SIX HOUSE-BASIN STRUCTURES: THE JONATHAN CREEK SITE AND ITS DEPOSITIONAL HISTORY

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ABSTRACT

R. Berle Clay (1979) postulated that six house-basin structures from the Jonathan Creek Site (15M14) might represent a late Mississippi period Tinsley Hill phase reoccupation of an otherwise early Mississippi period site. An analysis of ceramics from the house-basin structures and from a control group of non-basin house structures demonstrates that the former were probably not constructed during the Tinsley Hill phase.

INTRODUCTION

This paper describes the results of research focused on the testing of Clay's (1963, 1976, 1979) inference that six house-basin structures at the Jonathan Creek Site (15M14) (Figure 1) represent a late Mississippi period reoccupation of an otherwise early Mississippi period site. The test is based on an analysis of ceramics from the house-basin structures and from a control group of non-basin house structures. The house-basin structure ceramics are compared to those of the control group in an attempt to identify stylistic differences that would indicate a temporal difference between the two. The test results clarify the depositional history of the Jonathan Creek Site and are consistent with Clay's regional ceramic sequence.

Like many sites excavated in the early 1940s, the artifacts recovered from Jonathan Creek have never been fully analyzed and described. Between 1940 and 1942, William S. Webb excavated extensive areas of the site using Civilian Conservation Corps (CCC) labor. Unfortunately, World War II prematurely terminated Webb's excavations. In the early 1950s, he returned to the Jonathan Creek material and produced a report (Webb 1952) that focused on the excavated structural remains. Only cursory attention was paid to a sample of ceramic artifacts. Webb (1952) does not describe the methods he used to draw the sample nor its provenience. R. Berle Clay, the first archaeologist to analyze Jonathan Creek ceramics following Webb, analyzed another sample of ceramics. The differences between his and Webb's ceramic samples prompted Clay to search for late Mississippi period features at Jonathan Creek. Clay's sample, unlike Webb's, lacked certain stylistic attributes. It consisted of only plain ware, while Webb's included incised and decorated types such as Matthews Incised, var. Matthews and var. Beckwith, Mound Place Incised, Nashville Negative Painted, and Rhodes Incised in addition to the plain wares (Table 1).

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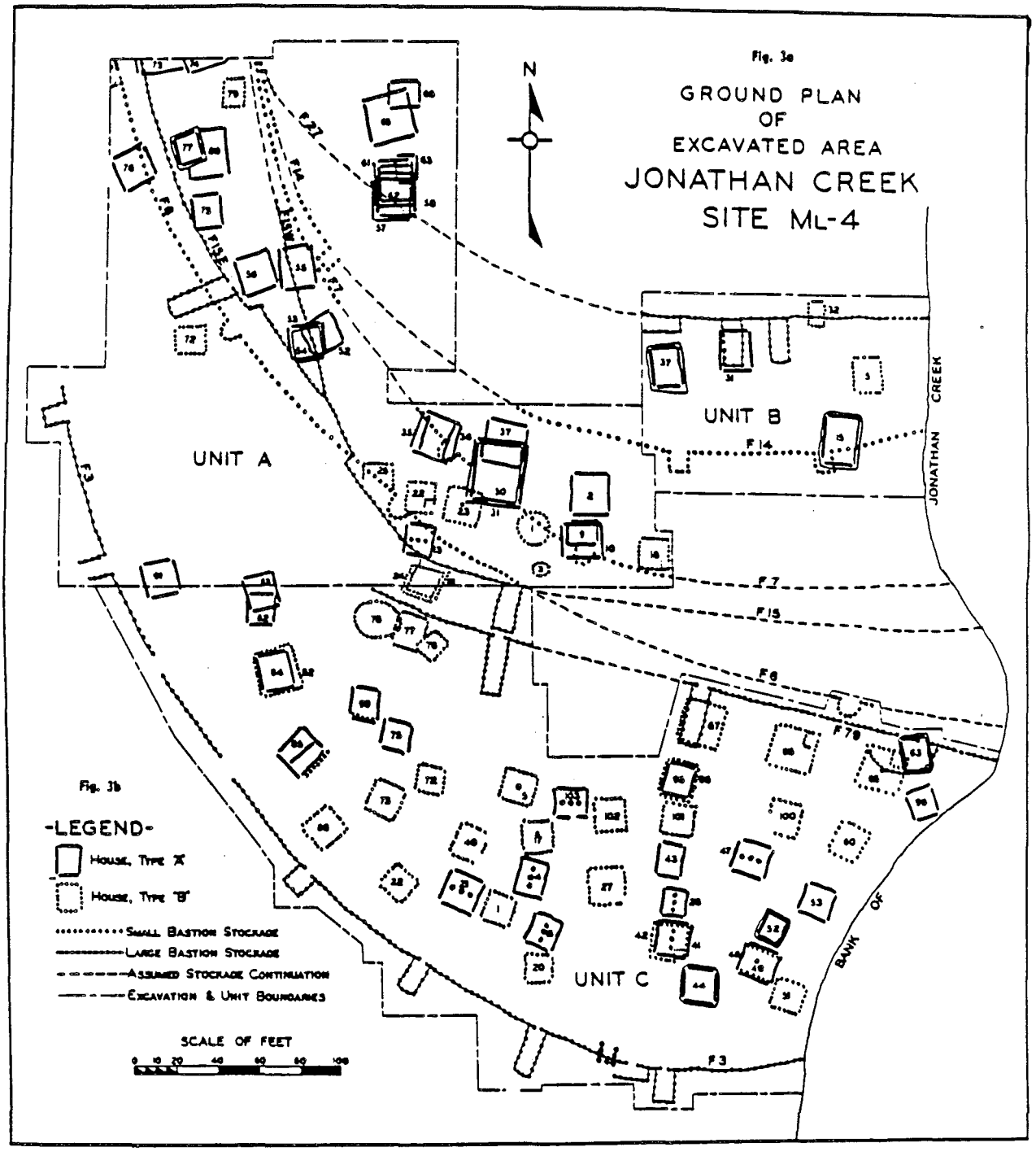

Figure 1. The Jonathan Creek Site (from Webb 1952:16-17).

TABLE 1. Ceramic Counts for Sites in the Tennessee-Cumberland Region.

	Jonathan Creek				Tinsley Hill		Goheen	Roach
	Wolforth 1987		Clay 1963	Webb 1951	Upper Level	Lower Level		
Type Name	A" Type	Other						
Mississippi Plain	1169	1229	564	1659	2694*	285	6395	1171
Bell Plain	79	91	29	151	241	29	469	54
Kimmswick Fab. Imp.	82	52	21	480	188	27	119	48
Old Town Red	26	17		1	7		10	4
Wickliffe Thick	4						2	
Nashville Neg. Painted								
var. Nashville	1			1				
var. Angel					1			
Matthews Incised								
var. Matthews				1	2			
var. Manly					7			
var. Beckwith				1	4		30	
O'Byam Inc. var. Stewart							1	
McKee Island Cordmarked					3		4	
Tolu Interior Fab. Imp.					8		9	
Mound Place Incised				1			1	
Rhodes Incised				1				
Baytown Plain	1	3	8	6		1	1	
Mulberry Creek Cord.	3					2	8	
Baumer Fab. Imp.	1			2			8	
O'Neal Plain				2			2	
Totals	1366	1392	622	2330	3155	344	7059	1277

*Includes Morris Plain.

The presence or absence of incised and decorated ceramics is crucial in distinguishing early Mississippi period components from late Mississippi period components in the regional sequence developed by Clay (1979). Decorated ceramics are not characteristic of the early Jonathan Creek phase, as defined by Clay (1979). Instead, they are characteristic of the later Tinsley Hill phase. The Jonathan Creek Site could be classified as a Tinsley Hill phase site on the basis of Webb's (1952) sample, and as a Jonathan Creek phase site based on Clay's (1963) sample. To explain this apparent discrepancy, Clay (1979) proposed that Webb's decorated types may have originated from six house-basin structures (Type A"; Figure 2) that were more recent than most of the excavated portion of the site. The structural similarity to house-basin features at the Goheen (15Ml19) and Roach (15Tr10) sites, radiocarbon dated at A.D. 1600+/-85 and A.D. 1545+/-80, respectively, suggested to Clay that the house-basins represented a Tinsley Hill phase reoccupation of the Jonathan Creek Site.

The research reported here is designed to determine if the six house-basin structures are Tinsley Hill phase features. The ceramics from the six house-basin structures and from a random sample of six non-basin house structures were collected from the University of Kentucky Museum of Anthropology in Lexington. The ceramics from each group were compared for indications of temporal placement. If there are two components represented at Jonathan Creek and the six house-basin structures are representative of a later component, then Clay's regional ceramic sequence accounts for the Tinsley Hill phase ceramics in Webb's sample. If the house-basin structures are determined not to represent a Tinsley Hill phase component, then either there are as-yet-unanalyzed Tinsley Hill phase features present in the University of Kentucky's collections from the site or Clay's regional ceramic sequence does not account for the decorated types recovered from Jonathan Creek.

This paper is organized as follows: first, background information on the environment, previous archaeological research, and the regional ceramic sequence are presented; second, the methods involved in the excavation of the Jonathan Creek Site, curation of the recovered cultural materials, and analysis of different ceramic samples from the site are reviewed; third, the current ceramic analysis and results are presented; and finally, the implications of this analysis for the depositional history and regional ceramic sequence are discussed.

GEOGRAPHY AND ENVIRONMENT

Prior to 1944, the Jonathan Creek Site was located on a second river terrace approximately 1.5 km south of the confluence of Jonathan Creek and the Tennessee River. Today, much of the site is flooded by the impounded waters of Kentucky Dam, built by the Tennessee Valley Authority during World War II. The portion of the site that remains visible today is located on the southern end of a long, narrow island within the fluctuation zone of the west side of Kentucky Lake, just north of the mouth of the Jonathan Creek embayment.

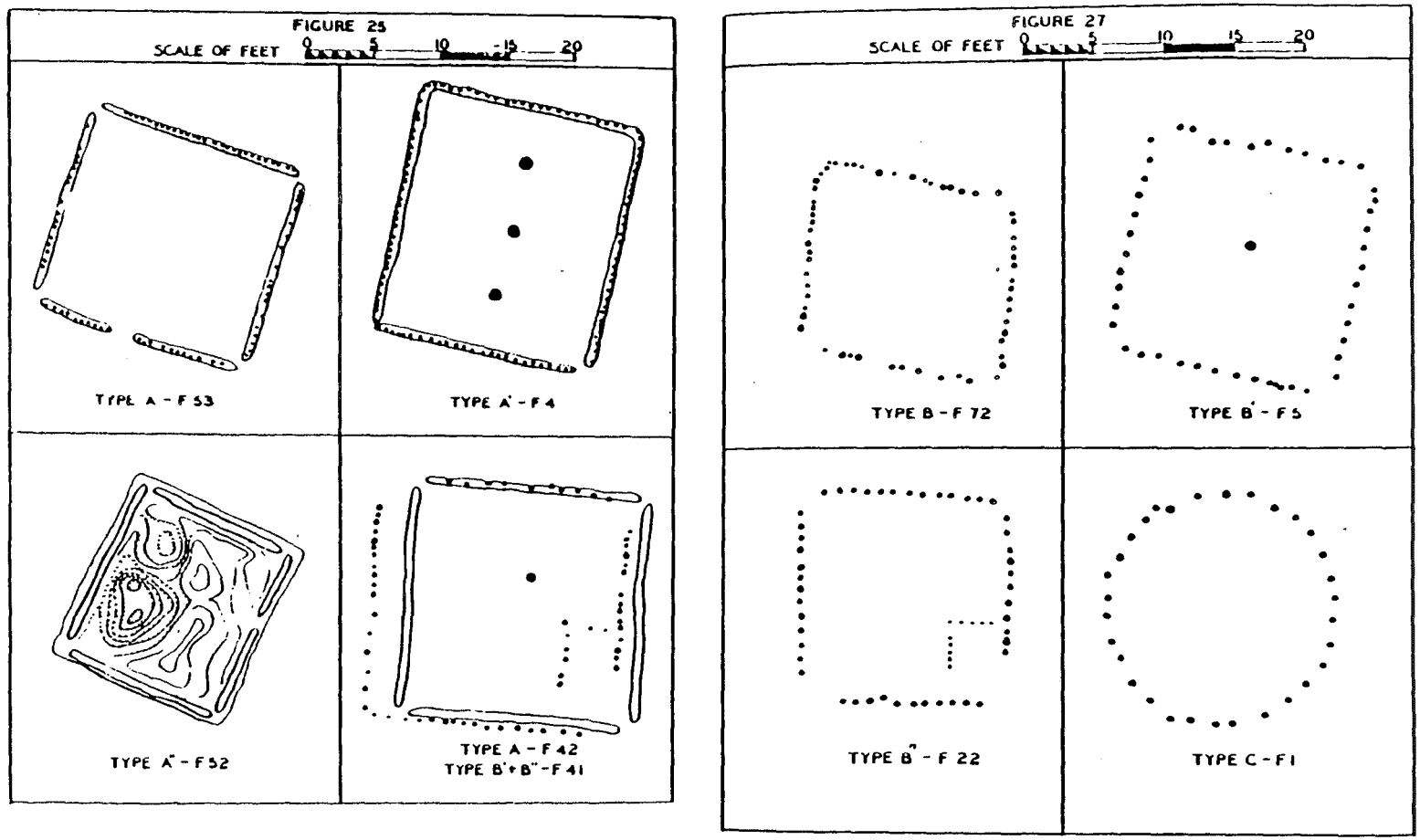

Figure 2. The seven structure types defined by Webb at Jonathan Creek (from Webb 1952:54,57).

Normal summer pool elevation on Kentucky Lake averages 109.4 m above sea level. At summer pool, only the eastern edge of the river terrace, a thin strip of land approximately 7 m wide, and the earthen mounds of the Jonathan Creek Site remain above water. Normal winter pool averages 108 m above sea level (Figure 3) and a great deal more of the site is accessible during the winter months.

Boat trips taken to the site in July 1985 and February 1986 revealed serious erosion with the remains of prehistoric house structures visibly eroding on the eastern shore (Figure 4). Also a possible mound on the eastern side of the island was being undercut. Mound A appears to be the only prehistoric structure that remains out of water year round and it showed signs of recent potting.

The Tennessee River flows through the post-Tertiary gravels and recent loess of the Jackson Purchase, making the valley soils fine grained (Clay 1963). A silt loam of the Grenada Series characterizes the soils of Jonathan Creek (Humphrey et al. 1973). The elevation of a second terrace of the Grenada series soil type can support a sweetgum-elm forest (Humphrey et al. 1973; Lewis 1974). Currently, the seasonal inundation of the site only allows for the growth of water-tolerant species of the Salicaceae family, such as Populus Deltoides (cottonwood) and Salix sp. (willow).

PREVIOUS ARCHAEOLOGICAL RESEARCH

Robert H. Loughridge (1888) and Clarence B. Moore (1915) were the first to publish information on the archaeology of the Tennessee-Cumberland region. Although these early investigations were brief, they contribute to a fuller description of the Jonathan Creek Site. Loughridge (1888) provides an excellent map (Figure 5) of the site that correlates well with Webb's (1952) topographical map. Loughridge's map gives the location of smaller mounds that had been nearly plowed away by the 1940s. Three of these are only vaguely visible on Webb's (1952) map, at the northeast corner of his excavation units. The work Moore accomplished in the area was not extensive. He visited only three sites in the region, one of which was the Jonathan Creek Site. His written description of the site makes mention of the mounds that were visible at the time as well as their relative positions and dimensions. Webb's (1952) report only locates two of the three large mounds that appear on Loughridge's map and in Moore's description of the site.

In 1930-1931, Webb and William D. Funkhouser of the University of Kentucky, conducted a systematic survey of the archaeology of Kentucky. Their report, Archaeological Survey of Kentucky (Funkhouser and Webb 1932), gives a brief and somewhat useless description of Jonathan Creek but appearing with it is a description of the site's associated stone box grave cemetery.

The next period of research at the site occurred in the 1940s in connection with the Tennessee Valley Authority's hydroelectric projects.

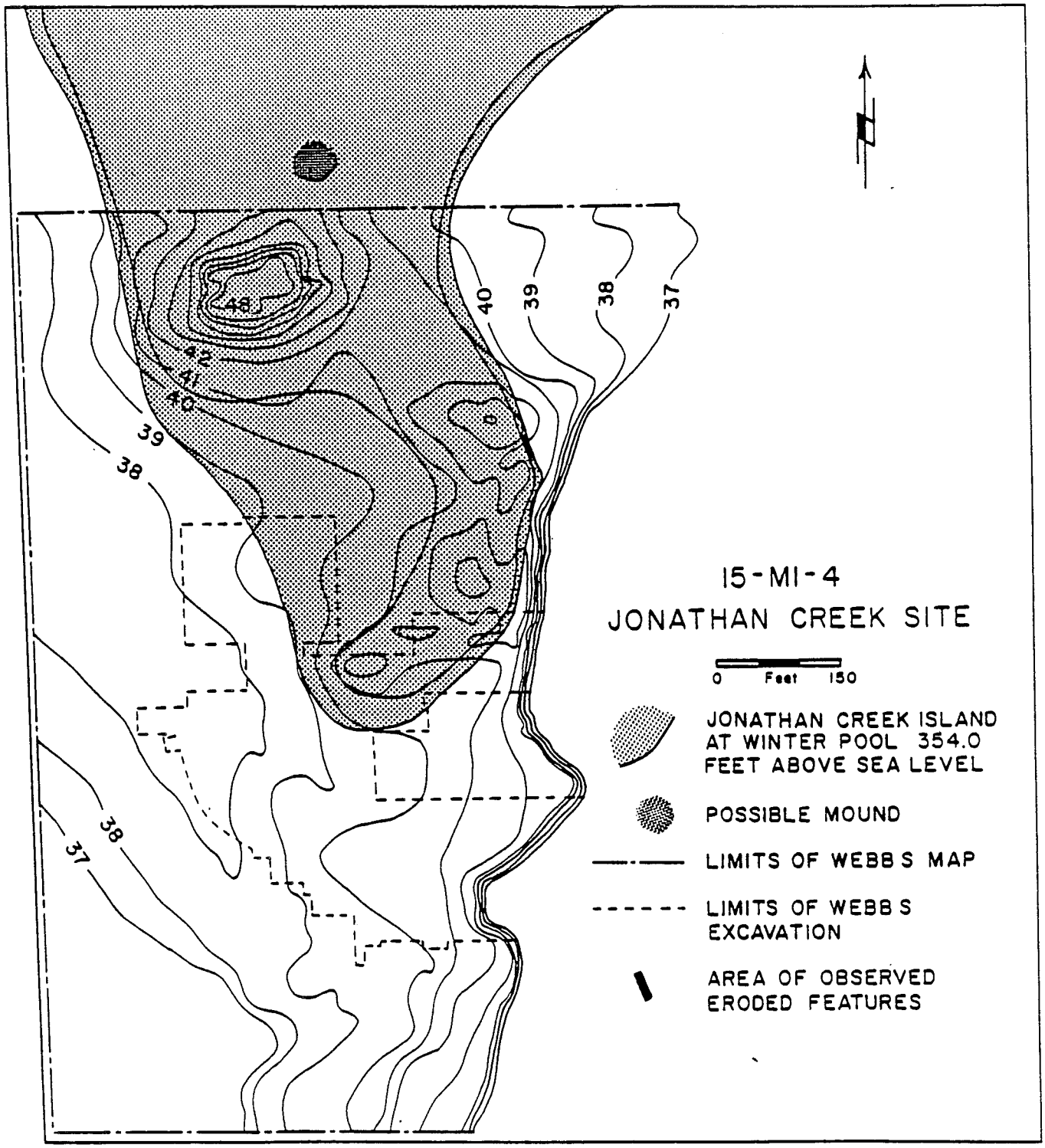

Figure 3. Jonathan Creek at winter pool (topographic map from Webb 1952:11).

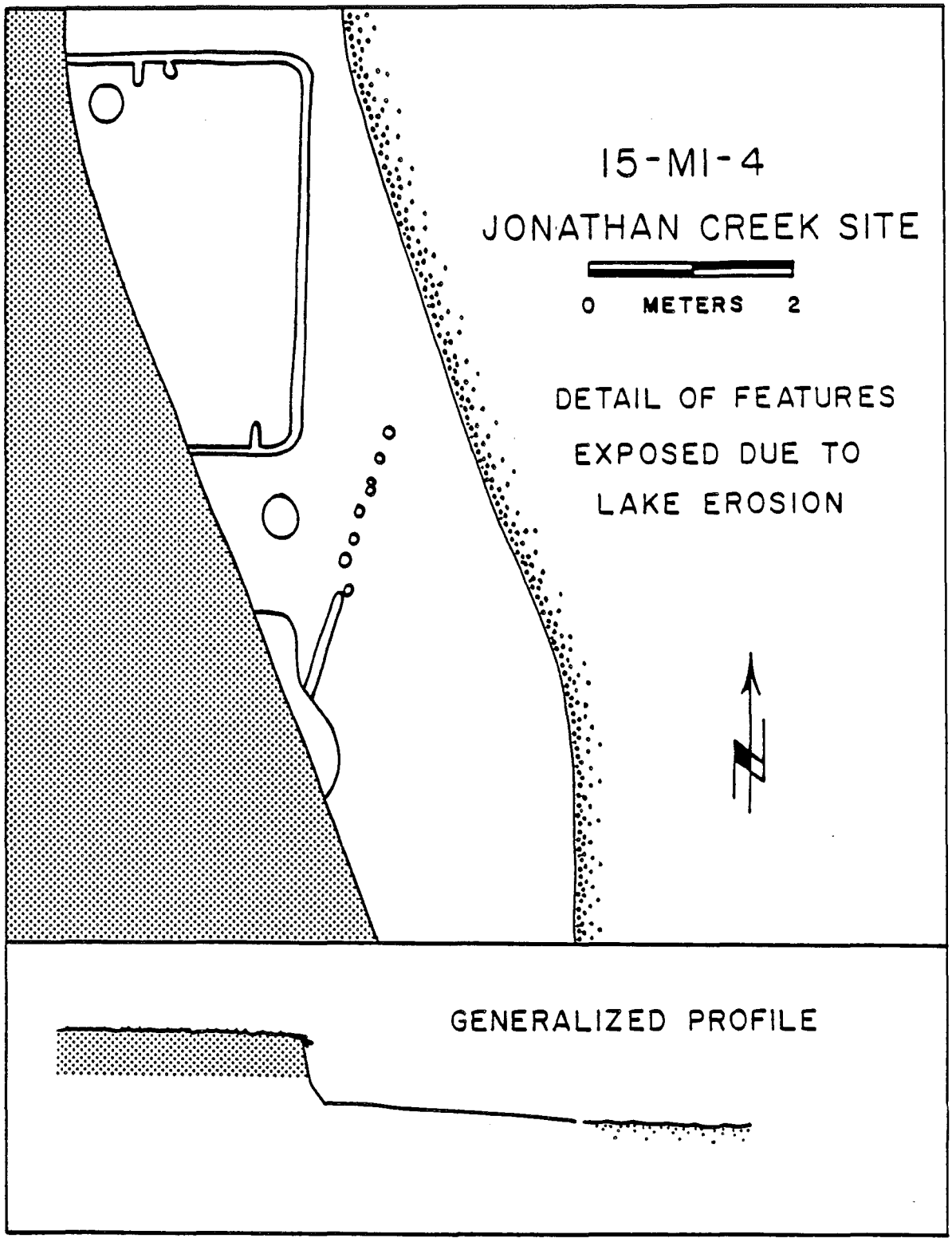

Figure 4. Features exposed by lake erosion.

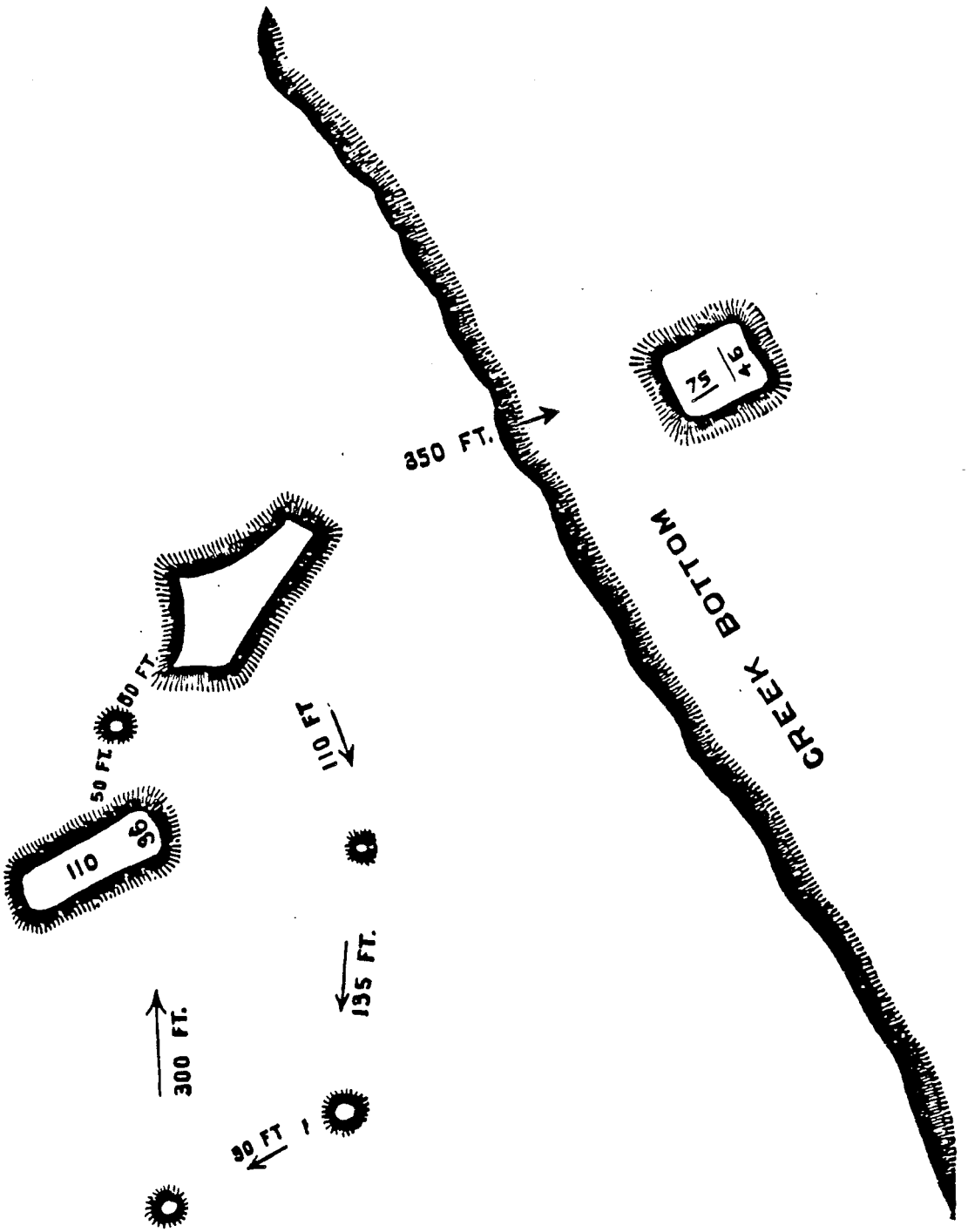

Figure 5. 1888 map of the Jonathan Creek Site (from Loughridge 1888:193).

The TVA appointed Webb coordinator of salvage archaeology in the Tennessee Valley. James R. Foster, working under Webb, was the first to actually survey the valley from Gilbertsville to the Kentucky-Tennessee border. Of the 47 sites found by Foster, 22 were in Marshall County. One of these was the Jonathan Creek Site (Clay 1963).

In 1940, the CCC established a camp at Benton, Kentucky. Supervised by Webb, excavations using CCC labors were initiated at a number of sites in Marshall and Trigg counties: Jonathan Creek (15M14), Birmingham (15M18), Root (15M111), Goheen (15M114), and Roach (15Tr10). Jonathan Creek was the first site to be investigated (October 23, 1940) and the last to be shut down (March 20, 1942). Excavations at the other sites were halted shortly after the bombing of Pearl Harbor. The rather abrupt and premature termination of excavations and site survey in the Tennessee-Cumberland region created problems in the processing and curation of artifacts and fieldnotes. The Jonathan Creek artifacts remained unwashed, uncataloged, and even unreported until the early 1950s when Webb published his report.

Both Webb and Funkhouser were trained scientists and brought the basics of scientific methodology to archaeology. However, neither researcher had any training in anthropology and both lacked the theoretical tools to deal with culture history. This is especially evident with regards to Webb's conclusions about Jonathan Creek, where he tried to match prehistoric cultures with very recent native Indian cultures described by ethnohistorians.

With the governments authorization of Barkley Dam in 1958, a new era of work was initiated in the lower Tennessee-Cumberland region. This work, which was conducted by a group of men who were professionally trained in anthropology, focused on the survey and excavation of sites along the Cumberland River. Dr. Douglas W. Schwartz, of the University of Kentucky Museum of Anthropology, directed the operations. Work in the late 1950s and early 1960s differed from that conducted before World War II. Gone were the huge CCC crews that had been put to work exposing large areas of sites. In their place were smaller crews and an emphasis on excavations designed to understand each site and its chronological position. This work resulted in more complete artifact descriptions and the development of a regional cultural sequence (Clay 1963).

Subsequent work on the archaeology of the Tennessee Valley has focused on sites other than Jonathan Creek (e.g., Fryman 1966; Rolingson and Schwartz 1966). After the Tennessee and Cumberland valleys were flooded, the Land Between the Lakes Archaeological Project continued research in the area (Nance 1976).

THE REGIONAL CULTURAL SEQUENCE

Clay (1979) divides the Mississippi period into two phases: the Jonathan Creek phase and the Tinsley Hill phase. The Jonathan Creek phase is characterized by ceramics that lack the decorative techniques of incising, engraving, punctation, negative painting, and direct painting. Ceramic types associated with this phase include Mississippi Plain, Bell Plain, Kimmswick Fabric Impressed, Old Town Red, McKee Island Cordmarked, Mulberry Creek Cordmarked, and Baytown Plain (Clay 1979). The major vessel forms are globular jars with loop handles or bifurcated lugs, saltpans, and hooded bottles (Clay 1963). The Tinsley Hill phase ceramic assemblage is comprised of the above-mentioned types and Kimmswick Plain, Nashville Negative Painted, var. Nashville and var. Angel, Matthews Incised var. Matthews, Beckwith, and Manly, O'Byam Incised, var. Stewart, and Tolu Interior Fabric Impressed (Clay 1979). According to Clay (1979), there are also differences in the types of appendages associated with jars and in the vessel forms identified for each phase. Appendages on Mississippi Plain globular jars shift from narrow loop handles to wide strap handles. During the Tinsley Hill phase the hooded water bottle becomes less common and the short and long necked water bottles appear along with the plate form.

A brief review of the data and the cross comparisons Clay (1979) used to divide the Mississippi period into two phases is important in order to fully understand the regional cultural sequence. The stratigraphy and radiocarbon dates from the Tinsley Hill village indicated to Clay that two occupations had occurred at the site. A deep trench excavated at the Tinsley Hill village revealed two levels of occupation stratigraphically separated by a layer of sterile slope wash. A radiocarbon date of A.D. 1650+/-80 was associated with a prehistoric structure from the upper component of the Tinsley Hill village. The lower stratigraphic level yielded no material for radiocarbon dating. The ceramics from the lower stratigraphic level were undecorated types, while the assemblage from the more recent occupation of the Tinsley Hill village included the decorated types.

The similarity between the ceramics from the lower levels at Tinsley Hill, Jonathan Creek, and those from the Dedmon Site (15M168), radiocarbon dated at 1045+/-75 and 1045+/-85, helped Clay set the approximate temporal boundary for the beginning of the Jonathan Creek phase. The ceramic assemblage from Dedmon was simple, and like the Jonathan Creek assemblage, lacked the incised and decorated types. Consequently, Clay placed the beginning of the Jonathan Creek phase at approximately A.D. 1045 and considered the simple ceramic assemblages from Dedmon, Jonathan Creek, and the lower levels of Tinsley Hill to represent Jonathan Creek phase components.

Clay could only determine one other temporal boundary at the end of his regional sequence. The end of the Tinsley Hill phase was set at approximately A.D. 1600 by the radiocarbon date from the upper component at Tinsley Hill. The transition between the Jonathan Creek phase and the Tinsley Hill phase is, as Clay (1979) mentions, presently unknown. The earliest radiocarbon date from the Tinsley Hill cemetery (A.D. 1380) is difficult to associate with a particular village midden level.

However, Clay (1979) suggests that the Angelly phase (A.D. 1100-1300), defined in the Black Bottom (Riordan 1975), represents the type of development that probably occurred between the Jonathan Creek phase and the Tinsley Hill phase. During the Angelly phase, decorated types comprised a minor portion of the assemblage, with the only representatives being Matthews Incised and Angel Negative Painted.

There are two assumptions inherent in the ceramic sequence defined by Clay for the Tennessee-Cumberland region that are relevant to this study: one, that his Jonathan Creek sample is representative of the rest of the site; and two, that the six house-basin structures are Tinsley Hill phase features. This research contributes further analysis on Jonathan Creek ceramics and provides a test of the temporal placement of the six house-basin structures.

METHODS

This section describes the methods used in Webb's fieldwork, those used in curating the collection at the University of Kentucky Museum of Anthropology in Lexington, and the methods used in this research. Webb rigorously assigned horizontal proveniences but, unfortunately, vertical proveniences were grossly defined. The whole site was divided into several large units labeled A-E (Figure 1). Horizontal provenience was assigned with reference to a 5 foot (1.5 m) grid, oriented north-south. Within each 5 by 5 foot block, features were provenienced by designating how many feet east or west, and north or south of the appropriate grid line the feature was situated.

Webb designated vertical proveniences in zones. Zone A, the plowzone, extended to between .35 feet (11 cm) and 1.3 feet (40 cm) below the ground surface. Webb averaged this to 0.6 feet (18 cm). He reported Zone B to be everything from 0.6 feet (18 cm) to 1 foot (30 cm). Despite these reported methods, vertical provenience on the artifact bags were often recorded as 1 foot (30 cm) Zone A or 1.5 feet (46 cm) Zone B.

The collection of Jonathan Creek artifacts suffers, as many WPA era museum collections do, from selective curation of artifacts and fieldnotes. A card catalog was started for the site in the 1950s but it was never completed. Early in the project workers filled out cards completely with catalog numbers and corresponding proveniences but later on, file cards were marked with a catalog number only. To further complicate matters, many of the larger sherds and rim sherds were pulled from their original bags, labeled, and curated separately. Some of these sherds were not fully labeled with unit letters. The unit letter is crucial for identifying proveniences, since Webb used the same catalog numbers within each unit. Thus, artifacts without unit letters are virtually unprovenienced.

A random sample of six non-basin structures was selected from a list stratified by structure type (Figure 2). Artifacts associated with the six randomly selected non-basin (Types A-C) structures as well as the

six house-basin (Type A") structures were collected by searching through each box of curated ceramics for bags and loose, labeled sherds with the relevant feature number or provenience. One complete search through the curated collection retrieved material from only nine of the 12 structures (Table 2). Artifacts from five of the six randomly-drawn non-basin house features and four of the house-basin structures were located in the curated collection. Of these, materials from one non-basin structure and three house-basin structures were associated with the artifact bags that had their feature number written on it. For the remaining four non-basin structures and one house-basin structure ceramics selected for analysis were from the grid block area associated with these features.

Ceramics were classified according to Phillips' (1970) type variety system. Paste and surface finish characteristics used to sort the analyzed ceramic sample followed Clay (1963) and Lewis (1986). Vessel form for rims was determined from rim shape and surface treatment. The standards followed for form classification were those developed by Lewis (1982, 1986). The characteristics of the entire ceramic sample are described in detail in Wolforth 1987.

Table 2. List of Sampled Features.

Structure Type	Feature Number	Excavation Unit
House-basin		
A"	44	Unit C
A"	52	Unit C
A"	37	Unit B
A"	15	Unit B
Non-basin		
A	9	Unit A
B	22	Unit C
B	5	Unit B
B	23	Unit A
C	1	Unit A

ANALYSIS AND RESULTS

This section presents a summary of the comparison of ceramics from house-basin structures with a control group of non-basin house structures.

Based on the cultural sequence developed by Clay (1979), ceramic assemblages from late Mississippi period Tinsley Hill phase sites are expected to include Matthews Incised vars. Matthews, Beckwith, and Manly, Mound Place Incised, O'Byam Incised, Tolu Interior Fabric Impressed, and Nashville Negative Painted. If the house-basin structures represent a Tinsley Hill phase re-occupation of the Jonathan

Creek Site, these types should be found in the ceramic assemblages associated with these structures. To test this inference, ceramic types, vessel forms, and appendage types were compared between house-basin structures and the control group.

Ceramic types associated with the house-basin and non-basin structures are presented in Table 3. This table shows that Mississippi Plain dominates both samples. None of the Matthews Incised varieties, O'Byam Incised, or any other incised types occur in either sample. Both house-basins and non-basin house structures exhibit the same basic frequencies and percentages of the four types which Clay used to characterize the Jonathan Creek phase: Mississippi Plain, Bell Plain, Kimmswick Fabric Impressed, and Old Town Red. Minor amounts of Baytown Plain are also associated with both types of structures. Wickliffe Thick, Mulberry Creek Cordmarked, and Nashville Negative Painted occur in small numbers in house-basin structures.

Table 3. Ceramic Counts and Percentages.

Type Name	A" Type House-basin Structures		Control Group Non-basin Structures	
	Number	Percent	Number	Percent
Mississippi Plain	1166	85.50	1229	88.30
Bell Plain	79	5.80	91	6.50
Kimmswick Fabric Impressed	82	5.00	52	3.70
Old Town Red	26	1.90	17	1.20
Wickliffe Thick	4	0.30	0	0.00
Nashville Negative Painted	1	0.03	0	0.00
Baytown Plain	1	0.07	3	0.20
Mulberry Creek Cordmarked	3	0.20	0	0.00
Baumer Fabric Impressed	1	0.07	0	0.00
Totals	1366	99.91	1392	99.9

Although the house-basin structures are associated with a slightly greater variety of types than the other structures, these ceramic types are not the temporally significant incised or engraved types. On the basis of this comparison, it is inferred that the house-basin structures were occupied at roughly the same time as the other structures at the Jonathan Creek Site.

Functional differences between the ceramics recovered from the two groups of structures were also investigated. All structures were assumed to be contemporaneous, and ceramic vessel form was assumed to reflect vessel function. The minimum number of vessels for each vessel type was estimated and the counts compared between the house-basin structures and the control group. The results (Table 4) indicate that both the house-basin structures and the control group have the same MNI for almost all vessel forms: jars, bowls, saltpans, and hooded bottles. However, plates and funnels were only recovered from the house-basin structures. These differences are somewhat insignificant, because they involve, in each case, only one sherd. On the whole there is no significant difference in the range of vessel forms associated with the house-basin structures and the non-basin structures. Thus, based upon this comparison no functional differences between the two structure groups could be identified.

Table 4. Minimum Number of Individual Vessel Forms.

	Structure Type		
Vessel Form	A" Type House-basin Structures	Control Group Non-basin Structures	Total
Jar	12	16	28
Bowl	4	3	7
Hooded Bottle	2	5	7
Open Bottle	2	2	4
Plate	1	0	1
Saltpan	4	2	6
Funnel	1	0	1
Total	26	28	54

Finally, changes in the style of vessel appendages was investigated. Given that loop handles and bifurcated lugs occur more frequently at early Mississippi period sites and strap handles are more common at later sites in the lower Mississippi Valley (Phillips et al. 1951) and in the Tennessee-Cumberland region (Butler 1983; Clay 1963), loop handles and bifurcated lugs were expected to be present in non-basin house structures and strap handles in house-basin structures. Only two handles and one bifurcated lug were included in the sample (Table 5). The one strap handle originated in a non-basin house structure, while the loop handle was found in a house-basin structure. The handle associations are thus the opposite of what was predicted. However, the

bifurcated lug was associated, as expected, with the non-basin structures.

Table 5. Appendage Types.

Appendage Type	Structure Type: A" Type House-basin Structures	Structure Type: Control Group Non-basin Structures	Total
Loop Handle	1	0	1
Strap Handle	0	1	1
Simple Lug	2	4	6
Bifurcated Lug	0	1	1
Undetermined	0	1	1
Total	3	7	10

DISCUSSION AND CONCLUSIONS

The analysis of the ceramics from the house-basin structures and a control group of non-basin house structures from the Jonathan Creek Site identified no significant differences in the ceramic types, vessel forms, or types of appendages associated with basin and non-basin house structures. Judged on the basis of their ceramic assemblages, the house-basin structures were probably not constructed during a postulated Tinsley Hill phase occupation of the site. Therefore, as a result of this analysis there is no information to support Clay's inference that these structures represent a Tinsley Hill phase reoccupation of the Jonathan Creek Site.

The contemporaneity of house-basin structures and non-basin structures clarifies one aspect of the depositional history of the Jonathan Creek Site, but it also eliminates a possible explanation for the Tinsley Hill phase ceramics in Webb's sample from the site. These ceramics do not occur in large enough numbers, however, to suggest that the Jonathan Creek phase, as defined by Clay, is not representative of the ceramic assemblage as a whole. However, a new explanation is now needed to account for the occurrence of decorated ceramics at the site.

One explanation may lie in as-yet-unanalyzed Tinsley Hill phase features excavated at Jonathan Creek. To determine the contextual association of Webb's Tinsley Hill phase ceramics, an attempt was made to locate these specimens in the curated collection and to trace their

provenience. However, only one sherd could be located among the curated artifacts. It was recovered from Feature 61. Unfortunately, the ceramics associated with this pit were not included in this study. Documenting the presence of a Tinsley Hill phase component at Jonathan Creek, though not within the scope of this study, will prove to be an important project for a future researcher.

Finally, the results of the present research corroborate and support the existing regional ceramic sequence. First, the sample of Jonathan Creek ceramics analyzed as a result of this study resembles an early Mississippi period assemblage. The large percentages of plain wares, and the absence of incised and decorated ceramic types are consistent with Clay's characterization of Jonathan Creek phase ceramic assemblages. Second, the sample used for this research is larger and more reliable than Clay's 1963 sample (Table 1). Since sample size is related to sample richness in a log normal relationship (Figure 6), the lack of richness in Clay's sample may be due to sampling errors inherent in small samples and not to any significant temporal or cultural phenomenon.

The relationship between sample size and sample richness can be assessed by using a method presented by Kintigh (1984). This method can be used to compare Clay's (1963) sample to the expected diversity or richness of randomly-drawn samples of the same size. Figure 6 is a curve of expected diversity generated using Kintigh's (1984) method. Using all analyzed ceramic types and their frequencies from Jonathan Creek, random samples of 14 different sizes were drawn 200 times. The mean number of types calculated from the 200 trials was plotted against sample size. Two similar curves were drawn around the plotted means, which include 80% of the samples drawn. Webb's 1952, Clay's 1963, and Wolforth's 1987 samples were then plotted on the same graph (Figure 6).

Clay's 1963 sample (Figure 6) is less diverse than 80% of all randomly drawn samples. Wolforth's 1987 and Webb's 1952 samples are on the border of being less or more diverse than expected. This suggests that Clay's sample may not be representative of the total Jonathan Creek ceramic assemblage, still only partially analyzed. In light of this, the analyses of a larger and more reliable ceramic sample is a significant contribution to the total amount published about the Jonathan Creek ceramic assemblage and will hopefully encourage further analyses of the materials recovered from this site.

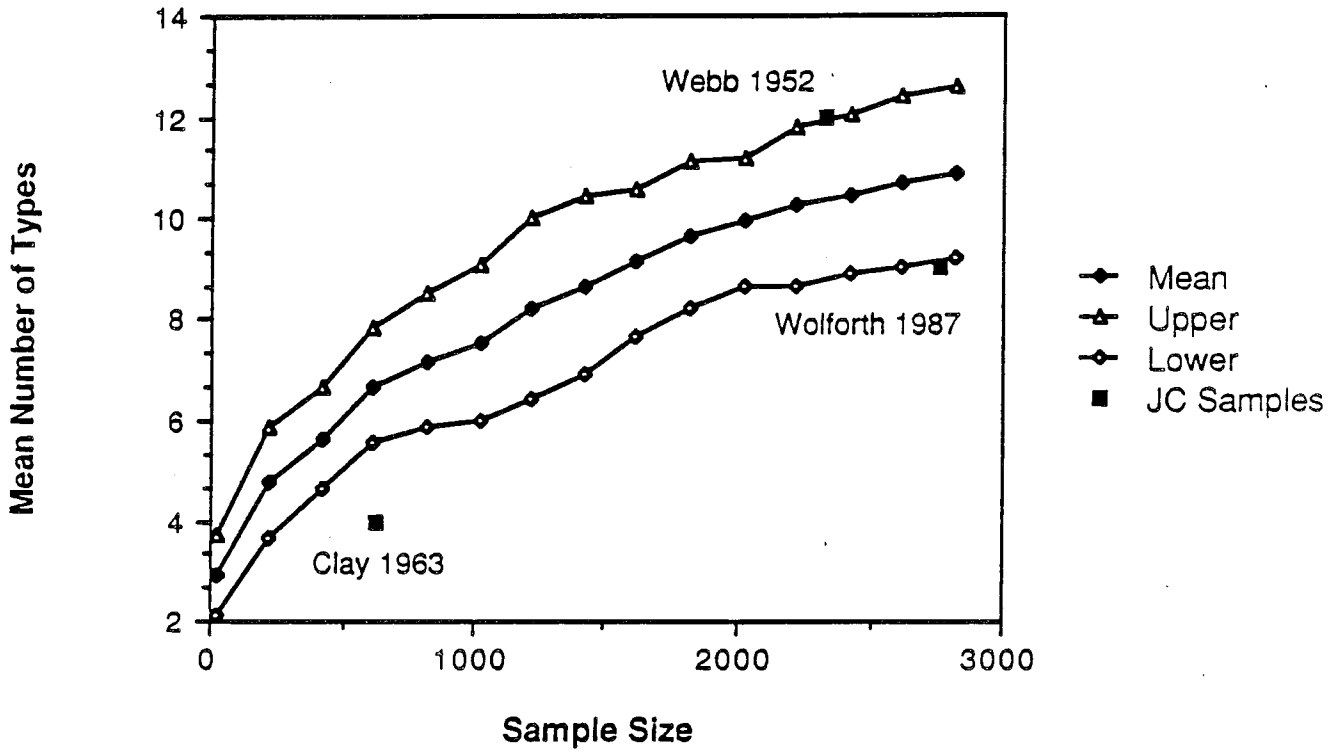

Figure 6. Curve of Expected Diversity, Jonathan Creek ceramics.

In summary, the results of this study indicate that there are virtually no differences between the ceramics from the house-basin structures and the non-basin house structures at Jonathan Creek. This clarifies one question about the depositional history of the site. The six house-basin structures probably do not represent a late Mississippi period Tinsley Hill phase reoccupation of the site. This study also corroborates Clay's 1963 reanalysis of the site's ceramics. The vast majority of the sample analyzed for this paper, as with Clay's sample, consisted of plain ware ceramics. Incised and other decorated types were not identified in either sample. Thus, no changes can be offered with regard to the current regional ceramic sequence. Further research into other uninvestigated parts of the Jonathan Creek artifact collection will be necessary in order to define a Tinsley Hill phase component at this site.

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