A Case of Late Prehistoric Mutilation on the Northwest Plains

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ABSTRACT

Questions concerning the origin and antiquity of Plains culture continue to be of interest to anthropologists. The suggestion that truly violent warfare practices involving mutilation, scalping, and torture were introduced by Europeans is of particular interest in that it reinforces the traditional view of Plains culture as a post-contact phenomenon. The discovery of a pre-contact inhumation in south-central Wyoming bears importantly on this view.

Remains of an adult male approximately 30-35 years of age exhumed from a site near Bairoil, Wyoming provide evidence for extensive trauma to the head and upper torso consistent with the violent warfare practices of Plains culture. An associated radiocarbon date of 1430 ± 60 B.P. : A.D. 520 suggests, however, that such practices had a substantially longer history than that traditionally ascribed to the horse culture of the American Great Plains.

From the early days of American ethnology, one of the dominant traits identified with the horse-culture of the Great Plains has been glory-oriented warfare (Wissler 1914). Plains warfare, consisting mainly of counting coup, scalping, revenge cycles, and horse raids, was conducted mainly for the glory of warriors, and was an integral step in the development from childhood to manhood. The prowess of the warrior had a major impact on many aspects of life, including marriage and kinship patterns, social cohesion and distribution of wealth. Because the glory of warfare was so far reaching in historic Plains culture it became a focus of anthropological investigation. A consensus emerged that violence, including scalping and mutilation, became an increasingly important aspect of warfare after the introduction of the horse (Grinnell 1910).

Given the historical particularist roots of American ethnology, it is not surprising that questions concerning the origins and antiquity of Plains culture became a topic of interest. Kroeber (1939) argued that the entirety of Plains culture was a post-contact phenomena—a product of the horse that had no real antecedents in prehistoric times. He states:

With the horse and all its culturally intensifying consequences taken away from the tribes of the western or true plains, such as the Blackfoot, Crow, Teton and Arapaho, these have left but a meager stock of culture. Showy clothing, embroidered footwear, medicine-bundle purchases, elaborate rituals, gratuitous and time-
**THE ARCHEOLOGICAL SETTING**

South-central Wyoming, as part of the Northwestern Plains, has been recognized as a natural corridor between the Plains and Great Basin (Figure 1). Ecologically, this area provided a mixture of plains and basin environments, the sage flats of the basin mingling with the short grass prairie of the plains. South Pass, just to the north of Bairoil, was the main corridor for the movements of animals and people between the basin and plains in both historic and prehistoric times (Wedel 1978). In fact, in the nineteenth century, Southern Wyoming was the meeting place for trade and interactions between plains, plateau, and basin populations, and it is likely that this historic practice had its precedence in prehistory (Wood 1980; Frison 1975; Mulloy 1958). The aboriginal culture of South-central Wyoming therefore demonstrated a blend of elements from these regions.

The burial described in this report is one of a number of features discovered during mitigation of a reservoir construction project in 1988. The burial was designated Feature 13 of Locality P-139, 48SW7101 (Figure 2). The area was a habitation site located on a terrace between two...
intermittent drainages, Laundry Draw and Reed Creek. Feature 13, the only burial associated with the site, was situated in the riser between the terrace and the present floodplain of Reed Creek. This burial was the only feature located in the riser rather than in the terrace itself, and it was some distance from any other features. The fill of the burial pit was clean and of the same sediment removed from the pit, indicating that the excavation was for the sole purpose of burial. This relationship between site and burial location, and the nature of the pit seem to reflect an intentional practice of inter-

ment of the dead a short distance from the actual habitation.

A radiocarbon date of 1430 B.P.: A.D. 520 ± 60 (Beta-26887) established a maximum age for the site based upon a habitation feature in the terrace. Geomorphological studies indicate the burial post-dates this feature somewhat. Also, a Rose Spring projectile point, a Late Prehistoric type used until approximately 700 B.P.:1250 A.D., was found embedded in the right tibia of the interred individual. The geomorphological studies suggest that the burial
dates to the latter part of this rather wide temporal range.

THE HUMAN REMAINS

The feature is a partially disturbed pit burial exposed by a bulldozer during the early phase of reservoir construction. Bones found in the backdirt included fragments of left innominate, one metatarsal, one sternal fragment, and several rib fragments. Bones exposed by the bulldozer in the grave included tarsals and phalanges, one metatarsal, the proximal 1/3 of the left fibula, and two lumbar vertebra.

Subsequent excavation revealed a single individual tightly flexed with arms folded across the chest (Figure 3). The body was resting on its back with the face to the left and the pelvis and legs elevated over the torso. The remains were in an excellent state of preservation with relatively little disturbance. There were no associated artifacts in the grave.

Graveside analysis revealed the remains to be those of an adult male approximately 30 to 35 years of age. Age determination was based on multiple criteria including dental wear (Brotwell 1981), suture closure (Meindel and Lovejoy 1985) and morphology of the os pubis (Todd 1920). Sex determination was based on pelvic morphology and general skeletal robusticity. Burial pattern, dental wear, shoveling of the incisors, and mid-facial prognathism confirmed the individual to be an aboriginal American.

Observation of massive healed trauma to the face and right shoulder prompted the
Figure 4. Evidence for extensive healed trauma to the right side of the face: a) damage to the orbit, zygomatic, maxillary sinus, and a bony outgrowth in the area of the origin of the right temporalis; b) close-up of the zygomatic region with the sequestrum placed in the approximate position during life.

Bureau of Land Management to permit removal of the skeleton to the University of Colorado, Boulder for a more thorough analysis. There the remains were cleaned, inventoried, x-rayed and photographed. The remains were subsequently returned to Wyoming for reburial.

**DESCRIPTION AND DIAGNOSIS OF TRAUMA**

Evidence for severe skeletal trauma and subsequent healing was observed in the skull, vertebra, ribs, shoulder girdle, and lower limb. Each will be described in turn.

**Cranium**

Extensive healed trauma was evident on the cranium. The right zygomatic arch from the canine fossa to the temporal bone, as well as the entire lateral border of the orbit, had been severed from the skull (Figure 4). Fragments of the orbit and zygomatic formed a sequestrum lateral to the orbit. The superior margin of the
right orbit also showed evidence of battering with a pronounced bony outgrowth. Organ damage in this area minimally included detachment of the right masseter at its origin with substantial loss of muscle function, exposure of the right maxillary sinus, and probable loss of the right eye. In addition, many of the muscles of facial expression would have been severely damaged.

Figure 5 illustrates the additional trauma to the skull. Fracture of the left orbit and zygomatic produced strong latero-inferior displacement of the orbit. The left maxillary sinus was exposed through the orbital floor. The left zygomatic remained anteriorly detached from the maxilla and healed with a downward bend of 20°. Organ damage included impairment of left masseter muscle function and possible injury to or loss of the left eye. Surprisingly, the extensive trauma to
the left and right sides of the face and skull occurred with no damage to the mid-face or nasal area.

The right posterior frontal bone also showed evidence of healed trauma including a 1 cm depressed fracture. Additional damage included the formation of three bony outgrowths on the right frontal and parietal bones probably resulting from tearing of the temporalis muscle.

No evidence of direct mandibular pathology was present, but the right coracoid process showed evidence of remodeling and marked thinning. The right condyle was also reduced in size compared to the left and showed signs of some disuse atrophy. These changes were consistent with impaired right-side chewing due to loss of right masseter function.

Shoulder Girdle and Upper Limb

Both clavicles and scapulae were intact, as were the manubrium and sternum. Damage to these bones included fracture of the right
clavicle and scapulae (Figure 6). The superior spinous fossa, including the superior border and spinous process of the right scapula, exhibited a healed fracture. The right clavicle also demonstrated two healed fractures near the midsection; these were confirmed by x-ray. In addition, the dorsal margin of the left glenoid was more pronounced than the right, indicating more extensive use of the left arm and shoulder during the latter years of life (Stewart 1979). This differential use of the left arm was consistent with the right arm injury. Differential use of the left arm was further indicated by greater lipping on the left humeral head, as well as sharper delineation of the left deltoïd tuberosity and possible loss of bone volume in the right deltoïd tuberosity (evident on x-ray).

Vertebra and Ribs

All but the fifth lumbar vertebra were present. Vertebral pathologies included strong wedging on the twelfth thoracic vertebra and moderate wedging of the second lumbar (Figure 7a). The third and fourth lumbars displayed moderate osteophyte development and signs of infectious reaction on their surfaces. The combination of wedging, osteophyte formation, and infectious reaction suggest some earlier, healed trauma to the back. Whether this occurred at the time of the head injury could not be determined.

All ribs were also present and well-preserved. The right eighth and ninth ribs revealed signs of separation of their tubercles from the adjacent transverse spinous processes with tearing of the lateral costo-transverse ligament (Figure 7b). Such trauma may have resulted from a blow to the right dorsal thorax.

Pelvic Girdle and Lower Limb

A slight periosteal reaction on the right anterior tibial crest was initially believed to be the result of bruising; however, subsequent analysis by the Office of the Wyoming State Archaeologist revealed a projectile point embedded in the tibia with complete bony overgrowth (Figure 8). The projectile point was removed from the bone and identified as a Rose Spring Variant point by Mark Miller, Wyoming State Archaeologist.

INTERPRETIVE SUMMARY

Taken together, the skeletal remains provide striking evidence of extensive injury to the skull, shoulder and back resulting from
violent interpersonal conflict on the Northwestern Plains prior to the advent of Plains horse culture. The injuries are consistent with a blow to and complete amputation of the right zygomatic arch and lateral orbit. This slashing blow continued downward through the clavicle and into the superior portion of the scapula. Additional blows resulted in fracture of the right frontal bone and left orbit and zygomatic. Whether the rib and back injuries occurred at the same time cannot be determined with certainty. However, they show a comparable degree of healing to those of the head and shoulder. Damage to the lower back shows evidence of continuing inflammation and bone loss up to the time of death.

What can be said with certainty is that this man survived massive trauma which would be life threatening in today's medically sophisticated society. He was blind in at least his right eye and possible his left. His face was severely disfigured by scars and loss of facial musculature. Chewing was severely impaired. His right arm was at least partially crippled and he likely suffered from chronic lower back pain. A great deal of time and energy would have been required to sustain him not only during healing, but throughout the remainder of his life.

While this single example of mutilation does not constitute evidence for organized warfare of the sort attributed to Plains culture, it was not an isolated event. The remains of three late prehistoric individuals from Robber's Gulch, Wyoming, also show evidence of violence—in this case leading to death (Eckles 1982). The individuals were killed with arrows, also of the Rose Spring Variant, in a manner suggesting an ambush. These incidents indicate that violent fighting was a part of Northwest Plains culture in the Late Prehistoric period, and the BAIRoIL individual provides clear evidence that severe mutilation was a part of that violence. The movements of Plains and Basin groups through this area may have been the catalyst for violence, as different groups came into contact in the corridor around South Pass; or this is direct evidence of intra-populational conflict. Regardless of the cause for violence, the effort involved in sustaining an individual thus mutilated perhaps suggests that his violent experience was accepted or of value.
within his group. Severe violence and the effort to sustain a critically injured warrior are characteristics of historic Plains warfare, which have clear antecedents in the Late Prehistoric at Bairoil, Wyoming.

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REFERENCES CITED

Axtell, J., and W. C. Sturtevant
1980 The Unkindest Cut, or Who Invented Scalping? William and Mary Quarterly 37(3): 451-472.

Brothwell, D.

Eckles, G.

Frison, G.

Grinnell, G. B.

Kroeber, A. L.

Meindel, R., and O. C. Lovejoy

Mulloy, W. T.

Stewart, T. D.

Todd, T. W.

Wedel, W. R.

Wissler, C.

Wood, W. R.

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