

**ABSTRACTS of the 8th Annual Meeting of the  
Midwest Bioarcheology & Forensic Anthropology Association  
Wichita State University, Wichita, Kansas  
October 6, 2001**

**Abstracts are given in alphabetical order by senior author; all papers are podium presentations unless noted otherwise.**

**(1) ABU DAQEH, Holly. "Bioarchaeology of the Hill Site: A View from the 20th Century."**  
(abstract not available)

**(2) ALAKKAM, Abdulla. "The Oxygen Isotope Composition of Human Tooth Enamel: A Promised Method for Reconstructing the Paleoclimate in the Southern Levant."** (abstract not available)

**(3) BALL, Cindy. "The Cemeteries of Sumner County, Kansas: A Demographical and Historical Profile."** (abstract not available)

**(4) BATEY, Trey. "Age at death and Stress in Subadults of a Midwest Osteological Collection."**  
(abstract not available)

**(5) BUEHLER, Kent. "Turnabout is Foul Play: Applying Forensic Techniques to an Archaeological Investigation."**

In recent years it has become common for law enforcement personnel to turn to archaeologists for help in recovering evidence from crime scenes. Homicide detectives have learned to apply archaeological excavation and recovery techniques to the exhumation of human remains in forensic contexts. In the present case, however, forensic techniques are applied in an archaeological investigation to interpret evidence of violent death on skeletal remains. The remains were initially recovered in 1952 by amateur archaeologists and were believed to represent a prehistoric human burial. In the early 90s, they were turned over to the Oklahoma Archeological Survey where evidence of violent death was discovered. The death, however, was not a "homicide", but an "ursicide" as the bones were from an adult black bear, not a human being. A radiocarbon assay placed the bear's death during the latter part of the seventeenth century to early eighteenth century. This paper documents the find and examines the skeletal evidence of trauma in an attempt to reconstruct cause and manner of death and postmortem treatment.

**(6) CALAWAY, Miranda. "A Possible Index to Distinguish Between *Canis latrans* and *Canis familiaris*."**

Difficulties often arise when attempting to differentiate between coyote and domestic dog crania. Some gross morphological differences are present, yet these only prove helpful if the cranium is complete. In an attempt to solve this problem, a craniometric approach was taken in which ten selected points on coyote and domestic dog crania were measured and analyzed. Though means of the individual measurements and most indices showed no significant difference, medial palatal width over

breadth at canine alveoli showed promise as there was a significant difference with no overlap. In order to establish an index, a large sample size should be considered.

**(7) HALL, Scott, & Fiona PRICE. "The 1855 Cholera Epidemic and the Search for Unmarked Graves at Fort Riley, Kansas."** (podium & poster presentations)

In 1855, cholera swept through the frontier army post at Fort Riley, Kansas. Within just a few days in August, it had claimed approximately 100 lives. Four of the burials have permanent grave markers, and only assumptions persist about the burial locations of the remaining victims. The Fort Riley Cultural Resources Management Program initiated an extensive survey to attempt to relocate the unmarked graves. There were many rumors about a mass grave, but extensive literature searches provided little assistance. At the heart of the search for the grave/graves is a number of cutting edge, non-invasive, technologies. These technologies include global positioning systems, geographical information systems software, and most importantly the geophysical prospecting and data processing techniques of direct current resistivity and magnetometry.

**(8) LANDWEHR, Ken. "Serial Murders and Forensic Investigation."** (abstract not available)

**(9) MENDOZA, Melinda. "Case Studies in Skeletal Trauma."** (poster presentation; abstract not available)

**(10) MICK, Maranda. "Hip Prostheses."** (poster presentation; abstract not available)

**(11) NAWROCKI, Stephen, & Amanda BAKER. "Fluvial Transport of Human Remains at the Fox Hollow Serial Homicide Site."** (poster presentation)

This naturalistic study examines the effects of intermittent water action on the burned and unburned remains of 11 adult victims from one site in Hamilton County, Indiana. Topics examined include the relationship between transportability and fragment size, the composition of "lag" and "transport" bone groups, the effects of natural obstructions, and comparisons of results with previous taphonomic studies. (NOTE: this poster was originally presented at the 53rd Meeting of the American Academy of Forensic Sciences, Seattle, Washington, February 2001; for a complete abstract, see Proceedings of the American Academy of Forensic Sciences 7:246-247).

**(12) NAWROCKI, Stephen, Christopher SCHMIDT, & Susan NAWROCKI. "Unusual Forms of Archeological Evidence at the Forensic Scene."**

Forensic anthropologists are increasingly called upon to assist in the recovery of decomposed human remains at crime scenes. While documenting and collecting bones is obviously a large part of the job, the forensic archeologist must constantly be on the lookout for various types of subtle or unusual evidence that law enforcement may not be cognizant of. This presentation will focus on four such types of evidence: (1) necrophagous insects, (2) soil impressions, including tool marks, tire marks, footprints, and kneeling impressions, (3) soil disturbances, including halo formation and soil scatters, and (4) botanical evidence, including leaf litter stratigraphy, root penetration, "hitch-hiker" plants, and plant succession patterns. Examples of how this evidence can be used to aid in the interpretation of the formation of the scene and in prosecuting possible assailants are given.

**(13) PARISH, Joe, & Ralph ROWLETT. "Nicolita 2000: The Remains of a Late Iron Age Getic Female c. 300 B.C."**

This paper presents the bioarchaeological investigations of the burial of a female skeleton of the Getic La Tene culture c. 300 B.C. (Late Iron Age) found in Romania at the village of Nicolita, near the Black Sea, in 2000. The skeleton was one from a small inhumation cemetery close to the Danube Delta and the frontier of the nomadic horse pastoralist cultures. The investigation involved several lines of evidence including paleopathological analysis, radiography and zooarchaeology. The emerging picture of this individual shows a female, 30 - 35 years old whose lifestyle demanded great physical labor as evidenced through fracture and robust muscle attachments. Radiographical analysis confirms the perimortem nature of the fractured radius. Zooarchaeological remains found with her grave suggest ritual significance was ascribed to the offerings rather than simple dietary components. Finally, a set of turtle bones found intact in an oyster shell suggest a small tool kit of unknown application.

**(14) RITTERSKAMP, Idelle, Amanda BAKER, Paul EMANOVSKY, Stephen NAWROCKI, & Neal HASKELL. "Recovery and Analysis of Two Vandalized Mausoleum Crypts in Northern Indiana."**

In early March of 2001, the University of Indianapolis was called in to assist with the examination of two vandalized mausoleum crypts in a city cemetery in Elwood, Madison County, Indiana. The coffin of the first, an 77 year old female who died in 1939, had been pulled from the crypt and dropped to the floor of the mausoleum. Although the lid was opened, the remains had not been disturbed and displayed a remarkable state of soft tissue preservation. Thousands of dermestid beetle larvae cast skins were present in the coffin and within the crypt. The second interment, in a different mausoleum, was in much worse shape. The metal coffin of this 82 year old male who died in 1918 had rusted, and invading rodents and vandals had scattered the bones. A single gunshot entrance wound to the right side of the cranium confirmed the newspaper obituary account that he had died of a self-inflicted wound.

**(15) SCHMIDT, Christopher, & Molly HILL. "Finding and Correcting Error When Using the Robustness Index to Calculate Occlusal Area."**

Although odontologists have repeatedly expressed concern with the inherent tendency of the robustness index to overestimate tooth area, it continues to be employed widely. Apparently, justification of its use comes from the intuitive way in which it expresses tooth size coupled with a belief, by at least some, that the inter-tooth errors are so close that even though tooth size is overstated, it overestimates about all teeth (within a given tooth class) to the same level. The current study seeks to determine if the overestimation (error) is the same for all molars when using the robustness index. Our results suggest that the error is not the same and that tooth shape plays a significant role in the degree to which the robustness index overestimates tooth area. Regression-based corrections are calculated to overcome the problems with this potentially insightful odontometric index.

**(16) SCOTT, Tony. "A Preliminary Report on Epigenetic Traits in an Osteological Collection from Nebraska." (abstract not available)**

**(17) SMITH, Maria. "Hiwassee Island Revisited: Reassessing the Case for Intergroup Violence."**

A series of late Woodland/early Mississippian sites from East Tennessee were surveyed for warfare-related violent trauma (e.g., inflicted projectiles, trophy taking, cranial fractures). Particular attention was paid to the human remains from Hiwassee Island. This large site was one of few WPA-era excavations to merit an extensive descriptive publication. In that 1946 report, approximately 7.5 percent of the sample was suggested to have sustained multiple inflicted projectile points, a frequency easily twice that observed in Tennessee Archaic and Late Mississippian contexts. When the current study attempted to distinguish between inflicted projectiles and burial inclusions, a pattern of differential status among males was revealed as well as violent trauma patterns not seen in either the Late Mississippian or Archaic Periods.

**(18) STANTON, Patrick. "A Sucker is Born Every Minute: A Suspected Fabrication in a North American Osteological Collection." (abstract not available)**

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