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ABSTRACT

Between 1960 and 1962, and again in 1967, excavations into the western circumplaza mound at Chucalissa (40SY1) were conducted under the direction of the late Charles Nash. These four field seasons of work exposed a 150' long east-west trench through the southern flank of the earthwork and resulted in the horizontal removal of a portion of the latest stratigraphic member and underlying mound fill from the eastern flank. We provide description and interpretation of some of the structural, artifactual, and skeletal evidence recovered and focus our discussion on chronology, differential mound utilization, and mortuary ceremonialism associated with the latest Mississippian occupation of the site. The unit 4 excavations provide indirect but complimentary evidence for the existence of a charnel house processing program during the Walls phase occupation of Chucalissa. The latest burials from the mound are demonstrated to be quite distinct from the larger village population. It is argued that the upper stratum on the eastern mound flank provides material correlates for the recognition of the "communalization" of elite mortuary ceremonialism at the site during the last occupation.
INTRODUCTION

Thirty years have passed since excavations were initiated in the small, eroded mound (designated unit 4) situated along the western edge of the plaza at the Chocalissa site (Figures 1 and 2). This work was conducted intermittently by crews under the direction of Charles Nash between 1960 and 1967. The rather unusual human skeletal remains recovered from the mound have been the subject of limited discussion and speculation concerning possible behavioral implications by both Nash (1972:19-21) and Robinson (1977:37-43), but no systematic consideration of the unit 4 assemblage, in site-specific or broader archaeological perspective, has been attempted. We make a step in this direction by presenting the results of the analysis of some of the structural, artifactual, and skeletal evidence from unit 4, drawing on literature which has appeared since the earlier work of Nash and Robinson (Lumb and McNutt 1988; Smith 1988) to interpret this material.

The physical setting and spacial organization of Chocalissa have been discussed in other papers dealing with the site (Childress 1991; Lumb and McNutt 1988; Nash 1972; Smith 1988, 1990) and will not be reiterated here. The currently recognized site components are predominantly Mississippian (Smith 1972; Lumb and McNutt 1988:134-138) and document the intermittent occupation of a bluff-top location adjacent to the Mississippi River alluvial bottom between approximately the eleventh and early sixteenth centuries A.D. The latest and most extensive occupation of the mound and village complex is associated with the Walls phase of the central Mississippi valley. In this paper we will attempt to place the construction and utilization of the unit 4 mound within the chronology of the site and to explore its differential use through time.

EXCAVATIONS

Following initial clearing in 1955 (Figure 3), the principal excavation into the unit 4 mound consisted of an east-west trench placed between the 230 and 235 lines (hereafter referred to as the 230 line trench). This trench eventually extended from the western edge of the plaza at L 90 to the bluff edge near L 245 (Figure 4). The removal of the deposits from the trench was executed in sections over two field seasons during 1960 and 1961. No field notes were maintained for 1960, but entries made in 1961 by Rodney Gates and dated feature and burial forms have allowed us to reconstruct the excavation sequence with some accuracy. Field labor was provided by summer field school students and prisoners from the Shelby County Penal Farm.

Section 1 of the 230 line trench extended between the L 90 and L 120 lines and was excavated during 1960 by field school students. Section 2 was designated between L 190 and the bluff edge (L 245) and was probably removed during 1960 by the Penal Farm work crew. The initial work in 1961 was designed to complete the trench between L 120 and L 190, connecting the east and west ends by the removal of trench section 3.

The trenching was apparently carried out by excavating rectangular units with mattocks. This is the procedure described for the removal of section 3 (Gates 1961). The units, 5 by 10 feet, were begun by digging a narrow north-south trench along the grid lines at the western margin to a depth of 1.5 feet below the ground surface (three arbitrary 0.5' levels). From here, the levels were consecutively removed by chopping back toward the eastern margin of the unit. This procedure was used in section 3 of the 230 line trench to the L 150 line, at which time the field school crew abandoned the operation for "more productive areas." The entire trench was obviously completed
by 1962, when the south profile drawing was prepared. Gerald Smith (personal communication 1990) suggests that the prisoners probably completed the trenching.

Mattocking was the excavation technique used by both prison and field school crews to remove the mound deposits unless burials were encountered. Upon observing skeletal remains, trowels, cane picks, and brushes were used to clean and pedestal the material for plotting and photographing. There is no mention in any of the extant field notes concerning the use of screens. Some of the photographs of the excavation record screens near the units, but the artifacts recovered indicate to us that these were only sporadically used (i.e., there is a marked lack of small sherds, flakes, or pieces of daub).

**MOUND STRUCTURE AND CHRONOLOGY**

Information on the internal structure and postulated pre-erosional appearance of the unit 4 earthwork is derived primarily from our examination of profile drawings prepared in the field by Rodney Gates and Linda DeLuca. We have also gleaned information from the extant field notes and benefited from conversations with Gerald Smith to fill gaps in our knowledge. Our discussion of the mound chronology is supported by ceramic analysis and recently obtained radiocarbon assays on charred organics from two features.

The generalized 230 line profile (Figure 5) clearly shows that the mound was constructed in stages and that a significant portion of the original mound top has been removed. The bulk of this erosional damage probably occurred when the site was under cultivation prior to 1938. The projected lines above the current mound top represent extrapolations based on the slope of the mantles and fill zones (Figures 5 and 6) and take into account the relative quantity of outwashed fill located on the western margin (Figure 5). Mound height and summit area are merely estimates based on these data and comparison to the physical characteristics of the more pristine unit 5 mound located on the north side of the plaza.

Mound stage A was erected over a midden layer designated stratum III. This stratum designation was used by Nash to refer to any cultural zone immediately overlying subsoil. In most cases this basal deposit is characterized by a preponderance of clay-tempered Baytown pottery and trace amounts of earlier material. Stratum III is thus not considered in this analysis to strictly correspond to any particular site component as currently recognized (see Lumb and McNutt 1988). The ceramics derived from the pre-mound midden are primarily clay-tempered plain types and will be described in a separate artifact section. Stratum III is recognized as the initial cultural deposit underlying the unit 4 mound and extends under, and is apparently mechanically mixed with, the later midden zones on the western side of the mound near the bluff edge. Stratum III is stratigraphically isolated between L 120 and L 190 by the capping of mound stage A. Wood charcoal recovered from a post hole originating in the pre-mound midden deposit and extending into the subsoil was recovered at 231.8 L 163.6 (datum depth 15.4'-16.4') and yielded an uncalibrated radiocarbon age of 1110 ± 70 years: A.D. 840 (Tx 6842). At the one sigma level the calibrated age of the sample has a 90% probability of falling between A.D. 867 and 996 (Stuiver and Reimer 1987). We conclude from this determination that mound building probably post-dates the beginning of the eleventh century A.D.

Stage A is characterized by basket-loaded fill composed of sterile(?) clay/loess and mixed midden soil. Our uncertainty concerning the presence or absence of artifacts in the clay matrix results from general lack of detailed control during the the recovery phase. The original profile,
colored to reflect actual soil shades, shows lenticular individual loads which vary between dark and light. We interpret the darker zones to be midden derived from another location at the site and to be the source of included artifacts.

Stage A appears to have been capped by a lighter and sterile (?) mantle zone. Above this, a dark zone caps the mantle on the eastern flank. This zone is unlabeled on the original profile, but given its appearance and location we interpret it as representing a buried humus layer that may have formed when the mound was not in use. This organic layer is in turn overlain by mound stage B. Stage B appears to have been composed almost completely of sterile clay/loess fill. An unusual aspect of this next phase of earth addition is the appearance of a blue clay fill which extends in an apron around the margin of the mound base and interfaces with the stage B fill further up the mound flank. The 1967 profile prepared along the 225 line shows the blue clay apron thickening and becoming more substantial near the mound's southern margin (see Figure 6) and gives some indication that this may have been a circum-mound feature. Only additional excavation can confirm or refute this speculation. Burials placed upon or partially within this region prior to the loading of additional fill will be discussed in detail in the following section. The surface of stage B also exhibited a darker organic zone, thicker near the the previous mound summit, which we interpret as another buried humus layer.

Mound stage C represents a fairly substantial addition of clay/loess to the earthenwork. Judging from the relationship of the midden and fill zones on the western side of the mound (Figure 5) it appears that the activity associated with the burned floors and daub zones may be slightly earlier or roughly contemporaneous with this loading. Like stage B, the stage C fill appears in the original profile to be consistently composed of sterile fill.

Superimposed on the stage C fill on the eastern mound flank is a band of mixed yellow clay and charcoal. This zone was found to be irregular in its thickness and horizontal extent and produced several burned, hearth-like features. Feature 7, a burned area with curved margins (see Figure 8), was the largest such feature. Feature 7 was only partially excavated and centered at approximately 227 L 117 (datum depth 10' - 11.3'). Charred corn cobs and kernels were recovered from the base of the feature at 226.9 L 119.95. The cobs were submitted for dating and yielded an uncorrected radiocarbon age of 270 ± 70 years: A.D. 1680 (Tx 6843). A necessary correction for C-13 provides a date of 520 ± 70 years: A.D. 1430 (Cree and Long 1986). This uncalibrated date is extremely close to the cluster of recently obtained but as yet incompletely reported dates for other Walls phase features at Chucalissa (Smith 1988). The dating of feature 7 and the nature of the ceramic assemblage from the ash layer immediately above it indicate that both the band of yellow clay and charcoal and the ash layer were deposited at about the same time. The location and nature of the burials found in the upper mound zones also lead us to consider the deposition of these two stratigraphic layers to be closely associated. Terminal use of the mound thus seems to coincide with what Lumb and McNutt (1988) have recently defined as the early segment of the Walls phase.

The final addition to the unit 4 mound consists of a thick and irregular cap of soil heavily mixed with ash and charcoal. This stratum appears to be restricted to the eastern flank of the mound, but since the mound summit has been reduced by erosion we are unable to firmly establish the original extent and distribution of the ash layer. This matrix contained abundant ceramics, fragmented human skeletal remains, and grouped burials (discussed below). Of particular interest is the aboriginal excavation of a deep rectangular pit into the stage C fill which accommodated four individuals. The fill immediately up-slope from this pit shown in the 230 line trench profile
(Figure 5) is interpreted as back dirt from this excavation. Irregularities in the mound surface below this burial feature indicate that the mound surface was substantially modified prior to the final loading of the ash cap.

A stratum similar to the ash layer on the unit 4 mound flank was excavated at the thirteenth century A.D. Beaverdam Creek site in Elbert County, Georgia (Rudolph and Hally 1985:119-122). Termed the "Gray Ashy Layer" by the investigators, this stratum was not a final addition to the mound and was restricted to the mound flank (in this case on the north side). Rudolph and Hally interpreted this zone as a secondary deposit which had originated on the mound summit. They based this conclusion on the distribution of the material and the fact that they considered a primary occupation of the mound slope to have been unlikely. In contrast to the unit 4 ash layer, the "Gray Ashy Layer" contained no human skeletal elements.

It is possible that the unit 4 ash layer also represents a secondary deposit. Like Rudolph and Hally, we are in a poor position to test alternatives because much of the original mound summit has been disturbed. This was the case at Beaverdam Creek as well, but the mound had been much more heavily modified prior to systematic excavation. The ash layer of the Chucalissa mound contained primary inhumations, and we consider this finding to provide strong evidence against an interpretation that the ash layer was secondarily deposited on the mound flank. Disturbance to the upper aspects of some of the skeletons is probably the result of plow damage. Thus the unit 4 ash layer, while superficially similar to the zone on the Beaverdam Creek mound, seems to represent a different kind of mound addition.

While the unit 4 excavation provided clear evidence of the generalized construction stages of the earthwork, it is notable that indications of structures atop the mound were lacking. No daub layers, burned thatch, or obvious postmold patterns were encountered, in marked contrast to the situation atop the unit 5 mound. Paired structures were mapped in this location in association with the latest mound component (Smith 1988). The heavy deflation of the unit 4 mound summit may have contributed to the lack of architectural evidence, but it seems that at least some traces would have been present along the steeper eastern flank if a building had been present on any of the mound stages. Horizontal excavation closer to the original mound center might shed further light on the question of prehistoric structures.

BURIALS

Trenching operations clearly revealed that burials in the unit 4 mound were concentrated in section 1. At the completion of the trench excavation, six burials (B1, 2, 4, 5, 6, and 7) in two clusters had been removed from the upper ash layer of the mound (Figure 7) and three burials (B3, 8, and 9) were recovered from the primary mound fill (Figure 8). Recognition of this distribution prompted additional excavation in 1962, when squares were opened north to the 250 line between L 100 and L 120. The upper ash layer and a portion of the lower mound fill were removed in this region and burials 10a, 10b, and 11 were recorded. After a lull in the work on unit 4, the 1967 field school crew expanded the 230 line trench to the south in an attempt to remove more of the upper ash layer and to recover additional burials (DeLuca 1967). This excavation extended to the 225 line between L 90 and L 110 and was excavated to subsoil. A profile drawing of the south face was prepared. The upper ash layer was then removed in the remainder of units 220 L 100 and 220 L 110. One additional burial (B12) was recovered from the lowest stratigraphic unit.

Initial age and sex assessments for the unit 4 mound burials were made by Nash
(1972:Chart 1). The skeletal material was re-examined by Robinson (1976), who confirmed all of Nash's observations on gender with the exception of burial 10b (cf. Nash 1972:Chart 1 and Robinson 1977:Appendix A) and provided age ranges for each individual. Nine of the 11 burials (82 percent) for which both age and sex could be determined were adult males. This contrasts sharply with 29 percent for adult males in the total burial population of the site and 25 percent in the total non-mound population (Table 1). Adair and Boucher measured the skeletal material and determined that the male burial population of the mound was taller than average for the Chucalissa site (1965:3-4). All of these summary observations on the contrasts between the unit 4 mound burials and the larger village population are interesting and important, but the significance of the differences are difficult to assess given the small sample of individuals from the mound.

We re-examined the skeletal material from the primary burials using Anderson (1962) and Bass (1971) for identification of bone elements. Close attention was paid to pathologies and modifications to the bone. Ubelaker (1978) and Brothwell (1963) were consulted for identification of staining. Our analysis led to the identification of additional bone elements and the recognition of two previously unrecorded worked elements. The original burial forms made frequent reference to charring and copper stains on several of the skeletons, and "green-stained soil" was reportedly included in the fill of several individuals. We observed no copper staining and virtually no burned bone. However, dark mineral staining was observed on several individuals, particularly on the ribs and vertebrae. Descriptive details of the burials are provided in Appendix 1 and discussed by stratigraphic association below.

Remains from the Pre-Mound Midden

Burial 12 was recovered from a puddled blue clay deposit below the mound in stratum III and apparently predates mound construction. This was the only burial recovered in association with the pre-mound midden. No pit was observed during excavation and orientation was east southeast to west northwest. The burial was the fleshted inhumation of an adult female, fully extended on the back. The skull had been crushed post-mortem, and some of the facial bone was turned to the right. Bone preservation was fair and no artifacts were associated.

Remains from the Mound Fill

Four adult male burials were recovered from the mound fill. All were extended, primary inhumations.

Burial 3 was interred in the side slope of mound stage C. Orientation was north northeast to south southwest. No pit was observed. Bone preservation was fair, and the skeleton was essentially complete, missing only a few bones from the hands. The skull had sustained posthumous damage. The left femur exhibited a break with an overlap and healing at the distal end. Interred with this individual were three, possibly four human skulls. The association of the fourth skull is problematic because Nash's (1972:20) description of the location as "under the left foot" differs from the description on the burial form ("below left tibia"). None of the excavation photos (see Nash 1972:Plate 10) show the fourth skull in situ. No other material was associated with burial 3.

Burial 8 was interred without a pit in apparent association with a loaded blue clay zone on the mound stage A mantle (Gates 1961). This individual was located near the region where the
blue clay was interstratified with the upper stage B yellow clay fill, so the precise stratigraphic association of the burial is difficult to reconstruct. Orientation was east northeast to west southwest. Bone preservation was excellent, and the skeleton is virtually complete. The skull and face appear to have been fractured before defleshing, and this may have been the cause of death. No artifacts were associated with this individual.

Burial 9 was interred in an oblong pit with the head turned to the right. Orientation was south southwest to north northeast. Bone preservation was poor. The lower skeleton was cut into during trenching operations. The legs were in the wall of the 230 line trench and were not excavated. The remaining skeletal material was apparently lost around 1961. An excavation photograph shows that the skull was partially crushed, and the original burial form noted charring or staining beneath the ribs on the left side. No artifacts were recovered with this burial. A sample of "greenish-stained earth" found beside the left humerus was taken but was not analyzed.

Burial 11 was excavated from the clay fill below the ash layer in either mound stage B or C. The individual was buried in an oval pit approximately two feet deep, oriented south to north. The left leg was crossed over the right at the ankles. The feet had been disturbed by cultivation and several bone elements were missing. Also missing were the left clavicle and radius, as well as several bones from the hands. The sixth and seventh cervical vertebrae and the third and fourth lumbar vertebrae were ankylosed. A deer ulna awl was associated with the burial.

Remains from the Ash Layer

The interment positions of the eight burials recovered from the ash layer deviate sharply from the extended burials of the mound fill. This deviation implies possible differences in the functions of these burials in mound mortuary ceremonialism. All were apparently fleshed inhumations.

Burial 1 was an adult male interred in a semi-flexed position on the left side, with the pelvis flat on the back. Orientation was southeast to northwest. This burial was much disturbed by tree roots. The skull and torso were fragmentary, and the mandible and right femur were missing. Associated with this individual were an extra right radius and ulna, an extra left clavicle, and a worked human bone. The worked bone was the proximal portion of a right humerus that exhibited rounded and polished edges on the broken end.

Burial 2 was precedent to burial 1. The individual was an adult male interred in a seated (?) position. The skull, torso, and left humerus had eroded away, and the sternum and several ribs were found in the pelvic cage. Two pieces of worked human bone and an extra left radius and ulna were associated with this burial. Like burial 1, this burial contained a worked, apparently use-polished right humerus.

Burials 10a, an adult female, and 10b, a sub-adult, were apparently interred together in a large, irregular, oblong pit and were excavated as one burial. Although most bone elements were present, the burials were fragmented and highly disarticulated. We observed no obvious cut marks or pathologies. Associated with these burials were a projectile point, now missing, and a ceramic discoidal. An extra proximal fibula was recovered with burial 10b. Animal bone, antler fragments, and two lumps of red ochre were recovered from the pit fill. Burials 1, 2, 10a, and 10b were clustered above burial 3.

Burials 4, 5, 6, and 7 were interred together above burial 8 in a large rectangular pit that "appeared to have been cut into the side of the mound and covered with ash and soil” (Gates
1961). Green stains were observed in the pit fill, but no soil sample was taken. Burial 5 was an adult male buried in a seated position with the legs in an extreme flexed position and folded under the pelvis. The right arm extended diagonally under the body, and the left arm extended diagonally over burial 6. The skull was missing, but the mandible was present. The left wing of the pelvis was disarticulated. Mottled mineral staining was observed on several bone elements. Three sherds, all Mississippi Plain var. Chucalissa, were associated with this burial.

Burial 6 was interred in a semi-flexed, reclining (?) position. This adult male was complete except for the skull, although the mandible was present. Several of the bones exhibit mottled staining. A turkey long bone awl and an extra left human radius and ulna were associated with this burial.

Burial 7 represents an adult male interred in a semi-flexed, semi-reclining (?) position. Feet were together and knees exhibited maximum separation. The right leg was on top of burials 5 and 6. At least a portion of all bones were present. Some mineral staining was observed. No artifacts were associated with this burial.

Burial 4 was an adult male interred above burials 5, 6, and 7 before the pit containing those burials was completely refilled (Nash 1972). The individual was buried in a seated (?) position, leaning forward from the waist with the legs drawn up underneath. The face was intact, but the skull was broken up, apparently before defleshing. Dark stains were observed on several ribs and vertebrae. Two vertebrae exhibit possible charring. No artifacts were associated with this burial.

Several aspects of the group burial from the rectangular pit (burials 4 - 7) require comment. First, although the interment positions are consistently described in the early site records as "seated," the possibility that the skeletons settled into these postures over time cannot be ruled out. Because exact information on the depositional context was not recorded during excavation, this alternative cannot be rigorously investigated. The reported artifact associations also pose a problem. Given the tight and overlapping distribution of the skeletons (Figure 7), it seems assumptive to associate specific artifacts found in the pit fill with particular individuals. These should probably be regarded as simply general artifact inclusions.

**Fragmentary Human Remains from the Ash Layer**

Removal of the ash layer on the front section of the mound yielded a substantial number of human skeletal fragments (Figure 9) in addition to the primary interments. At least 420 individual bone elements were recovered during the unit 4 excavations. Seventy seven of these were individually piece plotted (Figure 7), and an additional 103 bone pieces were reportedly plotted within unit 230 L 110. However, the exact coordinates of the bones in 230 L 110 are not in any of the field records that we examined. The 400 ft² area north of the 230 line and west of L 100 yielded 51 individual human bone fragments from the ash. One additional bone has a provenience of "ash layer" only and nine human bones were recorded in the upper stratum during the preparation of the 225 south line profile. Two hundred forty one fragments thus have a secure ash layer association (Table 4). An additional 179 human skeletal fragments are currently curated as part of the unit 4 assemblage, but there is unfortunately no provenience data for any of this material. Our examination of the curated unit 4 artifacts and available excavation records strongly suggests that these bones were also removed from the ash layer, but since no locational data are available, these elements will not receive further detailed attention.

As indicated in Table 4, the human remains from the ash layer consist almost entirely of
cranial fragments. The number of occipitalts in the sample indicates that a minimum of 34 individuals are represented. Most of the larger cranial bones are from adult skulls, and at least two sub-adults are represented. Elements of the arm, hand, leg, and foot are only minimally represented among the group of bones with relatively secure provenience. The significance of the distribution of the fragments across the body should be interpreted with caution, however, because of the large number of elements (n = 179) with no provenience. We recorded 92 bones of the foot and ankle (calcaneus, talus, cuboid, metatarsal, etc.) during our examination of this possibly ash layer associated collection. In general, the fragmentary remains are characterized by an underrepresentation of long bones and a preponderance of elements from the skull and extremities.

Much of the bone is highly weathered and partially exfoliated. Several of the fragments also exhibit rodent gnawing, suggesting that the skeletons (or skeletal parts) of many of the individuals had been exposed for some time prior to deposition in the mound. In contrast, skull fragments from three individuals appeared "fresh," as though defleshing had been recent or possibly incomplete at the time of interment. Other modifications were also observed on the skull fragments of two individuals. One frontal bone exhibited multiple small parallel cut marks. Three conjoinable parietal fragments of another individual had a circular cut about 8 cm in diameter that was ringed by what appeared to be a calcium deposit. One occipital exhibited a partially healed puncture of the outer table. Also of interest is the recovery of an articulated human elbow (distal humerus and proximal radius and ulna) of a young adult located at 232 L 124.6.

Although the precision of the provenience data for the skeletal elements is variable, available locational information does allow for a general reconstruction of the horizontal distribution of the fragments within the ash layer. A density plot of the bones is shown in Figure 10. This plot was produced by first assigning random positions to non-piece plotted elements within the area from which they were recovered. The total number of pieces within a given unit were then associated with the center coordinates of full and partial excavation units. Eight data points were used. A computer program used these eight points to extrapolate a density pattern across the excavation area based on the relative concentrations of the 241 fragments. Figure 10 is thus a plot of density trends rather than a precise isopleth of the bone distribution. The center of the distribution is in unit 230 L 110, and the overall pattern seems to be roughly correlated with the mound contours. The high density area is superimposed on the location of burials 1, 2, and 10 (cf. Figure 7), indicating that this spot on the mound was the depositional focal point for most of the human bone. It is probable that the fall-off pattern of bone density around 230 L 110 is the result of agricultural disturbance to the mound.

ARTIFACTS

A fairly large assemblage was recovered from the mound excavations, but unfortunately only a portion of the artifacts have acceptable provenience. As noted above, there are three mound stages plus an ash layer, as well as the pre-mound midden. Most of the excavated artifacts were not segregated by stratum but by arbitrary levels, if at all. There are large samples that are attributable only to the trench excavation itself. The discussion below relies heavily on that material for which vertical provenience is available. None of the artifacts from mound stages B or C were segregated by stratum, and only a small number can be attributed to mound stage A. Reasonable samples are present for both the ash layer and for stratum III.
Ceramics

A total of 967 ceramic sherds from seven mound proveniences were isolated for analysis (Table 3). Although the sample is rather small, it appears to be adequate for consideration of the relative chronological sequencing of the mound stage additions. These data partially compliment the absolute dates obtained from the two radiocarbon samples.

The ceramic assemblage from the pre-mound midden (stratum III) is dominated by Baytown Plain var. Baytown, with accompanying amounts of various mixed clay/shell (vars. Mitchell and Nickel) and shell-tempered types (vars. Boxtown and Chucalissa) (Table 3). There is a notable absence of Bell Plain var. Bell in this stratum. Also of interest is the presence of one sherd of fiber-tempered Wheeler Plain (Phillips 1970:82), a Late Archaic ceramic type that is extremely rare west of the lower Tennessee River (Mainfort 1985:9). Decorated ceramics from the midden zone (Table 4) consist primarily of red wares on clay-tempered and both fine and coarse shell-tempered pastes. A minority of typical Walls phase decorated types (n = 3) is also represented. Twenty two rim sherds are included in the collection. Eleven are simple, outcurving rims with rounded or flattened lips of Baytown paste. The remainder are undecorated rims of var. Nickel (n = 4), Boxtown (n = 1), Mitchell (n = 4), and Chucalissa (n = 2) paste.

Based on the most recent detailed study of the Chucalissa ceramic complexes (Lumb and McNutt 1988), the assemblage assigned to stratum III appears to be extremely mixed and to posses little analytical integrity. There is no correspondence to the earliest Ensley phase/Baytown ceramic complex that would be expected based on the uncalibrated radiocarbon assay of A.D. 840 for this stratum. The presence of everything from Late Archaic fiber-tempered pottery (ca. 1000 B.C.) to marker decorated types for the Walls component at the site suggests two interpretations: 1) the "stratum III" ceramic collection contains a significant amount of material from higher stratigraphic levels, and 2) stratum III itself does not correspond to a stratigraphically isolated site component, but contains material discarded at the site from the earliest occupation of the bluff-top to some time prior to the 14th century A.D. (cf. Lumb and McNutt 1988:134-135). We are inclined to accept both of these interpretations. The mixture of material from different mound strata is not unexpected given the level of recording and recovery techniques used during the excavation of the mound. Excavations in other site units have also recovered what appear to be mixed ceramic complexes within stratum III, primarily corresponding to the Ensley phase/Baytown and Mitchell phase/Chucalissa-Baytown ceramic complexes (Smith 1972; Lumb and McNutt 1988:119-121; 134-135).

Ceramics recovered from mound stage A exhibit a somewhat different distributional pattern than those attributed to the pre-mound midden zone (Table 3). This small sample (n = 203) shows an obvious preponderance of Baytown Plain var. Baytown (95%) with minor amounts of coarse, shell-tempered (var. Chucalissa) and mixed clay/shell-tempered wares (var. Mitchell). The single decorated sherd (Table 4) is Mississippi Plain var. Mitchell with red paint. Nineteen rim sherds were also recovered. Most are undecorated, straight rims of Baytown paste with rounded or flattened lips (n =17). A thinned and slightly everted rim of var. Chucalissa paste (probably from a small jar) and a plain rim with a flattened lip of var. Mitchell paste were also recovered. In contrast to the stratum III collection, this assemblage does appear to conform to Lumb and McNutt's (1988:119;135) Chucalissa-Baytown ceramic complex and Smith's (1972:v) Mitchell phase.

The ash layer assemblage is dominated by shell-tempered sherds (Table 3). This sample in
gross terms corresponds exactly to the domestic assemblage from level 2 of 560 R 30 (unit 6) at Chucalissa, described by Lumb and McNutt (1988:65) with a ratio of 43:57 for Mississippi Plain
var. Chucalissa to the Bell Plain varieties. One notable difference between these two assemblages is the numerical dominance of Bell Plain var. Bell over var. Nickel (Lumb and McNutt 1988:30-31)--opposite of that found within the domestic assemblage of unit 6. Excluding the minor amount of Baytown Plain var. Baytown, the plainware is essentially evenly split between the varieties of Mississippi Plain and Bell Plain. This conforms to the Chucalissa - Bell I complex described by Lumb and McNutt (1988:120) and the early portion of Smith's Walls phase component (1972:ii). None of the forty four decorated sherds attributable to the ash layer, with the exception of the single piece of Mulberry Creek Cordmarked, are unexpected within the general range of decorated types common to the site (Table 4). All of these are typical late Mississippian types. Thirty two rim sherds included in the collection also show the increased range of variation in rim treatment and decoration typical of Walls phase vessel forms. The ceramic assemblage is completely concordant with the corrected feature 7 radiocarbon assay of A.D. 1430.

Other Selected Artifacts

A sand-tempered discoidal with micaceous inclusions 5 cm in diameter was associated with burials 10a and b. Also recovered from the ash layer was a small clay disc (3 cm), which has an indentation approximately 1 cm. in diameter on one face. In addition, the ash layer yielded 29 pieces of soft-fired untempered clay resembling sherds. Two other clay artifacts with less well-defined provenience were a pottery trowel fragment, 5 cm in diameter, and an unidentified clay fragment which may be either an ear plug fragment or an appendage from a small effigy figurine (cf. Williams and Brain 1983:214-215).

Three lumps of red ochre were associated with burials. Two specimens, now missing, were recovered from the pit fill of burials 10a and b. The third specimen had been placed in the left eye socket of one of the human skulls associated with burial 3 (Nash 1972:20). The only stone tool recovered was a projectile point associated with burials 10a and b. This artifact has been lost.

Two shell artifacts were found during the 1960 excavation. A mussel shell fragment, 5.7 cm long, with a small drilled perforation may have possibly served as an ornament. The other shell object is a hoe (10 cm) with a chipped perforation for hafting (cf. Williams and Brain 1983:283). The upper edge exhibits some wear.

Bone objects comprise the largest number of artifacts from the mound. These artifacts fall into two very distinct categories -- objects manufactured from animal bone and objects made from human bone. Awls are the most common class of animal bone artifacts from the mound. Two basic types were found. A large (19.0 cm.), highly polished awl manufactured from a deer ulna was associated with burial 11. A smaller deer ulna awl was found in the ash layer, and a third example, a distal fragment, was attributed to the mound fill. Also recovered were four awls manufactured from large long bone splinters. The only complete example was manufactured from the tibiotarsus of a turkey, and was associated with burial 6. Two distal fragments, one highly polished, were made from the long bones of birds, and the fourth example was manufactured from the distal end of a deer long bone. These last three were found in the mound fill.

Other animal bone artifacts include a spatulate tool made from a deer ulna and associated with feature 6, a polished deer long bone splinter from the mound fill, and a polished antler tine associated with burials 10a and b. A deer scapula (13.6 cm), cut, drilled, and polished, may have functioned as an ornament. No vertical provenience was recorded for this artifact. The polished
left mandible of a small carnivore and the highly polished left mandible of a deer were found in the mound fill. The latter may have functioned as a sickle (Brown 1964).

As noted in the individual burial descriptions, modified human bone was also recovered during the unit 4 excavations. Associated with burial 1 was the proximal end of a right humerus. The break on the shaft appears worked and rounded. Two worked human bones were associated with burial 2. A highly polished right ulna exhibits three well-defined cut marks on the posterior surface of the proximal end. The cut marks are located directly opposite the semi-lunar notch and show polish on the margins. This artifact was found vertically oriented in the burial, near the left femur. The other worked bone is a broken right humerus with localized polish on the lower part of the bone shaft. The polish is visible on both the outer surface and the cross-section. An excavation photograph shows this artifact located between the right radius and the pelvis. This worked human bone was originally catalogued as a skeletal element.

"Extra" human bone elements were associated with several of the burials. Although it is probable that some of these remains were part of the human bone scatter from the ash layer concentrated near 230 L 110, in several cases deliberate interment with these individuals appears possible. Associated with burial 1 was an extra right radius and ulna and left clavicle. Burials 2 and 6 both contained extra left radii and ulnas. Excavation photographs show these "extras" in articulated positions.

Four human skulls were found with burial 3. At least three of these appear to have been deliberate burial associations. At least one, and possibly all of the skulls were defleshed before interment (Robinson 1977:38). Age and sex determinations for these skulls, referred to as trophies by Nash (1972:20), were made by Robinson (1977:38). Skull T-1, from an adult male (20-25 years), was found on the lower right portion of the rib column. Skull T-2, also an adult male (20-25 years), was located midway on the right femoral shaft of burial 3. This skull had been completely painted with red ochre, and a lump of ochre had been placed in the left eye socket (Nash 1972:20). The base of the skull around the foramen magnum and the lower occiput had been cut away. Two sets of parallel cut marks are visible on the parietal in front of the lamboidal suture in the midline. Skull T-3, a sub-adult (11-14 years), was found on the left tibia just below the knee. This skull was not examined by us, but Robinson noted slight frontal deformation (1977:37). Skull T-4, possibly associated, was an adult female (20-25 years), recovered somewhere near the lower body and under burial 3. Small cut marks were observed on the frontal bone near the left coronal suture of this skull (Robinson 1977:37).

MOUND FEATURES

Several features located near the eastern mound flank were separately excavated by the field crews (see Figures 7 and 8). Our review of the field notes and other records indicates that many of these were associated with the mixed yellow clay and charcoal zone just beneath the ash layer. Feature 1 was encountered at 11.5' below datum and recorded as an oval burned area with no associated artifacts. Feature 2 was also recorded as a burned area (datum depth 12.4') located immediately above the skull of burial 3. Although no artifacts were recovered from this feature, a small collection of partially burned animal bone was located on the periphery of the feature to the east. Feature 3 was a partially excavated oval burned area identified during the initial trench excavation at 14.1' below datum. This stratigraphically deep feature appears to have been associated with the pre-mound midden deposit and reportedly contained a quantity of charred corn.
cobs and cane fragments (now missing). A set of paired post molds (feature 4) were excavated in the line trench just west of and below burial 9. The feature was encountered at 14.1' below datum and descended into the pre-mound midden. Feature 6 was recorded as a small, shallow (ca. 9 cm), oval pit containing five human skeletal fragments, fragmented deer bone, and a single deer bone tool. The largest feature recorded on the eastern mound flank (feature 7) was a large, apparently circular burned area recorded at approximately 10' below datum. Assuming feature symmetry, it appears that about 25% of the area was excavated. Feature 7 was approximately 1' deep and was contained completely within the yellow clay/charcoal zone. As mentioned previously, charred cobs and kernels were recovered, providing the single radiocarbon date for the upper mound fill.

As a group, the features recorded along the eastern flank of the mound are fairly redundant in their physical characteristics and contents (excluding the feature 4 postmolds). They suggest the burning of small fires and perhaps the ceremonial combustion of food near the focal point of mound burials.

SUMMARY AND CONCLUSIONS

Analysis of the material recovered from the unit 4 excavations has revealed that the western circum-plaza earthwork at Chucalissa is in many senses typical of platform mounds distributed across the southeastern United States during the Mississippian period. Mound building commenced atop an intact midden deposit probably associated with pre-eleventh century A.D. occupation of the bluff-top location. Stages were apparently intermittently added to the mound over several centuries and terminated with the capping of the eastern flank, and perhaps other areas of the mound, with a substantial layer of humic ash. This final fill was probably added during the early part of the Walls phase occupation (ca. A.D. 1450) and contained both village refuse, primarily ceramic, and abundant fragmentary human skeletal elements. It is unfortunate that we were unable to provide absolute dates for stage additions which fell between initial mound construction and termination of usage.

The trench and square excavations failed to produce evidence of architectural features near the mound summits or on the flanks. It is entirely possible that plowing and erosion have removed traces of structures since even the earliest summit (stage A) has been truncated. It does seem significant, however, that rubble layers or daub zones which frequently accumulate along mound flanks following demolition of structures were not encountered. We interpret this as tentative evidence that the unit 4 mound may have served a different function in village ceremonial activity, perhaps over an extended period of time. In contrast to evidence produced during the unit 5 mound excavation (Smith 1988), the unit 4 mound yielded numerous burials, indicating that this earthwork was symbolically and physically linked to mortuary activity associated with final disposal of a segment of the village population.

Burial patterning indicates that disposal practices changed over time at this location, and that in some respects they reflect temporal changes seen in the burial population from the larger non-mound areas. The most obvious shift is in interment position: extended burials are associated with earlier occupational episodes while bundle and secondary burials occur later during the Walls phase. There are also some important spacial distinctions, particularly the occurrence of group burials and scattered human skeletal fragments in the last mound stratum. These burial forms are unique to unit 4. Extended burials found in the earlier fill zones of the mound are quite comparable to those recovered in domestic areas of the site near loci of repeated house construction (family
cemeteries?), especially in units 2, 3 and 6 (Nash 1972:19-21). In other site areas, excavated bundle burials and pits containing ceramic vessels but lacking skeletal remains clearly indicate that a mortuary program oriented toward reprocessing and possible temporary maintenance in a charnel house existed at the site. Some of the latest unit 4 mound interments seem to reflect the final stage of a charnel house processing program, and the implications of deliberate segregation of body parts and overrepresentation of parts from the skull and extremities are particularly suggestive (cf. Brown 1971:79). Although these data are complimentary and highly indicative of a charnel house processing program, the processing facility has not yet been firmly identified. Smith's (1988) recent summary of the unit 5 architectural data suggests a charnel house identification for the eastern structure atop the latest mound stage, but he prudently avoids speculating on the function given incomplete excavation of the area.

The association of group burials and fragmented skeletal elements in the last mound lens suggests behavioral interpretations consistent with ideas advanced by Knight (1986) concerning the late prehistoric organization of Mississippian religious institutions. With specific reference to the Walls phase manifestations of the central Mississippi valley, Knight (1986:682-683) offers the following observation of temporal shifts in elite and communal contexts of various Mississippian sacra:

In chronological perspective, archaeological and ethnohistorical data indicate that a substantial proportion of the sacra formerly held under exclusive chiefly cult prerogatives during early and middle Mississippian times later became somehow "communalized" in certain contexts. This process of communalization indeed may have begun prior to European contact. For example, a wide variety of iconography clearly assignable by context to the warfare/cosmogony complex appears in some late Mississippian and Protohistoric cultures in the very commonplace medium of incised or engraved decoration on pottery. This is especially true of Moundville III (Steponaitis 1983) and later Alabama River phase (Sheldon 1974) and Pensacola (Fuller and Stowe 1982) manifestations in the Alabama area, and of the Walls-Nodena sphere (Phillips et al. 1951) in the Mississippi Valley. The zenith of chiefly co-opting of warfare/cosmogony seems to have occurred only briefly during A.D. 1200-1350.

These observations are consistent with the nature of mound-related mortuary program as revealed through the unit 4 excavations. Clearly distinct individual and group burials, individuals showing evidence of skeletal damage possibly related to violence (Lahren and Berryman 1984), the incorporation of fragmented elements, and the association of the burials with a presumably communally deposited mound addition all point to a general communal context for the unit 4 mound and the mortuary activities that took place upon it. The implications for a charnel house processing program reserved for a portion of the village population, presumably those of higher social status, is reinforced by other evidence from the site. The presence of empty graves and functionally distinct paired structures atop the unit 5 mound are certainly complimentary (cf. Smith 1988). Demonstrated sex ratio and physical variation in the unit 4 and non-mound village burial population also supports such an interpretation (Dye 1976; Lahren and Berryman 1984:17).

Perhaps influenced by accounts of other mound excavations at larger sites with slightly earlier Mississippian components (Brown 1971; Hatch 1976; Larson 1971; Lewis and Kneberg 1946; Peebles 1971, and others), some have anticipated the recovery of certain high status artifacts from both of the Chucalissa mounds, and been surprised when these were not forthcoming (Smith
1988:3). Although differential status has been assumed based on the recovery context of burials at the site, none of the exotic regalia that many associate with the Mississippian elite have been recovered at Chucalissa. This has in turn led to the speculation that the "truly elite" segment of the Chucalissa village population has yet to be discovered or that the "rulers may well have been buried with the society-wide elite at the main Walls center rather than at Chucalissa" (Smith 1988:13). The evidence from unit 4, however, clearly suggests rather dramatic distinctions in the small burial population from the latest stratum of the mound (see also Lahren and Berryman 1984), particularly in terms of the comparatively high frequency of unusual grave inclusions such as worked, curated, and unmodified human bone. When seen in the context of temporal shifts in the organization of Mississippian religion outlined by Knight, the evidence from unit 4 provides compelling evidence of the communalization of elite mortuary ceremonialism characteristic of late period in the central Mississippi valley.
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Hatch, James W.

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Stuiver, M., and P. J. Reimer

Ubelaker, Douglas H.

Williams, Stephen, and Jeffrey P. Brain
FIGURE CAPTIONS

1. The location of the Chucalissa site in southwestern Tennessee.

2. The mound and plaza complex at Chucalissa and excavation areas, 1940 - 1987. Based on a contour map prepared by Charles Nash in 1955. Contour interval is two feet (0.61 m).

3. View to the southwest of the unit 4 mound immediately after clearing in 1955.

4. Contour map of the unit 4 mound showing location of excavated area. Based on a field map prepared by Charles Nash circa 1959. Elevation in feet AMSL.

5. South profile of the 230 line trench.

6. Extrapolated west profile along the L 116.2 line. Based on field drawings of the 225 and 230 lines prepared by L. DeLuca and R. Gates.

7. Locations and orientations of burials and features from the ash layer. Diamonds indicate locations of individually piece plotted human skeletal elements or element groups.

8. Locations and orientations of burials and features from the lower mound fill zones.

9. View to the west of unit 4 upper stratum (ash layer) showing concentration and distribution of human skeletal parts along the eastern mound flank.

10. Extrapolated density plot of human skeletal fragments in the unit 4 ash layer.
TABLES
Table 2. Summary of Human Skeletal Fragments Recovered from the Unit 4 Mound Ash Layer.

<table>
<thead>
<tr>
<th>Body Part</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cranial Fragments:</strong></td>
<td></td>
</tr>
<tr>
<td>Sphenoid (1 right, 1 left)</td>
<td>2</td>
</tr>
<tr>
<td>Maxilla</td>
<td>1</td>
</tr>
<tr>
<td>Mandible (4 complete, 3 right fragments)</td>
<td>7</td>
</tr>
<tr>
<td>Frontal</td>
<td>17</td>
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<tr>
<td>Parietal (side indeterminate)</td>
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</tr>
<tr>
<td>Right Parietal</td>
<td>32</td>
</tr>
<tr>
<td>Left Parietal</td>
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</tr>
<tr>
<td>Right Temporal</td>
<td>2</td>
</tr>
<tr>
<td>Left Temporal</td>
<td>1</td>
</tr>
<tr>
<td>Occipital</td>
<td>34</td>
</tr>
<tr>
<td>Left Malar</td>
<td>3</td>
</tr>
<tr>
<td>Individual Teeth</td>
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</tr>
<tr>
<td>Miscellaneous Unidentified Fragments</td>
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</tr>
<tr>
<td><strong>Upper Body:</strong></td>
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<tr>
<td>Rib Fragments</td>
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<tr>
<td>Right Humerus (1 distal, 2 complete)</td>
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</tr>
<tr>
<td>Left Humerus (complete)</td>
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</tr>
<tr>
<td>Right Radius (1 distal, 1 proximal)</td>
<td>2</td>
</tr>
<tr>
<td>Left Radius (1 proximal, 1 complete)</td>
<td>2</td>
</tr>
<tr>
<td>Right Ulna (proximal)</td>
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</tr>
<tr>
<td>Carpal</td>
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</tr>
<tr>
<td>Metacarpal (RII, RIV)</td>
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<tr>
<td>Phalanges (fingers)</td>
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<tr>
<td><strong>Lower Body:</strong></td>
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</tr>
<tr>
<td>Lumbar Vertebra (fragment)</td>
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</tr>
<tr>
<td>Right Ilium (fragments)</td>
<td>2</td>
</tr>
<tr>
<td>Left Femur (1 medial, 1 distal)</td>
<td>2</td>
</tr>
<tr>
<td>Patella (1 left, 1 right)</td>
<td>2</td>
</tr>
<tr>
<td>Right Tibia (complete)</td>
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</tr>
<tr>
<td>Left Tibia (proximal)</td>
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</tr>
<tr>
<td>Right Fibula (complete)</td>
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</tr>
<tr>
<td>Left Tarsal</td>
<td>2</td>
</tr>
<tr>
<td>Metatarsal (1 LI, 2 LIII)</td>
<td>3</td>
</tr>
<tr>
<td>Phalanges (toes)</td>
<td>1</td>
</tr>
<tr>
<td><strong>Unidentified Fragments</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>241</td>
</tr>
</tbody>
</table>
Table 3. Stratigraphic Distribution of Selected Ceramics Recovered from the Unit 4 Mound.

<table>
<thead>
<tr>
<th>Provenience</th>
<th>Ceramic Type</th>
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<tbody>
<tr>
<td>Ash Layer</td>
<td>35</td>
</tr>
<tr>
<td>Stage A Mound Fill (230 L 150, Level 4)</td>
<td>30</td>
</tr>
<tr>
<td>Stage A Mound Fill (230 L 150, Levels 6-9)</td>
<td>162</td>
</tr>
<tr>
<td>Stage A Subtotal</td>
<td>192</td>
</tr>
<tr>
<td>Stratum III (225 Line)</td>
<td>37</td>
</tr>
<tr>
<td>Stratum III (230 L 130-150, DD 14.4'-Subsoil)</td>
<td>47</td>
</tr>
<tr>
<td>Stratum III (230 L 140-170, Levels 14-17)</td>
<td>49</td>
</tr>
<tr>
<td>Stratum III (230 L 200-240)</td>
<td>79</td>
</tr>
<tr>
<td>Stratum III Subtotal</td>
<td>212</td>
</tr>
</tbody>
</table>

* Includes one unidentified plainware sherd from the ash layer and one fiber tempered Wheeler Plain sherd from stratum III.
Table 4. Stratigraphic Distribution of Selected Decorated Ceramics Recovered from the Unit 4 Mound.

<table>
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<tr>
<th>Ceramic Type</th>
<th>Count</th>
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</thead>
<tbody>
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<td></td>
</tr>
<tr>
<td>Body Sherds:</td>
<td></td>
</tr>
<tr>
<td>Parkin Punctated</td>
<td>17</td>
</tr>
<tr>
<td>Barton Incised</td>
<td>1</td>
</tr>
<tr>
<td>Ranch Incised</td>
<td>2</td>
</tr>
<tr>
<td>Rhodes Incised</td>
<td>4</td>
</tr>
<tr>
<td>Fortune Noded</td>
<td>1</td>
</tr>
<tr>
<td>Walls Engraved</td>
<td>2</td>
</tr>
<tr>
<td>Hull Engraved</td>
<td>1</td>
</tr>
<tr>
<td>Old Town Red</td>
<td>3</td>
</tr>
<tr>
<td>Nodena Red and White</td>
<td>4</td>
</tr>
<tr>
<td>Mulberry Creek Cordmarked</td>
<td>1</td>
</tr>
<tr>
<td>Unclassified Incised</td>
<td>6</td>
</tr>
<tr>
<td>Unclassified Engraved</td>
<td>1</td>
</tr>
<tr>
<td>Handles:</td>
<td></td>
</tr>
<tr>
<td>Punctated with Incised Face</td>
<td>1</td>
</tr>
<tr>
<td><strong>Stage A Mound Fill (all proveniences):</strong></td>
<td></td>
</tr>
<tr>
<td>Body Sherds:</td>
<td></td>
</tr>
<tr>
<td>Old Town Red</td>
<td>1</td>
</tr>
<tr>
<td><strong>Stratum III (all proveniences):</strong></td>
<td></td>
</tr>
<tr>
<td>Body Sherds:</td>
<td></td>
</tr>
<tr>
<td>Larto Red</td>
<td>2</td>
</tr>
<tr>
<td>Old Town Red</td>
<td>7</td>
</tr>
<tr>
<td>Parkin Punctated</td>
<td>1</td>
</tr>
<tr>
<td>Kent Incised</td>
<td>1</td>
</tr>
<tr>
<td>Walls Engraved</td>
<td>1</td>
</tr>
<tr>
<td>Unclassified Incised</td>
<td>1</td>
</tr>
</tbody>
</table>
FIGURES
Figure 2

The mound and plaza complex at Chucalissa and excavation areas, 1940-1967, based on a contour map prepared by Charles Nash in 1955. Contour interval is two feet.
Figure 4. Contour map of Unit 4 mound showing location of excavated area. Based on map prepared by C.H. Nash ca. 1950, elevation in feet AMSL.
Figure 5. 230 Line Trench Profile.

* NEED TO MAKE GOOD PATT
FIG. 6

- Datum Depth (ft)
  - 5
  - 6
  - 7
  - 8
  - 9
  - 10
  - 11
  - 12
  - 13
  - 14
  - 15
  - 16

- Depth
  - 225
  - 230

- Layer Descriptions
  - Plow Zone
  - Ash Layer
  - Buried Humus
  - Yellow Clay with Charcoal/Ash
  - Mound Fill
  - Premound Midden
  - Subsoil
Figure 5. Locations and orientations of mounds and features in the mound hill.

*Need to make PMT*
NOTES

1. The site grid system has its origin south of the village plaza with the north-south axis essentially bisecting the primary unit 5 mound. Points north of the origin have positive values while points south are negative. Points west of the north-south grid axis are preceded by the letter "L" (left) and points to the east of this by the letter "R" (right). In this paper, we use the converted grid designations made by Gerald Smith, which are based on 1' units rather than Nash's original 10' units. Thus, in our area of interest the point 230 L 90 in unit 4 is 230' north and 90' west of the origin. Individual squares are 10' on a side and are identified by the coordinates of the southwest corner stake.

Nash (1972:6) originally listed the site datum as having an elevation of 333.1' AMSL. This elevation was adopted by Lumb and McNutt (1988:5) and by us in the preparation of the figures included in this paper. It has since come to our attention that mapping work done in 1970 determined the site datum to be 324.33' AMSL. We regret this nearly seven foot discrepancy, but have maintained the older figure. Excavation levels measured as to their depth below datum will of course be unaffected.
APPENDIX 1: Descriptions of Unit 4 Burials

Burial 1
Location: Horizontal: 234.0 L 104.0  
   Datum Depth: 12.2'  
   Stratum/Layer: Ash layer
Age/Sex: Adult (30-35)/Male
Preservation: Fair
Orientation: SE - NW
Pit: None apparent
Grave Dimensions: Not known
Position: Semi-flexed on left side, pelvis flat on back
Completeness: Mandible, right humerus, and right femur missing; skull and torso fragmentary
Associated Material: Human bone; distal end of right humerus, worked and polished; right radius and ulna; left clavicle
Comments: The skull and torso of this individual were much disturbed by tree roots and rodents. A probe hole is located on the distal end of the right tibia. No evidence of charring or copper or other mineral staining was observed.

Burial 2
Location: Horizontal: 232.0 L 104.1  
   Datum Depth: 12.5'  
   Stratum/Layer: Ash Layer
Age/Sex: Adult (33-38)/Male
Preservation: Good
Orientation: N/A
Pit: None apparent
Grave Dimensions: Not known
Position: Semi-flexed (seated?)
Completeness: Skull, torso, and left humerus eroded away; sternum and some ribs found in pelvic cavity.
Associated Material: Human bone; left radius and ulna; highly polished right ulna; right humerus with localized polish.
Comments: Burial 2 was precedent to Burial 1. The pelvic position and the manner in which the sternum and ribs had fallen into the pelvic cavity indicate a seated position for this individual (Nash 1972), however, the precise interment position cannot be identified with certainty. No pathologies or modifications were observed.

Burial 3
Location: Horizontal: 233.6 L 106.5 (pelvis)  
   Datum Depth: 13.2'  
   Stratum/Layer: Yellow Clay fill, Mound Stage C
Age/Sex: Adult (40-45)/Male
Preservation: Fair
Orientation: NNE - SSW
Pit: None apparent
Grave Dimensions: 5.4' x 1.7'
Position: Extended, on back
Completeness: Left ulna broken; pelvis and right scapula fragmentary; fourth metacarpal and third carpal of right hand and 3 carpals from left hand missing
Associated Material: 3, possibly 4 human skulls
Comments: This individual was interred in the side slope of mound stage C. The skull was complete, but face and skull had sustained some posthumous damage. The individual had a very large wormian bone, and the lower jaw was strongly everted at the gonial angle. The left femur exhibited a fracture with an overlap and healing at the distal end.

**Burial 4**
Location: Horizontal: 230.0 L 115.0
Datum Depth: 10.1' (shoulder)
Stratum/Layer: Ash layer
Age/Sex: Adult (35-40)/Male
Preservation: Good
Orientation: N/A
Pit: Rectangular
Grave Dimensions: 4' x 3.3' x 0.8'
Completeness: Complete except for mandible and part of skull; some skull fragments in the rib cage.
Associated Material: None
Comments: This individual was possibly interred in a seated position, leaning forward from the waist with the legs drawn up underneath. Some shifting of bone position occurred during decomposition. The facial bone is intact, but the skull is broken into many small fragments. Whether this fracture occurred before or after defleshing is not known, but this burial was not disturbed by cultivation or tree roots. Dark localized staining was observed on several ribs and vertebrae. Two vertebrae exhibit possible charring. Burial 4 was located above burials 5, 6, and 7 in the same pit.

**Burial 5**
Location: Horizontal: 229.0 L 115.8
Datum Depth: 12.1'
Stratum/Layer: Ash layer
Age/Sex: Adult (20-25)/Male
Preservation: Fair
Orientation: N - S
Pit: Rectangular
Grave Dimensions: 4.0' x 3.3' x 0.8'
Position: Semi-flexed (seated?)
Completeness: Skull missing; remainder of skeleton including mandible present.
Associated Material: 3 sherds, Mississippi Plain var. Chucalissa
Comments: This was the western-most burial of three interred together in a rectangular pit (see burials 6 and 7). The individual was possibly buried in a seated position with the legs in an
extreme flexed position and folded under the pelvis. Like the other individuals in this pit, the apparent "seated" position may be the result of settling of the skeletal elements. The right arm was extended diagonally under the body, and the left arm was extended diagonally over burial 6. The left wing of the pelvis was disarticulated. Mottled mineral staining was observed on several bones.

**Burial 6**
Location: Horizontal: 229.0 L 114.3 (pelvis)
Datum Depth: 12.3'
Stratum/Layer: Ash layer
Age/Sex: Adult (25-30)/Male
Preservation: Fair
Orientation: N - S
Pit: Rectangular
Grave Dimensions: 4.0' x 3.3' x 0.8'
Position: Semi-flexed (reclining?)
Completeness: Complete except for skull; mandible present.
Associated Material: Human left radius and ulna; long bone awl (turkey tibiotarsus).
Comments: This individual was the center burial in a rectangular pit cut into the side of the mound and covered with ash and soil (see burials 5 and 7). Mottled mineral staining was observed on several bones, and some of the ribs exhibit possible charring. Gates (1961) noted "green flecks" in the pit fill, but no soil sample was taken.

**Burial 7**
Location: Horizontal: 229.0 L 113.5
Datum Depth: 11.9'
Stratum/Layer: Ash layer
Age/Sex: Adult (25-30)/Male
Preservation: Fair
Orientation: N - S
Pit: Rectangular
Grave Dimensions: 4.0' x 3.3' x 0.8'
Position: Semi-flexed (semi-reclining?)
Completeness: At least a portion of all bones present and apparently articulated.
Associated Material: None
Comments: The individual was interred in the eastern edge of the rectangular pit with legs flexed. Feet were together and knees exhibited maximum separation. The right leg extended over burials 5 and 6. Gates (1961) noted green stains on the bone, but none were observed by us. However, several bones exhibited other mineral staining.

**Burial 8**
Location: Horizontal: 231.0 L 109.7 (skull)
Datum Depth: 13.4'
Stratum/Layer: Yellow Clay Fill/Blue Clay, Mound Stage A Mantle (?).
Age/Sex: Adult (35-40)/Male
Preservation: Excellent
Orientation: ENE - WSW
Pit: Possibly, but no details on burial form
Grave Dimensions: 5.7' x 1.6'
Position: Extended, on back
Completeness: Complete except possibly some small skull fragments; face and skull highly fractured.
Associated Material: None
Comments: This individual was interred in association with a loaded blue clay zone on the mound stage A mantle surface, prior to the loading of mound stage B. Bone preservation is excellent with delicate facial bone virtually complete and hyoid present. The skull and face appear to have been fractured before defleshing, and this fracturing appears to have been the cause of death. Thoracic vertebrae and several ribs exhibit possible mineral staining. No modifications or obvious pathologies were observed on the long bones.

**Burial 9**
Location: Horizontal: 233.0 L 120.0
Datum Depth: 12.7'
Stratum/Layer: Not known
Age/Sex: Adult/Sex Indeterminate
Preservation: Poor
Orientation: SSW - NNE
Pit: Oblong
Grave Dimensions: 5.6' x 1.5' x 0.4'
Position: Extended, on back, head turned right
Completeness: Not known
Associated Materials: None
Comments: The skeleton was cut into during trenching operations, and part of the right side was destroyed. An excavation photograph shows the skull partially crushed. The lower legs were located in the wall of the trench and were not excavated. The recovered skeletal material was lost circa 1961, and, therefore, was not examined by us. The burial form indicated some charring or staining beneath the ribs on the left side. A sample of "green-stained soil" found beside the left humerus was taken but never analyzed.

**Burials 10a and 10b**
Location: Horizontal: 237.0 L 102.0 (center of scatter)
Datum Depth: 10.6' - 12.3'
Stratum/Layer: Ash layer
Age/Sex: (a) Adult (30-35)/Female; (b) Sub-adult (12-13)/Sex indeterminate.
Preservation: Excellent
Orientation: Not known
Pit: Irregular (oblong)
Grave Dimensions: 6.8' x 5.0'
Position: Partially disarticulated
Completeness: See Comments
Associated Material: Ceramic discoidal; projectile point; non-human bone fragments, 2 antler
fragments, and 2 lumps of red ochre; extra proximal human fibula associated (?) with 10b.
Comments: The individuals represented by burials 10a and 10b were interred together in an
irregular, oblong pit. These were apparently fleshed interments, but both skeletons were highly
disarticulated. No obvious cut marks, plow scars, or pathologies were observed on either
individual. The following bones are present:

**Burial 10a** - Skull fragments: frontal with left sphenoid; parietal with temporal
juncture; 2 miscellaneous skull bones (highly weathered); mandible with abscess,
left rear, plus 11 teeth; left and right clavicles; left and right scapulae, fragmented;
miscellaneous vertebrae; miscellaneous ribs; pelvis; sacrum; left and right humeri;
right radius/ulna; left and right femurs; left and right tibiae/fibulae; miscellaneous
foot bones

**Burial 10b** - Mandible; 6 teeth; left and right clavicles; scapulae fragments (2);
miscellaneous vertebrae; miscellaneous ribs; pelvis fragments (3); left and right
humeri; left and right radii/ulnas; left and right femurs; left and right tibiae; left and
right fibulae (both proximals + 1 shaft); calcaneum with large probe hole (ca. 1 cm)

**Burial 11**
Location: 243.4 L 102.0
Datum Depth: ca. 12.0' - 14.0' (incorrectly listed as 19.5' on original burial form)
Stratum/Layer: Clay fill below ash layer, Mound Stage B or C.
Age/Sex: Adult (28-33)/Male
Preservation: Good
Orientation: S - N
Pit: Oval, ca. 2.0' deep
Grave Dimensions: ca. 2.2' x 5.5'
Position: Extended, on back, head turned to right; legs crossed at ankles (left over right)
Completeness: Complete except for left clavicle, left radius, and several hand and foot bones.
Associated Material: Deer ulna awl, highly polished, near left humerus.
Comments: The skeleton of this individual is particularly clean and lacks in mineral stains. Feet
were disturbed by cultivation. Pathologies include ankylosed sixth and seventh cervical vertebrae
and third and fourth lumbar vertebrae.

**Burial 12**
Location: 226.7 L 114.48 (pelvis)
Datum Depth: 14.4'
Stratum/Layer: Blue Clay, Stratum III
Age/Sex: Adult (28-33)/Female
Preservation: Fair to poor
Orientation: ESE - WNW
Pit: None apparent
Grave Dimensions: Not known
Completeness: Essentially complete; skull crushed post-mortem.
Associated Material: Charred nut.
Comments: The skull was crushed post-mortem and parts of the facial bone were turned to the right. The bone was apparently quite soft in the ground and split from drying too quickly. No pathologies were observed. The burial pit was within the stratum III (pre-mound) midden and the skeleton was lying in a heavy puddled blue clay deposit.