

Analysis of Findings from the Buckeye Knoll Site (41VT98), Victoria County, Texas

Quarterly Report No. 2 (through February 24, 2004)

Prepared for
U.S. Army Corps of Engineers, Galveston District

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Between December 1, 2003 and February 25, 2004, the following tasks have been accomplished relevant to the analyses of the findings at 41VT98:

1. Definition of non-mortuary cultural components as the basis for defining analytical units at the site. This is based upon quantifications of various cultural debris classes in combination with vertical and horizontal provenience information. The results are as follows:
 - A. Late Paleoindian component. This temporally defined component has been identified in the Knoll Top and Early Midden areas of the site. The most extensively investigated aspect of this component is in the Knoll Top area, Zone 3A, which has yielded Golondrina, Dalton-like and other untyped lanceolate points, debitage and non-diagnostic lithic tools.
 - B. Middle Archaic components. Two areas are pertinent to this component. On the Knoll Top, Bell/Andice and Early Triangular points occur at/near the interface of Zones 2 and 3A. On the West Slope, Early Triangular points are recurrent in Zone 3, along with apparently contemporaneous Refugio points.
 - C. Late Archaic I. This defines the earlier of two apparent Late Archaic components. It has been identified on the Knoll Top in the lower one-third of Zone 2. On the West Slope, this period is evidenced by the entire stratum designated Zone 2. Diagnostics include dart point types Morhiss, Bulverde, Pedernales, Morhill and Lange.
 - D. Late Archaic II. This is represented on the Knoll Top in the middle one-third of Zone 2, and on the West Slope in Zone 1. Diagnostic point types are Ensor/Fairland, Godley, and Darl.
 - E. Late Prehistoric I. This is strongly represented in the upper one-third of Zone 2 on the Knoll Top and, probably, in the upper part of Zone 1 on the West Slope. Diagnostics are Scallorn and Edwards arrow points and sparse ceramics.
 - F. Late Prehistoric II. This is represented by a restricted area in the upper levels of the East Midden area. It pertains to the Rockport Phase, with diagnostics being Perdiz arrow points and Rockport ware pottery.

2. Selection of samples for radiocarbon dating of non-mortuary components. A total of 21 samples of organic materials (11 faunal bone, 6 *Rangia cuneata* shell, 4 oyster [*Crassostrea virginica*] shell) have been selected and culled from the general bulk collection according to proveniences (unit, level, strata) that pertain to the various above-listed components (with the exception of the Paleoindian, which is believed not to have associated, preserved organic materials). Although scattered charcoal bits were recovered during excavation and laboratory flotation, contexts and associations are not confidently identified and thus these will not be used for radiocarbon dating of components.

The 21 samples have been assigned sample numbers and are, as of this writing, being prepared for shipping to Beta Analytic, Inc. for standard radiometric dating.

3. Debitage analysis. A detailed analysis of debitage has been conducted in order to assess the nature of lithic technological organization at the site and its possible changes through time. This analysis has involved identification of raw materials, flake types, incidence of heat-treatment of flakes, and flake sizes. Samples analyzed represent all excavation levels in two 2x2-meter units, one on the Knoll Top and one on the West Slope.
4. Zooarchaeological analysis are continuing, as additional samples of faunal bones representing various components on the Knoll Top and the West Slope have been shipped to Susan Scott Jackson, Hattiesburg, Mississippi, for taxa identification.
5. All faunal samples from the lower levels of Zone 2 and Zone 3 on the Knoll Top have been examined for fragmentary human bone that may have been displaced by bioturbation from the abundant human burials in Zone 3. This resulted in the removal from the faunal bone samples of numerous human bone elements and bone fragments; these have been placed in separate storage and will be delivered to Dr. Glen Doran at Florida State University for inclusion in bioarchaeological analysis.
6. Bioarchaeological Analyses, under the direction of Dr. Glen Doran, Florida State University, are ongoing. The following tasks have been accomplished/initiated:
 - A. Samples of human teeth from seven burials have been released to Dr. Noreen Tuross (Smithsonian Institution) for preliminary DNA testing, stable isotope analysis, and AMS radiocarbon dating. Dr. Tuross reports that this work is in process; results on preliminary DNA testing and isotope analysis are expected by June 1, 2004.
 - B. Soil matrix has been separated from cranial and post-cranial bones. Soil associated with burials has been bagged and stored with each burial. Photographs have been made of cranial elements in soil matrix prior to removal of matrix.
 - C. Bones from each burial have been assessed as to condition and identified as to elements present.

- D. Initial identifications have been made of crania that are suitably well represented for recovery of metric data.
- E. Initial identifications of post-cranial materials suitable for metric data recovery.
- F. Data recovery has been started on dental materials.