

A TAPHONOMIC ANALYSIS OF HUMAN CREMAINS FROM THE FOX HOLLOW FARM SERIAL HOMICIDE SITE

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ABSTRACT of a Master's Thesis in Human Biology at the University of Indianapolis
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In June of 1996, the University of Indianapolis Archeology and Forensics Laboratory was asked to assist in the recovery of human remains from the Fox Hollow Farm, an 18-acre horse farm located north of Indianapolis in Westfield, Indiana. The remains of at least 11 homicide victims were discovered in two areas on the property. Scientific study of the remains from Fox Hollow Farm offers an opportunity to look at how numerous taphonomic processes affect a skeletal assemblage over a short period of time. The general goals of the present study are to ascertain the condition of the remains (fresh or dry) at the time of burning, to identify the taphonomic processes that may have contributed to the distribution of the remains, and to reconstruct assailant behaviors from the scientific data.

During the excavation of Area 1, 17 contiguous 2x2-meter grids were constructed. Two distinct datasets were derived from the remains in these grids. The first dataset includes all 5651 bone fragments from all grids, excluding complete bones and teeth. These fragments were counted and plotted to discern distribution patterns over the entire area, but no additional measurements or observations were taken on this assemblage.

The second dataset is a subset of the first. This dataset includes all of the complete bones and a random sample of fragments, exclusive of teeth. One hundred fragments were chosen from each of the 8 grids that produced more than 100 fragments. Altogether, a total of 800 fragments (8 grids x 100 fragments) and 133 complete bones make up the second dataset. All fragments from this set were assigned to one of 12 bone group categories. The maximum length of each fragment was measured to the nearest tenth of a millimeter. Each fragment was then scored as burned or unburned and scored for coloration. Fracturing was scored as the type (transverse, longitudinal, curvilinear, or patina) that predominated on the body of the fragment. In addition, each fragment was assessed for warping and delamination. These characteristics were scored simply as present or absent.

In order to assess the degree to which the Area 1 sample was burned, the remains from Fox Hollow Farm were compared to five other burned specimens or collections whose degree of heat alteration had been defined through previous study. The comparative sample includes a commercial dog cremation, a commercial human cremation, a Late Archaic prehistoric cremation, and two recent forensic cases. These comparative samples were scored with the same criteria established for the Fox Hollow sample and comparisons were made between all assemblages. It seems that Fox Hollow is most similar to the commercial dog and commercial human cremations and least similar to the recent forensic cases or the prehistoric sample.

Fluvial transport was also addressed. The larger dataset from Fox Hollow was used to examine differential distribution of fragments across Area 1. The larger, less burned fragments were located

uphill near the top of the grid system, while the smaller, more heavily burned fragments were located downhill at the bottom of the grid system. While assialant behaviors and carnivore activities cannot be ruled out as contributors to the distribution of remains in Area 1, it seems that flowing water was the major source of dispersal for the remains.

This study suggests that fragment size is crucial when looking at heavily-burned assemblages. Traits used to determine the pre-burning state of the bones (fresh or dry) may be easily masked by small fragment size. However, at least some of the remains from Fox Hollow show characteristics consistent with bone that was burned with soft tissues and fats still present. Other evidence indicates that some victims were allowed to decompose before burning.

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