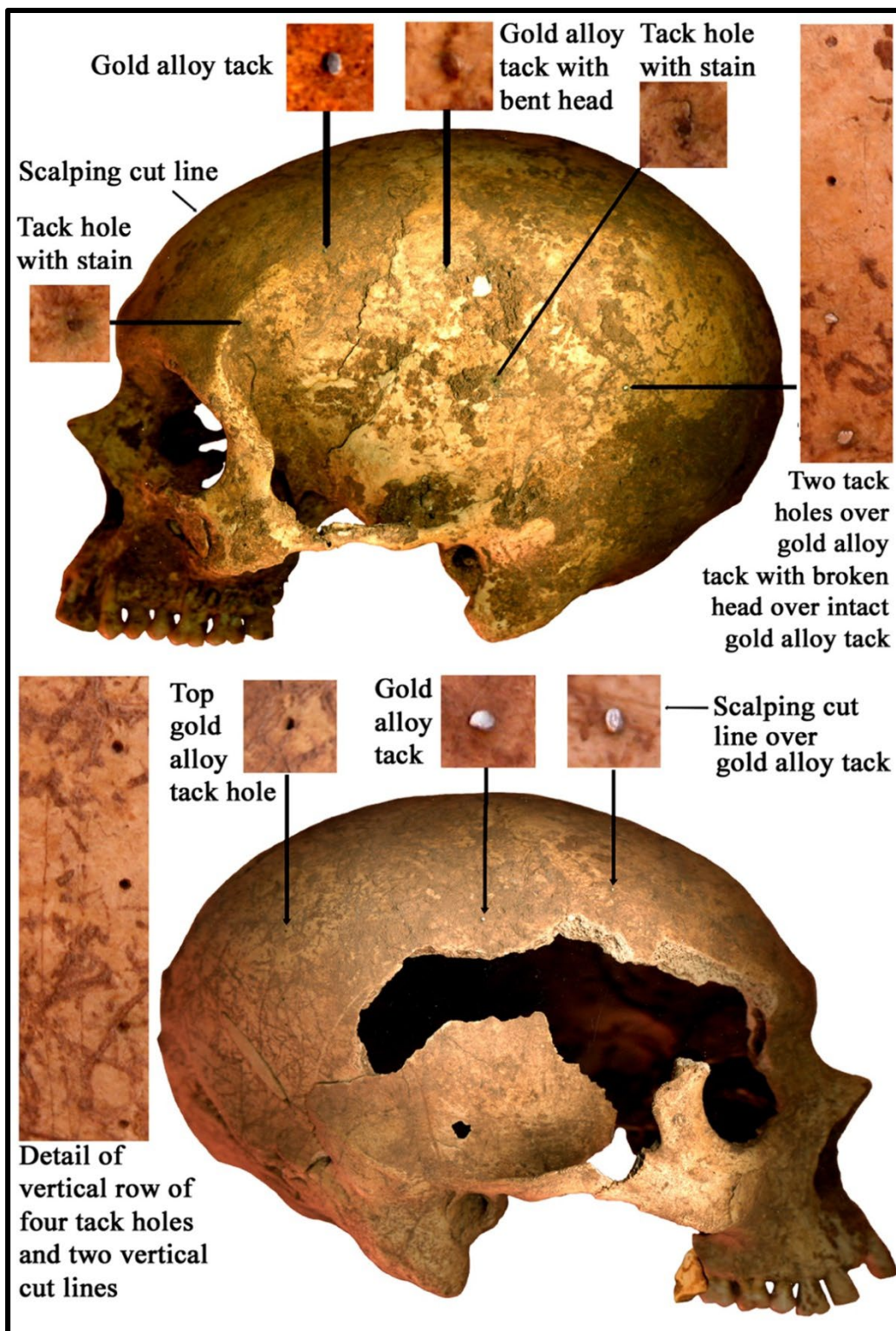


Figure 29. Cotocotuyoc SWA.E3B.Trophy Skull side views showing the location of tacks and tack holes. The tacks apparently served to attach hair removed below the scalping cut line and damage to them indicates that the hair was forcibly removed when the skull was placed as a dedicatory offering.

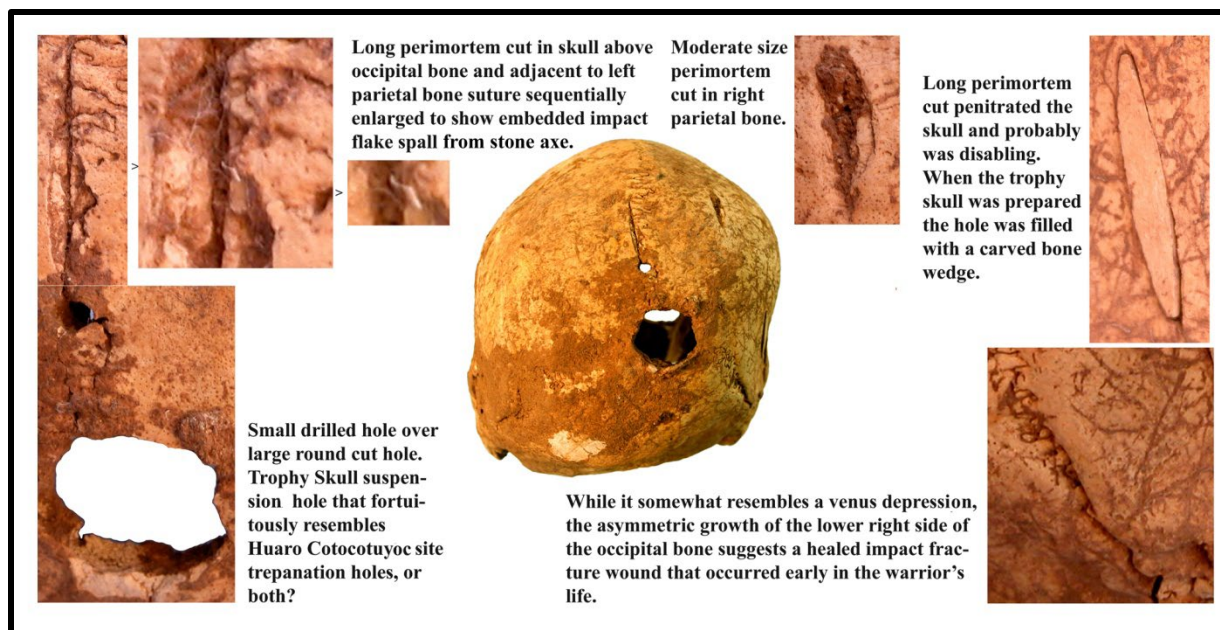


Figure 30. Cotocotuyoc SWA.E3B. Trophy Skull back view showing perimortem stone ax cut marks. One was filled with a postmortem cut animal bone wedge when the large hole was also cut. The images used in Figures 27-29 were produced by Louis Tesar using his digital camera, with five exceptions in Figure 27 that came from images provided by Valerie Andrushko, who is again thanked for her permission to use them.

The pattern of missing tacks on both sides, a missing head (second tack up on the back of the left side), and a downward bent head (center top tack on the left side) suggest that the attached hair was forcefully removed, perhaps when the trophy head was buried in the cemetery. It is not known if the removed hair was burnt to destroy whatever power it contained. The symbolic breaking of the Cotocotuyoc trophy head is consistent with that of other broken dedicatory items placed in the Wari cemetery.

Comment 1: Most recorded trophy heads, particularly Nasca trophy heads (Proulx 2001), retain the jaw, exterior tissue and hair. The jaw was removed from the Cotocotuyoc skull without reattachment and there are discernable cut marks around the top of the skull indicating scalping. The front teeth were extracted (perhaps for use in a trophy necklace) and replaced with carved bone “teeth-shaped” prosthetic ones.

The Cotocotuyoc Trophy Skull reveals a number of healed and unhealed traumatic features suggesting that it came from a person who was probably a warrior of note in a local chiefdom. The defeat of that warrior would have been cause for celebration. Fabrication of the trophy skull is one aspect of that cultural process.

The individual used to make this trophy head probably was killed in battle and was not a sacrificial offering. The three vertical linear stone ax cuts in the skull are not consistent with those expected for a sacrificial decapitation event. The damaged zygomatic arch and cuts penetrating the skull (particularly the one later filled with a carved animal bone) should have been disabling. However, the final death wound could have occurred in the neck or lower body.

The person from whom the skull came likely was from an opposing population, and not a Wari. It is hoped that Strontium isotope analysis will be conducted on some of his teeth to help determine the population origin question.

Comment 2: Two Moche trophy skulls had the top of the cranium cut away to provide bowl-like features (see Verano 2001:175 [Figure 8.4]). I have not seen reports on any other trophy skulls with bowl-like modifications.

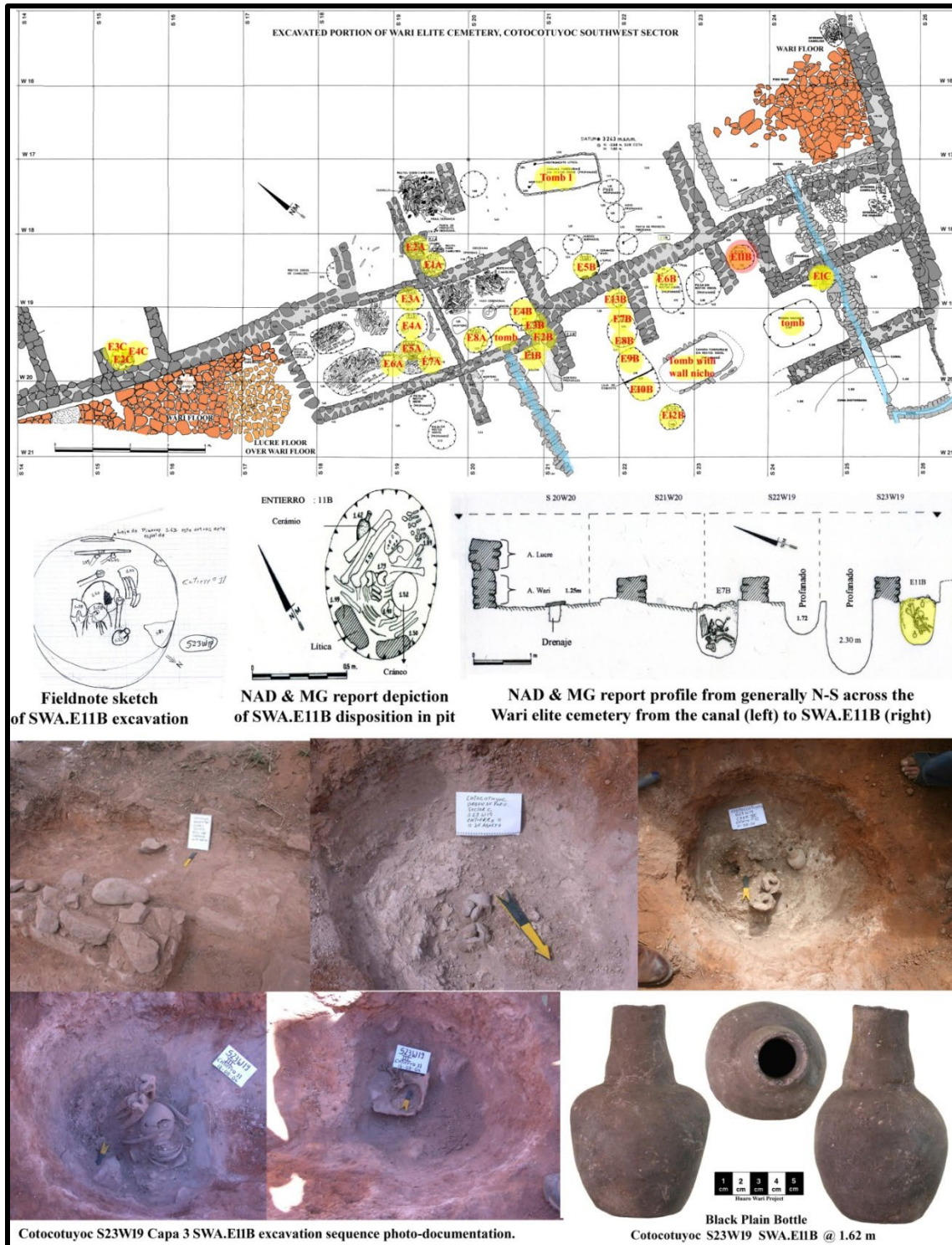


Figure 31. Cotocotuyoc SWA.E11B excavation sequence and plain bottle burial offering.

B5. Wari Primary Flexed Sitting Burials with Late Middle Horizon Ceramic Vessel Offerings

SWA.E11B. *Location:* S23W19. *Associated External Offerings:* None recorded. *Burial Fill Soil:* Light gray colored lime sand that hardened over time. *Burial Type:* Body apparently wrapped in a tightly bound flexed sitting position when placed in center of prepared pit. *Individual:* Female (26-35 years old). *Pathologies and Trauma:* Abscessed tooth resulted in alveolar bone loss, cavities in five teeth, and moderate accumulation of tartar on teeth. Also, osteoarthritis affected bilateral articulation of temporal and mandibular bones. *Burial Offerings:* Transitional Wari-Lucre style Plain Black late style bottle placed near top of burial.

Comment: The individual in this burial is identified as Wari, since the remains were placed in a cylindrical pit in a flexed sitting position and then surrounded by lime-sand fill soil. The ceramic vessel offering could be identified as either late Wari or early Lucre. A small canteen-jar with a shortened neck that features a similar expanded neck base was excavated with Cotocotuyoc Lucre burial SEC.E4A.

B6. Wari Secondary Bundle or Disarticulated Burial in Cylindrical Pit Under Camelid Feast Bones; Late Middle Horizon Wari Ceramic Vessel Burial Offerings

SWA.E7B. *Location:* S21-22W20 Level 3 above SWA.E8B and near pit side. *Associated External Offerings:* None recorded. *Burial Fill Soil:* Pale yellowish burnt umber colored soil surrounding the bones. *Burial Type:* Cloth-wrapped disarticulated bone bundle based on the concentrated piled bone pattern in the pit. *Individual:* Female (18-25 years old). *Pathologies and Trauma:* Cavity in one tooth, two abscesses that resulted in alveolar bone loss, and an accumulation of tartar on her teeth. She also had *periostitis* inflammation of the tibia and radius; and, *spondilolistesis* of the fourth lumbar vertebrae. *Burial Offerings:* Okros-style plain bottle found against the pit wall within the yellowish burnt umber colored soil associated with SWA.E7B.

Comment: As noted above, the lack of mixing of the two burial fill soils provides a contrast demonstrating that the burials represent two separate events; SWA.E8B occurred first.



Figure 32. Cotocotuyoc SWA.E7B bundled bones interment excavation and Okros Plain bottle. In the same pit as SWA.E8B, but the SWA.E7A intrusive pit fill soil is of a different color.

WCA.E35B (CC 18?). *Location:* Likely from the same pit feature as WCA.Ceramica 3 in S06W17. *Associated External Offering:* None mentioned. *Burial Fill Soil:* Reddish-brown clayey sand. *Burial Type:* Mixed context (disarticulated) burial. *Individual:* Undetermined sex (probably less than 9 years old). A femur was used to establish the depth of the poorly preserved bones at 140 cmbs. *Pathologies and Trauma:* Undetermined. *Burial Offerings:* WCA.Ceramica 3 sherds from Okros Plain “Chamber Pot” with a broken (missing) basket handle projecting from its rim.

Comment: Two similar Okros Plain vessels were found at the Wari Pikillacta site. The first was reported by McEwan (1984:247) and reprinted with his permission by Glowacki (1996:698 Figure 56). The second was also reported by McEwan (1984:263). This suggests that the WCA.Ceramica 3 vessel and the associated WCA.E35B burial pit feature may date from the late Wari occupation of the site. The apparent absence (if unreported) of camelid offering feast remains over the pit feature location is noted.



Figure 33. Cotocotuyoc WAC.E35B pit feature in S06W16-17 Level 4 includes Okros style Plain “Chamber Pot” with handle (missing).



Figure 34. Cotacotuyoc WCA.Hallazgo 7 Olla with spout from pit feature under a mortar in S07W17.

WCA.Hallazgo7. The WCA.Hallazgo 7 offering pit feature near the east wall in S07W17 is believed to be contemporary with that of the WCA.Ceramica 3 ceramic vessel (see WCA.E35B above). WCA.Hallazgo 7 is a large Okros-style wide-mouth *olla*-shaped vessel with a spout and a horizontal strap handle. It came from a pit feature next to the WCA.E1B burial pit. The western half of the room following construction of a barrier wall was used for the mass burial recorded as Fosa Funeraria 01. While perhaps occurring late in their occupation, it is suggested that the large Okros vessel with a spout may be a Wari offering and its presence in the same room used for the Lucre burials is considered to be coincidental. Stylistically, the manufacture quality of the Hallazgo 7 vessel is consistent with that of the Wari and much better made than the Lucre ceramic norm. Finally, the pit containing the vessel was carefully covered with an upside down large tabular stone mortar and the burial feature lies below the floor level used for the Lucre mass burial.

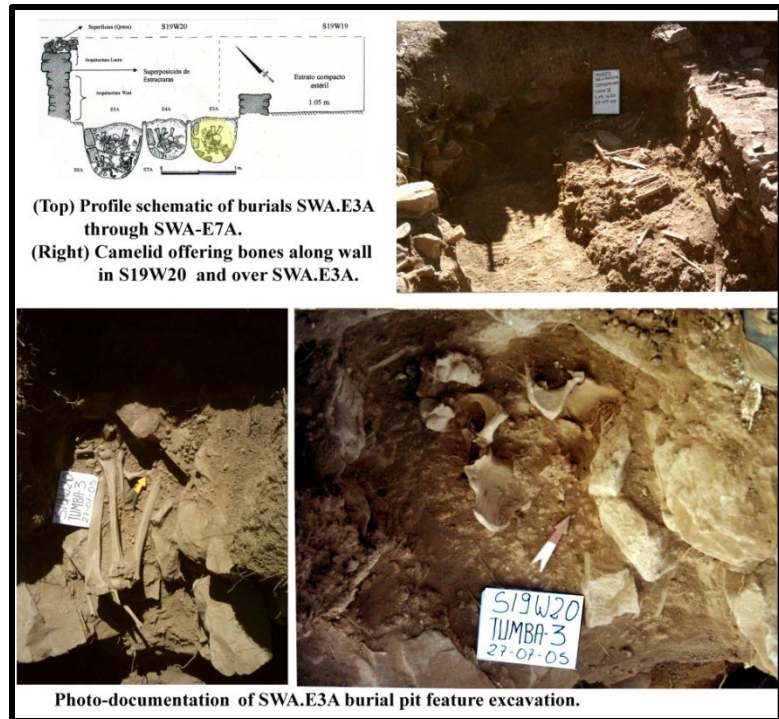
B7. Late (?) Wari Burials Without Preserved Offerings

Note: The burials in Subgroup B7 may have occurred later in the Middle Horizon reflecting a transition to less elaborate Wari interments, or perhaps they indicate that the individuals had less status than those buried with preserved burial offerings. Further, any organic items made of cloth, animal hide, wood, plant fiber and the like deteriorated and their residue was not observed. Regardless, their treatment is similar to that of the early Lucre individual interments.

SWA.E3A. Location: S19W19 in circular pit (0.70m x 0.70m; 0.56m deep) in the SW corner of the room. **Burial Fill Soil:** Reddish-brown soil mixed with lime sand. **Interments:** Two individuals in draft report; only one in project report; both included here.

SWA.E3A.Individual 1 (CC24). **Burial Type:** Primary flexed sitting position. **Individual:** Male (26-35 years old) with 75% of his bones well preserved. **Pathologies and Trauma:** Three teeth lost during life with alveolar bone closure over the sockets.

SWA.E3A.Individual 2 (CC25). **Burial Type:** Not recorded. **Individual:** Male (18-25 years old) with less than 10% of poorly



preserved bones remaining. *Pathologies and Trauma*: No anomalies were observed. *Burial Offerings*: No associated (preserved) artifacts reported.

SWA.E2C. *Location*: S15W20 next to SWA.E3C and over SWA.E4C. *Associated External Offering*: None. *Burial Fill Soil*: Loose reddish-brown soil. *Burial Type*: Well preserved primary, tightly bound/wrapped sitting flexed position. *Individual*: Undetermined (less than 20 years old). *Pathologies and Trauma*: No anomalies were observed. The skull exhibits tabular erect cranial vault modification. *Burial Offerings*: None preserved.

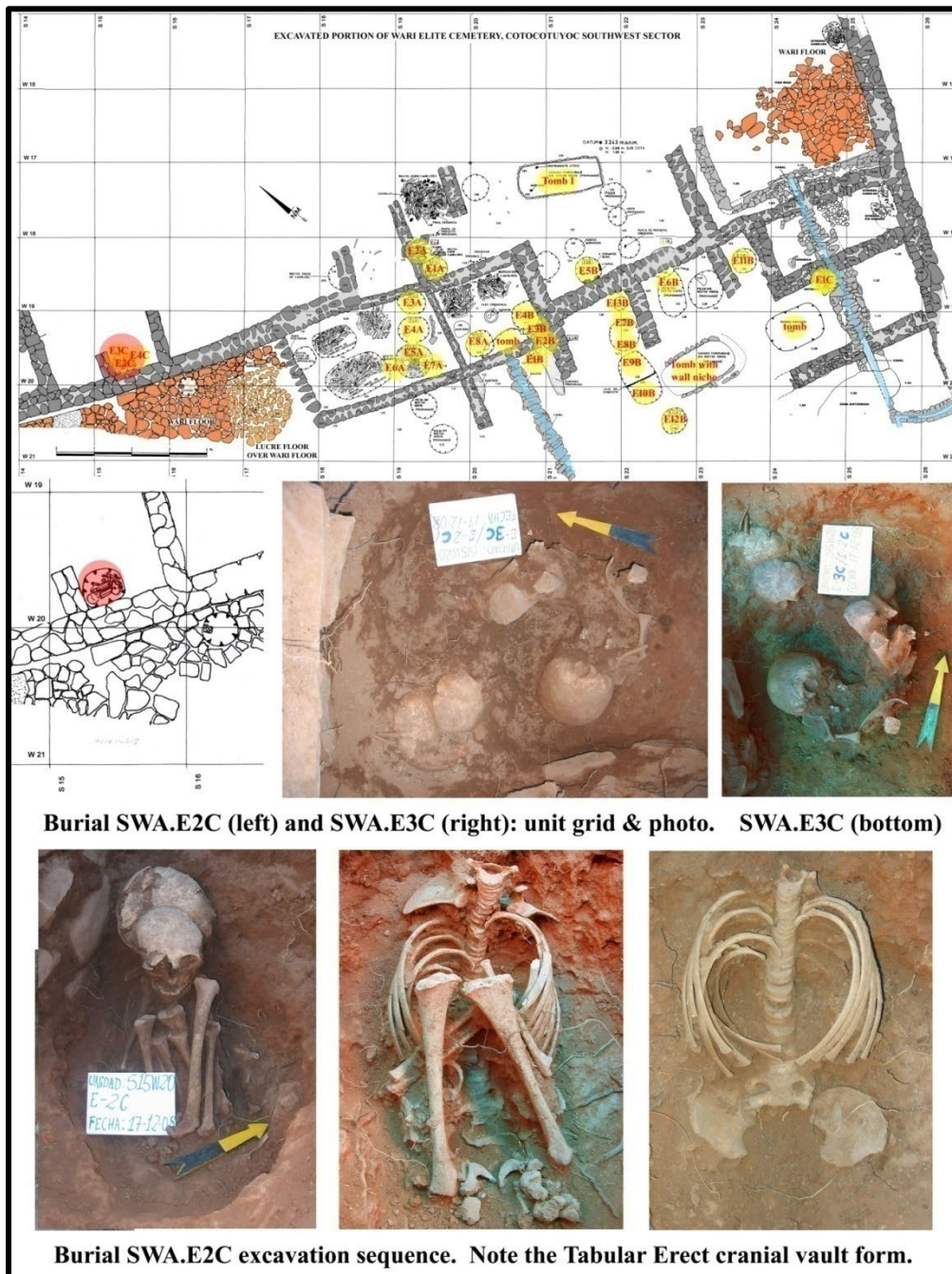


Figure 36. Cotocotuyoc SWA.E2C and SWA.E3C excavation photographs.



Figure 37. Cotocotuyoc SWA.E4C excavation documentation.



Figure 38. Cotocotuyoc SWA.E12B excavation photographs.

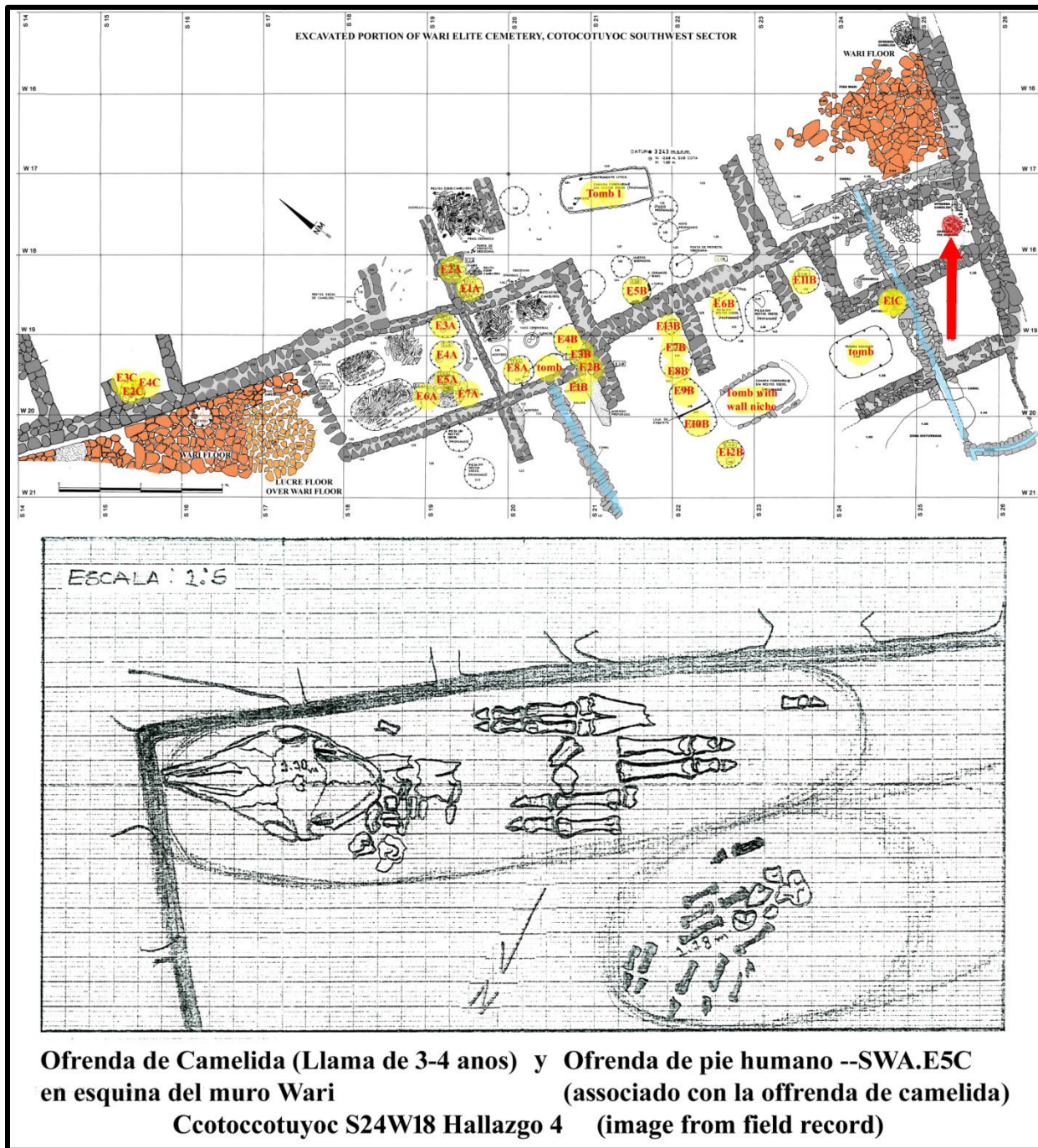


Figure 39. Cotocotuyoc SWA.E5C excavation field drawing recording “human foot” trophy offering.

SWA.E3C. *Location:* S15W20 next to SWA.E2C and over SWA.E4C. *Associated External Offering:* No camelid bones from a feasting event. *Burial Fill Soil:* Loose reddish-brown soil. *Burial Type:* Primary flexed sitting position. *Individual:* Female (18-25 years old).

Pathologies and Trauma: Molars show little wear, but missing some teeth. ***Burial Offerings:*** None preserved.

SWA.E4C. ***Location:*** Near wall in S15W20 and under SWA.E2C and SWA.E3C. ***Associated External Offerings:*** None. ***Burial Fill Soil:*** Undescribed. ***Burial Type:*** Partially preserved disarticulated. ***Individual:*** Child (5-9 years old) of undetermined sex. ***Pathologies and Trauma:*** Undetermined. ***Burial Offerings:*** None.

SWA.E12B. ***Location:*** S22W21. ***Associated External Offerings:*** None recorded. ***Burial Fill Soil:*** Loose reddish-brown soil. ***Burial Type:*** Primary flexed sitting position. ***Individual:*** Male (18-25 years old) with poorly preserved bones. ***Pathologies and Trauma:*** Tooth loss during life with alveolar bone loss and closure; tartar accumulation on teeth; and, fractured right rib and right clavicle. ***Burial Offerings:*** No artifacts were found with the burial. ***Comment:*** The fractured right rib and right clavicle might be the result of a battle injury, or the result of an accidental fall in the mountainous terrain or elsewhere.

SWA.E5C.HumanFootTrophy. ***Location:*** S24W18 shallow pit offering feature. ***Associated External Offerings:*** None beyond the foot itself. ***Burial Fill Soil:*** Undescribed. ***Burial Type:*** While it was recorded as a human burial, as with the Cotocotuyoc trophy skull, the human foot is an artifact—a trophy item. ***Individual:*** Probably male (more than 18 years old). ***Burial Offerings:*** No artifacts were found with the foot bones.

Comment 1: The foot was a war trophy and the bones were collected but remain unanalyzed. A copy of the digital camera image documenting the find was inadvertently not made. However, the field drawing records the context of the find.

Comment 2: The trophy foot offering occurred next to a camelid offering and their proximity to the water retention room and its canal system suggests that both offering features are linked to Wari efforts to assure the continued flow of water to the system.

Group C. Late Middle Horizon Wari Primary Flexed Sitting Burial in Non-Elite Burial Contexts

Two Wari burials were excavated in non-elite burial contexts. They show the continuity in burial style found in the Wari Elite Cemetery. They are primary sitting flexed burials but appear to lack the full ceremonial treatment seen in their elite counterparts. They likely date to late in the Middle Horizon or early in the Late Intermediate Period. They were buried under the floor in an area used for food preparation purposes. It is possible that they were part of a mixed population that occupied Cotocotuyoc as a defensive refuge when the Wari elite abandoned the valley.

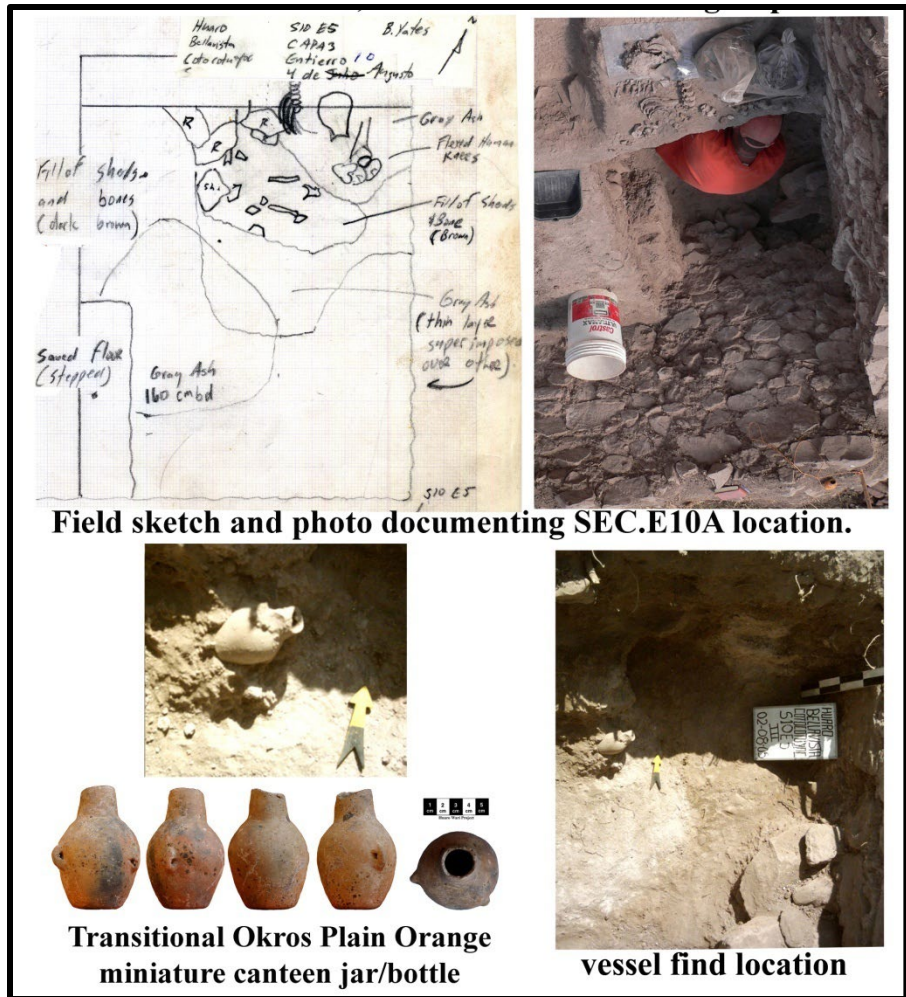
SEC.E10A. Location: S10E05 Level 3. **Associated External Offerings:** No camelid bones above the feature. **Burial Fill Soil:** Gray colored ash/lime and “several camelid long bones”.

Individual: Adult of undeter-mined sex (over 30 years old). “Head (was) up and facing east.” Suggests a linkage to the canal system and the continued flow of water through it. **Pathologies and Trauma:** Not determined.

Burial Offerings: A miniature transitional Okros Plain Orange canteen jar with two perforated appliquéd nubbin handles.

Comment: Field sketches and general activity field photographs document the burial location and the ceramic vessel.

Figure 40. Cotocotuyoc SEC.E10A excavation records and artifact image.



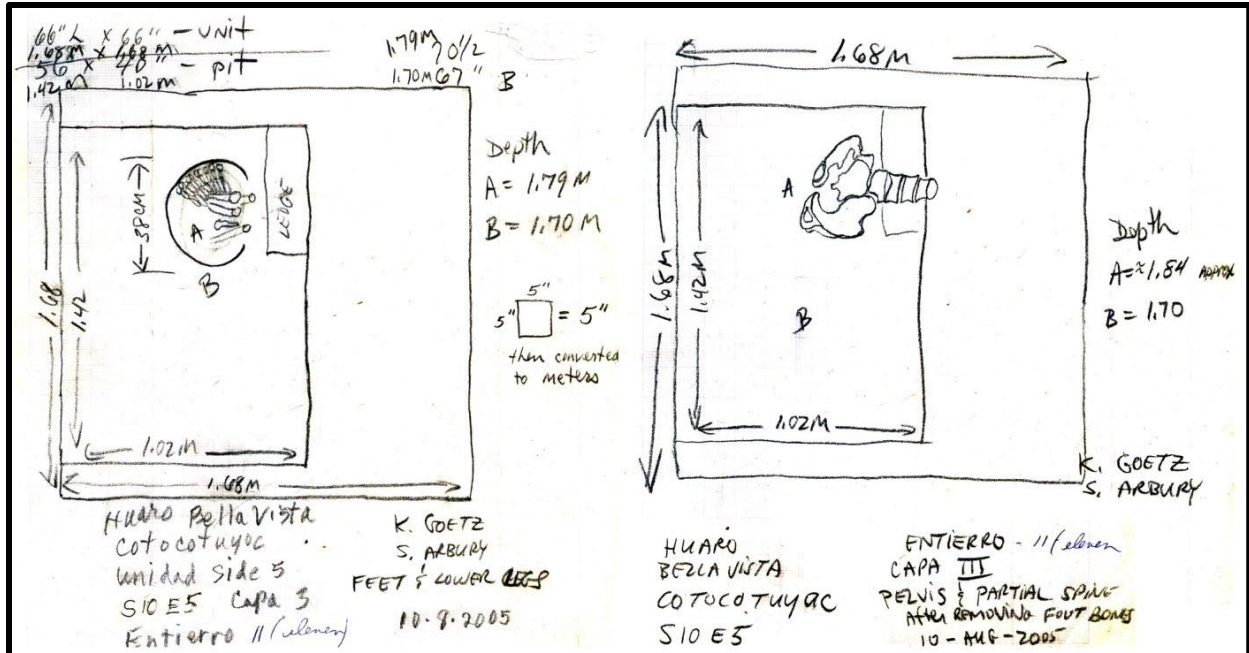
Field sketch and photo documenting SEC.E10A location.

Transitional Okros Plain Orange miniature canteen jar/bottle

vessel find location

SEC.E11A. Location: Shallow pit feature in S10E05Level 3 south of SEC.E10A in Wari food preparation room (kitchen); located below Wari floor. **Associated External Offerings:** No camelid bones above the feature recorded. **Burial Fill Soil:** Not recorded. **Burial Type:** Field sketches suggest a deteriorated primary sitting flexed adult burial. Sex and age undetermined. **Burial Offerings:** No associated (preserved) artifacts reported.

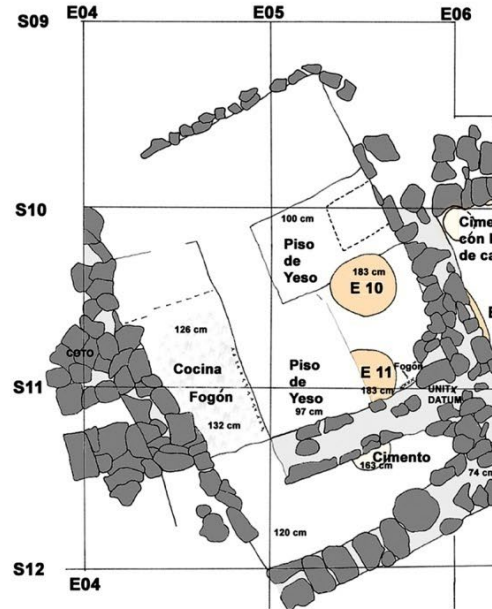
Comment: Field sketches of the E11A burial excavation and the notes for E10A and E11A (both dated 10 Aug 2005) confirm the burial location.



SECE11A excavation field notes showing location in excavation area corner..



SEC.E10A excavation photograph showing SEC.E11A location in center background.



SEC Kitchen structural area grid unit map showing SEC,E10 and SEC.E11 interment locations.

Figure 41. Cotocotuyoc SEC.E11A interment excavation information and grid structural area map depicting SEC.E10A and SEC.E11A recorded locations.

Group D. Wari Large Stone-Walled and Stone-Lined Tombs

The four large tombs excavated in the Southwestern Area, the Wari elite cemetery area, had been emptied. Lucre ceramic vessels found on the floor in one corner of the first excavated tomb suggest possible Lucre reuse of the tomb. Such tombs appear to occur late in the Middle Horizon and perhaps extend into the early Late Intermediate period. Similar tombs are reported for Batan Urqu (see Zapata 1997:210 and Figure 4).

Subgroup D1. Large Stone-Walled Box-Shaped Tombs

SWA.Tomb 1. *Location:* Primarily in S20-21W18. *Characteristics:* This 2.40m by 0.80m rectangular feature has walls of irregularly shaped fieldstone, a 1.40m deep floor of compact clay, and was capped with large slate slabs that were in turn covered with sandy lime mortar—the same as that used by the Wari to make “yeso” floors. *Burial Type and Individuals:* With the exception of a few fragmentary skeletal remains (Tesar 2006:16), the human bones once present in the tomb had been removed or deteriorated. *Burial Offerings:* A Lucre Polychrome Faceneck jar with a simple tunic pattern and an appliquéd rounded simplistic face and two miniature pinch-shaped plain vessels—a jar and a tripod incense burner—were found on the tomb floor in its southeastern corner. A basalt pestle was excavated in fill soil near the northern end of the tomb, as was a roughly rectangular box-shaped “medicine stone” of hematite.

Comment 1: It is suggested that the removed human remains may have been those of an ancestor or ancestors important to the Wari overlords abandoning Cotocotuyoc and that they may have been taken for appropriate interment at the site to which the Wari were going. However, the transitional Lucre ceramic vessels found in the tomb suggest that alternatively the tomb dates to late in the Middle Horizon and the removed remains may have been reinterred at Batan Urqu. The Lucre Polychrome Faceneck jar is stylistically similar to vessels excavated at Batan Urqu.

Comment 2: Tomb 1 was opened by a modern looter, who left a wallet with identification and the sacrificial remains of a black-haired dog. It was the incompletely filled looter hole that resulted in its identification and in the excavation of Tomb 1.

SWA.Stone-WalledTombWithNiche. *Location:* S22-23W20. *Characteristics:* Its construction style and dimensions are similar to those of Tomb 1, as is its orientation. Unlike Tomb 1, the second tomb has a rectangular-shaped niche in its eastern wall. The niche is too small for a mummy, but of appropriate size to display one or more artifacts, such as a figurine or faceneck jar. Portions of the western side of the tomb and parts of its ends were missing. Also, the tomb cover was missing; although, as with Tomb 1, it likely consisted of large tabular slate sheets.

Comment: Its contents had been removed, presumably at the same time as those of Tomb 1; although, it also was damaged by historic looters.



≪ Slate embedded in yeso
Tomb 1 cover



Slate removed from
yeso Tomb 1 cover



North end of SWA. Tomb 1 to left and south end to right.
Note Lucre ceramic artifacts on floor in SE corner.

Figure 42. Cotocotuyoc SWA. Tomb 1 location, yeso over slate cover, fieldstone construction.



Figure 43. Cotocotuyoc SWA.Tomb 1 ground-stone and ceramic vessel artifact assemblage.

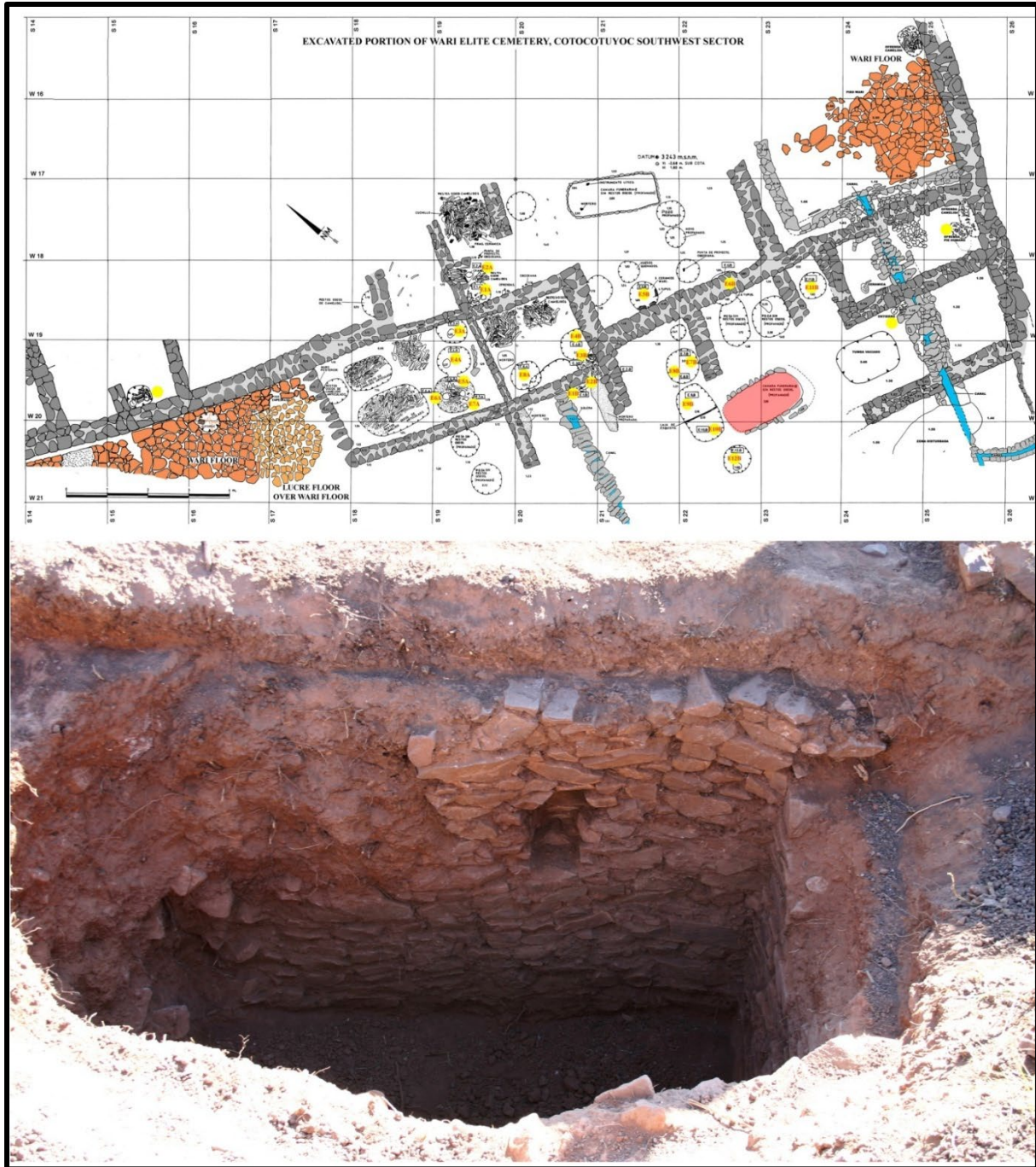


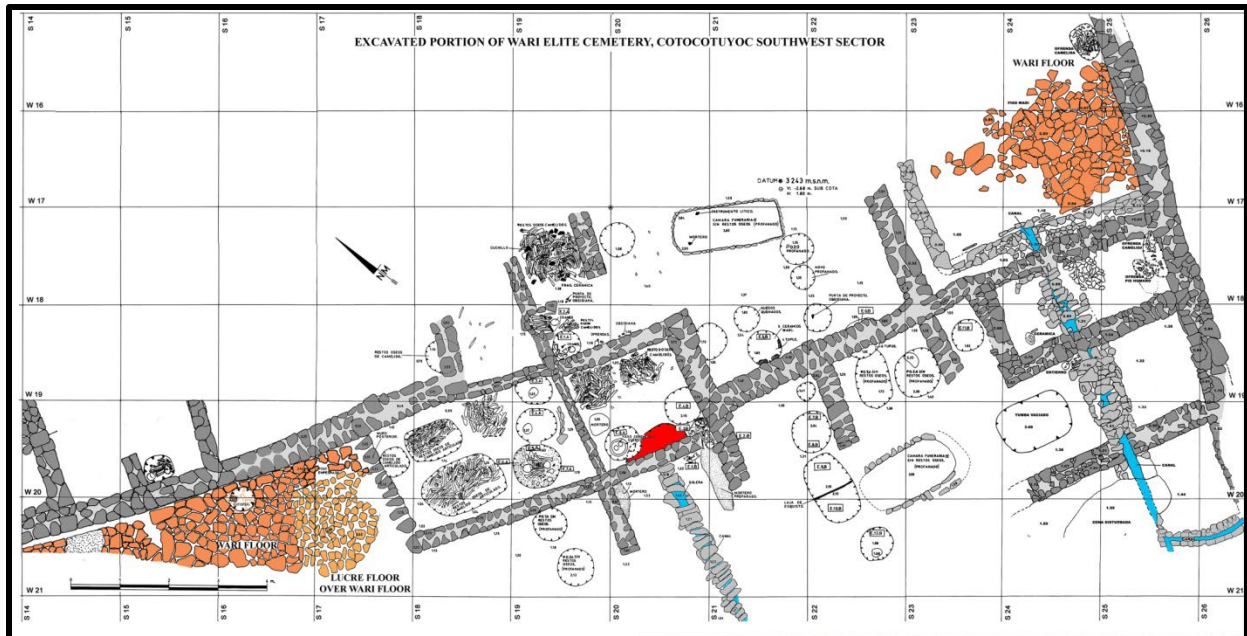
Figure 44. Cotocotuyoc SWA. Stone-Walled Tomb with Wall Niche; looter damaged.

Subgroup D2. Large Partially Stone-Lined Oval-Shaped Tombs

SWA. Partially Stone Lined Wall Tomb. *Location:* About two meters south of the stone-walled tomb with a niche was found another large tomb in S23-24W19-20 and close to a stone-lined drainage canal. *Characteristics:* It is roughly oval-shaped and about 1.5 meters deep. Its cist-like construction style is that of the Wari, although late in the Middle Horizon and similar to Batan Urqu tombs (see Zapata 1997: Figure 4).



Figure 45. Cotocotuyoc SWA. Partially Stone Lined Tomb Near Canal in S24W20.



Beginning tomb excavation revealed camelid bones from offering feast present below and adjacent to jesso floor remnant. Floor removed to facilitate tomb construction.



View of canal intersecting wall adjacent to tomb. Note lime-mortar (jesso) floor remnant from floor removed to construct the canal; and, wall fall stone (left) from tomb.



Looking down into tomb from wall penetrated by canal. View of stone-lined drainage canal to wall accessing tomb.

Figure 46. Cotocotuyoc SWA.Canal Linked Tomb location and excavation.

Comment: Its contents had been removed. Here too it is suggested that the ancestral remains and any associated artifacts may have been removed when the Wari leadership abandoned the Huaro Valley and Cotocotuyoc. And, here too they alternatively may have been reinterred at Batan Urqu.

SWA.Canal-LinkedTomb. *Location:* Adjacent to a room wall in S20W20 and connected to a stone-lined drainage canal west of the wall. *Characteristics:* Large cist-like partially stone-lined tomb. Its construction involved removal of a lime-mortar (*yeso*) floor. *Associated External Offerings:* Camelid bones from a feasting event capping the burial remains and (likely) the trophy skull (SWA.E3B; Subgroup B4) near the tomb's southern edge. *Contents:* Empty; no human bones or associated artifacts were identified in it,

Comment 1: The tomb and associated canal represent a change in the use of that portion of the structural complex as they required removal of sandy lime-mortar floors in two rooms and penetration of an extant wall to permit canal water to empty into the tomb in a controlled manner. As noted, the unique trophy skull basin was found adjacent to the tomb, resting upon a lime-mortar floor remnant in the SW corner of the room, and under camelid feast offering bone remains that also extended over the tomb pit.

Comment 2: The tomb size and the associated canal, suggesting a link between the ancestral spirit and forces controlling ground and rain water, imply that the tomb contained important ancestral remains. Control of those remains and their beneficial function necessitated their removal when the site was abandoned.

Comment 3: While the tomb was capped with Wari camelid feast remains, an indication that the canal may have been a later addition is seen in the sacrificial remains of a single llama or alpaca. It lay with its head facing eastward in a long shallow pit as a primary extended interment parallel to the canal (see Figure 46, bottom right).

Observation 1: It is noted that the style of the four tombs, especially the last two, is similar to that of the larger tombs found at Batan Urqu. That association and structural modification (such as lime-mortar floor removal) occurring during their construction indicate that they were made later in the Middle Horizon than most of the elite Wari burials occurring in cylindrical burial pit features (Isbell's Type 1 and Type 2 style interments) within the same structural complex. Likewise, construction of the basin pool room and drainage canals may represent a later expansion of an older complex, perhaps added during a time when reroofing and other maintenance activities occurred.

Observation 2: As noted, it is possible that, rather than the Wari elite removing the contents of the four tombs that when normal life could be resumed by representatives of the emerging Lucre culture, the remains may have been removed and reinterred as the dedicatory interments in the Batan Urqu cemetery.

Group E. Early Lucre Mass Burials During the Initial Reoccupation of Cotocotuyoc

I believe that the data demonstrate the reoccupation of Cotocotuyoc by a mixture of Wari and the local chiefdom population shortly after the Wari elite abandoned the Huaro Valley. Some rooms may have been cleared and restored to their original floor, while in

other rooms the collapsed wall rubble was leveled and a layer of flat stones added to make a functional floor. The leaders of the refugees apparently sent out groups to seek other survivors and to recover the remains of deceased family members.

The latter effort suggests a cultural imperative to inter those remains and their associated spiritual essence in a protected setting. The Cotocotuyoc West Central Area revealed the results and was designated the Lucre Mortuary Area.

Three mass burials, designated Fosa Funeraria 01 – 03, are believed to represent some of the earliest burials that occurred during the initial reoccupation of Cotocotuyoc as a refuge for the Huaro Valley and Urcos Lake area survivors. Fosa Funeraria 02 and 03 were probably the first, followed by Fosa Funeraria 01 and smaller burials. The first two likely represent the family remains of community leaders, or at least high status families and were buried with a few non-perishable grave goods (and likely also with some perishable items). Fosa Funeraria 02 is believed to have contained the remains of a mixed heritage high status (Wari and local) family, while Fosa Funeraria 03 contained the remains of a high status local heritage family. The third mass burial, Fosa Funeraria 01, likely represents the recovered remains of people of less social importance based on the limited grave goods and mixed manner in which the remains were piled in the room and covered, followed by the sealing of the room. Contact with those deteriorating remains may have resulted in infection of open wounds and perhaps the subsequent death of the infected individuals. The death of those trained in the handling of the deceased, their interment, and conduct of proper rituals would have had negative consequences.

Fosa Funeraria 02 (Mass Burial: WCA.E18B, E20B-E23B and E29B-E31B) *Location:* In S06E16-17 Level 3 with a large stone placed on top of the pit. *Associated External Offerings:* None. *Burial Fill Soil:* Unrecorded. *Burial Type:* Disarticulated bones of eight individuals. In the field-notes it is noted that Burial #18 and 20-23 “all show signs of burning.”

WCA.E18B. Individual: In the Burial Form the poorly preserved bones are identified as those of an infant (0-1 year old) of undetermined sex and with its skull missing. *Pathologies and Trauma:* Undetermined. *Burial Offerings:* None.

Comment: In the project field-notes it is written: Burial #18 “some arm bones are articulated but human mandible straight atop them is probably not ... all bones burnt.” Figure 47 (top left and right) depicts the mandible over the arm bones.

WCA.E20B. Individual 3 (CC 60). Male (17-18 years old). *Pathologies and Trauma:* Cavities in one tooth and linear *hypoplasia* over the central incisors. Tabular erect cranial vault modification. Perimortem radiating fracture lines on his left parietal and two groups of perimortem cuts in the frontal bone. *Burial Offerings:* None.

Comment 1: A cranium identified as WCA.E23 was photo-documented in the project lab. WCA.E23 is reported to exhibit tabular erect CVM and to have trepanation events on the right and left parietals. The documented cranium has tabular erect CVM but no trepanation. Its attributes match those of WCA.E20B and it is depicted in excavation photos (see Figure 55).

Comment 2: The perimortem left parietal and the frontal bone cranial injuries indicate he likely was violently killed.



Figure 47. Cotocotuyoc WCA.Fosa Funeraria 02 excavation sequence.

WCA.E21B.Individual 1. Child (5-6 years old) of undetermined sex. *Pathologies and Trauma:* Annular oblique cranial vault deformation. *Burial Offerings:* A miniature Lucre style pinch-pot was found near the skull.

WCA.E22B.Individual 6. *Burial Type:* Primary sitting flexed burial whose bones shifted when the body decayed. *Individual:* Female (more than 46 years old). *Pathologies and Trauma:* Arthritis in her vertebral column. (Annular oblique CVM). *Burial Offerings:*

Ccoipa influenced transitional in style from the late Middle Horizon Wari ceramic to early Late Intermediate Period Lucre Polychrome Faceneck jar found in the pit bottom.

Comment 1: While it lacks an associated camelid feast offering feature capping the burial, stylistically this burial is more like Wari burials at the site and likewise the ceramic vessel is better made than the Lucre norm, representing the transition from Wari to Lucre. In her field notes, archaeologist Julianne White wrote (19/7/2006) the faceneck jar design “appears to be transitional Lucre-Wari. Appears to confirm earlier date that deformed cranium indicate as well.”



Figure 48. Cotocotuyoc WCA.Fosa Funeraria 02 ceramic vessel assemblage.



Figure 49. Cotocotuyoc Fosa Funeraria 02 WCA.E20B excavation photographs and rotated tabular erect (cradle board frontal-occipital) cranial vault modification images. Cranium images extracted from Louis Tesar's project laboratory digital photo documentation records.



Figure 50. Cotocotuyoc Fosa Funeraria 02 WCA.E22B excavation photographs and rotated annular oblique cranial vault modification images. (From Tesar's project lab photo images.)

WCA.E23B.Individual 2 (CC 61). *Burial Type:* Primary sitting flexed burial whose bones shifted when the body decayed. *Individual:* Male (more than 46 years old). *Pathologies and Trauma:* Tooth loss during life with alveolar bone closing over sockets, and accumulation of tartar on remaining teeth. Osteoarthritis in the vertebral column, left hip and both knees. Furthermore, he had *periostitis* in an inflamed mandible and tabular erect cranial vault deformation. Finally, he has a fractured cranium, a massive fracture of the left pubic bone, three fractured ribs, and a fractured second metacarpal of the right hand. *Bone Modification:* Two healed scraping type trepanation events on the right and left parietal bones (Andrushko and Bellifemine 2006:104; Andrushko and Sanchez-Chopitea 2020:69). *Burial Offerings:* Lucre *keru* was found at the bottom of the burial.

Comment 1: This individual was placed in the pit next to and higher than WCA.E22B. Here too the skeletal elements shifted when the body decomposed. It too was associated with light gray lime mortar sand pit fill but lacked a camelid offering deposit. He was probably the spouse of the female identified as WCA.E22B.Individual 6.

Comment 2: A fractured cranium, a massive fracture of the left pubic bone, three fractured ribs, and a fractured right hand second metacarpal indicate he was likely violently killed.

Comment 3: The tabular erect cranial vault deformation and the fact that he merited trepanation when needed demonstrate his elite status within his community.

WCA.E29B.Individual 4. Child (3-4 years old) of undetermined sex. *Pathologies and Trauma:* No anomalies were observed. *Burial Offerings:* none.

WCA.E30B.Individual 5. The Burial Form records all of the bones are burnt (*Todos los huesos estan quemados*). The physical anthropologists record a sub-adult (1-2 years old) of undetermined sex. *Pathologies and Trauma:* No anomalies were observed. *Burial Offerings:* None.

WCA.E31B.Individual 7. The Burial Form reports that all of the bones are burnt (*Huesos quemados—todos*). The physical anthropologists record a male (less than 25 years old). *Pathologies and Trauma:* Alveolar bone closed over the area of two teeth broken during his life. Caries in one tooth, as well as an accumulation of tartar on his teeth. The trochanter major region of his femur and one of his ribs were fractured. Also, bone inflammation, *periostitis* on one tibia. *Burial Offerings:* None.

Comment: The fractured femur and rib indicate he likely was violently killed.

Note: Given the number of individuals with traumatic bone injuries, including those reportedly with burnt bones, Fosa Funeraria 02 likely represents the collected remains of a family killed by opposition forces shortly before or during the defensive reoccupation of the abandoned Cotocotuyoc complex. The old adult male may have been a Wari married to a local high status female to foster favorable ties between the Wari and subservient chiefdom. The remains may have been removed from a circular thatched roof residence that was burnt when they were killed.

Fosa Funeraria 03.Hallazgo 11 (Mass Burial: WCA.E19B, E24B-E27B, and E32B-E34B). *Location:* Hallazgo 11 in S08W16 Level 3 is on the eastern side of the primary N-S structural wall and bound on the North and South by two projecting E-W walls. The

Fosa Funeraria 03 project notes include a description and field sketches of five rectangular slate stones covering human skeletal remains. The skeletal remains are identified and described on burial forms. Field excavation photographs document the described findings. *Associated External Offerings: None. Burial Fill Soil: reddish-brown loose soil. Burial Type: Disarticulated bones. Burial Offerings: Two Lucre vessels were found in the burial feature and considered to be a general grave offering, not individual burial offerings. They include a miniature Lucre Polychrome jar with a strap handle and faded black-colored cross-hatched collar decoration. No field photo-image depicting the miniature jar was found in the photo-archive.*

Note: Information in the completed Burial Forms was compared with the analysis of the skeletal remains prepared by V. Andrushko and V. Bellifemine (2006:105). The two lists have been combined.

WCA.E19B. The field notes indicate that these human remains came from the NW corner of S08W16 and were over Hallazgo 11. The burial form indicates that “only” the mandible and left humerus distal end bone were found (see Group L).

WCA.E24B.Individual 4. Poorly preserved bones of a child (6-7 years old) of undetermined sex. *Pathologies and Trauma: Annular oblique cranial vault deformation. Burial Offerings: Lucre Orange Plain jar with missing strap handle found near WCA.E24B bones.*

WCA.E25B.Individual 3. Female (18-25 years old) with poorly preserved bones. *Pathologies and Trauma: Annular oblique cranial vault deformation. Burial Offerings: None.*

WCA.E26B.Individual 2 (CC 68). Male (more than 26 years old) with poorly preserved bones. *Pathologies and Trauma: Five teeth lost during his life and alveolar bone over the sockets has closed the holes. Abscessed tooth resulted in alveolar bone destruction. Fractured nasal bone and fractured mandible. Burial Offerings: None.*
Comment: The fractured facial bones indicate he was likely violently killed.

WCA.E32B-33B. *Interments: Partial mixed disarticulated remains of three young children: WCA.E32B-33B.Individual 5.* Child (4-5 years old) of undetermined sex. *Pathologies and Trauma: Annular oblique cranial vault deformation.*

WCA.E32B-33B.Individual 6. Child (2-3 years old) of undetermined sex. *Pathologies and Trauma: No anomalies were observed.*

WCA.E32B-33B.Individual 7. Infant (0-1 year old) of undetermined sex. *Pathologies and Trauma: No anomalies were observed.*
Burial Offerings: None.

WCA.E34B.Individual 1. Female (16-17 years old) with poorly preserved mixed bones. *Pathologies and Trauma: Annular oblique cranial vault deformation. Burial Offerings: None.*

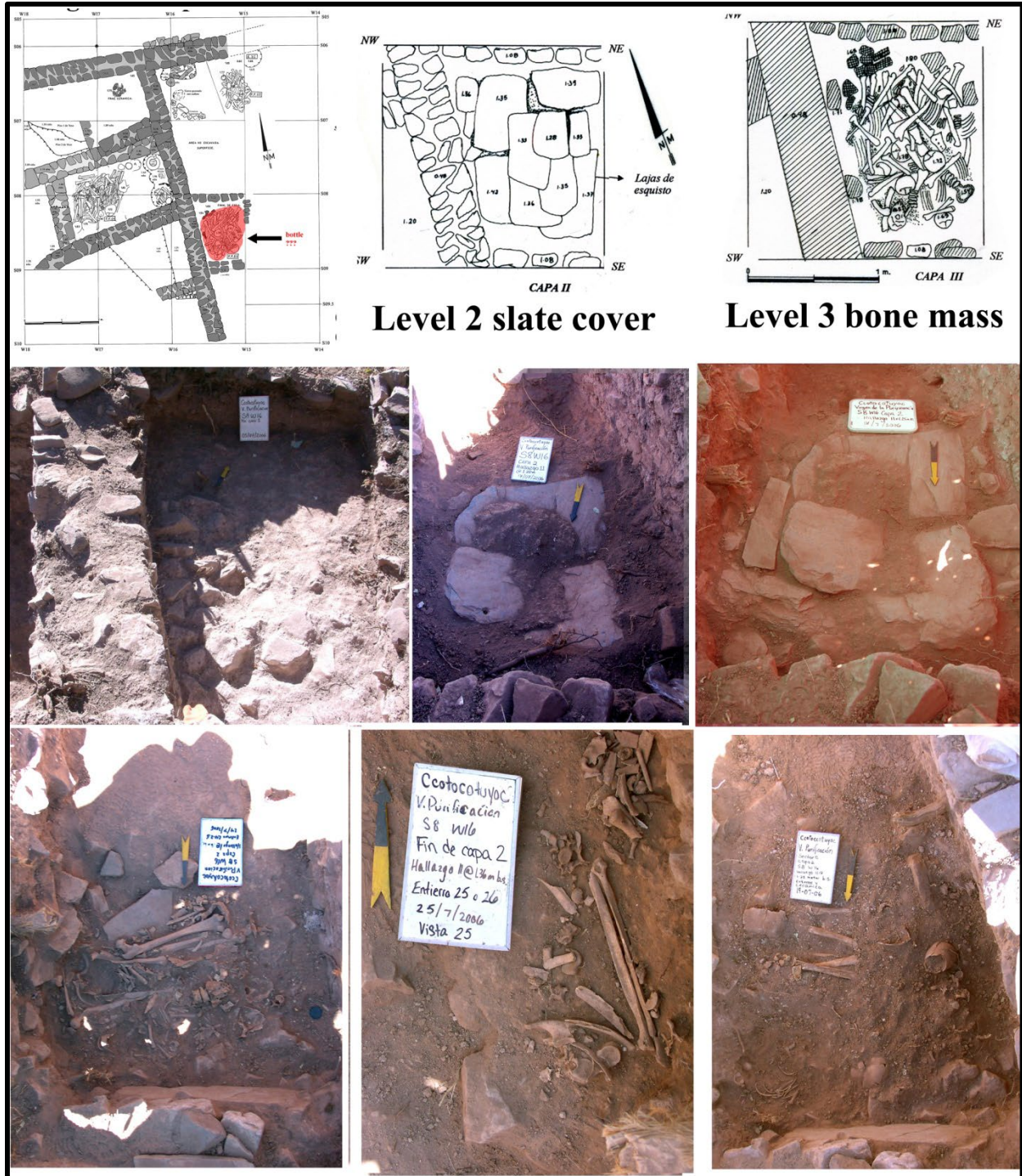


Figure 51. Cotocotuyoc WCA.Fosa Funeraria 02 excavation sequence for rock covered mass burial.



Figure 52. Cotocotuyoc WCA.Fosa Funeraria 03 Lucre ceramic vessels.

Note: The remains in Fosa Funeraria 03 are likely those of a local leader's family. Four (WCA.E24B.Individual 4, E25B.Individual 3, E33B.Individual 5 and E34B.Individual 1) exhibit annular oblique cranial vault modification, which occurs in the LIP Lucre population. The family members were apparently killed when the valley was overrun. They were covered with five large slate slabs that rested on perimeter stones preventing their remains being crushed. Such protective stone coverings appear to be a characteristic of the subjugated non-Wari local population burial custom.

WCA.Fosa Funeraria 01 (Mass Burial). Halazgos 5, 6 and 8 (Entierros WCA.E4B-WCA.E17B). *Location:* S07-08W17-18 Level 3. *Associated External Offerings:* None. *Burial Fill Soil:* Reddish-brown colored sandy clay soil from the surrounding area. *Burial Type:* Disarticulated bones in mass burial.

Note 1: Excavation records and field photographs depict Fosa Funeraria 01 as a mass burial of mixed partial remains piled together on the floor of one of the structure's rooms. The recovery efforts by the Cotocotuyoc refugees appear to have been delayed until the bodies were in an advanced stage of decay. The rituals needed for their interment likely were performed under the stress and limitations of a people struggling for survival. Compared with individual burials and Fosa Funeraria 02 and 03, the ritual treatment of the remains of Fosa Funeraria 01 was incomplete. If that left the spirits of the involved deceased unappeased, it may explain why the access portal to the room was sealed; it is the only identified burial area with such containment measures.

Note 2: Two of the following burials had ceramic offerings. However, when the vessels were collected no association with either of the two (subsequently) numbered burials was indicated.



The room entrance apparently sealed using large stones from adjacent wall (left) and other rubble stones. The pit features for Hallazgo 7 (olla with spout vessel) and WAC.E1B and WAC.E3B occur below the room floor level.



Figure 53. Cotocotuyoc WCA.Fosa Funeraria 01 mass burial excavation and sealed room wall.

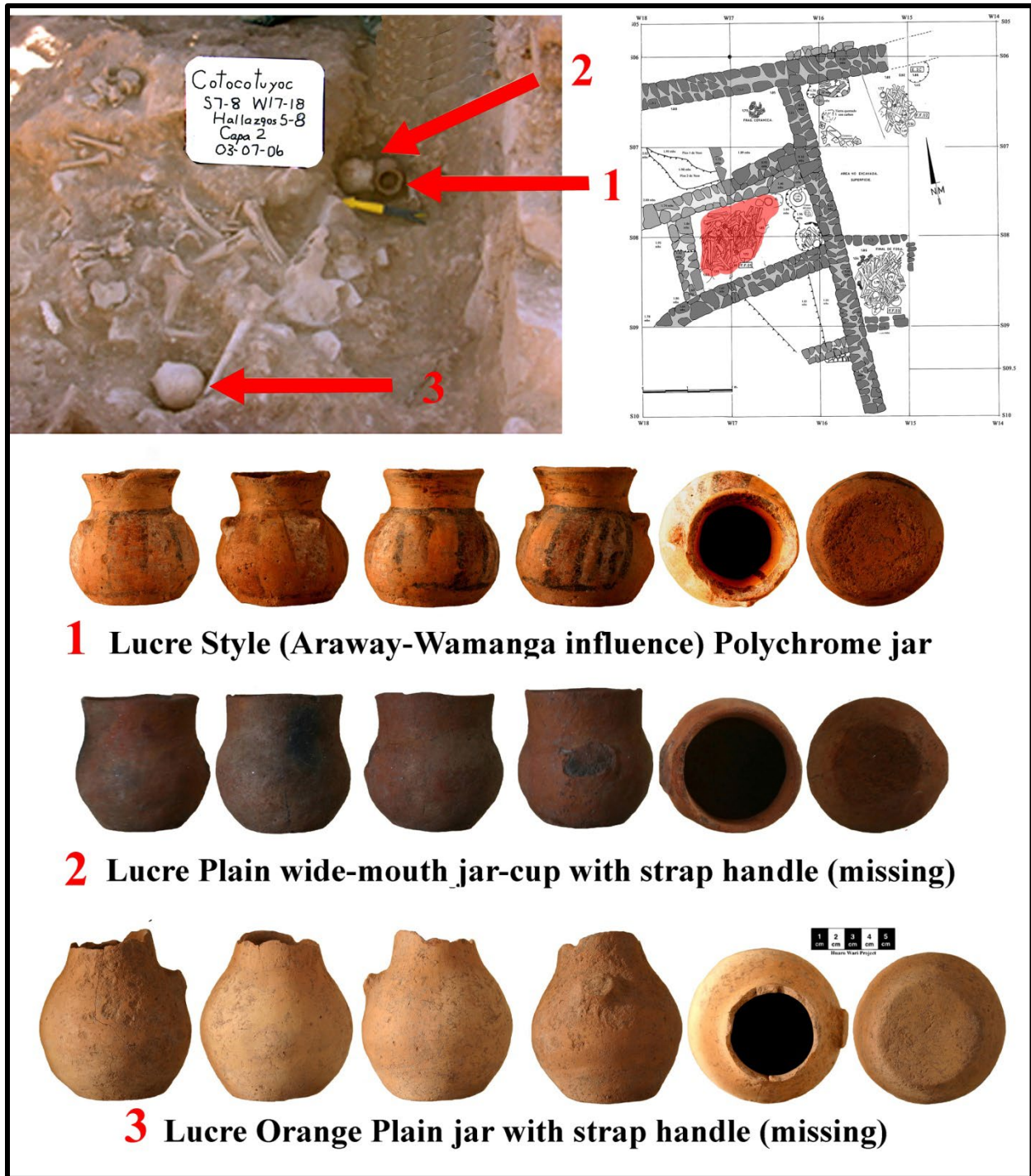


Figure 54. Cotocotuyoc WCA.Fosa Funeraria 01 burial offering Lucre ceramic vessels.

Note 3: Eight (those with individual numbers) of fourteen individuals were analyzed by the physical anthropologists. All were documented in project burial forms. The merged descriptions follow.

Note 4: WCA.Hallazgo7 and WCA.E1B and E3B located near the sealed wall and below the Fosa Funeraria 01 floor level obviously date to before the wall closure.



Figure 55. Cotocotuyo Fosa Funeraria 01 WAC.E11B. Individual 8 cranium with tabular erect CVM and healed scraping style trepanation in two locations.

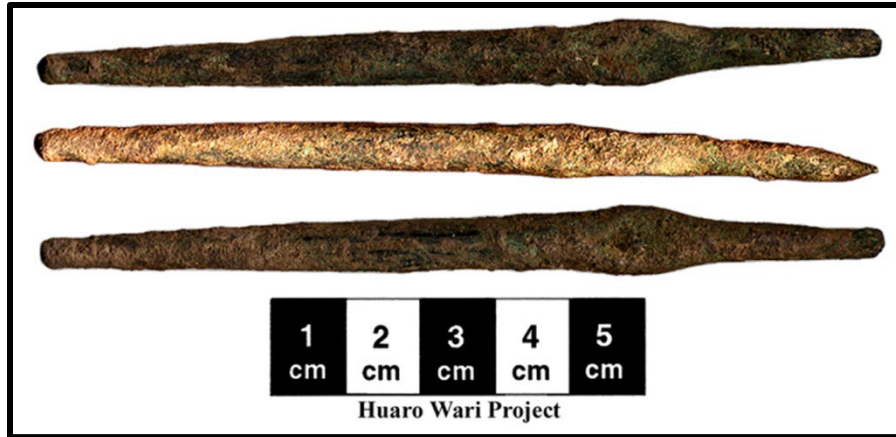


Figure 56. Cotocotuyoc copper alloy trepanation tool'.

**** SWA.TrepanationTool.** A copper alloy tool with a form that could have been used in the conduct of scarping style trepanations was excavated in the Cotocotuyoc Wari elite cemetery area in S18W18 Level 1 at 0.62m. It was found among disturbed soil and rubble. While copper alloy artifacts occur almost exclusively in Wari contexts at Cotocotuyoc, this artifact likely belongs to the transitional late Wari-early Lucre site occupation.

However, it should also be noted that this tool could also date to the Middle Horizon Wari occupation. For instance, such a tool could have been used to cut a rectangular hole in the S19W19 Levels 2-3 SWA.E2A.Guardian Burial skull to remove the atlatl dart. Likewise, however rare the examples may be it could also have been used in the performance of Wari trepanations or in the fashioning of trophy skulls.

WCA.E4B.(Hallazgo 7). *Individual:* Infant (0-1 year old) with poorly preserved mandible found at a depth of 196 cm. *Pathologies and Trauma:* Undetermined.

WCA.E5B. Individual 1. Male (15-16 years old) with poorly preserved disarticulated mixed remains, including skull fragments. *Pathologies and Trauma:* No anomalies were observed.

WCA.E6B. Individual. Female (?) (18-25 years old) with poorly preserved disarticulated mixed remains. *Pathologies and Trauma:* Undetermined.

WCA.E7B. Individual 6. Child (2-3 years old) of undetermined sex with poorly preserved mixed remains with the skull missing and a femur recorded at a depth of 176 cm. *Pathologies and Trauma:* No anomalies were observed.

WCA.E8B. Individual 7. Child (6-7 years old) of undetermined sex with poorly preserved mixed remains with skull found at 173 cm. *Pathologies and Trauma:* Non-specific stress indicators in the form of delayed growth of long bone extremities.

WCA.E9B. Individual 2. Male (less than 25 years old) with poorly preserved mixed remains with base of skull measured at a depth of 188 cm. *Pathologies and Trauma:* Osteoarthritis in the vertebral column.

WCA.E10B. Individual. Male (over 46 years old) with poorly preserved mixed remains and skull found at a depth of 168 cm. *Pathologies and Trauma:* Undetermined.

WCA.E11B.Individual 8. Male (18-25 years old) with poorly preserved mixed remains with the base of his skull at a depth of 175 cm. *Pathologies and Trauma:* Tabular erect cranial vault deformation. There is evidence of two perimortem scraping type cranial trepanation events with associated bone deterioration.

WCA.E12B.Individual. Male (18-25 years old) with poorly preserved mixed remains with skull at a depth of 180 cm. *Pathologies and Trauma:* Deteriorated bones unanalyzed.

WCA.E13B.Individual. Male (10-17 years old) with poorly preserved disarticulated remains and mandible at a depth of 176 cm. *Pathologies and Trauma:* Deteriorated bones unanalyzed.

WCA.E14B. Individual 3. Infant (0-1 year old) of undetermined sex. *Pathologies and Trauma:* No anomalies were observed.

WCA.E15B. Individual 4. Infant (0-1 year old) of undetermined sex. *Pathologies and Trauma:* No anomalies were observed.

WCA.E16B. Individual. Female (over 20 years old) with poorly preserved mixed remains, including fragmented skull. *Pathologies and Trauma:* Undetermined.

WCA.E17B.Individual 5. Child (1-2 years old) of undetermined sex. *Pathologies and Trauma:* No anomalies were observed.

Burial Offerings: Araway-Wamanga influenced Lucre Polychrome wide-mouth jar with appliquéd nubbin-lugs on the vessel shoulder (found next to) Lucre Plain wide-mouth jar with attachment scars from a missing strap handle. Both occur next to the Lucre wall partitioning the room and helping to enclose the burial feature. The third vessel, a Lucre Plain narrow-mouth jar with a damaged rim and missing strap handle was placed amongst the bones and near the western side of the mass burial. Unfortunately, it was not determined which burials of the E4B-E17B group were linked to the burial offerings.

Group F. Rock Covered Lucre Primary Flexed Sitting Burials

The burials included in Group H likely are early Late Intermediate Period interments. Tabular rock covering (slate or fieldstone) over burials here, as in Fosa Funeraria 02 and 03, suggests that its occurrence was an important Lucre burial element. As such, it was likely a trait already extant among members of the local chiefdom population and would be found at their Middle Horizon sites.

NWA.E1A. Location: N07-08W07 Levels 2-4. ***Associated External Offerings:*** None. ***Special Feature:*** Stone-lined oval-shaped cist-like pit covered with pile of tabular stone beginning in Level 2. ***Burial Fill Soil:*** Loose local soil. ***Interments:*** Two burials in pit.

NWA.E1A.Individual 1 (CC 16). *Burial Type:* Primary flexed seated individual. *Individual:* Male (26-35 years old) with 60% of his skeletal remains. *Pathologies and Trauma:* Linear enamel hypoplasia on the upper right canine and tartar accumulated on his teeth.

NWA.E1A.Individual 2 (CC 17). *Burial Type:* Primary flexed seated individual. *Individual:* Female (more than 46 years old) with less than 10% of her remains. *Pathologies and Trauma:* Tooth cavities and abscesses resulting in alveolar bone loss in the molar area.

Burial Offerings: Three ceramic vessels were placed around the bottom of the burial with the leg bones. Araway-Wamanga bowl with interior wavy lines in panels, small Lucre Plain Orange wide-mouth jar-cup with a strap handle, and large Lucre Polychrome jar with a strap handle (and decorated on its high collar).



Figure 57. Cotocotuyoc NWA.E1A and E2A rock covered Lucre burial excavation and artifacts. The teeth pathology information and images were provided by Valerie Andrushko.

Comment: The quality of the ceramic vessel offering suggests that the two individuals probably were family members of high social status who died early in the refugee occupation of the site. The older woman may have been the mother of the younger male.

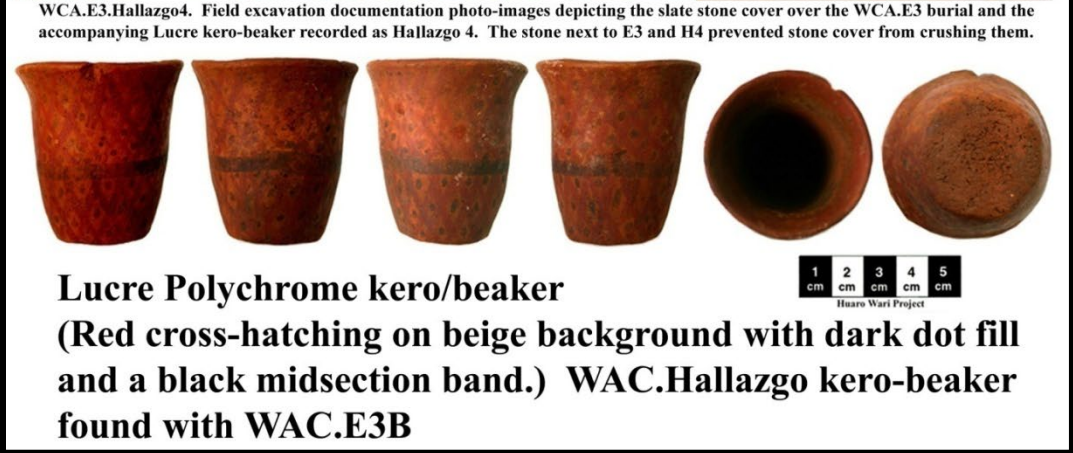
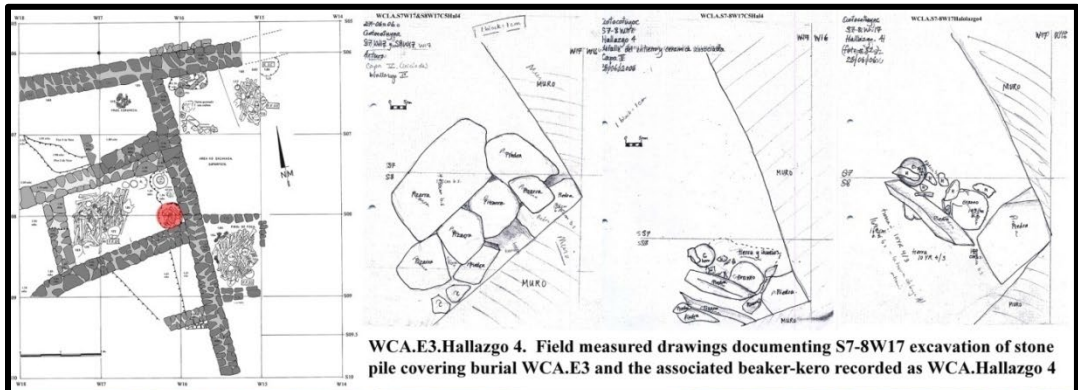


Figure 58. Cotocotuyoc WCA.E3B excavation and Lucre Polychrome (Ccoipa-like) kero.

WCA.E3B.Hallazgo4. Location: Corner of a room in S07-08W17. **Associated External Offerings:** None. **Special Feature:** Covering of slate stones and placement of a large stone parallel to the western side prevented crushing of the E3B burial and accompanying

Hallazgo 4 in an oval-shaped pit. *Burial Fill Soil*: Unrecorded; excavation photographs depict a reddish-brown colored soil. *Burial Type*: Primary fully flexed or disarticulated bundle (?). *Individual*: Child (1-7 years old) that was placed on back in a tightly wrapped bundle with the skull in the south facing northward. *Pathologies and Trauma*: Undetermined. *Burial Offerings*: Lucre Polychrome (Ccoipa-like) kero-beaker. A camelid foot bone was found in the beaker mouth and is presumed to have been an object favored by the child.



Figure 59. Cotocotuyoc WCA.EntierroUID.Hallazgo 9 excavation photos and stone mortar image.

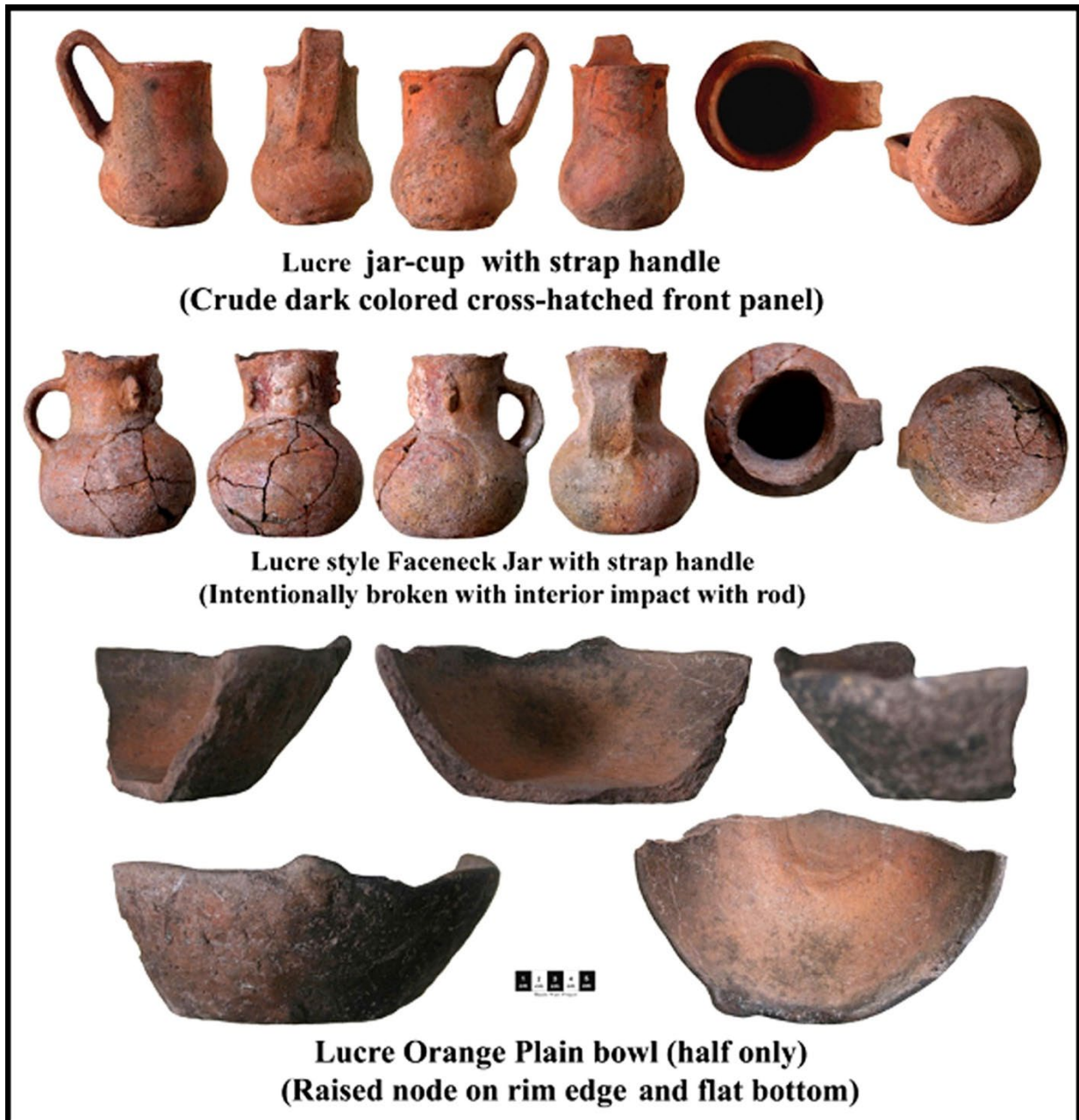


Figure 60. Cotocotuyoc WCA.EntierroUID.Hallazgo 9 ceramic vessel images.

Group G. Rock Covered Rectangular-Shaped Burial Pit with Lucre Ceramic Vessel

WCA.EntierroUID.Hallazgo9. *Location:* Against wall in S06W16-17 Levels 3-4 in a rectangular-shaped pit. *Burial Fill Soil:* Reddish brown colored loose soil. *Burial Type:* Unknown. Nearly totally degraded bone fragments concentrated in central pit area. The bones were identified in the field as camelid remains; however, the artifact offerings suggest that they more likely are human bones. *Individual:* Unknown. *Pathologies and Trauma:*

Undetermined. *Burial Offerings*: Disc-shaped tabular stone mortar and Lucre style Lucre jar-cup with a strap handle and crude dark-colored cross-hatching on its front, Lucre Faceneck jar with a strap handle and simple appliquéd face and ears, and Lucre Orange Plain bowl with a flat base (half vessel).

Note: This is the only example of a small rock-covered rectangular-shaped Lucre burial pit thus far found at Cotocotuyoc.

Group H. Lucre Primary Flexed Sitting Burials Without Rock Covers

SEC.E3A. Location: Burial pit north of SEC.E2A next to and partially under east side of the western wall in S10E06 Level 3. *Burial Fill Soil:* Loose light gray sand. *Burial Type:* Primary sitting flexed position oriented facing eastward. Leg bone location suggests that he was not bound (as were the tightly flexed older Wari burials). *Individual:* Male (18-25 years old). *Pathologies and Trauma:* No anomalies are noted. *Burial Offerings:* No preserved artifacts.



Figure 61. Cotocotuyoc SEC.E3A excavation sequence images.

Group I. Lucre Primary Flexed Not Sitting Burials Without Rock Covers

SEC.E1A. Location: S10E06 Level 3 in shallow oval pit (0.60m x 0.50m; 0.15m deep). **Associated External Offerings:** None. **Burial Fill Soil:** gray lime sand mixed with camelid bones and Wari sherds. **Interments:** Two individuals in burial pit.

SEC.E1A.Individual 1 (CC 3). Burial Type: Primary flexed burial “lying on his back and his head faces the canal.” **Individual:** Female (26-45 years) with 60% of the individual present and good bone preservation. **Pathologies and Trauma:** Caries on two teeth, accumulation of tartar (“sarro”) on teeth, and seven teeth (molars) lost during life with alveolar bone closure. Tabular erect cranial vault deformation (confirmed in lab photo).

SEC.E1A.Individual 2 (CC 4). Burial Type: The second individual, located immediately north of the first, is in a fetal position. **Individual:** Male (18-25 years old) with 45% of bones present and good preservation.

Pathologies and Trauma: No skeletal anomalies were detected. Mandibular teeth all present and unworn; possible tabular erect cranial vault deformation (seen in lab photo).

Burial Offerings: No preserved offering artifacts in pit.

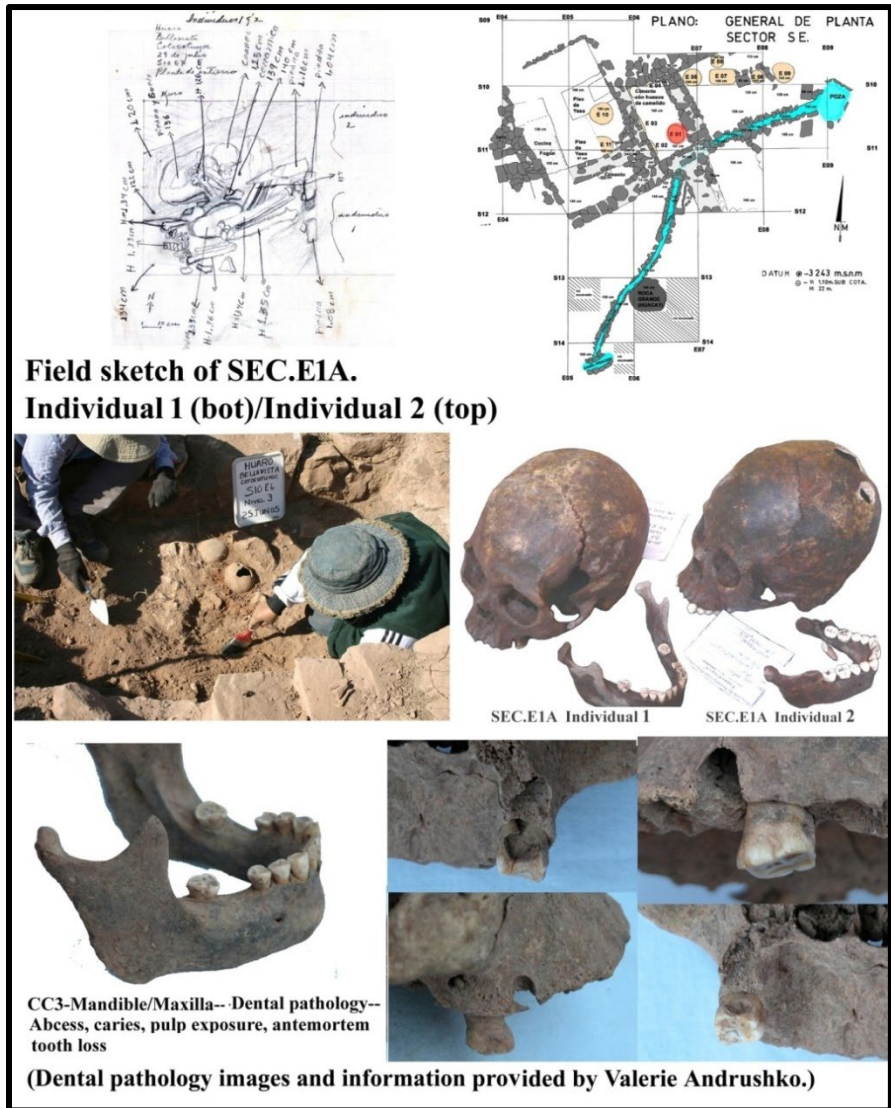


Figure 62. Cotocotuyoc SEC.E1A excavation photo and cranium and mandible images.

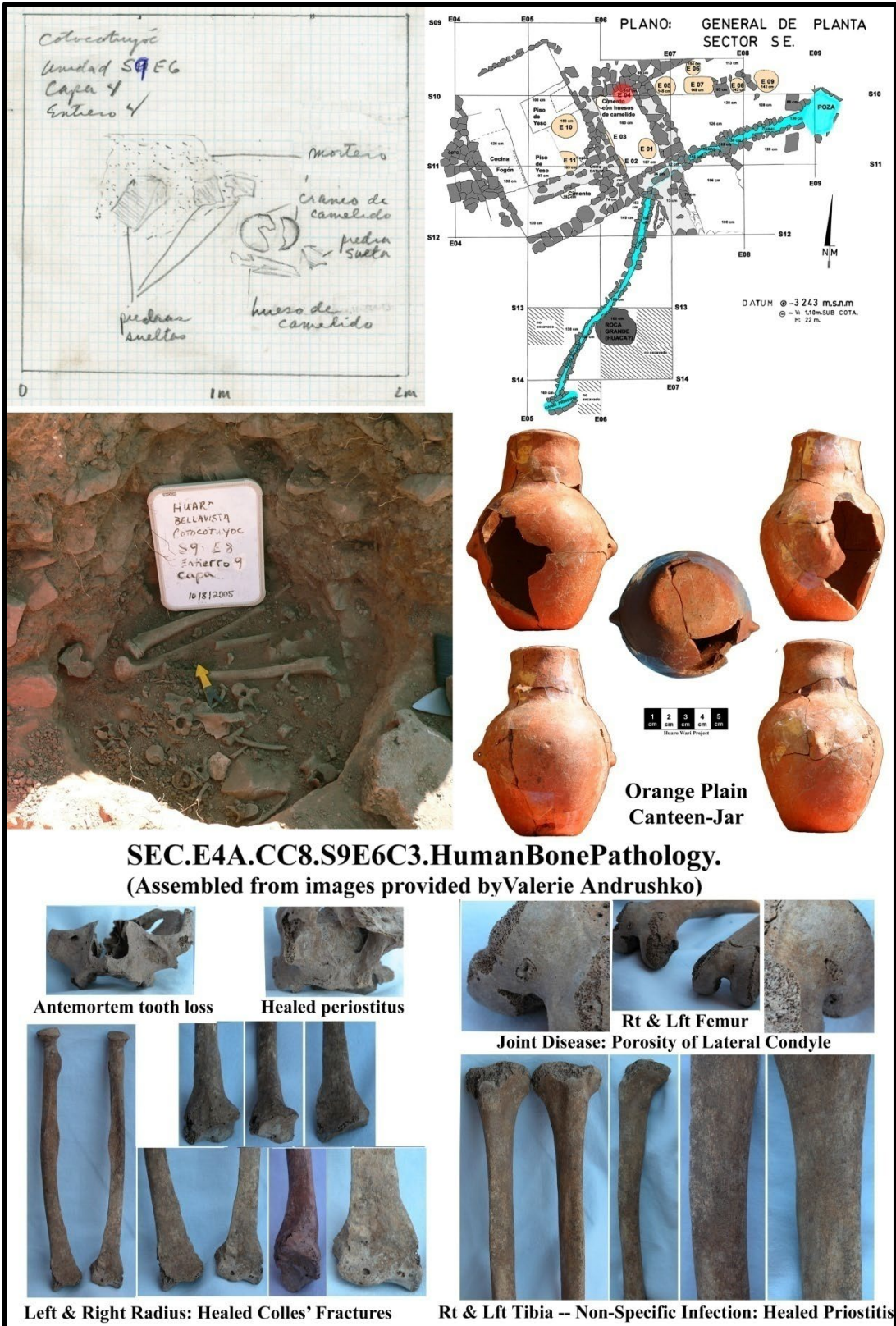


Figure 63. Cotocotuyoc SEC.E4A.CC8 excavation, Orange Plain canteen, and skeletal pathology images.

Comment 1: The two primary flexed burials placed in a shallow burial pit are consistent with burials associated with the Lucre presence at Cotocotuyoc. The location in which they were found and orientation toward the nearby canal suggests a (possible sacrificial?) linkage with vital water flowing in the canal.

Comment 2: The burial pit fill likely came from the nearby Wari kitchen area to the west, including crushed *yeso* floor and midden material.

SEC.E4A (CC8). ***Location:*** Shallow oval burial pit (1.00m x 0.50m; 0.15m deep) located against the southern side of the North wall in S09E06 Level 3. ***Associated External Offerings:*** None. ***Burial Fill Soil:*** Soft gray colored soil. ***Burial Type:*** Primary burial oriented facing eastward toward the canal. ***Individual:*** Female (more than 46 years old) with 65% of the bones represented and in good preservation. ***Pathologies and Trauma:*** Two periapical abscesses. Alveolar bone closed over the locations of the 32teeth lost during her life. Degenerative disease in right and left knee joints. Healed *periostitis* inflammation on the right and left tibias and the right and left maxilla. Both the right and left radius exhibit healed Colles' fractures. ***Burial Offerings:*** Small LIP Lucre Plain Orange canteen-jar with two small perforated appliquéd nubbin handles.

SEC.E5A.Individual 1 (CC 9). ***Location:*** Circular pit lined with stones in S09E06 Level 3 near intersection of two walls. ***Burial Fill Soil:*** Soft light reddish-brown colored soil. ***Interments:*** Remains of four individuals. (See Group K for SEC.E5A Individuals 2-4).

Burial Type: Primary interment found in a disarticulated flexed position. ***Individual:*** Male (36-45 years old) with 50% of bones present in good preservation. ***Pathologies and Trauma:*** Molar tooth loss with alveolar bone loss and closure over tooth sockets; and, healed rib shaft fracture. ***Burial Offerings:*** No accompanying preserved artifacts.

Comment 1: The rock lining suggests a possible temporal link with the rock lined tombs in the elite cemetery and across the valley entrance at Batan Urqu.

Comment 2: The fractured rib (healed) may be the result of an accident or of an aggressive act.

SWA.E2B. ***Location:*** S20W20 in gap in partially collapsed Wari structure wall. ***Burial Fill Soil:*** loose reddish-brown soil. ***Burial Type:*** Tightly flexed primary burial placed on her back. ***Individual:*** Female (26-35 years old). ***Pathologies and Trauma:*** Lost two molars during her life with resulting alveolar bone closure over tooth socket, and two cavities and three abscesses with associated alveolar bone deterioration, as well as accumulation of tartar on teeth. Fracture in right hand second and fourth metacarpals. Also, annular oblique cranial vault deformation. ***Burial Offerings:*** Small Lucre Orange Plain strap handle jar.



Figure 64. Cotocotuyoc SEC.E5A excavation photo and Individual 1 (CC9) and Individual 2 (CC10) images of burnt ribs. (Bone pathology images and analysis provided by Valerie Andrushko.)



Field note sketches of excavation sequence.

COTOCOTUYOC
Virgen de Purif.
S20 W20
Entierro 2
al lado el
muro

COTOCOTUYOC
Virgen de la Purissima
S20 W19
Entierro 2
del lado O

COTOCOTUYOC
Virgen de la Purissima
S20 W19
Entierro 2
del lado O

Lucre Orange Plain jar-cup with strap handle

Figure 65. Cotocotuyoc SWA.E2B excavation sequence, cranium and Orange Plain jar-cup.

Group J. Lucre Secondary/Disarticulated Burials With Ceramic Vessel Burial Offerings

ECA.E1A (CC 5). *Location:* Near the western edge of S03W01-02. *Associated External Offerings:* None. *Burial Fill Soil.* No special burial fill soil; rather local site soil was used. *Burial Type:* Disarticulated bones, including part of a pelvis, lumbar vertebra, rib and other fragments (less than 10%). *Individual:* Possibly 11-12 years old. The sex is unknown. *Pathologies and Trauma:* Undetermined. *Burial Offerings:* Lucre Polychrome jar-cup with a strap handle (and cross-hatched pattern in collar panels) and a shell pendant were both found nearby in S03W02.

Comment: The remains apparently were placed on the floor surface or in a shallow depression and covered with local soil and included the single Lucre vessel. The feature is consistent with the later Lucre burial pattern at the site under stressed conditions.

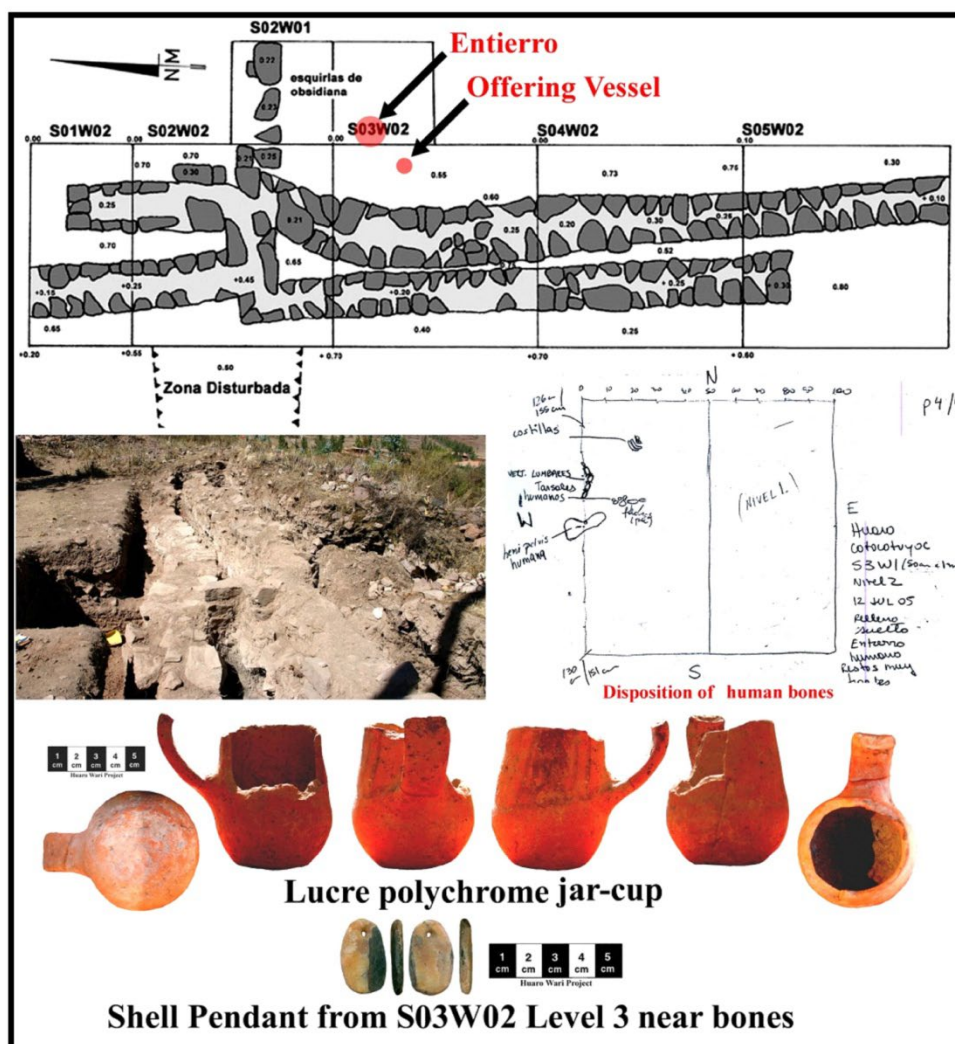


Figure 66. Cotocotuyoc ECA.E1A excavation area, Lucre jar-cup and shell pendant.

SEC.E7A (CC 14). *Location:* Southeast corner of S09E07Level 3 in a shallow pit between small boulders. *Associated External Offerings:* None. *Burial Fill Soil:* Light gray colored soil. *Burial Type:* Disarticulated. *Individual:* Sub-adult (14-15 years old) of undetermined sex. About 45% of the disarticulated bones are preserved in good condition. *Pathologies and Trauma:* Four teeth exhibit *hypoplasia* and there is a barrel-shaped lateral incisor. Delayed long bone growth. *Burial Offerings:* Miniature Lucre Plain Orange strap handle jar.

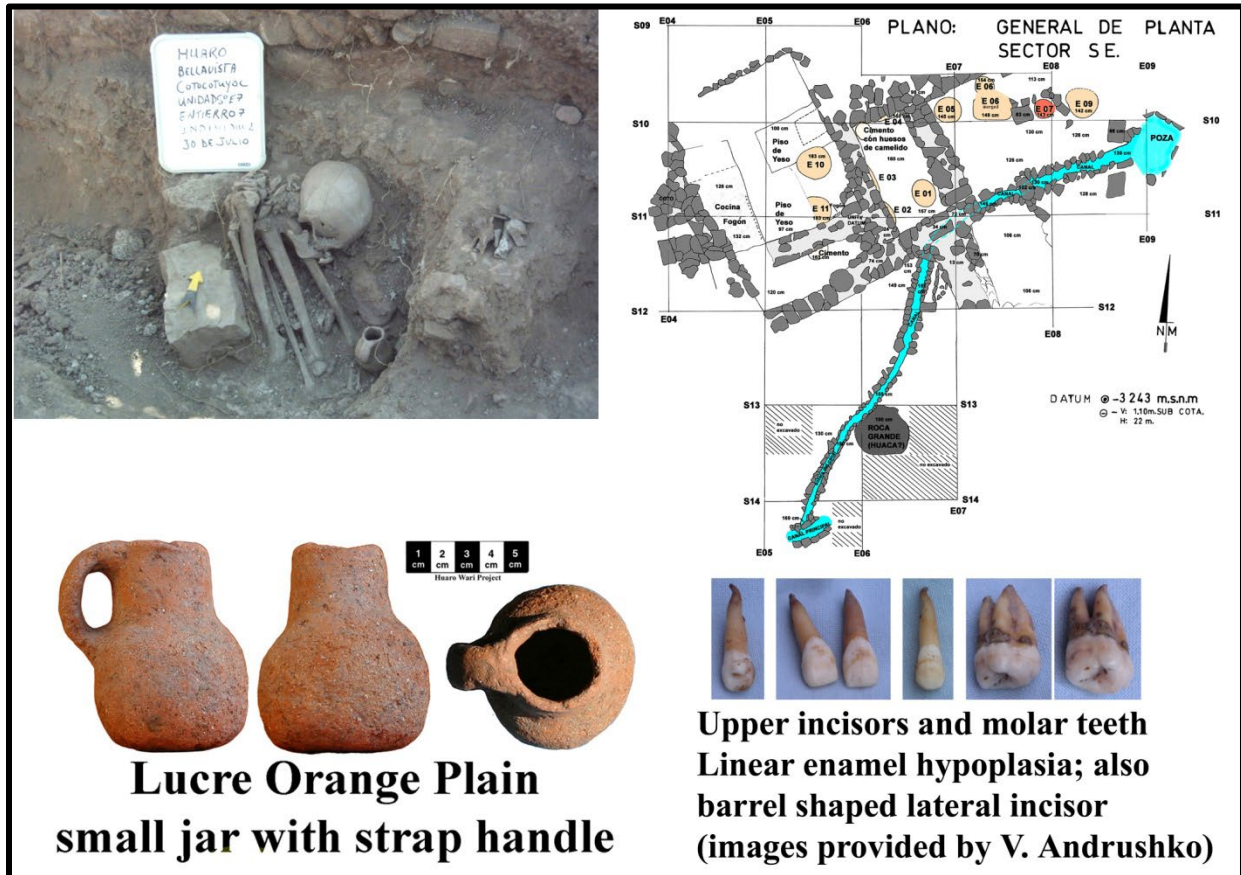


Figure 67. Cotocotuyoc SEC.E7A excavation documentation, Lucre Orange Plain jar, and dental pathology.

SWA.E1B. *Location:* Adjacent to the building’s wall in S20W20 Level 2. *Associated External Offerings:* None. *Burial Fill Soil:* Light brown colored soft soil. *Burial Type:* Fragmented poorly preserved disarticulated remains. *Individual:* Male (26-45 years old). *Pathologies and Trauma:* Second and fourth metacarpals fractured. Annular oblique cranial vault deformation. *Burial Offerings:* Small obsidian projectile point and two miniature Lucre Polychrome strap handle jar-cups with vertical lines on the collar.

Comment 1: The burial appears to have been placed on the then ground surface and covered with loose soil. It is possible that the people conducting the burial were aware of the Wari elite cemetery on the opposite side of the wall but were constrained against placing the body in that hallowed area. But, given the condition of the remains they were more likely placed in a convenient location next to the SWA.E2B Lucre female burial in the cemetery wall gap. Both SWA.E1B and SWA.E2B had similar Lucre vessel burial offerings.

Comment 2: Inclusion of an obsidian point as a “burial offering” is surprising in a Lucre interment. The absence of such items is the norm. Its occurrence may be fortuitous.



Figure 68. Cotocotuyoc SWA.E1B excavation documentation and associated artifact images.



Figure 69. Cotocotuyoc SWA.E13B excavation of two Lucre Faceneck jars.

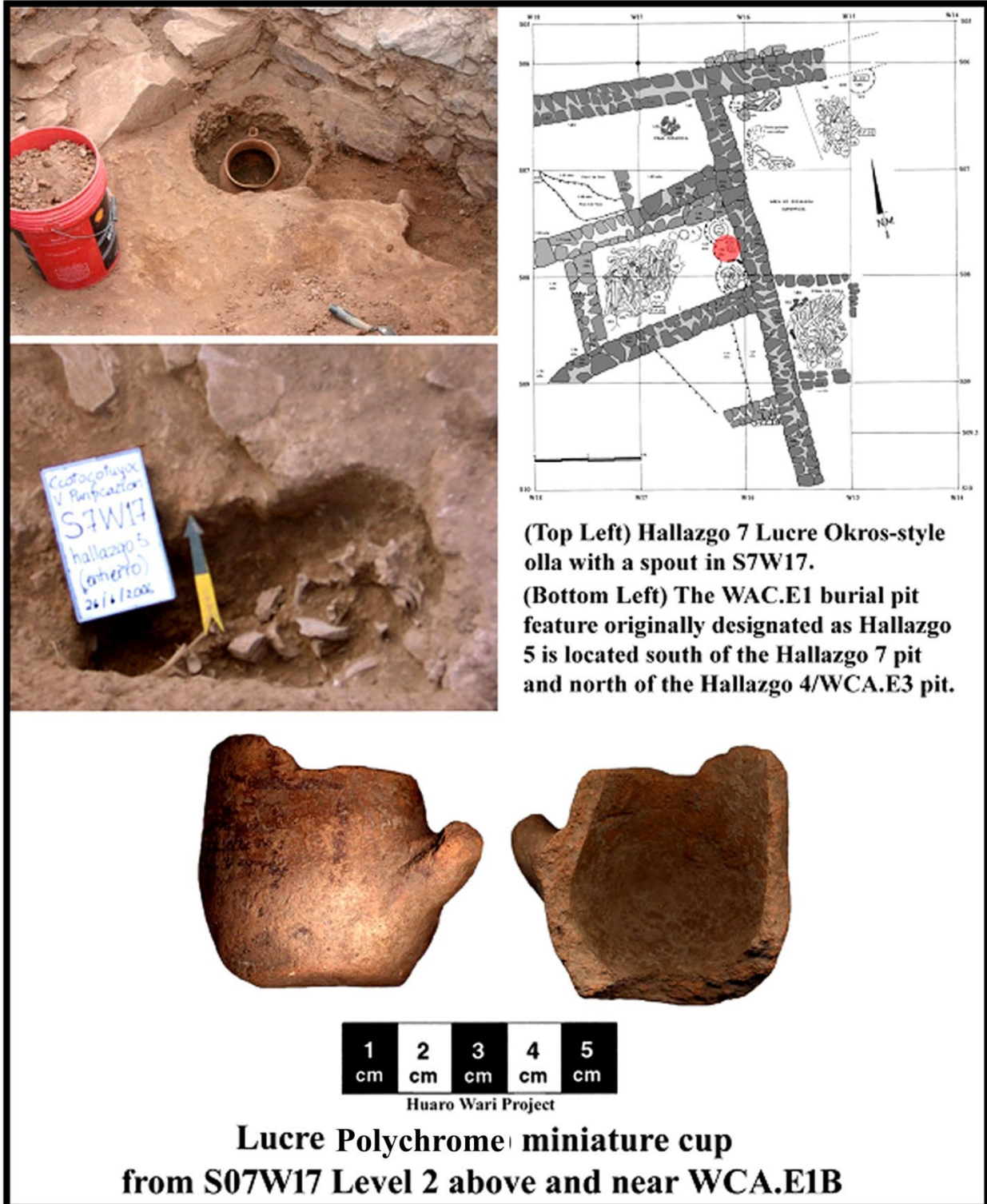


Figure 70. Cotocotuyoc WCA.E1B burial pit excavation and miniature Lucre cup.

SWA.E13B (Lucre Offering Pit?) *Location:* SE corner of S22W19-20. *Associated External Offerings:* None. *Burial Fill Soil:* Loose gray colored soil with gravel-size lime mortar. *Burial Type:* It is possible, indeed likely, that a now totally deteriorated burial was placed in the

pit. If so, then this feature would be identified as SWA.E13B. *Individual:* Undetermined, although the burial offerings suggest an adult (more than 19 years old) of undetermined sex. *Pathologies and Trauma:* Undetermined. *Burial Offerings:* Two Lucre Faceneck jars: one with a missing strap handle and the other is lacking a handle.

Comment 1: The two jars are stylistically similar to those from Batan Urqu. Both are Lucre style vessels and the smaller one has an enlarged stomach suggesting pregnancy.

Comment 2: The burial pit fill appears to be the salvaged remains of a Wari *yeso* floor removed from a nearby room.

WCA.E1B. *Location:* S07W17. *Associated External Offerings:* None. *Burial Fill Soil:* Unrecorded. *Burial Type:* Disarticulated bundle. *Individual:* The Burial Form records a poorly preserved skull, jaw, vertebra, leg and arm bones; 3-7 years old child of undetermined sex. *Pathologies and Trauma:* Undetermined. *Burial Offerings:* While WCA.E1B was considered to be linked to Hallazgo 7, because they are in distinct pit features their association is here considered to be fortuitous. The broken half of a miniature Lucre Polychrome jar/cup with a handle was found in S07W17 Level 2 during excavation of the soil above these two features is more in keeping with the type of artifact placed with and near Lucre infant and child burials at this site.

WCA.E2A. *Location* :“S07W15 Level 3”; however, nothing is recorded in that location. *Associated External Offerings:* None. *Burial Fill Soil:* Unrecorded. *Burial Type:* Poorly preserved mixed disarticulated bones. *Individual.* Male (35-45 years old). *Pathologies and Trauma:* Cavities in one tooth. He also has osteoarthritis in the vertebral column and in both feet. *Burial Offerings:* Colonial style *vaso* (“glass”).

Note: The plotted location on the map is S07W14, which is the location on the collection bags for WAC.E27A bones (see Group K below).

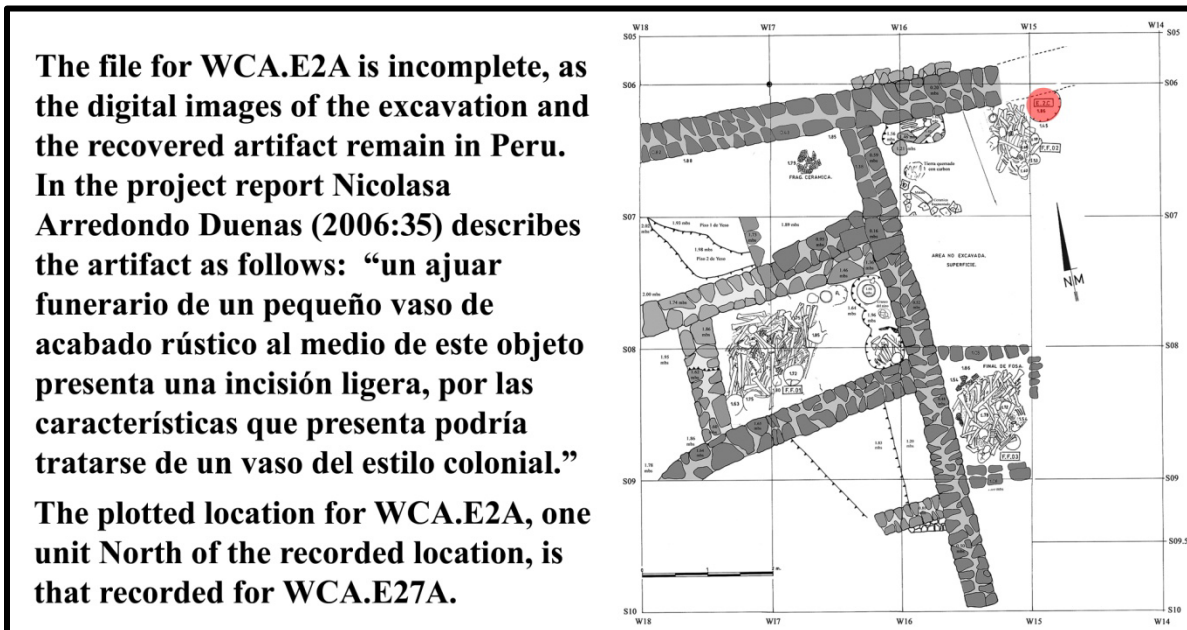


Figure 71. Cotocotuyoc WCA.E2A location map and artifact description.

Group K. Lucre Disarticulated Burials With No Preserved Burial Offerings

Lucre disarticulated burials placed in shallow pits without preserved artifacts were excavated. As with WCA.Fosa Funeraria 1, the remains may have been those of deceased community members that were recovered in a decomposed condition when brought to the site for burial. The burial treatment is less structured—that is less elaborate—than expected. It may be that the remains in such settings reflect stressed conditions in which the surviving population (or the individual’s relatives) lacked the time and resources. Or, perhaps persons trained in the proper handling of the deceased and their interment were no longer available having succumbed to inflection of cuts and abrasions from handling decomposing bodies. The loss of such trained intermediaries (if it occurred) would contribute to less elaborate interment treatments, while any subsequent revitalization movement would foster changes to perhaps more elaborate rituals believed to have existed prior to the societal disruption.

SEC.E2A. Location: Burial pit next to and partially under east side of western wall in S10-11E6Level 3. **Associated External Offerings:** None. **Burial Fill Soil:** Light gray compact lime sand. **Burial Type:** Disarticulated (bundles?). **Interment:** There were two individuals placed in the burial pit.

SEC.E2A.Individual 1 (CC 6). Male (26-45 years old) with less than 10% of his bones present; the bones are well preserved. **Pathologies and Trauma:** He lost 16 teeth in life and the bone closed over the area. Also, a healed zygomatic arch fracture on the left side of his face.

SEC.E2A.Individual 2 (CC 7). Male (18-25 years old) with 30% of his bones present, including skull fragments. **Pathologies and Trauma:** Heavy accumulation of *sarro* (tartar) on his teeth.

Burial Offerings: none.

Comment 1: The distribution of the SEC.E2A bones in the burial pit is documented in field drawings. The remains appear to have been disarticulated bone bundles or deteriorating bodies when placed in the pit.

Comment 2: In the project report, Arredondo Dueñas (2006:18) suggests that the two burials “por las características encontradas, al parecer se trata de una ofrenda o (sacrificio)... los cuerpos están orientados hacia el este.”

Comment 3: The left side zygomatic arch injury was probably sustained in battle from a right hand wielded club, or from a sling stone. The healing of the injury indicates that he survived that event.

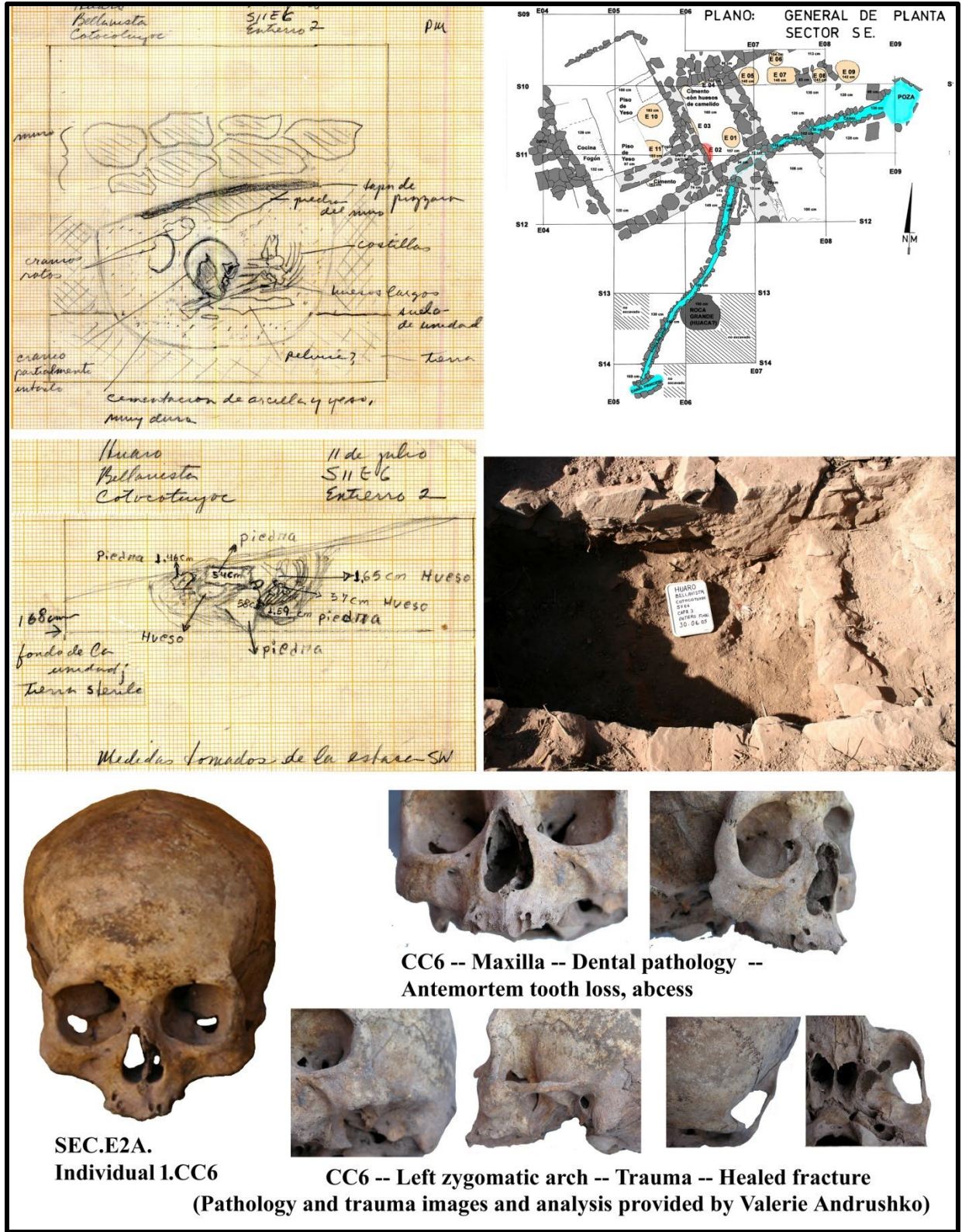


Figure 72. Cotocotuyoc SEC.E2A excavation documentation and Individual 1 (CC6) cranial pathology and trauma images and analysis (derived from files provided by Valerie Andrushko).

SEC.E5A. *Location:* Cist-like circular pit lined with stones in S09E06 Level 3 near the intersection of two walls. *Associated External Offerings:* None. *Burial Fill Soil:* Soft light reddish-brown colored soil. *Burial Type:* Disarticulated bundle. *Interments:* Remains of four individuals. [See above Group I.**SEC.E5A.Individual 1 (CC9).** *Burial Type:* Primary interment.]

SEC.E5A.Individual 2 (CC 11). Adult (over 18 years old) of undetermined sex. Less than 10% of the bones are present. *Pathologies and Trauma:* No anomalies are noted. *Burial Offerings:* None.

Comment: While the Final Analysis report included only the above two individuals (CC 9 and CC 11), the preliminary report included two others, as does this report.

SEC.E5A.Individual 3 (CC 10). Sub-adult (12-13 years old) of undetermined sex. About 15% of the bones are present in average condition. *Pathologies and Trauma:* No anomalies were observed. However, several of the fragmented rib elements are burnt (see Figure 57, bottom left), suggesting a tragic death. *Burial Offerings:* None.

SEC.E5A.Individual 4 (CC 12). Infant (0-1 year old) of undetermined sex. Less than 10% of the bones are present and of average condition. *Pathologies and Trauma:* No anomalies were observed. *Burial Offerings:* None.

Comment: The burnt ribs of SEC.E5A.Individual 3 may be the result of a tragic accident or of an aggressive act which included burning the structure where the body lay.

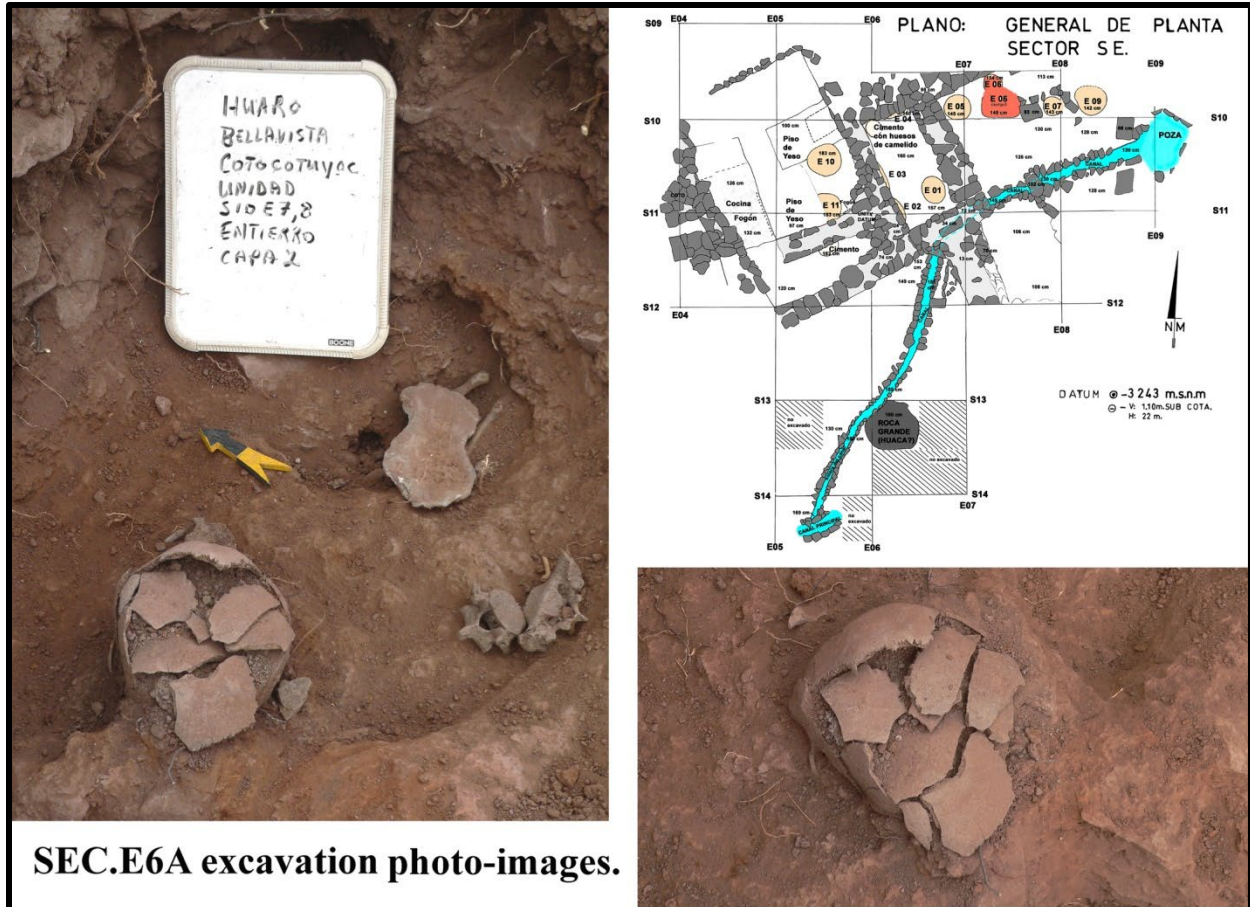
SEC.E6A. *Location:* S09E07Level 3 in a large shallow pit. *Associated External Offerings:* None. *Burial Fill Soil:* Soft tan-brown fill soil. *Burial Type:* disarticulated bundle.

SEC.E6A.Individual 1 (CC 13). Female (36-45 years old) with less than 10% of her disarticulated bones present in average condition. *Pathologies and Trauma:* Right and left maxilla has congenital shovel and barrel-shaped incisors. One tooth with a cavity and accumulation of tartar on her teeth. *Burial Offerings:* A flaked stone hoe-like object was included in the pit. No silica polish was noted; so if it was used as a hoe it had limited use.

SEC.E6A.Individual 2 (CC 1). Infant (0-1 year old) of unknown sex. About 50% of the disarticulated bones in average condition were recovered. *Pathologies and Trauma:* No anomalies were observed. *Burial Offerings:* No associated artifacts were found.

SEC.E6A.Individual 3 (CC 2). Child (1-2 years old) of unknown sex. About 20% of the disarticulated bones in average condition were recovered. *Pathologies and Trauma:* No anomalies were observed. *Burial Offerings:* No associated artifacts were found.

SEC.E6A.Individual 4 (CC 15). Adult (more than 20 years old) of undetermined sex. Less than 10% of the bones are preserved and they are in poor condition. *Pathologies and Trauma:* No anomalies were observed. *Burial Offerings:* No associated artifacts were found.



SEC.E6A excavation photo-images.



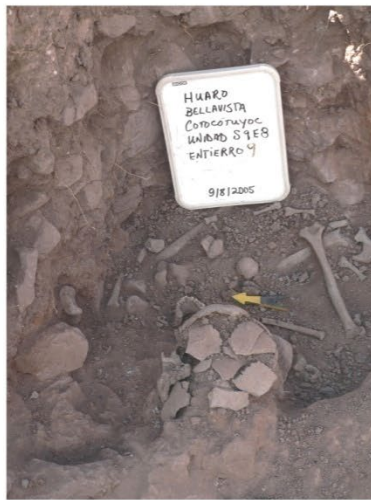
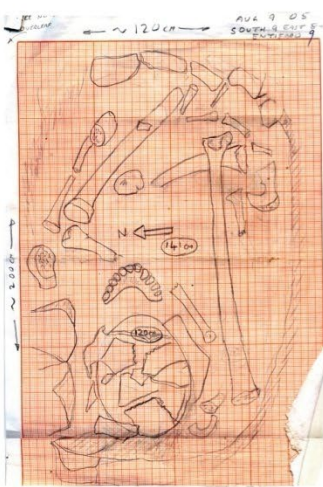
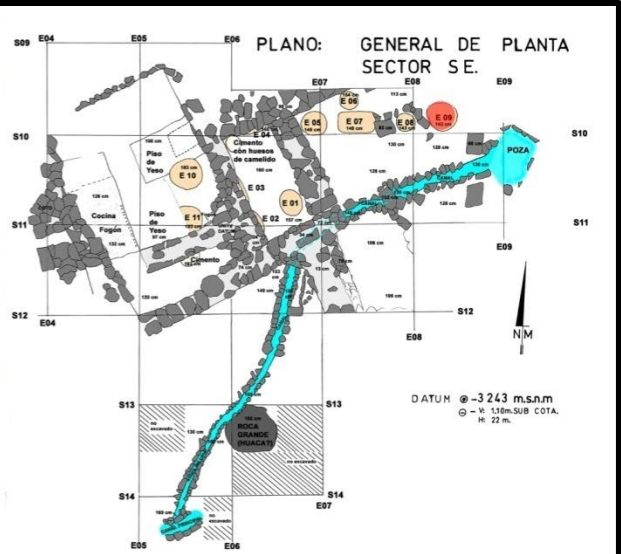
SEC.E6A.CC13 -- Right & Left Maxilla Incisors 1 & 2 -- Congenital shovel and barrel-shaped incisors. (Pathology images provided by Valerie Andrushko)

Figure 73. Cotocotuyoc SEC.E6A excavation documentation and Individual 1 (CC13) maxilla incisors congenital pathologies.

SEC.E9A. Location: Southwest part of S09E08 Level 3. **Associated External Offerings:** None. **Burial Fill Soil:** Loose grayish-brown colored soil. **Burial Type:** Disarticulated remains. **Individual:** Young adult (18-26 years old) of undetermined sex. About 60% of the bones are present in good preservation condition. **Pathologies and Trauma:** Undetermined. **Burial Offerings:** No preserved artifacts were found in the pit.



**SEC.E9A field excavation image.
Note canal location to right.**



SEC.E9A documentation of skeletal remains disarticulated distribution.



SEC.E9A cranium and mandible fragments drying after lab cleaning.

Figure 74. Cotocotuyoc SEC.E9A excavation documentation and cranium and mandible drying after lab preliminary cleaning.

SWA.E1C. Location: S24W19 Level 3 in the corner of a room nested in a shallow (0.15m deep) oval-shaped pit between the stone wall and enclosed by other stones. **Associated External Offerings:** None. **Burial Fill Soil:** Loose brown colored soil. **Burial Type:** Disarticulated bundle. **Individual:** Child (8-11 years old) of undetermined sex. Only the skull placed facing the canal on top of a few other disarticulated bones was present. **Pathologies and Trauma:** Undetermined. **Burial Offerings:** None preserved. **Comment:** The burial is in the Lucre style and its proximity to the canal draining the basin-room at the southern end of the complex is noted.



Figure 75. Cotocotuyoc SWA.E1C excavation documentation.

WCA.E27A. Location: S07W14 Level 1. **Associated External Offerings:** None. **Burial Fill Soil:** Undescribed. **Burial Type:** Poorly preserved disarticulated bones. **Individual:** Male (26-35 years old). **Pathologies and Trauma:** Project lab photograph of the sacrum depicts pathological problems. **Burial Offerings:** None.

Comment: The map location is that of WCA.E27A; however, it is labeled as the location of WCA.E2A that reportedly was excavated in S07W15 Level 3 where no feature is depicted. WCA.E2A is identified as a male (35-45 years old) (see Group J above). It is possible that they are the remains of the same individual excavated at different depths.



Figure 76. Cotocotuyoc WCA.E27A excavated bones provenience documentation.

Group L. Skeletal Remnant in Disturbed Contexts

CWA.E1A. Location: S04W10. **Associated External Offering:** N/A. **Burial Fill Soil:** N/A. **Burial Type:** Only part of the body (about 20%) was found. The field notes include the following: “We have uncovered the head & upper spinal column & ribs, but bottom of body just appears to be missing. Moved? Beneath rocks? The body itself is lying on top of rocks.”

Comment 1: The human remains (in their discovery location) were determined not to be part of an intentional burial or offering, as they were intermixed with wall rubble.

Comment 2: The partial remains appear to be those of an adult (over 20 years old) of undetermined sex. They were not analyzed. No other human remains were found in S04W10, which was excavated to Level 4 where camelid offering remains were found on a Wari floor. However, the field records identify a poorly preserved burial in S04W11 Level 2 (see Unit Level Drawing). The context of those remains suggests a Lucre interment. No burial form was found for them, unless all of the remains were bagged and identified as CWA.E1A.

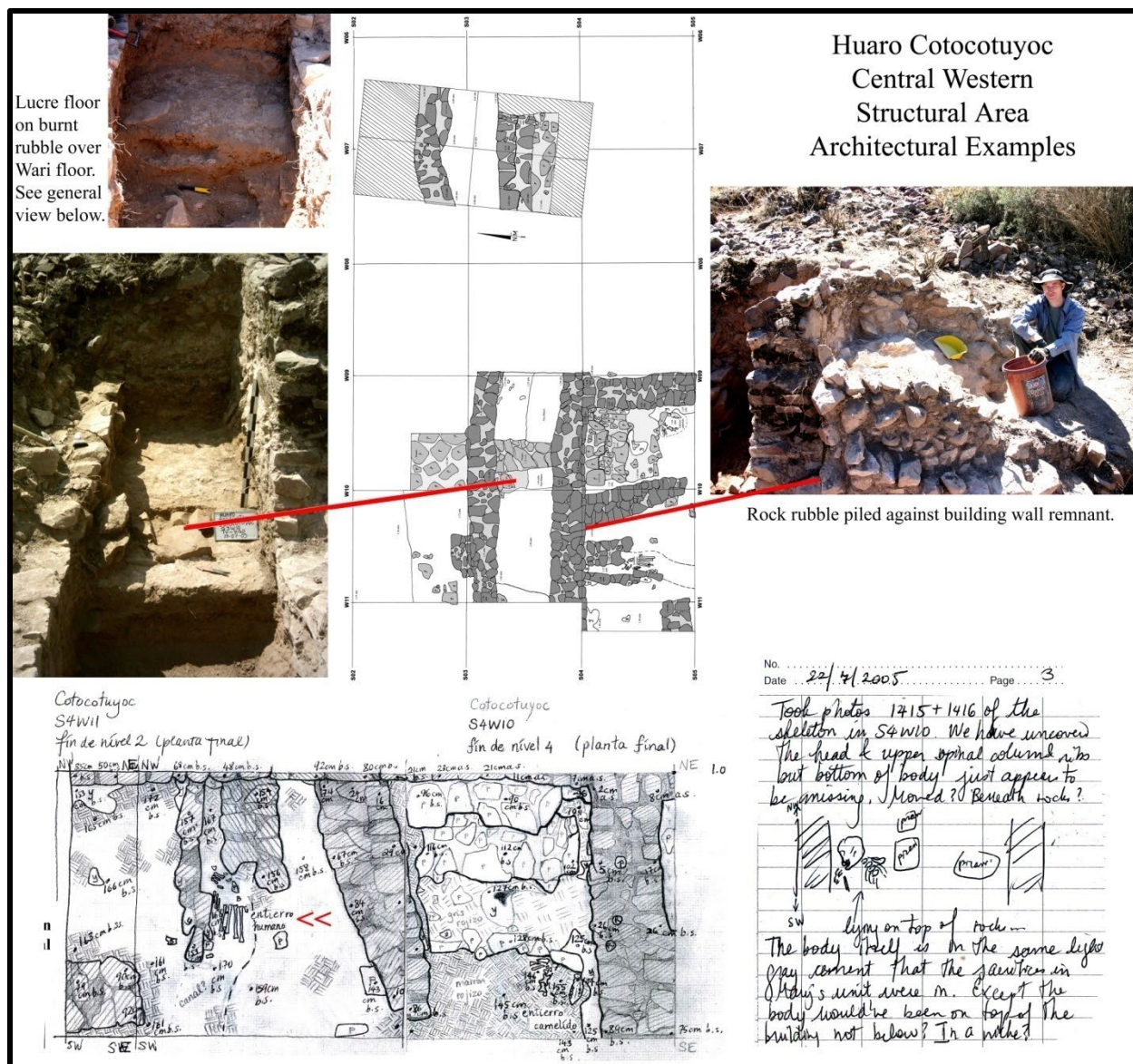


Figure 77. Cotocotuyoc CWA.E1A associated records.

SWA.E5C duplicate (redesignated SWA.E6C). *Location:* West side of S24W19. *Associated External Offerings:* None recorded (unrecognized in disturbed soil?). *Burial Fill Soil:* Unrecorded. *Burial Type:* Incomplete human remains (less than 10%). The skull and some of the long bones are reported to have been missing. *Individual:* Child (about 8-years old) of undetermined sex. *Pathologies and Trauma:* Undetermined. *Burial Offerings:* Plain Black Wari ceramic vessel is reported to have been found near the remains.

Comment: The burial's association with the Wari or Lucre is considered undetermined; indeed the burial might post-date them.

Note: The Trophy Foot Offering in S25W18 also is identified as SWA.E5C. It retains that designation, while the above burial of uncertain affiliation is redesignated SWA.E6C.

WCA.E19A. *Location:* S08W16 over Fosa Funeraria 03. Hallazgo 11. *Associated External Offerings:* None. *Burial Fill Soil:* N/A. *Burial Type:* Incomplete human skeletal remains.

Individual: Poorly preserved mandible and humerus (bottom left fragment) of an old adult
Pathologies and Trauma: Undetermined. **Burial Offerings:** None.

Comment: Hallazgo 11 in level 3 was capped with a layer of stones in Level 2. The WCA.E19A remains came from overlying disturbed soil and are considered to be out-of-context redeposited bones.

Summary of Interments and Related Data

Camelid feast offering features, with one exception, occurred only in the Wari elite burial area. The exception was an offering pit feature designated SEC.East.Hallazgo 1 that occurred under the eastern wall of the Cotocotuyoc complex in the eastern part of the Southeastern Canal Excavation Area in S08E11 Level 3. The camelid remains were accompanied by two obsidian knives. No other features of interest were found in the excavated area.

It is suggested that SEC.East.Hallazgo 1 was deposited as part of a ceremony to assure continued water flow from the mountain-side spring through the canal system built to supply water to Cotocotuyoc. Its similarity to two large camelid offerings with obsidian knives that were excavated in the Wari elite cemetery near a canal-linked tomb suggests they had the same purpose and occurred chronologically close to each other—perhaps during an extended drought.

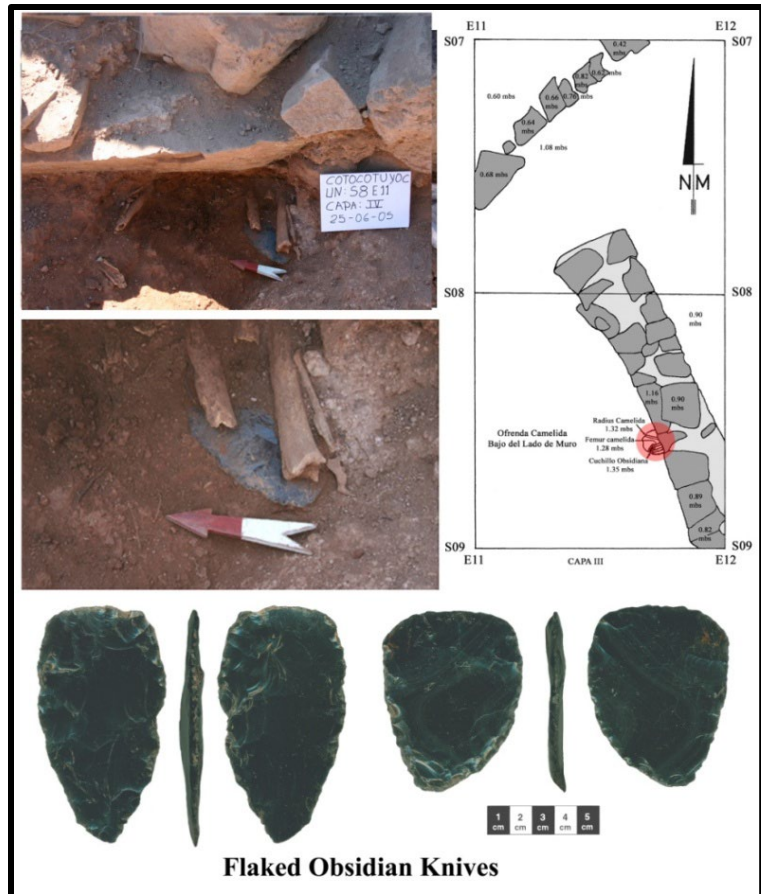


Figure 78. Cototuyoc SEC.East.Hallazgo 1 excavation documentation and two obsidian knives.

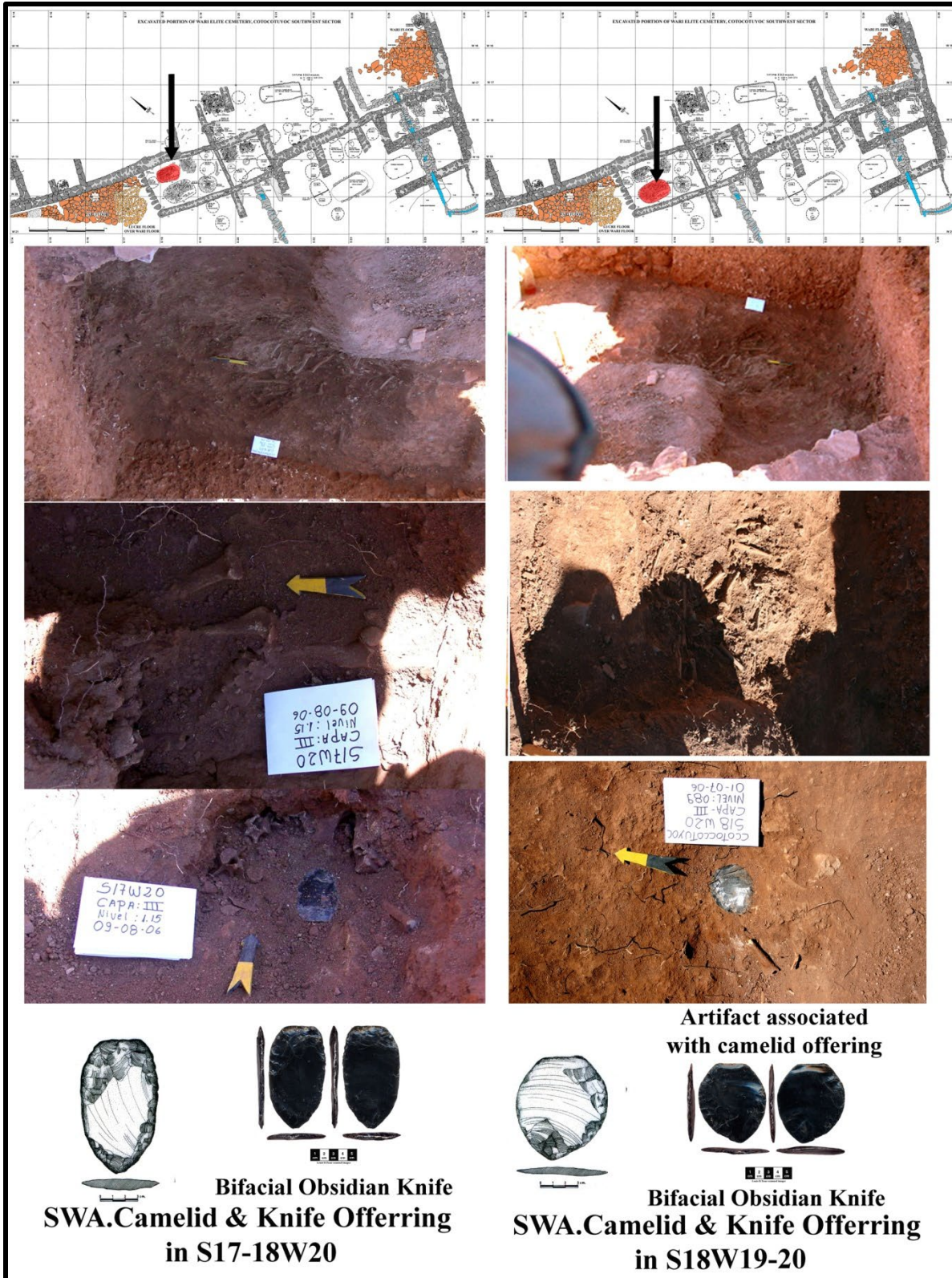


Figure 79. Cotocotuyoc SWA Wari elite cemetery area excavation documentation images showing obsidian knife offerings and images of the knives from the two offering features.



Camelid offering pit under wall in S18W19 Levels 1-2



Camelid feast offering deposit over burial pit in S19W19 Lv 4.



Camelid feast offering over tomb in S19-20W20 linked with canal.



Large camelid feast offering in S19W20 from E3A northward.



Camelid bone deposit near wall in S23W20 (Hallazgo 1)



Three camelid feast offering pits in S21W19. Two offerings only and one (top) over SWA.E5B,

Figure 80. Cotocotuyoc SWA Wari elite cemetery camelid feast offering examples.

Single large flaked obsidian knives were found with two camelid offering features in the Wari elite cemetery area. The abrasive dulling on one lateral edge shows that they were hand held (not hafted) when used to prepare the ceremonial offerings. The offerings and knives were excavated in S17-18W20 and S18W19-20 Level 3, and their inclusion represents a change in the ceremonies. The offering deposits, while in the cemetery area were not placed over any interment; however, both of them were in close proximity to SWA.E5A-E7A with their exceptional Wari Middle Horizon ceramic, *tupu* and *Spondylus* shell artifact dedicatory and burial offerings.

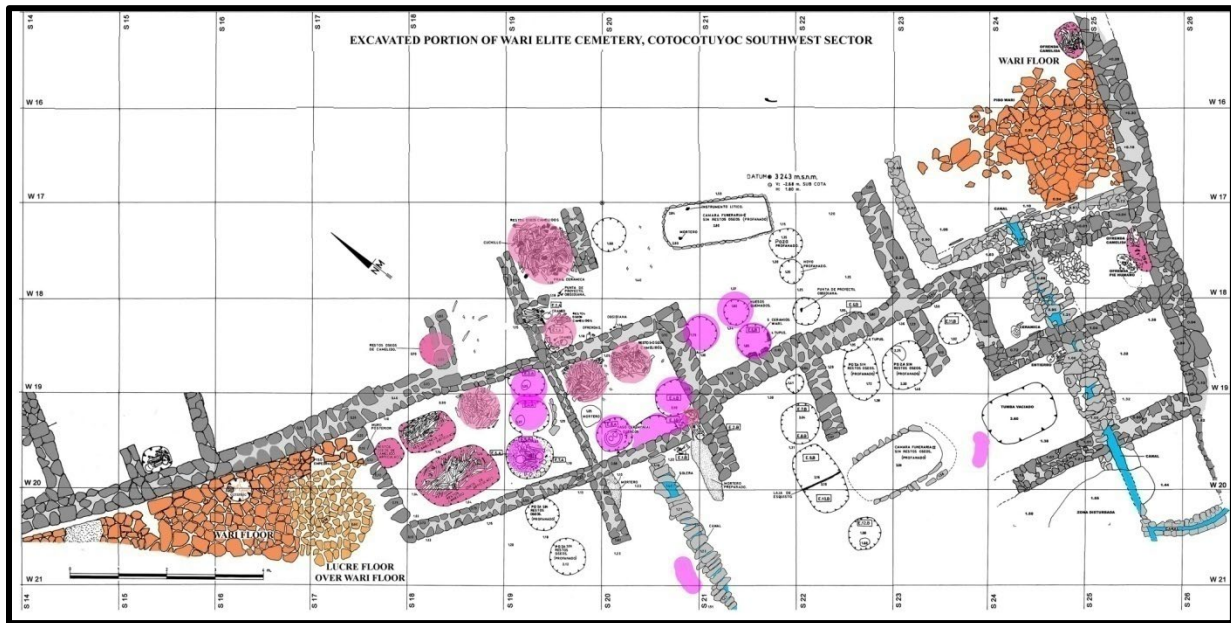
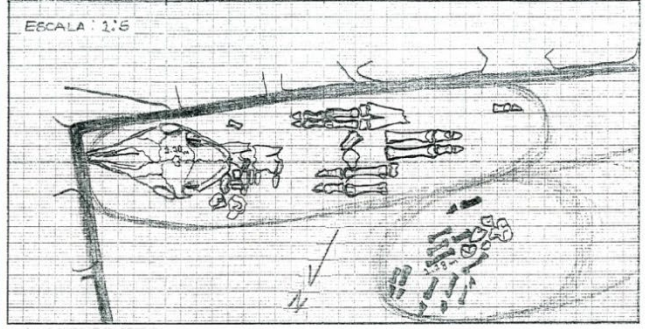
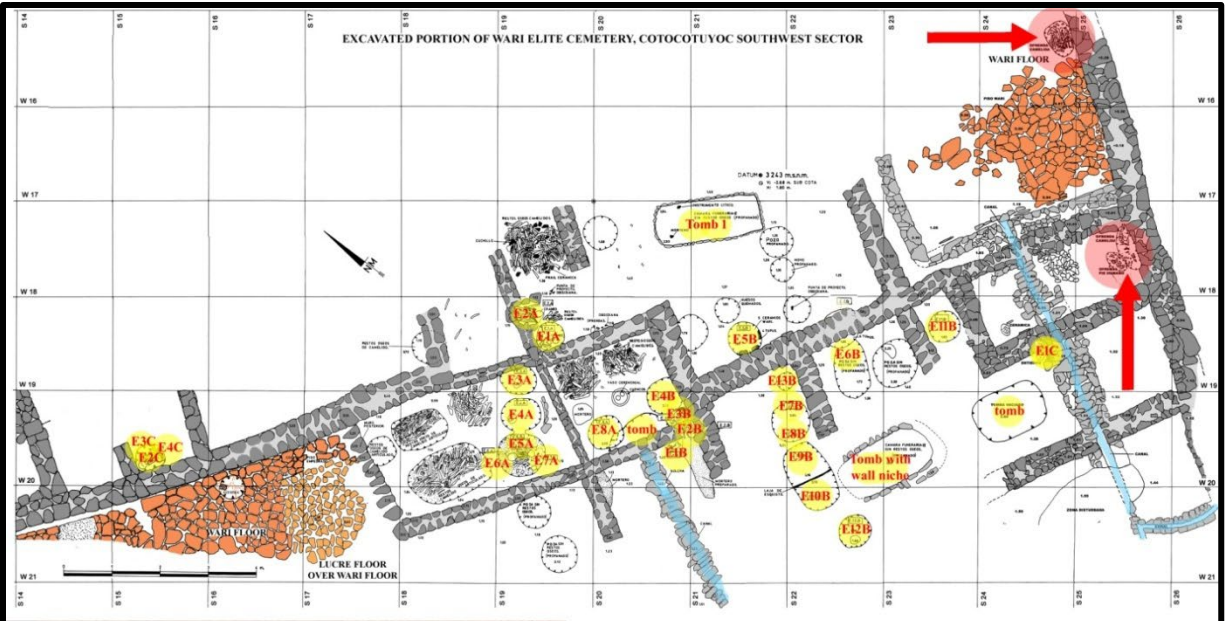


Figure 81. Cotocotuyoc SWA Wari elite cemetery camelid offerings distribution map.

The camelid feasting events, which sometimes included guinea pig (*cuy*) bones, primarily occur as post-interment disarticulated and partially disarticulated bone deposits capping interment pits. Additional feast remains occur in proximity to burials that appear to have been of exceptional significance, as did the two with obsidian knives.

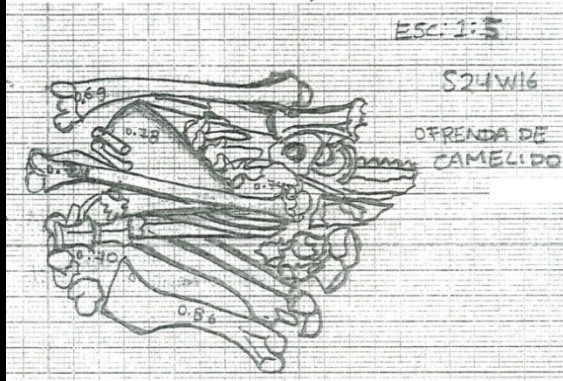
Post-interment camelid feasting events, which are a common and prominent feature among Cotocotuyoc early Middle Horizon Wari elite burials, become less common during the late Middle Horizon and are absent during the Late Intermediate Period. Likewise, the occurrence of quantities of high-status ceramic and other burial offerings follows the same pattern, diminishing to more mundane intermittently occurring offerings.

A variant of the interment feasting events is linked to the Wari elite cemetery canal system. A regular camelid feasting event occurred near where the canal water enters the southeastern corner of the floor of the paved water-retention room at the southern end of the complex. Bundled disarticulated camelid remains with the skull placed on top occurred against a wall in the southeastern corner of the room west of the water-retention room. Also, the sacrificial remains of a primary extended llama (?) with its head facing east toward a canal-linked tomb and the sacred mountain with the spring were interred parallel to the north side of the stone-lined canal. It is the only offering of its type thus far excavated at Cotocotuyoc.



Ofrenda de Camélida (Llama de 3-4 años) y Ofrenda de pie humano --SWA.ESC en esquina del muro Wari Cotocotuyoc S24W18 Hallazgo 4 (image from field record)

Excavation of S25W18 feature (skull on top of disarticulated bones)



Excavation of S24W16 feature (bundled disarticulated bones)

Figure 82. Cotocotuyoc SWA Wari elite cemetery canal linked camelid offerings in the pool area.

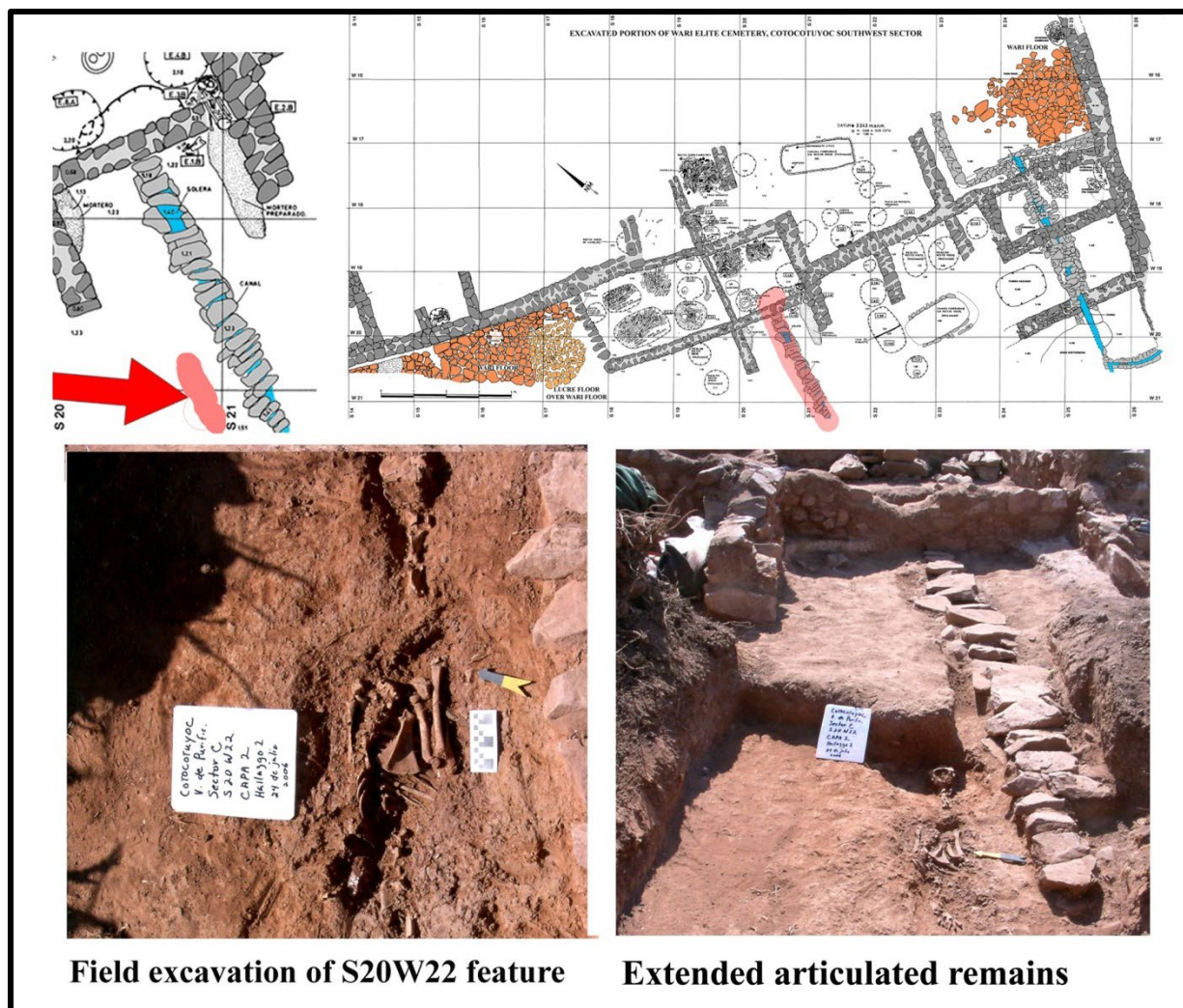


Figure 83. CotocotuyocSWA Wari elite cemetery canal linked articulated camelid offering placed parallel to the canal linked to a large tomb and facing the mountain spring source of the water.

Obsidian quarries and obsidian manufacture debris have not been reported from any of the Wari sites in the Cuzco region, although finished whole and broken obsidian artifacts are one of the hallmarks of Wari sites. It is clear that they were made elsewhere and received as items of exchange or tribute. Determining the source of these obsidian artifacts is of interest.

Burger *et al.* (2006:124) observe that the Alca source of obsidian was “favored by prehistoric occupants of the Cuzco basin.” The centuries long use of obsidian from the Alca region ended with the Wari occupation in the Cuzco region, during which time obsidian was imported from the Wari controlled Quispisisa area (Bauer 2004:68 citing Burger *et al.* 2000). Also, the copper alloy tweezers and *tupus*, *Spondylus* shell, and other extra local exchange items were seemingly halted when the Wari presence ended. At least they are not included with Cotocotuyoc interments during the Late Intermediate Period.

Of note, while the Wari-to-Lucre transitional interments include high quality intermediate style ceramic vessels, later Lucre burial offerings substitute miniature vessels

as symbolic representations of the functional full-size vessels that they depict. The shift from including vessels used during the life of the individual to the miniature symbolic ones marks an interesting change. Was it implemented because the Cotocotuyoc refugees lacked the surplus resources to remove functional vessels from daily use, or was it for some other reason? Likewise, the realistically portrayed Middle Horizon faceneck vessels are followed during the LIP with simplistically rendered appliquéd faces on faceneck vessels. Smoothed, but rarely burnished, Orange Plain and Lucre Polychrome crudely pigment decorated vessels become the norm.

Thus, as indicated above, aspects of the human burials and associated offerings at Cotocotuyoc gradually changed through time. Some of the changed patterns may be attributed to burials conducted during times of peace where the Wari elite could do so with culturally appropriate “pomp-and-circumstance.”

Burials during the early Lucre Cotocotuyoc occupation phase seem to show an effort to maintain proper burial decorum with individual burials accompanied by artifact offerings. However, early Lucre interments also reflect degraded circumstances where survival of the living took priority. Remains of the deceased were recovered after traumatic death—many with bone fractures and some with burnt bone elements. Some were simply placed in an available room or shallow pit and covered in mass.

Wari burials at Cotocotuyoc generally are represented by primary flexed remains placed in an upright “sitting” position or as disarticulated remains in cylindrical burial pits. Many have associated Middle Horizon ceramic vessels and *tupu* copper alloy clothing pins for the women or obsidian projectile points for the men. The sandy soil filling the burial pits is distinct from the site soil into which the pits were excavated. Some burial fill soil appears to have come from *yeso* floors removed from rooms in preparation for digging interment pits. The use of salvaged *yeso* floor remains from the extant elite cemetery area may be more than expedient; it may represent use of already consecrated material. Other fill soil is from off-site locations, perhaps from the area near the residence of the deceased.

Camelid ritual feasting deposits placed over or adjacent to the Wari burials are notably absent in Lucre burial areas. The Lucre burials include three mass burials designated Fosa Funeraria 01-03 in the West Central Area. Lucre burials include primary flexed burials in both sitting and on their side orientation, as well as fully flexed burials placed on their back, and secondary/disarticulated burials in mass deposits and individually in shallow pits. Early Lucre interments at Cotocotuyoc, primarily those with transitional better quality ceramic vessel burial offerings, generally are capped with stones, while later interments have no protective covering material.

The context in which interments occurred was used to determine whether to consider them Middle Horizon Wari or Late Intermediate Period Lucre, with transitional occurrences between the two noted. Nine interments of “undetermined sex”—two 9-18 years old, six 19-25 years old and one 26-35 years old, were designated as Wari females because of the presence of *tupus* and “(female)” was added to their descriptive text.

The remains of individuals excavated at Cotocotuyoc are revealing. Cotocotuyoc seasons 2005, 2006 and 2008 Wari and Lucre interment sex and age distribution is presented in Table 1. Eight Wari men ranged between 19-45 years old when they died. Of the 19 Wari women, 12 ranged between 17-25 years old and 7 between 26-45 years old. Five Wari context individuals of undetermined sex include one from the 1-8 years old group and four from the 18-35 years old groups. Of these 32 individuals 30 came from the Wari elite cemetery area.

The remaining two individuals (26-35 years old) are of undetermined sex and came from the domestic food preparation area of the Southeastern Canal area. There is a noted absence of young and old individuals and a dominance of Wari elite women in the sample. Discarded human remains in looted locations suggest that excavation in those areas may yield the remains of the non-elite Wari and a more complete demographic sample.

SEX-AGE	0-1 yr	1-8 yr	9-18 yr	18-25 yr	26-35 yr	36-45 yr	Over 46 yr	Total	
Wari Male	---	---	---	3	4	1	---	8	Wari Total
Wari Female	---	---	2	10	5	2	---	19	
Wari Unk	---	1	---	2	2	---	---	5	
Lucre Male	---	---	3	7	5	2	2	19	Lucre Total
Lucre Female	---	---	1	3	2	4	3	13	
Lucre Unk	7	14	4	5	---	---	---	30	

Table 1. Cotocotuyoc seasons 2005, 2006 and 2008 Wari and Lucre interment sex and age distribution.

The 62 individuals represented in the Lucre sample show a more balanced sex and age distribution from very young infants to elderly adult men and women. They also include both non-elite and high status individuals (those with cranial vault modification). There are more men than women (19 vs 13) and children (ages 0-1 year [n=7] and 1-8 years [n=14]) of undetermined sex and sub-adults (9-18 years old [n=8]) are well represented, as are young adults (18-25 years [n=15]). Lacking a pre-Cotocotuyoc occupation sample, it is not possible to determine if they represent a higher mortality rate than in non-conflict times. Two of the men and three of the women were determined to be more than 46 years old. Further, the Lucre remains have a broader distribution within the site area.

Dental problems are present throughout the Middle Horizon Wari and the Late Intermediate Period burial remains at Cotocotuyoc. These include tooth decay, generally linked to a dependence on maize in food consumption, and associated abscesses and tooth loss along with alveolar bone loss in the molar area and elsewhere. Tartar accumulation on the teeth is also common. Their diet likely failed to include the vegetables and fruit that would have inhibited scurvy and similar ailments.

The physical anthropologists identified a wide range of physical problems (pathologies and trauma) among both the Wari and Lucre interments (Andrushko and Bellifemine 2007; Andrushko and Sanchez-Chopitea 2020:71-72) Most of them were determined to be the result of lifestyles and unsanitary living conditions. They are identified in the individual interment assessments presented above. Some bone injuries may be the result of accidents, while others can only be attributed to aggressive events, such as warfare.

Three Wari and seven Lucre males are identified with battle injuries (Table 2). One of the Lucre males is a child (12-13 years old) with burnt rib bones. Three (19-25 year old Wari, 19-25 year old Lucre and 36-45 year old Lucre) suffered a fractured rib and clavicle, fractured rib and femur, and a fractured rib, respectively. The rest, the Wari guardian burial (CC 35) and Wari trophy skull (CC 48) and four Lucre (CC 6, 60, 61 and 68) all suffered cranial, facial and other traumatic injuries.

Wari

SWA.E2A.Guardian Burial (CC 35). Male (26-45 years old). Impact fracture on right front of maxilla (cheek bone). Skull shows trauma with a rectangular hole cut in the left parietal for removal of an atlatl dart shaft, and dart point impact on interior of the right parietal produced radiating striations/cracks.

SWA.E12B. Male (19-25 years old). Fractured right rib and right clavicle. Accident or battle injury?

SWA.E3B (Trophy Skull) (CC 48). Male (26-45 years old), Damaged left cheek bone. Three unhealed ax cuts on back of cranium. Scalping cut marks around parietal and frontal bones. Base of skull cut to form basin-like container.

Lucre

WCA.E20A.Individual 3 (CC 60). Male (17-18 years old). Perimortem radiating fracture lines on his left parietal and two groups of cuts in the frontal bone

WCA.E23A.Individual 2 (CC 61). Old adult male (more than 46 years old). Fractured cranium, a massive fracture of the left pubic bone, three fractured ribs, and a fractured second metacarpal of the right hand.

WCA.E31B.Individual 7. Male (less than 25 years old). Fracture of the femur and fractured rib.

WCA.E26B.Individual 2 (CC 68). Male (more than 26 years old). Fractured nasal bone and fractured mandible.

SEC.E5A.Individual 1 (CC 9). Male (36-45 years old). Healed rib shaft fracture. Accident or battle injury?

SEC.E2A.Individual 1 (CC 6). Male (26-45 years old). Healed zygomatic arch fracture on the left side of his face.

SEC.E5A.Individual 3 (CC 10). (12-13 years old) of undetermined sex. Several of the fragmented rib elements are burnt, suggesting a tragic death.

Table 2. Cotocotuyoc Wari and Lucre interments with battle injuries on their remains.

There are four types of Andean trepanation, “(linear cutting, circular grooving, scraping, and boring [Verano 2003b]), circular grooving and scraping predominated... With scraping, a wide section of bone was scraped away on the ectocranial surface... In contrast,

circular grooving involved the removal of a plug of bone through circular or ovoid incisions...” (Andrushko and Verano 2008:3).

Examples of Middle Horizon Wari trepanation are rare. “Tung (2003:211) documented two instances of trepanation at the Wari site of La Real” (Andrushko and Bellifemine 2007:8-9). In the Cuzco region, one possible case of trepanation at the Wari site of Pikillacta is reported (Bauer and Bauer 1987:94 cited by Andrushko and Bellifemine 2007:8-9; McEwan 1987:94 cited by Andrushko and Sanchez-Chopitea 2020:70).

A Cotocotuyoc Wari interment of interest, SWA.E4A.Individual 1 (CC 26), is an adult (more than 20 years old) of undetermined sex (female?). Andrushko (2005:15, 2006:98) reports none noted for skeletal pathology and cranial modification. However, Arredondo Dueñas (2006:45 field photograph) depicts what appears to be a scraped trepanation hole in the cranium. Other field photos show the same hole and surrounding eroded area in detail. If it is not a scraped trepanation example, then it is probably a severe cranial infection that resulted in bone loss and a central circular hole.

Trepanation is noted in the Cuzco region among the Late Intermediate Period Lucre. While the success rate was low early in the LIP, it increased until the majority of the cases were successful among the Inca (Andrushko and Sanchez-Chopitea 2020:69).

Cuzco region “trepanation data show a strong correlation with cranial trauma... These cranial injuries mostly (sic) likely resulted from violent conflict, based on osteological and demographic evidence” (Andrushko and Verano 2008:8).

Examples of trepanation occur at Cotocotuyoc. While no examples of trepanation are identified in the Wari sample, Andrushko and Bellifemine (2007:8) describe two Lucre burials each with two scraped trepanation events. The first matches FF01 WCA.E11A, an 18-25 year old individual for which they describe the trepanation and tabular erect cranial vault deformation. The second matches FF02 WCA.E23A.Individual 2 (CC 61), a more than 46 year old male with healed trepanation events on his right and left parietals, many described skeletal injuries, and tabular erect cranial vault deformation (Andrushko and Bellifemine 2006:104; Andrushko and Sanchez-Chopitea 2020:69).

“Cranial vault modification involves the intentional reshaping of the head, begun at an early age when the cranial bones are malleable (Gerszten and Gerszten 1995). ... Since modification must occur in early childhood, this practice constituted an irreversible symbol of group membership that accompanied a person throughout their life (Torres-Rouff 2003). The most commonly observed forms of cranial modification in pre-Columbian Andean crania are tabular and annular modification” (Andrushko and Bellifemine 2007:10).

Tabular erect modification occurs when cradle boards and pads are used to apply pressure on the frontal and occipital bones, resulting in “lateral expansion of the parietal bones and a bulbous, ‘Mickey Mouse-eared’ appearance” (Andrushko 2006:6). Tabular erect (frontal-occipital) cranial deformation occurred on “all the crania present” in one of the Marayniyoq Wari burial structures and they have “a distinctive annular vault modification similar to Tiwanaku cranial deformation from San Pedro de Atacama, Chile (Torres-Rouff 2002:165)” (Valdez *et al.* 2006:681).

Regarding Cotocotuyoc site interments, Andrushko (2006:6) wrote: “Only one individual exhibited cranial vault modification, the form being tabular erect.” She identifies that individual as CC 33 (Andrushko 2006: Table 6.1). CC 33 is SWA.E8A.Individual 22, a 19-35 year old Wari male. He is the only Wari interment in the 2005 and 2006 season sample

exhibiting cranial vault modification. SWA.E2C excavated during the 2008 season appears to exhibit tabular erect CVM (see Figure 36).

Alternatively, “the Aymara ethnic groups of the Bolivian altiplano practiced annular oblique modification (circumferential binding) on both sexes and on individuals of all status groups; this custom had a great time depth in the altiplano, long before the Inca expansion, and continued until the Spanish conquest, when it was outlawed by Virrey Toledo’s government (1569-1582) (Marroquin 1944:31)”(Andrushko 2006:6).

The annular form of cranial deformation “does not appear in any Cuzco population until the LIP (Andrushko 2007); only following Wari collapse does this new head shape appear anywhere in the region” (Andrushko and Sanchez-Chopitea 2020:69).

SEX	TABULAR ERECT CVM	ANNULAR OBLIQUE CVM
LUCRE	WCA.E2A.Individual 3	WCA.E21A.Individual 1
MALE	CC 60 17-18 years old	5-6 years old
	WCA.E23A.Individual 2	SWA.E1B 26-45 years old
	CC 61 older than 46 years	
	SEC.E1A.Individual 2	
	CC 4 18-25 years old	
LUCRE	SEC.E1A.Individual 1	WAC.E25A.Individual 3
FEMALE	25-45 years old	18-25 years old
		WAC.E34A.Individual 1
		16-17 years old
		SWA.E2B. 26-35 years old
LUCRE	WAC.E11A.Individual 8	WCA.E24A.Individual 4
UID	18-25 years old	6-7 years old
		WCA.E32-33A.Individual 5
		4-5 years old

Table 3. Cotocotuyoc Lucre cranial vault modification.

While the 2005 and 2006 Cotocotuyoc sample only has one Wari interment with cranial vault modification (CC 33, with the tabular erect form), it has twelve Lucre examples (Table 3). Three Lucre males, one female and one individual of undetermined sex have the tabular erect form, while two males, three females and two children of undetermined sex have the annular oblique form. It is noted that four individuals in Fosa Funeraria 03 (two females [16-17 years old WCA.34A.Individual 1 and 18-25 years old WCA.E25A.Individual 3] and two children of undetermined sex [6-7 years old WCA.E24A.Individual 4 and 4-5 years old WCA.E32-33A.Individual 5]) have the annular oblique form for that local high status (?) family. When the over 46 years old male with tabular erect modifications and the three children with the annular oblique form are omitted from the sample, the remaining eight individuals are equally divided between the two forms and fall within similar age grades.

Andrushko and Sanchez-Chopitea (2020:69) strongly suggest: “The appearance of the annular-oblique form in the LIP may reflect emigration from the Bolivian altiplano, where Aymara ethnic groups were known to practice annular oblique modification (Marroquin 1944).” While the annular form could have come from highlands or coastal contexts, I suggest that the Cotocotuyoc interments indicate that CVM was present within

the local chiefdom made subservient to the Huaro Valley Wari. Indeed, the tabular erect CVM occurrence within the Cotocotuyoc early LIP site occupants likely was introduced by the Wari through contact diffusion. Investigations in the Urcos community or around its lake likely would reveal examples of both CVM forms in that chiefdom population. (Regardless, it would help resolve the sample bias affecting population interpretations.)

The late Middle Horizon and early Late Intermediate Period interment data, including early Lucre transitional ceramics, seem to me to document mixed Wari and local population refugees occupying Cotocotuyoc as a protective redoubt. The cultural transformation in the Huaro Valley is from Wari to Lucre and the Batan Urqu mortuary across the valley from Cotocotuyoc reflects that transformation. Thus, I do not believe that the evidence supports a replacement immigrant population.

The material items and cultural traits of an immigrant population would be consistent with the homeland from which they came, rather than occurring as a transformation melding of the Wari ceramic and other traits (that essentially ended when the Wari abandoned Huaro Valley) with those of an invading population. Apparently locally made Huaro Valley Wari ceramic vessels style that differ from the homeland template seem to reflect that melding on a limited level. Further, artistic renderings such as those on the SWA.E8A chichi beakers seem to memorialize the Wari control of the conquered local population. Strontium testing of Cotocotuyoc interments' tooth enamel and that of Urcos area prehistoric burials would help resolve the local versus immigrant question.

Conclusion

The absence of Wari children burial remains versus their preponderance in the early Late Intermediate Period sample, especially those of very young children, is notable. They, along with the mass burial of decomposing bodies, support the changed use of Cotocotuyoc as an early LIP refuge under stressful conditions. The many child burials and some of the adult women may also be the result of limited resources, if priority was given to men capable of defending the site. A starvation diet would have adversely affected lactation to the detriment of breast feeding infants and also would have affected young children.

It is presumed that Wari children and others lacking elite status were buried elsewhere and that burial in the Wari elite cemetery was restricted to the remains of individuals whose spiritual essence needed to be maintained and appeased so that they could be appealed to for intercession on behalf of the Wari during times of need (i.e., drought, famine, sickness, etc.).

The Cotocotuyoc interment data, indeed all of the site data, are consistent with an in-place cultural transformation of a mixed Wari and local population, following the withdrawal of the controlling Wari elite, rather than a replacement immigrant population. Indeed, the transformation probably had begun among the local chiefdom population before circumstances compelled them to seek refuge at Cotocotuyoc.

It is hoped that the Cotocotuyoc burial data presented above will be used with other contemporary site burial data to test and confirm, refine and/or refute the interpretations offered here for consideration. Mary Glowacki is thanked for providing me with an opportunity to participate in the three field seasons of Cotocotuyoc investigations and for

granting access to the project files and other sources used to prepare this report. She is also thanked for reviewing the draft text.

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