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HUMAN SKELETAL REMAINS FROM 41CP25, THE PEACH ORCHARD OVERLOOK SITE, AND THEIR ARCHAEOLOGICAL CONTEXT

Diane E. Wilson, Timothy K. Perttula, and Bo Nelson

INTRODUCTION

Human skeletal remains analyzed from the Peach Orchard Overlook site (41CP25) were recovered from a burial exposed along the eroding shoreline of Lake Bob Sandlin in the mid-1980s. Although the remains appeared to be from a single individual, a minimum of two individuals were represented by the human remains studied by Wilson; there was also one non-human tooth (possibly a deer molar) that will not be discussed in this article. The human remains described here from the Peach Orchard Overlook site are from an Early Caddoan (ca. A.D. 1000-1200) period component, based on the recovery of Crockett Curvilinear Incised and East Incised vessels in association with the dental remains. According to Thurmond (1990), mortuary patterns from the Early Caddoan period in the Big Cypress Creek basin are not well known because few intact burials have been found and studied.

INVENTORY OF HUMAN REMAINS

The human dental remains were fragmentary and none of the teeth were complete. There were three complete crowns that lacked roots, two fragmentary occlusal surfaces, and two chipped and eroded root fragments. It appears that the dental remains came from two individuals, but this cannot be known definitively, and thus a minimum of two individuals are represented.

The complete crowns were a right maxillary canine, a right maxillary first premolar, and a left mandibular first molar. The two fragmentary crowns were both molars, and exhibited considerable occlusal wear in comparison to the complete crowns, which were not worn. One was a right mandibular first or second molar; the other was too worn to determine. Both root fragments were from molars, but it was impossible to fit either fragment with any of the molar crowns.

DEMOGRAPHY

It was not possible to determine the sex from the remains present. The dental eruption sequence among Native Americans (Ubelaker 1989) indicates that the complete crowns were from an individual at least 7 ± 2 years of age. Using Wilson's (1997) data on dental attrition in a combined Early and Late Caddoan population from the Red River, the fragmentary teeth suggest an age of at least 20-29 years, but more likely they are from an individual 35-45 years at the time of death. Due to the fragmentary nature of the remains, it was not possible to assess formation stages of the teeth.

DENTAL PATHOLOGY AND OCCLUSAL WEAR

Dental attrition is useful in reconstructing prehistoric diet, estimating age at death, and is related to patterns of antemortem tooth loss, caries, and dental abscesses. Teeth wear

with age as a function of normal use, but teeth wear significantly more when a diet contains coarse items or inclusions. The generally maize-rich diets of Caddoan populations resulted in a relatively low rate of dental attrition compared to earlier Fourche Maline populations (Powell 1985).

Anterior teeth (incisors, canines, and premolars) are commonly scored using a method developed by Smith (1984). This method uses a scoring system from 1-8 based on the amount of dentin exposed according to illustrations and written descriptions. Both the RC1 and RPM1 are at Smith's (1984) stage 1 (i.e., unworn). It cannot be determined whether these teeth had erupted, but if they had, they were not exposed to the oral environment for long.

Molars are scored for dental wear using Scott's (1979) system. In this system, each molar is divided into four quadrants and the amount of enamel is scored from 0-10 following written descriptions and illustrations. The final score for a tooth is the sum of scores for each quadrant. It was not possible to score either of the Peach Orchard Overlook molar fragments because they were incomplete. The LM1 complete crown was unworn, and thus gave a score of 4. One molar fragment had two complete quadrants with a summed score of 7. The other molar also had two complete quadrants, and had a higher summed score of 12.

No dental caries were present in the complete unworn crowns, which may be related to the lack of time they were exposed to a carbohydrate-rich, maize-based Caddoan diet. The maize-based diet of many Late Prehistoric Native American populations resulted in a high frequency of caries (Turner 1979; Cohen and Armelagos 1984; Powell 1985; Larsen et al. 1991). Two caries were found in the seven fragments, resulting in 29 percent of the fragments being carious. Because these are fragments, rather than individual teeth, and the sample size is low, the percentage affected is higher than the 19 percent documented from the ca. A.D. 1100-1300 Sanders site (41LR2) population (Wilson 1997). The minimum caries rate was 1.0, with two caries present in the minimum of two individuals present in the Peach Orchard Overlook dental remains. This rate is low for maize agriculturists, being lower than the Early Caddoan rates summarized by Wilson (1997:150), and is probably a result of small sample size.

A small dental caries was found on the occlusal surface of one of the fragmentary crowns. One of the root fragments had a caries on the distal surface. Root caries usually indicate exposure of the root, which is most commonly caused by periodontal disease and/or excessive dental attrition. Because the teeth were not in occlusion, it was not possible to determine if abscessing was present. If calculus had been present, fragmentation of the remains destroyed it. Enamel hypoplasias were not observed on the complete crowns. No modifications were present on the teeth.

DENTAL MEASUREMENTS

Dental measurements were taken on the crowns (Table 1). All measurements were taken by Wilson using a hand-held digital calipers. Measurements could not be taken at the cervical margin.

In all but one instance, mesio-distal and bucco-lingual measurements on the Caddoan tooth crowns were larger than those reported for hunter-gatherers from neighboring regions of Texas (Wilson and Steele 1996). Dental crown size was also larger in the sample from Peach Orchard Overlook than they were in the Late Caddoan Titus phase horticulturists from the Pleasure Point site (41MR63) at Lake O' the Pines (Wilson

and Steele 1996). Tooth size may be a function of health, genetic heritage, and/or body size.

Table 1. Mesio-distal and Bucco-lingual diameters of the complete crowns.

Tooth	Mesio-distal (mm)	Bucco-lingual (mm)
RC1	8.9	8.7
RPI	8.1	10.1
LMI	12.3	10.0

DENTAL MORPHOLOGY

Turner et al.'s (1991) list of traits commonly found in archaeological populations were recorded for the complete crowns (Table 2). Turner et al.'s (1991) dental features were identified using a series of dental casts and written descriptions.

Table 2. Dental discrete traits.

<u>Tooth Trait Scores.</u>									
<u>RC1</u>									
Shoveling	Double Shoveling		Tuberculum Dentale		Canine Mesial Ridge		Canine Distal Accessory Ridge		
2	1		4		0		4		
<u>RPI</u>									
Premolar Mesial and Distal Accessory Cusps		Tricuspid Premolars			Distosaggital Ridge		Odontome		
0		0			0		1		
<u>LMI</u>									
Anterior Fovca	Groove Pattern	Cusp No.	Deflecting Wrinkle	Distal Trigonid Crest	Proto-stylid	Cusp 5	Cusp 6	Cusp 7	
4	Y	7	1	0	0	3	1	1	

ARCHAEOLOGICAL CONTEXT

The Peach Orchard Overlook site (41CP25) is located on a large terrace overlooking Big Cypress Creek. About half of the site is currently underwater, with the elevation of Lake Bob Sandlin at about 327 feet amsl. The site has extensive Paleoindian and Archaic archaeological deposits from multiple hunter-gatherer occupations (i.e., several hundred dart points and tools have been reported and/or collected from the site over the years), as well as Early (ca. A.D. 1000-1200) and Late (ca. A.D. 1450-1600+) Caddoan habitations, and 20th century foundations and archaeological deposits.

Associated with the Early Caddoan settlement, which are poorly known in this part of Northeast Texas (see Pertulla 1995), is a small cemetery that is being eroded by shoreline action and had also been looted in the 1970s, as well as a possible artificially constructed mound (now submerged by Lake Bob Sandlin). The mound stood about 1.5 m in height. The cemetery is known to have contained at least seven interments.

The human remains reported on by Wilson herein were from a highly eroded burial, situated just below 327 feet amsl, that was in an extended position, with the head facing to the south and facing north-northwest. Very poorly preserved portions of the skull and upper body were laying along the shoreline in B-horizon clay deposits (indicating the burial had been placed in a pit dug into the subsoil), and the remainder of the body had been eroded away by wave action.

Associated with the burial were four ceramic vessels. Two were placed on either side of the head (Vessels 1 and 2), and the other two (Vessels 3 and 4) on either side of the body near the waist. All four of the vessels were tempered with grog or crushed sherds.

Vessel 1, on the west side of the head, is an East Incised bowl with two rim peaks and four sets of horizontal incised lines encircling the vessel. It stands 7.3 cm in height and has a 10.8 cm orifice diameter. Both interior and exterior vessel walls are well burnished, and it has been tempered with grog and bone. The rim is 4.2 mm in thickness. Vessel 2, on the east side of the head of the burial, is a well-made grog-tempered Crockett Curvilinear Incised bowl that is 9.4 cm in height; the orifice diameter is 11.0 cm. The bowl has a incised scroll design with circular central elements, and these are separated by paired excised triangles above and below the scroll (see Suhm and Jelks 1962:31). The circles also have one or two small punctations within them, and they are diagonally bisected by a single incised line. It has a broad and flat lip that is 8.5 mm in width; the rim walls are 3.9 mm in thickness.

Vessel 3 is a small bowl with a single broad (4 mm) and horizontal incised line 16 mm below the vessel lip. It may be an example of Coles Creek Incised. The bowl is 8.9 cm in height and 10.5 cm in orifice diameter, with a direct and rounded lip. The rim is 6.4 mm in thickness, and the body and base walls range from 6.9 to 7.0 mm in thickness. Both interior and exterior vessel surfaces have been poorly smoothed. Vessel 4 is also a small bowl, but it is undecorated. It has a 10.2 cm orifice diameter, and stood about 14.5 cm in height. The rim (6.4 mm in thickness) is direct and rounded, and the exterior vessel surface has been burnished. Fire clouds are also present on the exterior vessel body. The vessel body ranges from 8.7-10.2 mm in thickness, and the flat base is 11.5 mm thick. The vessel interior has been smoothed.

Other Early Caddoan materials from habitation contexts include several different types of ceramics, including Crockett Curvilinear Incised, Davis Incised, Hickory Engraved, Holly Fine Engraved, and Pennington Punctated-Incised, as well as some red-

slipped sherds. Arrow points of Early Caddoan age noted in collections from the Peach Orchard Overlook site include Alba, Bonham, Catahoula, Hayes, Scallorn, and Steiner types (see Thurmond 1990:Table 8). These arrow points tend to be made from both local quartzites and non-local raw materials (such as Red River chert and novaculite). Bifacial perforators and stemmed bifacial perforators in collections--and similar to those found in Early Caddoan contexts at the George C. Davis site (Baskin 1981:Figure 34v-ii)--probably are other Early Caddoan tools at the site. These are made of local chert, Red River chert, and novaculite.

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