

## CASE REPORT

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### An Analysis of a Prehistoric Homicide from Northern California

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**ABSTRACT:** An analysis was performed on a prehistoric human vertebral column recovered during an archaeological excavation in the Sierra of northern California. Fifteen burials believed to represent the Maidu culture of 400 to 700 years ago were recovered. The vertebral column from one of the individuals is particularly significant because of three embedded projectile points. The analysis attempts to recreate the trajectory of each point; to determine the possible extent of damage done by each with emphasis upon which could have been fatal; and by employing available ethnographic and archaeological data, to suggest the possible circumstances surrounding the violent event. The conclusion suggests that death may have resulted from any of the three wounds and was probably the result of an intratribal dispute.

**KEYWORDS:** physical anthropology, archaeology, homicide, prehistory

The potential for archaeological techniques to contribute to crime investigations has been addressed [1,2] but occasionally prehistoric archaeologists recover evidence of a violent event which prompts a forensic anthropologist to speculate about the circumstances surrounding a death. This report is based upon such an instance. Specifically, skeletal evidence of a prehistoric death in the Sierra of northern California is combined with available archaeological and ethnographic data to reconstruct the events related to a prehistoric homicide.

Because of a drought in northern California during 1974 and 1975, the skeletal remains of several individuals were noticed eroding from the receding bank of Lake Almanor in the northern Sierra. They were removed during November and December of 1975 by a team of archaeology students directed by Professor Makoto Kowta, Archaeologist in the Department of Anthropology, California State University, Chico. In all, portions of 15 burials and accompanying cultural artifacts were recovered from the lake's northwestern shore just across from the community of Chester. The site, which has been recorded as CA-PLU-33, measured 3 by 6 m and is depicted in Fig. 1.

Of particular interest in this report is the vertebral column from Burial 1, which possessed three embedded projectile points. The individual has been identified as an adult male who was

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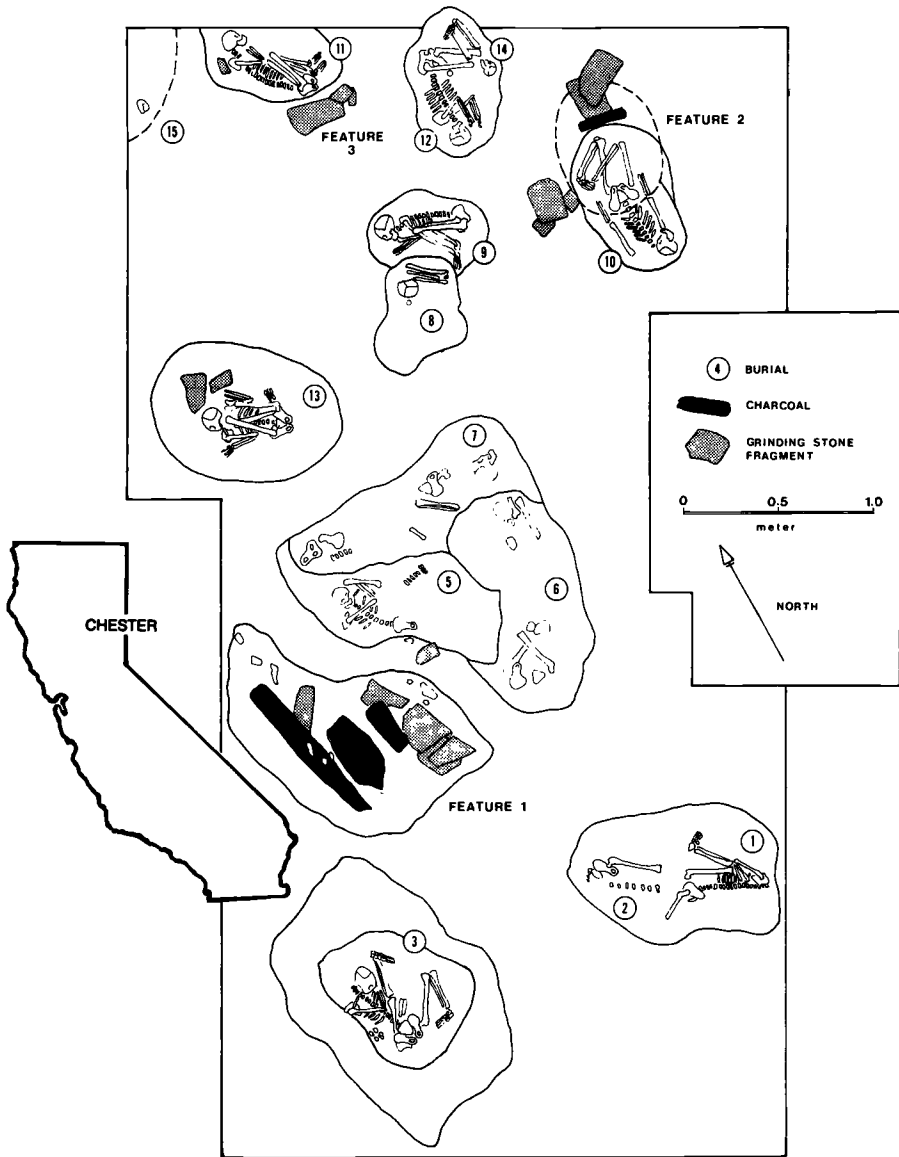


FIG. 1—CA-PLU-33 and its location in the northern Sierra after Kowta.<sup>3</sup>

approximately 165 cm (65 in.) tall and was probably in his early 20s when he died. He was found in what appears as a common grave with Burial 2, an adult female of approximately the same age. Burial 1 was located nearer the surface and oriented in the SE-NW direction. The body was semiflexed with the left leg flexed to the chest while the right leg was extended. Missing from the burial were the skull and bones from the lower right leg, which is believed to be due to both rodent intrusions and the effects of erosion.

Ethnic identification and date of the burials were derived by Kowta<sup>3</sup> and follow from an

<sup>3</sup>M. Kowta, "A Late Prehistoric Mortuary Complex from Lake Almanor, Plumas County, California," unpublished report, California Archaeology Site Inventory Information Office, Chico, CA, 1980.

analysis of the accompanying cultural artifacts and the exhibited burial pattern. Cultural artifacts found in association with Burial 1 included three Desert Side Notched points, a single large ceremonial blade, and several lithic flakes. The points and blade were accepted by Kowta as the most diagnostic features for providing an approximate date for the burial. The points embedded in the vertebral column were identified as one Gunther-Barbed type and two Expanding Stem type. From the typological sequences for the recovered artifacts, Kowta suggests that the date for the burials may be between 1100 and 1750 AD and that the evidence contained in Burial 1 suggests a date of approximately 1300 to 1600 AD.

In the absence of compelling evidence to the contrary, the ethnic identification of the burials has been concluded to be that of the Northeastern Maidu [3]. This conclusion is supported by available ethnographic data and the accompanying artifacts. For example, the area where the burials were uncovered was once known as Big Meadows. Dixon [3], Merriman [4], and Riddell [5] all agree that Big Meadows lies within the Northeastern Maidu territory. A number of traits are shared between the excavated burials and Dixon's ethnographic account [3]: for example, burial being the most common method for disposing of the dead, the body being placed in a flexed or semiflexed position, evidence of offeratory ornaments and other personal possessions, and a tendency for an eastward orientation of the deceased's head or face. Indeed, Kowta<sup>3</sup> suggests that the artifacts found with the burials, including Burial 1, exhibit functional cultural materials that have been reported as being present with other discovered Maidu burial sites [3].

The vertebral column of Burial 1 is represented by all the vertebrae from the ninth thoracic and below, including the sacrum. The vertebral column and its key portions are shown in Fig. 2. The condition of the bone is from fair to poor because of breakage and exposure both to weathering and the wave action of the lake. In general the vertebral bodies are in poor condition with the spinous processes fragmented and the transverse processes missing. Those vertebrae in which projectile points were found embedded are the twelfth thoracic (T12) and the second and fifth lumbar (L2 and L5). The twelfth thoracic contained the Gunther-Barbed point while the Expanding Stem type were found in L2 and L5.

The point contained in T12 was embedded in the lateral wall of the vertebral body immediately anterior to where the right transverse process would be. The point appears to have entered the vertebra from an anteriolateral direction at an angle approximately 5° above the horizontal.

The projectile point contained in L2 is located in the center of the vertebral body and appears to have entered in the horizontal plane from directly anterior. The point pierced the vertebral body and is extended into the neural arch.

The third point is embedded in L5 approximately 3 cm to the left of the spinous process and just anterior and slightly superior to where the transverse process would be. The point appears to have entered the body from the posterior left lateral, again at approximately a 5° angle above the horizontal.

A reconstruction of the possible damage done by each projectile point was attempted and was based upon the assumption that the victim was standing in a position similar to that used in standard anatomical descriptions. The orientation of the point in T12 and the extension of its suggested angle of entry allowed us to speculate that the point entered the body between the fifth and sixth right ribs. If that were the case, it is likely that the point could have pierced the following underlying organs: the middle lobe of the right lung and diaphragm, depending upon the victim's state of respiration; the right lobe of the liver; possibly the superior portion of the right kidney and its accompanying adrenal gland; the duodenum; the inferior vena cava, possibly in the area of the hepatic vein; and the right sympathetic trunk of the autonomic nervous system. Indeed, all of these organs or parts of them have commonly been described as lying in that area of the body [6] through which the projectile point is believed to have passed.

The point lodged in L2 is suggested to have entered the body in the umbilical area. The following internal organs lie in its projected path: the transverse section of the colon and the

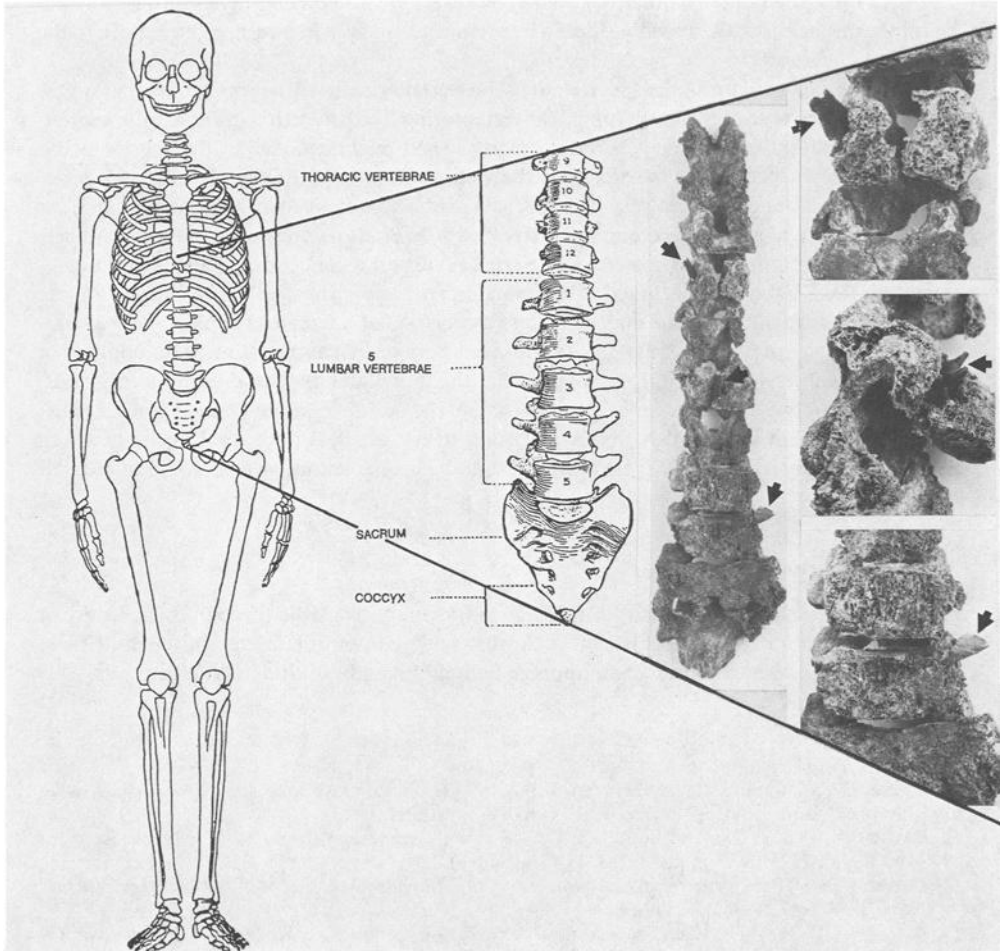


FIG. 2.—Details of the vertebral column in Burial 1.

superior portion of the small intestine including the duodenum and the pyloric portion of the stomach. Each of these organs could have been pierced depending upon the state of the individual's digestive tract. It is quite likely that both the pancreas and the aorta were severely damaged as the point is located just beneath the area where the celiac trunk and the superior mesenteric artery are commonly described as being found [6]. The fact that the point passed through the vertebral body prompts us to say that much if not all the spinal function below this location would have been lost.

The point lodged in L5 is suggested to have passed just over the superior margin of the left ilium and through a portion of the erector spinae group of muscles. Because of its location in L5 it can be further suggested that the point fractured the left transverse process of that vertebra, possibly damaging the fifth lumbar nerve on the left side and thus interrupting its contribution to the sacral plexus which innervates many of the organs within the pelvis in addition to the muscles of the left buttock and left lower limb [6].

While it is quite likely that the victim died from the combination of wounds received, it is our opinion that the point contained in L5 might not have caused the victim's immediate death.

Either of the remaining two projectile points, however, are accepted as being sufficient to account for the individual's immediate death by prompting massive hemorrhage and shock to the central nervous system.

While the exact circumstances surrounding the victim's death will never be known, it is possible to suggest what may have happened by employing available ethnographic information. Riddell [5] states that a person who did not repay a theft might be killed by the aggrieved and that an inter- or intra-tribal murder gave the victim's family the right to kill the murderer. Moreover, he states that among the Maidu, male prisoners were usually killed and among the Konkow the shaman led the ceremony by shooting arrows at the body of influential captives. Kowta<sup>3</sup> has stated that while present circumstances suggest a deliberate killing like that mentioned for the Konkow, the artifactual accompaniments and estimated age of Burial 1 do not suggest high status. Indeed the apparent close association of a female of similar age may provide other reconstructive explanations for the violent event such as punishment for adultery or incest. While it may be tempting to suggest that the individual may have been killed by outsiders, this cannot be argued seriously on the basis of the nature of the embedded points. Thus, the evidence presented suggests that a violent and deliberate death occurred in the northern Sierra approximately 700 to 400 years ago and that the probable cause was to settle an intratribal dispute.

#### *Acknowledgment*

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