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Personal Taphonomy at Sacred Ridge: Burial 196

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Personal Taphonomy at Sacred Ridge: Burial 196

Abstract

The fragmentary remains of a female aged 45 to 50 years were recovered from floor fill in the ventilator shaft of a Pueblo I pit house at Sacred Ridge (5LP245). Taphonomic evidence indicates facial destruction, scalping, decapitation, dismemberment, and perhaps hand or foot removal. Human hemoglobin and myoglobin residue on associated artifacts suggest that processing took place in this structure. This study addresses the significance of this feature in regard to the remains of 33 other processed individuals in another pit structure at Sacred Ridge, and the implications of these features for interpretations of Pueblo I pit structure burials.

Keywords

Taphonomy, Pueblo I, Violence

Author Biography

This work was conducted while both authors were employed by SWCA. The authors wish to thank the Ute Mountain Ute Tribe and Acoma Pueblo for the opportunity to analyze these remains. The UNLV Graduate and Professional Student Association providing funding to present a version of this poster.



Introduction

Sacred Ridge (5LP0245) is a very large (ca. 5 ha), early (A.D. 710-825) Pueblo I site in the Ridges Basin, near Durango, CO. The largest of several sites inhabited by ethnically diverse groups who lived in Ridges Basin for just two generations, Sacred Ridge has the only ceremonial and communal architecture, and evidence of greater access to high quality protein sources than in other Basin villages (Potter and Chuipka, 2010, 2007). Besides the normative burials in intramural and extramural contexts, three assembages of culturally modified human remains were found in pit house at Sacred Ridge. Artifacts bearing human hemoglobin and myoglobin residue were found in all these locations.

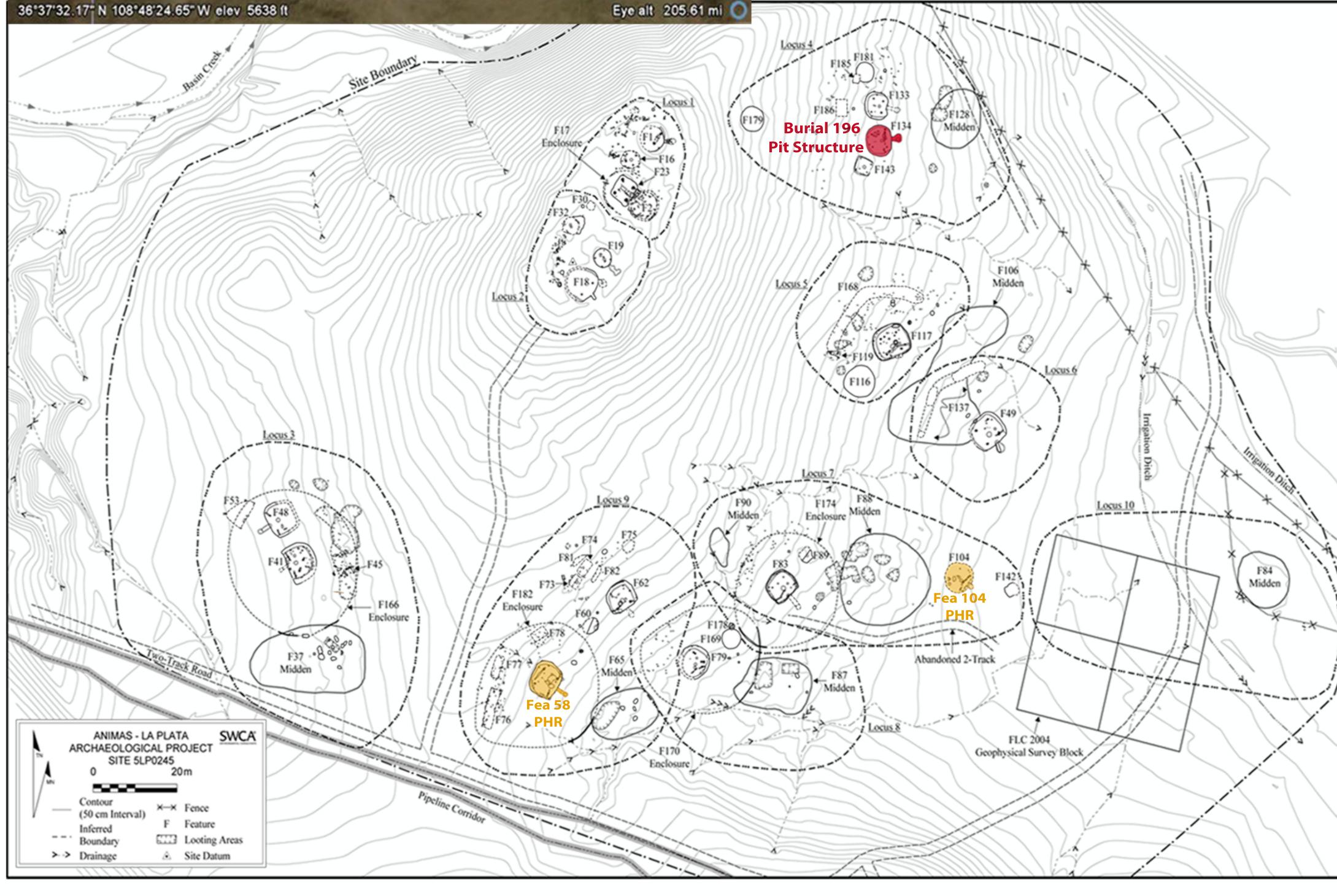


1. The assemblage of nearly 15, 000 comingled human bone fragments (skeletal MNI=33, dental MNI=35) in pit structure Feature 104. The remains exhibit perimortem fractures and tool marks consistent with execution, torture hand hobbling, dismemberment, defleshing, and mutilation. Occupation of the site and of Ridges Basin ended within a decade of the massacre.

2. The incomplete and fragmentary remains of a child and an adult female in Feature 58 where bone fragments were in situ on a metate with the hammerstone nearby.

3. The processed remains of a 45-50 year old woman, Burial 196, found in the ventilator shaft of a very large pit structure, Feature 134.

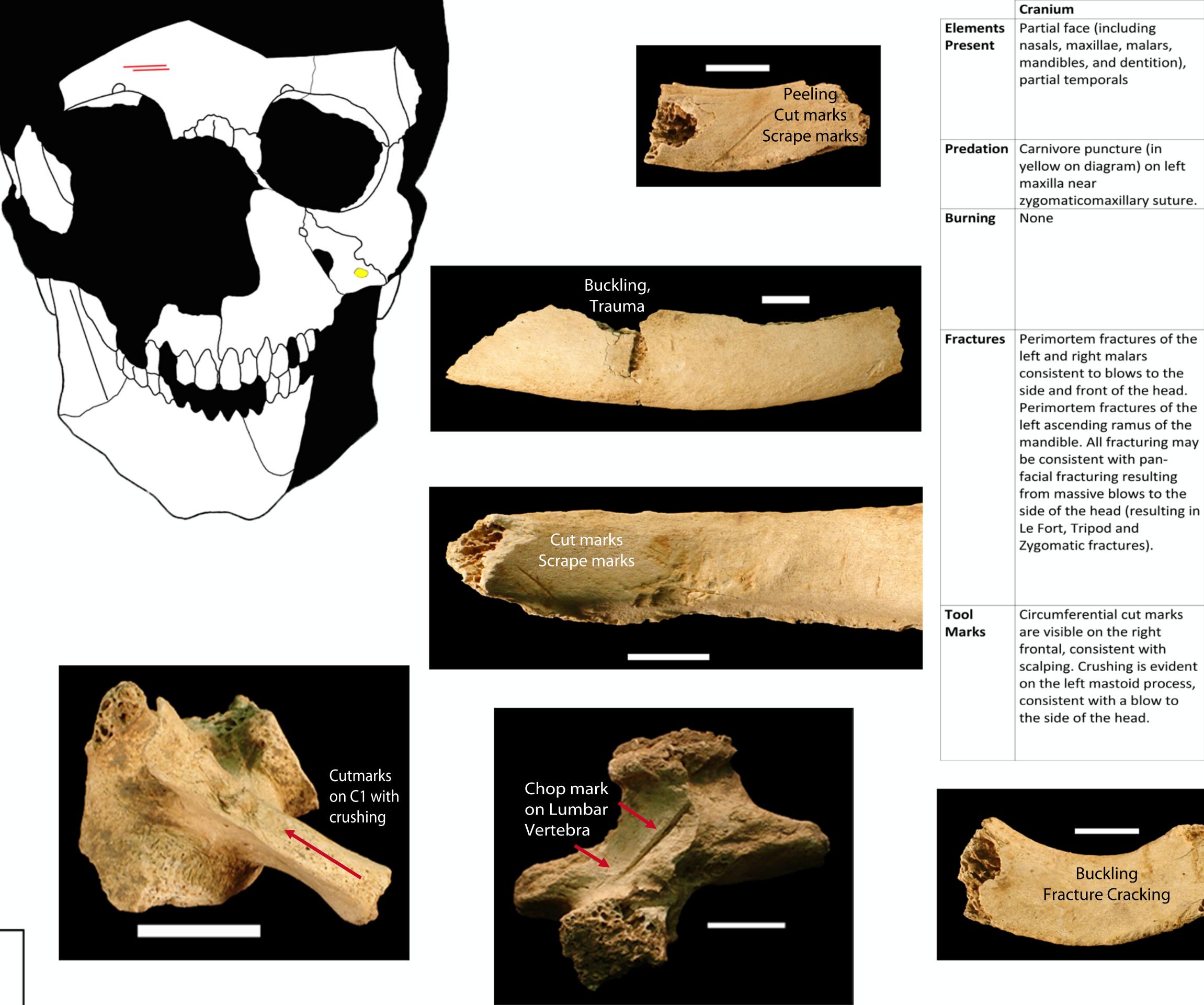
In this study we describe the taphonomy of Burial 196 which provides the opportunity to observe the damage inflicted on a single individual, in counterpoint to the fragment based taphonomy reported for extended processing assemblages from the Southwest. This woman's remains, and her treatment in death, help us to understand teh fate of the Sacred Ridge Feature 104 victims, expand the documented scope of Anasazi mortuary activity, and raise new questions about the relationship of perimortem procesing and mortuary use of structures



Personal Taphonomy at Sacred Ridge: Burial 196

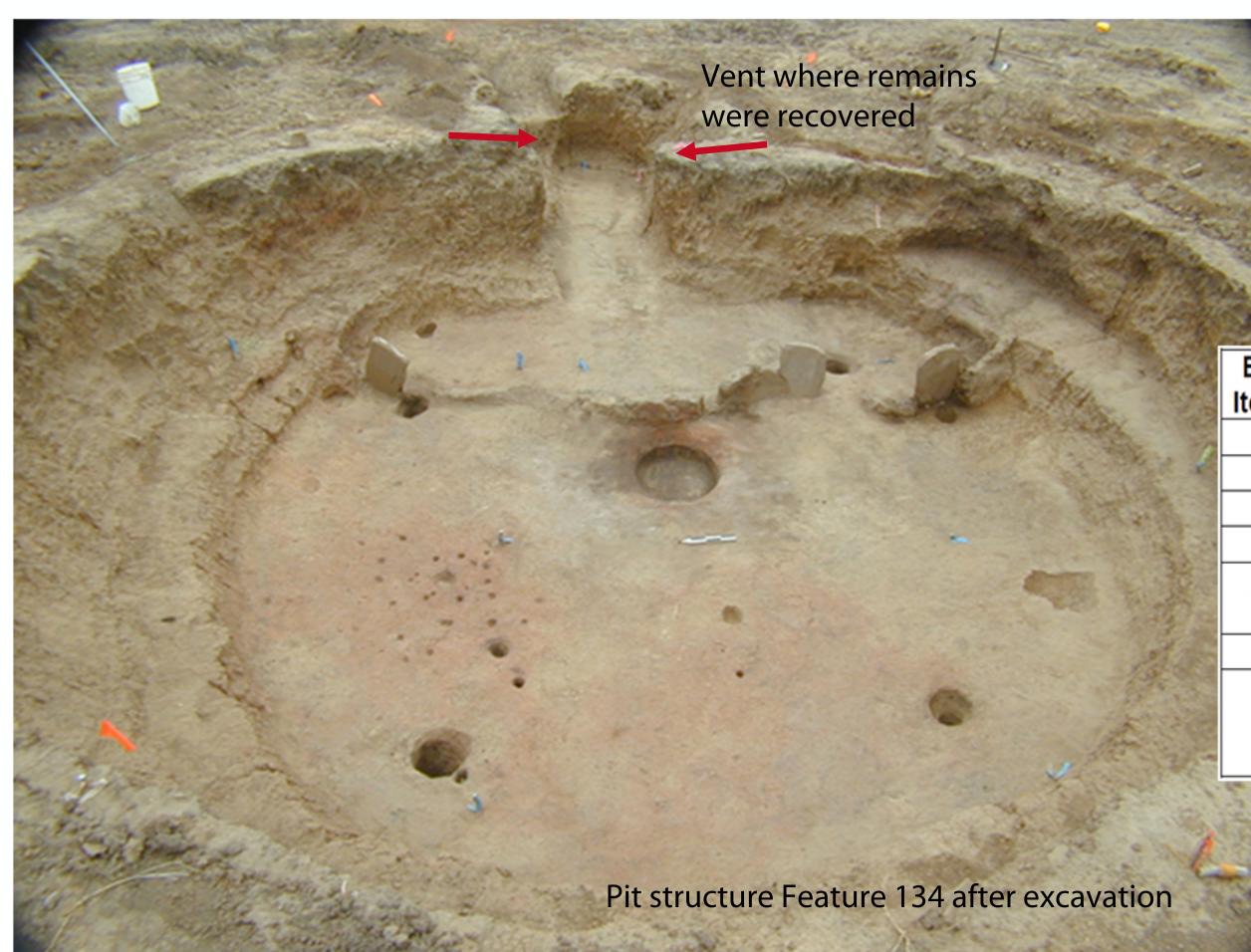
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University of Nevada Las Vegas



Burial 196 Contex

Feature 134 was an oval to D-shaped pit structure with a bench surrounding the structure on three sides. Entrance into the structure was originally through the roof, but the ventilator was enlarged and converted to an entry way. Burial 196 was interred in this expanded shaft (1.7 x 1.5 m) around the time the pit structure was abandoned, and may have been the closing act for the structure (Potter and Chuipka, 2010).



Artifacts recovered from the floor of the pit structure tested positive for human hemoglobin (blood) residue and two artifacts tested positive for human myglobin (muscle tissue) residue (Marlar 2010).

1 20				
Bag	Artifact		Human	Human
tem#	Туре	Description	Hemoglobin	Myoglobin
1	FS	Used flake	+	Neg
36	FS	Used flake	+	Neg
11	FS	Hammerstone: hammering area	+	Neg
13	FS	Indeterminate biface	+	Neg
26	GS	Maul: larger end with use wear	++	++
		smaller end	+	+
34	GS	Maul: intact end	+	Neg
32	CER	Grayware jar (broken): bottom	+++	+++
		side	+	+
		neck	Neg	+
100			-	

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Thorax and Shoulder	Vertebrae	Os Coxae	Lower Limb
Partial Scapulae, partial clavicles, 45 rib fragments from both sides.	At least 4 cervical vertebrae (including C1 and C2), 6 thoracic vertebrae, 5 lumbar vertebrae are presented. All are incomplete, lacking bodies.	Reconstructed from 13 fragments. Most of the Ilia, portions of the Ischia, and a portion of the right pubis are present.	Portions of all lower limb bones are present.
Carnivore punctures visible on shoulder elements.	None	Carnivore puncture on right Ilium.	Rodent gnawing present on the left femur and left tibia
Uniform browning visible on the left clavicle and in the cross section of a fracture line, indicating fracture prior to burning. Browning present on a single rib fragment.	None	None	None
Fracturing of the scapula and clavicles are consistent with blows to the point of the shoulder with the clavicle acting as a circuit-breaker for the transmission of force from the shoulder through to the sternum. Transverse and oblique fractures of the ribs with crushing and peeling indicate perimortem injuries.	Perimortem fractures to spinous processes, laminae, and intervertebral facets are ubiquitous. Crushing is also common.	Both acetabula are fractured, consistent with blows to the trochanter of the femur driving the femoral head into the acetabulum. Ilium wing fractures are also present as is a pubic fracture on the right side. Crushing and buckling is visible at the edges of the missing bone of the left ilium near the acetabulum, indicating that at least some of the fracturing was the result of direct blows. Perimortem fracturing of both ischia and pubic bones.	Spiral and flaking fractures evident on all bones. Fractures are consistent with direct blows when flesh was present on the bones.
Cut marks suggesting disarticulation of the shoulder are present. Cut and scrape marks are present on the internal and external surfaces of the ribs.	C1 has one group of cut marks on the anterior arch. One lumbar vertebra has a chop mark on the lamina.	Cut, chop, and scrape marks consistent with defleshing, disarticulation (based on association of the tool marks with muscle attachment sites), and possible disembowelment (based on the presence of tool marks on the internal surface of the iliac wing) are present.	Cut and chop marks are present at muscle attachment sites, all oriented medial-laterally, suggesting severing of the muscles preparatory to disarticulation.

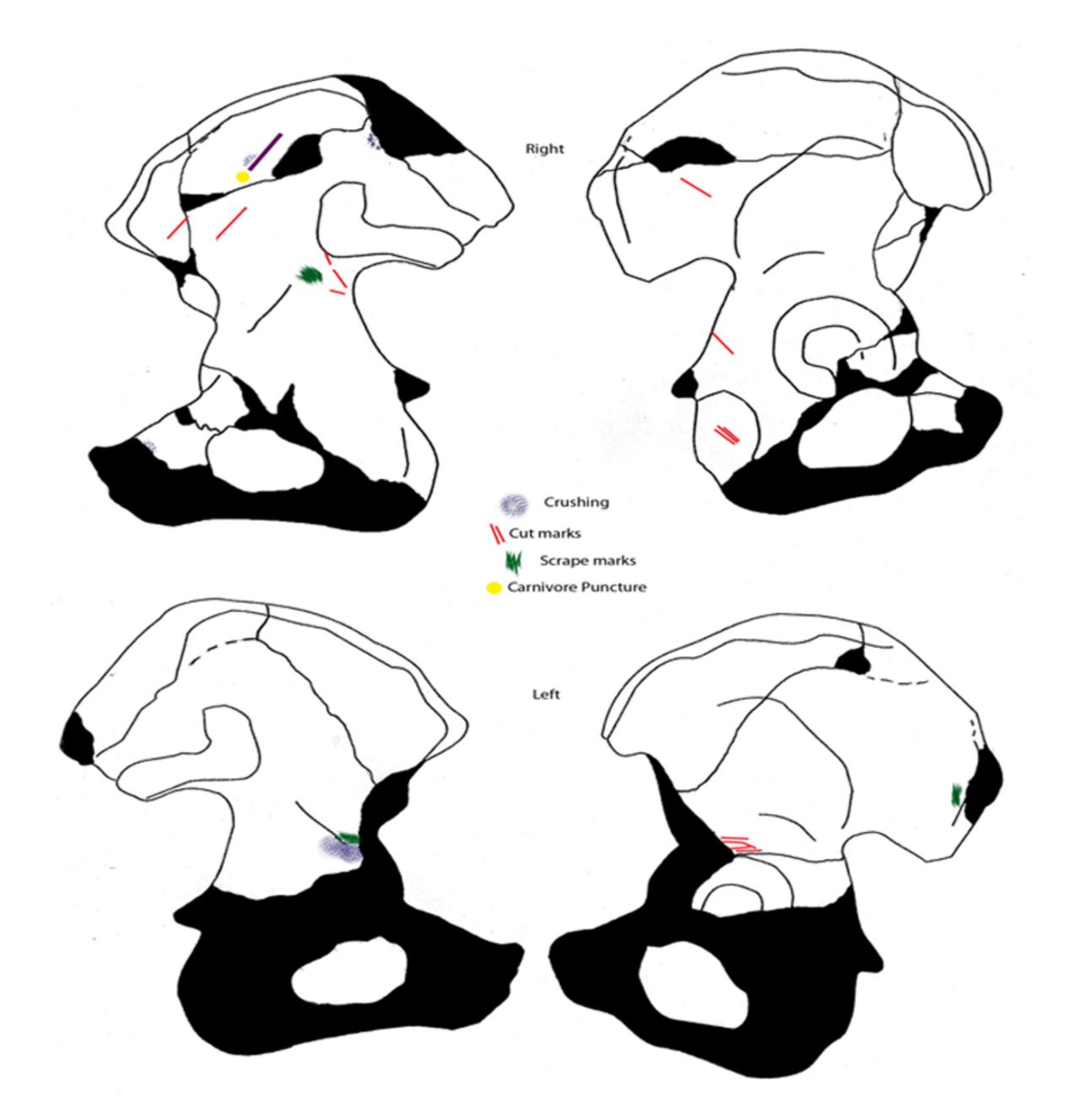












The Commingled Humerus

Found with Burial 196 were 11 conjoinable fragments from the proximal shaft of a left humerus of a subadult. Age at death (based on size) is less than 12 years of age.

No weathering of chewing marks.

Fracture edge morphology is consistent with perimortem fracturing.

Two deep cut marks (one oriented medial-laterally and the other proximal-distally) at the site of the deltoid muscle attachment are consistent with an attempt to sever this muscle from the bone. The placement of the cut marks is consistent with the Feature 104 assemblage.



The Processing of Burial 196: A behavioral Interpretation

Scalping, possible decapitation, dismemberment, possible disembowelment

Trauma to multipel regions of hte face, possible the reuslt of pan-facial fracturing, where a single heavy blow leads to multiple fractures of the mandible, maxillae, and zygomatics (Le Fort, Tripod, and Zygomatic fractures).

Heavy blows to the point of the shoulder, driving the humeral head toward the sternum and causing the clavicle to fracture. Blows to this area may be preparatory to disarticulating the shoulder by loosening the bonds of the soft tissue.

Processing of the vertebrae indicate destruction of the bodies, which could only have occurred either during or after disarticulation of the spine. The protected location of the bodies on the anterior surface of the vertebrae suggests that the destruction of the vertebral bodies was intentional.

Heavy blows to the hip that drove the femoral head through the wall of the acetabulum. Typically today, these fractures occur only in motor vehicle accidents where acceleration produces the amount of force necessary to force the femoral head through the acetabulum. The fracturing could only have occurred with tremendous force. Blows to this area would loosen the attachment of the soft tissues in the hip, allowing it to be more easily disarticulated.

Burial 196 and the overall picture of processing at Sacred Ridge

How does the processing of this single individual tell us about processing of the 33+individuals from the other pit structures? One goal of this study is to examine similarities and differences identified in the processing of Burial 196 and the processing of the commingled fragmentary remains from Features 104 and 58 at Sacred Ridge.

Similaritie

Scalping marks and general fracturing of the face (it is possible that the facial bones of Burial 196 were more easily reconstructed because it was assumed to be a single individual, so the fragments *had* to refit).

Perimortem racturing of the long bones.

Distribution of tool marks and fracture patterning of the os coxa, particularly the acetabular fracture.

Distribution and patterning of tool marks on the long bones.

Lack of vertebral bodies.

Associated artifacts bearing human hemoglobin and myglobin residue.

Difference

Interment of a single individual and one complete subadult arm bone.

The skull vault is not well represented in Burial 196, in contrast to the Feature 104 assemblage where vault fragments were plentiful but facial bones were missing. This reflects the more intensive fragmentation and complex depositional history of the Feature 104 assemblage, but may also suggest curation or deposition fo vault fragments elsewhere on the

Limited burning in the postcranial bones of Burial 196 compared to the Feature 104 remains, where 24% of the long bone fragments were burned.

Cervical vertebrae are relatively well represented, as opposed to the larger assemblage where 33 individuals are represented by cranial fragments but only the MNI derived from the cervical vertebrae was only

Discussion and Future Research

The patterns of trauma and processing evident in the remains of Burial 196 are overall quite similar to the larger assemblage, and her fate serves as an example of how the 30+ individuals were treated during the massacre that created the Feature 104 assemblage.

Trauma to multipel regions of the face, which could be the result of pan-facial fracturing, leading to Le Fort, Tripod, and Zygomatic

Decapitation, Dismemberment, posible disembowelment

Massive blunt force trauma exemplified by the damage to the hip that drove the femoral head through the wall of the acetabulum.

Burial and Pit Structure closure events in the Southwest

If found alone, Burial 196 might be seen as consistent with the treatment of Witches (Darling 199), but there are nearly 40 procesed individuals at Sacred Ridge. We don't know of other such heavily processed remains, but Burial 196 is one of the several less than intact individuals whose interment is associated with the closure of a pit structure of kiva at later (PIII) settlements: Towoac (Dice 193), Cowboy Wash (Billman et al. 2000, Lambert 1999, 2000), Homolovi II (Walker 1998).

This subset of burials on structure floors, in vent shafts, on benches, suggests a number of avenues for additional study including comparison of the demographic distribution and site context of disarticulated remains versus those with unmodified (intact) bodies interred on structure floors, and examination of regional and temporal patterning in deposition and treatment.

Burial 196--interred individual (except for the single commingled humerus)--but processed like those commingled in the Feature 104 mass graves, sits between the extremes of mortuary behavior that garner most attention in the Norther southwest: single primary interments and commingled extended processing assemblages. Her treatment answers some of our questions about what happened at Sacred Ridge (in terms of the processing of a single individual), and poses many others about the meaning of perimortem processing, pit structure interment, and site closing activities.

Acknowledgements and References Cited

This research was conducted while the authors were employed by SWCA Environmental Consultants. The authors wish to thank the Ute Mountain Ute Tribe and Acoma Pueblo for the opportunity to analyze these remains. The UNLV Graduate and Professional Student Association provided funding for the presentation of this research.

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