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ONE HUNDRED YEARS OF ARCHAEOLOGY AT GORDONTOWN: A FORTIFIED MISSISSIPPIAN TOWN IN MIDDLE TENNESSEE

Michael C. Moore, Emanuel Breitburg,
Kevin E. Smith, and Mary Beth Trubitt

Archaeological research on Mississippian culture in Tennessee's Middle Cumberland region during recent years has provided a revised chronological sequence as well as new information about settlement shifts. Excavations at one fortified Mississippian town, Gordontown, and a reanalysis of past site investigations from the late nineteenth and early twentieth centuries indicate the site area included one platform mound, a substantial burial mound, and a sizable habitation zone enclosed by a palisade with bastions. Radiocarbon assays and ceramics conclusively date this site occupation to the Thruston regional period (A.D. 1250–1450). Mortuary and other analysis results reveal a dynamic, yet somewhat stressed, native population within the Middle Cumberland River Valley.

As research builds on Mississippian period societies across the Southeast, archaeologists are exploring the variation in cultural adaptations through time and between regions. Detailed reconstruction of the archaeological sequences within regions is producing information on the developmental histories of specific chiefdoms, both at the major centers of Cahokia, Moundville, Etowah, and Spiro, and at smaller polities. From the perspective of the middle Cumberland region of central Tennessee, interregional comparisons have focused on the better known Mississippi River Valley and East Tennessee. Recent archaeological work and publications have filled some gaps for lesser-known areas such as western Kentucky (e.g., Hammerstedt 2005; Wesler 2001), eastern Kentucky (e.g., Jefferies et al. 1996), and southern Tennessee/northern Alabama (e.g., Welch 1998, 2005).

The significant Mississippian period occupations in the middle Cumberland region have been underrepresented in the literature, although recent research has led to a revised chronological sequence as well as new information about settlement shifts and the health status of resident populations. Here, we focus on one fortified Mississippian town, Gordontown, where excavations during the 1980s and a reanalysis of older site investigations show a community plan with a platform mound, a burial mound, and a residential area enclosed by a bastioned palisade. Gordontown's occupation dates to the Thruston regional period (A.D. 1250–

1450), a time when populations at this and other sites in the middle Cumberland River Valley were stressed and social conflict was a factor.

Mississippian Culture in the Middle Cumberland Region

Researchers have recognized a discrete Mississippian culture within the Cumberland River drainage of Tennessee and Kentucky for many years (Bushnell 1920; Holmes 1903; Phillips et al. 1951; Putnam 1878; Thomas 1894; Walthall 1980). Until recently, systematic efforts to define boundaries for this cultural manifestation were rather limited. Most studies focused on one aspect, stone-lined graves, as the defining characteristic of the region's culture.

Attention to stone-lined graves was initiated in the antiquarian reports on the Cumberland River Valley in Middle Tennessee (Haywood 1823; Jones 1876; Putnam 1878; Thruston 1897). These works established a pattern of interest in stone-lined graves that dominated archaeological research for many decades. For example, Gates P. Thruston opened his classic *Antiquities of Tennessee* with "The prehistoric cemeteries of the Stone Grave race of Tennessee are among the most interesting memorials of aboriginal life in America" (Thruston 1897:1). Also, Cyrus Thomas noted that "the characteristics which distinguish this district as a whole . . . [include] the general distribution and large number of stone graves" (1894:576).

Archaeological literature during the first half of the twentieth century continued to define Mississippian peoples living in the Cumberland Valley primarily by their mortuary practices. William E. Myer inadvertently set this course with his 1920 excavations of the Fewkes and Gordon (Gordontown) sites (Myer 1928). Although Myer recognized the importance of mounds, houses, and domestic artifacts from these sites, he also defined two "related tribes" in the region (Fewkes people and Gordon people) based upon slight differences in stone-box burial modes. Subsequent researchers cited Myer's work to define groups within the Cumberland Valley of Tennessee, often using stone graves as the focal characteristic (Cole 1951; Funkhouser and Webb 1931a, 1931b; Kneberg 1952; Webb and Funkhouser 1929, 1933; Willey 1966).

The term *Middle Cumberland Culture* was introduced in an edited volume that focused upon stone-box graves and associated mortuary goods removed from two

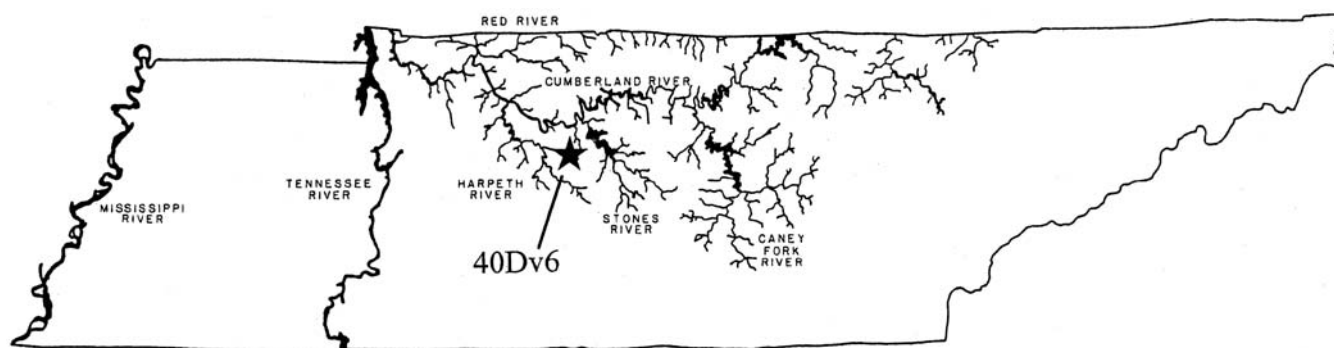


Figure 1. Gordontown site location.

Nashville-area Mississippian villages (Arnold and Ganier) during subdivision development (Broster 1972; Ferguson 1972). Unlike previous works, this volume defined the culture as extending from “the confluence of the Caney Fork River and the Cumberland on the east, and the junction of the Cumberland and Ohio Rivers on the west” (Ferguson 1972:3). The term *Middle Cumberland Culture* soon became synonymous for Mississippian groups in the middle Cumberland River Valley of Middle Tennessee.

Throughout the 1970s and 1980s, studies of middle Cumberland Mississippian sites began to move toward more synthetic analyses of Mississippian culture (Autry 1983, 1985; Broster 1988; Buikstra et al. 1988; Butler 1981; Eisenberg 1986; Klippel and Bass 1984; O’Brien 1977). These works examined various aspects including site types and hierarchies, site location and distribution, diet, and paleopathology. Such studies represented an important shift from previous reports that had provided “relatively little cultural information” (Brown 1981:2).

Building upon this new direction in Mississippian studies, the Middle Cumberland Culture concept underwent a major renovation in the early 1990s (Smith 1992). An integral part of this change involved the establishment of new boundaries based more upon the distribution of ceramic traits than stone-box graves (Smith 1992; Smith and Moore 1996). After some revision, the middle Cumberland region is now defined

as the Cumberland River drainages between the confluence of the Caney Fork and Cumberland Rivers to the east and the confluence of the Red and Cumberland Rivers to the west (see Figure 1). The core of this redefined region falls within the Central Basin physiographic province, an elliptical depression divided into inner and outer sections (Figure 2). The outer basin has higher elevations and more deeply dissected terrain in contrast to the generally smoother and gently rolling inner basin (Miller 1974). The adjacent Highland Rim physiographic province surrounds the Central Basin, and is characterized by higher elevations with a more dissected and rolling terrain.

The variety of Mississippian site types identified within the middle Cumberland study area include (1) resource acquisition camps, (2) single structures interpreted as seasonal agricultural stations, (3) single structure farmsteads, (4) hamlets consisting of one to five structures, (5) villages, and (6) towns, defined as permanent settlements often exhibiting one or more platform mounds (Autry 1983; Broster 1988; Smith 1992; Smith and Moore 1996). These site types were incorporated within a cultural chronology that illustrated changing patterns within the redefined middle Cumberland region during the late prehistoric period, circa A.D. 1000–1450 (Smith 1992; Smith and Moore 1994, 1996, 2005). Smith (1992) initially classified the growth and florescence of middle Cumberland Mississippian

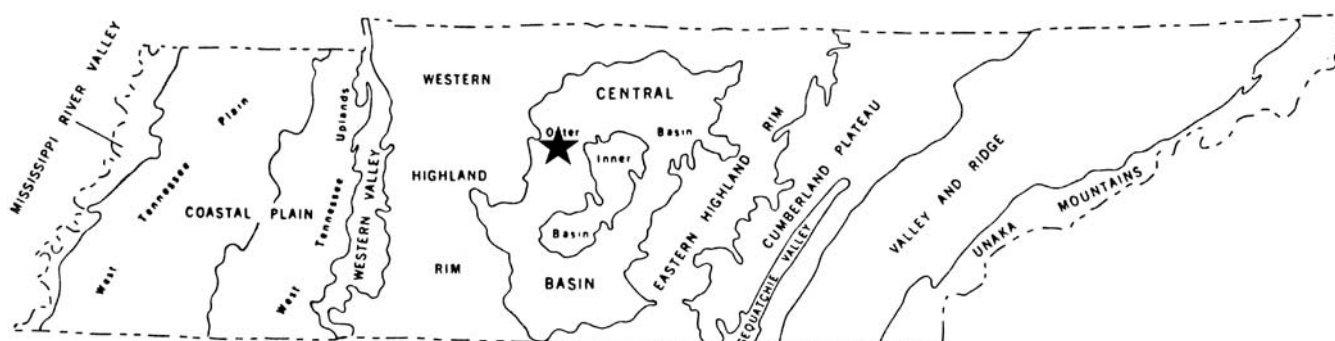


Figure 2. Physiographic province setting.

groups within the temporal framework of two distinct phases, Dowd (A.D. 1050–1250) and Thruston (A.D. 1250–1450). These phase designations were tweaked using radiocarbon dates and artifact assemblages from subsequent site research over the past decade (Barker 2005; Jones 2001; Moore 2005; Moore and Breitburg 1998; Moore and Smith 2001; Smith 1993, 1994; Smith and Moore 1994, 1999; Smith et al. 1993; Walling et al. 2000). Recent discussions about the framework of chronological sequences have led to a redefinition of the Dowd and Thruston “phases” into the Dowd and Thruston “regional periods” (King 2003; Smith and Moore 2005).

The Dowd regional period represents an initial mound-building period, starting roughly A.D. 1050, during which most of the Mississippian population was dispersed into small farmsteads and hamlets oriented toward a central town with platform mounds (Norton and Broster 2004; Smith and Moore 1994, 1996; Smith et al. 1993). This proposed relationship of mound construction and population dispersal suggests the existence of several relatively stable and (perhaps rapidly) growing chiefdoms within the middle Cumberland region. The origins of these chiefdoms are difficult to interpret at this time, in large part due to the absence of evidence for substantive Late Woodland populations in the region. However, this apparent lack of occupation likely provided the opportunity for Mississippian populations to quickly develop and expand.

The succeeding Thruston regional period denotes a time, beginning around A.D. 1250, in which area populations began moving away from dispersed sites and settling into larger villages and towns. Construction and renovation of platform mounds seems to have ended for the most part. Some Dowd period mound centers appear abandoned during this time, whereas others were converted into settlements functionally the same as newly founded villages. The larger, nucleated Thruston settlements often built substantial palisades (with bastions) around their perimeters. Farmsteads and hamlets do not disappear during this period but are substantially reduced in number and distribution. The Thruston regional period lasts until circa A.D. 1450. After this time, the native inhabitants essentially abandon the middle Cumberland River Valley. The reasons for this relatively rapid depopulation have yet to be determined at the present time, although the answers likely reside within the cumulative societal impacts of drought, crop failures, dwindling natural resources, ill health, and raiding activity from other groups. This rapid decline in the population base provides intriguing support for the Vacant Quarter hypothesis proposed by Williams (1990; see also Cobb and Butler 2002).

Despite the importance of mound centers and town sites to the understanding of middle Cumberland Mississippian culture, construction and development in

and around Nashville have had an acute impact on these sites. In fact, of the more than 30 Mississippian mound centers/towns and nucleated villages recorded across the middle Cumberland study area to date, nearly all have been severely disturbed or destroyed by phosphate mining, construction, and/or farming interests (Barker 2005; Ferguson 1972; Jones 2001; Klippel and Bass 1984; Moore 2005; Moore and Smith 2001; Smith 1992, 1993, 1994; Smith and Moore 2005; Walling et al. 2000). Notable exceptions include the Mound Bottom, Sellars Farm, and Castalian Springs mound sites presently owned by the state of Tennessee (Butler 1981; O’Brien 1977; Smith 2003). This article focuses on the results of excavations conducted at the Gordontown site (40DV6) in 1985–86 in the face of subdivision development.

Previous Research at Gordontown

Gordontown is located in Middle Tennessee near the extreme southern border of Davidson County. This site was established along a gently sloping, dissected upland ridge between two substantial springs that feed a small headwater tributary (Brentwood Branch) that joins Sevenmile Creek some one and one-quarter miles to the east. Sevenmile Creek itself comprises a tributary of Mill Creek that flows northward into the Cumberland River. Interestingly, the rather modest Mill Creek drainage occurs between the substantial Harpeth and Stones River watersheds (see Figure 1). The major reliable sources of water for the Gordontown residents were the two large springs located on the northern and southwestern site perimeters.

The earliest discussion of the Gordontown site appeared in the work by Dr. Joseph Jones on the native remains of Tennessee (Jones 1876:37–38). Jones conducted a significant amount of archaeological exploration during his service as Health Officer of the city of Nashville from 1868–1869. He mentions the “Brentwood site” (Gordontown) as consisting of an earthwork enclosing several mounds and an extensive encampment. He excavated an unknown portion of one burial mound (45 ft in diameter and 12 ft in height), which he described as containing about 100 skeletons in stone graves.

Edwin Curtiss, a Nashville resident, explored Gordontown roughly a decade after the completion of Jones’s work. Curtiss conducted an aggressive site exploration program in Tennessee (and adjacent states) from 1877 to 1880 for Frederic Ward Putnam of the Peabody Museum at Harvard University (Mainfort and Demb 2001; Smith and Moore 2005). Recent research at Harvard University discovered a sketch map and field notes of (previously unknown) excavations by Curtiss at T. F. Wilkinson’s Farm (Gordontown) in September 1877 (Moore 2004). One important feature of the sketch map

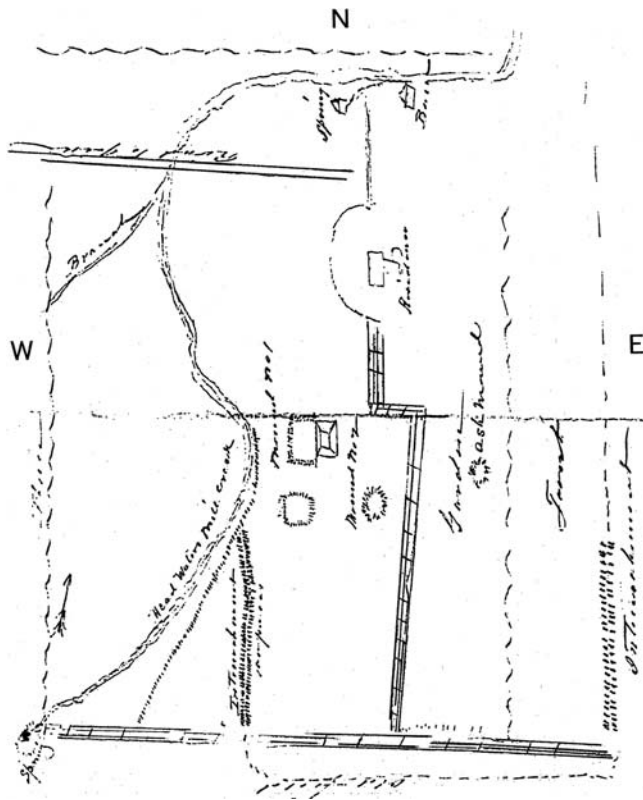


Figure 3. Curtiss 1877 sketch map of T. F. Wilkinson's farm.

was the definition of a palisade line ("intrenchment") that enclosed an area estimated to be 15 acres in size (Figure 3). The location of one platform mound, two circular mounds, and several springs were also provided.

Curtiss explored all three mounds denoted on his sketch map. Mound No. 1, a platform mound measuring about 1.2 m high and 7.3 m by 8.5 m on top, yielded no burials. Mound No. 2 was the burial mound previously explored by Joseph Jones. "The large burial mound marked No. 2 is about 30 ft (9.1 meters) diameter at the base and about 5 ft (1.5 meters) high. A few graves had been opened on the top by Dr. Joseph Jones" (Curtiss field notes, September 1877, UAV.677.38, Harvard University Archives). The reported size of Mound No. 2 was smaller than the mound described by Jones in the late 1860s. However, given the explorations of Jones, this difference should not be surprising. Curtiss removed 35 graves from Mound No. 2 and observed multiple tiers of stone-box graves similar to that noted by Jones. Among the artifacts retrieved from the Mound No. 2 graves were a variety of shell-tempered vessels, including a mussel shell effigy bowl, notched-rim bowl, miniature medallion head bowl, frog effigy jar, and a human effigy hooded bottle. A third mound marked "ash" received limited attention, likely due to the unexciting recovery of habitation debris such as broken pottery and animal bone.

As previously mentioned, William E. Myer with the Bureau of American Ethnology directed an excavation at Gordontown in September of 1920. He prepared a detailed map that defined an 11.2-acre site area with at least 87 "house circles" and two mounds enclosed by a palisade with bastions at 55-ft (16.7-m) intervals (Figure 4). Myer invested a considerable amount of time examining six of the "house circles," interpreting them as circular, wattle-and-daub post structures with prepared floors and interior hearths. Modern excavations at numerous sites throughout the study area (including later work at Gordontown) have unequivocally defined Mississippian structure plan-view dimensions as square or square with rounded corners (Barker 2005; Jones 2001; Klippel and Bass 1984; Moore 2005; Moore and Breitburg 1998; Moore and Smith 2001; Smith and Moore 1994). Regardless of this inaccuracy, Myer also identified a main stone-box cemetery and another area of scattered stone-box graves inside the palisade wall (see Figure 4). He observed that adults and adolescents were generally buried in the main cemetery, whereas infants and very young children were placed beneath structure floors. Modern comparative research on Mississippian sites and cemeteries within the study area has shown such placement to be a common and consistent mortuary practice (Barker 2005; Jones 2001; Moore 2005; Moore and Smith 2001; Smith and Moore 1994). Shell-tempered ceramic vessels recovered from these graves include notched-rim bowls, Beckwith Incised jars, Matthews Incised var. *Matthews* jars with strap handles, a Matthews Incised var. *Manly* jar, a Mound Place Incised rim-rider bowl, an owl effigy hooded bottle, and several negative painted plates.

The 1985–86 Excavations

Initial grading of roads for a residential development exposed numerous stone-box burials, refuse-filled pits, and structure floors at Gordontown. Although hampered by the inability to legally stop the progress of construction projects on private property, the Tennessee Division of Archaeology (TDOA) negotiated an agreement with the developer to investigate proposed house lots. Since the 1877 Curtiss sketch map and field notes were not discovered until after the fieldwork and site report were completed (Moore and Breitburg 1998), the TDOA investigations were guided by the 1928 Myer map. None of the earthworks described by Myer were visible at the time of the TDOA work.

Three major concentrations of graves and features were revealed within locales corresponding to the village area noted on Myer's map (Figures 4 and 5). The first, and most extensive, concentration was found in the southwest quadrant of the site (Figure 5, inset A). This zone corresponds to the area where Myer had

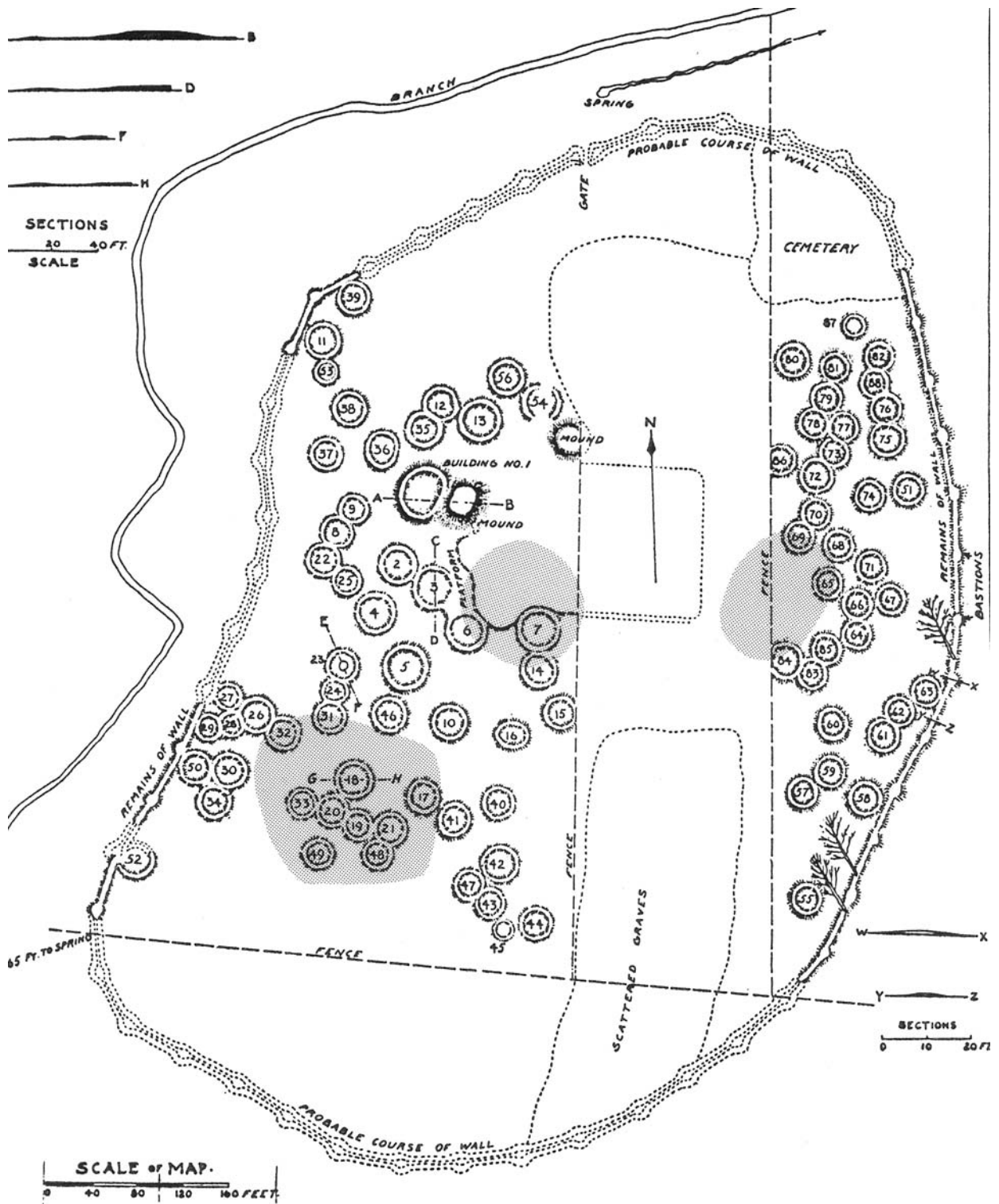


Figure 4. TDOA primary concentrations (shaded) on Myer 1928 map.

recorded “house circles” 17, 18, 19, 20, 21, 31, 32, 33, 48, and 49. Nonmortuary features exposed in this area included three structures and an approximate 17-m section of an interior palisade line (Figure 6). This palisade segment (Feature 10) included a bastion with double wall posts (Moore and Breitburg 1998:27–28).

Neither the 1877 Curtiss nor the 1928 Myer maps noted a palisade at this location.

A second area of (primarily) scattered graves was identified in the east-central site area. This concentration occurs east of the central mounds and immediately west of “house circles” 69, 65, and 84 defined by Myer (see

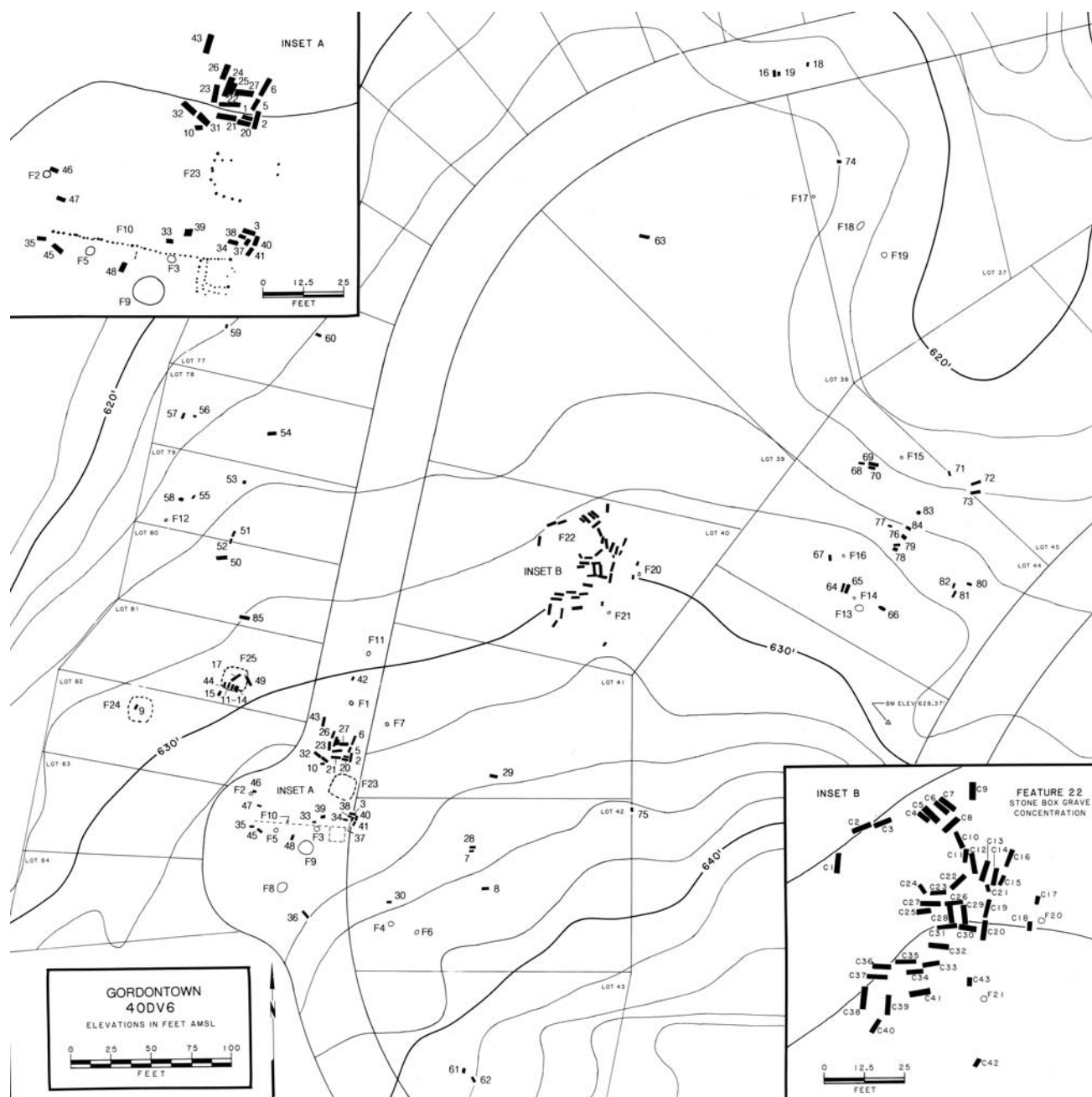


Figure 5. TDOA 1985–86 excavation results. Inset A illustrates the variety of features exposed within the southwest site quadrant. Inset B shows the massive concentration of stone-box graves designated Feature 22.

Figure 4). Of interest is that 19 graves, two ash deposits, one refuse-filled pit, and one hearth were removed from an area void of features on Myer’s map.

The third major burial concentration was recorded in the central site area during the final weeks of fieldwork. These graves first appeared as a mass of limestone slabs (designated Feature 22) that was eventually revealed to be a tremendous concentration of stacked, tightly clustered stone-box burials (Figure 5, inset B). The feature area was not excavated but set aside as open space in the residential development. Such a massive

concentration of stacked stone-boxes suggested that Feature 22 was the remnant of a small burial mound, but the location corresponded with the area labeled “platform” on Myer’s map (see Figure 4). Subsequent review of the recently acquired 1877 Curtiss map determined that Feature 22 was the location of Mound No. 2 previously excavated by Curtiss (as well as Joseph Jones). The enigmatic “platform” on Myer’s 1920 map comprised what was left of the mound excavated during the late 1860s and again in 1877 (Moore 2004). Since burials from the mound were not excavated in

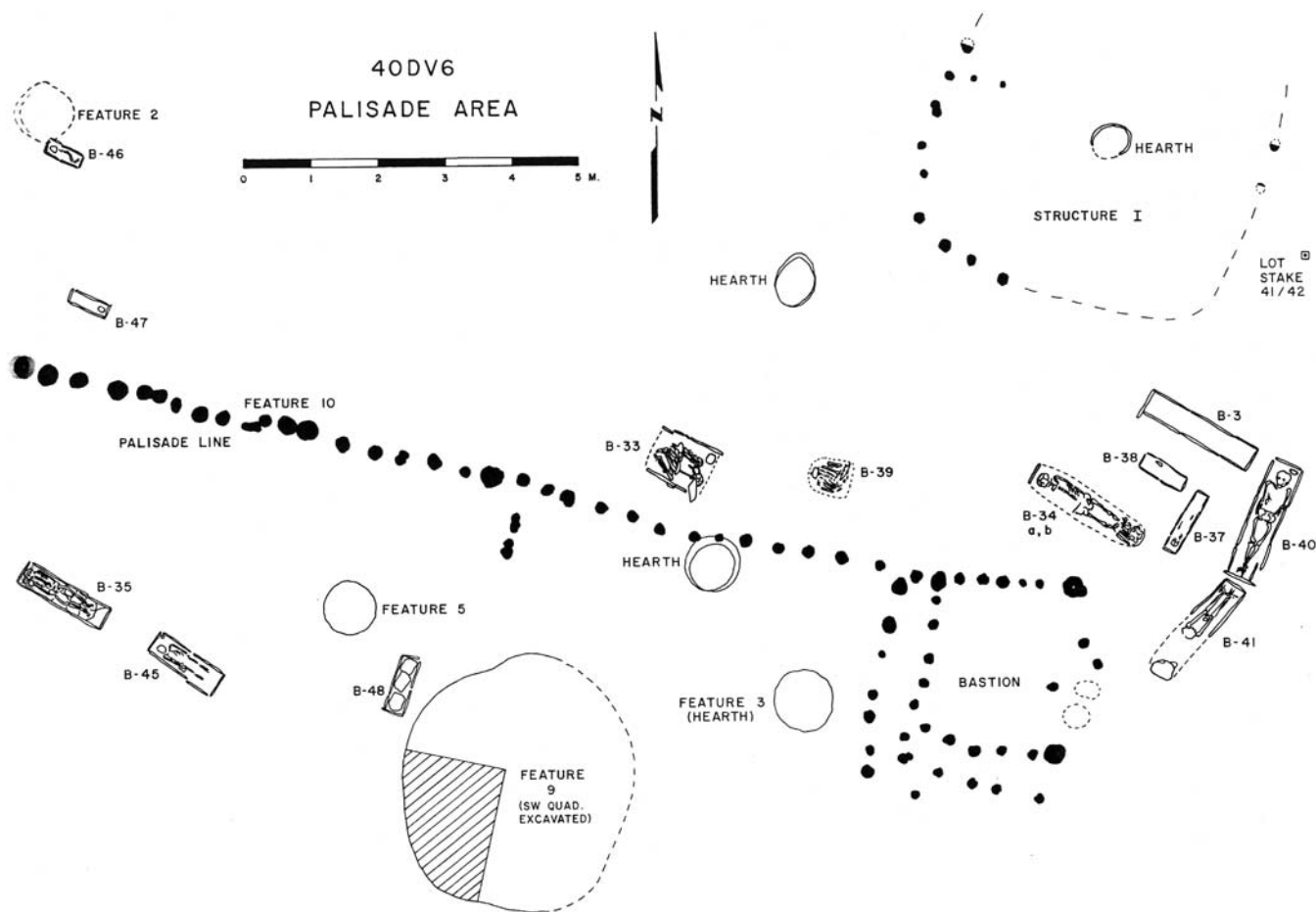


Figure 6. Palisade section with bastion.

1985–86, the sample of recovered burials may not be representative of Gordontown's population. Burial location in Mississippian towns (in East Tennessee, for example, Sullivan 2001) was often structured by social identity (age, gender, and status).

Partial post patterns for several domestic structures were among the nonmortuary features recorded during the project. Structure 3 displayed numerous artifacts (several ceramic vessels, a greenstone celt, a Dover chert hoe, a Dover chert hafted knife, a metate, and a deer antler) on the floor. All of the lithic tools exhibited fractures and color changes consistent with exposure to intense heat, suggesting that Structure 3 burned while still occupied. Mica fragments were also recovered near the hearth. One stone-box grave containing a very young child (Burial 44) was likely associated with the Structure 3 interior.

Radiocarbon Dates

Corrected age dates and ranges for two radiocarbon samples were obtained using CALIB Revision 4.4 (Stuiver et al. 2003). One wood charcoal sample (Tx-

5551) from the southeast quadrant of Structure 1 yielded a radiocarbon age of 640 ± 70 B.P., with a corrected range at one sigma of cal A.D. 1294–1395. A second wood charcoal sample (Tx-5550) from the floor of Structure 3 produced a radiocarbon age of 520 ± 60 B.P. with corrected ranges at one sigma of cal A.D. 1326–1348 and cal A.D. 1392–1443. These date ranges place Gordontown firmly within the Thruston regional period.

Mortuary Analysis

Limestone slab-lined graves are the defining characteristic of Mississippian period burials throughout the middle Cumberland region. These "stone-boxes" are part of a much broader regional pattern of Mississippian period mortuary behavior observed in other areas of the mid-South and extreme lower Midwest (Brown 1981; Clay 1984; Dowd 1986; Milner and Schroeder 1992; Putnam 1883; Thruston 1897). Most of the Gordontown burials represented typical stone-box interments previously documented for Mississippian groups within the study area. These graves were constructed of vertically set limestone (sometimes shale) slabs covered

Table 1. Sex, Age, and Stature Determinations per Burial.

Burial	Sex	General	Age Determination		Stature (cm)
			Dental	Long Bone/Misc	
1	Ind	—	1.5 ± 8 mos.	0.5–1.5	—
2	F	35–45	—	—	147.3–147.6 ± 3.8
3	F	50+	—	—	157.6 ± 3.8
4	Reassigned as Burial 34				
5	Ind.	—	1.5–2.5	1–3	—
6	Ind.	Adult	—	—	—
7	M	30–40	—	—	—
8	F (probable)	40–50	—	—	159.6–160.2 ± 3.8
9	Ind.	<1	—	—	—
10	M	17–20	—	—	167.5 ± 3.2
11A	F	16–19	—	—	154.5 ± 3.8
11B	F (probable)	20–24	—	—	159.3 ± 3.5
12	M	30–40	—	—	168.3 ± 3.3
13	F	35–39	—	—	148.9–149.2 ± 3.5
14	F	30–39	—	—	147.8 ± 3.5
14A	Ind.	Fetus/Nb	—	Fetal	—
15	F (probable)	40–50	—	—	157.9–158.5 ± 3.5
16	Ind.	—	—	—	—
17	M	30–39	—	—	173.4 ± 3.2
18	Ind.	Infant	—	—	—
19	Ind.	Child?	—	—	—
20	Ind.	—	3–4 ± 12 mos.	1.5–2.5	—
21	M	30–34	—	—	167.5 ± 4.6
22A	M	30–40	—	—	165.4 ± 3.2
22B	F	40–50	—	—	148.4–148.9 ± 3.8
23	F (probable)	25–35	—	—	—
24	M	40–44	—	—	163.0–163.3 ± 3.5
24A	Ind.	Infant	—	—	—
25	Ind.	—	—	2.5–3.0 (?)	—
26	Ind.	—	7–8 ± 24 mos.	5.5–6.5	—
27	M	30–39	—	—	161.3 ± 3.8
28	Ind.	—	2–3 ± 12 mos.	0.5–1.5	—
29A	M	35–40	—	—	170.9–171.2 ± 3.8
29B	M	35–40	—	—	165.2–165.8 ± 3.8
30	Ind.	—	—	<Nb–0.5	—
31	Ind.	—	5–6 ^a ; 6–7 ^b	3.5–4.5	—
32	Ind.	—	9.5–10.5 ^a ; 12 ± 8 mos. ^b	7.5–8.5	—
33	M (probable)	45+	—	—	164.6 ± 4.3
34A	F (probable)	40–44	—	—	—
34B	M (probable)	18–21	—	—	—
35	Ind.	—	8 ^a ; 7–9 ^b	6.5–7.5; 7–9	—
36	M	45–50	—	—	162.9–163.2 ± 3.8
37	Ind.	—	2 ± 8 mos.	1–3	—
38	Ind.	—	—	Nb–0.5	—
39	Ind.	—	7 ± 24 mos.	5.5–6.5	—
40	F	30–40	—	—	155.1 ± 3.5
41	M (probable)	—	—	13.5–15.5	—
42	Ind.	—	—	Nb–0.5	—
43	M	30–40	—	—	170.1–170.7 ± 4.1
44	Ind.	—	—	1.5–3.5	—
45	Ind.	—	2–3	1.5–2.5	—
46	Ind.	—	2 mos.	Nb–0.5	—
47	Ind.	—	Nb ± 2 mos.	Nb–0.5	—
48	Ind.	—	—	Nb–0.5	—
49	M	45–55	—	—	170.4–170.7 ± 3.2
50	M	35–45	—	—	164.4–165.0 ± 3.2
51A	Ind.	—	3 ± 12 mos.	—	—
51B	Ind.	—	1.5 ± 6 mos.	0.5–1.5	—
52	Ind.	—	—	Nb–0.5	—
53	Ind.	Young child	—	—	—
54A	M	<40	—	—	170.6 ± 4.3
54B	M	30–40	—	—	165.1 ± 3.8
54C	Ind.	Infant	—	—	—
55	Ind.	—	1.4–1.7	0.5–1.5	—
56	Ind.	—	Nb–0.5 ± 3 mos.	—	—
57	Ind.	—	3–3.5 ^a ; 4 ± 12 mos. ^b	2.5–3.5	—
58	M (probable)	35–45	—	—	158.3–158.9 ± 4.7
59	Ind.	—	3 mos. ^a ; nb ± 2 mos. ^b	Nb–0.5	—
60	Ind.	—	1.5	—	—
61	Ind.	—	—	<1	—
62	Ind.	—	2–3 ^a ; 2 ± 8 mos. ^b	1–3	—
63	F	30–39	—	—	—
64	M	15–17	—	—	—
65	F	30–40	—	—	154.3 ± 3.5
66	M	30–40	—	—	164.3 ± 3.8
67	Ind.	—	1.5 ± 6 mos.	1–1.5	—
67A	Ind.	—	—	Nb–0.5	—

Table 1. Sex, Age, and Stature Determinations per Burial (continued).

Burial	Sex	General	Age Determination		Stature (cm)
			Dental	Long Bone/Misc	
68	Ind.	—	1.3 yrs ^a ; 1.5 ± 6 mos. ^b	1–2.5	—
69A	F	40+	—	—	152.0 ± 3.8
69B	F (probable)	30+	—	—	—
70	Ind.	Adult	—	—	—
71	Ind.	—	—	1–1.5	—
72	M	30–35	—	—	169.0 ± 3.8
73	F (probable)	45+	—	—	—
74	Ind.	—	6–9 mos. ± 3 mos.	Nb–0.5	—
75	Ind.	—	Nb–0.5	Nb–5 mos.	—
75A	Ind.	Nb–0.5	—	—	—
76	F	40–50	—	—	146.9 ± 147.6 ± 3.8
77	Ind.	—	—	Nb–0.5	—
77A	Ind.	Infant	—	—	—
78	Ind.	—	1.5 ± 6 mos.	1–3	—
79	Ind.	—	14–15 ± 36 mos.	12.5–15.5	—
80A	Ind.	—	1.5	0.5–1.5	—
80B	Ind.	—	9–12 mos.	0.5–1.5	—
81	Ind.	—	9–10 ± 24 mos.	6.5–7.5	—
82A	Ind.	—	1.5 ± 6 mos.	1–3	—
82B	Ind.	—	1.5 ± 6 mos.	1–3	—
83	Ind.	—	6–8 ^a ; 8 ± 24 mos. ^b	5.5–6.5	—
84	F	30–40	—	—	151.4–152.0 ± 3.8
85	M	35–45	—	—	—

^a Moorrees et al. 1963.

^b Ubelaker 1978.

Note: Nb = Newborn; ind. = indeterminate.

by horizontally placed slabs or capstones. Raw material to construct these coffins was readily available from the adjacent creeks and slopes. Many of the stone-box floors were bare earth. On occasion, however, the floors were lined with thin limestone slabs or ceramic sherds.

The 1985–86 excavations exhumed a total of 100 people from 85 graves (Table 1). Most of these individuals ($n = 95$) were interred inside stone boxes in an extended position. Several exceptions were observed, however, including one grave (Burial 79) that contained a flexed individual rather than the typical extended burial. Most of the stone boxes had only one individual. Fourteen graves (Burials 1, 11, 22, 24, 29, 34, 51, 54, 67, 69, 75, 77, 80, and 82) accommodated two or more individuals in the same box.

Two stone-box graves exhibited characteristics that stand out from the other burials. One grave, Burial 7, was a relatively small box that contained an adult male bundle burial. Interestingly, the cranium of the interred individual was placed in the center of the box on a deposit of small, smooth river pebbles. The second grave, by far the most unusual interment encountered at Gordontown, was Burial 10 (Figure 7). This short, wide, and massively constructed grave was relatively deep with multilayered sidewalls and capstones. Between two and three layers of limestone were visible on the box sidewalls, and up to four layers of stone were used to cap the grave. Another unusual aspect of Burial 10 was that it contained the remains of a very robust, headless male. This individual's knees abutted the west end of the box as his lower legs were flexed back toward the pelvis. The torso was placed in a chest-down position with the cervical vertebra against the east end

of the box. Both arms were bent behind his back, as if this person had been bound.

Over one-third ($n = 27$) of the 85 graves contained some type of burial association (Table 2). Recovered grave goods included a wide range of shell-tempered ceramic vessels, including human effigy hooded bottles, duck and fish effigy bowls, and small Mississippi Plain jars. Most of the effigy vessels and all of the marine shell beads came from graves of children. A carved deer phalanx was retrieved from the grave of an adolescent male.

Demography

Table 3 presents the demographic profile of the Gordontown skeletal assemblage. Comparative demographic information is provided in the life tables (Tables



Figure 7. Burial 10.

Table 2. Associated Burial Objects from 1985–1986 Investigations.

Burial	Age (Years)	Sex	Associated Artifacts
1	1.5	—	Madison projectile point; marine-shell beads
6	Adult	—	Madison projectile point
7	30–40	M	Madison projectile point; groundstone (pallet?); bone pin
11	16–19	F	Lowe Cluster dart point
	20–24	F	
12	30–40	M	Drill bit tip; Motley dart point
20	3–4	—	Bell Plain bowl
22	40–50	F	Mississippi Plain compound bowl with notched rim
	30–40	M	
23	25–35	F	Lowe Cluster dart point
28	2–3	—	Marine-shell beads
29	35–40	M	Mississippi Plain jar
	35–40	M	
30	Newborn	—	Metate used as capstone; Lowe Cluster dart point
32	9.5–10.5	—	Two Madison projectile points
33	45+	M	Mississippi Plain jar
35	7–9	—	Bell Plain duck effigy bowl; Bell Plain fish effigy bowl
40	30–40	F	Bell Plain fish effigy bowl
41	13.5–15.5	M	Carved deer phalanx
45	2–3	—	One Mississippi Plain and one Bell Plain human effigy hooded bottles; marine-shell beads
50	35–45	M	Human effigy rim-rider fragment
51	3	—	Four marine-shell disc beads
	1.5	—	
60	1.5	—	Bell Plain fish effigy bowl; 32 marine-shell barrel beads
62	2–3	—	Mississippi Plain small “pinch” bowl
65	30–40	F	Three stone disks
69	40+	F	Bell Plain compound bowl with notched rim
	30+	F	
72	30–35	M	Bone pin
73	45+	—	Mississippi Plain jar
74	6–9 mos.	—	Mississippi Plain jar
84	30–40	F	Mississippi Plain bottle

4–7) and survivorship curves (Figure 8) constructed from the demographic data available for three contemporaneous sites from the study area: Moss-Wright, Averbuch, and Rutherford-Kizer (Benthall 1987; Klippel and Bass 1984; Moore and Smith 2001). As shown in Table 3, it is clear that over half (56.6%, 57 of 94 individuals) of the Gordontown assemblage is represented by subadult individuals 16 years of age or younger, with the greatest percentage represented by children in the birth to less than five years age category (n = 42). This high frequency of subadults is greater than that seen in other middle Cumberland human skeletal populations excavated at the Averbuch (48%, 426 of 886 individuals), Rutherford-Kizer (52.8%, 37 of 70 individuals), and Moss-Wright (41%, 37 of 90 individuals) sites.

Stature estimates for 20 males range from 173.4 cm to 158.3 cm (5 ft 8 in to 5 ft 2 in) and average 166.5 cm or 5 ft 6 in (see Table 1). Thirteen females range from 159.6 cm to 146.9 cm (5 ft 3 in to 4 ft 8 in) and average 152.4 cm (5 ft 0 in) in stature. Although female mean stature is 1 to 2 inches less, the average stature for both sexes compare favorably with stature estimates for the Arnold, Ganier, and Averbuch site populations (Berryman 1984:Table 5.24).

Table 3. Skeletal Sample Summary.

Age (Years)	Male	Female	Indeterminate	Total	(%)	Cumulative %
Fetal	—	—	2	2	2.0	2.0
Birth–3	—	—	34	34	34.7	36.7
3–10	—	—	7	7	7.1	43.8
10–16	—	—	3	3	3.1	46.9
16–21	3	2	—	5	5.1	52.0
25–35	—	1	—	1	1.0	53.0
30–40	10	6	—	16	16.3	69.3
35–45	5	1	—	6	6.1	75.4
40–50	1	4	—	5	5.1	80.5
45–55	2	—	—	2	2.0	82.5
40+	1	4	—	5	5.1	87.6
Subadult ^a	—	—	7	7	7.1	94.7
Adult ^a	1	1	3	5	5.1	99.8
Total	23	19	56	98	99.8	—

^a Remains too fragmented to age more specifically.
 Note: No material retained for Burials 19 and 19.

Pathologies

Oral and dental pathologies (including hypoplasia, bone resorption, abscesses, periostitis, and some caries) are present in the Gordontown population. One individual (Burial 37, 2 years ± 8 months) shows the hematologic condition cribra orbitalia. This infant exhibits a porotic hyperostosis condition within the area of the superior orbital walls. The anemic condition is likely present due to nutrition-related stress.

Infectious Diseases

Cranial and postcranial lesions are evident on children as well as adults. These lesions are almost always the result of infections, with the vast majority caused by *Staphylococcus aureus* (Steinbock 1976:60).

A noteworthy incidence of skeletal tuberculosis appears along the vertebral column of Burial 43, a 30–40 year old male (Figure 9). Tuberculosis-like lesions are evident in the spinal column of Burial 43 by the presence of active bone resorption in the seventh to twelfth thoracic vertebral bodies and the right femur head and shaft. The tenth and eleventh thoracic vertebrae show tubercular damage and destruction of the anterior portions of the vertebral body, in addition to para-vertebral abscesses. Tubercle formation is present between the eleventh and twelfth thoracic vertebrae. The destruction of the vertebral bodies and collapse of the spinal column has resulted in an angular deformity in the back or kyphosis, as well as lateral curvature of the spine. Other complications of tuberculosis manifested in the skeleton include the presence of osteophytosis of the anterior superior and inferior margins of thoracic and lumbar vertebrae, bone necrosis and compression of the right femoral neck and head, and eburnation of the remnants of the femoral head. A female (Burial 86A) at the Arnold site shows a similar condition in the vertebral column (Ferguson 1972). Human effigy hooded bottles with hunched backs, common ceramic effigy vessels of the Mississippian period, depict kyphotic posture that

Table 4. Life Table for Gordontown, 40DV6.

Age Interval (x)	Number of Deaths (Dx)	Percentage of Deaths (dx)	Survivors Entering (lx)	Probability of Death (qx)	Total Years Lived (Lx)	Total Years After Lifetime (Tx)	Life Expectancy (ex)
0-4	42	44.68	100.00	0.45	388.30	1882.95	18.83
5-9	6	6.38	55.32	0.12	260.65	1494.65	27.02
10-14	4	4.26	48.94	0.09	234.05	1234.00	25.21
15-19	5	5.32	44.68	0.12	210.10	999.95	22.38
20-24	1	1.06	39.36	0.03	194.15	789.85	20.07
25-29	0	0.00	38.30	0.00	191.50	595.70	15.55
30-34	5	5.32	38.30	0.14	178.20	404.20	10.55
35-39	15	15.96	32.98	0.48	125.00	226.00	6.85
40-44	7	7.45	17.02	0.44	66.48	101.00	5.93
45-49	7	7.45	9.57	0.78	29.22	34.52	3.61
50-54	2	2.13	2.12	1.00	5.30	5.30	2.50
55+	0	0.00	0.00	0.00	0.00	0.00	0.00
Total	94						

may portray the real-life conditions of how some individuals looked with advanced conditions of tuberculosis, or perhaps other conditions resulting in the collapse of the vertebral column.

Osteoarthritis/Osteophytosis

Osteoarthritis and vertebral osteophytosis appear in individuals from about 30 years of age and upward. Some of the arthritic development is severe and leading to ankylosis or fusion of adjacent osteophytes. Further damage of osteoarthritis is manifested in the presence of eburnated bones. In several cases, such as Burial 49 (male 40-50 years), eburnation appears on the articular surfaces of long bones.

Trauma

The Gordontown population was vulnerable to various types of trauma including accidental fractures or the death of individuals as a result of violence that may have included scalping, decapitation, or disarticulation. Evidence of bone trauma includes a healed left tibia fracture (Burial 14, female 30-39 years), cut marks on the femoral condyle implying intentional disarticulation (Burial 73, female 45+ years), cut marks on the temporal and occipital bones suggesting the individual was scalped (Burial 7, male 30-40 years), probable

decapitation (Burial 10, male 17-20 years), cut marks on the skull, a possible skull fracture, and a healed blunt wound on the left parietal (Burial 29A, a male 35-40 years), and a compression fracture of the fourth lumbar vertebra (Burial 36, male 40-45 years).

Skeletal Population Discussion

The skeletal sample from Gordontown (100 individuals) is a resource to assess the health status and standard of living for Mississippian populations living in the middle Cumberland River Valley. Disease, nutritional deficiencies, personal injuries, and warfare depict the dimensions that affected these populations in life. High morbidity was documented at Averbuch, the most intensively studied prehistoric site population in Middle Tennessee (Klippel and Bass 1984). This population was characterized by high infant mortality, low adult survivorship, and manifestations of infectious pathology, anemia, and trauma (Eisenberg 1986). These same conditions appear to prevail at Gordontown. The presence of tuberculosis-like conditions suggests that the settlement was crowded with unclean living standards. Close human contact and dirty village areas provided opportunities for tuberculosis to develop as an endemic condition among villagers. The Gordontown population was not only stressed by disease, but by social conflict as well. Evidence for violence (e.g.,

Table 5. Life Table for Moss-Wright, 40SU20.

Age Interval (x)	Number of Deaths (Dx)	Percentage of Deaths (dx)	Survivors Entering (lx)	Probability of Death (qx)	Total Years Lived (Lx)	Total Years After Lifetime (Tx)	Life Expectancy (ex)
0-4	21	23.33	100.00	0.2333	441.67	2461.11	24.61
5-9	14	15.56	76.67	0.2029	344.44	2019.44	26.34
10-14	1	1.11	61.11	0.0182	302.78	1675.00	27.41
15-19	1	1.11	60.00	0.0185	297.22	1372.22	22.87
20-24	4	4.44	58.89	0.0755	283.33	1075.00	18.25
25-29	6	6.67	54.44	0.1224	255.56	791.67	14.54
30-34	4	4.44	47.78	0.0930	227.78	536.11	11.22
35-39	22	24.44	43.33	0.5641	155.56	308.33	7.12
40-44	7	7.78	18.89	0.4118	75.00	152.78	8.09
45-49	1	1.11	11.11	0.1000	52.78	77.78	7.00
50-54	9	10.00	10.00	1.0000	25.00	25.00	2.50
55+	0	0.00	0.00	0.0000	0.00	0.00	0.00
Total	90						

Table 6. Life Table for Averbuch, 40DV60.

Age Interval (x)	Number of Deaths (Dx)	Percentage of Deaths (dx)	Survivors Entering (lx)	Probability of Death (qx)	Total Years Lived (Lx)	Total Years After Lifetime (Tx)	Life Expectancy (ex)
0-4	268	30.25	100.00	0.3025	424.38	1994.92	19.95
5-9	54	6.09	69.75	0.0874	333.52	1570.54	22.52
10-14	25	2.82	63.66	0.0443	311.23	1237.02	19.43
15-19	79	8.92	60.84	0.1466	281.88	925.79	15.22
20-24	152	17.16	51.92	0.3304	216.70	643.91	12.40
25-29	93	10.50	34.76	0.3019	147.57	427.20	12.29
30-34	64	7.22	24.27	0.2977	103.27	279.63	11.52
35-39	49	5.53	17.04	0.3245	71.39	176.35	10.35
40-44	30	3.39	11.51	0.2941	49.10	104.97	9.12
45-49	30	3.39	8.13	0.4167	32.17	55.87	6.88
50-54	21	2.37	4.74	0.5000	17.78	23.70	5.00
55-59	21	2.37	2.37	1.0000	5.93	5.93	2.50
60+	0	0.00	0.00	0.0000	0.00	0.00	0.00
Total	886						

scalping, decapitation) is evident. Compelling information at Mississippian period settlements within the middle Cumberland River Valley to suggest social discord include burned village areas, and building and expanding palisades and village structures to accommodate growing populations (Autry 1983; Klippel and Bass 1984; Moore and Smith 2001; Smith 1992).

These conditions undoubtedly had an influence on the health of the Gordontown people. Paleonutritional study (Buikstra et al. 1988) has shown that the over-reliance on maize in the diet had an impact on Mississippian period populations and may have contributed to the ill health of the populations. Gordontown peoples, along with Averbuch, Arnold, and Moss-Wright groups, should show some of the highest positive values of corn consumption for Mississippian/Fort Ancient period populations in the eastern parts of the North America.

Artifact Descriptions

Ceramics

Shell-tempered pottery constitutes the defining characteristic of middle Cumberland Mississippian ceramic assemblages (Smith 1992). Gordontown is certainly no exception with 99.9 percent (n = 5949) of the assemblage

comprised of shell-tempered wares (Table 8). This total includes 23 nonvessel objects such as earplugs and disks. A single plain surface sherd with sand temper, recovered from the site surface, may derive from a nonlocal ware associated with the Mississippian occupation at Gordontown. Two plain surface sherds tempered with limestone derive from an earlier (poorly defined) Woodland component.

A functional analysis of the Gordontown ceramic assemblage identified an assortment of jar, bowl, bottle, plate, and pan forms. Large lug-handled jars, some with sooting and interior pitting, were the main cooking vessel. Strap and loop handled jars probably functioned for cooking, food preparation, and storage. Bowls, bottles, and plates were used for serving and eating. Comparisons of mortuary and domestic vessels indicated differences were mainly in size rather than form.

Mississippi Plain (n = 4806). Mississippi Plain specimens comprise 81.1 percent of the assemblage. This ware, characterized by a loose to moderate compact paste tempered with medium to coarse crushed mussel shell (Phillips 1970:130-135), is the dominant ceramic type in middle Cumberland Mississippian sites (Jones 2001; Klippel and Bass 1984; Moore 2005; Moore and Smith 2001; Walling et al. 2000). Jar, bowl, and bottle forms were defined, with 163 of the 173 identified vessels falling into jar forms (Table 9; Figure 10). Ten stone-box

Table 7. Life Table for Rutherford-Kizer, 40SU15.

Age Interval (x)	Number of Deaths (Dx)	Percentage of Deaths (dx)	Survivors Entering (lx)	Probability of Death (qx)	Total Years Lived (Lx)	Total Years After Lifetime (Tx)	Life Expectancy (ex)
0-4	24	34.29	100.00	0.3429	414.29	2021.43	20.21
5-9	5	7.14	65.71	0.1087	310.71	1607.14	24.46
10-14	6	8.57	58.57	0.1463	271.43	1296.43	22.13
15-19	2	2.86	50.00	0.0571	242.86	1025.00	20.50
20-24	0	0.00	47.14	0.0000	235.71	782.14	16.59
25-29	3	4.29	47.14	0.0909	225.00	546.43	11.59
30-34	12	17.14	42.86	0.4000	171.43	321.43	7.50
35-39	11	15.71	25.71	0.6111	89.29	150.00	5.83
40-44	3	4.29	10.00	0.4286	39.29	60.71	6.07
45-49	3	4.29	5.71	0.7500	17.86	21.43	3.75
50-54	1	1.43	1.43	1.0000	3.57	3.57	2.50
55-59	0	0.00	0.00	0.0000	0.00	0.00	5.00
60+	0	0.00	0.00	0.0000	0.00	0.00	0.00
Total	70						

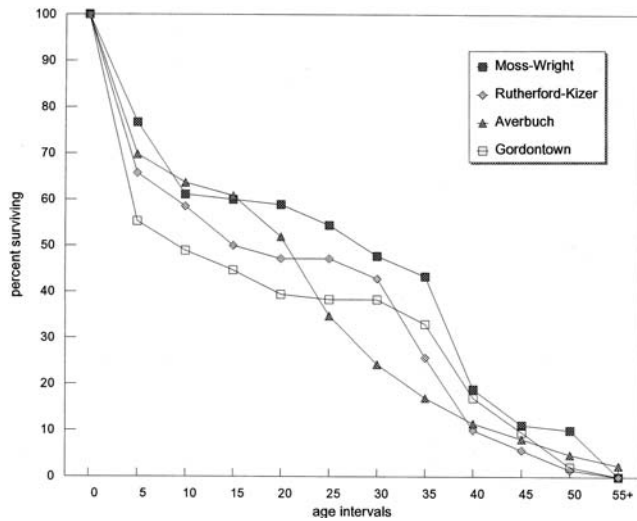


Figure 8. Mississippian survivorship curve.

grave floors (Burials 1, 12, 25, 43, 50, 67, 69, 72, 73, and 75) were lined with Mississippi Plain jar sherds.

Bell Plain (n = 760). Bell Plain ware represents 12.8 percent of the ceramic assemblage, and is characterized by a fine to moderate compact paste with finely crushed mussel shell temper generally less than 1.0 mm in particle size (Phillips 1970:58–61; Phillips et al. 1951:122–126). Exterior and interior surfaces are smoothed, and often polished or burnished. Bowls with notched rim appliqué strips (filleted or beaded rim treatment) comprised the vast majority of the represented vessels, with (human and animal) effigy bottles also present (Table 10; Figures 10 and 11).

Beckwith Incised (n = 51). Beckwith Incised (also identified as Matthews Incised var. *Beckwith*) displays three or four incised lines in a crosshatched diamond pattern around the neck area of Mississippi Plain paste jars (Clay 1963; Moore and Smith 2001). This incised “rectilinear guilloche” design occurs on 0.7 percent of the assemblage.

Matthews Incised var. Manly (n = 24). This type displays one or more rows of punctated arches, at times combined with incised arches, along the neck and shoulder area of Mississippi Plain jars (Phillips



Figure 9. Tuberculosis in Burial 43 vertebrae.

1970:127–128). These sherds represent 0.4 percent of the ceramic assemblage.

Kimmswick Fabric Impressed (n = 28) and *Kimmswick Plain* (n = 245). Kimmswick Fabric Impressed and Kimmswick Plain sherds comprise 0.5 percent and 4.1 percent of the ceramic assemblage, respectively. These specimens have a loose to moderate compact paste with moderate to coarse crushed shell temper. The vessel form for Kimmswick Fabric Impressed and Kimmswick Plain is a large, shallow bowl or pan with rounded or flat bottom, often termed “salt pans” (Clay 1963:242, 250; Phillips 1970:96). Although these vessels were originally interpreted as pans for the evaporation of salt brine, Kuttruff and Kuttruff (1986:7) compile a list of several proposed functions suggested in the literature, including the use as communal eating pans, large stationary cooking vessels, possibly for parching corn or toasting acorns, hearths for making bread, and unknown ritual functions.

Ceramic Discussion

Plain surface, shell-tempered wares dominate the ceramic assemblages from middle Cumberland Mississippian sites. Mississippi Plain and Bell Plain account for at least 90 percent of assemblage totals from the general study area (Table 11). The addition of Kimmswick Fabric-Impressed and Kimmswick Plain increases these totals to over 98 percent. Decorated shell-

Table 8. Ceramic Assemblage Summary by Type and Provenance.

Type	Surface	%	Burials	%	Features	%	Total	%
Mississippi Plain	435 (9.1%)	59.3	2,747 (57.1%)	89.2	1,624 (33.8%)	76.9	4806 (100%)	81.1
Bell Plain	192 (25.3%)	26.2	161 (21.2%)	5.2	407 (53.6%)	19.3	760 (100%)	12.8
Beckwith Incised	38 (74.5%)	5.2	6 (11.8%)	0.2	7 (13.7%)	0.3	51 (100%)	0.7
Matthews Incised var. <i>Manley</i>	8 (33.3%)	1.1	10 (41.7%)	0.3	6 (25.0%)	0.3	24 (100%)	0.4
Kimmswick Fabric Impressed	20 (62.6%)	2.7	3 (9.4%)	0.1	9 (28.1%)	0.4	32 (100%)	0.5
Kimmswick Plain	38 (15.8%)	5.2	149 (61.8%)	4.8	54 (22.4%)	2.6	241 (100%)	4.1
Sand Temper	1 (100%)	0.1	—	—	—	—	1 (100%)	<0.1
Limestone Temper	—	—	2 (100%)	<0.1%	—	—	2 (100%)	<0.1

Table 9. Mississippi Plain Vessel Forms and Minimum Number of Vessels (MNV).

Vessel Form	MNV
Standard Jar	
Strap Handle	23
Loop Handle	16
Lug Handle	48
Indeterminate Handle	74
Miniature Jar, loop handle	1
Lobed jar, flanged lip	1
Semi-hemispherical bowl, notched rim	1
Compound bowl, notched rim	1
Everted rim bowl	2
Miniature bowl "pinch pot"	1
Shallow bowl, flaring rim	3
Wide-necked bottle	1
Human effigy hooded bottle (see Figure 10)	1



Figure 10. Human effigy hooded bottles.

tempered wares comprise a small portion of the overall ceramic assemblage (Moore 2005). Beckwith Incised, Matthews Incised var. *Matthews* and Matthews Incised var. *Manly* represent commonly identified incised types. Mound Place Incised occurs in limited amounts throughout the middle Cumberland area. A small sample of O'Byam Incised var. *Stewart* sherds has been recovered from several sites within the western half of the middle Cumberland region (Smith et al. 2004). Shell-tempered negative painted wares (generally bottle and plate forms) represent a distinct decorated style in middle Cumberland Mississippian assemblages, but are probably underrepresented (especially in surface contexts) due to designs faded by exposure.

Strap and bifurcated lug handles, considered to be later Mississippian traits, dominate the Gordontown ceramic assemblage (Moore and Breitburg 1998; Smith 1992). Notched-rim bowls, Beckwith Incised and Matthews Incised var. *Manly* jars, hooded effigy bottles, and rim-rider effigy bowls comprise additional Thruston period markers (Moore 2005; Moore and Breitburg 1998; Moore and Smith 2001; Smith 1992; Smith and Moore 1996). The presence of several negative painted vessels from the Myer exploration also supports a post A.D. 1250 occupation (Hilgeman 1985, 1991, 2000; Myer 1928; Smith 1998).

In contrast to the Thruston assemblage, earlier Dowd period ceramics include undecorated coarse-paste "blank-face" hooded bottles; cylindrical neck fine-paste bottles; coarse-paste fabric-impressed pans; fine-paste outslanting-wall bowls; and medium to coarse paste plain-surface and (occasionally) exterior fabric/cord-marked jars. Vessel handle forms include riveted loop handles, with slightly lesser numbers of semilunate and bifurcated lugs and intermediate flattened loop handles. Compared to the later Thruston period, Dowd period ceramic assemblages are most notably marked by a general lack of decorated and effigy types.

Lithics

The chipped stone tool sample included 15 triangular arrow points consistent with the Madison type. Additional chipped stone Mississippian artifacts include the (heavily burned) spatulate hoe, hafted knife, and chisel of Dover chert from the Structure 3 floor. The groundstone tools from Structure 3 comprised a highly polished greenstone celt, along with a mano and large metate of abrasive siltstone.

The Gordontown lithic assemblage, while moderate in size, contained artifacts made from local as well as exotic resources. The vast majority of items (including the Madison points) were made from Ft. Payne chert, a locally available resource that derives from the (geologic) Mississippian limestone formations across the study area (Amick 1987). The presence of smooth, waterworn cortex on numerous specimens indicates the site residents obtained much of their knappable material from local stream cobbles. Most of the groundstone items (including manos, metates, abraders, and nutting stones) were manufactured from an abrasive siltstone (Moore 2005). Previous identification of this particular material as sandstone (a borderline nonlocal material) was in error based upon the presence of large quartz grains. Abrasive siltstone also originates within the Mississippian age limestone formations across the study area.

Materials of nonlocal origin include Dover chert and greenstone. Both are commonly found on Mississippian period sites throughout the study area (Smith and Moore 1999). Dover chert primarily derives from quarries in Stewart County, Tennessee, roughly 110 km northwest of Gordontown. This particular resource was desired by prehistoric natives for the manufacture of such domestic utilitarian tools as hoes, chisels/adzes, and knives and for specialty items like maces, "ceremonial" swords, and eccentric pieces (Gramly 1992).

Table 10. Bell Plain Vessel Forms and Minimum Number of Vessels.

Vessel Form	MNV
Semi-hemispherical bowl	
Notched rim	68
Plain rim	29
Direct rim with applied rim strip, without notches	1
Incurving rim with everted lip	3
Shallow bowl	
Direct rim with scalloped lip	2
Flaring rim	3
Compound bowl, notched rim	1
Effigy bowl (see Figure 11)	
Duck	2
Fish	5
Unidentified animal	1
Human	2
Indeterminate-necked bottle	1
Human effigy hooded bottle (see Figure 10)	1
Globular jar, narrow orifice	1

Greenstone occurs on middle Cumberland Mississippian sites in the form of polished celts and rejuvenation flakes. Unmodified blanks, flakes, or shatter are essentially absent from the study area. The probable origin of materials called greenstone is the Appalachian Mountain chain southeast of the study area. No formal source studies for greenstone artifacts recovered from the middle Cumberland valley have been conducted to date comparable to those carried out in the Moundville region (e.g. Gall and Steponaitis 2001; Gallet al. 2002).

Other Artifacts

Mica: Several small fragments of mica were found adjacent to the Structure 3 hearth. This nonlocal mineral derives from the mountainous regions of eastern Tennessee and western North Carolina and has been recovered (in relatively small quantities) from several middle Cumberland Mississippian sites, including Sellars Farm, DeGraffenreid, and Rutherford-Kizer.

Shell: Marine-shell beads (disk and barrel types) were observed in five child burials (Burials 1, 28, 45, 51, and 60).

Charred Botanical Remains: An informal review of the charred botanical remains recovered from the Gordontown excavations revealed the presence of corn, nutshell, cane, and wood.

Faunal Remains

The admittedly modest faunal assemblage was classified as 80.5 percent mammal, 9.3 percent bird, 8.9 percent reptiles, and 1.2 percent fish (see Table 12). The most common identified mammal was the white-tailed deer. Based on the recovery of left fibular tarsi, at least



Figure 11. Animal effigy bowls.

ten mature deer are present. Black bear, represented by two individuals, is the second most common mammal species present, followed by squirrels, wapiti, cougar, possibly bobcat, raccoon, muskrat, rice rat, vole, beaver, rabbit, shrew, mole, and opossum. Turkey remains prevail among the avifauna, with cardinal, screech owl, passenger pigeon, quail, and hawk also present. Identified reptiles include poisonous (rattlesnake or copperhead) and nonpoisonous snake, eastern box turtle, and map/painted turtle. The few specimens of fish include catfish and gar.

Twenty-five specimens exhibit modification as a product of human use or manufacture, including antler tine pressure flakers, a deer ulna awl, and a turkey tarsometatarsus awl. One noteworthy specimen associated with Burial 41 (probable male) includes a 33-mm high kneeling effigy or figurine made from a second phalanx of the third or fourth digits of white-tailed deer (Figure 12). The figure was made by a combination of carving, abrading, smoothing, and polishing processes.

Table 11. Mississippi Plain and Bell Plain Counts and Ceramic Assemblage Percentages from Selected Middle Cumberland Mississippian Sites.

Site	Mississippi Plain		Bell Plain	
	N	%	N	%
Kelley's Battery (40DV392)	1,396	73.6	354	18.7
Rutherford-Kizer (40SU15)	7,283	75.0	1835	18.9
Old Town (40WM2)	527	79.5	100	15.1
Gordontown (40DV6)	4,806	81.1	722	12.2
Brentwood Library (40WM210)	5,441	84.4	759	11.8
French Lick/Sulphur Dell (40DV5)	2,985	90.4	4	0.1
East Nashville Mounds (40DV4)	24,688	95.0	98	0.4

Table 12. Summary of Gordontown Faunal Remains.

Taxa	Count	MNI	Yield Meat (kgs)	%	Burned	Cut	Modified
Mammals	364	35	742.3	96.72	30	5	14
<i>Cervus elaphus</i> (wapiti)	1	1	159.0	20.72	—	1	—
<i>Odocoileus virginianus</i> (white-tailed deer)	278	10	300.0	39.09	25	4	12
<i>Felis concolor</i> (cougar)	3	1	31.5	4.1	—	—	—
<i>Lynx rufus</i> (bobcat)	1	1	4.5	0.59	—	—	—
<i>Procyon lotor</i> (raccoon)	5	2	11.5	1.5	—	—	—
<i>Ursus americanus</i> (black bear)	25	2	214.4	27.93	3	—	2
<i>Ondatra zibethicus</i> (muskrat)	1	1	0.8	0.1	—	—	—
<i>Oryzomys palustris</i> (rice rat)	1	1	—	—	—	—	—
<i>Microtus</i> spp. (vole)	5	5	—	—	—	—	—
<i>Castor canadensis</i> (beaver)	4	1	11.9	1.55	—	—	—
<i>Sciurus niger</i> (fox squirrel)	8	3	1.5	0.2	—	—	—
<i>Sciurus carolinensis</i> (gray squirrel)	14	2	0.8	0.1	—	—	—
<i>Sylvilagus floridanus</i> (cottontail rabbit)	8	1	0.6	0.08	—	—	—
<i>Blarina brevicauda</i> (short-tailed shrew)	1	1	—	—	—	—	—
<i>Scalopus aquaticus</i> (mole)	3	1	—	—	—	—	—
<i>Didelphis marsupialis</i> (opossum)	5	2	5.8	0.76	2	—	—
Birds	43	10	23.6	3.07	2	—	1
<i>Richmondia cardinalis</i> (cardinal)	1	1	0.1	0.01	—	—	—
<i>Otus asio</i> (screech owl)	1	1	—	—	—	—	—
<i>Ectopistes migratorius</i> (passenger pigeon)	2	1	0.2	0.03	—	—	—
<i>Meleagris gallopavo</i> (turkey)	34	4	23.2	3.02	2	—	1
<i>Colinus virginianus</i> (bobwhite quail)	3	1	0.1	0.01	—	—	—
<i>Buteo jamaicensis</i> (red-tailed hawk)	1	1	—	—	—	—	—
Hawk spp.	1	1	—	—	—	—	—
Reptiles	41	7	0.5	0.07	—	—	—
<i>Chrysemys/Graptemys</i> spp. (painted/map turtle spp.)	8	2	0.2	0.03	—	—	—
<i>Terrapene carolina</i> (box turtle)	24	3	0.3	0.04	—	—	—
Colubridae (nonpoisonous snake)	8	1	Trace	—	—	—	—
Viperidae (poisonous snake)	1	1	Trace	—	—	—	—
Fishes	3	3	1.1	0.14	—	—	—
<i>Ictalurus</i> sp. (catfish)	1	1	0.1	0.01	—	—	—
Catostomidae (sucker family)	1	1	0.5	0.07	—	—	—
<i>Lepisosteus</i> sp. (gar)	1	1	0.5	0.07	—	—	—
Indeterminate	22	—	—	—	2	—	9
Large mammal	8	—	—	—	2	—	8
Small mammal	1	—	—	—	—	—	—
Small rodent	8	—	—	—	—	—	—
Bird	1	—	—	—	—	—	1
Fish	4	—	—	—	—	—	—
Total	473	55	767.5	100	34	5	24

Note: MNI = minimum number of individuals.

The distal condyle has been shaped into a birdlike head with an open beak. The large circular eyes are placed at the depressions for the insertion of the lateral toe tendons. To produce an image of a kneeling figure, the legs have been fashioned so as to include the proximal rim and sides. The proximal articular surface has been smoothed to produce a relatively flat surface to rest on. Drill holes on either side of the neck or base of the head suggest that the specimen was an amulet or pendant that was probably worn around the neck.

Faunal Remains Discussion

By number of specimens and meat weight, white-tailed deer was the primary source of meat, accounting for about 39 percent of the meat yield (Table 10). Black bear was the second most important source of meat (ca. 28%). Wapiti ranks third as a meat contributor (ca. 21%). As a group, other mammals (cougar, possibly bobcat, raccoon, muskrat, beaver, fox and gray squirrels, cottontail rabbit, and opossum) made a relatively

significant contribution to the diet (9%). Bird hunting accounts for a rather small contribution (ca. 3%), with the wild turkey being the primary species taken. Finally, fish, as a meat resource, constitutes less than 1 percent of the diet. The dietary values clearly show that the animal economy revolved around deer, bear, wapiti, and turkey.

All of the potentially edible animal species are associated with three primary habitats or group of habitats: (1) forest edge or open forest, (2) rugged forested uplands, and (3) aquatic/riparian habitat. The combination of meat yields for animal species taken within or along these habitats suggests that forest edge and open forested area were the most significant. The species taken in these habitats include deer, fox squirrel, woodchuck, cottontail rabbit, and turkey. At least 63 percent of the edible meat source was acquired within forest edge and open wooded habitats. Rugged forested uplands and denser wooded areas were a significant source of edible species. At least 35 percent of the useable meat was acquired from animals associated



Figure 12. Carved deer phalanx with Burial 41.

with the latter habitats. The species taken include: cougar, bobcat, black bear, gray squirrel, opossum, passenger pigeon, box turtle, and poisonous and non-poisonous snake species. Given the upland nature of site location, distance from extensive floodplain habitats of the Cumberland River, and the heavily wooded conditions of the surrounding uplands area (Highland Rim escarpments), the significance of wooded habitat is expected. Less than 2 percent of the total meat source comes from aquatic/riparian habitats. Animal species acquired from these habitats include beaver, muskrat, map/painted turtle species, and gar, sucker, and catfish.

The 40DV6 faunal assemblage has defined the nature of Mississippian faunal resource exploitation in the middle Cumberland River Valley. The outer Central Basin physiographic province supplied enough forest edge environments to support a relatively abundant deer population, and also provided an excellent habitat for wapiti and bear populations in both dense forest and forest openings. It is noteworthy that this pattern is the exact opposite condition predicted by the Mississippian model of animal exploitation proposed by Smith (1975). The model predicted primary dependence on white-tailed deer, migratory avifauna, and seasonal fish use. However, Mississippian populations in the midlatitudes of the eastern woodlands were oriented toward an animal exploitation pattern of large game mammals and turkey (Breitburg 1998). Whereas black bear and wapiti are of little or no importance within the Mississippi River Valley, the species were important players and accounted for a substantial part of subsistence in the Cumberland River drainage.

Conclusions

The documentation of Gordontown as a fortified Mississippian town dating to the Thruston regional period (A.D. 1250–1450) is based upon corrected radiocarbon date results along with cultural materials

from the Curtiss, Myer, and TDOA excavations. William E. Myer (1928) provided the initial introduction of the Gordontown site plan to the archaeological community. Myer's map noted substantial earthworks (palisade, mounds) along with habitation and cemetery areas, and guided the later 1985–86 TDOA investigations (Moore and Breitburg 1998). The newly discovered 1877 Curtiss map presented key details about the site plan to better comprehend the Myer and TDOA exploration results (Moore 2004). Together, these maps illustrated that Gordontown, by the early to mid-fifteenth century, contained one platform mound, a substantial burial mound, and (at least) one additional mound of unknown function (denoted as "ash mound" by Curtiss and possibly the undefined mound on Myer's map) enclosed by a palisade with bastions. The area enclosed within the palisade, an estimated 11 to 15 acres, included numerous domestic structures along with several cemeteries.

Given this plan, how could the Gordontown residents sustain themselves on an upland ridge over a mile away from any primary streams and the accompanying fertile floodplain soils? William E. Myer (1928:496) stated that "the causes of the selection of this site were the two large bold springs indicated on the map . . . the fertility of the soil, and the natural adaptability of the site to fortification." These reasons, presented over seventy years ago, continue to be valid avenues of inquiry in current archaeological research.

Although somewhat obvious, reliable water sources have long been recognized as a basic necessity for more permanent late prehistoric site locations. Significant sites throughout the middle Cumberland drainage were established on landforms adjacent to rivers and primary streams with a substantial flow of water (Broster 1972; Dowd 1972; Ferguson 1972; Jolley 1978, 1980; O'Brien 1977; Smith 1993, 1994). However, recent research within the study area has identified a somewhat contrasting pattern with the presence of settlements along the dissected uplands away from the rivers and large tributaries (Klippel and Bass 1984; Smith 1992; Smith and Moore 1994, 1996). Springs within these upland areas offered prehistoric inhabitants a reliable water source away from the larger streams. At Gordontown, the two large springs present on the northern and southwestern site perimeters would have provided site residents with a suitable water supply for daily consumption and use.

The Central Basin has long been recognized for its rich soils (Edwards et al. 1974; Fenneman 1938; Springer and Elder 1980; Vanderford 1897). Underlying Ordovician formations of phosphatic limestone make this section of Middle Tennessee (especially the outer basin) one of the most productive locations within the Interior Low Plateau. The presence of fertile (phosphate-enriched) soils available within upland settings substantially

increased the area available to native inhabitants for farming. Previous research has defined a statistically valid relationship between Mississippian period site locations and the fertile outer Central Basin soils (Klippel and Bass 1984; Smith 1992). Gordontown exemplifies this relationship as a town established on fertile upland soils where residents could successfully grow maize (and other crops) within or adjacent to the immediate site area.

Another factor not mentioned by Myer but certainly a positive influence was the physical position of Gordontown along the western margin of the outer Central Basin near its border with the Western Highland Rim (see Figure 2). Late prehistoric populations must have recognized the availability of diverse animal and plant species living within these two provinces. Analysis of faunal remains from the 1985–86 investigations identified a reliance of the Gordontown residents upon animal species from forest edge/open forest as well as rugged forested upland habitats. Aquatic/riparian resources comprised a very small percentage of the total meat source, an expected result given the Gordontown site location.

Demographic data revealed the Gordontown population to be both socially and physically stressed. Archaeologists at this time cannot specify a primary cause for the circa A.D. 1450 abandonment of the middle Cumberland region and settlements like Gordontown. However, the authors are certain that high infant mortality, over reliance on maize as a food staple, overcrowded settlement conditions leading to an endemic incidence of infectious diseases like tuberculosis, and evidence of social conflict had an impact on settlement stability and population recruitment.

This study of the Gordontown site in the middle Cumberland region highlights the variation in Mississippian culture across the Southeast. Architecturally, Gordontown is recognizable as a fortified Mississippian town with mounds and residences. The site also shows some interesting features, including its upland setting that contrasts with prior characterizations of Mississippian peoples favoring river bottomlands (Smith 1985). Consequently, the fauna exploited by the Gordontown residents differ as well with a heavy reliance on deer, bear, and wapiti rather than fish. Mississippian towns were often surrounded by palisade walls, but the skeletal evidence of trauma at Gordontown and other middle Cumberland Mississippian sites indicates very real social conflict during the Thruston regional period. Interaction with other communities was not all violent; evidence for exchange shows up in nonlocal materials such as marine shell, Dover chert, greenstone, and ceramics (Smith and Moore 1999). The ceramics also show the flow of ideas across a wide area, with similarities in surface treatment and form to both the

east (eastern Tennessee) and west (Mississippi River Valley).

Extensive research in the middle Cumberland region over the past two decades has led to a better understanding of the changing population dynamics during the Mississippian period (Moore 2005; Moore and Smith 2001; Smith 1992; Smith and Moore 1994, 1996, 2005). During the Dowd regional period (A.D. 1050–1250), several chiefdoms developed within the middle Cumberland region; populations were dispersed into small farmsteads and hamlets oriented toward central towns with platform mounds (Smith and Moore 1996). In the Thruston regional period (A.D. 1250–1450), populations congregated into larger villages and towns, and the construction and renovation of platform mounds declined. The larger, nucleated Thruston settlements often built substantial palisades (with bastions) around their perimeters. Populations appear stressed by environmental and social factors, and raiding activity seems to increase. After A.D. 1450, the inhabitants essentially abandon the middle Cumberland River Valley.

Notes

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