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I am submitting herewith a thesis written by Richard R. Polhemus entitled "Mississippian Architecture: Temporal, Technological, and Spatial Patterning of Structures at the Toqua Site (40M R6)." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Anthropology.

Charles H. Faulkner, Major Professor

We have read this thesis and recommend its acceptance:

Gerald F. Schroedl, Jefferson Chapman

Accepted for the Council:
Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

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Date August 26, 1985

MISSISSIPPIAN ARCHITECTURE: TEMPORAL, TECHNOLOGICAL, AND SPATIAL PATTERNING OF STRUCTURES AT THE TOQUA SITE (40MR6)

A Thesis

Presented for the

Master of Arts

Degree

The University of Tennessee, Knoxville

Richard R. Polhemus

December 1985

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ABSTRACT

The description and analysis of 130 Native American structures from the Toqua site (40MR6) provide an architectural typology for determining age, form, and function of Mississippian and historic Cherokee structural remains in East Tennessee. The Toqua structures, ranging in age from circa A.D. 1200 to circa A.D. 1780, are examined for temporal, technological, and spatial patterning and are compared with 469 structures from 58 Mississippian archaeological sites in the interior Southeastern United States.

Superimposed structures and radiocarbon determinations provided a temporal sequence of structure types. Closely controlled excavations, botanical analysis of construction materials, and technological studies of building materials provided insight into two successive construction techniques. An earlier flexed form of building construction had continuous elements making up both walls and roof. A later rigid form of building construction used separate components for walls, roof, and roof support system.

Study of structure size, form, proportion, elaboration, content, and location provided information concerning structure function and the relationship of contemporary structures to each other. Insight concerning the temporal, technological, and spatial patterning of Mississippian structures was obtained.

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CHAPTER I

INTRODUCTION

Mississippian Architecture

Mississippian architecture may be defined as that portion of the built environment produced by Mississippian peoples as a patterned response to their perceived needs, desires, and world view. The built environment produced by Mississippian peoples is made up of buildings and other constructions usually accepted within the realm of "primitive" (Guidoni 1975) or "vernacular" (Rapoport 1969) architecture. Structures both reflect the multiplicity of interaction within a society and represent only a portion of such interaction. Some anthropologists (Chang 1968; Trigger 1968) choose the community rather than the household or tribe as the primary unit for classification, holding that the "community is the social group that is archaeologically most definable" (Chang 1968:2), while many anthropologists (Cranstone 1972; Whiting and Ayres 1968; Douglas 1972; Morgan 1975; Rapoport 1969) prefer the house or household as the primary unit for classification. The emphasis in this thesis will be on the archaeologically definable structure. For the purposes of this study "structure" is defined as any construction provided with a roof and excludes palisades, screens, plazas, and earthworks.

Evidence of Mississippian architecture, in the form of charred posts, postholes, fired clay daub, clay floors, and prepared clay

hearths, was noted by Read (1868), Emmert (Thomas 1894), and other early investigators in East Tennessee in the second half of the nineteenth century; however, they made no attempt to define the form or size of the buildings represented by such remains. William Edward Myer (1972) made the first attempt at describing the form and function of Mississippian structures and settlement features in Tennessee when he published the results of his investigations in 1927 at the Gordon and Fewkes sites located in Middle Tennessee. The investigations by Myer were focused upon the form and function of site features and house circles evident on the ground surface of these two sites. From the circular form of the surface evidence of the raised house circles, an assumption was made that the associated structures were also circular. This assumption, later shown to be incorrect by the work of Nash (1968) at the Link and Sleyden sites, was compounded by the excavation techniques of the day. Charred posts and fallen structural elements were encountered and recorded but larger areas sufficient to clearly observe structure patterns were not exposed at one time.

The investigation of the Norris Basin under the direction of William S. Webb (1938) represents a turning point in the study of Mississippian architecture in Tennessee. Large quantities of labor, provided by the Works Progress Administration and related federal works programs, coupled with access to relatively large regions within Tennessee Valley Authority reservoir projects provided an opportunity to investigate more than the isolated site or mound. Surveys were conducted and groups of sites identified, tested, and excavated in a

uniform manner (Lewis and Kneberg 1939). Large sites were chosen over small sites both to employ large numbers of workmen and to elicit data concerning intrasite patterning. Great quantities of data, tens of thousands of postholds and other traces of structures, as well as hundreds of structure patterns were recorded.

William S. Webb (1938) first described the two primary construction techniques utilized by Mississippian cultures in East Tennessee; these he designated "small log" and "large log." Lewis and Kneberg (1946) refined the descriptive parameters of these construction techniques and demonstrated the relative temporal relationship between them at Hiwassee Island and other sites in the Chickamauga basin. Hiwassee Island (Lewis and Kneberg 1946) and the unpublished Chickamauga Basin Report (Lewis and Kneberg 1945) remain the landmark studies dealing with Mississippian architecture in East Tennessee. Studies dealing with, or containing substantial data on, Mississippian architecture in other parts of the interior Southeastern United States include Black (1967), McKenzie (1964), Nash (1968), and Price (1969; 1978).

Mississippian Cultures in East Tennessee

The cultural period known as "Mississippian" has traditionally been defined by the presence of shell tempered ceramics, maize horticulture, and platform mounds. James B. Griffin (1967:189) used the term "Mississippian" in reference "to the wide variety of adaptations made by societies which developed a dependence upon agriculture for

their basic, storable food supply." Bruce Smith (1978:486) has defined "Mississippian" as:

> those prehistoric human populations existing in the eastern deciduous woodlands during the time period A.D. 800-1500 that had a ranked form of social organization, and had developed a specific complex adaptation to linear, environmentally circumscribed floodplain habitat zones. This adaptation involved maize horticulture and selective utilization of a limited number of species groups of wild plants and animals that represented dependable, seasonally abundant energy sources that could be exploited at a relatively low level of energy expenditure.

The Mississippian period in the East Tennessee Valley is represented by, in temporal order, the Martin Farm phase (Schroedl et al. 1985), the Hiwassee Island phase (Lewis and Kneberg 1946), the Dallas phase (Lewis and Kneberg 1946), and the Mouse Creek phase (Lewis and Kneberg 1941; 1945). The Early Mississippian is made up of the Martin Farm phase and the Hiwassee Island phase. The Late Mississippian is made up of the Dallas phase, the Mouse Creek phase, and the historic Overhill Cherokee phase.

The transitional Late Woodland-Early Mississippian Martin Farm phase is characterized by shell and limestone tempered ceramics possessing flaring rims and plugged loop handles, small Hamilton style triangular projectile points, and flexed construction utilizing both wall trenches and single set poles. The Hiwassee Island phase is characterized by shell tempered, predominately plain, ceramics in an increased variety of forms such as jars, bowls, bottles, plates, and pans. Distinctive ceramic traits include plugged loop handles, red filming, and red-on-buff painted decoration. Flexed construction utilizing both wall trenches and single set poles continues in use. The

Dallas phase is also characterized by shell tempered ceramics; however, cordmarked surface treatment is much more common than in the preceding phase. Distinctive ceramic traits include applique strap handles, applique surface ornamentation, human and animal effigy heads, and frequent incised decoration. Human burials, predominately partly flexed, are commonly found within and in the immediate vicinity of both primary and secondary structures. Rigid construction techniques utilizing interior support systems and single set posts replace the flexed construction of the earlier phases. The Mouse Creek phase is characterized by shell tempered ceramics closely resembling those of the Dallas phase. However, cord marked surface treatments are rarely present on Mouse Creek vessels and the colander vessel form is more common. Human burials, predominately extended, are common within secondary structures and in the vicinity of primary structures. Rigid construction techniques utilizing a central support system and single set posts for Mouse Creek structures closely resemble those of the Dallas phase; however, Mouse Creek structures are more commonly equipped with a wall trench entryway and set within a shallow pit than Dallas phase structures. The Mouse Creek phase, situated primarily on the Hiwassee River, is similar to the Dallas phase and may represent a late prehistoric or protohistoric variant of the Dallas phase.

The Toqua Site

The Toqua site (40MR6) is located on the south bank of the Little Tennessee River between river miles 23 and 23.5 in Monroe County,

Tennessee (Figure 1.1). The site is situated on the second terrace (T2) (Delcourt 1980) within an extensive expanse of bottom land at 35°33'53" North Latitude, 84°10'14" West Longitude. The occupied area at Toqua extends for a minimum of 2,000 ft along the terrace with a maximum width of 600 ft. Archaeological evidence of occupation ranges from a light scatter of lithic material in outlying areas to dense midden deposits adjacent to two substantial substructure mounds. Although the site area has been occupied for an extended period, as indicated by a scatter of diagnostic artifacts of the Paleo Indian, Archaic, and Woodland periods, only the Mississippian and the eighteenth century Overhill Cherokee occupations are represented by clearly defined architectural remains.

The Mississippian occupation of the Toqua site began late in the Hiwassee Island phase, about A.D. 1200, with the construction of the initial stage of Mound A and a number of structures dispersed along the front edge of the second terrace. During the Hiwassee Island-Dallas transition, near the end of the thirteenth or the beginning of the fourteenth century, a planned settlement enclosed by a substantial palisade was laid out around Mound A and construction of Mound B was initiated. A short time after this initial construction, the town and its defensive palisade were destroyed by fire and subsequently rebuilt on a more compact plan (Polhemus 1985). The resulting settlement plan, a plaza flanked by two substructure mounds surrounded by a dense array of structures within an encompassing palisade, remained little changed until near the end of the sixteenth century. Apparent

Figure 1.1. Map Showing Site Locations in the East Tennessee Valley.

1 Chota-Tanasee (40MR2-40MR62)
2 Mialoquo (40MR3)
3 Tomotley (40MR5)
4 Citico (40MR7)
5 Peery Farm (40MR67)
6 Wear Bend (40LD107)
7 Tomotley (40MR5a)
8 Bussell Island (40LD17)
9 Jones Ferry (40MR76)
10 Martin Farm (40MR20)
11 Bat Creek (40LD24)
12 Tellico Blockhouse (40MR50)
13 Fort Loudoun (40MR1)
14 Mayfield II (40MR27)
15 Rymer (40BY11)
16 Ledford Island (40BY13)
17 Mouse Creek (40MN3)
18 Upper Hampton Plance (40RH41)
19 Dallas (40HA1)
20 Bell (40RE1)
21 Fains Island (40JE1)
22 Walters Farm (40UN11)
23 Cox (40AN19)
24 Sale Creek (40HA10)
25 DeArmond (40RE12)
26 Ausmus Farm (40CE10)
27 Hixon (40HA3)
28 Hiwassee Island (40MG31)
29 Irvin Village (40CP5)
30 Davis (40HA2)
31 Hill Farm (40UN6)
32 Lea Farm (40AN17)
33 Richardson Farm (40CP8)
34 Bowman Farm (40CP2)
35 Leuty (40RH6)
36 Harris Farm (40CP9)
37 McCarty Farm (40UN4)
38 Pittman-Alder (40MI5)
39 Long Island (40RE17)

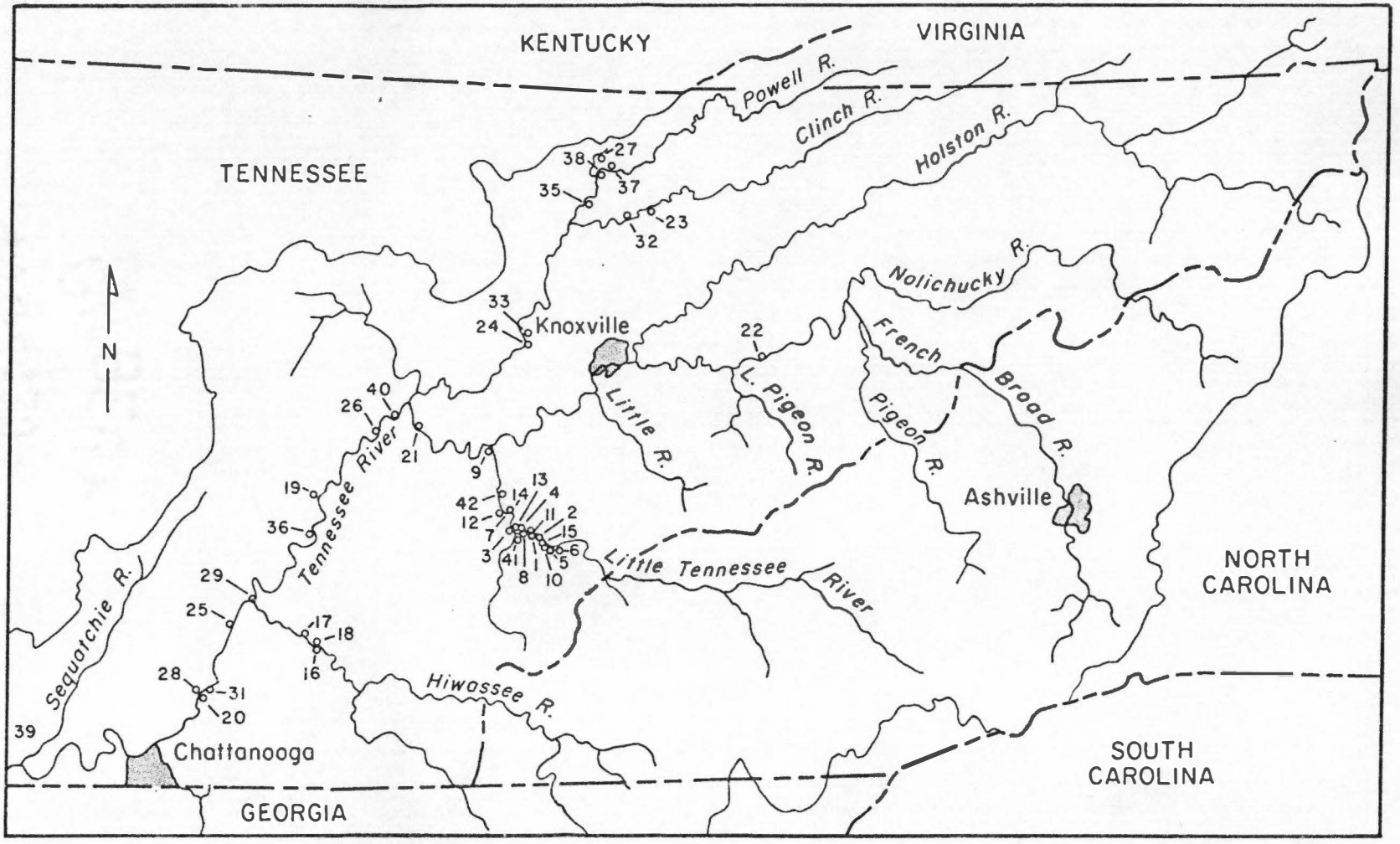
KENTUCKY
VIRGINIA
TENNESSEE
Powell R.
Clinch R.
Holston R.
Nolichucky R.
French Broad R.
Pigeon R.
L. Pigeon R.
Little R.
Tennessee River
Little Tennessee River
Sequatchie R.
Hiwassee R.
Knoxville
Ashville
Chattanooga
NORTH CAROLINA
SOUTH CAROLINA
GEORGIA
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Figure 1.1.

population losses at that time resulted in a much reduced occupied area enclosed by a poorly constructed palisade. Multiple burials containing more than two individuals and burials containing early historic period artifacts were recovered within this last palisade perimeter and suggest that the terminal Dallas phase occupation extended into the first half of the seventeenth century.

The Overhill Cherokee occupation, initiated in the second quarter of the eighteenth century and extending into the early nineteenth century (Polhemus 1985), was most heavily represented in an area upstream to the east of the Mississippian occupation although small amounts of Overhill Cherokee material were recovered in other portions of the site. The Cherokee occupation is represented by surface and plowzone materials as well as by features, burials, and postholes intrusive from the base of the plowzone.

Archaeological Investigation

The Toqua site was investigated as a part of the Tellico Archaeological project prior to inundation by Tellico Lake. The investigation was initiated in April of 1975 under direction of the author and continued until April of 1977 (Polhemus 1985; Schroedl and Polhemus 1977). The work was funded by the Tennessee Valley Authority and the National Park Service to whom a report has been submitted (Polhemus 1985).

The investigative strategy for the Toqua site (Polhemus 1974) comprised five phases:

I. Preliminary surveys to determine the extent of the site;

II. Test excavations to determine the condition and stratigraphy of the mounds and village areas;

III. Wide area excavation in selected village areas and in Mound B to obtain data concerning settlement patterning and architecture;

IV. Excavation of Mound A to determine the architectural and temporal sequence; and

V. A comparative analysis of the data recovered from Toqua with other Dallas phase sites to determine intersite relationships. The present study derives from data obtained from phases III through V of the Toqua investigation.

An area of approximately 175,000 ft^2 was excavated at least to the base of the plowzone at Toqua revealing over 16,000 postholds, over 1,500 features, and traces of 130 structures. One hundred and thirty-three structure numbers were assigned; however, three feature concentrations were later found not to represent structures. The site, following preliminary surveys consisting of controlled plowing and total controlled surface collection, was divided into a series of areas as illustrated in Figure 1.2. A consistent set of area abbreviations, utilized throughout the Toqua report (Polhemus 1985) and this study follows:

SV--South Village

NV--North Village

EV--East Village

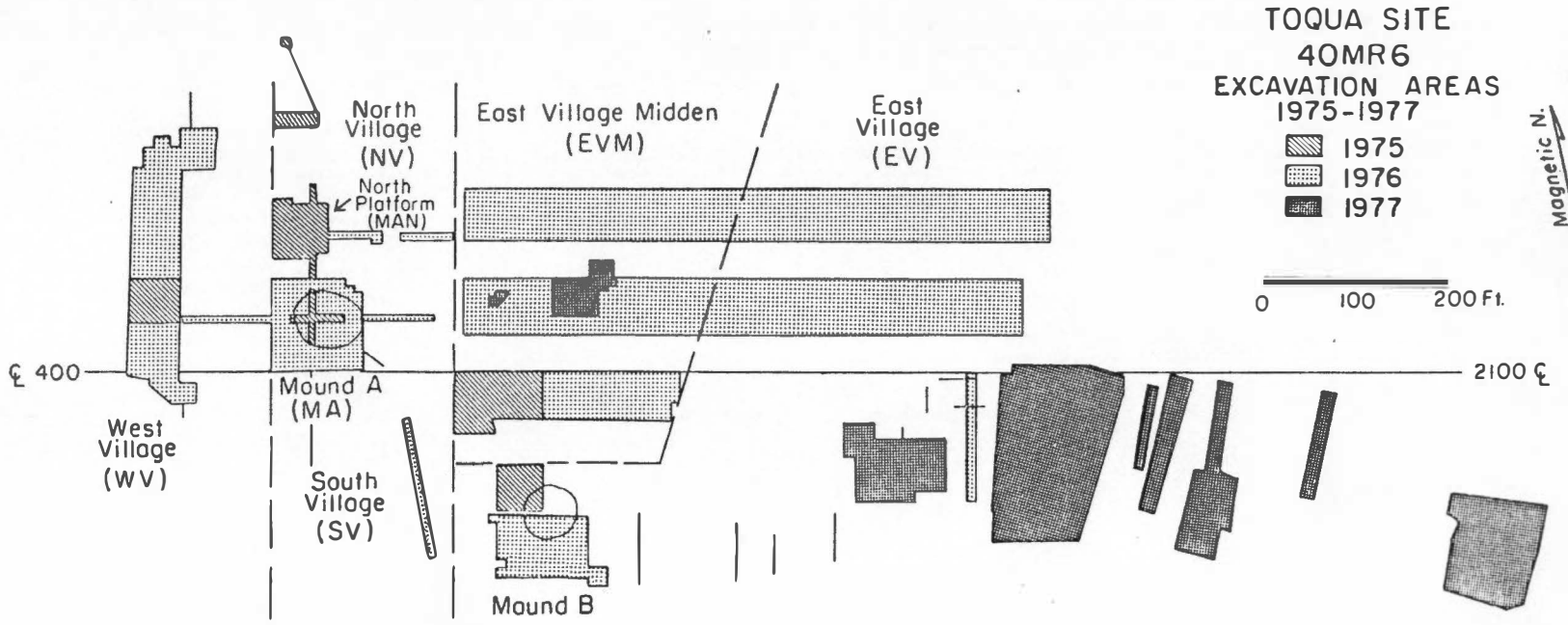


Figure 1.2. Map of Toqua Site Showing Village Areas.

EVM--East Village Midden

WV--West Village

MAE--Mound A East

MAW--Mound A West

MAN--Mound A North Platform

MB--Mound B

Structures, once identified, were exposed with shovels and trowels. Associated materials and features were recorded as described in Chapter II. A 2.5 ft square control block of floor fill for each structure was water screened. Three burned structures (Structure 3, Structure 14, Structure 39) were waterscreened in their entirety and are discussed in Chapter III. Structure preservation, project priorities, and weather conditions prevented the large scale water-screening of additional structures.

Environmental Setting

The location of the Toqua site, on the eastern edge of the Ridge and Valley Province near the southern section of the Blue Ridge Province, provides relatively easy access to a wide range of floral, faunal, and other natural resources. The Ridge and Valley Province is characterized by an assemblage of valley floors surmounted by long, narrow mountain ridges (Fenneman 1938). These ridges are formed of more resistant strata and intervening weaker rocks have been worn down to form the valley floors. The western boundary of the Blue Ridge Province is composed of metamorphosed Cambrian conglomerates,

quartzites, and slates (Fenneman 1938), as opposed to the folded limestone, dolomites, and shales that underly the Little Tennessee River Valley west of Chilhowee Mountain.

The topography of the area surrounding this site is made up of rolling hills to the north, west, and south with steep rugged mountains to the east. The nearly east-west orientation of the river is perpendicular to the prevailing ridge and valley trend and provided direct access to the resources of the Blue Ridge Province. The prevailing soils in the upland areas near the Toqua site are red to yellow podzols derived from the underlying dolomites, limestone, and shales (Elder 1954:93). The soils of the valley floor are made up of alluvial and colluvial materials derived from both the Ridge and Valley Province and the Blue Ridge Province. The extensive second terrace bottom lands on which the Toqua site is situated are predominantly of Statler loam, a deep, well drained fertile soil with friable subsoil (Hall et al. 1981). Calloway Island, a large island adjacent to Toqua, is made up predominantly of Transylvania loam, a deep, well drained silty soil (Hall et al. 1981). Large areas of these two very fertile agricultural soils were therefore available to the occupants of the Toqua site.

The lower Little Tennessee Valley receives an average annual rainfall of 59 inches (TVA 1972:13), with late winter and early spring being the wettest seasons. Flood data indicate that flooding most often occurred in March and sometimes in October and May (TVA 1972:29).

The Valley has a humid, temperate climate with moderate winters and hot summers. Temperatures recorded for the lower Little Tennessee Valley range from a maximum of 108°F to a minimum of minus 5°F. The average frost free season is 191 days, extending from April 14, the average date of the latest killing frost, to October 25, the average date of the earliest killing frost (Elder 1954:2).

The Little Tennessee Valley is included in the Carolinian Biotic Province (Dice 1943:17), which is characterized by a diverse temperate hardwood forest. The oak-chestnut forest region of the Carolinian Biotic Province includes the Blue Ridge as well as most of the Ridge and Valley Province (Braun 1950:192).

The Moravians, Abraham Steiner and Frederick C. DeSchweinitz, who visited Toqua in 1799, provide an important description of the topography and plants in the vicinity by listing the range of then extant vegetation by topographic zones or categories. The Moravians describe the extensive bottom lands along the south bank of the Little Tennessee River in the following manner:

> We soon came to flat land and had amazingly extensive plains about us, covered with high grass. Of woods there is little on this side of the river, the more, however, on the other side. The plains are partly good bottoms, partly more elevated, fertile land. Under the grass the earth was covered with strawberry plants. When the strawberries are ripe the region is said to appear as though covered with a red cloth. Here and there peach and wild apple trees may be seen, and in various places, especially along the river, very many chicasaw and other plum trees, of such varied kinds that one may have ripe plums from June til Autumn.
> (Williams 1928:470-471)

Patches of woods were also noted by the Moravians on the bottoms, along tributaries flowing across the bottoms, and on higher ground to the south:

> Now and then we passed patches of woods, particularly along little streams that flow into the Tennessee. The trees consisted of mulberry, walnut, honey-locust, persimmon, plum, and particularly of tall and large sumach. Farther inland there are pine, hickory, and oak.
> (Williams 1928:472)

The Moravians described the uplands they encountered south of the Toqua site, while traveling to Tellico town, in the following way:

> We rode mainly southward and soon came to high land, mostly level. Trees were scattered and we noticed pine, hickory, post-oakes, few black oakes and still less frequently, Spanish oakes. Underbrush we saw very little, other than very low hickory and sourwood. Everywhere there was high grass, and we saw many low grape-vines. There was much of this high land of this nature that we saw in the Cherokee country. This highland is everywhere more or less broken by many narrow valleys, in which streams frequently flow, . . . along these waters there are many tall poplar trees. The soil is black but not deep. Underneath there is yellow-gray loam.
> . . . . . .
> Next we came to a small brook, up which we followed a considerable distance on low-lying ground. This land is not of the best, but it seems to be good meadow land. It bears a low reed grass and has very tall poplars, also maple, beech, and oak, with thick undergrowth.
> (Williams 1928:477-478)

The preceding excerpts from the travels of Steiner and DeSchweinitz provide an unusually detailed description of the area around the Toqua site near the end of the Cherokee occupation. The relatively open park-like aspect of the uplands may have been due in part to seasonal burning of the undergrowth by the Indians as described later in the Moravians' account (Williams 1928:478). These descriptions illustrate the extent to which the botanical resources had

been affected by the Native American presence in the Toqua site area by the end of the eighteenth century as well as provide some indication of the variety and placement of vegetation types. Recent research in the Lower Little Tennessee River Valley utilizing archaeologically derived charred botanical materials (Chapman and Shea 1981) and a combination of archaeologically derived botanical materials and pollen analysis (Cridlebaugh 1984) has demonstrated the progressive effect of man on the landscape, beginning prior to the Mississippian period and continuing to the present day. This progressive effect is readily evident in the increasing percentage of successional and disturbance favored species through time in both studies. The effect of a population the size of which probably occupied the Toqua site on the surrounding landscape over a period of four hundred years of Mississippian occupation must have been considerable.

Research Objectives and Limitations

It is the purpose of this study to (1) describe and present a typology for structures identified at the Toqua site (40MR6), (2) discuss temporal, technological, and spatial patterning noted for Toqua structures, (3) compare such patterning with other Mississippian sites in the Ridge and Valley Province, and (4) briefly examine the place or role of structures in Mississippian society. It is hoped that this study will provide an expandable typological framework of use in ordering and utilizing the tremendous corpus of Native American architectural data on file at various institutions in the Southeastern

United States as well as helping structure future field research to acquire even better data on the form and function of Mississippian architecture. The study also demonstrates that certain basic technological aspects of Mississippian architecture are not restricted to a particular cultural group but reflect a progression of architectural development common to much of the interior Southeastern United States, and by doing so, provides a vehicle of use in examining architecture in other culture areas.

These research objectives are subject to certain limitations inherent in the nature of the basic data and in the archaeological process. All archaeological remains, however well preserved, represent only the hollow shell or husk of the processes and human behaviors which created them. The ideal structure would be that still standing with contents abandoned intact; however, the best archaeologists in the interior Southeastern United States can expect to encounter is a structure destroyed by fire with at least some contents in primary context. In fact such ideal structures are rarely encountered, and when encountered are even more rarely recorded in sufficient detail to take full advantage of the data they contain. Structures at the Toqua site range from near the ideal in preservation to aggregations of postholes and features representing up to four hundred years of continuous utilization of the same building location. Comparability of data between sites and projects was a problem not fully resolved, particularly with sites for which the field data were unavailable and only the published sources utilized. Such difficulties

underline the need for explicit description and definition of terms. The terms "posthole" and "postmold" for instance are frequently used interchangeably yet for structural analysis there is a great difference between a posthole, which serves as a setting and limiting dimension for a post, and a postmold, which provides data concerning the size and form of the structural element itself. Comparison of posthole/ postmold size as well as posthole/charred post size at Bussell Island (40LD17) and the Rymer site (40BY11) as well as at Toqua by the author indicates that structure element size is most frequently between one half and three quarters the diameter of the containing posthole. Changing emphasis on recording of structural details, on the importance of paleobotanical analysis of structural elements, and on the mode of recovery of structure contents has also limited the scale of intrasite comparisons. A last limitation for architectural studies rests with the changing mode of field investigation over the past fifty years from a concentration upon primary structures and particularly public buildings associated with substructure mounds to a concentration upon not only primary structures but the space between them and the resulting identification of secondary structure types. In some cases returning to the original field records has allowed the identification of at least some secondary structures while others remain unknown. As a result of the nature of the archaeological record, and of the various limitations discussed, the number of structures represented at any site should be considered as a minimum number for each type.

The Comparative Sample

The sample of structures compiled for comparison with structure data from the Toqua site (Table A.1, in the Appendix) is summarized in Table A.2 (Appendix) for sites recorded in the East Tennessee Valley and in Table A.3 (Appendix) for selected sites recorded elsewhere in the interior Southeastern United States. Data concerning 621 structures from 58 archaeological sites were compiled to provide a matrix within which to study the 130 structures recorded during investigation of the Toqua site. Original field records for 48 of the archaeological sites, representing 499 structures, on file at the Frank H. McClung Museum, The University of Tennessee, Knoxville, were consulted to identify secondary structures and architectural features recorded by archaeologists but not included in published reports. Published materials were utilized for the remaining 17 sites situated south, west, and east of the East Tennessee Valley. Structure identification data, by structure type, for each site in the comparative sample is presented in Table A.4 (Appendix).

CHAPTER II

STRUCTURES

Introduction

One hundred and thirty-three structure numbers were assigned to the remains of roofed structures at the Toqua site. Structure numbers 1 through 60 were assigned in the field. Structure numbers 61 through 133 were assigned to structures identified during analysis of field records and to structures excavated during the spring of 1977. Each structure designation represents a combination of architectural traits identified in situ within the area excavated. Each structure number should, ideally, represent a single building episode, preferably destroyed with contents by fire. In actuality, structures identified at Toqua range from the ideal, to series of heavily intruded structures spanning long periods of time, to identified but otherwise unexcavated or unspecified structure localities within the site.

Description of Architectural Traits

Structural data from all previous Mississippian Period excavations within the Great Valley of East Tennessee on record at the Frank H. McClung Museum, The University of Tennessee, Knoxville, were examined prior to the Toqua site investigation with a two-fold goal: first, to refine if possible the previously described sequence of structure change (Lewis and Kneberg 1946; Webb 1938); and, second, to compile a list of diagnostic traits for the structures within that

sequence. Certain traits, identified through this process, were designated as features to be recorded in the field to aid in identifying and interpreting structures. Other traits were to be noted (Polhemus 1985), particularly on recorded excavation profiles, but were not to be assigned feature numbers. Table 2.1 lists those traits derived from the records of previous excavations as well as the feature or non-feature status of each.

Architectural traits assigned feature designations at the Toqua site are described in detail elsewhere (Polhemus 1985); however, both featured and nonfeatured architectural traits are briefly discussed prior to the definition of specific structure types. Structure types are defined on technological attributes other than size and so may include one or more functional modes. The difference between Dallas phase domestic structures and public buildings, for instance, is reflected in size and relative degree of interior elaboration rather than basic technological attributes. Probable function, then, is approached through examination of content, interior elaboration, and relative size within each structure type. Although a temporal progression of structure or architectural types is clearly indicated at the Toqua site and other Mississippian sites in the Great Valley of East Tennessee, it should be noted that more than one structure type was in use at any given point in time and that such diversity should reflect the shelter needs of the aboriginal population.

Table 2.1. Architectural Traits Present in Structures at Toqua.

Architectural Traits	Trait Noted but not Featured	Trait Featured
Prepared Clay Hearth		×
Surface Fired Area		×
Clay Floor or Surface	×	
Prepared Clay Furnishing (bench, partition, platform, seat)		×
Split Cane Matting Impressions		×
Wall Trench	×	
Posthole (<1 ft diameter)	×	
Posthole (≥1 ft diameter)		×
Floor Trench		×
Entryway		×
Structure Pit or Depression	×	
Clay or Earthen Embankment	×	
Burial Beneath Floor	×	
Fired/Unfired Clay Daub	×	
Burned Superstructure (including but not limited to: charred timbers, poles, grass thatch, cane, bark, and split cane matting)	×	
Artifact or Artifacts in situ on Floor (including discrete midden and other refuse deposits)		×

Nonfeatured Architectural Traits

Architectural traits not assigned feature designations include wall trenches, postholes less than 1.0 ft in diameter, clay floors or surfaces, fired or unified clay daub, burned superstructure, embankments, structure pits or depressions, and burials placed beneath structure floors.

Wall trenches are associated with structures in the lower phases of Mound A and the circular structure beneath Mound B. Wall trenches are typically attributed to the Hiwassee Island phase in the Ridge and Valley Province and occur in both the relatively rare continuous or closed cornered style and the more common discontinuous or open cornered style. The use of wall trenches may relate, in part, to the soil characteristics where a structure is constructed. A loose or less compact soil, such as mound fill, may require the additional reinforcement provided by poles or other materials positioned in the trenches.

Postholes are associated with all identified structures at Toqua (10,127 postholes), as well as with unidentified structures, palisades, and other aboriginal activities requiring ground support, and are recorded throughout the excavated portions of the Toqua site. The size, that is the diameter and depth, of a posthole does not accurately reflect the size of the member contained other than to provide an upper threshold or limit. Studies of burned structures occupied for short periods of time (Polhemus 1968; 1978) indicate that postholes for a given portion of a Dallas phase structure, such as the exterior wall,

the main roof supports, or interior furnishings, can and frequently do differ by as much as a full diameter (i.e., 0.5 ft-1.0 ft for exterior wall postholes). Depth, when the actual point of origin can be determined, varies to an even greater degree. The diameter and wood type of the actual post, either in the form of a postmold or of a charred post, reflects more clearly the intent of the builder than the footing dug to receive it. In addition to diameter, patterning in alignment, spacing, and fill type, as well as the presence and size of preserved postmolds and charred posts are utilized in defining structure patterns. With few exceptions, the total number of postholes and/or postmolds summarized in the structure tables should be considered a minimum count for each structure due to intrusions, differences in soil types, and fill characteristics. Postholes greater than 1.0 ft in diameter are predominantly associated with structures as main roof supports and, for that reason, were assigned feature numbers during the Toqua investigation. Postholes less than 1.0 ft in diameter frequently occurred in smaller aggregates situated between some structures and are suggestive of repetitive activities that required some support. Highly variable fill and a minimum of preserved postmolds or charred posts within such postholes tend to set these aggregations of postholes apart from those associated with structures. Although variability is present in the much larger aggregations of postholes on a structure location due to long term construction, alignments and segments of patterns were frequently differentiated by fill characteristics after a sufficient area had been excavated.

Clay floors or surfaces are associated with a variety of structure types at the Toqua site. Such floors are found most often with larger public buildings associated with the substructure mounds. Earlier structures also tend to have a greater percentage of floors so treated. Later rigid single set post Dallas structures tend to have such treatment restricted to the area encompassed within the main roof supports, considered to be the "public floor area" in such structures. The extent and form of clay floors in early (Hiwassee Island) versus late (Dallas) structures reflects two factors: first, the smaller percentage of "built in" furnishings, as indicated by postholes, in the earlier structures; and second, the presence of clay roof daub only on that central portion of the roof within the span of the main roof supports in the later structures. The roof daub from preceding structures, having fallen or been washed from the superstructure, is frequently trampled or compacted into a "floor" for the succeeding structure constructed on the same location. Clay floors or surfaces are most easily identified in vertical profiles or sections.

Fired or unfired clay daub is most frequently recognized in the form of circular to rectangular masses centered over the prepared clay hearths within the main roof supports of type 4a structures. In its unfired state clay daub may form an irregular pile at such locations or it may be reduced or modified into the clay floors previously described. Fired clay daub, when not removed during construction of a subsequent structure, also forms an irregular pile as much as 0.8 ft in thickness centered within the structure. Smaller quantities

representing clay partitions or other interior furnishings may be found in other portions of a structure destroyed by fire. Clay daub utilized for interior partitions is sometimes decorated through punctation, incision, or painting. Several fragments recovered from the east interior partitions associated with Structure 14 on the Phase E summit of Mound A are decorated with rows of conical punctations. A single painted wall fragment recovered from Structure 132, a large shed or portico east of and associated with Structure 3 on the North Platform of Mound A, is decorated with a series of white dots and lines on a red wash (Figure 2.1). Fired clay daub can provide a host of detailed architectural information concerning construction materials, construction details, and probable season of construction. Hard fired clay daub from Toqua structures and Structure 1 at Bussell Island were examined for impressions left by perishable construction materials. The plastic nature of the clay at the time of its application to a structure results in clearly defined impressions of other, more perishable, materials. The season of daub application may be indicated through the inclusion of identifiable leaves. Cane, split cane, split cane matting, and twisted cordage impressions observed on fired daub associated with Structure 3 at Toqua provided details concerning construction materials not clearly recognizable from charred botanical materials alone. Construction details, particularly the relative placement and spacing of superstructure elements, may be retained only in such impressions after burning structures have collapsed. The use and relative spacing of split wood roofing elements as well as the

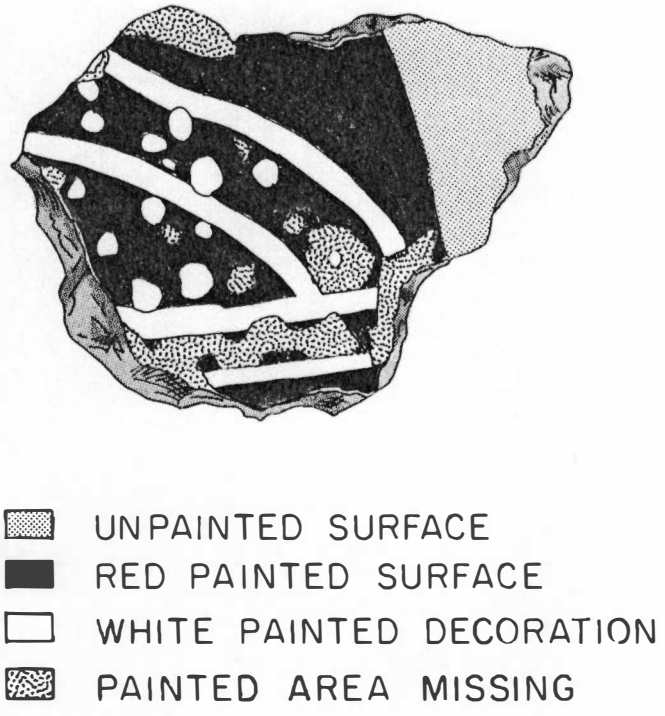


Figure 2.1. Painted Daub Fragment.

joining of two main roof beams to a main roof support post are preserved on daub fragments from Structure 1 at Bussell Island.

Portions of the charred superstructure are frequently preserved when structures are destroyed by fire. Portions of timbers, wall posts, grass thatch, cane matting, and cordage as well as perishable structure contents are sometimes recovered from burned structures. Daub, charred superstructure and the contents of structures are more likely to be preserved in protected environments, as within structure pits or depressions and within substructure mounds. Rapid burial of structural remains, through the introduction of fill to level a floor while replacing a domestic structure or the addition of mound fill to create a new mound summit surface, contributes greatly to the preservation of such remains. This tendency produces a bias on the part of the excavator toward structures in such environments, particularly public buildings within mounds and rigid single set post structures, which are frequently set in a shallow pit and encompassed by a clay or earthen embankment. Clay or earthen embankments, although frequently altered or damaged during later construction, can be recognized best through a combination of wide horizontal exposures and vertical profiles. Embankments around structures served three purposes: first, to insulate the exterior walls; second, to divert run-off from the frequent rainfall characteristic of the Dallas area; and third, to dispose of the fill removed from the shallow pits frequently dug to contain structures.

A limited number of structures identified during investigation of the Toqua site were sufficiently well preserved to provide full data concerning patterning and the use of space within structures. Pottery vessels and other isolated artifacts or groups of artifacts were recorded on a number of structure floors; however, only three possessed the necessary combination of clear floor definition, sufficient quantity of material on the floor, destruction by fire, and relative lack of later disturbance to provide extensive data concerning patterning and the use of space. Two rigid single set post structures, Structure 3 and Structure 14, were excavated in sufficiently small units and with floor fill fully processed by waterscreening to 1/16 in mesh to allow detailed examination of interstructural patterning and the use of space. One structure, Structure 39 in the East Village Midden Area, was unfortunately excavated only in quarters rather than in more desirable smaller units; however, floor fill of each quarter was waterscreened to 1/16 in mesh. In all three structures artifacts noted during excavation were plotted and concentrations of artifacts or other discrete deposits of other materials were recorded and assigned feature numbers. These structures are described elsewhere with respect to content and spatial relationships as well as with respect to the structures themselves.

Burials, although not an architectural component, are frequently and consistently associated with certain structure types and are usually interred beneath the floor of a structure which continued in use. Indeed, clusters of burials demonstrating consistent patterning

in orientation often provide the first clue to the presence of a structure in the records of previous excavations. Burials associated with structures at the Toqua site tend to be concentrated toward the later end of the occupation and to be concentrated within structures demonstrating the longest sequence of rebuilding on one location. Given the age and sex composition of such burial clusters, it seems likely that the clusters represent a portion of the social unit occupying the structure or succession of structures through time. There is some evidence to suggest that individuals may have been interred in their customary location occupied within the structure while living (Polhemus 1985).

Featured Architectural Traits

An archaeological feature, for the purpose of this study, may be defined as any cultural entity which, by content, form, or context, is capable of providing data concerning past activities within an archaeological site. Thus a feature, as here defined, may be a single object such as a native copper ornament, a discrete cluster of artifacts within a closed context such as a structure floor, or a prepared clay hearth in a structure. Some feature types carry more information value than others. A discrete deposit of primary midden on a structure floor, for example, will be of greater interpretive value than the same refuse deposited as part of a secondary midden away from the household that produced it.

Features may be examined from two levels or aspects; a plan view or two dimensional aspect, and a three dimensional aspect. The first

aspect, that of observation in plan view (South 1977:279), may be employed for all features recognized and assigned numbers during an excavation but not necessarily excavated. The second or three dimensional aspect is employed for all excavated features and results in the elaboration or refinement of data for features identified through plan view observation. Some feature types, by their nature, are excavated at the point of discovery such as surface fired areas, split cane matting impressions, or artifacts and display all relevant data if intact. Other types of features, such as pits or prepared clay hearths are not fully defined until excavated. Those classes of archaeological entities assigned feature numbers that relate to structures (see Table 2.1, p. 22) are described below.

Prepared clay hearths are defined as clay receptacles for fire other than a simple clay surface. Although simple clay surfaces were sometimes utilized for primary hearths within primary structures, such features, described elsewhere as surface fired areas, are generally found in outdoor or secondary structure contexts. The primary function of the prepared clay hearth was to provide heat and light within a primary structure. Prepared clay hearths display a considerable range in both size and form at the Toqua site. Hearth categories or types are defined using attributes always present, i.e., those associated with the firebasin itself, and attributes which are frequently present, i.e, those associated with the rim or interface between the firebasin and the surrounding floor surface. The first, made up of variables in the plan and profile of the firebasin, directly effect the heat and light

producing qualities of the prepared clay hearth. The second, made up of primarily decorative elements, may more accurately reflect status, temporal, or other cultural patterning within the Toqua site as well as between Toqua and other Mississippian sites. Prepared clay hearth data from other Mississippian sites were examined to determine the range of variability and to try to identify any evident temporal trends. A hearth typology (Figure 2.2) was compiled for the Toqua site and is illustrated in Figure 2.3.

Prepared clay hearths associated with public buildings were found to be more elaborate than those associated with domestic or village structures; however, a temporal sequence was evident for both (Figure 2.4). Preliminary comparisons with prepared clay hearths from other Mississippian sites, particularly Hiwassee Island, indicate that intersite correlations can be made and a relative dating of different Mississippian sites in the Ridge and Valley Province may be possible. The initial mound construction, Phase A-1, at Toqua for example correlates with Phase E-1 at Hiwassee Island. Through examination of superimposed series of hearths in both Mound A and the village areas, prepared clay hearths were found to change through time in the following ways:

1. firebasin proportions change from relatively deep to relatively shallow;
2. modeled clay rims, when present, change from rectangular to circular in form;
3. firebasin size changes from relatively small in diameter to relatively large in diameter in comparison to structure size.

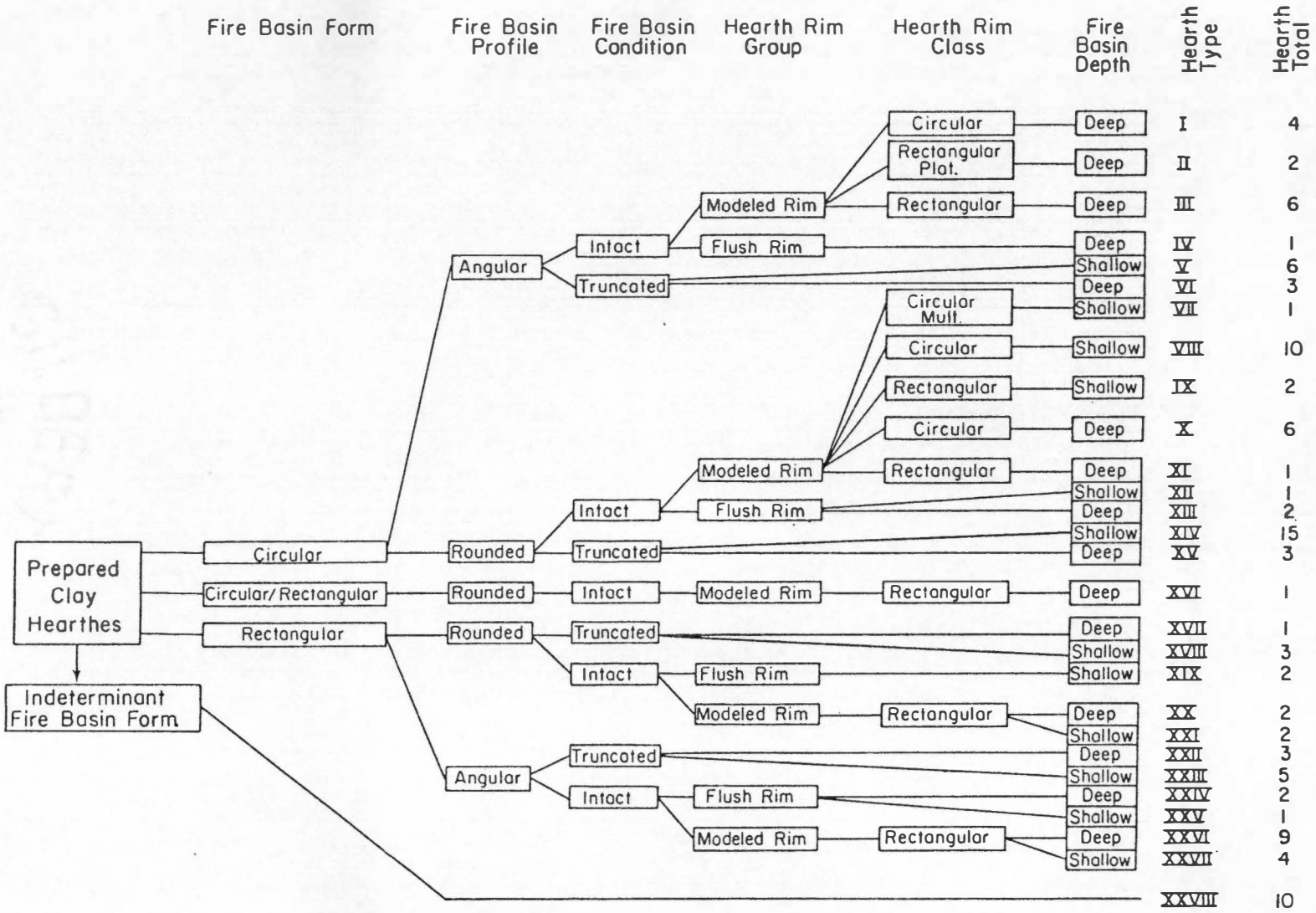


Figure 2.2. Prepared Clay Hearth Typology for the Toqua Site.

Figure 2.3. Prepared Clay Hearth Plan Views and Sections.

I	Circular deep angular firebasin with intact circular modeled rim
II	Circular deep angular firebasin with intact rectangular modeled platform rim
III	Circular deep angular firebasin with intact rectangular modeled rim
IV	Circular deep angular firebasin with intact flush rim
V	Circular shallow angular firebasin with truncated rim
VI	Circular deep angular firebasin with truncated rim
VII	Circular shallow rounded firebasin with intact multiple circular modeled rims
VIII	Circular shallow rounded firebasin with intact circular modeled rim
IX	Circular shallow rounded firebasin with intact rectangular modeled rim
X	Circular deep rounded firebasin with intact circular modeled rim
XI	Circular deep rounded firebasin with intact rectangular modeled rim
XII	Circular shallow rounded firebasin with intact flush rim
XIII	Circular deep rounded firebasin with intact flush rim
XIV	Circular shallow rounded firebasin with truncated rim
XV	Circular deep rounded firebasin with truncated rim
XVI	Circular and rectangular deep rounded firebasin with intact rectangular modeled rim
XVII	Rectangular deep rounded firebasin with truncated rim
XVIII	Rectangular shallow rounded firebasin with truncated rim
XIX	Rectangular shallow rounded firebasin with intact flush rim
XX	Rectangular deep rounded firebasin with intact modeled rectangular rim
XXI	Rectangular shallow rounded firebasin with intact modeled rectangular rim
XXII	Rectangular deep angular firebasin with truncated rim
XXIII	Rectangular shallow angular firebasin with truncated rim
XXIV	Rectangular deep angular firebasin with intact flush rim
XXV	Rectangular shallow angular firebasin with intact flush rim
XXVI	Rectangular deep angular firebasin with rectangular modeled rim
XXVII	Rectangular shallow angular firebasin with rectangular modeled rim
XXVIII	Prepared clay hearth of indeterminant form

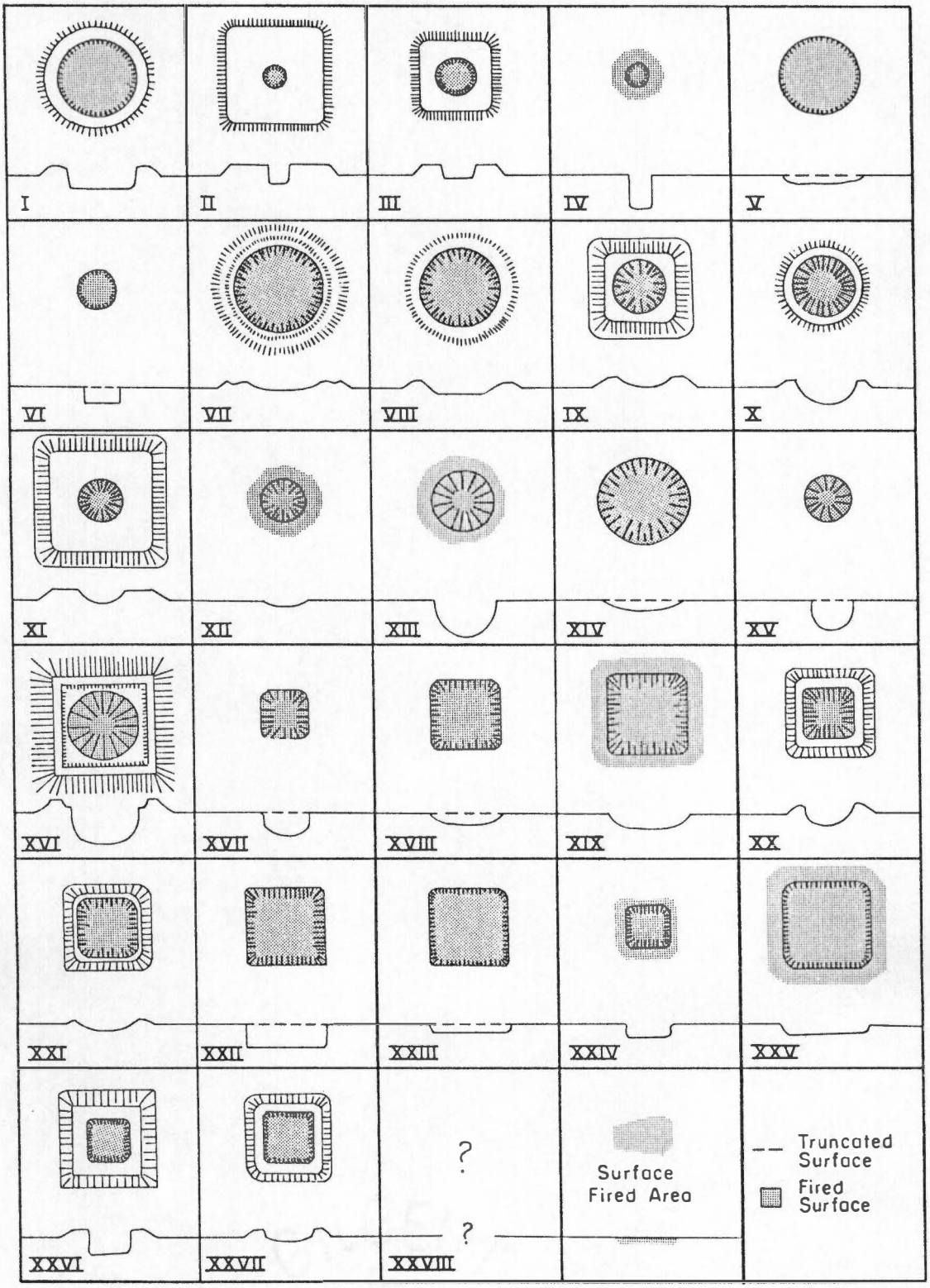

I
II
III
IV
V
VI
VII
VIII
IX
X
XI
XII
XIII
XIV
XV
XVI
XVII
XVIII
XIX
XX
XXI
XXII
XXIII
XXIV
XXV
XXVI
XXVII
XXVIII
?
?
Surface
Fired Area
Truncated
Surface
Fired
Surface

Figure 2.3.

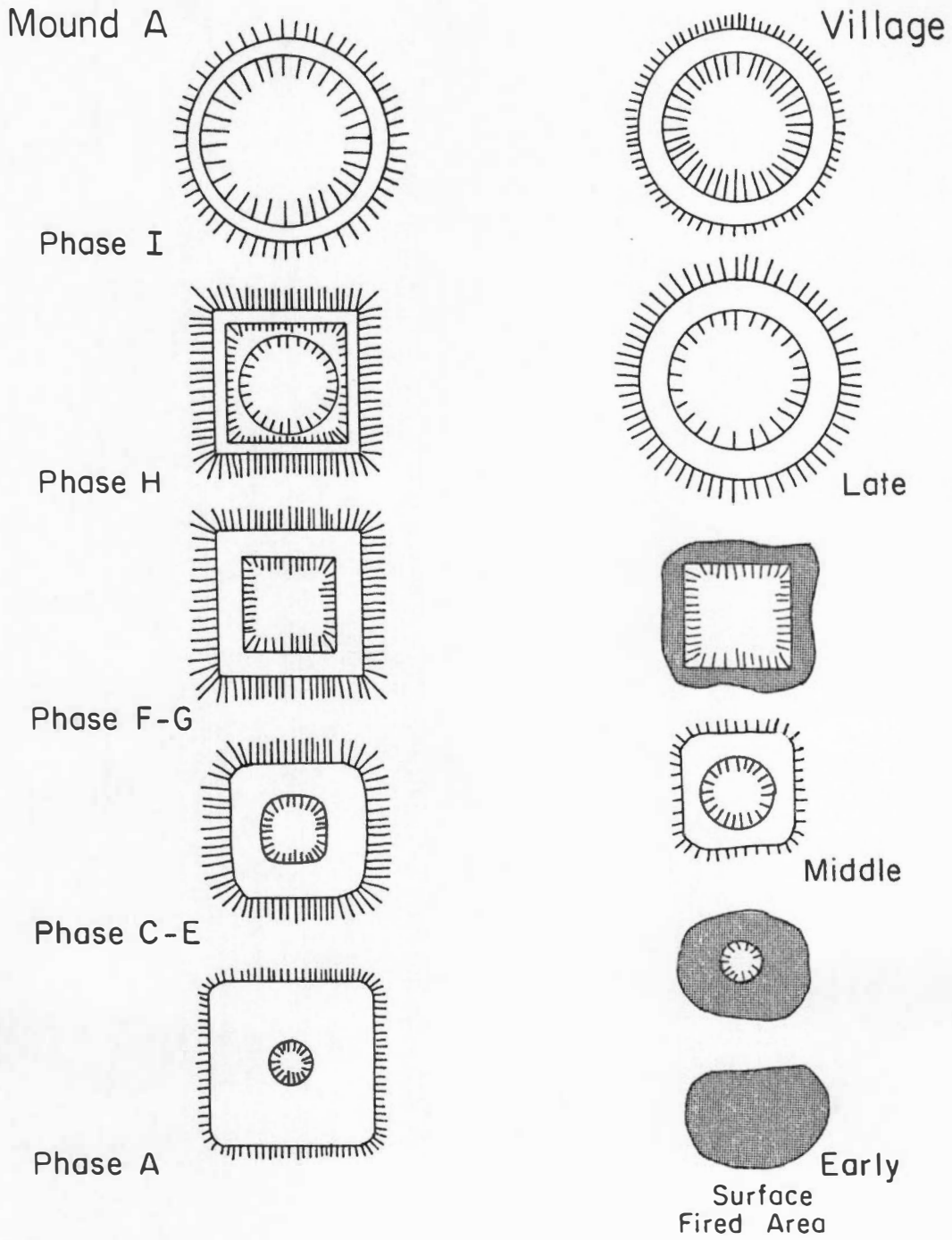


Figure 2.4. Toqua Prepared Clay Hearth Sequence--Mound and Village.

Hearth size and elaboration at the Toqua site appear related to the relative status of the occupants or to the primary function of the structure with which it is associated.

The surface fired area has a long history in the Little Tennessee River Valley, extending well back into the Archaic period (Chapman 1977:98), and undoubtedly served a variety of purposes during that time. At the Toqua site surface fired areas occurred both in direct association with structures and with outdoor activity areas and probably served a generalized cooking or food processing function. In two cases stone trivets capable of supporting a pottery vessel were recorded in association with surface fired areas. Size and intensity of firing probably varied with the type and duration of the activity which took place and no temporal patterning was evident. Surface fired areas associated with large single set post open structures on the east summit of Mound A, however, were found to be consistently much larger than those associated with other structure types.

Interior furnishings of prepared clay, other than prepared clay hearths and surface fired areas, are most frequently associated with public buildings and consist of platforms, benches, and partitions. Perishable counterparts are present in both mound and village contexts indicating that material rather than form was the differentiating factor. Clay platforms and benches were frequently covered with split cane matting of the type featured when encountered as impressions on floor surfaces. Clay interior furnishings were not only frequently covered with perishable surfacings but were frequently reinforced through the

incorporation of cane and small diameter wooden elements, particularly within the edges and facings of such features. The tough yellow sandy clay, utilized for prepared clay hearths and mound surfaces as well as interior furnishings for public buildings, was deliberately chosen from a range of available soils to serve as a wear and weather resistant construction material. Clay partitions, which served to divide the private floor area of public and larger domestic structures into segments, were constructed with similar reinforcement and, in preserved examples, were originally 4.5 ft to 5.0 ft in height. Clay partitions and walls were sometimes decorated by punctation, incision, or painting (see Figure 2.1, p. 27). Prepared clay constructions described in the literature as "seats" (Lewis and Kneberg 1946:56) were recorded in two structures (Structure 10, Structure 61) at the Toqua site. The position within the structure that each seat occupies, centered against a wall, both at Toqua and at the Hiwassee Island site suggests that such features may have functioned as a step up to an entryway. Regardless of function, seats are characteristic of a relatively short period of time during the transition from the Hiwassee Island to the Dallas phase.

Floor trenches, shallow elongate rectangular features situated between a pair of main roof supports, were identified during excavation of Structure 2 on the east edge of the plaza and Structure 3 on the North Platform of Mound A. Similar features have been recorded in Dallas structures at the Tomotley site (Guthe and Bistline 1978: 56-61). The Tomotley examples and the Structure 2 floor trench are

centered on, and situated west-northwest of, the prepared clay hearth of each structure. The floor trench in Structure 3 is situated south-southwest of, and centered on, the prepared clay hearth. Each example associated with a burned structure contained charred wood and other charred structural debris indicating that the feature was either open or contained a construction of perishable materials at the time the structure burned. Careful excavation of Feature 86 in Structure 3 disclosed that a large horizontal chestnut log, at least 1.6 ft in diameter and 7.2 ft in length, had been set into the structure floor in the trench. this horizontal timber may have served as a seat opposite the entryway in certain structures during the latter portion of the Dallas phase.

Postholes greater than 1.0 ft in diameter are consistently associated with structures and provide data concerning the roof form of many structures. Not all postholes determined to be main roof supports are greater than 1.0 ft in diameter, nor are all postholes of such size main roof supports; however, the great majority are clearly indicative of permanent construction and therefore qualify for feature designation.

Entryways provide a clear indication of the functional axis or orientation of structures. The access needs of the occupants as well as the relation of structures and outdoor space to each other provides key data of use in understanding both intra- and interstructural patterning. Three types of entryway were recorded at the Toqua site. The most common type consists of a pair of parallel trenches

which, in one case, contained split planks or slabs of wood set edge to edge, and form a vestibule extending out from the structure wall. Such entryways are usually associated with rigid single set post Dallas primary structures on Mound A or structures set in shallow pits in the village area. Pairs of structures on the west summit of Mound A are frequently linked by a trench type entryway to each other as well as to open pavilions on the east summit. Trench entryways reflect the presence of clay or earthen embankments around structures.

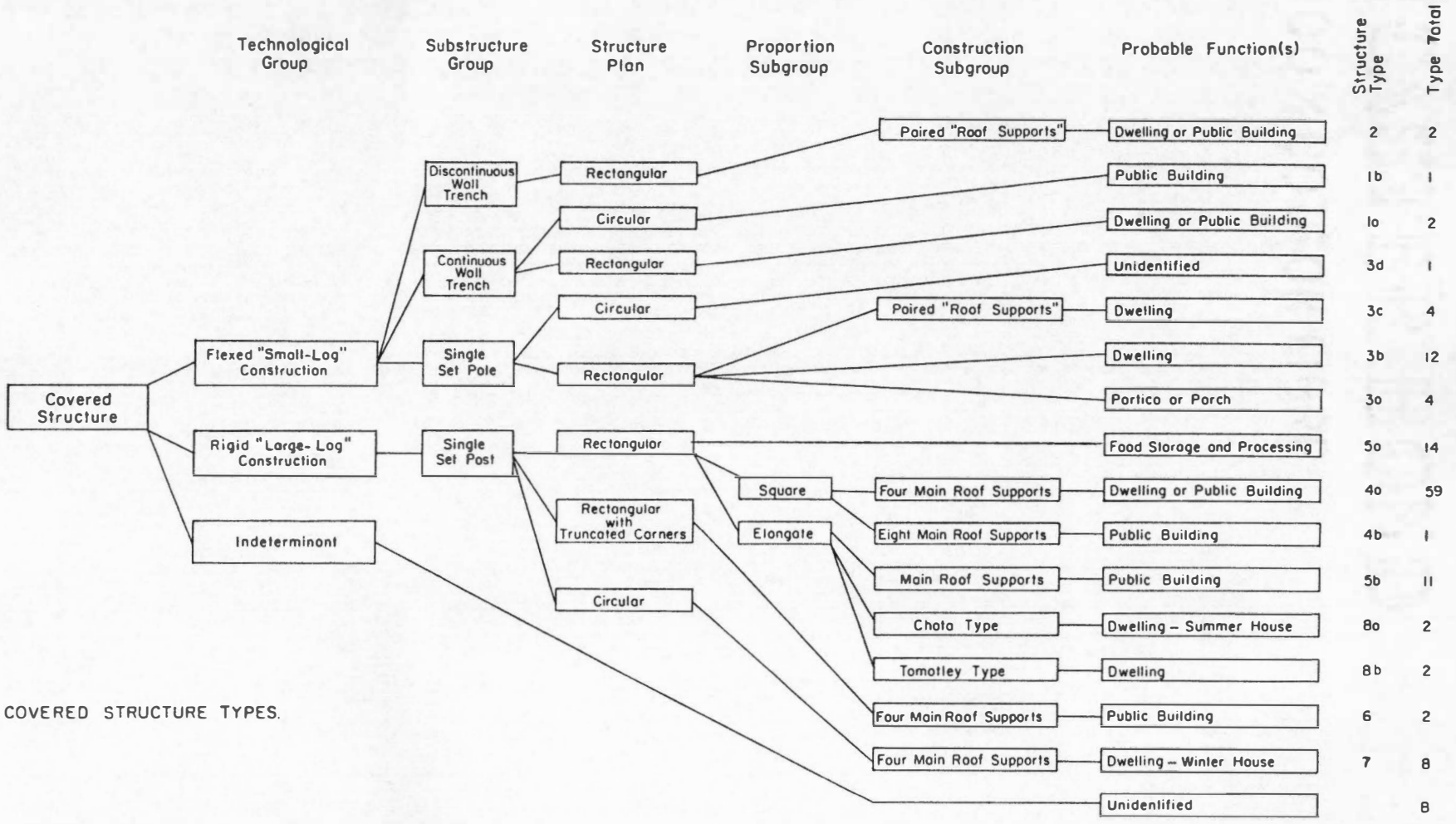
A second type of entryway, associated only with three of the earliest public buildings at the Toqua site, is constructed of a combination of tough clay and stone slabs. Each example provides a raised sill or threshold, possibly to prevent the entry of rainwater. The remaining structure entryways recorded at Toqua are constructed of prepared clay and differ from structure to structure. The entryway associated with Structure 6, for example, consists of a raised trapezoid shaped threshold of compacted yellow clay having a distinct ridge down the center perpendicular to the structure wall. No two examples are exactly alike and no comparable entryways have been reported elsewhere in the Ridge and Valley Province.

Artifacts or concentrations of artifacts or other cultural material, when found associated with burned structures or on structure floors, can provide data concerning areas frequented and activities performed by the occupants of a particular structure (Hally 1980, 1981). Repetitive patterning of cultural materials within structures can provide a basis for generalized statements concerning the use of space as well as

structure function. Storage of tools, raw materials, pottery vessels, other food processing equipment, and foodstuffs may be identified in burned or otherwise well preserved structures. Storage appears to have been concentrated within the corner portions of the private floor area of rigid single set post primary structures in contrast to the center portions of each wall which served as beds or benches. Vessels in use at the time a structure was destroyed by fire tend to be concentrated within the central or public floor area but never on or within the prepared clay hearth. Refuse of primary midden accumulations occur in structures and tend to achieve the greatest density beneath the beds or benches rather than toward the center or against the exterior wall of the structure. Cultural materials attributed to high status individuals or linked to the sociopolitical hierarchy, native copper objects or specialized Dover chert biface blades for example, can provide additional data concerning the function of a particular structure as well as the status of the occupants.

Architectural Typology

Structural entities at the Toqua site were assigned to one of fifteen types or subtypes based upon the following architectural traits or levels of integration (Figure 2.5; Figure 2.6): (1) technological characteristics, (2) substructure characteristics, (3) ground plan, and (4) mode of roof support. The structures were first attributed to either the flexed ("small-log") construction group or the rigid ("large-log") construction group depending upon the relative diameter



COVERED STRUCTURE TYPES.

Figure 2.5. Structure Typology for the Toqua Site.

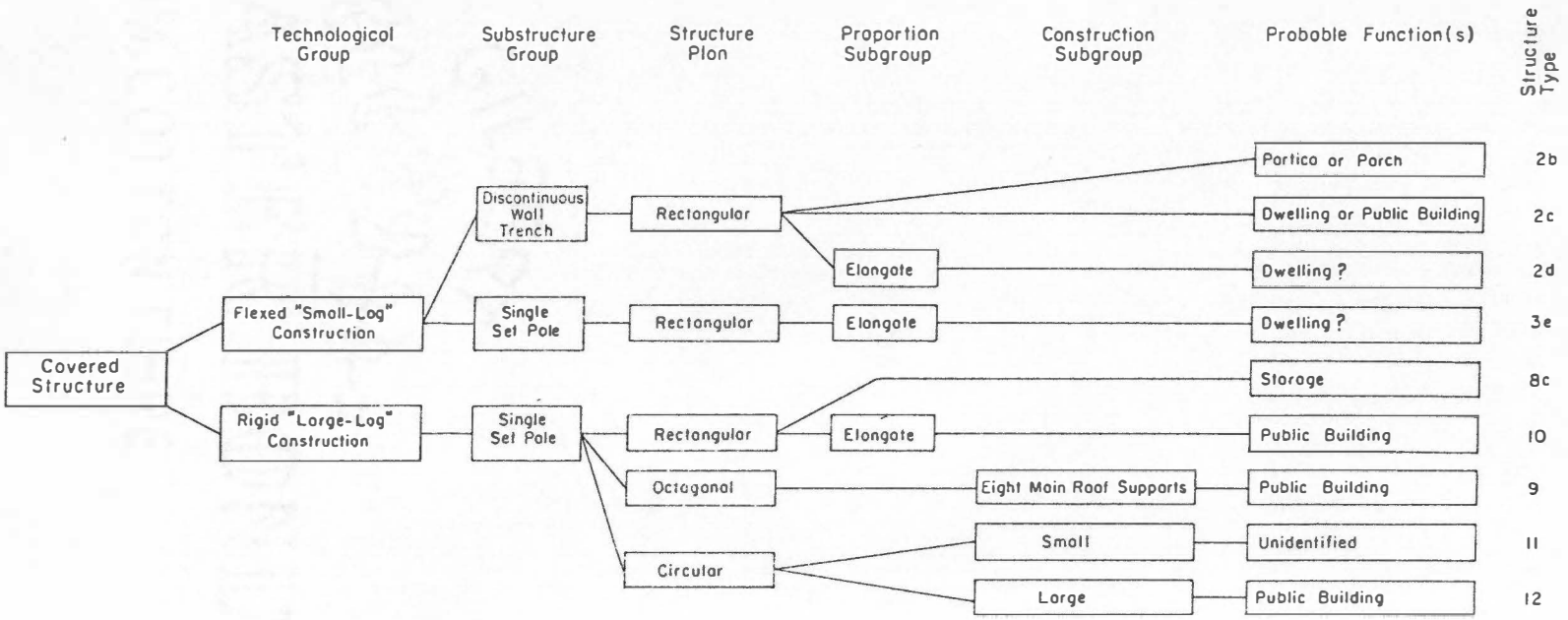


Figure 2.6. Structure Typology for Other East Tennessee Sites.

and spacing of elements making up the exterior fabric of each structure. Structures of flexed construction possess relatively small and more closely spaced exterior wall elements in proportion to structure size. Structures of rigid construction possess larger, more widely spaced exterior wall elements in proportion to structure size. Each structure was then classified according to substructure characteristics or mode in which the exterior wall elements were fixed in the ground. Structures of flexed construction were constructed utilizing segmented wall trenches and continuous wall trenches, as well as single set elements. Structures of rigid construction were constructed utilizing single set elements. Structure ground plan or geometric form was next utilized to divide the population of structures into the twelve numbered structure types presented in Figures 2.7, 2.8. Structures of flexed construction tend to be rectangular rather than square, and two circular structures are also represented. Structures of rigid construction are predominantly square, although rectangular, elongate rectangular, and circular structures are also represented. Rectangular structures of rigid construction are subdivided on the basis of length/width proportions: square structures having equal or nearly equal dimensions; rectangular structures having one dimension distinctly longer than the other; and elongate rectangular structures having a length equal to or greater than twice the width.

Main roof supports are characteristic of rigid structures, although two flexed structure types (Type 2, Type 3c) possess paired "roof supports" centered on the long axis of the structures. It is the

Figure 2.7. Floor Plans and Reconstructions for Toqua Site Structure Types.

FLEXED CONSTRUCTION--HIWASSEE ISLAND PHASE

Type	Subtype	Description
1	a	Rectangular continuous wall trench
1	b	Circular continuous wall trench
2	a	Rectangular segmented wall trench with two main roof supports
3	a	Rectangular single set pole portico or porch
3	b	Rectangular single set pole
3	c	Rectangular single set pole with two main roof supports
3	d	Circular single set pole

RIGID SINGLE SET POST CONSTRUCTION--DALLAS PHASE

Type	Subtype	Description
4	a	Square with four main roof supports
4	b	Square with eight main roof supports
5	a	Rectangular open shed
5	b	Rectangular open "summer pavilion" with main roof supports

RIGID SINGLE SET POST CONSTRUCTION--OVERHILL CHEROKEE

Type	Subtype	Description
6		Square with truncated corners with four main roof supports
7		Circular with four main roof supports
8	a	Elongate rectangular (Chota type)
8	b	Elongate Rectangular (segmented Tomotley type)

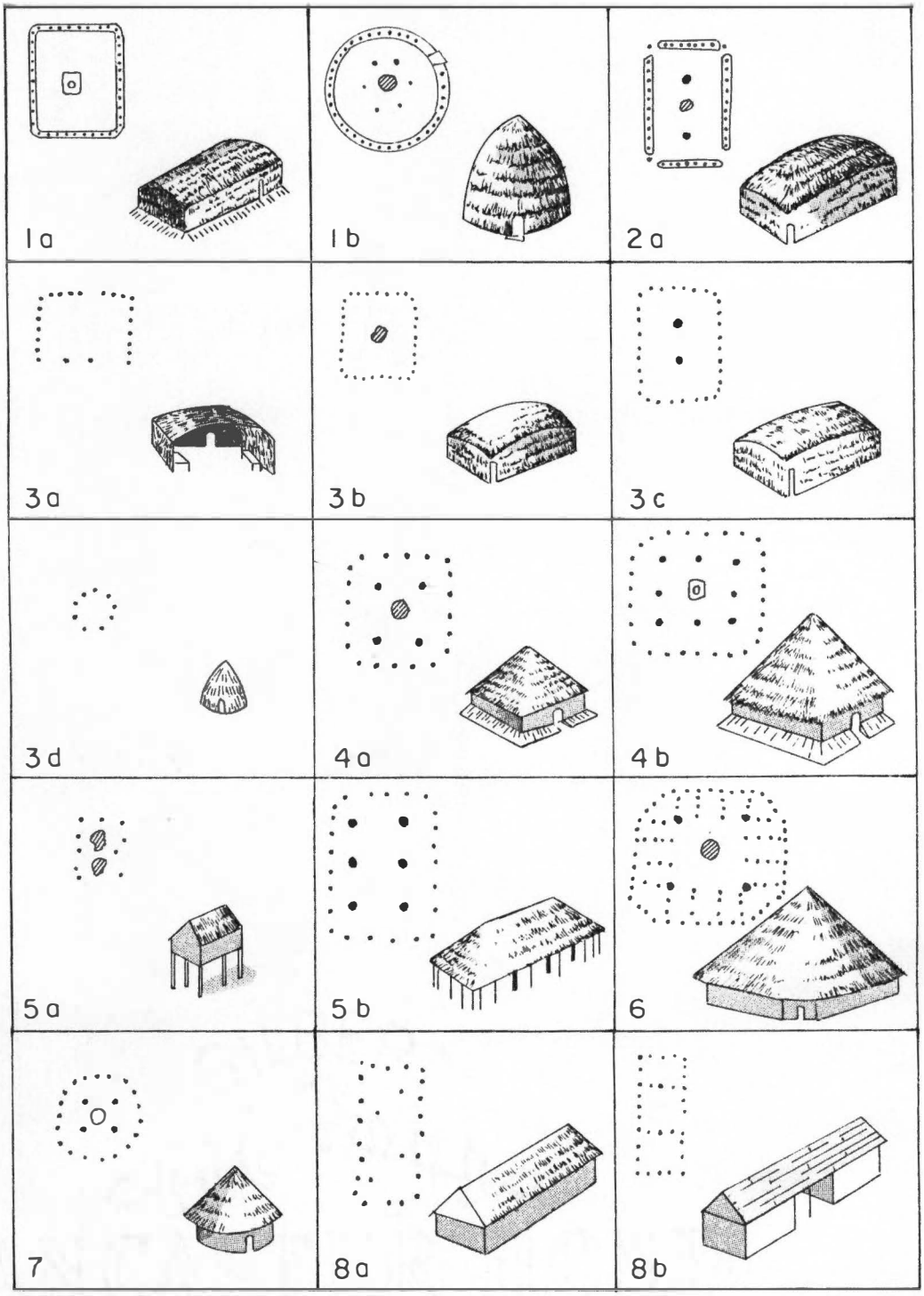


Figure 2.7.

Figure 2.8. Floor Plans and Reconstructions for Other East Tennessee Valley Structure Types.

FLEXED CONSTRUCTION--HIWASSEE ISLAND PHASE

Type	Subtype	Description
2	b	Rectangular segmented wall trench portil or porch
2	c	Rectangular segmented wall trench
2	d	Small semisubteranian rectangular segmented wall trench
3	e	Small semisubteranian rectangular single set pole

RIGID SINGLE SET POST CONSTRUCTION--CHEROKEE

Type	Subtype	Description
8	c	Rectangular horizontal rail with spaced posts
9		Octagonal with eight main roof supports
10		Elongate rectangular "summer pavilion"

RIGID SINGLE SET POST CONSTRUCTION--MULTIPLE COMPONENT

Type	Subtype	Description
11		Circular

RIGID SINGLE SET POST CONSTRUCTION--EARLY DALLAS PHASE

Type	Subtype	Description
12		Large circular structure without apparent interior support system

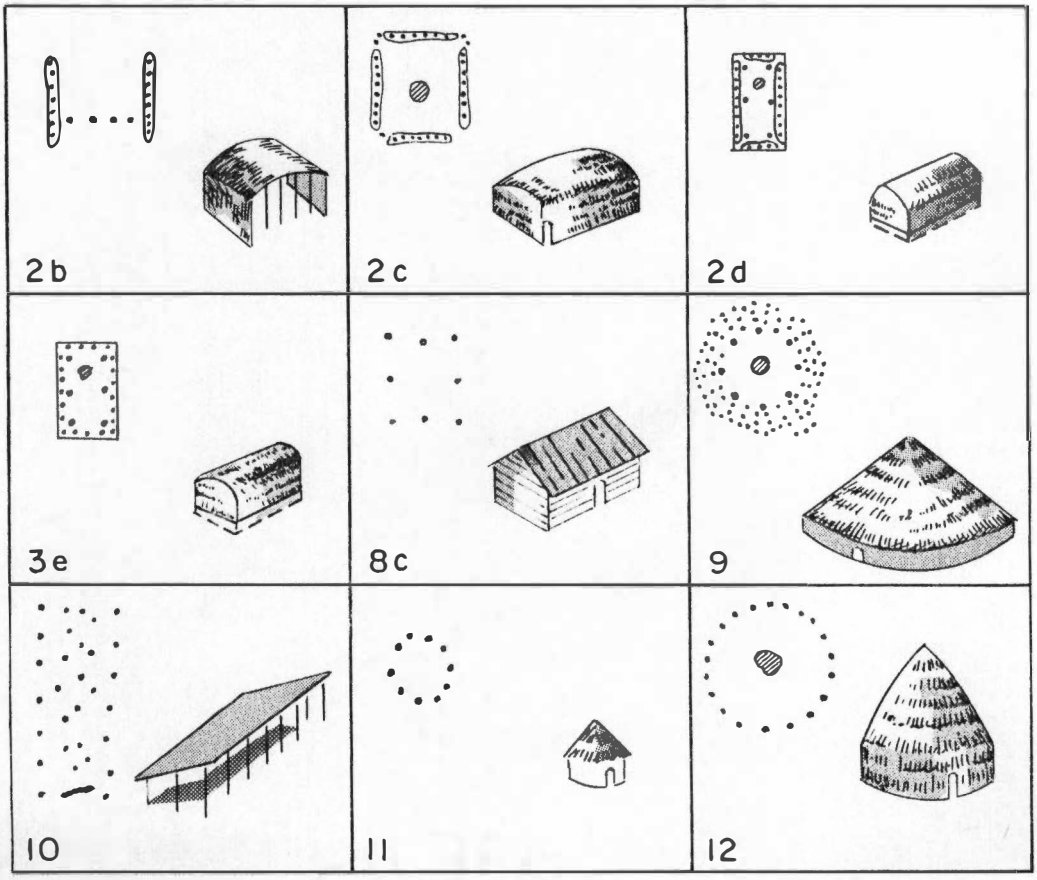


Figure 2.8.

author's interpretation, based upon examination of well preserved examples from other sites (Polhemus 1980:100), that many such postholes represent scaffolding utilized during construction which was removed following completion of the structure. One circular structure (Structure 6) of flexed construction (Type 1b) also possessed a posthole in the exact center of the structure which was subsequently sealed with clay and covered by a central hearth. Four main roof supports, set in postholes generally greater than 1.0 ft in diameter arranged in the form of a square, make up the predominant roof support system although six (Type 5b) and eight (Type 4b) roof supports were sometimes utilized to support the roof of larger public buildings.

The probable function or functions of each structure type should be reflected not only by overall size and form of each structure but by the use of interior space, form and elaboration of interior furnishings, and the position and kinds of cultural materials found associated with each structure.

Covered Structure Type Descriptions

Type 1a

Sample Size: 2.

Structure Numbers: 61, 62.

Figure 2.7, 1a.

Distribution	SV	NV	EV	EVM	WV	MAE	MAW	MAN	MB
	-	-	-	-	-	-	2	-	-

Type 1a structures are rectangular structures characterized by flexed wall construction set in a continuous wall trench. The

structures are 26.0 ft and 44.5 ft in length; 24.0 ft and 30.5 ft in width; and have floor areas of 624 ft^2 and 1,357 ft^2. East wall orientations are North 28° East and North 32° East. The mean diameter of the exterior wall elements set in the wall trenches for each structure is 0.25 ft and 0.4 ft. Large prepared clay Type II rectangular platform hearths possessing small cylindrical fire basins are centered within each structure. One or both ends of each structure are set apart by an interior alignment of small postholes which may represent interior partitions or other furnishings. Access is provided by an entryway paved with stone slabs bridging the wall trench near the north end of each east wall. Both structures are situated on the west side of the Phase A-1 summit of Mound A and each is accompanied by a Type 3a rectangular porch or portico. The structure walls and roof were sheathed in grass thatch which was anchored by a clay embankment around each structure.

Type 1b

Sample size: 1.

Structure number: 6.

Figure 2.7, 1b.

Distribution	SV	NV	EV	EVM	WV	MAE	MAW	MAN	MB
	-	-	-	-	-	-	-	-	1

The single example of Type 1b construction is a circular structure, 21.0 ft in diameter, situated beneath the northwest quarter of Mound B. The exterior wall elements, averaging 0.4 ft in diameter, are set along the inner edge of a relatively shallow trench. The

central hearth is represented by a heavily utilized surface fired area possessing no associated ash. A posthole, situated in the exact center of the structure, was found sealed with clay beneath the hearth. Eight interior postholes encircling the central fired area average 0.5 ft in diameter. Four of the postholes were also sealed with clay prior to compaction of the floor surface. The well compacted floor consists of the upper surface of the old humus beneath Mound B. Access to the structure was provided by an entryway having a raised heavily compacted threshold on the northeast side. The superstructure was constructed of flexed poles covered by a framework of river cane, over which a sheathing of grass thatch was placed. The thatch was anchored beneath a narrow grey clay embankment encircling the structure. Cane benches or other interior furnishings are indicated by an alignment of canes driven into the floor of the structure parallel to the exterior wall.

No other structures of Type 1b have been recorded in the Ridge and Valley Province although a small number of circular structures of a different form are present at Hiwassee Island (Lewis and Kneberg 1946:70). The location of this structure beneath Mound B, the unique form of the structure, and the orientation of the entryway within one degree (North 64° East) of the summer soltice suggests this structure served a specialized function at the Toqua site.

Type 2a

Sample size: 2.

Structure numbers: 85, 86.

Figure 2.7 (p. 45), 2a.

Distribution	SV	NV	EV	EVM	WV	MAE	MAW	MAN	MB
	-	-	-	-	-	-	2	-	-

Type 2 structures are rectangular structures characterized by flexed wall construction set in discontinuous wall trenches. The trenches are replaced at the corners by one or more single set poles. Both structures identified at Toqua are incomplete, having one end missing. The structures are 18.0 ft and 35.0 ft in apparent width. East wall orientation for each of the structures is North 25° East and North 30° East. One of the projected pair of "roof supports" is situated on what would be the long axis of each structure. No hearth or floor surface is preserved for either structure.

A Type 2a structure was excavated during borrow pit clearance east of Fort Loudoun (40MR1) (Karl Kutruff, personal communication 1979).

Type 3a

Sample size: 4.

Structure numbers: 63, 65, 66a, 66b.

Figure 2.7, 3a.

Distribution	SV	NV	EV	EVM	WV	MAE	MAW	MAN	MB
	-	-	-	-	-	4	-	-	-

Type 3a structures consist of rectangular porches or porticos of flexed single set pole construction associated with more formal or public structures. The structures range from 20.0 ft to 38.0 ft in length, 16.0 ft to 24.0 ft in width, and possess floor areas of from

320 ft^2 to 912 ft^2. At least one, more clearly defined, structure (Structure 65) contains interior postholes suggestive of benches or other interior furnishings, as well as the surface fired areas characteristic of this structure type. East wall orientation of Type 3a structures ranges from North 26° East to North 31° East. The east wall of each structure was at least partially open whereas the west or rear wall was pierced only by a doorway leading to associated structures on the west side of the Mound A summit. The structures, situated on the east side of the Phase A-1 and Phase A-2 summits of Mound A, appear to have been more lightly built than the associated more formal structures. The structures were roofed, as indicated by preserved driplines in the mound summit surface.

Similar structures are associated with mound summit structures at Hiwassee Island (Lewis and Kneberg 1946:70) in mound Phases G, F, E2, E1, and D.

Type 3b

Sample size: 12.

Structure numbers: 10, 17, 46, 47, 48a, 60, 64a, 69, 71, 82, 84, 133.

Figure 2.7 (p. 45), 3b.

Distribution	SV	NV	EV	EVM	WV	MAE	MAW	MAN	MB
	-	-	5	4	1	-	2	-	-

Type 3b structures consist of rectangular structures of flexed single set pole construction. Few interior postholes appear to be associated, and preserved, well compacted floors are set in shallow

depressions. The structures range from 16.0 ft to 32.0 ft in length, 14.0 ft to 32.0 ft in width, and possess floor areas of from 224 ft^2 to 1,024 ft^2. East wall orientation ranges from North 22° East to North 65° East. Three of the six structures sufficiently preserved to determine hearth type contained centrally placed surface fired areas. Two structures contained prepared clay hearths (Structure 64, Structure 84) and one (Structure 60) appears to have been a specialized structure and contained no hearth. Five of the structures were decidedly rectangular rather than square.

The superstructure is made up of larger elements than those associated with Type 1 or Type 2 wall trench structures and some fired clay daub as well as charred grass thatch are present within burned structures. Type 3b structures appear to be associated with the earliest palisade perimeter and perhaps the bastioned palisade perimeter around the site. At least some of the structures of this type may represent a transition from the earlier flexed construction, associated with the Hiwassee Island phase, and the later rigid construction typified by the Type 4a structures associated with the Dallas phase. Such a transitional position for some Type 3b structures is suggested by somewhat larger, less regularly placed, single set wall elements as well as by their stratigraphic position above more regular Type 3b structures and below Type 4 structures at Toqua (Polhemus 1985), Hixon (Jennings and Neitzel 1936), DeArmond (Walker 1940) and Hiwassee Island (Nash 1938).

Type 3c

Sample size: 4.

Structure numbers: 64b, 70, 90, 91.

Figure 2.7 (p. 45), 3c.

Distribution	SV	NV	EV	EVM	WV	MAE	MAW	MAN	MB
	-	-	-	3	-	-	1	-	-

Type 3c structures consist of rectangular patterns of flexed single set pole construction possessing paired "roof supports." Type 3c structures resemble Type 2 structures in all respects with the exception of wall trenches. The structures range from 19.7 ft to 24.0 ft in length and from 18.0 ft to 22.0 ft in width, and possess floor areas of from 363 ft^2 to 528 ft^2. East wall orientation ranges from North 18° East to North 37° East. The single structure having an intact floor possessed a centrally placed surface fired area for a hearth.

Type 3c structures appear to predate the earliest palisade perimeter around the Toqua site. These structures may represent a more dispersed settlement pattern having structures scattered along the front edge of the bottom such as those excavated at Tomotley (Baden 1983) and Tuskegee (Karl Kutruff, personal communication 1979).

Type 3d

Sample size: 1.

Structure number: 42.

Figure 2.7, 3d.

Distribution	SV	NV	EV	EVM	WV	MAE	MAW	MAN	MB
	-	-	-	-	-	-	-	-	1

Type 3d structures are represented by a single example, 8.0 ft in diameter, situated southeast of Structure 6 beneath the southeast quarter of Mound B. The circular structure is made up of twelve individually set poles having a mean diameter of 0.45 ft. No hearth or other structural elaboration is present and the function of this small structure, possessing only 50 ft^2 of floor area, is unknown.

A small circular posthole pattern, 7.0 ft in diameter, is present within the outline of Structure 35 on Level D of the substructure mound at Hiwassee Island (Lewis and Kneberg 1946:68). A second small circular posthole pattern, 5.5 ft in diameter, is present at Martin Farm (40MR20) (Salo 1969:96-97) in a Hiwassee Island phase context.

Type 4a

Sample size: 59.

Structure numbers: 1, 2, 3, 4, 5, 7, 8, 9, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 30, 31, 32, 33, 35, 37, 39, 41, 43, 44, 45, 48b, 49, 50, 52, 53, 54, 56, 57, 58, 92, 93, 94, 95, 96, 97, 98, 110, 112, 116, 118, 119, 126, 127, 131.

Figure 2.7 (p. 45), 4a; 2.9; 2.10; 2.11.

Distribution	SV	NV	EV	EVM	WV	MAE	MAW	MAN	MB
	1	4	4	23	11	-	14	1	1

Type 4a structures consist of rectangular structures of rigid single set post construction possessing four main roof supports. The

rectangular pattern of main roof supports, centered on a prepared clay hearth, divides the structure interior into two principal parts; a central "public" floor area around the hearth, and an outer "private" floor area situated between the roof supports and the exterior wall. The public area is centered on the prepared clay hearth and frequently includes surface fired areas probably utilized in food preparation. The private floor area is usually divided into segments through the use of interior posthole alignments or prepared clay daub partitions. Segments situated between main roof supports along the central portion of each wall appear to have functioned as beds or benches as well as serving as loci for activities such as flintknapping and bone tool manufacturing. Burials are most frequently placed beneath or immediately in front of the beds or benches. The corners of the structure, making up the remaining portions of the private floor area, were utilized for storage.

The structures range from 14.25 ft to 38.0 ft in length, 13.4 ft to 38.0 ft in width, and possess floor areas of from 211 ft^2 to 1,444 ft^2. Structures in the West Village area (mean 378.5 ft^2, st. dev. 74.1) are of smaller size (Figure 2.9; Figure 2.10) than structures in the East Village Midden area (mean 495.6 ft^2 st. dev. 216.4) (Figure 2.11). Structures on the summit of Mound A are larger still (mean 736.9 ft^2 st. dev. 361.9); however, the largest Type 4a example is Structure 3 (1,444 ft^2) situated on the North Platform of Mound A. East wall orientation ranges from North 88° East to North 155° East with the great majority within ten degrees of North 121° East.

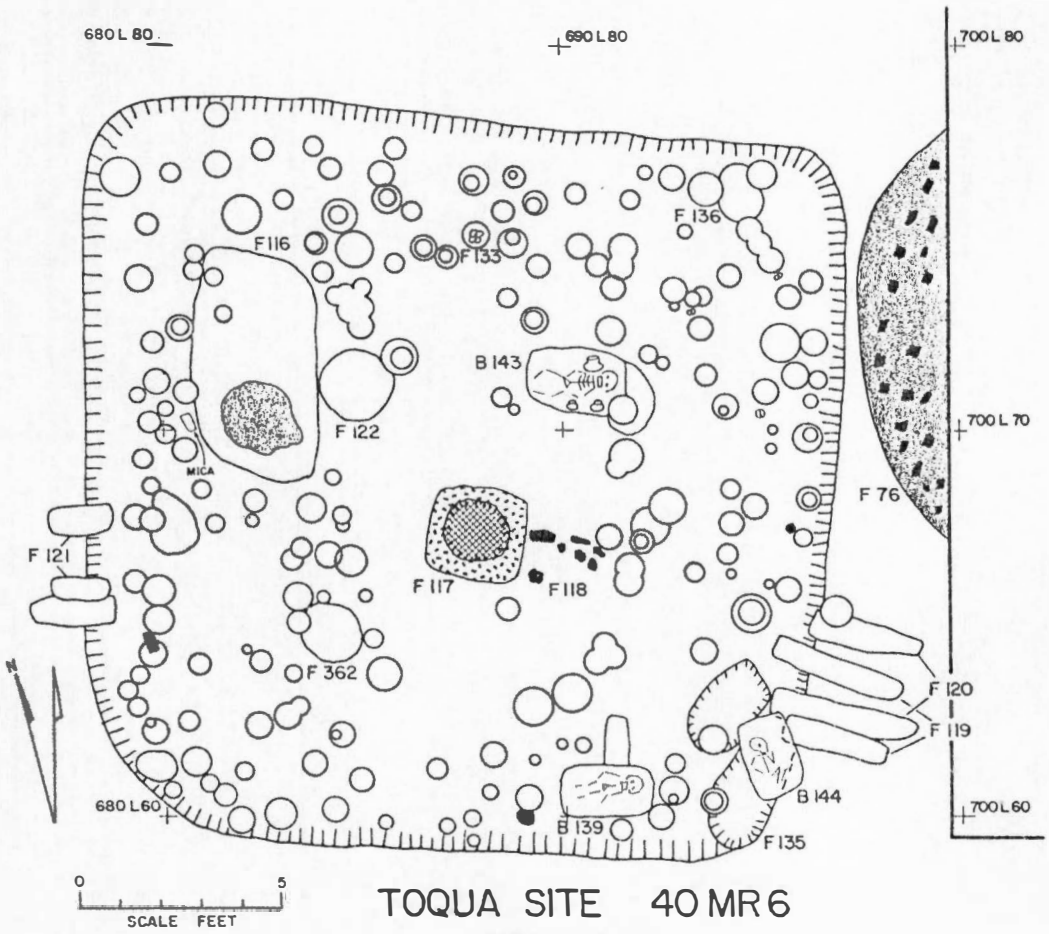


Figure 2.9. Plat of Type 4a Structure 9.

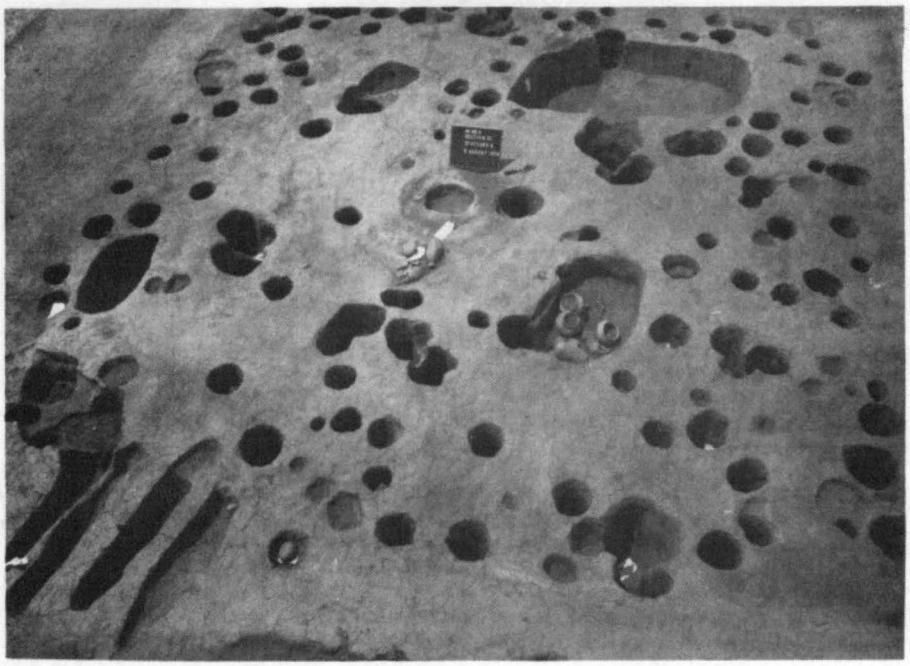


Figure 2.10. Type 4a Structure 9--View to West after Excavation.

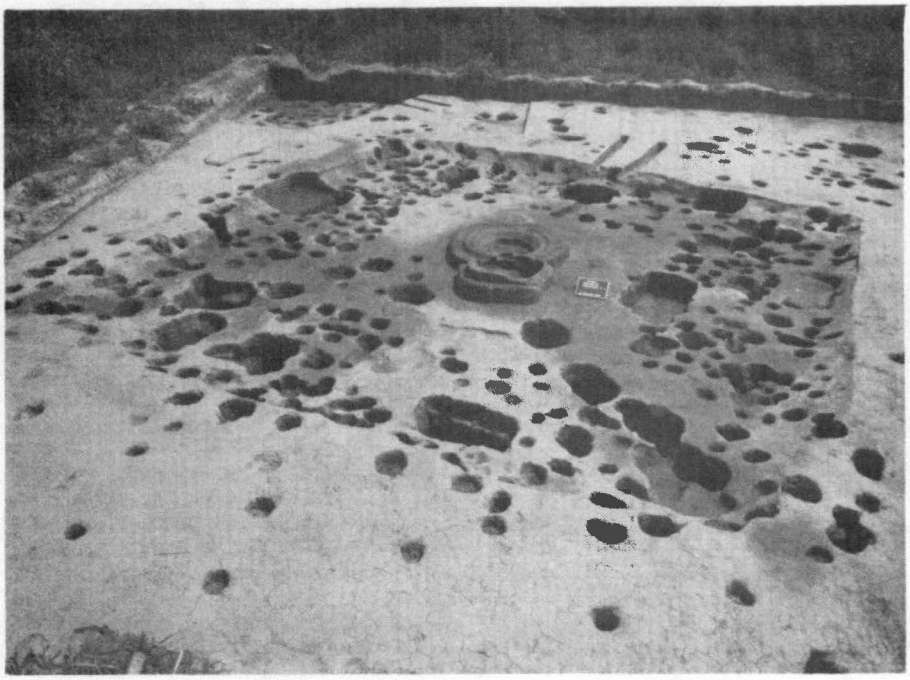


Figure 2.11. Type 4a Structure 2--View to East after Excavation.

Structure Type 4a, as evident from the number of examples from the Toqua site and the presence of the type at every Dallas phase site for which there are architectural data, is the prevalent primary structure form associated with the Dallas phase. Within the lower Little Tennessee River Valley such structures have been recorded from the lower part of the Tomotley site (40MR5) (Guthe and Bistline 1978), the Citico site (40MR7) (Polhemus 1968; Salo 1969), and the Bussell Island site (40LD17) (Polhemus 1978), as well as a single example from the Martin Farm site (40MR20) (Schroedl et al. 1985).

Primary structures of this technological form occur over a wide area of the interior of the Southeastern United States during the late prehistoric period; including the Pisgah and Qualla phases (Dickens 1976) to the east, the Little Egypt and Barnett phases (Hally 1970, 1980) to the south, and the latter part of the Middle Cumberland culture (Klippel and Bass 1984) to the west.

Type 4b

Sample size: 1.

Structure number: 51.

Figure 2.7 (p. 45).

Distribution	SV	NV	EV	EVM	WV	MAE	MAW	MAN	MB
	-	-	-	-	-	-	1	-	-

The Type 4b structure consists of a rectangular structure of rigid single set post construction having eight main roof supports. The rectangular pattern of roof supports, centered on a prepared clay hearth, resembles Type 4a structures with the exception that a second

set of load bearing posts has been centered between the usual set of four main roof supports. The structure is 33.0 ft square and has an east wall orientation of North 30° East. The floor area of 1,089 ft^2 is less than some Type 4a structures, such as Structure 11 and Structure 53, which have only four main roof supports. The main roof support postholes have a mean diameter of 1.37 ft, are 4.0 ft-6.0 ft in depth, and contain postmolds 1.0 ft in diameter. The presence of a stone slab at the base of each main roof support posthole, the great depth of these postholes, and the increased number of main roof support postholes, suggest that the roof structure: (1) bore a heavy load, (2) was extremely high, or (3) was overbuilt due to lack of familiarity with the architectural form. As Phase B-3 of Mound A is the first to bear Type 4a structures and the only phase to bear Type 4b construction, it is likely that a combination of the above possibilities resulted in the short term use of structure Type 4b. The domestic structure (Structure 52) paired with Structure 51 on the Phase B-3 summit is of Type 4a construction. East wall orientation for Structure 51 is North 121° East.

The presence of a native sheet copper ornament within a posthole and a general lack of associated refuse supports the interpretation, based on size and percentage of public floor area, that Structure 51 functioned as a public building. The presence of numerous postholes as well as a second set of eight main roof supports attests to the construction of a second Type 4b structure on the same location during Phase B-3.

Structures matching the Type 4b description have been reported from the King site (9FL5) by Hally (1975) and from the Estatoe site (9ST3) by Kelly and De Baillou (1960). Recognition of Type 4b structures at other sites may have been obscured by a profusion of postholes from multiple constructions on the same location, excavation techniques, or other factors.

Type 5a

Sample size: 14.

Structure numbers: 38, 67, 77, 78, 79, 80, 81, 89, 100, 106, 107, 108, 114, 117.

Figure 2.7 (p. 45), 5a.

Distribution	SV	NV	EV	EVM	WV	MAE	MAW	MAN	MB
	1	1	1	7	4	-	-	-	-

Type 5a consists of rectangular structures of rigid single set construction characterized by small size, presence of postholes greater than 1.0 ft in diameter, surface fired areas, and the presence of burials. Type 5a structures are consistently associated with Type 4a structures and are interpreted as open or semiopen sheds utilized for cooking, food processing, and other activities as well as food storage (Polhemus 1985). Floor area ranges from 64 ft^2 to 280 ft^2 (mean 135 ft^2). Surface fired areas are associated with nine Type 5a structures which have not been truncated by cultivation. Nine of eleven structures at least partially excavated below floor level contained clusters of burials beneath the floor. Two structures had linear ash deposits along the limits of the structure floor, suggesting

that the clay surface fired areas needed to be kept free of wood ash accumulations in order to function as cooking or food processing facilities and that ash was swept out at least periodically. One burned Type 5a structure (Structure 79) contained a mass of charred corn, corn cobs, and cane. Type 5a structures probably had a raised floor of cane or peeled poles like corn houses described from later periods (DeVorsey 1971:110; Hudson 1976:299). East wall orientation of Type 5a structures ranges from North 19° East to North 55° East.

Type 5b

Sample size: 13.

Structure numbers: 40, 87a, 87b, 87c, 88, 122, 123, 124, 125, 128, 129, 130, 132.

Figure 2.7 (p. 45), 5b.

Distribution	SV	NV	EV	EVM	WV	MAE	MAW	MAN	MB
	-	-	-	-	-	12	-	1	-

Type 5b structures consist of elongate rectangular structures of rigid single set post construction characterized by large size, presence of postholes considerably larger than 1.0 ft in diameter, large surface fired areas, and, in later structures, burials. Type 5b structures are associated with Type 4a and Type 4b structures that are situated on the summit of Mound A and with Structure 3 on the North Platform of Mound A. These structures are interpreted as large open or semiopen sheds or porticos associated with high status or public buildings (Polhemus 1985). Type 5b structures tend to have a length that is nearly twice the width and have a floor area that ranges from 780 ft^2

to 1,400 ft^2 with a mean floor area of 793 ft^2. In form, most Type 5b structures are constructed having equally spaced pairs of main roof supports flanking a central alignment of large surface fired areas and probably supporting a superstructure resembling two Type 4a structures sharing a central pair of main roof supports and a common ridgeline. Posts ranging from 1.0 ft to 1.7 ft in diameter, set in postholes up to 2.0 ft in diameter, supported the superstructure. The north, west, and south sides were more enclosed than the east or front side which remained open with the exception of a few short wall segments. Access to primary structures situated on the west half of the mound summit was provided through the back or west wall by the means of trench type entryways. The east wall orientation for Type 5b structures ranges from North 22° East to North 38° East.

High status burials in large log covered pits containing a wide range of exotic materials as burial associations are situated beneath Type 5b structures affiliated with Phases G, H, and I of Mound A. This structure form is related to the primary Type 4a and Type 4b occupying the west half of each mound summit in the same manner that the smaller Type 5a structures are related to Type 4a village structures. Such pairing of a more lightly built secondary structure of combined function with more substantially built primary structures noted at the Toqua site probably relates to the ethnohistoric pattern of paired winter and summer dwellings described by Bartram and others during the eighteenth century for several groups in the interior of the Southeastern United States (Bartram 1853:55; Faulkner 1977).

Type 6

Sample size: 2.

Structure numbers: 73, 75.

Figure 2.7 (p. 45), 6.

Distribution	SV	NV	EV	EVM	WV	MAE	MAW	MAN	MB
	-	-	2	-	-	-	-	-	-

Type 6 structures consist of large rectangular structures, of rigid single set post construction, which have truncated corners. Type 6 structures are 50.0 ft to 52.0 ft in length, 50.0 ft to 51.0 ft in width, and have floor areas of 2,300 ft^2 and 2,450 ft^2, respectively. Public floor area makes up 30% of the floor space in each structure. The roof is supported by four large main roof supports centered on a circular prepared clay hearth and access is gained by an entryway situated in one of the truncated corner faces. Interior furnishings are clearly indicated by interior posthole alignments oriented perpendicular to the longer segments of the exterior wall. Four such alignments are spaced along each longer wall segment; the outer pair extending from the main roof support to the exterior wall. Post hole patterning suggests that two ranks or stages of raised wide beds or benches were present behind a narrower bench extending between the main roof supports.

These structures, situated in the East Village area beyond the East Village Midden area, are identified as eighteenth century Overhill Cherokee townhouses. Overhill Cherokee townhouses are discussed in detail elsewhere by Polhemus (1975) and Schroedl (1978a; 1982). The

two townhouses excavated at the Toqua site closely resemble the earlier of two townhouses excavated at the Chota site (Polhemus 1975).

Type 7

Sample size: 8.

Structure numbers: 59, 74, 83, 99, 104, 105, 111, 115.

Figure 2.7 (p. 45), 7.

Distribution	SV	NV	EV	EVM	WV	MAE	MAW	MAN	MB
	-	-	6	-	1	-	-	1	-

Type 7 structures consist of circular structures of rigid single set post construction having four main roof supports. The structures average slightly over 20 ft in diameter and the main roof supports are arranged 6 to 8 ft apart to form a square centered on a shallow circular prepared clay hearth. Type 7 structures tend to have more irregular posthole patterns than earlier structure types, although this factor may be due in part to the typically poor condition of these more exposed structures. Type 7 structures are concentrated in the East Village area and are attributed to the eighteenth century Overhill Cherokee occupation of the Toqua site. Only Structure 104 could be associated with a summer house (Type 8a Structure 103) as a pair of dwellings matching the Chota pattern (Schroedl 1982). A number of other pairs may not have been recognized, however, due to excavation limits, masses of earlier postholes, or truncation by cultivation.

Type 8a

Sample size: 2.

Structure numbers: 103, 113.

Figure 2.7 (p. 45); 8a.

Distribution	SV	NV	EV	EVM	WV	MAE	MAW	MAN	MB
	-	-	2	-	-	-	-	-	-

Type 8a structures consist of elongate rectangular structures of rigid single set post construction which at the Chota site (Schroedl 1982) are frequently paired with circular winter houses (Type 7). Type 8a structures are 25.0 ft and 26.0 ft in length, 10.0 ft and 12.2 ft in width, and have floor areas of 250 ft^2 and 317 ft^2, respectively. There are no obvious divisions or evidence of segmentation characteristic of Type 8b Tomotley style structures. Type 8a structures were first recognized at the Chota site (Polhemus 1975) and are described in detail by Schroedl (1982). No evidence of hearths is preserved for Type 8a structures at the Toqua site.

Type 8b

Sample size: 2.

Structure numbers: 101, 102.

Figure 2.7, 8b.

Distribution	SV	NV	EV	EVM	WV	MAE	MAW	MAN	MB
	-	-	2	-	-	-	-	-	-

Type 8b structures consist of segmented elongate rectangular structures of rigid single set post construction first recognized as a distinct structure form at the Tomotley site (Baden 1983). Type 8b structures are 19.0 ft and 38.0 ft in length, 9.0 ft and 15.0 ft in width, and have floor areas of 261 ft^2 and 570 ft^2, respectively. The structure is divided into three parts or segments by two transverse

alignments of postholes. Rectangular to elongate oval pits, which probably contain burials, are present in the end segments and are oriented parallel with the axis or with the end wall of the structure. No evidence of hearths is preserved for Type 8b structures at the Toqua site.

One Type 8b structure intrudes Structure 75, an Overhill Cherokee townhouse, and thus postdates it. Type 8b structures appear to date to the third quarter of the eighteenth century and provide a contrast to the more common Chota pattern of paired winter and summer structures at most Overhill Cherokee sites.

Structures of Unidentified Type

Sample size: 8.

Structure numbers: 34, 36, 55, 68, 76, 109, 120, 121.

Distribution	SV	NV	EV	EVM	WV	MAE	MAW	MAN	MB
	1	1	2	1	-	-	3	-	-

Unidentified structures consist of aggregations of postholes, prepared clay hearths, or other architectural elements which could not be placed with confidence in any of the previously described structure types due to condition, excavation limitations, or other reasons. Unidentified structures with prepared clay hearths or within pits are probably Type 4a structures.

Summary of Other East Tennessee Structure Types

A number of structure types not found at the Toqua site were encountered during analysis of structures from other sites in the East

Tennessee Valley. The following summary provides general data concerning the form, age, and distribution of such structures. Figure 2.8, p. 47, illustrates the floor plan and possible reconstruction for each of these additional structure types. Several of these structure types represent only slight variations of structure types represented at Toqua; others represent forms which are quite distinct from those at Toqua. Relevant structure designations by structure type and source for each site in the comparative sample are presented in Table A.4 (Appendix). Specific data for these structures are available in the excavation records on file at the Frank H. McClung Museum and in the several relevant publications. Distributional comments with respect to these structure types, as well as those recorded at Toqua, are intended to indicate the presence of each structure type outside the East Tennessee Valley rather than exhaustive distributional studies.

Type 2b

Sample size: 1.

Figure 2.8, 2b.

Sites: 1. Hiwassee Island (40MG31)

Structure Type 2b consists of a rectangular portico or porch similar in all respects to Type 3a at Toqua with the exception of the use of segmented wall trenches rather than single set poles for the closed side walls. Such structures are associated with flexed wall trench structures serving public or status related functions. A similar structure was recorded at the base of the Summerville mound at the

Lubbub Creek site (Blitz 1983:228). A Type 3a single set pole example with associated prepared clay furnishing closely resembling those noted at Hiwassee Island were also recorded below the base of the Summerville mound (Blitz 1983:228).

Type 2c

Sample Size: 76.

Sites: 15. Chota-Tanasee (40MR2-40MR62), Martin Farm (40MR20), Mayfield II (40MR27), Mouse Creek (40MR3), DeArmond (40RE12), Hixon (40HA3), Hiwassee Island (40MG31), Irvin (40CP5), Lea Farm (40AN17), Richardson Farm (40CP8), Bowman (40CP2), Leuty (40RH6), Harris Farm (40CP9), McCarty (40UN4), Pittman-Alder (40MI5).

Figure 2.8 (p. 47), 2c.

Type 2c structures are square to rectangular buildings having flexed pole construction anchored in segmented wall trenches. The wall trenches are not joined at the corners and the resulting space is frequently closed by one or more small single set poles. This structure type differs from Type 2a in that there is no evidence for main roof supports or scaffold holes. Type 2c structures generally preceded single set pole construction as well as rigid construction techniques at many sites in the interior Southeastern United States. This structure type has a wide distribution and may be considered the classic or typical Mississippian structure form for much of the earlier Mississippian period. Interior furnishing are rarely clearly evident with the exception of prepared clay platforms and seats in public buildings.

Type 2d

Sample size: 3.

Sites: 1. Hixon (40HA3)

Figure 2.8 (p. 47), 2d.

Structure Type 2d has been recorded only at the Hixon site (40HA3) in the East Tennessee Valley. At the Hixon site such structures appear to date to the earliest part of the occupation of this site. Structure Type 2d is small, rectangular, set in a shallow pit, and frequently has six somewhat larger postholes spaced just within the corners and at the center of each long wall. A small surface fired area is usually present centered in one end of the structure.

Type 3e

Sample size: 5.

Sites: 2. Sale Creek (40HA10), Davis (40HA2).

Figure 2.8, 3e.

Structure Type 3e is similar in all respects to the preceding Type 2d with the exception that the wall elements are single set poles rather than wall trenches. The sites from which these structures are reported, Sale Creek (40HA10) and Davis (40HA2), as well as the Hixon site (40HA3) with Type 2d structures are clustered in Hamilton County in the southern portion of the East Tennessee Valley and appear to be early in the Mississippian sequence.

Type 8c

Sample size: 7.

Sites: 3. Chota-Tanassee (40MR2-40MR62), Mialoquo (40MR3), Citico (40MR7).

Figure 2.8 (p. 47), 8c.

Structure Type 8c consists of relatively small rectangular patterns of widely spaced posts recorded on eighteenth century Overhill Cherokee sites in the Little Tennessee Valley (Polhemus 1975; Schroedl 1982).

Type 9

Sample size: 3.

Sites: 3. Chota-Tanasee (40MR2-40MR62), Mialoquo (40MR3), Tomotley (40MR5).

Figure 2.8, 9.

Structure Type 9 consists of extremely large octagonal Overhill Cherokee public buildings or townhouses. These structures, up to sixty feet in diameter, have eight main roof supports and are associated with the second half of the eighteenth century at the Cherokee towns of Chota (40MR2), Tomotley (40MR5), and Mialoquo (40MR3). These structures are characterized by their large size, number of mainroof supports, a relatively large central prepared clay hearth, and numerous interior furnishing postholes situated between the main roof supports and the exterior wall. A Type 9 structure was probably present at the Toqua site but was not located during the investigation. Townhouses are described elsewhere by Polhemus (1975) and Schroedl (1978a; 1982).

Type 10

Sample size: 2.

Sites: 2. Chota-Tanasee (40MR2-40MR62), Tomotley (40MR5).

Figure 2.8 (p. 47), 10.

Structure Type 10 consists of an elongate rectangular open structure or summer pavilion associated with Type 9 Cherokee town houses at the Chota and Tomotley sites. Although a substantial area surrounding each of the two earlier Type 6 Cherokee town houses was excavated at Toqua no clearly defined pattern representing a Type 10 structure could be identified due to the large number of earlier postholes in each excavation unit.

Type 11

Sample size: 4.

Sites: 2. Chota-Tanasee (40MR2-40MR62), Citico (40MR7).

Figure 2.8, 11.

Structure Type 11 consists of relatively small circular single set post structures that have no evident interior roof support. These structures are somewhat larger than the Hiwassee Island phase Type 3d structures yet are considerably smaller than the Cherokee winter house (Schroedl 1982). Type 11 structures could have been present at the Toqua site; however, the large number of random postholes encountered in most excavation areas would have obscured their recognition. It is likely that less specialized or more temporary structure types would persist for longer periods than specialized structure types.

Type 12

Sample size: 5.

Sites: 4. DeArmond (40RE12), Hiwassee Island (40MG31), Davis (40HA2), Leuty (40RH6).

Figure 2.8 (p. 47), 12.

Structure Type 12 consists of large circular single set post structures possessing no evident interior support system. This structure type is not common and appears to be present during the transition from flexed to rigid construction modes about A.D. 1300. Several of the structures approach fifty feet in diameter and the construction mode is difficult to determine at this time.

Structure Sequence

The structure sequence for the Toqua site is illustrated in Figure 2.12. The sequence was derived from the superposition of structures in both mound and village contexts as well as structure content and spatial relationships. Figure 2.13 illustrates the relative position of structures from Toqua and other East Tennessee sites having associated radiocarbon dates. At the Toqua site, although structures displaying characteristics of flexed construction consistently precede structures of rigid construction, as illustrated in Table 2.2, the sequence of substructure form is inconsistent with the general pattern of wall trench to single set pole construction. The initial constructions (Type 1a) on the Phase A-1 summit of Mound A were provided with continuous wall trenches, a trait which Charles Nash

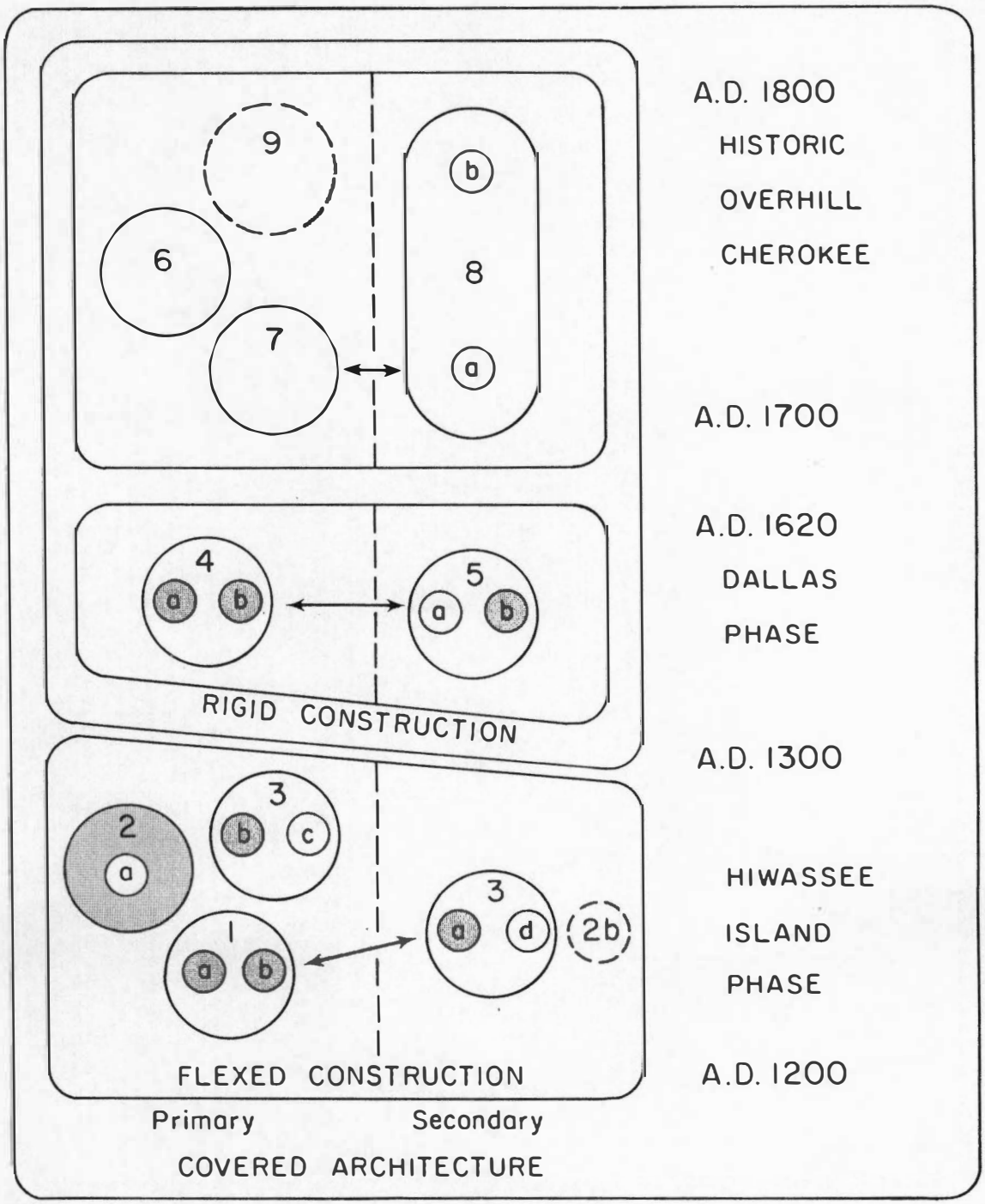


Figure 2.12. Sequence of Structure Types at the Toqua Site (40MR6).

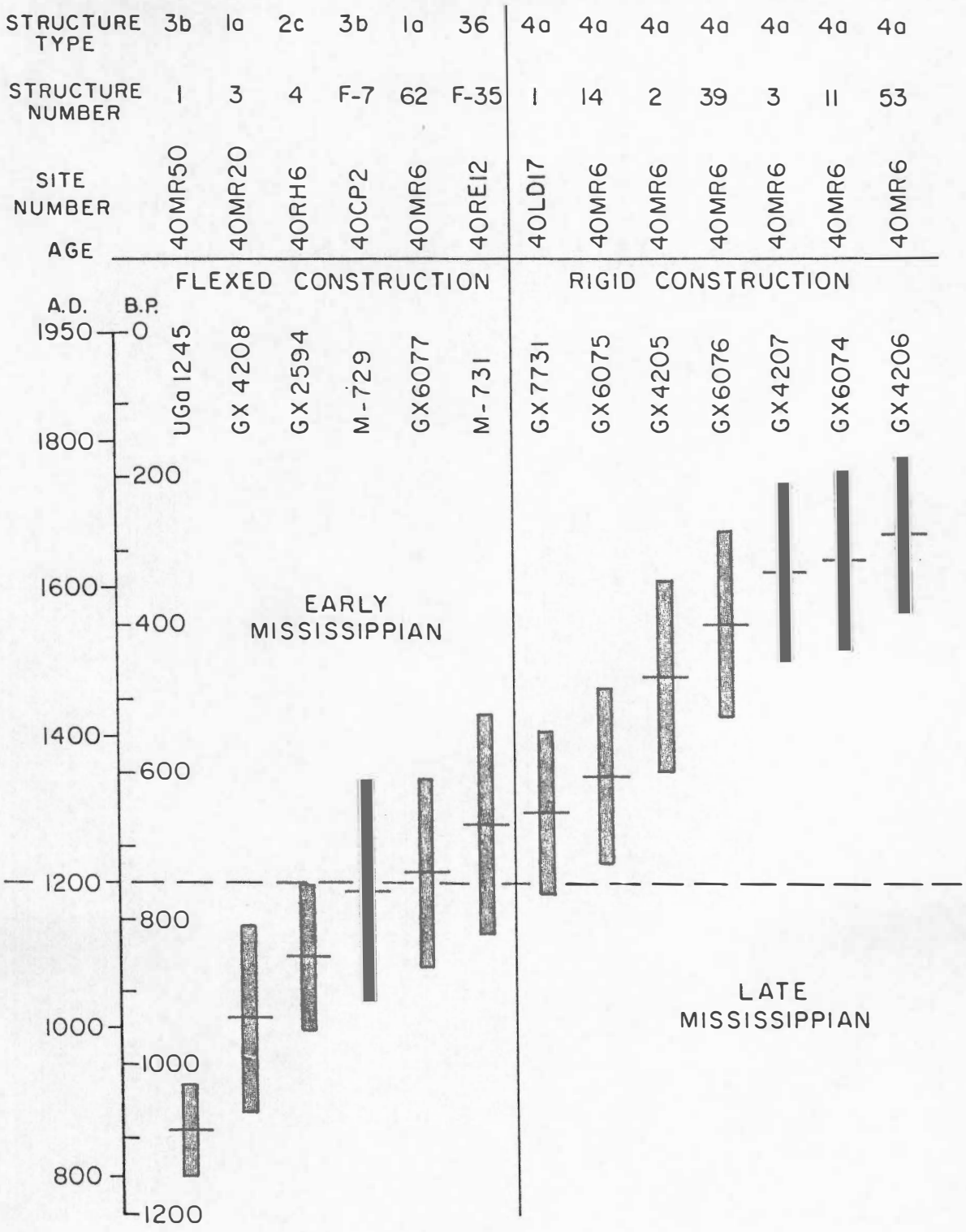


Figure 2.13. Mississippian Radiocarbon Dates from East Tennessee Plotted to One Sigma (uncorrected).

Table 2.2. Structures and Structure Types by Mound Phase.

Mound Phase	West Summit				East Summit			
	North Structure		South Structure		North Structure		South Structure	
I	ST-53	4a	ST-131	4a	ST-87c	5b	ST-88c	5b
H	ST-11	4a	ST-13b	4a	ST-87b	5b	ST-88b	5b
G	ST-12	4a	ST-13a	4a	ST-87a	5b	ST-88a	5b
F	ST-27	4a	ST-20	4a	ST-130	*		*
E	ST-30	4a	ST-14	4a	ST-129	*		*
D	ST-41	4a	ST-35	4a	ST-128	*	ST-40	5b
	ST-34	*						
C	ST-127	*	ST-126	*		*		*
B-3	ST-52	4a	ST-31	4b	ST-125	*	ST-124	*
B-2	ST-121	*	ST-120	*	ST-123	*	ST-122	*
B-1	ST-86	2b		*		*		*
	ST-85	2b						
	ST-84	3b						
A-2	ST-63	3b	ST-64a	3b	ST-66b	3a		
			ST-64b	3c				
A-1	ST-62	1a	ST-61	1a	ST-66a	3a	ST-65	3a

*Structure present but structure type not determined.

(1968:42) attributed to this "aberrant house type" intermediate between the earlier small pole open cornered wall trench structures and later "large log" construction. These structures were followed in Phase A-2 by single set pole structures (Type 3b); in Phase B-1 by segmented wall trench structures (Type 2a) and another, small, Type 3b structure. The structures surmounting Phase B-2 were recorded only in profile and by exposure of central prepared clay hearths and so no structure type attribution may be made. Structures of rigid Type 4 construction with sets of main roof supports were first recorded on the Phase B-3 summit and continue in use through Phase I, the latest mound summit for which architectural data are preserved. Phase B-3 marks the only appearance of structure Type 4b characterized by the presence of eight main roof supports arranged in the form of a square centered on the central prepared clay hearth.

More lightly built secondary structures accompany each of the preceding structures on each Mound A summit surface. Type 3a porticos are associated with early mound phases and Type 5b large sheds are associated with later mound phases. The pattern of paired primary and secondary structures on each mound summit is mirrored by domestic structures in the village areas, although the identification of individual building episodes is more difficult given the lack of intentional fill present in the several phases of mound construction.

The architectural sequence at the Toqua site was initiated during a period of technological change in which the solidity of the wall trench construction tradition was weakened and innovation or

borrowing was taking place, ultimately resulting in the uniform adoption of the rigid mode of construction. The examination of other substructure mound architectural sequences at Hixon (40HA3), Sale Creek (40HA10), Hiwassee Island (40MG31) and DeArmond (40RE12) sites in the East Tennessee Valley provided further support for a period of vacillation between segmented wall trench construction, single set pole construction, and, finally, rigid construction. Although the transition from flexed to rigid construction modes took place in much of the interior Southeastern United States, the flexed mode of construction was observed by Du Pratz (Swanton 1946:418) among the Natchez and Taensa of the lower Mississippi Valley in the early eighteenth century.

CHAPTER III

COMPARISON AND DISCUSSION

Structure Needs

The structure, in any society, be it a windbreak or a steel and glass skyscraper, serves both to shelter its contents and to modify the activities conducted within and around it. Amos Rapoport, in his discussion on the function of the house states that:

> The house is an institution, not just a structure, created for a complex set of purposes. Because building a house is a cultural phenomenon, its form and organization are greatly influenced by the cultural milieu to which it belongs. Very early in recorded time the house became more than shelter for primitive man, and almost from the beginning "function" was much more than a physical or utilitarian concept. Religious ceremonial has almost always preceded and accompanied its foundation, erection, and occupation. If provision of shelter is the passive function of the house, then its positive purpose is the creation of an environment best suited to the way of life of a people--in other words, a social unit of space.
>
> (Rapoport 1969:46)

What Rapoport attributes to the "house" may, to a greater or lesser degree be applied to much of the built environment included within primitive or vernacular architecture. The house or structure cannot be viewed in isolation, for it is an integral part of the cultural system and of the landscape of a society. Structure needs differ from culture to culture, from area to area, and from one period to the next.

The first, and perhaps most universal, structure need to be considered is that of shelter; shelter from climatic extremes and shelter from adverse cultural interaction. Climate and the natural environment

tend to have a more negative than positive influence on primitive architecture, preventing the use of certain forms or building material rather than determining architectural form (Guidoni 1975). Although primitive architectural forms usually respond to climate very well (Rapoport 1969) such forms are determined above all by sociocultural factors (Guidoni 1975) from a range of possible choices. The shelter or structure needs of a society are influenced by nearly every aspect of culture; particularly social structure, subsistence base, and settlement size. Structure needs are relative and vary from culture to culture. Nonsedentary groups, for example, are much less likely to construct certain types of structures than others, nor are they likely to emphasize the storage and display of surplus goods and foodstuffs characteristic of many sedentary groups.

Resource Utilization

The materials utilized for construction purposes by primitive peoples must, of necessity, be derived from the local environment. The form of many primitive structures "reflects a precise and detailed knowledge of local climatic conditions" and "a remarkable understanding of the performance characteristics of building materials" (Fitch and Branch 1960:134). A study of structural needs of a society must take into account both the climatic conditions within which that society lives and the range of available resources capable of constructive utilization. However, Rapoport (1969:25) states that:

> Materials, construction, and technology are best treated as modifying factors, rather than form determinants, because

> they decide neither what is to be built nor its form--this is decided on other grounds. They make possible the enclosure of a space organization decided upon for other reasons, and possibly modify that organization. They facilitate and make possible or impossible certain decisions, but never decide or determine form.

The choice of building materials, and the form of the structures created, is but one of an array of choices and possibilities provided by a particular environment. Such choices demonstrate "the complex interplay between the characteristics of raw materials, technological skills, and social factors" (Hodges 1972:523) inherent in the structural remains of a society.

Mississippian architecture, then, must be examined within the context not only of resources available but of resources utilized in construction. The technological characteristics affecting choice of materials used must be examined. The specific use to which construction materials were applied must be determined when possible. Only then can the question of choice in the application of construction materials to structure form be approached and compared with the ethnohistoric record. A limited number of Mississippian structures from the Toqua site and other sites in Tennessee provide the data necessary for this purpose. Limitations created by recovery techniques, and by the frequent lack of paleobotanical identification of recovered structure elements from many sites, preclude the generation of all encompassing statements concerning architectural resource utilization; however, specific statements may be made concerning such utilization for certain structures and suggestions made concerning the question of choice in the application of construction materials.

An intimate knowledge of the environment and the resources available to the occupants of Toqua and other Mississippian sites is readily evident upon examination of construction materials utilized. The diverse temperate hardwood forest composition of the oak-chestnut region within the Carolinian Biotic Province (Braun 1950:192) provided an extensive array of potential construction materials to occupants of the Toqua site. Table 3.1 presents the identification of wood types and cane recovered from selected structure contexts at the Toqua, Jones Ferry, and Bussell Island sites. Although a wide range of wood types are present in some structures, such as Structure 3 at Toqua, a relatively small number of species make up the bulk of the sample. Wood species represented in small amounts within limited areas on burned structure floors likely represent portions of wooden objects contained in the structure at the time of destruction rather than a part of the structure itself. The species making up the bulk of a particular structure may differ somewhat as to specific varieties; however, patterning in technological characteristics remains consistent.

All building materials represent a compromise in desirable and less desirable technological characteristics. In an attempt to determine the limiting as well as beneficial technological characteristics of archaeologically identified building materials a number of relevant sources were consulted (Collingwood and Brush 1974; Forest Products Laboratory 1974; Killebrew 1974). The publication found to be of most use, Introduction to the Resources of Tennessee by J. B. Killebrew first published in 1874, included data concerning not only the natural

Table 3.1. Construction Materials Identified in Selected Structures.

	40MR6 ST-61+		40MR6 ST-10		40MR6 ST-14		40MR6 ST-2		40MR6 ST-39		40MR6 ST-3		40MR6 ST-12		40MR6 ST-11		40LD17 ST-1+		40MR76 ST-1+	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Cane	x		x		x		x		x		x		x		x		x		x	
Pine					518	40	253	73	39	16	746	27	10	6	4	40	25	52	12	44
Black Locust					126	10	3	*	19	8	378	14					3	6		
Cedar					136	10	1	*			261	9	1	7	5	50	5	10	1	4
Ash			14	40	36	3	32	9	16	7	257	9	3	20			1	2		
White Oak	5	100	1	3	106	8	8	2	34	14	210	8					1	2	3	11
Red Oak					111	9	10	3	44	18	134	5	1	7			7	14	6	22
Oak (sp.)					1	*	1	*			14	*							1	4
Honey Locust			5	14	4	*	1	*			27	*							4	15
Hickory					90	7	31	9	66	28	160	6					2	4		
Chestnut			15	43	102	8	6	2	2	*	99	4			1	10	2	4		
Maple					11	*	2	*	1	*	192	7								
Beech					2	*			3	1	16	*								
Walnut/Butternut					2	*			14	6	13	*								
Redbud					3	*					2	*					1	2		
Persimmon					3	*					91	3					2	4		
Sassafras											5	*								
Hemlock					29	2					15	*								
Mulberry					30	2					21	*								
Coffee Tree									3	1	3	*								
Cottonwood					1	*					1	*								
Plum							1	*												
Cherry											18	*								
Sweetgum											16	*								
Elm											3	*								
Dogwood											17	*								
Willow											10	*								
Poplar											21	*								
Sycamore											6	*								
Hackberry											8	*								
Sourwood											19	*								
Ironwood											1	*								
Hornbeam											1	*								
Holly											1	*								
	5	100	35	100	1,311	100	349	100	241	100	2,766	100	15	100	10	100	49	100	27	100

+ = Structure element identification only.

x = Present in quantity.

* = Present in small quantities (01%).

characteristics and contemporary uses for various wood species and their distribution but also data concerning native grasses. The later publications dealing with forest products proved to be less informative, due both to the practice of treating wood products, thus obscuring their natural character, and to the long distance transport of present day wood products. Table 3.2 presents relative technological characteristics for thirteen wood species derived from Table 3.1. The six wood characteristics (decay resistance, flexibility, strength, splitting quality, uniformity of growth, and availability within the oak-chestnut region) were chosen on the basis of technological characteristics most often referred to in ethnohistoric accounts of house construction (Hawkins 1982; Swanton 1946; Van Doren 1928; Williams 1973). Decay resistance is a measure of durability with respect to ground contact characteristic of all structure members set in postholes. Flexibility is a measure of the capability of a structure member to be bent or kept in a uniform state of controlled tension. Strength is a measure of the capability to receive and distribute stress while maintaining form. Splitting quality is a measure of the capability of being reduced into longitudinal segments without excessive damage to other technological characteristics. Uniformity is a two part measure referring both to uniformity of form within individual structure members and between structure members obtained from the same environment, that is, between trees making up the same stand of timber at the same stage of development. Availability is a measure of the probable accessibility to a sufficient number of trees of a particular species, based upon

Table 3.2. Technological Characteristics of Construction Materials.

Construction Material	Wood Characteristics					
	Decay Resistance	Flexibility	Strength	Splitting Quality	Uniformity	Availability
Pine	G	M	G	G	E	E
Black Locust	E	P	E	M	M	G
Cedar	E	P	P	M	M	G
Ash	P	E	G	G	E	G
White Oak	G	E	G	E	E	E
Red Oak	G	G	G	M	G	G
Honey Locust	E	P	E	P	M	M
Hickory	P	E	E	G	G	G
Chestnut	G	P	M	G	G	G
Maple	G	P	G	P	M	M
Beech	P	G	E	P	M	M
Sassafras	E	P	P	M	M	G
Poplar	P	P	M	F	F	G

E = Excellent; G = Good; M = Moderate; P = Poor.

Sources consulted include: Killegrew 1974; Collingwood and Brush 1974; Forest Products Laboratory, U.S. Department of Agriculture 1974.

topography, soil types, and observed past and present vegetation patterns (see Chapter I).

Resource utilization in the construction of buildings reflects both the technological knowledge of the builder and the social uses to which the structures are put. Differences in materials used may be evident in public or religious structures when compared to domestic structures. Structures having public or religious functions may also be of larger size than the normal range for domestic architecture. Structure 3, situated on the North Platform of Mound A at the Toqua site and dating to the end of the sixteenth or beginning of the seventeenth century, is both larger than any other Dallas phase structure and displays a greater degree of technological elaboration than any village area structures on the site. The structure burned with a substantial portion of its contents and was excavated in 4.0 ft by 4.0 ft units (Polhemus 1985). The burned structural debris and the floor fill within each unit were waterscreened and features, artifacts, and structural members plotted. The Type 4a structure, illustrated in Figure 3.1, was 38.0 ft square and the roof structure was supported by four 1.0 ft diameter hard pine main roof supports. The area situated between the main roof supports and the exterior wall was lined with clay faced perishable wood and cane beds or benches divided into twelve segments by clay partitions. Cultural materials recovered from floor contexts, including over 60,000 lithic items, suggest a specialized, male dominated function for the structure. The variety and quantity of identified wood types recovered from

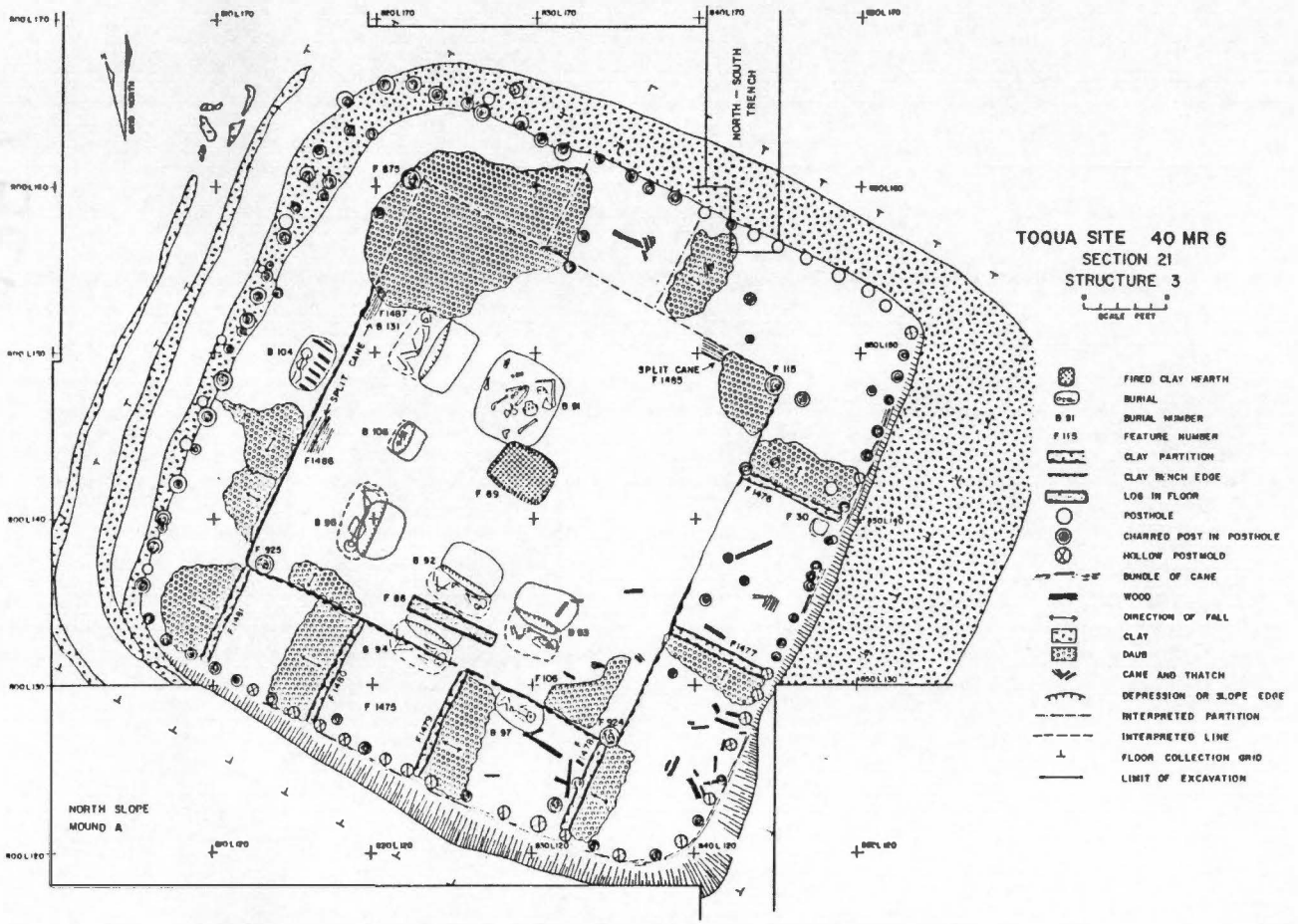


Figure 3.1. Plat of Type 4a Structure 3.

Structure 3 have been presented in Table 3.1. The use of concentric structure zones (Figure 3.2) in the distributional analysis of construction materials for Structure 3 minimizes the effect of isolated, probably nonstructural, occurrences of wood species and maximizes the zonal patterning of construction materials. Table 3.3 illustrates the distribution of cane and the ten most common wood types by zone within Structure 3. River cane is the most common construction material. Cane was used not only in wall, roof, and bench construction but also as reinforcement within the prepared clay bench facings and partitions, bundled in groups of three as a revetment between the wall and the adjoining mound fill, and as a floor and wall covering in the form of matting. Black locust and cedar form the next most common species and are also concentrated in Zone 5 along the exterior walls of the structure in line with their use as vertical exterior wall members. Zone 4 is characterized by peaks in the representation of ash, maple, hickory, chestnut, and persimmon much of which is probably related to the construction of the beds or benches occupying this structure area. Zone 3 is characterized by peaks in the representation of pine and red oak attributable to the main roof supports and associated heavier beams joining them. Zones 1 and 2 display a good representation of white oak although the total number of recovered wood fragments from these two central zones is considerably less than the preceding zones, suggesting perhaps that combustion was more complete in the vicinity of the smoke hole than other portions of the structure. The relatively uniform percentage of white oak in the

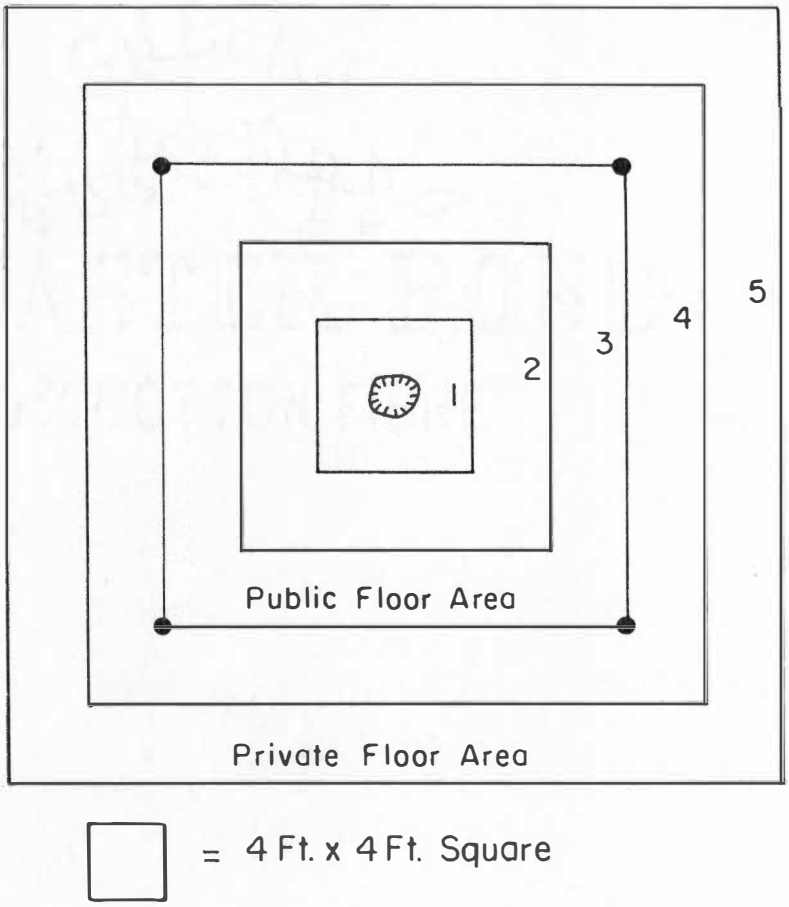


Figure 3.2. Structure 3 Concentric Structure Floor Zones.

Zone 1 Hearth area--roof fall only
Zone 2 Four foot band around Zone 1--primarily roof fall
Zone 3 Four foot band around Zone 2--roof fall and main roof support system
Zone 4 Four foot band around Zone 3--primarily interior furnishings with some roof fall, main roof supports, and exterior wall
Zone 5 Four foot band around Zone 4--primarily exterior wall elements with some interior furnishings and roof fall

Table 3.3. Distribution of Cane and Ten Most Common Wood Types by Zone in Structure 3.

Type		Floor Zone 1	2	3	4	5	Type Total	% of Total
Cane	#	24	62	577	645	759	2,067	45
	%	1	3	28	31	39	100	
Black Locust	#	4	42	55	75	202	378	8
	%	1	11	15	20	53	100	
Cedar	#	3	17	65	52	124	261	6
	%	1	6	25	20	48	100	
Ash	#	9	39	70	77	62	257	6
	%	4	15	27	30	24	100	
Maple	#	9	15	17	96	55	192	4
	%	5	8	9	49	29	100	
Hickory	#	33	25	28	51	23	160	3
	%	21	16	18	31	14	100	
Chestnut	#	1	2	9	69	18	99	2
	%	1	2	9	70	18	100	
Persimmon	#		1	14	45	31	91	2
	%		1	15	50	34	100	
Pine	#	43	91	331	193	88	746	16
	%	6	12	44	26	12	100	
R. Oak	#	8	13	50	23	40	134	3
	%	6	10	37	17	30	100	
W. Oak	#	15	61	45	45	44	210	5
	%	7	30	21	21	21	100	
Zone Total		149	368	1,261	1,371	1,446	4,595	100%

other, outer, zones suggests that white oak as well as hickory, which peaked in Zone 4 but has a similarly relatively uniform distribution in all five zones, were integral parts of the roof construction. Grass thatch was encountered associated with the exterior walls, anchored beneath the encompassing clay embankment as well as with the fallen roof structure, clearly indicating that both exterior walls and roof were sheathed in grass thatch. Clay daub tempered with grass was well represented in the structure; however, this daub is associated either with the interior partitions or with the roof structure within the mainroof supports, as indicated in Figure 3.1. Structure 3, in summary, displays a patterned distribution of construction materials which may be attributed at least in part by the relative merits of the several materials utilized in its construction.

Limited excavations conducted during archaeological stabilization work at Bussell Island (40LD17) in 1978 resulted in the controlled excavation of two thirds of an early Dallas phase structure (Polhemus 1978). Structure 1 at Bussell Island was first discovered by pot hunters and excavation of the threatened portions was completed prior to backfilling the area. Excavation procedures consisted of removing the remaining overburden to the top of the burned Type 4a structure to expose two sides of the structure as well as the central prepared clay hearth encountered by the pot hunters. The lack of waterscreening facilities required a modification of excavation method. All artifacts, structure elements, daub concentrations, and concentrations of paleobotanical materials as well as the usual postholes and features

were plotted. Nearly all of the postholes associated with the structure contained charred post segments and eleven timber fragments were recorded on the floor. Each charred post and timber was recorded, assigned a sample number, and placed in a labeled plastic bag. The entire fill of each posthole was also placed in labeled plastic bags for later processing by flotation. Each discrete concentration of paleobotanical material was treated in a like manner and recorded by feature number. All fired clay daub was also recorded by location and retained for examination. The excavation procedure utilized for Structure 1 at Bussell Island provided construction data not obtained from Toqua structures.

Structure 1 at Bussell Island was destroyed by fire with its contents a relatively short time after it was constructed, as indicated by the lack of primary refuse and post replacement. A number of pottery vessels, several containing charred corn and other paleobotanical materials, manos, hammerstones, projectile points and other items were encountered on the floor of the structure, indicating the abrupt nature of the fire which destroyed the structure. The identification of fifty-three structure elements recorded by element location in Structure 1 is presented in Table 3.4. Structure elements recovered from exterior wall and main roof support post holes are dominated by pine whereas structure elements recovered from interior furnishing post holes and roof structure display a more diverse range of wood types. The primary fabric of the structure, consisting of the exterior wall posts, the main roof supports, the main beams joining the main roof

Table 3.4. Identification of Architectural Elements from Structure 1 Bussell Island (40LD17).

	Element Location				
	Vertical			Horizontal	
Wood Type	Exterior Wall	Main Roof Support	Interior Furnishing	Roof Member	Total
Pine	13	1	7	4	25
Red Oak	2		1	4	7
Cedar			5		5
Black Locust			3		3
Chestnut			2		2
Sassafras			2		2
Hickory				2	2
White Oak			1		1
Red Bud			1		1
Ash			1		1
Unidentified	2		1	1	4
Total	17	1	24	11	53

supports, appear to have been constructed with regard to the known capabilities of the resources used; with hard pine, and to a smaller extent red oak, utilized for ground penetrating and major load bearing elements with the addition of flexible hickory utilized in the roof structure. The interior posts, representing interior furnishings such as beds or benches and partitions, present a distinctly different picture. The range of species represented, and their known technological characteristics, suggest the construction of such furnishings was conducted as a separate process, perhaps by a differently constituted social or labor group. As in the case of Structure 3 at Toqua, river cane was a principal component in the construction of the Bussell Island structure, having been used in wall and roof construction, in reinforcement of clay interior partitions, in bundles of three as a revetment outside the wall posts within the house pit, and in the form of split cane matting covering portions of the structure floor. Clay daub mixed with grass and leaves was used both in the construction of interior partitions and in roof construction within the limits of the main roof supports. Grass thatch was preserved in small areas and appears to have been used in both wall and roof construction. Impressions of twisted cordage are evident on a number of daub fragments, providing data concerning the attachment of at least some structure elements to each other. Structure 1 was set in a shallow pit and was entered by way of a wall trench entryway.

The two Dallas phase structures just described provide a much clearer idea of the form and construction of the Type 4a primary

structure. Table 3.5 presents a compilation of the primary functional designations for eighteen archaeologically derived construction materials, based on observations from Toqua, Bussell Island (40LD17), and Jones Ferry (40MR76). Table 3.6 illustrates the relative occurrence for construction materials derived from ethnohistoric references to construction materials. No specific reference could be found for half of the construction materials compiled for Table 3.5, yet those that were located generally correspond with the archaeological data.

A larger sample of well preserved and well excavated burned structures is necessary before definitive statements can be made concerning the selection and use of specific construction materials. Nonrandom patterning of construction materials is evident in the structures examined, as well as in ethnohistoric references, suggesting such statements are possible with a larger sample of structure data.

Technological Change

Technological change may take place in the face of influences from outside the culture concerned or as a result of altered needs or circumstances. The source or motivation for technological change is not of direct concern to this study. The form, path, and sequence of the pattern of technological change, however, is of interest in examining the transition from the flexed mode to the rigid mode of construction in Mississippian architecture. Possible reasons for the transition from the flexed mode to the rigid mode of construction by Mississippian peoples include changing resource availability as well as changing social needs for sheltered space.

Table 3.5. Functional Attribution of Archaeologically Derived Construction Materials.

Construction Material	Functional Attribution				
	Exterior Wall	Main Roof Support	Interior Furnishing	Roof Structure	Fastening
Pine	F	F	F	C	
Black Locust	F	R	C		
Cedar	F	C	C		
Ash			R	F	
White Oak	F			F	
Red Oak	R		R	C	
Honey Locust	R		R		
Hickory				F	
Chestnut			C		
Maple			R		
Beech			R		
Sassafras			R		
Walnut/Butternut			R		
Cane	F		F	F	F
Thatch	F			F	
Bark				R	R
Clay	C		C	F	
Cordage					C

F = Frequent; C = Common; R = Rare.

Sources consulted include: Toqua (40MR6) ST-3, ST-11, ST-13, ST-14, ST-39; Jomes Ferry (40MR76) ST-1, Bussell Island (40LD17) ST-1.

Table 3.6. Ethnohistoric References to Construction Materials.

Construction Material	Function				
	Exterior Wall	Main Roof Support	Interior Furnishing	Roof Structure	Fastening
Pine	C	F	ND	C	ND
Black Locust	C	ND	ND	ND	ND
Cedar	ND	ND	ND	ND	ND
Ash	ND	ND	ND	C	ND
White Oak	C	ND	ND	F	F
Red Oak	ND	ND	ND	ND	ND
Honey Locust	ND	ND	ND	ND	ND
Hickory	F	ND	ND	C	C
Chestnut	ND	ND	ND	ND	ND
Maple	ND	ND	ND	ND	ND
Beech	ND	ND	ND	ND	ND
Sassafras	C	ND	ND	ND	ND
Walnut	R	ND	ND	ND	ND
Cane	F		F	F	F
Thatch	C			F	
Bark	R			C	F
Poplar	ND	ND	R	ND	ND
Clay	C		R	C	

F = Frequent; C = Common; R = Rare; ND = Data Not Available.

Sources consulted include: Van Doren 1928; Williams 1973; Hawkins 1982; Swanton 1946.

The earlier flexed mode of construction, with its use of continuous structural members for both walls and roof, requires a substantial supply of construction materials that must meet rather stringent specifications for a building of any dimension. These construction materials must be decay resistant, flexible, strong and resilient, and uniform in taper and dimensions as well as being available in quantity. Generally speaking, those wood types fulfilling the last four requirements are no more than fair with regard to decay resistance when placed in the ground and so reduce the potential use span for structures of flexed construction. The inherent difficulty of making localized repairs on a structural fabric under tension frequently necessitated the complete replacement of such structures. The potentially most serious, but least quantifiable, drawback of the flexed mode of construction lies in the supply of suitable building materials and the length of the regeneration cycle. Extremely long slender white oak and hickory saplings capable, in pairs, of spanning structures as much as fifty feet across may be found in climax hardwood forest environments; however, the regeneration rate within a reasonable distance of Mississippian towns the size of Toqua is unlikely to have kept up with demand for specialized building materials.

The flexed mode of construction utilizes continuous structural members for both walls and roof. Archaeological evidence for flexed construction may be observed directly, in the form of charred superstructure (Nash 1938; Lewis and Kneberg 1946:51; Jennings and Neitzel 1936), or indirectly, in the form of post molds and other

substructure details. Post molds and charred structure members are relatively small in basal diameter in comparison to structure size; rarely greater than 0.45 ft and frequently as little as 0.2 ft in diameter. Structure elements are more closely and evenly placed in flexed construction. The frequent presence of wall trenches simplifies the placement of the many, closely spaced wall elements. Wall trenches, frequently supplied with horizontal braces or wedges of wood or stone (Lewis and Kneberg 1946:50), also facilitate control of the outward thrust created by placing the structure elements under tension. Evidence of this outward thrust is also indicated by postmold alignment and occasional distortion of post hole and wall trench edges.

The rigid mode of construction, with its use of separate components for wall members, roof members, and roof support system, brought with it a number of technological advantages as well as several disadvantages. The rigid mode of construction, with its segmented components, allows the use of the wood types best suited for each portion of the structure. Decay resistant woods, for example, can be used for structural members set in the ground and flexible but less durable woods can be used in roof construction. A much more diverse array of suitable woods are thus available for construction purposes which, in addition, do not have to meet the stringent size and form requirements imposed upon the flexed mode of construction. Split members can also be used when necessary. The addition of a system of main roof supports provided the solidity necessary to support the heavier roof structure with its clay daubed interior, although such

supports broke up the characteristic spacious interior aspect of the earlier structures of flexed construction. The earlier limited physical delineation of social space characteristic of flexed construction was replaced by an increasingly complex set of fixed internal divisions of space in both primary public and primary domestic structures through time.

The transition from flexed to rigid construction, although evident at many Mississippian sites throughout much of the interior Southeastern United States, did not occur simultaneously in all areas. Du Pratz (Swanton 1946:418), for instance, observed the construction of a house built in the flexed mode in the Lower Mississippi Valley early in the eighteenth century.

The Use of Space

The differential use of space through time with respect to the physical delimitation of space has been alluded to in the discussion of technological change. Lewis Henry Morgan made the first attempt at describing the function of kin groups and the household, the use of space, and the effect of a society's needs on the architecture of the society (Morgan 1965). Trigger (1968:57) suggests that "the size and layout of buildings may also reflect the structure of the family. A house occupied by a nuclear family may contain one or more rooms, but the function of these rooms will relate to the needs of a single family." The relationship between the built environment and the use of space is discussed by Rapoport in the following way:

> It is implicitly accepted that there is a link between behavior and form in two senses: first, in the sense that an understanding of behavior patterns, including desires, motivations, and feelings, is essential to the understanding of built form, since built form is the physical embodiment of these patterns; and second, in the sense that forms, once built, affect behavior and the way of life.
> (Rapoport 1969:16)

The social aspects of the use of space are much more difficult to approach by the archaeologist than for the cultural anthropologist or the ethnologist. Indeed, Douglas (1972:513) cautions that "however fully we accept that people use domestic space to express distinctions of age, sex, and rank, it would still be hazardous to deduce these symbolic orders from the material remains alone." The archaeologist, for the most part, must deal with those activities and actions which result in tangible residues or in the physical delimitation of space resulting from, or contributing to, the social aspects of the use of space. These two aspects of the use of space, "activity areas" and the delimitation of space are discussed below.

The activity area, consisting of a discrete primary cluster or concentration of residues and/or tools associated with an activity or related group of activities, such as stone tool manufacture or food preparation, has been the subject of investigation for some time (Hally 1975; Smith 1978; Flannery and Winter 1976; Binford 1983; Longacre and Ayres 1968). Structures tend to concentrate or focus activities within or in the immediate vicinity of the built environment. Such concentration frequently results in the multiple use of space for different activities producing mixed deposits of residues. In societies having defined social roles and use of space (Jett and Spencer 1981),

however, such grouping of activities may result in the accumulation of residues and other objects which may be attributed to a particular age, sex, or status group within a particular unit of space. This is particularly true in the case of structures with the contents destroyed by fire, preserving the relative position of not only residues but other, functional, objects as well. Activity areas recognized in and around structures at the Toqua site include stone implement manufacture in Structure 3, bone implement manufacture and maintenance in Structure 3 and Structure 56, pottery manufacture in Structure 56, and the working of marine shell in Structure 14.

The use of space within structures includes storage of equipment and foodstuffs as well as areas devoted at least in part to sitting and sleeping. Figure 3.3 illustrates the floor plan of Structure 39, a relatively late Dallas phase Type 4a structure situated in the East Village Midden area of the Toqua site. Figure 3.4 illustrates the spatial distribution of piece plotted artifacts and features within Structure 39. Most of the tools and other objects are concentrated within the northwest corner of the structure and the central portion of the floor is relatively clear of both artifacts and human burials, as are the areas interpreted to be bed or bench locations on the basis of interior clay partitions and charred interior furnishing posts at each location. Structure 39 is similar in most respects, other than in preservation, to many other Type 4a Dallas phase structures. The focal point within the structure is the central prepared clay hearth, source of heat and light for the social unit occupying the structure.

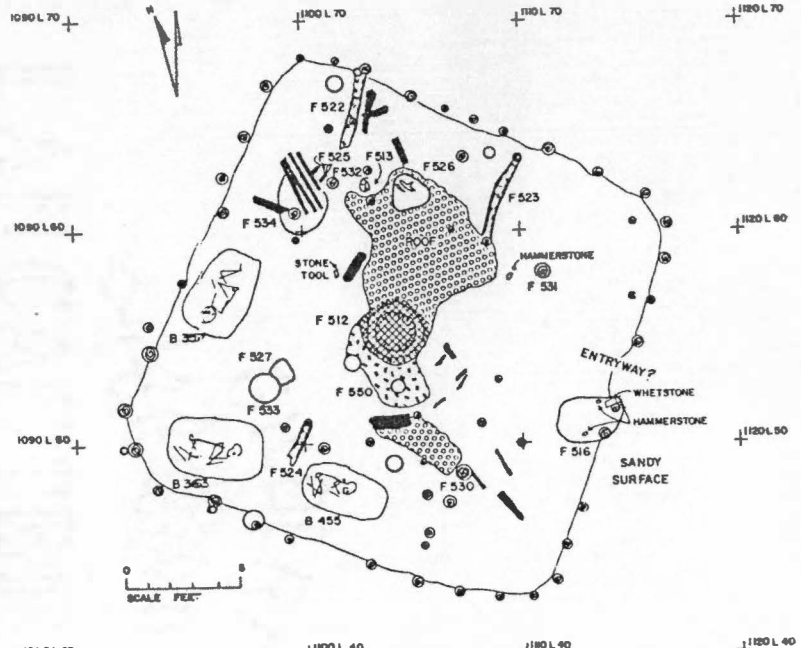


Figure 3.3. Plat of Type 4a Structure 39.

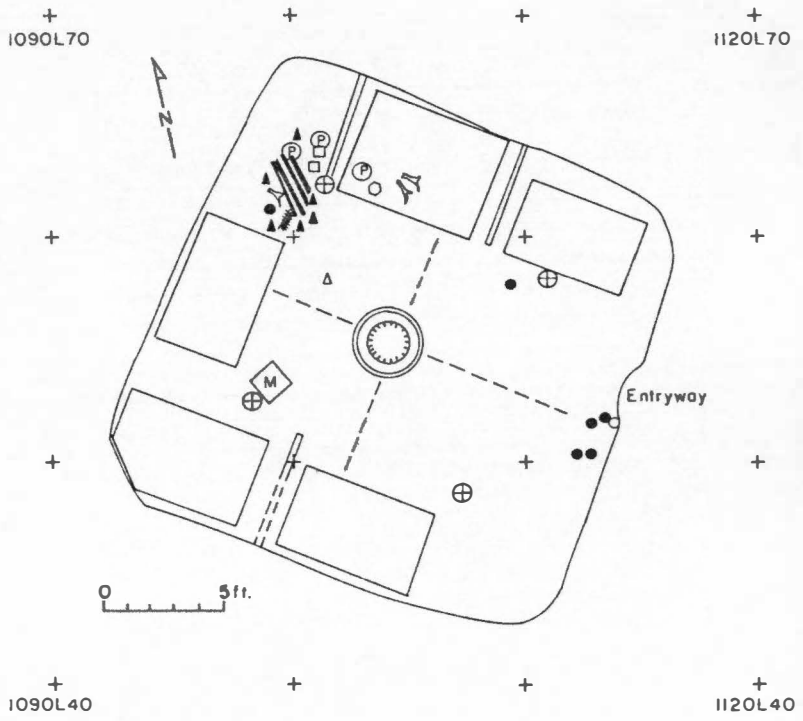


Figure 3.4. Structure 39--Spatial Distribution of Artifacts and Features with Interpreted Use of Interior Space.

Surrounding the central hearth, and extending out to the limits imposed by the four main roof supports, is the central or public area of the structure, accessible to all and the locus of indoor cooking activities and interpersonal interaction. Extending from the limits imposed by the main roof supports out to the exterior walls of the structure is the segmented or private area of the structure. This area of the structure is generally made up of four bed or bench areas, each centered between each pair of main roof supports and the exterior wall and flanked by partitions extending between wall and roof support. The corners of the structure are devoted to storage.

An examination of burial patterning in relation to Type 4a structures suggests that at least a portion of the structure population was interred beneath or adjacent to individual bed or bench areas within the structure, suggesting the possibility of eliciting intrastructure patterning of the deceased occupants. The spatial patterning of such individuals, when viewed in the light of ethnohistoric references to burial practices (Scott and Polhemus 1985), provides clues concerning social structure within domestic dwellings. The domestic model, for those individuals not removed due to status or other social or political ties, may be stated in the following way: those individuals who die at home will be interred within the structure beneath or near the bed or "cabin" occupied in life. The patterning of burials by age, sex, and associations, for three Type 4a village structures containing a sufficient number of individuals (Structure 2, 19 burials; Structure 18, 19 burials; Structure 39, 18 burials), was examined. The structures

displayed a circular to rectangular pattern of burials, of all ages and both sexes, situated along the walls of each structure. Burials tended to be concentrated toward the center of each wall between the main roof supports. Adults tended to be situated near the center of the north, west, and south walls of each structure. Females were more frequently found along the north and south walls and, when present, adult males tended to be found along the west, and less frequently along the south wall. Subadults were concentrated toward the front edge of the beds or benches along all four sides of each structure. Burial associations with subadults were more common and of greater variety within the west half of each structure. The examination of structure groups, and of articulated multiple burials may provide additional data concerning the size and composition of the social unit occupying the Dallas household (Polhemus 1985).

The Dallas phase Type 4 structure form is characterized by the division of the structure interior into two distinct zones or areas, separated by the pattern of main roof supports, classified as the "public" and "private" floor areas of the structure (Polhemus 1985). A relative measure of structure function is suggested by the percentage of total floor space devoted to "public" space. Figure 3.5 illustrates the relationship of total floor area to "public" floor area for Dallas phase Type 4 structures and eighteenth century Cherokee Type 6 and Type 7 structures at the Toqua site. The structures are classified as to probable function on the basis of site location, architectural elaboration, and content as well as total floor area. The

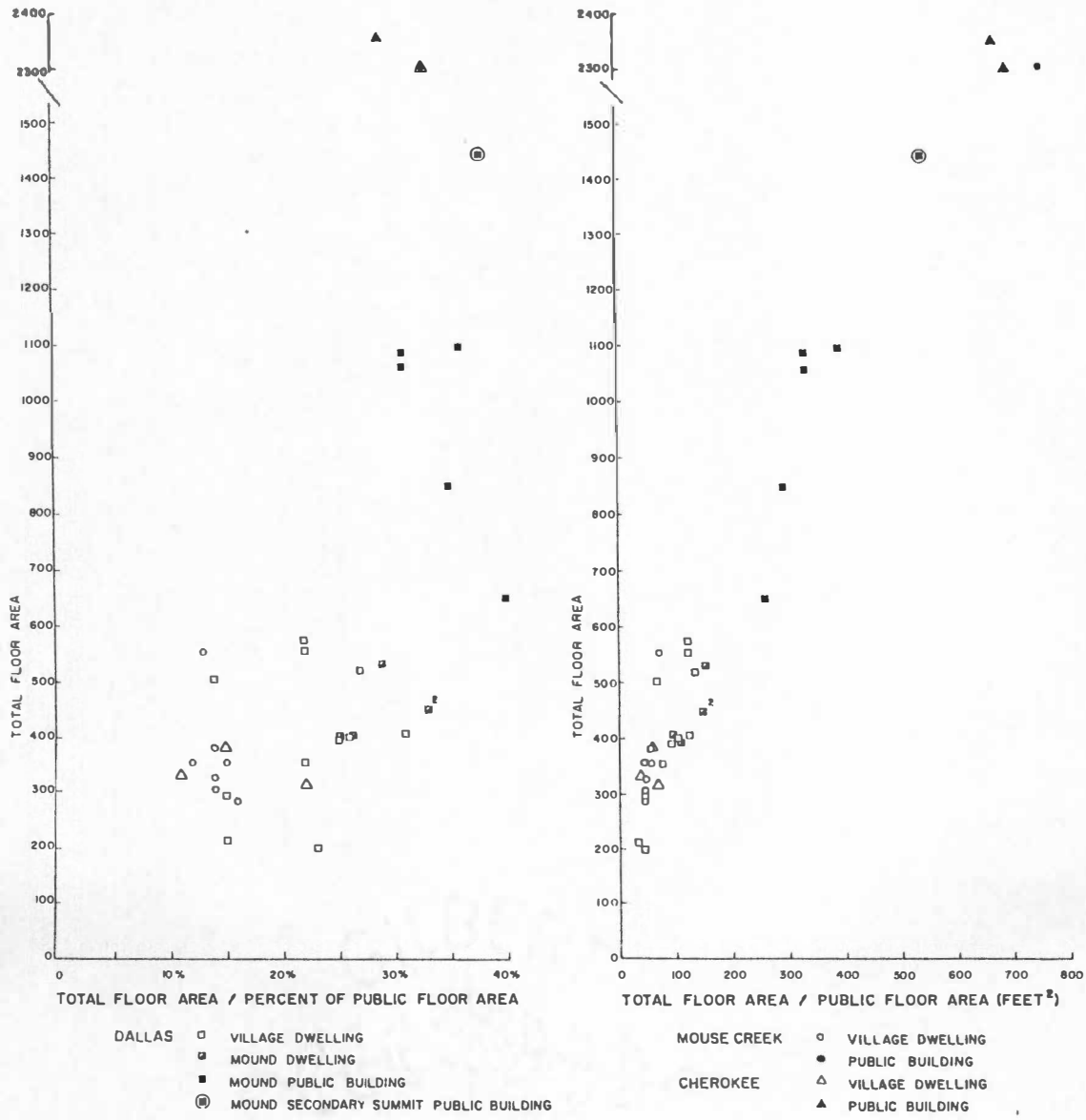


Figure 3.5. Floor Area/Public Floor Area Relationships Dallas Phase Type 4 Structures and Eighteenth Century Cherokee Type 6 and Type 7 Structures.

several functional categories cluster well on the chart both with respect to percentage of total floor area and the number of square feet recorded for the two factors in each structure. Table 3.7 provides data comparing the percentage of public floor area to total floor area of Type 4a structures by site area. Here the percentage of public space in domestic structures within the East Village Midden area, fronting on the central plaza, as well as domestic structures associated with the summit of Mound A, is greater than that recorded for structures of the same type situated in other village areas. Public buildings surmounting each Mound A summit display an even larger percentage of public floor space than the presumedly higher status domestic dwellings nearest the plaza and paired with each mound summit public building.

The symbolic use or allotment of space, particularly in structures or functions connected with public or religious activities, was a common feature among groups encountered by European observers in the interior Southeastern United States (Swanton 1931, 1946; Howard 1968; Hudson 1976; Howard 1968; Waring 1977). Specified seating patterns based upon title, rank, status, and kinship are evident in both townhouse and square ground use. Historic Creek square ground form and the terminology used for elements making up the square ground are analogous to the elements making up the townhouse (Swanton 1931) and, indeed, serve similar functions. Enclose and roof over the Creek square ground and one duplicates, on a larger scale, the traditional form of the townhouse and on a still more reduced scale

Table 3.7. Comparison of Percentage of Public Floor Area to Total Floor Area of Type 4a Structures by Site Area.

Site Area	West Village	East Village	East Village Midden	Village Areas Total	Mound A Domestic	Mound A Public
Sample Size	6 (%)	3 (%)	12 (%)	21 (%)	5 (%)	6 (%)
Range	15-28	16-25	14-32	14-32	25-33	31-40
Mean	22.7	21.3	20.4	21.2	29.2	35.2
% Dev.	4.55	4.73	5.47	4.99	3.77	3.66

the traditional form of primary dwelling or domestic structure. The facilities centered on each side are referred to as "beds" or "cabins" and are provided with partitions or other physical elements controlling the use of space in each case. The corners between adjoining "beds" serve storage functions in the case of square grounds (Swanton 1931) and within domestic structures. The focal point of social interaction in each case is the central hearth or fire and the space encompassed by the "beds" is equally accessible to all participants. The townhouse is frequently accompanied by a more open structure or summer pavilion for warm season use. The townhouse complex, and the still larger square ground complex, in actuality mirrors the traditional domestic unit, and certain symbolic aspects in the use of space may have differed only in degree rather than kind for all three. Patterning and the symbolic use of space therefore may be reflected in the form of the domestic dwelling unit.

Functional Variability and Continuity

Mississippian architecture is comprised of a relatively limited number of forms at any particular point in time, and structural variability within a particular contemporaneous settlement is more a product of degree and elaboration than of distinct architectural styles. Hunter-Anderson (1977:295-296) suggests two lines of inquiry into the study of structures. She suggests that one should be concerned with both the nature of the housed contents and the "nature of the interfering environmental agencies" (1977:296). For the purposes of this

study environmental aspects may be considered constant with respect to influence on Mississippian architecture at the Toqua site. Housed contents include inanimate objects, stored foodstuffs, and indoor activities. The patterning of form and content for Mississippian structures at the Toqua site indicative of functional variability and continuity is discussed below.

Patterning of archaeological materials and interior furnishings can provide indications of the type and location of activities conducted within structures as well as suggesting the primary function served by the structure. Activity areas, previously discussed with respect to the use of space, were not identified in sufficient numbers to do more than suggest the range of activities that took place in certain types of structures. Type 4 Dallas phase structures, both by virtue of greater numbers and generally better preservation, provide the bulk of such data. Many of the activities identified within primary structures, such as food preparation, stone and bone tool manufacture, and pottery manufacture, were undoubtedly conducted in secondary structures, or outdoors when weather conditions permitted; however, discrete concentrations are rarely preserved on exposed outdoor surfaces or within the more open Type 5 sheds. Such materials were generally dispersed and incorporated into the sheet midden characteristic of Dallas domestic areas. Additional difficulty is encountered when the position of the entryway or point of access to the structure cannot be determined. Specified use of space in the conduct of activities within a structure is frequently determined with respect to the entryway

and/or the orientation of the structure (Jett and Spencer 1981). Occupational residues accumulate within a systemic context and different residues are frequently concentrated within different portions of Mississippian primary structures. At the King site (9FL5) Hally's spatial study of structure contents indicated a higher density of occupational residues in the southern half (Hally 1975b). The east half of Structure 3 at the Toqua site contained over 75 percent of the nonstructural cultural material recovered from the structure floor, and access to the structure was probably gained through the northeast corner. The east half of Structure 2 at the Toqua site, between the central prepared clay hearth and the wall trench entryway centered in the east wall, also contained the greater portion of the pottery vessel sections and food remains. The posthole contents for all 596 Structure 2 postholes were waterscreened to determine if the examination of posthole contents alone would provide similar data if the structure had been truncated by cultivation. Processing and tabulation of a 10 percent random sample of postholes drawn from each quarter of the structure displayed a similar concentration of nonstructural remains toward the east half of the structure, particularly with regard to charred paleobotanical materials, suggesting that patterning indicative of structure function and intrastructural activities could be obtained from the posthole contents alone.

The presence, form, and number of architecturally related features or facilities within a structure, or associated with specific structure types, reflect the primary function of the structure and

defines the use of space for that function. Table 3.8 summarizes the distribution of classes of architecturally related features as well as burials by structure type at Toqua. Although the problems of multiple construction episodes, differential sample size, differential preservation, and combining public and domestic structures reduce the utility of the table, the comparative absence of built in facilities and burials in structures of flexed construction is evident. The exceptions, in the form of entryways, prepared clay hearths, prepared clay furnishings, and split cane matting impressions, are almost entirely restricted to mound structures. The later structures of rigid construction display a wider range of architectural features and greater variation of form within each class of architectural features than the earlier flexed structures. The disposal of primary refuse in domestic as well as public structures during the Hiwassee Island phase has left discouragingly little for the archaeologist to compare to later Dallas phase structures. The disposal of primary refuse during the Dallas phase apparently extended only to public buildings.

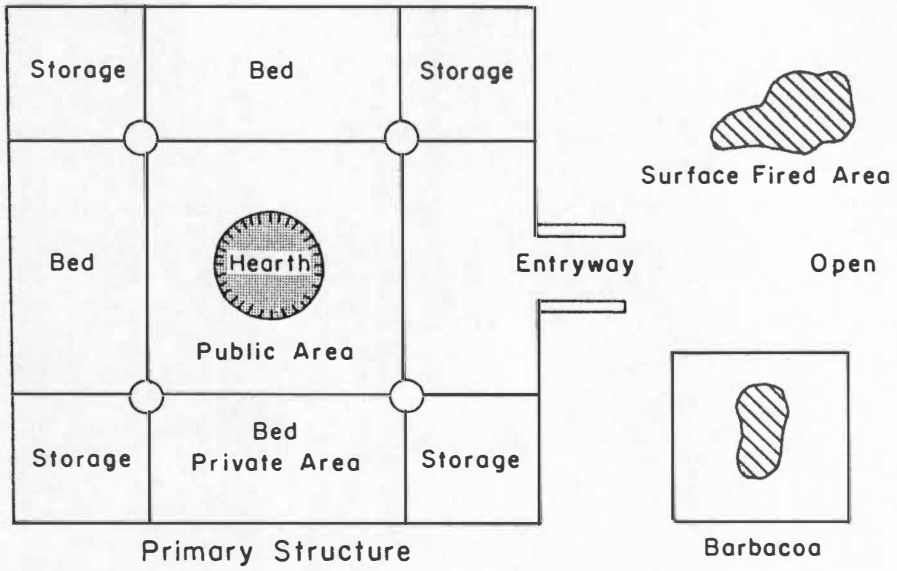
The spatial and contextual patterning of structure types at the Toqua site provided an opportunity to not only recognize for the first time a distinct class of secondary structure (Type 5) associated with the Dallas phase but to determine its relationship to the better known Type 4a primary Dallas structure. This open shed-like secondary structure type frequently contains associated burials and has been noted on Mouse Creek phase sites as well (Polhemus 1985). These paired structures, combined with surface fired areas and adjoining

Table 3.8. Feature Summary by Structure Type.

Number of Structures	Structure Type	Prepared Clay Hearth	Surface Fired Area	Prepared Clay Furnishings	Split Cane Matting Impressions	Posthole (= >1 ft Diameter)	Floor Trench	Entryway	Artifact or Artifacts on Floor	Burials	Total Treatments
2	1a	2	3	1	3			2			11
1	1b		1			1		1			3
2	2a					2					2
4	3a		7			28					35
12	3b	2	3	1		8		1	3	3	18
4	3c		1			13					14
1	3d										
59	4a	89	20	24	3	301	2	27	31	218	496
1	4b	1				23			1		25
14	5a		16			41				40	57
13	5b		11			8				2	19
2	6	2				8					10
8	7	3				8				2	11
2	8a										
2	8b										

open space between primary structures, make up the physical features interpreted as representing the household or minimal social and economic unit within Dallas society. The tangible remains of this minimal social and economic unit make up what has been described as the Minimal Settlement Unit (Polhemus 1985). Figure 3.6 illustrates the Minimal Settlement Unit and provides an interpretation of the use of space within the unit based upon the sum total of preserved Dallas phase structure data available to the author. The Minimal Settlement Unit is mirrored, on a larger scale, by pairs of primary and secondary structures upon each mound summit, and may provide an intermediate link between the "winter house" and "summer house" of the Woodland period (Faulkner 1977) and the closely paired "winter houses" and "summer houses" described for the eighteenth century Overhill Cherokee (Schroedl 1982) and other historic groups in the interior Southeastern United States (Swanton 1946).

Mississippian public structures have traditionally been identified on the basis of larger size, greater elaboration of architectural features, and association with substructure mounds. An additional measure of the public or domestic function of a structure, previously discussed with respect to the use of space, is the percentage of total floor area taken up by the central space delineated by the set of main roof supports. This measure, resulting in a percentage calculation for public floor area, is based upon the assumption that public buildings should by virtue of their function devote a greater portion of sheltered space to the public aspects of the structure to accommodate



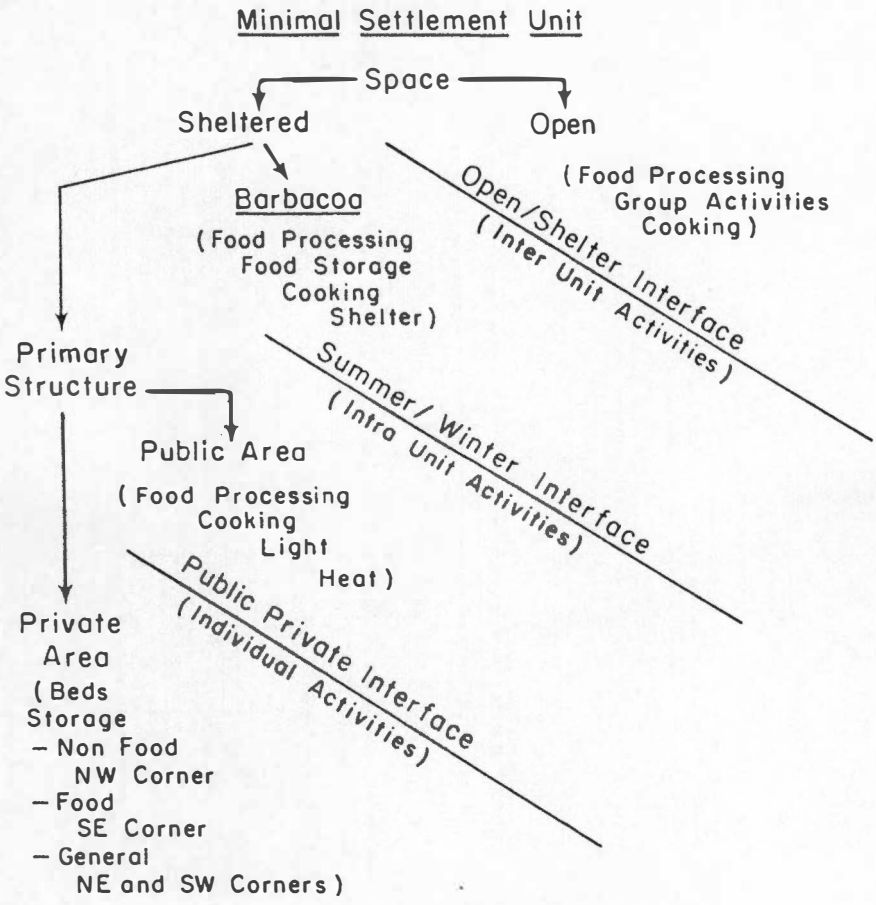


Figure 3.6. Interpreted Use of Space in the Minimal Settlement Unit.

the social interaction of a greater number of individuals. Structures containing high status domestic units should also display not only relatively greater size but a somewhat greater percentage of public space as a result of greater social interaction with the community population or certain sectors thereof. Table 3.9 presents a comparison between paired Type 4 primary structures situated on different phases of Mound A. Total floor area, public floor area, and the percentage of public floor area for each structure is presented. One of each pair of primary structures is within the size range for village structures, and the mean total floor area for East Village Midden structures and these mound structures are quite close (Table 3.10). Table 3.11 presents a comparison of structure floor area by site area for Type 4 structures using the t statistic. Each pair of site area/floor area means thought to be significantly different was subjected to the t test to determine if there were statistically significant differences in the means. Each statistic was calculated using a 0.05 level of significance. East Village Midden structures were not found to be significantly smaller than Mound A domestic structures; however, West Village structures were found to be significantly smaller. Mound A domestic structures were found to be significantly smaller than Mound A public structures. West Village structures were found to be smaller than East Village Midden structures but only at a 0.10 level of significance. The t statistic supports the interpretation that the mean floor area of domestic and public structures is significantly different at the 0.05 level. The t statistic less strongly supports the interpretation that

Table 3.9. Comparison of Paired Structures by Mound Phase--Structure Types 4a and 4b.

Domestic Structures					Public Structures				
Structure Number	Mound Phase	Total Floor Area (ft^2)	Public Floor Area (ft^2)	% Public Floor Area	Structure Number	Mound Phase	Total Floor Area (ft^2)	Public Floor Area (ft^2)	% Public Floor Area
131	I	-	-	-	53	I	1,156	440	38
13b	H	449	150	33	11	H	1.096	393	36
13a	G	449	150	33	12	G	650	261	40
27	F	400	105	26	20	F	1,060	333	31
30	E	532	154	29	14	E	849	295	35
52	B-3	400	100	25	50*	B-3	1,089	333	31

*Structure Type 4b.

Table 3.10. Comparison of Total Floor Area for Type 4a Structures by Site Area.

Site Area	West Village	East Village Midden	Mound A Domestic	Mound A Public	Mound A North Platform
Sample Size	8 (ft^2)	12 (ft^2)	5 (ft^2)	6 (ft^2)	1 (ft^2)
Range	292-506	211-921	400-532	690-1,156	1,444
Mean	379	496	446	983	-
St. Dev.	73.0	193.4	54.0	194.3	-

Table 3.11. Comparison of Floor Area of Type 4a Structures by Site Area.

	Area Using the t Statistic			
Site Areas	Level of Significance	t Value	One Tailed Value	Significant Difference
EVM < MAd	.05	0.63	0.269	No
WV < EVM	.05	-1.63	0.0615	No*
WV < MAd	.05	-1.91	.0415	Yes
MAd < MAp	.05	-5.73	.0005	Yes

*Significant at 0.10 level.

EVM = East Village Midden Structures (n = 12).
WV = West Village Structures (n = 8).
MAd = Mound A Domestic Structure (n = 5).
MAp = Mound A Public Structures (n = 7).

the mean floor area of East Village Midden and West Village structures is significantly different at the 0.10 level. The larger standard deviation for the East Village Midden sample is the result of the inclusion of structures within the midden area some distance from the plaza. The percentage of public floor area for the mound summit domestic or dwelling structures is within the upper range of the largest village structures near the plaza. Independent confirmation of the domestic role of this structure group includes the presence of an associated infant burial, a relative lack of architectural elaboration compared to each associated public building, and the presence of small amounts of refuse.

Public buildings are usually differentiated by larger size, a greater degree of interior architectural elaboration, only traces of domestic refuse, and a greater percentage of public floor area. Figure 3.7 illustrates the probable appearance of Structure 14, a public building associated with Phase E on the summit of Mound A, as it might have been shortly before a fire consigned the structure and contents to the archaeological record. The structure contained status or rank related objects, including a large Dover chert Duck River style biface blade and a polished stone celt, as well as a marine shell working activity area. The abrupt nature of the fire is indicated by the presence of the calcined remains of an individual lying prone on the floor of the structure. This structure, as with the other public buildings, was connected to the associated high status domestic structure by a wall trench entryway. The close association between

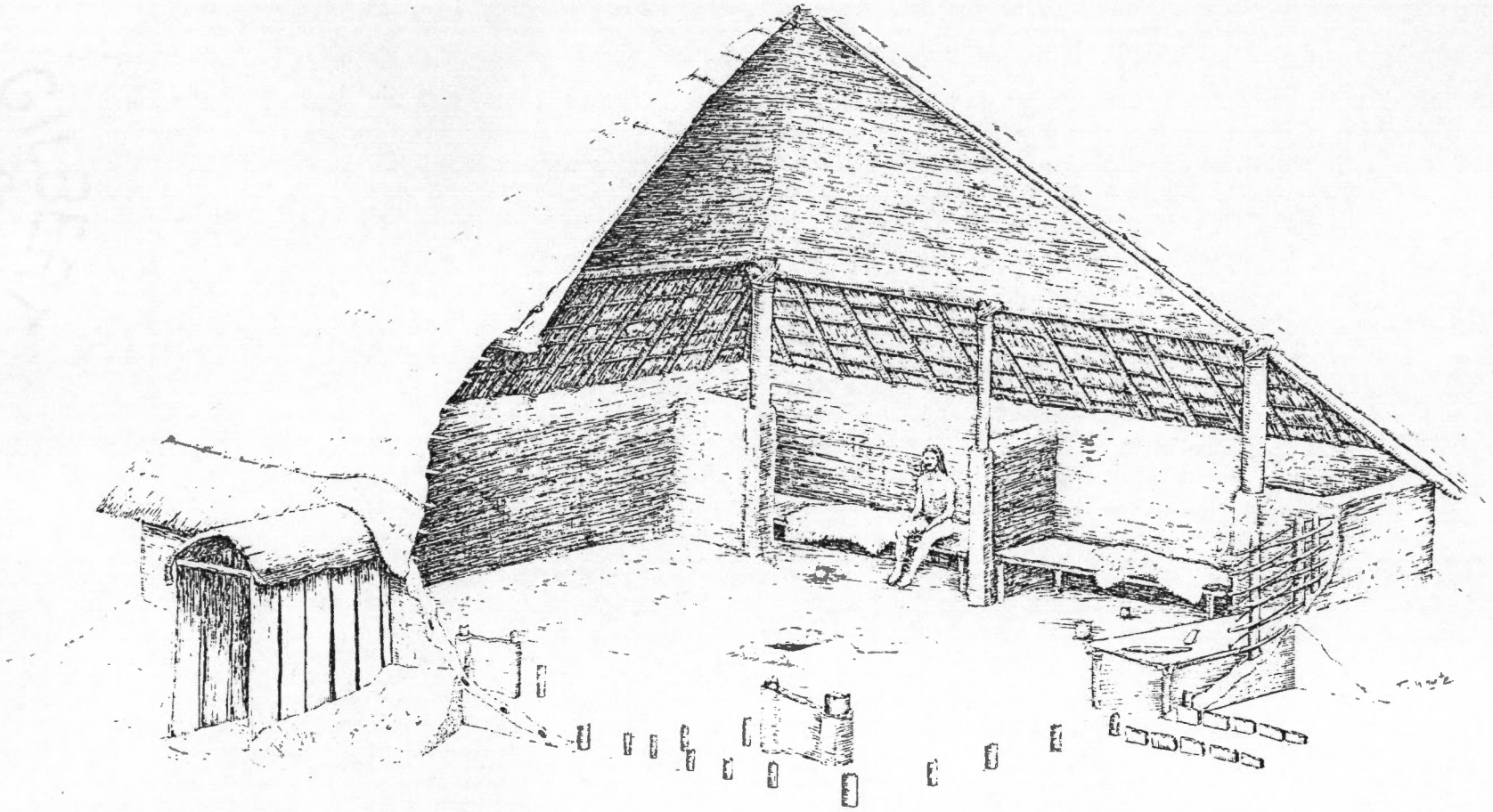


Figure 3.7. Artist's Reconstruction of Type 4a Public Building Structure 14.

the pairs of domestic and public buildings on each mound summit suggests that a high ranking individual and his immediate social unit occupied a prominent position closely linked to the focal point of political power within the community. A similar paired primary structure complex composed of one larger and one smaller structure connected to each other has been reported at the Dyar Mound (9GE5) by Marvin Smith (1981:45).

Functional continuity in Mississippian architecture may be indicated by continuity in architectural form, structure content, or structure context. One characteristic of Dallas phase sites is the tendency, once established, to continue to use the same structure location for long periods of time, suggesting at the least some form of settlement wide planning and perhaps some form of hereditary control for occupied or utilized space. Although structure types changed through time, and reductions in the total area encompassed by the defensive system necessitated reallotment of space in some portions of the site, certain prime structure localities remained in continuous use for close to four hundred years. Public space, such as that occupied by the central plaza and public buildings, provides an even more evident case of continuity over an extended period of time. The pattern of paired larger and smaller structures previously discussed for Type 4 structures situated on later mound summits is duplicated for every phase of Mound A. Figure 3.8, illustrating Phase H, the latest well preserved summit surface of Mound A, may be compared with Figure 3.9, illustrating Phase A-1, the initial construction on the

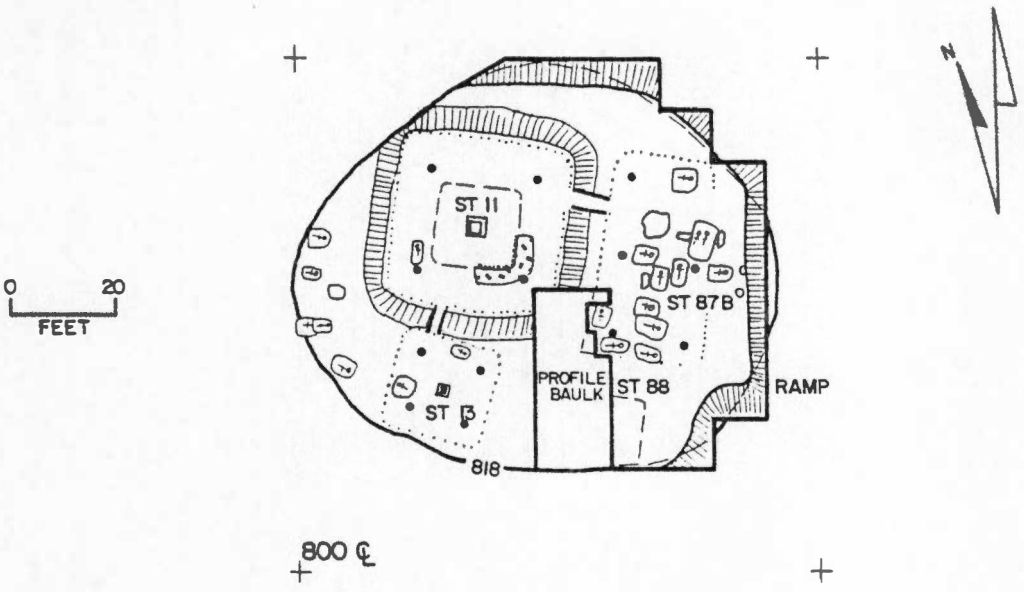


Figure 3.8. Plan of Mound A Phase H Summit.

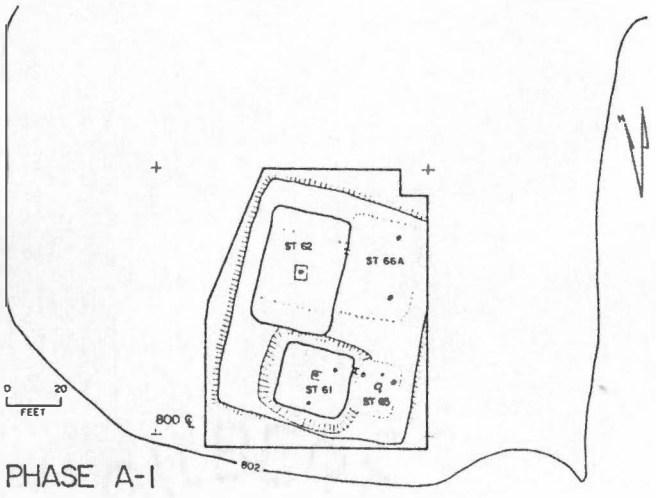


Figure 3.9. Plan of Mound A Phase A-1 Summit.

first summit. Phase A-1 has provided an uncorrected radiocarbon date of A.D. 1215 plus or minus 120 years (GX6077). Phase H has provided an uncorrected radiocarbon date of A.D. 1620 plus or minus 120 years (GX6074). The similarity in the layout and relative size of structures between the two mound summits is remarkable, particularly when the contrasts in architecture are considered.

Architecture and the Ethnohistoric Record

The ethnohistoric record has frequently been utilized as an aid for interpreting the archaeological record for a particular historically known culture such as the Cherokee (Polhemus 1975; Schroedl 1978a; 1982). This study has attempted to utilize a technological or materials analysis approach to ethnohistoric sources rather than the more traditional strict historical approach. With a technological or materials analysis approach even brief references to structures and construction materials can be of use for interpreting the archaeological record. Material and functional identifications can be compiled into a comparative matrix (see Table 3.6, p. 98) against which the archaeological record can be examined. More complete ethnohistoric structure descriptions, such as those by Du Pratz (Swanton 1946:418-419) and Adair (Williams 1973: 450-452), provide a more comprehensive view of a particular structure type as well as the manner and sequence of construction.

Du Pratz provides a detailed description of the use of flexed construction.

The cabins of the natives are all perfectly square. There is not one which measures less than 15 feet each way, but there are some more than 30. This is their method of constructing them:

The natives go into the young woods in search of poles of young walnut [hickory] trees 4 inches in diameter by 18 to 20 feet long. They plant the largest at the four corners to fix the dimensions and the size of the dome. But before planting the others they prepare the scaffold. This is composed of four poles fastened together above, the ends below resting at the four corners. On these four poles they fasten others crosswise 1 foot apart, all making a four-sided ladder or four ladders joined together.

That done they plant the other poles in the earth in straight lines between those at the corners. When they are thus planted they are bound firmly to a cross pole on the inside of each face (or side). For this purpose they use great cane splints to bind them, at the height of 5 or 6 feet, according to the size of the cabin. This forms the walls. These erect poles are not more than 15 inches apart. A young man then mounts to the top of a corner post with a cord between his teeth. He fastens the cord to the pole, and as he mounts inward the pole bends because those who are below draw the cord to make the pole curve as much as is needed. At the same time another young man does the same to the pole forming the angle opposite. Then the two poles, bent to a suitable height, are firmly and smoothly bound together. The same is done to the poles of the two remaining which are made to cross the first. Finally all the other poles are joined at the top, giving the whole the appearance of a bower in a greenhouse such as we have in France. After this work canes are fastened to the lower sides or walls crosswise about 8 inches apart, as high up as the pole which I have spoken of as determining the height of the walls.

These canes being fastened in this manner, they make mud walls of adobe (mortier de terre) in which they put a certain amount of Spanish beard. These walls are not more than 4 inches thick. No opening is left except the door, which is but 2 feet wide at most by 4 in height, and some are much smaller. Finally they cover the framework I have just described with cane mats, placing the smoothest on the inside of the cabin, and they fasten them to each other carefully so that they will join well.

After this they make many bundles of grass, of the tallest they can find in the low grounds, which are 4 or 5 feet long. They are laid down in the same manner as the straw with which cottages are covered. They fasten this grass by means of large canes and splints also made of

> cane. After the cabin has been covered with grass they cover all with cane mats well bound together, and below they make a circle of lianas all the way around the cabin. Then the grass is clipped uniformly, and in this way, however high the wind may be, it can do nothing against the cabin. These coverings last twenty years without repairing.
>
> (Swanton 1946:418-419)

This description, while describing the flexed mode of construction among the Natchez and Taensa of the lower Mississippi Valley in the early eighteenth century, provides data concerning the types, sizes, and sources of building materials as well as their use. The sequence of construction as well as the relative spacing and durability of some building materials is provided. Technological problems such as defining the inflection point between wall and roof structure through the use of an interior frame are addressed. While only structures from the Beaverdam Creek site (9EB85) (Rudolph and Hally 1985) in the comparative sample display four larger corner postholes in conjunction with flexed construction, thus more closely matching the structure described by Du Pratz, much of the structure data is of use in the interpretation of flexed construction in general.

James Adair provides a detailed description of rigid construction in his description of a Chickasaw winterhouse:

> The clothing of the Indians being very light, they provide themselves for the winter with hot-houses, whose properties are to retain, and reflect the heat, after the manner of the Dutch stoves. To raise these, they fix deep in the ground, a sufficient number of strong forked posts, at a proportional distance, in a circular form, all of an equal height, about five or six feet above the surface of the ground: above these, they tie very securely large pieces of the heart of white oak, which are of a tough flexible nature, interweaving this orbit, from top to bottom

> with pieces of the same, or the like timber. Then, in the middle of the fabric they fix very deep in the ground, four large pine posts, in a quadrangular form, notched a-top, on which they lay a number of heavy logs, let into each other, and rounding gradually to the top. Above this huge pile, to the very top, they lay a number of long dry poles, all properly notched, to keep strong hold of the under posts and wall plate. Then they weave them thick with their split sapplings, and daub them all over about six or seven inches thick with tough clay, well mixt with withered grass: when this cement is half dried, they thatch the house with the longest sort of dry grass, that their land produces. They first lay on one round tier, placing a split sappling a-top, well tied to different parts of the under-pieces of timber, about fifteen inches below the eave: and in this manner, they proceed circularly to the very spire, where commonly a pole is fixed, that displays on the top the figure of a large carved eagle. At a small distance below which, four heavy logs are strongly tied together across, in a quadrangular form, in order to secure the roof from the power of envious blasts. The door of this winter palace, is commonly about four feet high, and so narrow as not to admit two to enter it abreast, with a winding passage for the space of six or seven feet, to secure themselves both from the power of the bleak winds, and of an invading enemy. As they usually build on rising ground, the floor is often a yard lower than the earth, which serves them as a breast work against an enemy: and a small peeping window is level with the surface of the outside ground, to enable them to rake any lurking invaders in case of an attack. . . .
>
> The inside of their houses is furnished with genteel couches to sit, and lie upon, raised upon four forks of timber of a proper height, to give the swarming fleas some trouble in their attack, as they are not able to reach them at one spring: they tie with fine oak splinters, a sufficient quantity of middle-sized canes of proper dimensions, to three or four bars of the same sort, which they fasten the frame; and they put their mattresses a-top, which are made of long cane splinters.
>
> (Williams 1973:450-452)

This description, while describing rigid construction among the Chickasaw during the first half of the eighteenth century, provides data concerning the types of building materials and their use in such construction. Selection of materials for specific functional

characteristics such as flexibility is evident. Explanations are provided for specific construction details such as doorway and roof form. Such descriptive details and contemporary construction details should not be applied directly to the archaeological data; rather, such ethnohistoric data should be examined to provide technological alternatives to problems or patterns derived from the archaeological record.

It is apparent from ethnohistoric sources that both the flexed construction technique, observed by Du Pratz, and the rigid construction technique, observed by Adair for the Chickasaw continued to coexist even though a pattern of replacement on Mississippian archaeological sites from flexed to rigid construction throughout much of the interior Southeastern United States has been observed (Webb 1938; Lewis and Kneberg 1946; Reed and Klippel 1984). The examination of technological attributes of building materials identified from both ethnohistoric and archaeological sources within the framework of the local environment provides a more efficient and comprehensive approach than those attempted heretofore.

Regional Structure Type Comparisons

The distribution of structure types by site within the East Tennessee Valley is presented in Table A.2 (Appendix). In each case the principal occupation phase or phases resulting in architectural or potential architectural remains are indicated. The location of each site in the East Tennessee Valley is indicated on Figure 1.1 (p. 7) and the data source is included in the List of References. The number of

structure types recognized at each site is also listed as a measure of diversity.

The distribution of structure types for a limited number of selected sites in the Interior Southeastern United States located to the south, west, and east of the East Tennessee Valley is presented in Appendix Table A.3. The difference between Appendix Tables A.2 and A.3 may be the result of the use of published data in the compilation of Table A.3 while Table A.2 was compiled almost completely from field data, or if published, could be cross-checked as necessary with the pertinent field records. The format utilized in Table A.3 is the same as that utilized in Table A.2.

In the Little Tennessee Valley continuous wall trench Type 1 structures are present only at Martin Farm and Toqua. Segmented wall trench Type 2 structures are present at Toqua, Chota-Tanasee, Martin Farm, Fort Loudoun, and Mayfield II. Single set flexed pole Type 3 structures are present at Toqua, Tomotley, Citico, Martin Farm, Bat Creek, Tellico Blockhouse, 40LD74, Fort Loudoun, and Mayfield II. Single set rigid Type 4 structures are present at Toqua, Mialoquo, Citico, Tomotley, 40MR64, Bussell Island, Jones Ferry, and Martin Farm. Single set rigid shed-like Type 5 structures are present at Toqua, Tomotley, and 40MR64. Single set rigid Type 6 rectangular Overhill Cherokee town houses are present only at Toqua and Chota-Tanasee. Single set rigid Type 7 circular Overhill Cherokee winter houses, which are usually paired with Type 8a summer houses, are present at Toqua, Chota-Tanasee, Citico, and Wear Bend. Rigid

single set rigid Type 8a Overhill Cherokee summer houses are present at Toqua, Chota-Tanasee, Mialoquo, Citico, Peery Farm, and Wear Bend. Single set rigid Type 8b segmented Tomotley style Cherokee structures are most common at Tomotley, but are also present at Toqua, Chota-Tanasee, Mialoquo, and Citico. Single set rigid Type 8c small Cherokee structures are recognized only at Chota-Tanasee, Tomotley, and Citico. Single set rigid Type 9 octagonal later Overhill Cherokee town house structures are present at Chota-Tanasee, Mialoquo, and Tomotley. Associated single set rigid Type 10 Overhill Cherokee summer pavilions were recognized only at Chota-Tanasee and Tomotley. Small circular single set post Type 11 Overhill Cherokee structures of probable rigid construction are present at Chota-Tanasee, and Citico. Large Type 12 circular single set pole Hiwassee Island structures of probable flexed construction were not recorded in the Little Tennessee Valley.

Early Mississippian wall trench flexed pole Type 1 (n = 4) and Type 2 (n = 9) structures (Type 1 and Type 2) are present at five of 17 sites in the Little Tennessee Valley for which structure data were recorded. Only two sites, Toqua and Martin Farm, have more than one wall trench structure. Early Mississippian single set pole Type 3 (n = 55) structures are present at ten of the 17 sites; while seven sites have more than one structure of this type. Three factors could be called upon to provide a potential explanation for this difference in relative frequency and distribution. Type 3 structures may have been utilized for a greater period of time than other Early Mississippian

structure types in the lower Little Tennessee Valley. The population may have increased during the late Hiwassee Island phase. Type 4 (n = 82) and Type 5 (n = 38) Dallas phase structures of rigid construction are concentrated in three compactly settled towns while the remaining five sites are each represented by a single structure. Structure Types 6 (n = 3), 7 (n = 25), 8a (n = 21), 8b (n = 13), 8c (n = 7), 9 (n = 3), 10 (n = 2), and 11 (n = 4) associated with the historic Cherokee occupation are present at only two sites not identified in eighteenth century ethnohistoric references as Cherokee towns, and one of the two (Peery Farm) is situated close enough to the Citico site to be considered an outlyer of that town.

The distribution of sites having associated structures elsewhere in the East Tennessee Valley presents a somewhat different picture. A number of quite small semisubteranean Type 2d and Type 3e structures similar to those found in the Cahokia area (Finney 1985) are represented at the Davis, Hixon, and Sale Creek sites in Hamilton County in the lower East Tennessee Valley. Type 1 and Type 2 wall trench structures are well represented both in the Norris Basin on the Clinch River and in the lower East Tennessee Valley. Type 3 single set flexed pole structures are even better represented in both areas and are frequently superimposed over Type 2 wall trench structures. Type 4 and Type 5 Dallas and Mouse Creek phase rigid structures situated in compact towns are found both superimposed over structures of flexed construction on major sites such as Hixon and Hiwassee Island and on new ground not previously occupied during the Hiwassee

Island phase on the Hiwassee, Clinch, and Holston rivers and in some areas along the Tennessee River. A number of Dallas and Mouse Creek phase sites contain limited numbers of historic artifacts attributable to sixteenth and early seventeenth century Spanish sources, attesting to the terminal occupation date for much of the East Tennessee Valley. No structures of the types attributed to the Cherokee occupation of the Little Tennessee Valley have been recorded elsewhere in the East Tennessee Valley.

The distribution of structure types outside the East Tennessee Valley differs by area. Sites to the south contain either flexed structures or structures of rigid construction. Those with structures of flexed construction are temporally comparable to Hiwassee Island components in the East Tennessee Valley. Those sites with structures of rigid construction are comparable to Dallas and Mouse Creek phase components in the East Tennessee Valley.

To the west in Middle Tennessee both flexed and rigid types of construction are present and, when present on the same sites, they are superimposed in the same technological order as in the East Tennessee Valley. Sites in the upper Duck River Valley display architectural characteristics comparable to the early Mississippian structures at Davis, Hixon, and Sale Creek in the East Tennessee Valley.

To the east the flexed mode of construction appears to be absent in the limited sample available. Type 4 and Type 5 structures are associated with Pisgah and Qualla components in the river valleys of western North Carolina.

Flexed construction utilizing either wall trenches or single set poles appears in the East Tennessee Valley at the beginning of the Mississippian period. Flexed construction utilizing single set poles replaces wall trench construction toward the end of the Hiwassee Island phase. Later single set pole construction frequently displays proportionally larger, more widely spaced, construction elements. Early Mississippian primary structures have a greater tendency toward rectangular rather than square ground plans.

Rigid construction utilizing single set posts and having a separate roof structure supported by a system of main roof supports appears in the East Tennessee Valley at the beginning of the Dallas phase. Dallas primary structures have a square ground plan. Other historic groups in the interior Southeastern United States, such as the Overhill Cherokee and the Chickasaw, utilized the same roof support system in the construction of winter houses possessing a circular floor plan.

In conclusion, the earlier flexed and later rigid modes of building construction characterized Mississippian and early historic cultures throughout much of the interior Southeastern United States. Patterns of temporal variation within each construction mode are evident in the East Tennessee Valley. Although regional variations in secondary characteristics are clearly present, primary technological features appear to be consistent over wide areas at any given time.

CHAPTER IV

SUMMARY AND CONCLUSIONS

Summary

Mississippian architecture in the Ridge and Valley Province has been examined with respect to the Toqua site, a large, predominantly Dallas phase, Mississippian town located on the Little Tennessee River in Monroe County, Tennessee. The site is made up of two substructure mounds, facing a central plaza, surrounded by an extensive village area and defensive palisades. Although small numbers of earlier cultural materials are present, the primary occupation of the site area began during the latter part of the Hiwassee Island phase about A.D. 1200 and continued through the Dallas phase until early in the seventeenth century. An Overhill Cherokee occupation of the site began during the second quarter of the eighteenth century and extended into the early nineteenth century. The Toqua site was investigated from April of 1975 to April of 1977, during which time an area of approximately 175,000 ft^2 was excavated, within which 130 structures were identified. Excavation of the substructure mounds provided superimposed series of structures.

The purpose of this study was to: (1) describe and present a typology for structures identified at the Toqua site, (2) discuss temporal, technological, and spatial patterning for Toqua structures, (3) compare such patterning with other Mississippian sites in the Ridge and Valley Province, and (4) briefly examine the place or role of

structures in Mississippian society. Limitations, including preservation, variation in data quality, and recovery techniques, were discussed. A comparative sample numbering 621 structures derived from 58 archaeological sites was compiled from field records on file at the Frank H. McClung Museum, The University of Tennessee, Knoxville, and from published sources. The archaeological background for the Toqua data was discussed. The environmental setting for the Toqua site was described with particular attention given to factors which would affect Mississippian architecture including climate and botanical resources.

Section II presented the structure data from the Toqua site as well as discussing the architectural traits preserved in the archaeological record. An architectural typology was then developed based upon: (1) technological characteristics, (2) substructure characteristics, (3) ground plan, and (4) mode of roof support. Particular attention was directed at determining if a structure type utilized a flexed mode of construction in which the walls and roof were composed of common structural members or a rigid mode of construction in which the walls and roof were composed of separate structural members. Schematic floor plans and reconstruction drawings were developed for each of the 24 structure types and subtypes encountered within the Toqua sample and the comparative sample. Each of the structure types was then described in a systematic manner and comparative comments made where possible. A structure sequence was then developed for the Toqua structures and compared to that from other sites in the

area. Structures having associated radiocarbon samples were classified according to structure type and compared with the relative stratigraphic sequence of structure types at other sites in the sample.

Section III compared and discussed social and technological aspects of Mississippian architecture; including structure needs, resource utilization, technological change, the use of space, and functional variability and continuity. Structure needs differ from culture to culture but usually incorporate more than mere shelter. Shelter for goods and foodstuffs in sedentary societies was also discussed. The discussion of resource utilization was focused upon technological characteristics of the building materials utilized, paleobotanical analysis of structural elements, and ethnohistoric data. Technological change was discussed, with emphasis upon such aspects as could be examined utilizing archaeological data. The use of space was discussed with respect to the recognition of activity areas and the definition of public and private space within Dallas primary structures. Structural patterning relating to functional variability and continuity was then addressed. The archaeological correlate of the household or minimal social unit, the Minimal Settlement Unit, was discussed. The use of the ethnohistoric record from a technological rather than a strictly culture historical approach was then presented to clarify, if necessary, the manner in which ethnohistoric sources have been utilized for the purposes of this study.

Conclusions

Structures, when fully excavated and adequately analyzed, can produce a substantial return in terms of architectural, technological, and social data. Structures are one of the largest artifacts present on many sites and can be examined in all dimensions just like any other artifact. The well preserved structures at Toqua provide substantial data concerning the form and function of Mississippian architecture. Refined excavation methods applied to the Bussell Island structure resulted in better data as well as additional insight to be applied to future structure investigations.

The typological framework for Mississippian architecture in the Ridge and Valley Province, based upon technological characteristics, substructure characteristics, ground plan, and mode of roof support, is expandable and may be applicable outside the study area. The 15 structure types and subtypes identified at Toqua are supplemented through the identification of nine additional types and subtypes at the sites making up the comparative sample. Some typological categories represent contemporary structures of differing function while others represent temporal variations.

Temporal, technological, and spatial patterning of Mississippian structures is clearly evident at the Toqua site. Temporal patterning of structure types and subtypes is displayed through superposition and radiocarbon dating in both mound and village contexts. Technological patterning is displayed by the transition from flexed to rigid modes of construction, differential usage of construction materials, and

the application of material characteristics to address structural problems. Spatial patterning is displayed across the Toqua site not only in the distribution of structure types and subtypes but in the relative size, interior proportions, elaboration, and location of structures.

Temporal patterning of Mississippian structure types and subtypes is evident for both primary and secondary structures in the succession of mound phases at Toqua. Each primary, more substantially built structure in the mound sequence is associated with a more lightly built secondary structure. Both primary and secondary structures displaying characteristics of flexed construction consistently precede primary and secondary structures of rigid construction; however, the sequence of substructure form is inconsistent with the general pattern of wall trench to single set pole construction. At Toqua the initial primary structures were provided with continuous wall trenches (Type 1a) followed, in temporal order, by single set pole structures (Type 3b), by segmented wall trench structures (Type 2a), by single set pole structures (Type 3b), by single set post structures (Type 4a and Type 4b), and a long series of single set post structures of Type 4a. The more lightly built secondary structures present a more generalized pattern of single set pole structures (Type 3a) associated with primary structures of flexed construction, followed by single set post structures (Type 5b) associated with primary structures of rigid construction. Village area structures display the same sequence of flexed construction followed by rigid construction. The transition from flexed

to rigid modes of construction appears to have taken place between A.D. 1250 and A.D. 1300 at Toqua.

Temporal patternings is also evident in architectural details such as hearth form, entryway form, and interior furnishings. Hearth form changes from simple surface fired areas or small cylindrical receptacles to rectangular basins to circular basins. Small entryways having raised thresholds are replaced by trench entryways. Interior furnishings, while relatively rare in buildings of flexed construction, come into consistent use and display marked diversity in buildings of rigid construction.

Technological patterning in Mississippian architecture is reflected in changing construction modes and the differential usage of construction materials. Choice of construction materials is closely related to the mode of construction, although the characteristics of such materials must be viewed as factors which limit rather than dictate structure form. The earlier flexed mode of construction, with its use of continuous structural members for both walls and roof, requires a substantial supply of construction materials that must meet rather stringent specifications. These construction materials must be decay resistant, flexible, strong and resilient, and uniform in size as well as being available in quantity. Generally speaking, those wood types fulfilling the last four requirements, such as white oak and hickory, are no more than fair with regard to decay resistance when placed in the ground and thus limit the potential use span for structures of flexed construction. The rigid mode of construction, with its use of

separate components for wall members, roof members, and roof support system, brought with it technological advantages as well as several disadvantages. The rigid mode of construction, with its segmented components, allows the use of wood types best suited for each portion of the structure. Decay resistant woods, for example, can be used for structural members set in the ground and flexible but less durable woods can be used in roof construction. A much more diverse array of suitable woods are thus available for rigid construction than for earlier flexed construction. The addition of a system of main roof supports provided the solidity necessary to support the heavier roof structure with its clay daubed interior, although such supports broke up the characteristic spacious interior aspect of the earlier structures of flexed construction. The choice of building materials, and the form of the structures created, is but one of an array of choices and possibilities provided by a particular environment. Such choices demonstrate "the complex interplay between the characteristics of raw materials, technological skills, and social factors" (Hodges 1972:523) inherent in the structural remains of a society.

Spatial patterning of Mississippian structures at Toqua is evident in size, form, content, interior proportions, elaboration, and location as well as in structure type and subtype. The dependent nature of these variables is evident upon examination of structure function. Type 4 primary and Type 5 secondary structure groups provide the most useful sample for examining spatial patterning at Toqua. Each variable was examined separately and in combination within each

structure group to elucidate structure function and the use of interior space.

Structure size, as indicated by total floor space, was calculated for each structure, resulting in the definition of two size clusters. The first cluster, made up of village structures and one primary structure upon each Mound A summit, can be attributed to a domestic function on the basis of relatively smaller size, interior proportions, and content. The second cluster, made up of mound summit structures, can be attributed to a public function on the basis of relatively greater size, interior proportions, elaboration, and content. The size of domestic structures thus identified was examined by site location. Larger domestic structures were found to be present not only on the mound summit but nearest the plaza in the East Village Midden area, suggesting that higher status social units occupied more centralized or prominent locations within the community.

The Dallas phase Type 4 structure form is characterized by the division of the structure interior into two distinct zones, separated by the pattern of main roof supports, classified as the "public" and "private" floor areas of the structure. A relative measure of structure function is suggested by the proportion or percentage of total floor space devoted to "public" space. Public buildings, and to a lesser extent high status domestic structures, display a greater percentage of "public" floor space than other domestic structures. This is the case even in rare occasions when public and associated high status domestic structures are nearly the same size. The larger interior proportion of

"public" space is probably linked to greater social interaction and use of the central portion of such structures.

Primary Dallas phase Type 4 structures are consistently associated with more lightly built secondary Type 5 structures. Aggregations of such paired structures, each pair interpreted as representing the household or minimal economic unit within Dallas society, cluster to form larger social units within the settlement system, as illustrated in Figure 4.1, an artists' reconstruction of Toqua as it might have looked during the fifteenth century. These open shed-like secondary structures appear to have served as both storage facilities and as warm season sheltered work areas, thus providing a likely predecessor for the paired summer house--winter house complex recorded for the Creeks, Cherokees, and other southeastern Indian groups during the historic period.

The architectural sequence observed at the Toqua site is evident at other Mississippian sites in the East Tennessee Valley. Some structures types such as the open shed-like Type 5 buildings have not been recognized by earlier investigators. The earlier flexed and later rigid modes of building construction characterized Mississippian and early historic cultures throughout much of the interior Southeastern United States. Patterns of temporal variation within each construction mode are evident in the East Tennessee Valley. Although regional variations in secondary characteristics such as structure size are clearly present, primary technological features appear to be consistent over wide areas at any given time.

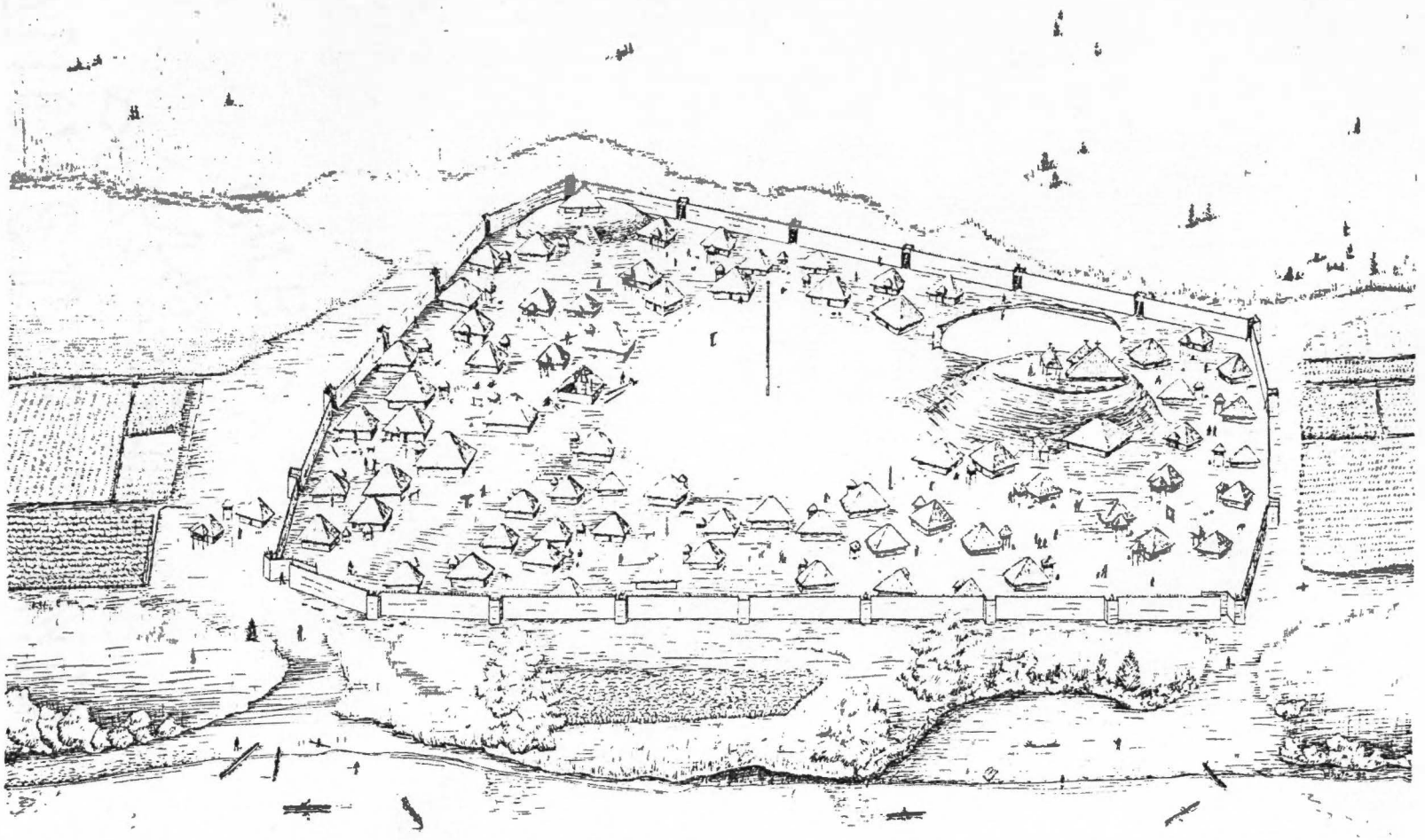


Figure 4.1. Artist's Reconstruction of the Toqua Site During the Dallas Phase Circa A.D. 1400.

Architecture played an important role in Mississippian society. Structures not only served the basic need of shelter from the environment for man and his goods but also reflected the symbolic use or allotment of space within a society. The symbolic use of space, particularly in structures or functions connected with public or religious activities, was a common features among groups encountered by early European observers in the interior Southeastern United States. Specified seating patterns based upon title, rank, status, and kinship are evident in both townhouse and square ground use. Townhouses and square grounds present a pattern similar to the domestic primary structure, differing only in degree rather than overall form. The focal point of social interaction in each case is the central hearth or fire and the space encompassed by "beds" or private facilities is equally accessible to all participants. The townhouse is frequently accompanied by a more open structure or summer pavilion for warm season use and thus reflects, on a larger scale, the paired primary and secondary domestic structures interpreted as representing the household or minimal social and economic unit within Mississippian society. The townhouse complex, and the still larger square ground complex, in actuality mirrors the traditional domestic unit, and certain symbolic aspects of the use of space may have differed only in degree rather than in kind for all three.

Mississippian architecture reflects structure needs of peoples following a sedentary lifeway based upon the exploitation of similar resources within similar environmental perimeters. An intimate

knowledge of the environment and the resources available to the occupants of Toqua and other Mississippian sites is readily evident upon examination of construction materials and house styles utilized. Changes in Mississippian architecture must, then, be examined with regard to social contexts as well as with regard to technology and available resources in order to derive order and understanding from the archaeological record.

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APPENDIX

Table A.1. Toque Structure Data Summary by Structure Type.

Structure Type	Structure Number	Structure Location	Length or Diameter	Width	Total Floor Area (Ft²)	Public Floor Area (Ft²)	% of Public Floor Area	Structure Orientation	Entryway Orientation	Total Postholes	Exterior Wall	Mean Diameter (Ft)	Main Roof Support	Mean Diameter (Ft)	Interior (Other)	Mean Diameter (Ft)	Total Postmolds	Exterior Wall	Mean Diameter (Ft)	Main Roof Support	Mean Diameter (Ft)	Interior (Other)	Mean Diameter (Ft)	Clay Hearth Type(s)	Total Burials	Total Features
1a	61	MAW	26.0	24.0	624			N122°E	N122°E	12					12	0.25	139	139	0.24					II		6
	62	MAW	44.5	30.5	1,357			N118°E	N118°E	21					21	0.32	136	136	0.40					II		5
1b	6	MB	21.0		346	42	12		N64°E	87	42	0.54	4	0.63	41	0.53	14	11	0.40			3	0.50	SFA		3
2	85	MAW	18.0	--	--			N115°E																--		1
	86	MAW	35.0	--	--			N120°E																--		1
3a	63	MAE	34.0	24.0	816			N116°E		84	84	0.80												--		18
	65	MAE	20.0	16.0	320			N120°E									81	75	0.22			6	0.25	SFA		6
	66a	MAE	38.0	24.0	912			N121°E		188			7?	1.70	181	0.45								SFA		14
	66b	MAE	30.0	15.0	450			N120°E		55			6?	1.20	49	0.40								SFA		9
3b	10	EVM	19.0	14.5	276			N125°E		153	13	0.70			140	0.64	13	13	0.34					SFA		4
	17	WV	18.5	17.5	324			N118°E		36	18	0.57			18	0.55	2					2	0.45	--	1	
	46	EV	20.0	20.0	400			N118°E		45	23	0.57			22	0.71	10	8	0.32			2	0.55	SFA		1
	47	EV	19.0	16.0	304			N118°E		36	27	0.61			9	0.48	2	2	0.30							1
	48a	EV	28.6	28.0	806			N131°E		155	37	0.52			118	0.58	3					3	0.42	--	3	6
	60	EVM	32.0	32.0	1,024			N155°E	N155°E	17	17	0.70					32	32	0.48					NP	1	2
	64a	MAW	16.0	15.0	240			N112°E		58							58	58	0.25					--		
	69	EVM	23.0	19.5	449			N145°E		81	24	0.54			57	0.57								V	1	1
	71	EV	24.0	21.5	516+			N139°E		28	28	0.54												--		
	82	EV	17.0	17+	289+			N126°E		31	26	0.49			5	0.44								--		
	84	MAW	16.0	14.0	224			N120°E		38	38	0.31												XXIV		1
	133	EVM	--	--	--			N128°E																--		
3c	64b	MAW	24.0	22.0	528			N118°E		63	47	0.45	2	0.80	14	0.45	1			1	0.60			--		9
	70	EV	19.7	18.4	363			N108°E		34	32	0.53	2	0.83										--		
	90	EV	24.0	22.0	528			N127°E		69	31	0.52	2	0.95	36	0.64								--		3
	91	EV	23.5	18.0	423			N110°E		80	44	0.58	2	1.05	34	0.67								SFA		6
3d	42	MB	8.0		50					12	12	0.61					11	11	0.45					NP		
4a	1	NV	20.0	--	--			N128°E		53	19	0.57	2	0.85	32	0.58	4	4	0.40					--		
	2	EVM						N123°E	N123°E	596			32	1.08			18	1	0.45	3	1.00	14	0.67		19	17
	a		27.0	27.0	727	129	18				29	0.64			291	0.66								XIV		
	b		23.6	23.4	552	127	23				25	0.62												XII		
	c		30.7	30.0	921	298	32				49	0.59			170	0.69								XXII		
	3	MAN	38.0	38.0	1,444	544	38	N128°E		117	91	0.73	4	1.55	22	0.60	70	66	0.57	4	1.15			XIX,XIII,I,X,XXIV	18	25
	4	EVM	20+	19.0	380+	77+		N132°E	N222°E	179	54	0.53	2	1.10	123	0.50								XV,XIII,I	2	24
	S	MB						N88°E		19														--		
	a		30+	30+	900+	69+					6	0.63	4	1.13			1			1	1.00					4
	b		30+	30+	900+	69+					8	0.71	1	1.30												1
	7	NV	--	--						34			1	1.40	33	0.59								--		3
	8	NV	--	--						32			1	1.20	31	0.57								XXIII		2
	9	WV	17.4	16.8	292	44	15	N110°E	aN121°E bN114°E cN284°E	191	80	0.64	8	1.18	103	0.59	25	14	0.36	1	0.70	10	0.41	XXI	2	8
	11	MAW	33.0	33.0	1,096	393	36	N109°E	N107°E	86	73	0.63	4	2.50	9	0.51	11	7	0.51	4	1.30			XVI	2	8
	12	MAW	26.0	25.0	650	261	40	N123°E	aN121°E bN127°E	51	40	0.69	4	1.68	7	0.44	4			4	0.78			XXVI		11
	13	MAW	21.5	20.9	449	150	33	N118°E	N27°E	121	72	0.65	10	1.58	33	0.45	10	7	0.44	1	0.85	2	0.25	XXIII	2	14
	14	MAW	27.5	27.3	849	295	35	N121°E	aN118°E bN207°E	68							68	50	0.43	4	0.94	14	0.45	XXVI		16

Table A.1. (continued)

Structure Type	Structure Number	Structure Location	Length or Diameter	Width	Total Floor Area (Ft²)	Public Floor Area (Ft²)	% of Public Floor Area	Structure Orientation	Entryway Orientation	Total Postholes	Exterior Wall	Mean Diameter (Ft)	Main Roof Support	Mean Diameter (Ft)	Interior (Other)	Mean Diameter (Ft)	Total Postmolds	Exterior Wall	Mean Diameter (Ft)	Main Roof Support	Mean Diameter (Ft)	Interior (Other)	Mean Diameter (Ft)	Clay Hearth Type(s)	Total Burials	Total Features
4a	15	WV						N119°E		244			7	1.12	128	0.66						5	0.38	--		14
	a		18.0	17.5	317	64	20				34	0.62						3	0.47							
	b		19.0	18.9	360	100	28				75	0.60						1	0.30							
	16	WV	18.0	17.0	306	74	25	N115°E		124	69	0.59	5	1.04	50	0.63	5	2	0.38			3	0.47	XIX	1	9
	18	WV	20.0	19.6+	392+	96	24	N123°E		477	89	0.61	22	1.14	366	0.75	22	2	0.25	1	0.60	19	0.43	XXVII,V,XIV	18	30
	19	WV	18.5	18.5+	342+			N105°E		175	52	0.60	3	1.33	120	0.74	19	8	0.48			11	0.49	XX,XXI		8
	20	MAW	32.6	32.5	1,060	333	31	N120°E		227	33	0.57	10	1.47	184	0.54	9	1	0.50	1	0.8	7	0.52	XXIII,XXVIII,XX	1	19
	21	WV	--	--				N112°E		143	50	0.58	2	1.10	91	0.58	8	1	0.30			7	0.54	--	8	2
	22	WV	21.0	20.7	435			N135°E		176			2	1.25	174	0.67								V	2	1
	23	WV	21.0	20.0	420			N155°E		157			4	1.04	153	0.58								VI,XXIII	1	10
	24	WV	18.0	--				N117°E	N117°E	38	16	0.60	3	0.95	19	0.59	6	4	0.26			2	0.35	XV		6
	25	WV	23.0	22.0	506	121	24			176	27	0.58	6	1.03	143	0.64	17	6	0.37			11	0.48	XVIII,XXII	13	10
	26	WV	20.0	--				N131°E		92	17	0.57	6	1.00	69	0.55	6	4	0.33			2	0.55	XVIII,XXVIII	2	8
	27	MAW	20.0	20.0	400	105	26	N124°E		33	25	0.59	4	1.23	4	0.74	30	13	0.47			17	0.39	XXVI		7
	30	MAW	23.8	22.4	532	154	29	N116°E	aN104°E bN207°E	114	38	0.68	4	1.23	72	0.51	43	33	0.50			10	0.41	III		7
	31	EVM	20.4	20.0	408+			N131°E		69	28	0.69			41	0.76	1					1	0.80	XII,VIII,XIV	8	9
	32	EVM	17.0	17+	289+	47	16	N132°E	N222°E	165	46	0.74	9	1.14	110	0.66	5	1	0.30	1	0.60	3	0.47	XXVI	9	35
	33	EVM	24.5	23.7	580	a140 b149	24 26	N130°E		268	90	0.69	7	1.27	171	0.64	5	1	0.40	2	0.90	2	0.28	--	6	21
	35	MAW	28+	26+	728+			N108°E		15	15	0.47												XXVII		2
	37	EVM	22.8	22.0	502	69	14	N132°E		50	29	0.56	5	0.87	16	0.63								VIII		7
	39	EVM						N124°E		316			19	0.96	243	0.60	14			5	0.69	9	0.43	VI,XXVII	16	27
	a		20.0	20.0	400+	105+	26				27	0.62	4	1.08	25	0.62	57	29	0.42	3	0.62	25	0.38	VIII	3	14
	41	MAW	24.0	24+	576+	225+		N116°E									33	11	0.45	3	0.85	19	0.38	XXVI		7
	43	EVM	23+	23+	529+	128	24	N135°E		12	8	0.54	4	1.10			2			2	0.68			VIII		5
	44	EVM	26+	26+	676+	121	18	N125°E	N35°E	98			18	1.03	80	0.64								XXVIII,XXII, XXIII	11	21
	45	EV	18+	18+	324+	53	16			50			7	0.77	43	0.54								--		4
	48	EV								190					118	0.58	5					3	0.40		3	5
	a		20.2	19.8	400	91	23	N127°E			33	0.53	2	0.93				2	0.45					XXIII		1
	49	EVM	--	--				N135°E		49	26	0.61	3	1.38	20	0.67	1					1	0.30	--	2	6
	50	EVM	19.0	19+	361+	74	20	N139°E		23	21	0.65	2	0.89			5	4	0.46	1	0.65			I	6	5
	52	MAW	20.0	20.0	400	100	25	N117°E	N207°E	72	54	0.59	7	1.22	11	0.66						11	0.45	III		1
	53	MAW	34.0	34.0	1,156	440	38	N110°E	N107°E	5	3	0.06	2	1.25			1			1	0.80			VIII		5
	54	SV	--	--	--			N132°E	N132°E N30°E	56 528	16	0.51	1 42	0.95 1.07	39 326	0.55 0.58	4 42	1	0.35	1 8	0.65 0.61	2 20	0.45 0.43	-- VI,XXVI,XXII,X	8	2 43
	56	EVM																								
	a		23.6	23.6	557			N119°E			62	0.51						14	0.49							4
	b		21.2	20.6	437			N122°E	N128°E		98	0.58						6	0.38	2	0.68	2	0.38	III		6
	57	EVM	15.6	13.4	211	32	15	N143°E	N230°E	65	15	0.58	4	0.96	46	0.60	8	2	0.35			1	0.20	III		7
	58	EVM	14.3	14.0	201+	46	23	N109°E	N199°E	72	18	0.59	3	1.20	51	0.51	3							--		3
	92	EV	26.0	26	676+	100		N115°E		104	36	0.65	4	0.80	64	0.63								--		3
	93	EVM	20.5	--	--			N129°E		66	51	0.59	3	0.93	12	0.24								XV	2	4
	94	EVM	18+	18+	324+			N129°E		20	14	0.58	3	1.07	3	0.60	1			1	0.55			XIV,VIII,XXVIII		3
	95	EVM	22+	22+	484+			N134°E		2	2	0.63												--		
	96	EVM	22+	22+	484+			N134°E		2	2	0.62												--		
	97	EVM	25+	24+	600+			N120°E																--		
	98	EVM	23+	23+	529+			N126°E																--		
	110	NV	--	--	--			N131°E		6	6	0.59					3	3	0.38							

Table A.1. (continued)

Structure Type	Structure Number	Structure Location	Length or Diameter	Width	Total Floor Area (Ft²)	Public Floor Area (Ft²)	% of Public Floor Area	Structure Orientation	Entryway Orientation	Total Postholes	Exterior Wall	Mean Diameter (Ft)	Main Roof Support	Mean Diameter (Ft)	Interior (Other)	Mean Diameter (Ft)	Total Postmolds	Exterior Wall	Mean Diameter (Ft)	Main Roof Support	Mean Diameter (Ft)	Interior (Other)	Mean Diameter (Ft)	Clay Hearth Type(s)	Total Burials	Total Features
4a	112	EVM	--	--	--					14					14	0.69	3					3	0.75	VIII	35	6
	116	EVM	--	--	--																			--		
	118	EVM	26.0	26.0	676	169	25	N120°E	N120°E	190	63	0.58	4	1.18	123	0.57	3					3	0.35	V	1	2
	119	EVM	17.0	17.0	289	44	15	N127°E	N313°E	50	24	0.66	4	0.95	22	0.65	1			1	0.60			XXIII	2	3
	126	MAW	30.0	30.0	900			N119°E																VIII,XXVIII		2
	127	MAW	25.5	24.5	625			N114°E																IX		9
	131	MAW	--	--	--					4			4	1.29										XXIII	3	5
4b	51	MAW	33.0	33.0	1,069	333	31	N120°E		232	72	0.60	15	1.37	138	0.67	12	2	0.50	3	1.00	7	0.50	IX		25
5a	38	EVM	11.6	9.3	108			N137°E		10					10	0.78								SFA	3	5
	67	EVM	10.5	9.1	96			N124°E		51					51	0.68								SFA	1	6
	77	WV	14.4	10.8	156			N109°E		37					37	0.86	2					2	0.35	SFA	8	11
	78	WV	20.0	14.0	280			N144°E		48					48	0.72	1					1	0.30	SFA	7	8
	79	EVM	14.2	13.1	186			N130°E		24					24	0.80								SFA	8	7
	80	EVM	15.0	8.8	132			N128°E		39					39	0.67								--		
	81	EV	13.0	11.0	143			N111°E		29					29	0.59								--	3	2
	89	WV	11.0	7.0	77			N120°E		18					18	0.64								--	2	1
	100	WV	9.0	8.0	72			N136°E		43					43	0.76								--	--	2
	106	SV	10.2	8.9	91			N125°E		15					15	0.52								--	4	1
	107	EVM	12.6	10.2	129			N145°E		24					21	0.73	2					2	0.73	SFA	--	7
	108	EVM	16+	10.0	160			N127°E		40					40	0.71	1					1	0.40	SFA	4	5
	114	NV	8+	8.0	64			N126°E		6					6	0.54								SFA	--	3
	117	EVM	12.6	9.5	120			N145°E		28					28	0.86	1					1	1.0	SFA	--	6
5b	40	MAE	28+	26+	728+			N125°E		8					8	0.88								SFA		9
	87	MAE								216			27	1.6	72	0.64	30			5	1.08	8	0.40			
	a		40.0	19.5	780			N115°E			55	0.70						11	0.46					SFA	10	2
	b		40+	20.0	800+			N114°E			53	0.70						5	0.46					SFA	5	2
	c		40+	26.0	1,400+			N116°E			21	0.66						1	0.55					SFA	10	1
	88	MAE	--	--	--			N115°E		10					10	0.95		1	0.60					--		1
	122	MAE	--	--	--					--														SFA		1
	123	MAE	--	--	--					--														SFA		2
	124	MAE	17+	17+	289+			N120°E		--														--		
	125	MAE	--	--	--					--														SFA		1
	128	MAE	--	--	--					--														SFA		5
	129	MAE	39+	20+	780+			N117°E		--														--		
	130	MAE	40+	20+	800+			N112°E		--														--		
	132	MAN	--	12+	--			N128°E		15					15	0.77	3					3	0.63	SFA	1	4
6	73	EV	50.0	50.0	2,300	696	30	N138°E		227	84	0.54	4	1.91	139	0.51	4			4	1.45			XIV		6
	75	EV	52.0	51.0	2,450	729	30	N145°E		247	88	0.58	4	1.88	155	0.51	1			1	1.40			XIV		5
7	59	MAN	20.5		330	36	11			59	45	0.62	4	1.13	10	0.70								XIV		2
	74	EV	20.0		314	--				30	21	0.46			9	0.42								--		
	83	EV	20.0		314	--				47					47	0.71								--		1
	99	WV	20.0		314+	39	12			34	18	0.67	3	0.67	13	0.65	1					1	0.40	--		
	104	EV	20+		314+	33	10			69	42	0.57	4	0.86	23	0.56								XIV		1
	105	EV	20.5		330+	42	12			33	11	0.59	3	0.80	19	0.45								--		1
	111	EV	22+		380+	--				56					56	0.62								--		2
	115	EV	2-		314+	--				--														XIV		1
8a	103	EV	26.0	12.2	317			N84°E		43	32	0.64			11	0.65								--	3	1
	113	EV	25.0	10.0	250			N56°E		24	18	0.49			6	0.54								--		
8b	101	EV	38.0	15.0	570			N40°E		52	45	0.52			7	0.52								--		4
	102	EV	29.0	9.0	261			N33°E		32	22	0.58			10	0.43								--		1

+Approximate Measurement.

NP = Not present SFA = Surface Fired Area -- = Data Not Available

Table A.2. Distribution of Structure Types at Sites in the East Tennessee Valley.

	Cultural Affiliation	Site Name	Site Number	Structure Types																								Number of Structures	Number of Types
				1a	1b	2a	2b+	2c+	2d+	3a	3b	3c	3d	3e+	4a	4b	5a	5b	6	7	8a	8b	8c+	9+	10+	11+	12+		
East Tennessee Valley	HI, D, C	Toqua	40MR6	2	1	2				4	12	4	1		62	1	14	13	2	8	2	2						130	15
	HI, , C	Chota-Tanasee	40MR6-40MR62					1											1	14	10	1	4	1	1	3	36	8
	, M, C	Mialoquo	40MR3												1						3	1	1	1			7	5
	HI, , C	Tomotley	40MR5								9											8		1	1		19	4
	, D, C	Citico	40MR7								1				2					2	4	1	2			1	13	7
	, C	Peery Farm	40MR67																		1						1	1
	, C	Wear Bend	40LD107																	1	1						2	2
	, D,	Tomotley	40MR5a								1				12		10										23	3
	, D,		40MR64												1		1										2	2
	, D,	Bussell Island	40LD17												1												1	1
	, D,	Jones Ferry	40MR76												1												1	1
	HI, D,	Martin Farm	40MR20	1		1		3			5		1		1												12	1
	HI,	Bat Creek	40LD24								5																5	1
	HI,	Tellico Blockhouse	40MR50								2																2	1
	HI,		40LD74								1																1	1
	HI,	Fort Loudoun	40MR1			1					5	2															8	3
	HI,	Mayfield II	40MR27					1			1		1														3	3
				3	1	4		5		4	42	6	3		81	1	25	13	3	25	21	13	7	3	2	4		266	
Little Tennessee Valley	, MC,	Rymer	40BY11												23		25										48	2
	, MC,	Ledford Island	40BY13												17		9										26	2
	, MC,	Mouse Creek	40MN3				1								18		14										33	3
	, MC,	Upper Hampton	40RH41												8												8	1
	, D,	Dallas	40HA1												27												27	1
	, D,	Bell	40RE1												2												2	1
	, D,	Fains Island	40JE1												4												4	1
	, D,	Walters Farm	40UN11												7												7	1
	, D,	Cox	40AN19												3												3	1
	HI, D,	Sale Creek	40HA10								1			3	1		1										6	4
	HI, D, MC	DeArmond	40RE12					5			19	1	1		6			1		1						1	35	8
	HI, D,	Ausmus Farm	40CE10								16				2		1										19	3
	HI, D,	Hixon	40HA3					9	3		1				5												18	4
	HI, D,	Hiwassee Island	40MG31		2	5	1	44		4	14		3		5											2	80	9
	HI, D,	Irvin	40CP5			3		2			2				1												8	4
	HI,	Davis	40HA2								2			2												1	5	3
	HI,	Hill Farm	40UN6								1																1	1
	HI,	Lea Farm	40AN17					1			6		1														8	3
	HI,	Richardson Farm	40CP8					1			2																3	2
	HI,	Bowman	40CP2	1				1			4																6	3
	HI,	Leuty	40RH6					1			2															1	4	3
	HI,	Harris Farm	40CP9					3		2																	5	2
	HI,	McCarty	40UN4			1		1			1																3	3
	HI,	Pittman-Alder	40MI5					2																			2	1
	HI,	Long Island	40RE17	1									1														2	2
				2	2	9	2	70	3	6	71	1	6	5	129		50	1		1						5	363	
		Total		5	3	13	2	75	3	10	113	7	9	5	210	1	75	14	3	26	21	13	7	3	2	4	5	629	

+Not present at Toqua.

HI = Hiwassee Island D = Dallas MC = Mouse Creek C = Cherokee M = Mississippian

Table A.3. Distribution of Structure Types at Other Sites in the Interior Southeastern United States.

	Cultural Affiliation	Site Name	Site Number	Structure Types																						Number of Structures	Number of Types
				1a	1b	2a	2b+	2c+	2d+	3a	3b	3c	3d	3e+	4a	4b	5a	5b	6	7	8a	8b	8c+	9+	10+	11+	12+	
East	BT	King	9FL5												27	1	5										33	3
	LE	Bellfield	9MU101												2			3									5	2
	LE, BT	Little Egypt	9MU102												3		1										4	2
	DR	Dyar	9CE5												3			1									4	2
		Sixtoe Field	9MU100			3		2			1																6	3
	SA	Beaverdam Creek	9EB85		1			2			3																6	3
					1	3		4			4				35	1	6	4									58	
West	MCD	Averbuch	40DV60					3			6				10												19	3
		Ducks Nest	40WR4			2																					2	1
		Brickyard	40FR13			1																					1	1
	BK	Banks V	40CF111					1																			1	1
	BK	Parks	40CF5	1																							1	1
	DR	Sleyden	40HS1	2				3			2																7	3
	DR	Link	40HS6	5							1																6	2
				8		3		7			9				10												37	
South	PH	Warren Wilson	31BN29												11												11	1
	PH	Garden Creek	31HW1												4												4	1
	QA	Coweeta Creek	31MA34												1			1									2	2
	QA	Estatoe	9ST3												2	2											4	1
															18	2		1									21	
			Total	8	1	6		11			13				63	3	6	5									116	

+Not present at Toqua.

BT = Barnett LE = Little Egypt DR = Dyar SA = Savannah II MCD = Middle Cumberland
BK = Banks DR = Duck River PH = Pisgah QA = Oualla

Table A.4. Structure Designations for Comparative Sample by Site, Source, and Structure Type.

Chota-Tanasee (40MR2-40MR62) (Schroedl 1985)

Type 2c	Unit 2M2 F-1	
Type 6	40MR2	Townhouse 1
Type 7	40MR2	ST-1, ST-5, ST-6, ST-10, ST-12, ST-14, ST-15, ST-16, ST-18, ST-20, ST-25, ST-27
	40MR62	ST-3, ST-5
Type 8a	40MR2	ST-4, ST-7, ST-11, ST-13, ST-19, ST-21, ST-26, ST-28
	40MR62	ST-4, ST-6
Type 8b	40MR2	ST-8
Type 8c	40MR2	ST-2, ST-3, ST-9, ST-24
Type 9	40MR2	Townhouse 2
Type 10	40MR2	Summer Pavilion
Type 11	40MR2	ST-22, ST-23
	40MR62	ST-1

Mialoqua (40MR3) (Russ and Chapman 1983)

Type 4a	ST-1
Type 8a	ST-2, ST-3, ST-4
Type 8b	ST-5
Type 8c	ST-6
Type 9	ST-7

Tomotley (40MR5) (Baden 1983)

Type 3b	ST-19, ST-20, ST-21, ST-22, ST-23, ST-27, ST-32, ST-33, ST-34
Type 8b	ST-16, ST-17, ST-18, ST-24, ST-25, ST-26, ST-30, ST-31
Type 9	ST-28
Type 10	ST-29

Citico (40MR7) (Polhemus 1968; Salo 1969; Chapman and Newman 1979)

Type 3b	ST-14
Type 4a	ST-1, ST-2
Type 7	ST-10, ST-12
Type 8a	ST-11, ST-13, ST-17, ST-20
Type 8b	ST-18
Type 8c	ST-16, ST-19
Type 11	ST-15

Peery Farm (40MR67) (Polhemus 1977)

Type 8a	ST-1

Wear Bend (40LD107) (Chapman 1980a)

Type 7	ST-1	Winterhouse
Type 8a	ST-1	Summerhouse

Table A.4. (continued)

Tomotley (40MR5a) (Guthe and Bistline 1978)
Type 3b? ST-2
Type 4a ST-1, ST-3, ST-4, ST-5, ST-6, ST-7, ST-9, ST-10, ST-11, ST-12, ST-13, ST-14
Type 5a No structure numbers assigned

(40MR64) (Guthe and Bistline 1978)
Type 4a No structure number assigned
Type 5a No structure number assigned

Bussell Island (40LD17) (Polhemus 1978)
Type 4a ST-1

Jones Ferry (40MR76) (Chapman 1980b)
Type 4a ST-1

Martin Farm (40MR20) (Schroedl et al. 1985)
Type 1a ST-3
Type 2a ST-7
Type 2c ST-1, ST-8, ST-12
Type 3b ST-4, ST-5, ST-6, ST-9, ST-11
Type 3d ST-2
Type 4a ST-10

Bat Creek (40LD24) (Schroedl 1975)
Type 3b ST-1, ST-6, ST-8, ST-10, ST-12

Tellico Blockhouse (40MR50) (Polhemus 1980)
Type 3b ST-1, +1 undesignated structure

(40LD74) (Chapman 1980b)
Type 3b No structure number assigned

Fort Loudoun (40MR1) (Karl Kutruff Personal Communication)
Type 2a ST-5
Type 3b ST-2, ST-3, ST-8, ST-9, ST-10
Type 3c ST-1, ST-7

Mayfield II (40MR27) (Salo 1969)
Type 2c H-4
Type 3b H-5
Type 3d Undesignated structure associated with Feature 8

Rymer (40BY11) (Neitzel and Fairbanks 1937)
Type 4a F-6, F-7, F-9, F-10, F-18, F-21, F-24, F-26, F-27, F-28, F-29, F-30, F-31, F-32, F-33, F-34, F-35, F-36, F-37, F-39, F-40, F-44, F-48
Type 5a No structure numbers assigned

Table A.4. (continued)

Ledford Island (40BY13) (Lidberg and Fairbanks 1939)		
Type 4a	F-5, F-9, F-10, F-14, F-15, F-19, F-20, F-25, F-29, F-31, F-36, F-38, F-40, F-44, F-45, F-47, +1 undesignated structure	
Type 5a	No structure numbers assigned	
Mouse Creek (40MN3) (Neitzel 1938)		
Type 2b	Unit 3	F-19
Type 4a	Unit 3	F-1, F-3, F-6, F-12, F-15, F-16, F-17, F-18, F-21, F-22
	Unit 4	F-1, F-2, F-8, F-9, F-10, F-13, F-15, F-16
Type 5a	No structure numbers assigned	
Upper Hampton Place (40RH41) (Walker and Nash 1940)		
Type 4a	H-1, H-2, H-3, H-4, H-5, H-11, H-12, H-13	
Dallas (40HA1) (Nash 1936)		
Type 4a	Unit 7	H-7, H-8, H-10, H-13, H-15, H-17, H-19, H-24, H-26, H-28, H-34, H-35, H-37, H-40, H-41, H-42, H-43, H-48
	Unit 8	H-6, H-25, H-36, H-37, H-41, H-42, H-42, +2 undesignated structures
Bell (40RE1) (Lewis 1935)		
Type 4a	F-1, F-3	
Fains Island (40JE1) (Lewis and Wilder 1935)		
Type 4a	Primary, Secondary, Tertiary, Quaternary	
Walters Farm (40UN11) (Lewis and Haag 1934a)		
Type 4a	F-4, F-9, F-10, F-13, F-15, F-16, F-18	
Cox (40AN19) (Lewis and Sullivan 1934a)		
Type 4a	Primary, Secondary, Tertiary	
Sale Creek (40HA10) (Neitzel 1937)		
Type 3b	F-2	
Type 3e	F-3, F-6, F-15	
Type 4a	F-4	
Type 5a	No structure number assigned	
DeArmond (40RE12) (Walker 1940)		
Type 2c	Unit 2	F-7, F-31
	Unit 3	F-19, F-20, F-21
Type 3b	Unit 2	F-4, F-9, F-10, F-11, F-13, F-14, F-17, F-18, F-19, F-20, F-25, F-26, F-27
	Unit 3	F-16, F-22, F-23, F-24, F-25, F-35

Table A.4. (continued)

Type 3c	Unit 3	F-26
Type 3d	Unit 2	F-3
Type 4a	Unit 2	F-5, F-12, F-21, F-28, F-34
	Unit 3	No structure number assigned
Type 5b	Unit 3	No structure number assigned
Type 7	Unit 2	F-8
Type 12	Unit 2	F-30
Ausmus Farm (40CE10) (Lewis et al. 1934)		
Type 3b		F-16, F-17, F-18, F-19, F-21, F-22, F-23, F-26, F-27, F-29, F-30, F-36, F-39, F-40, F-42, +1 undesignated structure
Type 4a		F-9, F-12
Type 5a		No structure number assigned
Hixon (40HA3) (Jennings and Neitzel 1936)		
Type 2c		H-46, H-46, H-55, H-63, H-64, H-68, H-69, H-76, +1 undesignated structure
Type 3d		H-11, H-14, H-79
Type 3b		H-73
Type 4a		H-36, H-52, H-56, H-58, H-62
Hiwassee Island (40MG31) (Nash 1938)		
Type 1b	Unit 37	F-48
	Unit 38	F-62
Type 2a	Unit 37	F-32, F-33, F-38, F-45, F-47
Type 2b	Unit 38	F-26
Type 2c	Unit 37	F-10, F-11, F-15, F-17, F-18, F-19, F-20, F-21, F-22, F-24, F-25, F-27, F-28, F-30, F-35, F-36, F-40, F-41, F-43, F-44, F-50, F-51, F-58, F-62, F-63, F-64, F-65, F-66, F-67, F-69, F-70
	Unit 38	F-25, F-56, F-57, F-58, F-60, F-61
	Unit 63	F-6, F-8, F-8, F-17, F-18
	Unit VT1	F-6
Type 3a	Unit 37	F-26, F-39, F-56, +1 undesignated structure
Type 3b	Unit 37	F-9, F-12, F-16, F-42, F-46, F-52, F-57, F-73
	Unit 38	F-34, F-36, F-37, F-64, F-72, +1 undesignated structure
Type 3d	Unit 37	F-21, F-49, F-71
Type 4a	Unit 38	Undesignated structures associated with F-11, F-15, F-22, F-27
Type 12	Unit 37	F-13, F-14

Table A.4. (continued)

Irvin Village (40CP5) (Lewis and Sullivan 1934b)			
	Type 2a	F-1, F-26, F-27	
	Type 2c	F-9, F-21	
	Type 3b	F-11, F-22	
	Type 4a	F-23	
Davis (40HA2) (Cooper 1936)			
	Type 3b	Unit 6	ST-11, ST-12
	Type 3e	Unit 4	ST-8, ST-11
	Type 12	Unit 6	ST-10
Hill Farm (40UN6) (Lewis 1934)			
	Type 3b	Mound 2 Primary	
Lea Farm (40AN17) (Lewis and Goslin 1934a)			
	Type 2c	F-12	
	Type 3b	F-3, F-5, F-6, F-7, F-8, F-14	
	Type 3d	F-4	
Richardson Farm (40CP8) (Lewis and Haag 1934b)			
	Type 2c	Mound 1 Primary	
	Type 3b	Mound 1 Secondary, Tertiary	
Bowman (40CP2) (Lewis et al. 1934)			
	Type 1a	Area B	West
	Type 2c	Mound 1	Primary
	Type 3b	Mound 1	Secondary, Secondary Rebuilt
		Area A	East
		Area B	West
Leuty (40RH6) (Schroedl 1978b)			
	Type 2c	ST-4	
	Type 3b	ST-1, ST-2	
	Type 12	ST-3	
Harris Farm (40CP9) (Lewis et al. 1934)			
	Type 2c	Mound 1	Primary
		Mound 2	Primary, Secondary
	Type 3a	Mound 2	Secondary
		North of Mound 1	
		South of Mound 2	
McCarty Farm (40UN4) (Lewis and Goslin 1934a)			
	Type 2a	Mound 3	Primary
	Type 2c	Mound 3	Primary Rebuilt
	Type 3b	Mound 1	Primary

Table A.4. (continued)

Pittman-Alder (40MI5) (Faulkner and Graham 1965)
Type 2c ST-1, ST-2

Long Island (40RE17) (Rowe 1941)
Type 1a ST-1
Type 3d F-2

King (9FL5) (Hally 1975b)
Type 4a ST-1, ST-2, ST-3, ST-4, ST-5, ST-6, ST-7, ST-8, ST-9, ST-10, ST-11, ST-12, ST-13, ST-14, ST-15, ST-16, ST-18, ST-19, ST-20, ST-21, ST-22, ST-23, ST-24, ST-25, ST-26, ST-27, ST-28
Type 4b ST-17
Type 5a No structure numbers assigned

Bell Field Mound (9MU101) (Kelly 1967)
Type 4a ST-4, ST-5
Type 5b ST-6, ST-7, ST-8

Little Egypt (9MU102) (Hally 1979; 1980)
Type 4a ST-1, ST-2, ST-3
Type 5a No structure number assigned

Dyar (9GE5) (Smith 1981)
Type 4a No structure numbers assigned
Type 5a No structure number assigned

Sixtoe Field (9MU100) (Kelly et al. 1966)
Type 2a ST-C, ST-D, ST-E
Type 2c ST-B, ST-F
Type 3b ST-A

Beaverdam Creek (9EB85) (Rudolph and Hally 1985)
Type 1b ST-B
Type 2c ST-D, ST-E
Type 3b ST-A1, ST-A2, F-3-8

Averbuch (40DV60) (Reed and Klippel 1984)
Type 2c ST-1, ST-5, ST-7
Type 3b ST-3, ST-10, ST-13, ST-20, ST-22, ST-23
Type 4a ST-8, ST-9, ST-11, ST-12, ST-15, ST-16, ST-17, ST-18, ST-24, ST-25

Ducks Nest (40WR4) (Kline 1979)
Type 2a ST-1, ST-2

Table A.4. (continued)

Brickyard (40FR13) (Butler 1968)		
Type 2a	ST-1	
Banks V (40CF111) (Kleinhans 1978)		
Type 2c	ST-II	
Parks (40CF5) (Brown 1982)		
Type 1a	ST-2	
Sleyden (40HS1) (Nash 1968)		
Type 1a	Unit 7	Structure
	Unit 8	Structure A
Type 2c	Unit 6	Primary
	Unit 8	Structure B, Structure B rebuilt
Type 3b	Unit 6	Secondary
	Unit 8	Structure C
Link (40HS6) (Nash 1968)		
Type 1a	Unit 43	Structure
	Unit 45	Structure
	Unit 46	Primary
Type 3b	Unit 46	Secondary
Warren Wilson (31BN29) (Dickens 1976)		
Type 4a	H-1, H-B, H-c, H-D, H-E, H-F, H-G, H-H, H-I, H-J, H-K	
Garden Creek (31HW1) (Dickens 1976)		
Type 4a	Earth Lodge 1, Earth Lodge 2, ST-A, ST-B	
Coweeta Creek (31MA34) (Egloff 1971)		
Type 4a	ST-1	
Type 5b	No structure number assigned	
Estatoe (9ST3) (Kelly and De Baillou 1960)		
Type 4a	ST-3, ST-4	
Type 4b	ST-1, ST-2	

ST = Structure
F = Feature
H = House
+X = Plus X number of undesignated structures

VITA

Richard Rowand Polhemus was born in Knoxville, Tennessee, on January 24, 1946. He attended elementary school in Knox County, Tennessee, and graduated from Patterson School near Lenoir, North Carolina in May 1964. The following September he entered the University of Arizona, Tucson, with a major in anthropology and a minor in geology. After four years in Tucson he conducted archaeological investigations for the University of Tennessee, Knoxville, and the Institute of Archaeology and Anthropology, University of South Carolina. He entered the University of Tennessee, Knoxville, in the spring of 1973 and graduated with a Bachelor of Arts degree with a major in anthropology in 1974. In 1975 he began study toward a Master of Arts degree with a major in anthropology. His Master of Arts degree was awarded in December 1985.

Mr. Polhemus has conducted fieldwork in Arizona, North Carolina, South Carolina, Tennessee, and Sonora, Mexico. He has been associated with the Tellico Archaeological Project since its inception in 1967. His major excavations within the Tellico Archaeological Project include the Tellico Blockhouse site (40MR50), the Virginia Fort site (40MR70), and the Morganton town site (40LD105), in addition to the Toqua site (40MR6).

Mr. Polhemus is a member of the Society of Professional Archaeologists, the Society for American Archaeology, the Society for Historical Archaeology, the Holland Society, and the Tennessee Anthropological Association.