

METHODS AND PROBLEMS OF MOUND EXCAVATION  
IN THE SOUTHERN APPALACHIAN AREA

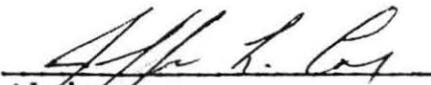
by

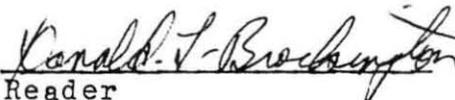
Keith Touton Egloff

A thesis submitted to the faculty of  
the University of North Carolina at  
Chapel Hill in partial fulfillment of  
the requirements for the degree of  
Master of Arts in the Department of  
Anthropology

Chapel Hill  
1971

Approved by:

  
Adviser

  
Reader

  
Reader

TABLE OF CONTENTS

	Page
List of Illustrations	iii
Chapter	
I. INTRODUCTION	1
II. OUTLINE OF METHODS AND PROBLEMS	4
III. HISTORY OF MOUND EXCAVATION	10
IV. COWEETA CREEK SITE, 1965 to 1970	42
V. CONCLUSION	72
Bibliography	81

## LIST OF ILLUSTRATIONS

Figure	Page
1. The Southern Appalachian Area	11
2. Burial Mound Excavation Technique	37
3. Temple Mound Excavation Technique	37
4. Coweeta Creek Site (Ma <sup>0</sup> 34), Contour	44
5. Coweeta Creek Site, Profile	57
6. Coweeta Creek Site, Plan at Subsoil	66
Plate	
I. Structure 1 at Ma <sup>0</sup> 34	48
II. Plow Zone Removed off Structure 1 at Ma <sup>0</sup> 34	48
III. Floor 1 of Structure 1 at Ma <sup>0</sup> 34	50
IV. Floor 2 of Structure 1 at Ma <sup>0</sup> 34	50
V. Floor 3 of Structure 1 at Ma <sup>0</sup> 34	55
VI. Floor 5 of Structure 1 at Ma <sup>0</sup> 34	55
VII. Diagonal Profile (14OR130-13OR140) at Ma <sup>0</sup> 34	59
VIII. Rock Mantle (14OR140) at Ma <sup>0</sup> 34	59
IX. Floor 6 of Structure 1 at Ma <sup>0</sup> 34	64
X. Subsoil of Structure 1 at Ma <sup>0</sup> 34	64
XI. East Profile of 16OR100 at Ma <sup>0</sup> 34	68
XII. Subsoil of 16OR110 at Ma <sup>0</sup> 34	68

Chapter I  
INTRODUCTION

The following paper will discuss the methods and problems of mound excavation in the Southern Appalachian Area, first from a historical perspective and then focusing on the current methods and problems of mound excavation, using as a model a recently excavated temple mound.

There are few publications that attempt to illuminate the problems a student archaeologist faces while applying a particular method of recovery to an archaeological site. Heizer and Graham's A Guide to Archaeological Field Methods illustrates some of the mechanical techniques of excavation, but it glosses over the crucial problems arising from the application of varying methods to diverse situations.

The majority of archaeologists fail to include in their site reports detailed descriptions of their methods of excavation and the problems they encountered. This background information may permit the reader to make a more proper evaluation of the published material. Thus, there is a need to point out to the student archaeologist some of the complex problems which

lie in the otherwise mechanical techniques of excavation. An acquaintance with these problems should help him in his own excavation and in evaluating the work of others.

It is essential for increased understanding that the reader recognizes the association of topics in the paper. First, a general outline of methods and problems will be presented. This should demonstrate the fact that there exist not one, but many sets of procedures and techniques for handling an archaeological site, and that evidence can never be obtained for a complete cultural synthesis. Furthermore, it will become plain that the basis for deriving information on the non-material aspect of culture is correlated to the exactitude of gathering archaeological data.

The following chapter on the history of mound excavation will present the student with an account of how the science of archaeology painfully has grown, not in a vacuum and without structure, but linked with other sciences. A knowledge of past methods and problems should show the origins of the procedures and techniques used in the recent excavation of the model site.

The model site is a Cherokee village with a low temple mound, located in the mountains of western North Carolina along the west bank of the Little Tennessee River. It has been excavated extensively

during the summers from 1965 to 1970 by the Research Laboratories of Anthropology of The University of North Carolina as part of the Cherokee Project under the direction of Joffre L. Coe. A complete description of the methods and problems of excavation from year to year will illustrate the present level of refinement of investigation.

The conclusion will summarize the trends of methods and problems in mound excavation from the first discovery and description of mounds in the early 1800's to the present refinement and innovation of excavation techniques.

## Chapter II

### OUTLINE OF METHODS AND PROBLEMS

For the purpose of this paper there exist three levels of organization of archaeological data analysis: recovery, classification, and explanation. (Willey and Phillips 1958: 4). The goal of this trio in archaeology is to draw the most complete picture of past human life possible at a given site. Although the archaeologist mainly is concerned with methods and problems of data recovery in the field, he must not lose sight, while still in the field, of the importance of later classification and explanation.

Most recovery, classification and explanation are rendered in terms of interpreted units. The archaeologist excavates in spatial units; he classifies artifacts in attribute and type units; and he explains relationships and processes in terms of unitized components, phases, horizons and traditions.

In archaeology the choice of one unit method of excavation over another, keeping in mind later ways of classifying and explaining the material, leaves the archaeologist with a wide range of interpretive possibilities while in the field.

A unit of excavation may be arbitrary with any size grid system and depth of excavated level. Smaller size grid systems are often used in caves and on burial mounds or in any situation where greater accuracy in measurement is needed.

The thickness of the excavated level could affect later interpretations. For example, if a midden deposit of three feet were excavated in two levels, the interpretation of the artifact inventory easily could indicate either no change or radical change. This method may lead to a conclusion of either mass migration or stagnation, two explanations circulated widely in the early literature.

As the number of excavated units increases, within a given amount of space in the midden deposit, the accuracy of excavation and of later interpretation should also increase until a point is reached where too fine a unit of excavation brings no further return of information and is a waste of labor. The more refined method should lead to more refined interpretations.

A unit of excavation may follow the natural delineations and zones of the soil or it may cross them. A unit of excavation that coincides with a sharp delineation in natural unit, such as a discrete house floor, should produce a group of artifacts restricted in context, that may possess a greater reliability

in unit classification and in later interpretation. If a unit of excavation is highly disturbed with postmolds and pits, the artifacts from that unit are less restricted in context and may be less useful in later classification or interpretation.

Since I found from experience that the problems an archaeologist encounters disrupt the desired method of unit excavation, I would like to familiarize the student archaeologist with some of the possible burdensome problems that are forced upon all archaeologists.

A category of problems exists which are not intrinsic to the nature of the site, but which limit the archaeologist. Time and money restrict the size of the investigation, which may range from a full-scale excavation to a short term "hit and run" salvage operation. One may generally say that an archaeologist has to make the choice of gathering a little material meticulously while neglecting the bulk, or to gather as much material as he is able in the time allowed, lessening its potential significance. Both approaches are widely used, and an archaeologist familiar with the methods and problems of one may be ignorant of the methods and problems of the other.

Personnel may either be professionals, inexperienced students, or local unskilled workers. A student worker aspiring to become an archaeologist is blind to most

of the problems of excavation. As he slowly matures, he grows in the knowledge of, appreciation of and respect for the science of archaeology, and his work should attain a higher degree of excellence. In many cases the reader's evaluation of a site report may amount to an assesment of the abilities of the site's field supervisor.

Weather is an often forgotten problem. It restricts archaeological excavation to certain seasons, and quirks of weather, like a prolonged rainy spell, bring work to a dead stop and could set back the time clock of the project.

The second set of problems is intrinsic to the nature of the site. Whether the site is a burial mound or temple mound, rockshelter, shell midden, tidewater or underwater site could affect the total approach of the archaeologist. The topic of this paper is limited to the discussion of burial and temple mounds, with an emphasis on temple mounds.

Location, physiography, and soil condition may create many problems. The location of the site brings into focus transportation problems -- the movement of crew and supplies to and from the site. The physiography of the area controls the erosional and depositional activities at a site. These activities could destroy the cogency of most distributional studies performed on artifacts, and conceal cultural interpretations.

Seldom is soil ideally suited for excavating and sifting. It is often dry and hard or wet and mucky. The soil is either sandy, which facilitates the caving in of profiles, but which is easier to dig; or it is hard to dig, like clay, but ideal for preserving a recognizable outline of intrusive pits and postmolds. Soil types have their advantages and disadvantages, and they may influence the exactness and the time spent in excavation.

The preservation and distributional context of material in the ground may create problems that direct the method employed by the archaeologist. The perishable nature of most cultural remains leaves the archaeologist with less material to work with as time passes. Lithic and ceramic artifacts may be preserved at some sites, while other sites may also have structural remains and charred remains of matting, cordage, and baskets. The greater potential of the latter type of site becomes manifested only if the investigator employs the proper method of excavation.

The distributional context of aboriginal material from a stratified site may portray either a long period of time with possible degrees of mixture and contamination between levels, or a short-term single component site with a homogeneous deposit of material.

Both type of sites are needed to interpret prehistory, and both pose their own problems of excavation.

Lastly, there is the problem of balancing, while in the field, the intended aims of the project with present results. It may happen that newly collected data or a pressing new problem will necessitate a slight change in the unit method of excavation or in overall approach. This is why it is best for archaeologists to try to bridge the gap between recovery of material and interpretation of that material while still in the field.

Permutations of any of the above problems and methods may produce entirely unique situations. This is why it is best to have a unified approach to excavation, but it is important not to freeze the method into uniformity.

We must realize that methods and problems of archaeological excavation are best taught and learned in the field by example. This fact makes it difficult to teach methods and problems to a person who has no point of reference from prior field experience. As a student archaeologist reads this paper or any other archaeological report, he should be aware of some of the methods and problems stated or hidden that affect and perplex archaeologists from before they first break ground until the final report is finished.

### Chapter III

#### HISTORY OF MOUND EXCAVATION IN SOUTHERN APPALACHIA

For the purpose of this paper the Southern Appalachian Area encompasses western North Carolina, the adjacent section of eastern Tennessee, northwest South Carolina, and north Georgia (Fig. 1).

It is not the intent of this chapter to give an exhaustive listing and description of all mound excavation in this area, but to familiarize the student archaeologist with a few of the influential men who excavated important mound sites, and to provide the student with the opportunity to evaluate various methods of unit excavation.

In order to evaluate an excavator's method, one should balance the purpose of the excavation against the methods employed, keeping in mind the level of refinement of methods at that period, and see whether or not the methods from the excavator's frame of reference achieved the desired purpose.

The earliest period of mound investigation, 1784 to 1850, does not exist in documented form in the Southern Appalachian Area. In order to illustrate this fascinating period of mound excavation, I was

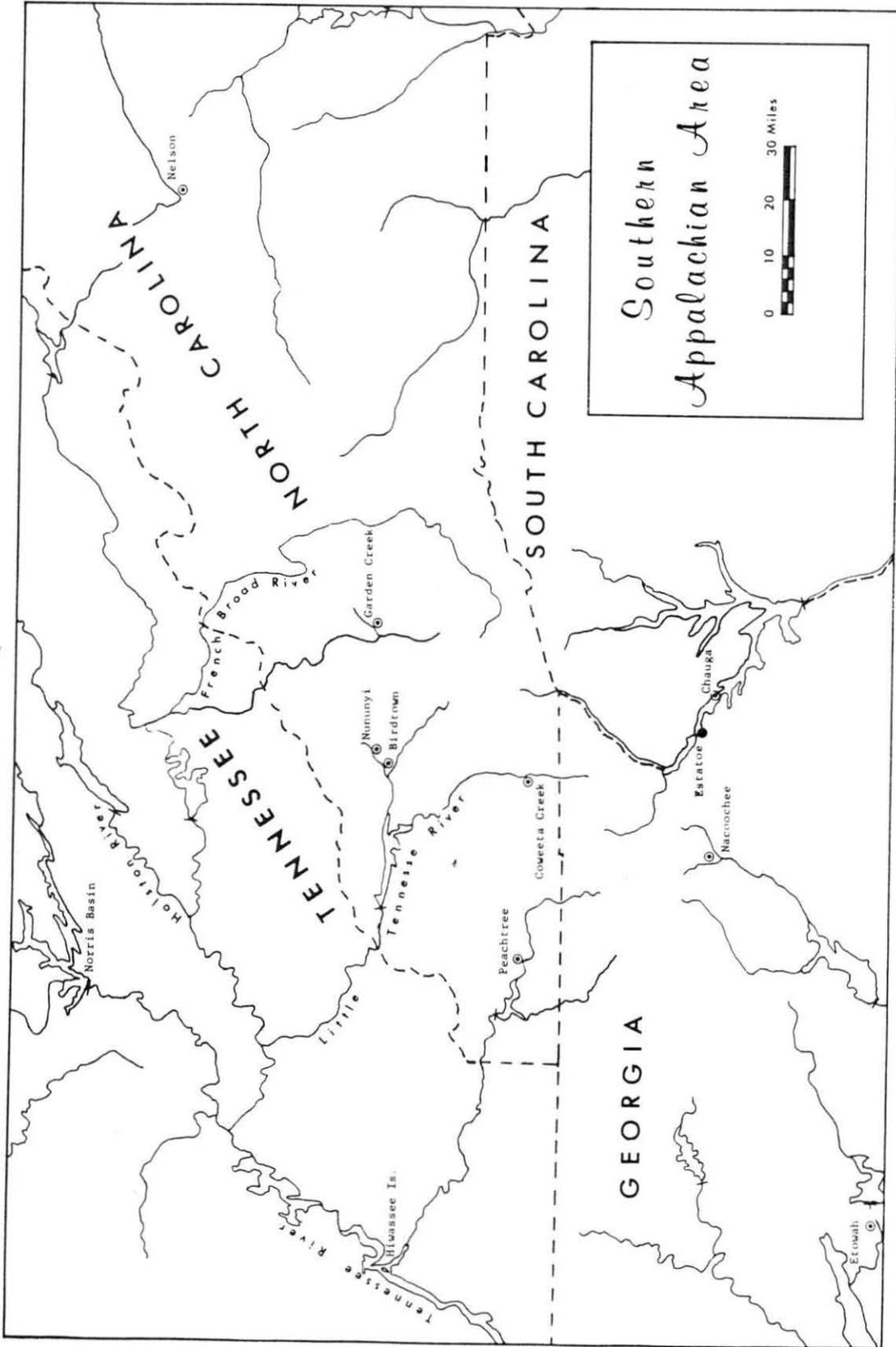


Figure 1

forced to gather the material from accounts of mound exploration in Virginia and in the upper Mississippi Valley.

Thomas Jefferson, 1784

Thomas Jefferson in 1784 decided to open and examine thoroughly one of the "borrows" in his immediate neighborhood in Virginia. He wished to satisfy his curiosity whether any of the numerous opinions about their origin and use were correct.

He first dug superficially in several parts of the mound, encountering utterly confused and widely scattered human bone.

I proceeded then to make a perpendicular cut through the body of the borrow, that I might examine its internal structure. This passed about three feet from its center, was opened to the former surface of the earth, and was wide enough for a man to walk through and examine its sides (Jefferson 1955:99).

From his exploration Thomas Jefferson concluded that bones were periodically collected and placed upon the surface of the mound and covered with a new layer of earth. He was able to distinguish different strata, and in that sense he recognized stratigraphy; but at this period in time stratigraphy was not yet employed or even acknowledged as a possible scientific tool for explaining either earth or cultural history.

Squier and Davis, 1845 to 1847

E. G. Squier and E. H. Davis started exploring the southern Ohio region in 1845 and continued expanding the investigation over surrounding states until 1847. They described and mapped over 100 ancient enclosures and groups of works and excavated about 200 mounds. They revealed numerous errors in Atwater's chain survey work in 1820, which under their advantages of research they found inexcusable.

The purpose of the exploration by Squier and Davis was twofold. First, they wanted to determine whether or not the mounds were similar in construction and possessed a common origin. They desired to arrive at the truth without crude speculation and wild conjectures. A second purpose was to describe the ancient earthworks before natural elements and encroachment of agriculture destroy them all.

In order to understand mound construction, they divided all earthworks into five categories: enclosures for defense, mounds of sacrifice, temple mounds, mounds of sepulture, and sacred and miscellaneous enclosures. The usual method of unit excavation was to sink a shaft from the apex to the base of the mound. At that time no one believed it possible to ascertain the history of construction of each mound through careful excavation.

Their resulting hypotheses were inconsistent with their results from fieldwork. They stated, reinforcing the general opinion at that time, that all earthworks are essentially homogeneous, representing one great nation with its homeland in the Mississippi Valley.

The "nation" possessed a high culture and an exceedingly dense population supported by maize agriculture. The "nation" was thought to be exceedingly old as proven by the virgin timber and mouldering remains of still older trees lying over the mounds, and by the fact that most mounds are located, when near rivers, on the highest and oldest terrace.

Edward Valentine, 1880 to 1883

The Valentine Museum of Richmond, Virginia, conducted the earliest record exploration and mound excavation in western North Carolina.

A. J. Osborne, a local postmaster, bought relics and located rich mound sites for the museum. Osborne first excavated in 1880 the Smather's Mound in Haywood County near Garden Creek. The excavation consisted of a pit sunk like a well shaft near the center of the 7 foot high mound. A series of three superimposed burials were drilled through. When the mound was totally excavated in 1966 by the Research Laboratories of Anthropology of The University of North Carolina,

two intrusive pits were discovered, both possibly dug by Osborne.

With the aid of McComb in late 1880, Osborne cut six separate trenches into the side of McComb's mound (later called Peachtree), which stood approximately 15 feet high with a diameter of 118 feet. Several of the 10 foot wide trenches were carried 20 feet towards the center of the mound and excavated to subsoil.

In 1883 the visiting Edward P. Valentine excavated the Birdtown Mound located in Swain County along the Oconaluftee River. He hired a gang of ten local Indians to excavate the mound in one week; it measured roughly 100 feet across by 8 feet high. In a letter home he writes

The Indians were waiting for us when we arrived and after photographing the mound with the Indians upon it we commenced digging a trench 4 1/2 ft. wide from the outer rim with the intention of carrying the trench all round the mound then another around it - and another, until at length the core was reached, and then the whole mound would be opened (Valentine's personal letter dated to July 16, 1883).

Later in the letter Valentine mentions being unable to obtain permission from Mr. Plott to open the mounds on his property, located near the previously tested Smather's Mound; but Valentine felt that "in the course of time he will, provided we give him money enough." Fortunately, his means of persuasion failed

and one of the mounds was later excavated by the Heye Foundation in 1915, and the other by the Research Laboratories of Anthropology at Chapel Hill from 1965 to 1967.

Valentine partially excavated the Sawnook Mound in Swain County. The mound is now called Nununyi. He cut across the center of the mound with two trenches meeting at right angles. One bisected half of the mound was further excavated at its periphery with a circular trench.

The Valentine Museum initiated excavations as thorough, and possibly more so, than succeeding excavations sponsored either by other private museums or by the government. Valentine drew rough sketches of the mound, illustrating his method of unit excavation; he kept notes of interesting structural features; and he listed and described the artifacts uncovered, including broken artifacts, animal bone and larger potsherds -- material discarded by other people at this period of time.

#### Cyrus Thomas, 1882 to 1890

In 1882 a small division of the Bureau of American Ethnology was assigned the work of investigating, under the directing of Cyrus Thomas, all mounds and earthworks in the United States east of the Rocky Mountains, to determine whether they should be

attributed to an extinct race of people or to the race found at the time of discovery.

Since more than 2,000 earthworks were scattered over a vast region with little money available to explore them,

...a plan was adopted which comprises the advantages of thoroughness in the case of single mounds and single groups, and yet permits the work to be carried over a large area.

First, a full and correct description of the groups examined, giving the topography of the immediate locality, the form, characters, and dimensions of the works and their relations to one another was written out, accompanied by diagrams and figures illustrating these descriptions.

As a rule each mound explored was measured before being excavated, and, if it varied from the ordinary conical type, a figure of it was made. As the exploration proceeded the character and thickness of the strata and the exact position of the skeletons and relics found in them were noted in a memorandum book. In many cases where there was promise of important finds, outline figures, both of the horizontal and vertical sections, were drawn on which the position of the skeletons and relics were marked as found.

Every effort possible was made at the time of collection to obtain all the facts in reference to each specimen. The assistants made full notes in the field and attached a number to each specimen before packing and shipping (Thomas 1894:22).

In eastern Tennessee J. W. Emmert, who had been employed temporarily, was engaged as a regular assistant in 1885. Cyrus Thomas received information of field exploration from Emmert and others by way of letters. Thomas possessed no first hand knowledge of

the field work he wrote about; and Emmert, as knowledgeable as any of Thomas's assistants, was far from being a professional archaeologist.

The exploration by Emmert consisted of locating and mapping over 125 mounds and testing or completely excavating about 75 of them. The wide area explored covered ten counties along the Tennessee, French Broad, Holston, and Little Tennessee rivers. There was no indication of the time spent or the labor needed in such an immense operation.

Minimal information is included in the final report of the actual method of unit excavation employed in investigating each mound. There are only a few incidental statements noting that a 10 foot wide trench was carried through the center of the mound down to original soil, or that excavations started at one side of the mound and progressed in vertical slices through the mound.

Since Emmert did trench through the mounds he was not totally insensitive to changes in color and nature of soil. He noticed, because of the difficulty of picking through them, fired clay layers 6 to 8 inches in thickness extending horizontally over the top of the mound, and circular basins of fired clay 3 to 6 feet in diameter.

The only proof of a structure or structures occurred at Jackson Farm near Lenoir City, when a number of charred posts 18 inches in diameter and 2 to 3 feet in length were found at about the same level in a mound.

In general, Emmert tended to take note only of features with unique physical properties that made it all but impossible for them to be overlooked.

Emmert made no attempt to collect broken artifacts, flint chips, potsherds, animal bone or most human bone. Celts, whole and partially crushed pots, discoidals, shell ornaments, and skulls (if they could be lifted with the hands) were the only material collected.

Besides his work in eastern Tennessee, Emmert recorded and excavated six mounds in Haywood, Buncombe, and Henderson counties in western North Carolina.

John P. Rogan, another field assistant to Cyrus Thomas, explored Caldwell, Burke and Wilkes counties in western North Carolina in 1883. Little is known of the method of unit excavation used to investigate the unique Nelson Mound located on the Yadkin River. The mound was low and circular and covered a shallow pit. Rogan stated that "The bottom and sides of the pit were so distinctly marked that they could be traced without difficulty" (Thomas 1887:63). In the pit Rogan uncovered eleven bee-hived shaped stone graves;

the largest grave located in the middle, covering a hole 3 feet deep in which a skeleton, according to Rogan, was placed vertically upon its feet.

Clarence Moore, 1915

Clarence Moore explored the Tennessee River in two trips between the months of January and April of the years 1914 and 1915. The section of the Tennessee River upon which we will focus our attention lies in eastern Tennessee between Hiwassee Island and Knoxville. Moore tested thirty mounds and described many more along this short stretch of the river.

He explains how the way was prepared for him by one of his assistants.

The whole river was carefully searched in advance of our coming by Mr. J. S. Roybon (who later commanded the steamboat during the period of our archaeological work on Tennessee River) and a companion, in the summer of 1913, and by them the exact situation of mounds and dwelling sites was determined, with the names and addresses of their owners, to whom requests for permission to investigate were sent by us (Moore 1918:180).

Moore patented a method of unit excavation that amounted in its entirety to attacking the center of the mound with a 12 foot square dug to sterile soil. He deviated from the method only when trees forced him to excavate off center. Sometimes he would excavate a series of test pits scattered over the top of the mound; or, if the mound was made of clay mixed freely with sand, a "sounding-rod" could be employed to find the burial pits.

Moore included no sketches or photographs of mounds, burials, or profiles in his publication. Estimated dimensions of the mounds and their present owners were recorded. Great effort went into describing each burial, and the best selection of associated artifacts were described and illustrated.

Moore, having excavated throughout the southeast, was especially dismayed and dejected by the low quantity of imperishable material placed in the burials of the aborigines of this region.

Stone graves in any part of the country, it may be said, resemble a lottery: one hears of the isolated winners but not of the legions who drew blanks . . . (Moore 1918:178).

For twenty-five years from 1890 to 1915 Clarence B. Moore explored along many of the major river basins of the southeast in his steamboat, Copher, and excavated or tested more mounds than anyone else. His method of unit excavation did not improve throughout the entire period, but became totally embodied in a 12 foot square dug to sterile soil.

George Heye, 1915

George G. Heye, founder of the Museum of the American Indian in New York City, excavated in the summer of 1915 the Nacoochee Mound, located in northeastern Georgia in the Nacoochee Valley between the Santee and Soquee creeks. The leveling of the top of the mound for the erection of a summer house and the

planting of a garden had taken 3 feet off of the estimated height of 20 feet recorded in 1870 by C. C. Jones.

One reason for excavating this mound was the recognition that it was the site of a town house, thought to represent the town of Guasili, through which De Soto traveled in his journey. It was impossible to remove the entire mound because of (1) excessive rainfall that summer, and (2) not obtaining concession from the owner for the resumption of the work in the following summer. Mr. Heye explained that

. . . the excavation of the Nacoochee mound was commenced at the summit by the removal of a stratum of the soil four feet deep, excepting the middle part occupied by the summer-house. This finished, a second stratum of four feet was removed, and so on until, at the eastern side, it was possible to reach the very base of the tumulus without danger to the workmen by caving of the bank (Heye 1918:18).

Once the height of the mound had been sufficiently reduced, vertical slices were excavated from the east and west sides of the mound.

Meticulous excavation could be conducted by Heye if he so desired. The wooden handle of a copper axe and cane matting, located above the copper axe and preserved by its copper salts, were carefully uncovered (Heye 1918:Plates VII, VIII).

Heye possessed the mental faculty and attitudes that not only led to greater detail and accuracy in

the recording of the stratigraphy of the mound than ever occurred before, but utilized this data to hypothesize periodic building up and widening of the mound with two main building stages being represented. He noted that hearths and burials, scattered throughout the mound, showed that the mound had been formed by gradual accretion.

Heye noted a slight change in artifact inventory between the bottom and uppermost levels, indicating a possible change in the culture of the inhabitants.

Not only did Heye take the time and effort to collect potsherds, he classified them into three groups -- straight-line, rectilinear, and curvilinear patterns -- and attempted a distributional study, but he found that all three types occurred throughout the mound.

Heye excavated two mounds in Haywood County, North Carolina, in the spring of 1915. The first, the James Plott Mound, located near Garden Creek, was approximately 13 feet in height. Heye employed no grid system, the mound being sliced in tiers from one side to the other, keeping relatively straight and vertical profiles. Heye noticed two strata of soil separated by a layer of stones that dipped when it reached the center of the mound.

The second mound, located in the front yard of T. D. Singleton of Bethel, was low and circular.

Heye started the excavation on the road side of the mound and progressed through it, detecting no stratigraphy but finding one slightly crushed vessel in the center.

Harrington, 1919

M. R. Harrington between August and December of 1919 directed the work of exploration confined to the section of the Tennessee River lying between the tributaries of the Little Tennessee and Hiwassee rivers.

Harrington procured a suitable houseboat at Knoxville, and having lost time in trying to catch the cook who ran off with all their money and in navigating the treacherous rapids past jagged rocks, made his first landing at a group of mounds near Lenoir City at the confluence of the Little Tennessee with the Tennessee River.

Harrington commented on Emmert's excavation technique of mounds near Lenoir City.

Our excavation revealed the fact that his opening of the last two consisted in sinking a small shaft in the center of each, and that his 'excavation' of the first means that he had driven a trench from one side of the tumulus to a point just beyond its center . . . (Harrington 1922:36).

Harrington later questioned Emmert's accuracy in recording burials on Bussell's Island at Lenoir City. He found it extraordinary that

. . . all but 2 of the 81 skeletons which Emmert found in these mounds are recorded as having lain in an extended position, whereas of our 34, apparently representing the same people and period, and found in the immediate vicinity, everyone was flexed except for 2 . . . (Harrington 1922:72).

The methods of unit excavation Harrington employed had improved little since the time of Emmert. Harrington tested a mound with shafts dug with corners and parallel sides, while his excavation of a mound consisted of starting at one side and ending up at the other.

However, Harrington did take greater care in noting stratigraphy. He realized that evidence for the later stages of mound construction that had been plowed off the top could be found protected along the flanks of the mound.

Harrington also recognized the importance of stratigraphy at the Great Midden on Bussell's Island. Although he could find no distinct stratification in the midden, in places 6 feet thick, he did note a gradual change in artifact inventory and types of burial forms from bottom to top. The material at this site formed the bases for this three fold chronological division of "Round Grave," "Pre-Cherokee," and "Cherokee" cultures.

Throughout the publication there are many photographs of burials, not only showing a disregard

for neatness but illustrating how the burials tended to control the expansion and direction of excavation with little regard for maintaining any type of systematic order.

Harrington next visited Hiwassee Island; where, due to lack of time, he totally excavated only one mound and tested with either a trench or pit four other mounds.

Harrington detected in his fifth mound at Hiwassee Island alternate layers of yellow-brown clay and mussel shell, indicating five stages of mound construction. This is another case of where stratigraphy was all but impossible not to notice.

#### Moorehead, 1925

Warren King Moorehead during the three winters from 1925 to 1927 explored Mound C and the adjacent village area of the Etowah Mound Group, located on the north bank of the Etowah River three miles southeast of Catersville, Georgia.

When Moorehead first arrived in 1925 he engaged a local engineer to survey the entire Etowah group, while he tested Mound C with a pit dug near the center of the mound. The mound was 21 feet high with a summit diameter of 80 feet. At a depth of 11 feet he encountered a slab stone burial. After that his quest for burials began in earnest.

Moorehead started the excavation of Mound C by staking off

. . . the western portion of the mound into 5 foot squares and began work, extending our trench some 60 feet north and south, working directly eastward for a distance of about 50 feet (Moorehead 1932:6).

Moorehead drew ground plans and cross sections of the mound, showing placement of burials and a few concentrations of rocks. He completely ignored all structural features of the mound.

Moorehead admits that his plan of Mound C may contain a few errors. These were mainly due to the necessity of pulling up the grid stakes each April and covering the excavated pit so that the owner could plant crops in the spring on the top of the mound. He felt the resulting error is insignificant:

Since all burials were encompassed within a space of less than 200 feet diameter, it really does not matter if skeleton K14 is entered on the map 4 feet away from the position in which he was originally placed by his friends (Moorehead 1932:72)'.

Moorehead subsequently criticized Cyrus Thomas and Rogan for erroneous statements in their final report in 1894 of the Etowah Mound Group, but felt that this was permissible since archaeological methods then were not so highly developed and exact as they were in 1925.

Moorehead's highly developed and exact methods are well hidden in the several photographs of Mound C in his publication. A pattern of large white stakes is readily distinguishable, although the excavation itself is rather random and conforms to the grid system in only a superficial manner. The single overall photograph of the village excavation, in a large open field covered with a light snow fall, looks like the bleak crater-marked surface of the moon.

Moorehead utilized a team of horses and a scraper for the removal of not only backdirt, but also for the excavation of parts of the mound. Moorehead deliberately sunk numerous auger holes in the edge of the mound and in all areas of the mound not thoroughly excavated, in order to discover any overlooked burials.

Moorehead's knowledge of methods of unit excavation are a culmination of years of experience dating back to 1892 when he initiated excavation on the Hopewell Mound Group in Ohio. Unfortunately, most archaeologists in the Ohio Valley throughout this period employed somewhat the same level of refinement in methods of excavation as did Moorehead, when investigating Hopewell and Adena mounds.

Antonio J. Waring sums up the work by Moorehead at Etowah when he writes

During 1927 and 1928 Warren K. Moorehead and his assistants virtually destroyed Mound C. It was in this remarkable and irreplaceable structure that Rogan had found the famous Etowah Copper Plates. Moorehead attacked it with all the discredited archaeological techniques of the last century, using undercutting, caving, horse scrapers, augers, and probes. His efforts resulted in the accumulation of a striking collection of ceremonial objects relating to the late Southern Cult, but he destroyed forever the context in which they were deposited (Waring 1968:294).

#### Peachtree Mound, 1933

The excavation of Peachtree Mound, located 5 1/2 miles east of Murphy in Cherokee County, North Carolina began in December 21, 1933 and ended April 1, 1934. Jesse D. Jennings, a graduate student at the University of Chicago who learned his excavation techniques while working on sites in Fulton County, Illinois, directed the excavation of the mound. His theory of methods of unit excavation are similar to those described by Fay-Copper Cole and Thorne Deuel in Rediscovering Illinois.

There were three reasons for the excavation of Peachtree Mound: 1) to determine whether it is Guasili of De Soto's travels, 2) to provide perhaps some stratification in the heart of Cherokee country, and 3) to provide employment during the depression for the unemployed under the provisions of the Civil Works Administration.

Jennings first staked out a 10 foot grid system across the entire surface of the mound. Then, because of the large number of men furnished by the CWA, he started the excavation trenches on three sides of the mound. After the trenches were cut down rapidly to undisturbed soil, Jennings changed the technique to vertical slicing, progressing towards the center of the mound from all three sides. When the slicing face became too high, he terraced and removed the soil in two or more arbitrary levels.

Jennings made no comment about the qualifications of his 104 nonprofessional workers; but Robert Wauchope, working in the late 1930's in north Georgia with Work Projects Administration assistance, observed that often the work was performed in a spirit of light-hearted irresponsibility and incomprehension (Wauchope 1966:vii-xviii). He maintained that good archaeology cannot be mass-produced with a crew of largely nonprofessional workers and supervisors.

As the excavation of the mound progressed, it quickly became evident to Jennings that two natural strata, mound and premound, existed; and the material from each strata Jennings kept separate. He noted three building stages over the original structure of stone and wood. The uppermost stage contained three

fired clay floors. Jennings found them cementlike in hardness and the soil above them cleaved off readily. The floors were probably those of buildings, but the method of vertical slicing hindered the recognition of any regularly spaced postmold pattern. The primary and secondary stages held two series of log stairways or ramps with the log molds filled with sand.

The earlier Valentine excavation had obliterated a great deal of the evidence of the top floors, and the crazy outline of his pits, illustrated in Jennings's report, leads one to imagine that they made excursions and followed burials outside of their trench lines.

The structure of stone and wood, Feature 29, laid upon a prepared floor under the primary mound. There existed a dip in the surface of the primary mound directly over the feature, indicating a collapse thought to be caused by pressure rather than fire.

Jennings first isolated the structure on all four sides down to subsoil, and then removed the soil horizontally over the stones. The middle section of the structure he uncovered next, removing the stones and excavating to subsoil. He left a block standing in the exact center of the feature to aid in excavation by showing stratigraphy. The periphery of the structure along with the central block he removed last.

Apparently, Jennings did not excavate the entire mound, although he makes no mention of this fact in the report. The evidence for this is found on the horizontal plot sheets where a 70 by 40 foot blank area is indicated near the center of the mound.

#### Norris Basin, 1934

Exploration in Norris Basin, that area which was soon to be flooded by the Norris Dam on the Clinch River in eastern Tennessee, began on January 8, 1934 and lasted until March 1934. William S. Webb, a physicist by training from the University of Kentucky, was the technical supervisor of the project. The Civil Works Administration and the Federal Emergency Relief Administration supplied the labor in the field for investigating 23 sites, including 29 mounds of which 12 were burial and 17 were associated with prehistoric structures.

Webb first staked the mound in a grid system of either 10 foot or 5 foot squares, depending upon whether it appeared to be a temple or a burial mound. In both cases the initial method of excavation was identical. Tier after tier of squares Webb excavated down to hardpan, starting from one or more sides of the mound, until the center of the mound was left standing like a block.

If the tumulus was a burial mound, for example the Taylor Farm Mound, the central block of squares continued to be excavated down to hardpan in vertical slices. In this case Webb noticed no burial pits, and it was inferred that soil additions covered each new burial laid upon the surface of the mound.

If the mound was a temple mound, with a series of superimposed structures, the method of unit excavation changed from vertical trenching to horizontal "topping." In the case of the Bowman Farm Mound, when the trenching had reached a certain point

. . . a series of post molds was encountered which clearly represented a secondary floor. Slicing was discontinued at this point and the portion of the mound above the secondary floor was removed in an attempt to ascertain the nature and extent of this secondary structure (Webb 1938:16).

The remainder of the mound, forming the other three sides of the structure, Webb then excavated as to form four faces aligned with the four walls of the secondary structure. This technique of excavation left a rectangular residue block in the center of the mound which was carefully studied for evidence of stratification.

After the secondary floor had been plotted and photographed, workmen were stationed around the outer edges of the vertical block of earth supporting the secondary floor and told to remove the earth in 1-foot stages (Webb 1938:19).

Covering the entire surface of the primary floor, Webb discovered the burnt remains of a collapsed structure, consisting of charred remains of logs, split cane and grass thatching. These remains were isolated, excavated and then discarded; although some of the charred logs or better preserved cedar posts were saved for tree ring dating. Webb uncovered a low clay altar resting on the middle of the floor, and against one wall a clay seat, which was partially damaged by workmen before its nature was discovered.

Crucial to the distinction between small-log and large-log houses, which Webb formulated for this area, is a thorough method of excavating the wall trenches and postmold patterns of the structure.

At the Irvin Village Site

A trench some 2 feet wide and 3 feet deep was excavated outside the line of post molds, to give an opportunity for studying the construction of the building (Webb 1938:47).

Webb even excavated notches into the wall trenches to more clearly illustrate their composition, which would then give clues as to the superstructure of the house.

## Hiwassee Island, 1937

The excavation of Hiwassee Island, under the supervision of Charles H. Nash and assisted by Wendell C. Walker and Charles H. Fairbanks, started in April, 1937, and continued without interruption to March, 1939. Hiwassee Island is located in the channel of the Tennessee River in Meigs County, Tennessee. The Work Projects Administration provided the labor for the project.

The theoretical method of unit excavation employed to investigate the conoidal burial mounds is described below (Fig. 2).

Excavation was begun from both the north and south sides and carried forward to within one foot of either side of the east-west axis. This final 2-foot vertical section was used to check all profiles previously recorded at 5-foot intervals (Lewis and Kneberg 1946:22).

As the excavation proceeded, Nash decided to maintain a standing 2-foot profile along both axis. The student may wonder if he employed arbitrary levels, and if the soil was screened.

Nash excavated five conoidal burial mounds in this manner, disclosing that the mounds were definitely accretive in nature with layers of mussel shell between dirt fill.

Nowhere in the entire publication is there a description of actual excavation techniques or of

the problems encountered. The student must infer this information from the photographs in the publication.

One photograph shows a conoidal burial mound, Unit 42, half excavated, leaving one neat vertical profile displaying stratigraphy and an intrusive burial pit. A 2-foot vertical section was not left along the other axis, and the backdirt was removed to the previously excavated cut, a shovel's throw away (Lewis and Kneberg 1946:Plate 29).

Lewis and Kneberg presented a hypothetical example to illustrate the excavation techniques applied to Unit 37, a large truncated temple mound.

It has been customary for us to stake off a grid system in 10-foot squares upon the surface of this type of mound and carry four test trenches 5 feet in width into the mound along the coordinate axes from points beyond the periphery (Lewis and Kneberg 1946:29).

In order to avoid unnecessary destruction the trench is stepped up at point D to the top of the deposit (Fig. 3).

The trench is then carried forward upon the surface of this deposit until the summit of Phase C becomes apparent on the side and end profiles, whereupon the trench is stepped up to the level of that summit and carried forward until the summit of Phases A and B are reached.

When the completed coordinate trenches intersect on the summit of Phase A, the resulting four quadrants of humic mantle are then removed. Subsequent to the recording of architectural and other evidence present upon the summit, the test trenches are then carried down through the fill of Phase A to the summit of Phase B.

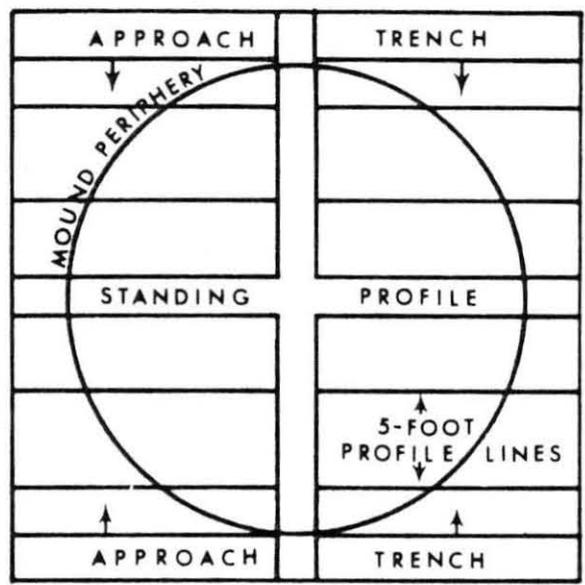


FIGURE 2

Diagram of Burial Mound Excavation Technique  
(Lewis and Kneberg 1946: 22)

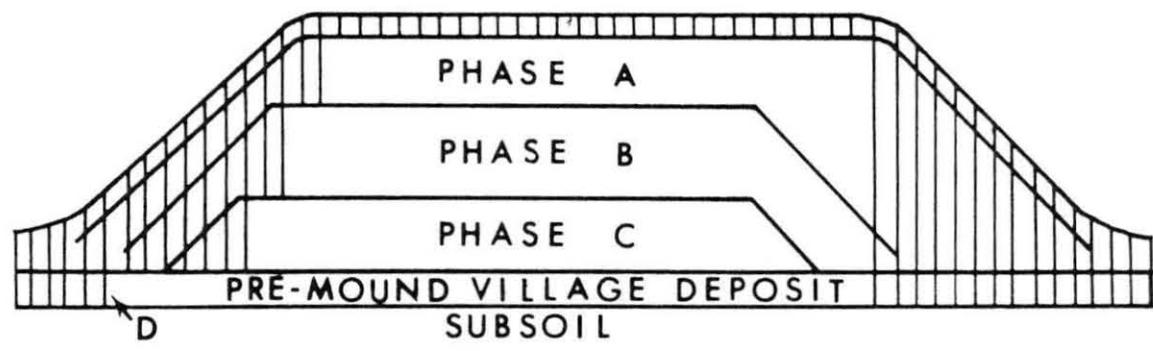


FIGURE 3

Diagram of Substructure Mound Excavation Technique  
(Lewis and Kneberg 1946: 29)

The profiles of both the north-south and east-west coordinate trenches are recorded phase by phase until the excavation of the mound has been completed. These profiles serve as a control for the horizontal stripping of the fill from the summit and for the removal of the fill of the side slopes.

. . .this combination of vertical and horizontal excavation made it possible to obtain a complete series of vertical profiles along the north-south and east-west axes, and to expose an entire building level at one time (Lewis and Kneberg 1946:29).

Eight building stages, each utilized as a foundation for two or more buildings, were distinguishable in the fill of the large temple mound, Unit 37. This superposition of building stages

. . .furnished an important means of separating culture-indicative materials into temporarily sequent series, since the fill used in the construction of each successive phase contained refuse previously discarded in the village. Thus, the fill of any particular phase included types of artifacts from all earlier occupation (Lewis and Kneberg 1946:30).

The sorting of archaeological remains in accordance with the stratigraphy of the temple mound led to the theory of at least three separate periods of occupation: the Hamilton Focus, a Woodland manifestation, followed by the Hiwassee Island and Dallas Focus, both divisions of the Mississippian.

Nash exposed each level of the mound as a unit with many of the structural features like altars, seats, hearths, and postmold patterns being left in place to show their spatial relationship in the

overall photograph. The photographs and horizontal drawings in the publication complement each other well. The photographs provide the needed three dimensional form to the drawings, and they, in turn, provide necessary details to the overall photographs.

#### Estatoe and Chauga, 1959

Estatoe, an important lower Cherokee settlement on the Tugalo River in northwest Georgia (area now flooded by the Hartwell Reservoir), was excavated from April 1959 through the summer and fall of the same year. The purpose of the excavation, conducted by A. R. Kelly and Clemens de Baillou, was to check the superimposed building levels reported by Carl Miller in 1958.

They first cleared Miller's backfilled central excavation, and after restudying the exposed profiles found the same as what Miller reported. The reopening of a backfilled pit in a mound, in order to study the profiles and structure of the tumulus, is an excellent first step in any mound excavation since professionally and nonprofessionally dug pits are common to all mounds.

The beginning operation consisted of removing plow zone and uncovering a rock strewn area above the superimposed building levels. Next, Kelly and de Baillou laid out a 10 foot grid system, incorporating

Miller's original ten foot test square.

The rocks, forming a four leaf clover in configuration, were removed and the floor underneath was carefully troweled, revealing supernumerary postmolds, patched or repaired floor sections, and large corner support posts which seemed to have been reused for each succeeding structure. A plane table was used to record everything, and the large posts were assigned feature numbers and probably removed separately from the general excavation.

Kelly and de Baillou obtained detailed floor plans of each of the five structures, presumably by using the profiles of Miller's pit as a guide and peeling back each floor carefully with trowels.

They acquired an indication of later stages of construction that covered the rock mantle by studying the protected flanks of the mound, and by noting historic material in the mound slump surrounding the tumulus.

The student by viewing the only photograph in the publication may observe that the squares at the periphery of the mound were excavated deeper at first, thereby partially isolating the main series of structures.

A. R. Kelly and R. S. Neitzel in 1959 excavated the Chauga Site, located across the Tugalo River in South Carolina.

They first oriented a grid system of 10 foot squares to the cardinal directions, and produced a contour map of the mound.

Four coordinate trenches, ten feet wide, were begun at the base lines of the primary grid. Complete profiles were drawn from both panels, east to west, and north to south. As excavation progressed profiles were constructed from north to south and east to west for each 10 ft. profile in the core of the mound (Kelly and Neitzel 1961:8).

Combined vertical and horizontal cuts were utilized in carrying out complete excavation once the problems of mound superimposition became apparent in the coordinate trench profiles (Kelly and Neitzel 1961:9).

No less than eleven nonprofessional pits, gouged out of the mound, made for frustrating interpretation of what intact soil record was left. The excavators were forced to examine closely the relatively undisturbed mound flanks. From studying what undisturbed cross-sections they could obtain, the authors suggested anywhere from a seven to ten stage series of mound construction.

The following chapter, describing the methods of unit excavation employed at the model site, will complete the illustration of the gradual refinement in methods and problems of mound excavation from 1784 to the present.

## Chapter IV

### COWEETA CREEK, 1965 to 1970

The Coweeta Creek site, Ma<sup>o</sup>34, is a late prehistoric and early historic Cherokee village, situated just north of the place where Coweeta Creek joins the Little Tennessee River. The site consists of a low temple mound and surrounding village area on a slight rise in the flood plain of the Little Tennessee River.

I chose Coweeta Creek as the model site, not because the mound was excavated perfectly in accord with all ideal techniques of investigation, but for two other reasons. First, I am intimately familiar with the site, having worked there during the three summers from 1968 through 1970. Secondly, the investigation of the site presents an excellent opportunity to study, in principle and in actuality, the methods and problems of mound excavation encountered by one research institution over a period of six years.

A description of excavation from year to year will illustrate the methods employed and the problems encountered in investigating the temple mound site.

1965

Surface collections, which were previously obtained, indicated that the vast majority of the ceramic material from Ma<sup>o</sup>34 was deposited during the early period of European contact. Woodland ceramic types and Archaic projectile points occurred rarely. No mound could then be detected. The investigation, consisting of testing a restricted area for no more than three to four weeks, was to be a small part of the larger Cherokee Project.

The work began on July 20, 1965 when a 10-foot grid system, capable of expanding in any direction, was laid out in accord with the cardinal directions on the top of a slight rise in the field (Fig. 4). Vertical control was maintained by a datum point established a short distance from the area to be excavated.

A number of basic preliminary jobs were performed the first summer. A contour map of the site was drawn, and an aerial photograph taken. The site and surrounding fields were divided into sections and systematically surface collected. A more lengthy, detailed discussion of the techniques of preparing a site for excavation may be found in Glenn Black's Angel Site (Black 1967:20-80).

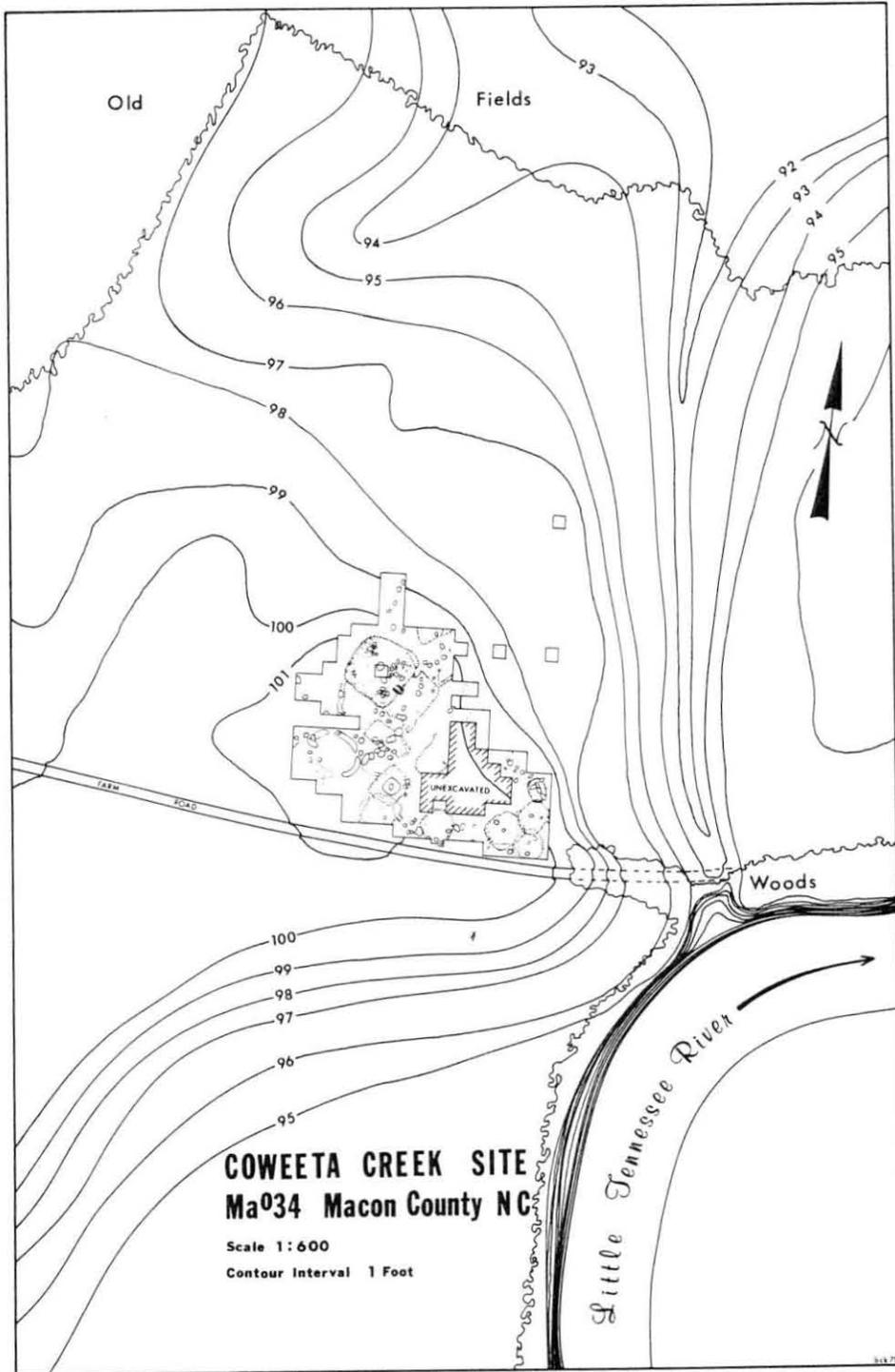


Figure 4

Standardized procedures and techniques of excavation were used throughout the six summers. All soil thought to contain artifacts was screened with either a hand or mechanical sifter. The elevations of all points thought to be relevant were measured with a transit. Both north-south and east-west profiles were drawn along each 10-foot line. Diagrams were sketched of horizontal features such as natural floors, pre-mound humus, and subsoil. Numerous black and white photographs and color slides were taken of features, burials, important profiles and horizontal floors, and intermittently of the entire site.

A fundamental problem arises from the description in the above paragraph. How does the archaeologist determine what lines in the profiles, marks on the floors, or any other occurrence is relevant and significant enough to be recorded by drawings or photographs? No matter how precise and accurate is the method of recording data, the archaeologist must realize the varying significance of each natural division and attempt to interpret them and determine their relevance while still in the field.

The first square, 100R110, situated in the middle of the rise, was opened by removing the disturbed plow zone and then excavating in arbitrary levels the midden above subsoil. It is best to determine early

the stratification of the midden and the depth of subsoil, to be used later as references when excavating the adjacent squares. The excavator noticed that the shallow midden deposit became thicker to the north. Subsequently, the excavation was enlarged in that direction to include a block of sixteen squares.

After the plow zone was removed from an area forty feet square, scattered postmolds and small concentrations of daub were observed. Each concentration of daub was given a feature number, carefully excavated and saved. In subsequent years, when tremendous quantities of daub were found associated with structures, they were recorded and then the majority of the daub was used to fill in mud holes in the access road leading to the site. Pieces of daub that contained hand prints, impressions of cane, thatch and beams were saved. These pieces of daub could later be studied to obtain some knowledge of the nature of the perishable superstructure of the house.

Meanwhile, three more squares along the 100 line were excavated to subsoil, revealing a number of large bowl-shaped pits containing scant amounts of lithic and ceramic material. Eventually, once the main structure was detected, the use of the pits could be inferred. They were presumably borrow pits from which clay was dug to plaster the walls of the structures on top of the mound.

It soon became apparent from the extent and content of the midden that possibly a undisturbed structure existed in the area to the north. Plow zone was removed from a 20' by 40' trench extending further into this area. The eastern half of a circular structure could be observed once the trench was troweled.

The eastern section of the round structure, designated as Structure 1, is visible as a darkened area in the foreground of Plate I. A rectangular intrusive pit cuts the southeast edge of the structure. The fill from the pit was removed and the profiles studied to obtain an idea of the composition of the midden in that area. The borrow pits and postmolds are visible in the background of Plate I.

The attitude of the site's field supervisor changed throughout the summer. No longer was the project a test investigation but a full-fledged excavation to be continued and completed next summer.

When the site was ready to be closed for the winter on September 9, the excavated area was covered with black plastic, and the site was partially back-filled with the aid of a bulldozer to protect the profiles and the floor of the structure from freeze-thaw action during the winter months. In succeeding years, the same procedure was performed at the end of each summer.

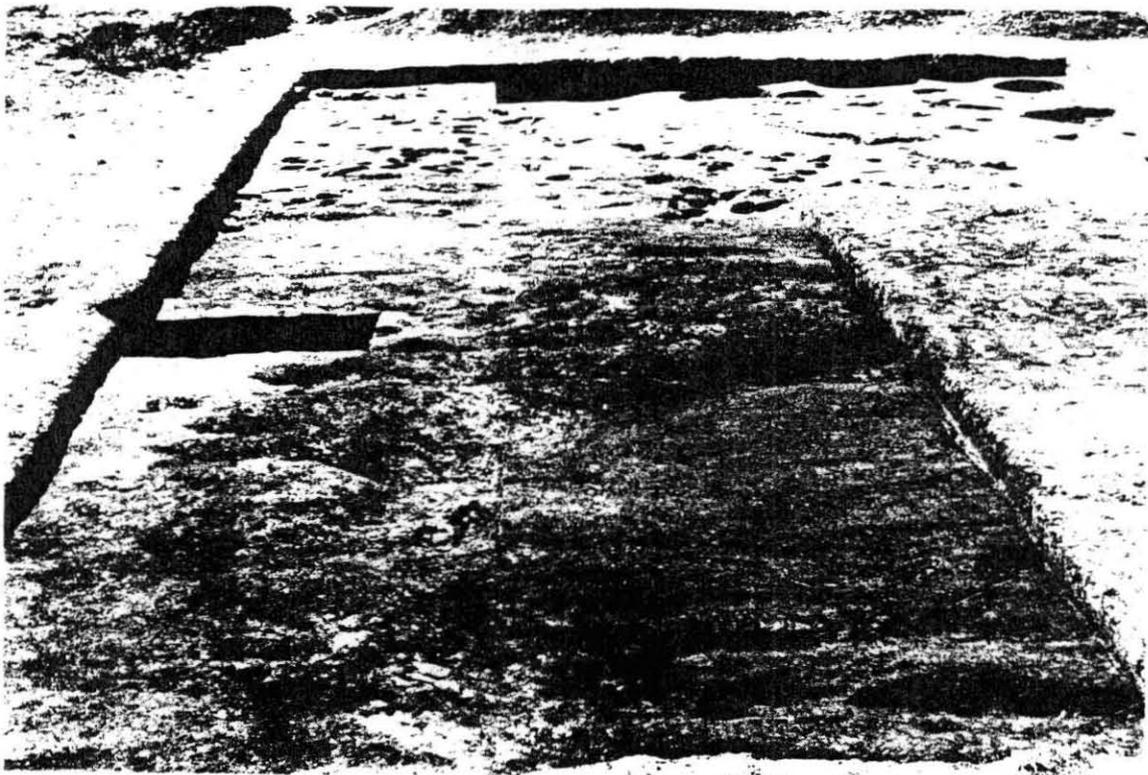


Plate I  
Structure 1 at Ma<sup>o</sup>34, Looking South

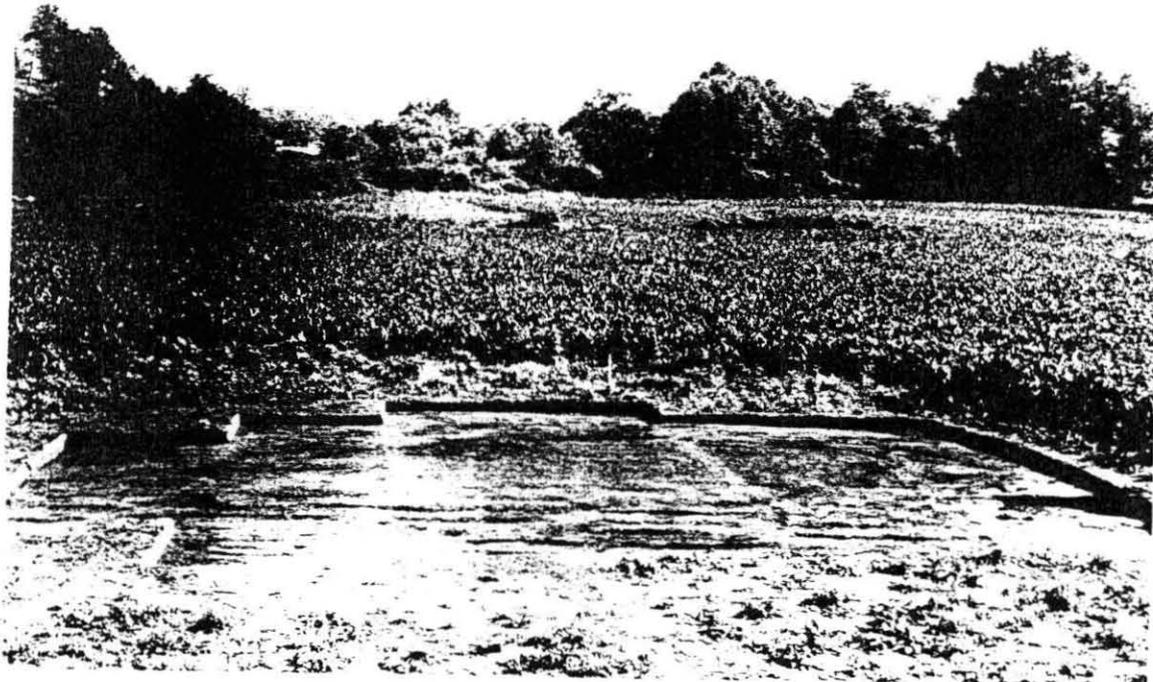


Plate II  
Plow Zone Removed off Structure 1 at Ma<sup>o</sup>34  
Looking North

1966

The initial work this summer, and for the next three summers, was to remove carefully the backdirt that had been deposited on top of the black plastic the previous fall.

In 1965 the datum point was marked by the top of a large field stone. The beginning of the 1966 season found the rock missing. By using known elevations of features that had been excavated in 1965, the new datum point was reset in a more permanent position -- on top of a surveying pipe driven firmly into the ground.

The slightly dark oval area in Plate II is Structure 1 after plow zone was removed from the area to the west. Structure 1 appeared to be a rectangular town house with rounded corners that was oriented northwest by southeast and measured roughly 46 by 48 feet. The horizontal furrows in the photograph are plow scars.

A thin discontinuous lens of sand fill, partially disturbed by the plow, was removed next from Structure 1. The natural level arrived at was designated as Floor 1, and is illustrated in Plate III. It was the first of six floors closely superimposed to form a low rubble mound approximately 4 feet high.

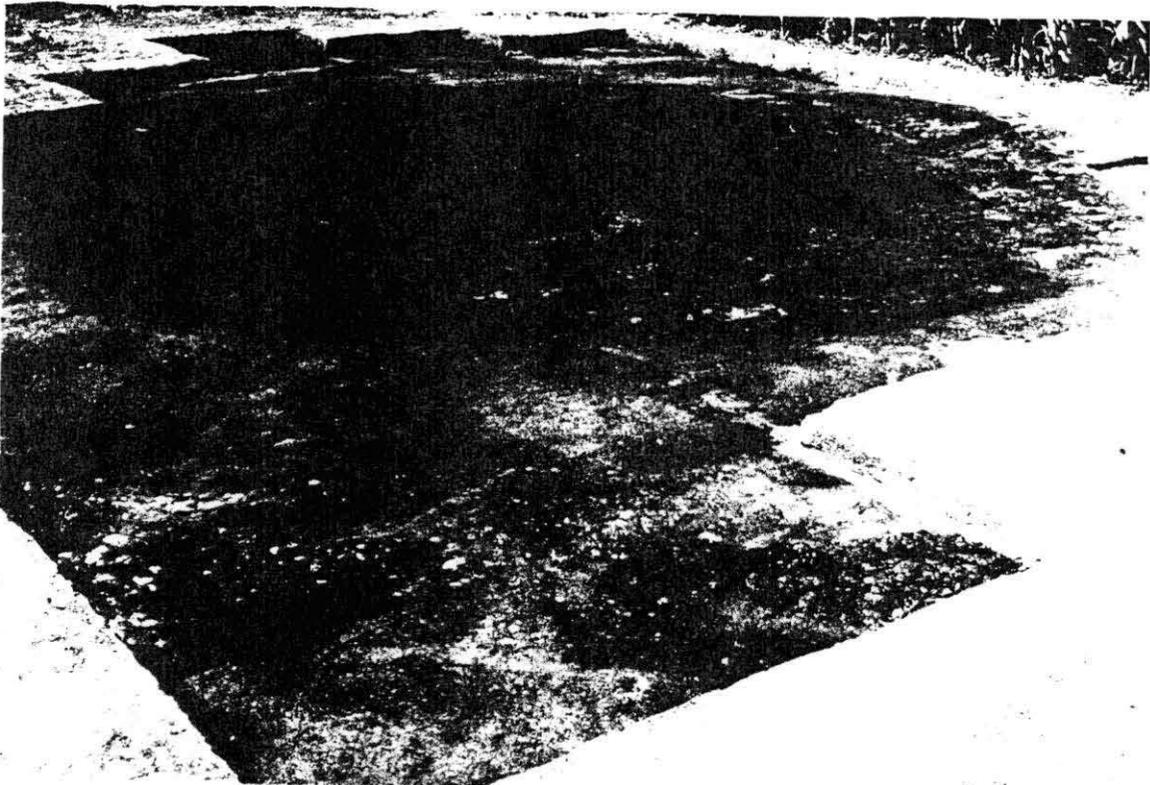


Plate III  
Floor 1 of Structure 1 at Ma<sup>o</sup>34, Looking Northeast

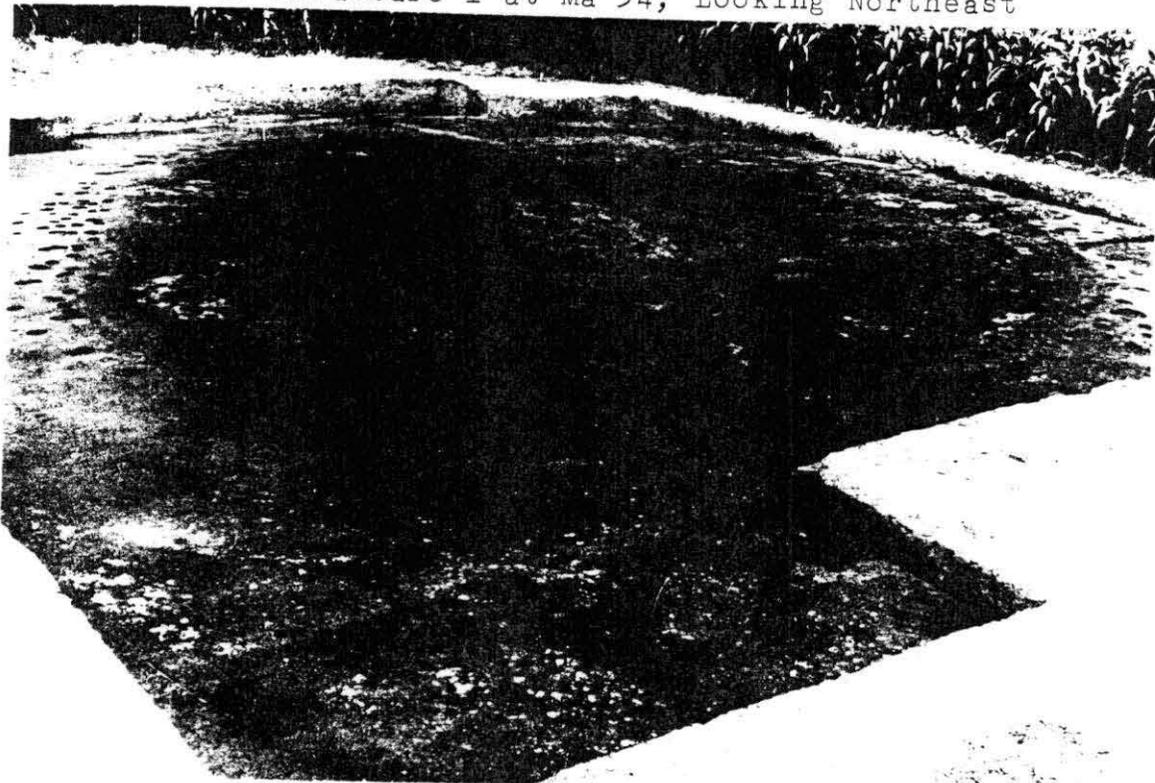


Plate IV  
Floor 2 of Structure 1 at Ma<sup>o</sup>34

A concentration of daub situated on top of a later mound stage is visible in the right foreground of Plate III. This mound stage, before it was truncated by the plow, sloped upward and formed a higher building level of the mound. Since few post-molds occurred in the sand lens covering Floor 1, the subsequent mound stage must have been an intentionally built addition of at least two feet of fill. Additional data from the angle of inclination of later mound stages, represented in the profiles along the toe of the mound, and from rough estimates of volume of disturbed fill plowed off the top of the mound suggest that there were three such intentionally built additions over the six closely superimposed floors, producing a mound with a total height of possibly ten feet.

The general principle to be learned is that remnants of later mound stages, which have been plowed off the top of the mound after years of cultivation, are preserved along the toe of the mound. These remnants are important in reconstructing the succession of building stages and in estimating the original height of the mound.

While investigating below Floor 1 the excavator noticed a hard puddled clay floor, designated as Floor 2, and an associated basin shaped hearth. Evidently, the structure built on Floor 2 had been burnt sometime

during its existence and the floor fired hard, making the floor easier to follow while troweling. Similarly, removal of earth from the basin shaped hearth was quite simple because the hard burnt pit walls delineated the borderline neatly and without question. The narrow space between the two floors was filled with occupational refuse and daub debris from the structure associated with Floor 2.

Clearly visible in Plate IV is Floor 2 after the structural debris had been removed. The floor, approximately 26 by 31 feet, is slightly depressed in the center. This structural feature, common to most Cherokee houses, is the only reason why the floor and the hearth were saved from the plow.

Numerous postmolds, partially excavated so as to be visible in the photograph, are concentrated in a wide band around the periphery of the structure. The light colored patches among the postmolds are parts of the daub fall associated with the next lowest floor (Plate IV).

Now that the extent of the structure associated with the mound had been determined, the next task was to isolate the mound. This could have been accomplished in a number of ways. Ideally, following Lewis and Kneber's hypothetical example, the flanks of the mound on all four sides could have been traced

outward until they merged with subsoil, thus creating a gently sloping low mound, that could be excavated stage by stage. But a large percentage of a mound that has been truncated by the plow is submerged like an iceberg, and that the base and plowed fill expands outward further than one first imagines.

Furthermore, it was felt that Structure 1 could be entirely excavated if given just one more summer. Therefore, instead of trying to isolate the entire mound which would not be as profitable in the time allotted, only the central structure was isolated by the expedient method of removing only those squares adjacent to the structure.

Six squares along the R70 line and a few scattered squares to the north and south were excavated down to subsoil during the last part of the summer as the first step in isolating Structure 1.

A substantial knowledge of the composition of the shallow midden was obtained through the excavation of these squares. Besides the discovery of a pre-mound humus that extended under the mound, an apron addition was recognized on the southeast quadrant of the mound.

The apron consisted, like the rest of the mound fill, of structural debris and basket loads of soil; while it differed in that it exhibited clay caps, rock mantles and lenses of sand. At this time the apron

posed numerous problems and there was no idea of what it represented. Eventually the apron was recognized as being the ramp area that led from the plaza up the southeast side of the mound. The majority of the ramp is associated with the three intentionally built mound stages that were plowed off the top of the mound. Unfortunately, the ramp was recognized only after the majority of it had been excavated. Nevertheless, the profile records have made it possible to associate the building stages of the ramp area with the appropriate floor levels of Structure 1.

1967

The summer of 1967 was spent isolating the rest of the mound, and peeling off structural debris above Floor 3. The structure was isolated in a manner similar to the method William S. Webb employed at Norris Basin (Webb 1938:16-18). The structure was left standing as a residue block, after excavating up to and leaving for photographing the postmold alignment which best concided with the perimeter of the structure (Plate V).

At first the squares around the periphery of the structure were excavated in arbitrary levels three inches thick to obtain a representative sample of



Plate V  
Floor 3 of Structure 1 at Ma<sup>o</sup>34, Looking Northwest

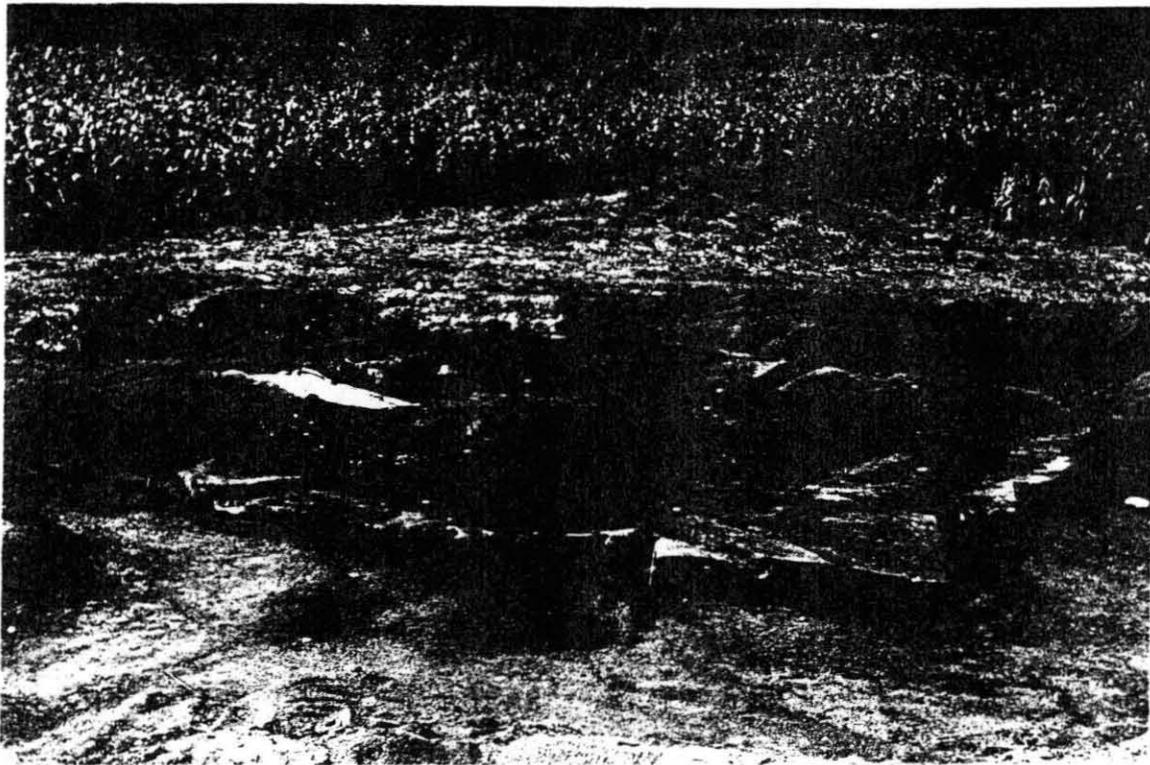
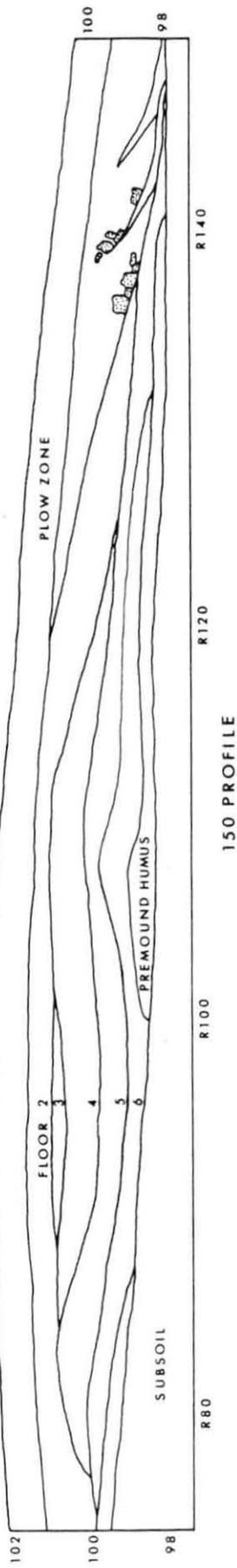
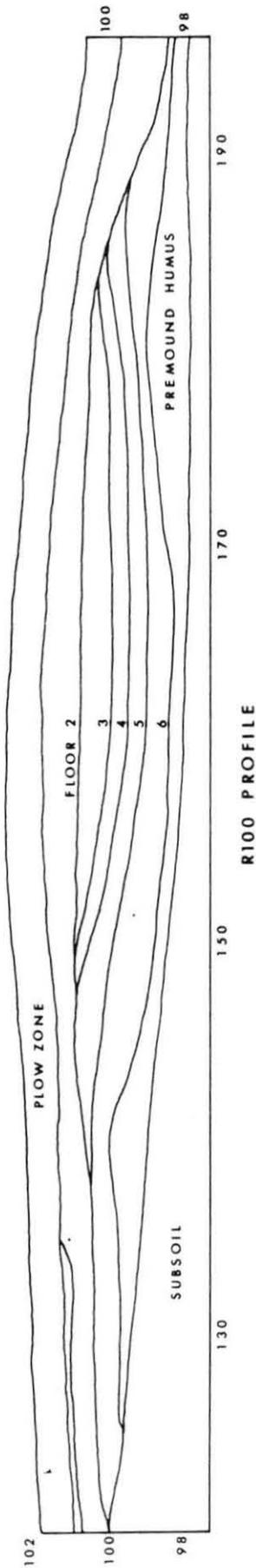


Plate VI  
Floor 5 of Structure 1 at Ma<sup>o</sup>34, Looking North

material throughout the fill. It became apparent that the material was nearly identical throughout both the mound slump and mound fill. Therefore, in order to speed up the excavation process without too much of a loss of information, the excavators removed mound slump and multiple building stages as one unit, keeping it separate only from the premound humus. This unorthodox method of excavation may be employed only on a single-component site.

If a site is multi-component, each building stage would be excavated as a unit and the material kept separate. Furthermore, the disturbed mound slump would be excavated in arbitrary levels to determine the nature of the building stages that have been plowed off the top of the mound. The mound slump, formed by redeposition, would exhibit reverse stratigraphy from that of the mound stages it was derived from because of the laws of erosion and deposition.

After Structure 1 was isolated, it was observed that the Indians built the mound on the slanting flank of the ridge rather than on the summit (Fig. 5). The ridge, as a natural feature, controlled the shape of the midden deposit and protected the low mound from being entirely demolished by the plow. But the plow dug deeply into the summit of the ridge, removing all midden and destroying part of a circular structure uncovered in 1970 (Fig. 4).



COWEETA CREEK MOUND

Ma 034

Macon County, N.C.

Figure 5

A number of timbers and a basin shaped hearth on Floor 3 are visible in Plate V. The beams were preserved in the form of charcoal because of the smothering effect of the collapsing roof and wall fall. The locations of the timbers were recorded to provide a clue as to the superstructure of the house, and they were carefully saved as a source of organic material for radiocarbon dating. The hearth in the photograph is the uppermost of a series of superimposed fireplaces, each one associated with one of the superimposed floors.

Two burial pits are shown in the foreground of Plate V, originating above the level of pre-mound humus and intrusive into subsoil. The two parallel ditches are the entrance trenches, marking where the doorway to Floor 3 existed.

The wedge-shaped section of soil in Plate V, connected to the central structure by a narrow balk, is all that is left of the ramp area. A closer view of this portion of the profile of the ramp is illustrated in Plate VII. The photograph clearly shows the degree of inclination of two clay caps and rock mantles of the last two intentionally built mound stages as they rise from the plaza to meet the mound. The same area of the toe of the ramp is illustrated in Plate VIII after the basket loading has been removed from above the stones lying on the clay cap.

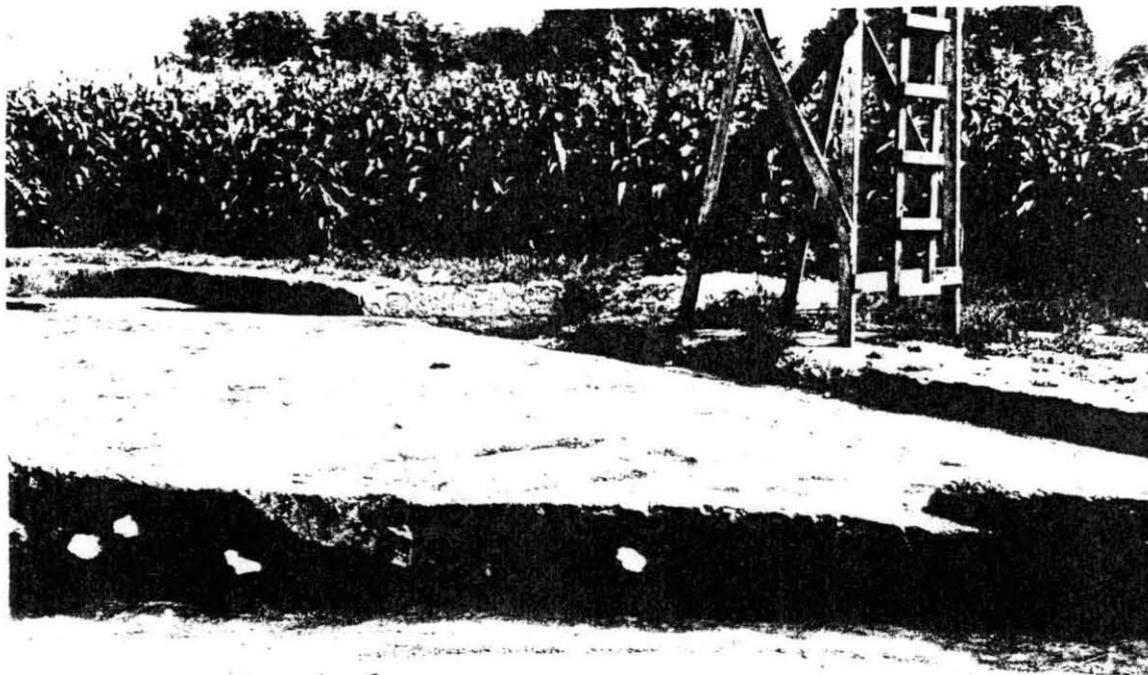


Plate VII  
Diagonal Profile (14OR130 - 13OR140) at Ma<sup>o</sup>34



Plate VIII  
Rock Mantle (14OR140), at Ma<sup>o</sup>34, Looking North

A small exploratory trench, cutting into the northwest corner of the structure, is visible at the top of Plate V. Until now an effort had been made to avoid deep vertical cuts, but the trench was necessary to give the archaeologists an idea of what to expect in the lower half of the mound. At least two more superimposed house floors were detected, and the profiles of the exploratory trench guided the archaeologist as he peeled back the lower floors.

1968

The summer and fall of 1968 were spent stripping the fill and structural debris from over the lowest three floors.

A student of archaeology may wonder why it took on an average six workers a summer five years to completely excavate a mound that stood only 4 1/2 feet high. The main reason is that the mound contained six intact floors closely superimposed upon one another (Fig. 5 and Plate XI). Each building stage was dismantled with trowels in reverse order from its construction. In each case the archaeologist took steps to insure that the excavated surface was shown the way it originally was formed.

Excavating downward on one building stage, the archaeologist first encountered the mottled fill

carried in by the Indians and spread thinly over the rubble debris of the previous structure to form a relatively flat, smooth surface upon which to construct the next house. Below this, the daub debris from the smoke hole and house walls formed a consolidated mass of fired clay rubble which was quite difficult to trowel through. Following this the charred remains of beams, boards, and split cane were uncovered and meticulously cleaned. After the beams and other structural remains were removed, the actual floor surface was troweled to delineate its features. The floor consisted of thin lenses of sand and lenses of ash from the hearth. The multiple layering of one building stage between two floors is illustrated in the photograph of the east profile of square 160R100 (Plate XI).

Add plow zone, pre mound humus, and subsoil to the four units of excavation that existed between each of the six floors, plus numerous repeated trowelings, and the result is a considerable number of units of excavation within a short vertical distance.

Few artifacts were found on the surface of the floors, although numerous potsherds were found concentrated along the inner edge of the structure. Apparently the Indians swept the floor debris under the benches that presumably lined the interior wall of the town house.

The supernumerary postmolds, originating from all levels, were not removed separately from the general excavation of the floors. Although the prevailing practice is to remove all intrusive units first, it would have been too much of a chore under these circumstances. The postmolds sufficiently disturbed the edge of the structure where the majority of the artifacts were found so that a restricted provenance could not be assigned with any certainty to most of the material excavated from the floors.

Since the ceramic inventory throughout the entire site was predominantly of one type with just a small percentage of earlier ceramics, the historical trade material such as glass beads and brass buttons became exceedingly important in dating the building stages of the mound, and in the development of a cultural sequence for the entire site. All of the floors, except Floor 6, contained European glass beads.

In order to find the small glass beads and other minute material, representative samples of soil from every floor were screened with water through a wash stand near the river. Washing soil through 1/4, 1/8 and 1/16 inch screen produced a systematically collected sample of material from the site, including large amounts of ethno-botanical remains.

Three additional exploratory trenches are visible in the photograph of Floor 5 in Plate VI. The exploratory trenches were oriented to the alignment of the structure which was at a 45 degree angle to the orientation of the grid system. The discrepancy of orientation between the grid system and the mound complex tends to produce recorded profiles that distort the proper perspective of the stratigraphy of the site. The profiles will have to be redrawn according to the orientation of the mound complex before generating the final structural and cultural interpretations of the site.

The hearth block (square 160R100) in Plate VI remained standing throughout the rest of the project, and was covered with black plastic and left for posterity when the area was backfilled.

An excellent view of Floor 6 is shown in Plate IX. The four large corner support posts of the town house and a lower hearth projecting from the west side of the central square are visible in the photograph. What remained of the reworked pre-mound humus may be seen in Plate IX on the east side of the structure.

1969

During the summer of 1969 the investigation of the mound proper was completed, with additional trenches excavated from the main structure to the north, west and south.

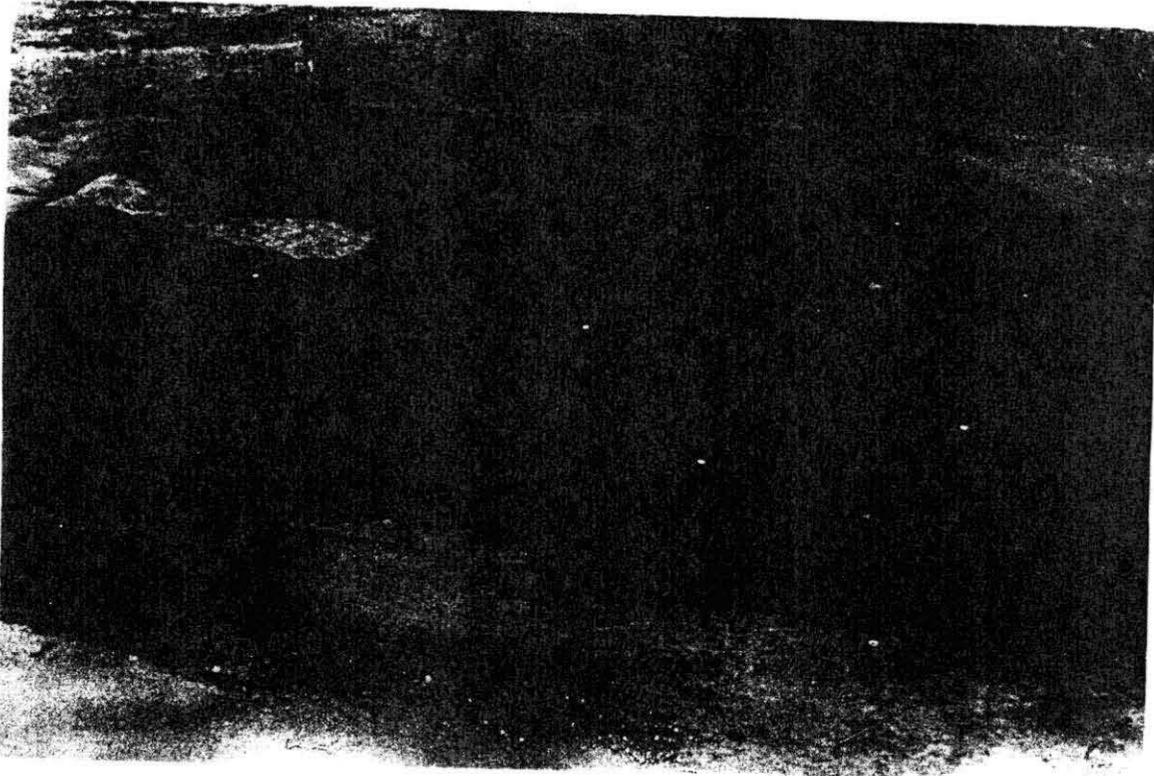


Plate IX  
Floor 6 of Structure 1 at Ma<sup>o</sup>34, Looking Northeast



Plate X  
Subsoil of Structure 1 at Ma<sup>o</sup>34, Looking West

A level of reworked prefound humus was removed after Floor 6. Apparently the Indians scraped the central area almost free of humus and piled some of it downslope and the rest along the outer wall of the structure to form a relatively level, slightly saucer-shaped depression in which the first town house was built (Fig. 5).

The supernumerary postmolds and pits that occurred at subsoil are visible in Plate X and are illustrated in Fig. 6. Two more sets of entrance trenches are visible near the southeast edge of the band of postmolds.

Most postmolds, pits, and burials were excavated in such a fashion as to preserve the shape of the original cavity. In the case of the burials, where the soil tended to be loose and separated easily from the sides of the pits, digging stick impressions were visible on the walls of the pits. The content of such intrusive features are always contaminated by the presence of earlier material in the fill.

The postmolds were excavated at subsoil and not when they were first encountered at higher levels. The configurations of the postmolds with dark loose fill are readily discernible in the orange colored subsoil (Plate XII), and the sides and bottoms of the postmolds are easy to follow with a trowel when excavating in subsoil. But to delineate the sides and



Figure 6

bottom of a postmold in loose, dark fill of the floor stages would not have been feasible. It is more than likely that by excavating these postmolds at higher levels we would have further disturbed any unseen features originating at lower levels. Only the larger corner posts were excavated by isolating them in the form of a pedestal at each floor level and removing them as a unit separate from the general floor excavation.

Normally an assignment of one house as older or younger than another can be determined by superposition of postmolds. But the great number of postmolds displayed at subsoil made it impossible, while still in the field, to assign a particular set to any one building stage. However, by carefully working with the horizontal plot sheets of the floors it is possible to extract the postmold patterns associated with each floor. Furthermore, only after recording the postmolds at subsoil did a frontal enclosure pattern, offset to the south, become visible situated just anterior to the main structure near the ramp area (Fig. 6).

The mottled oval shape of six burial pits are visible at subsoil in Plate XII in the square just to the east of the hearth square. Five of the burials originated at Floor 6 and the other at Floor 5. A series of four burial pits were uncovered in the ramp

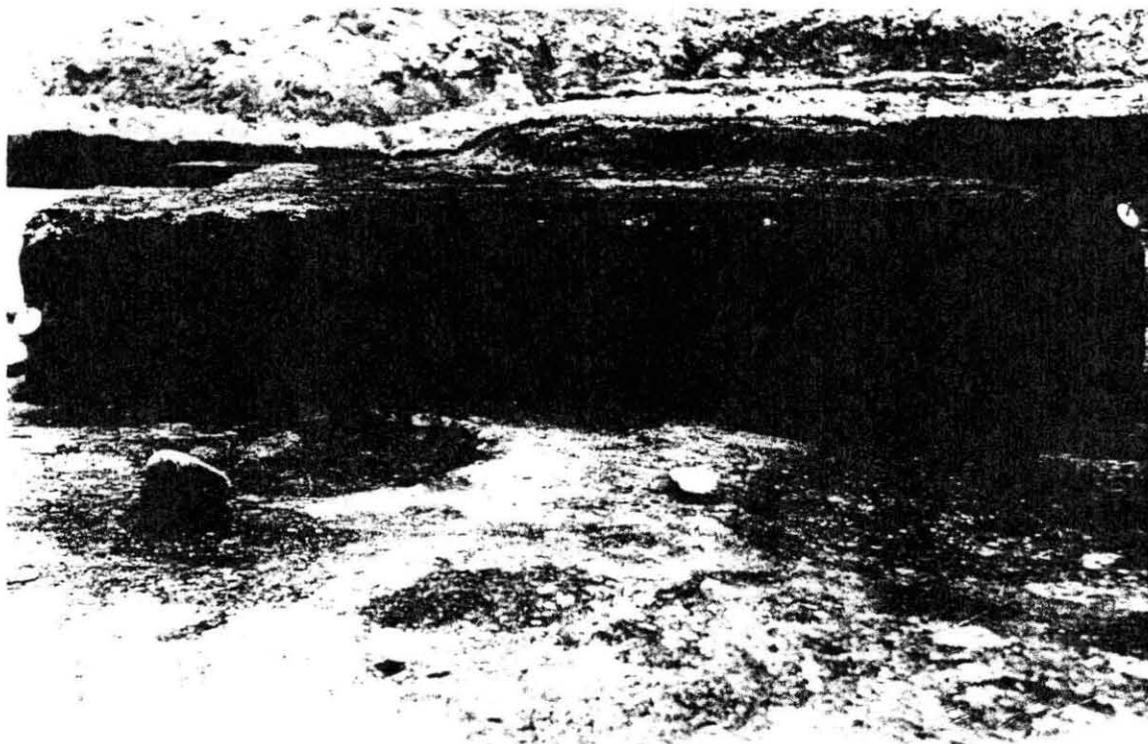


Plate XI  
East Profile of 16OR100 at Ma<sup>34</sup>, Looking West

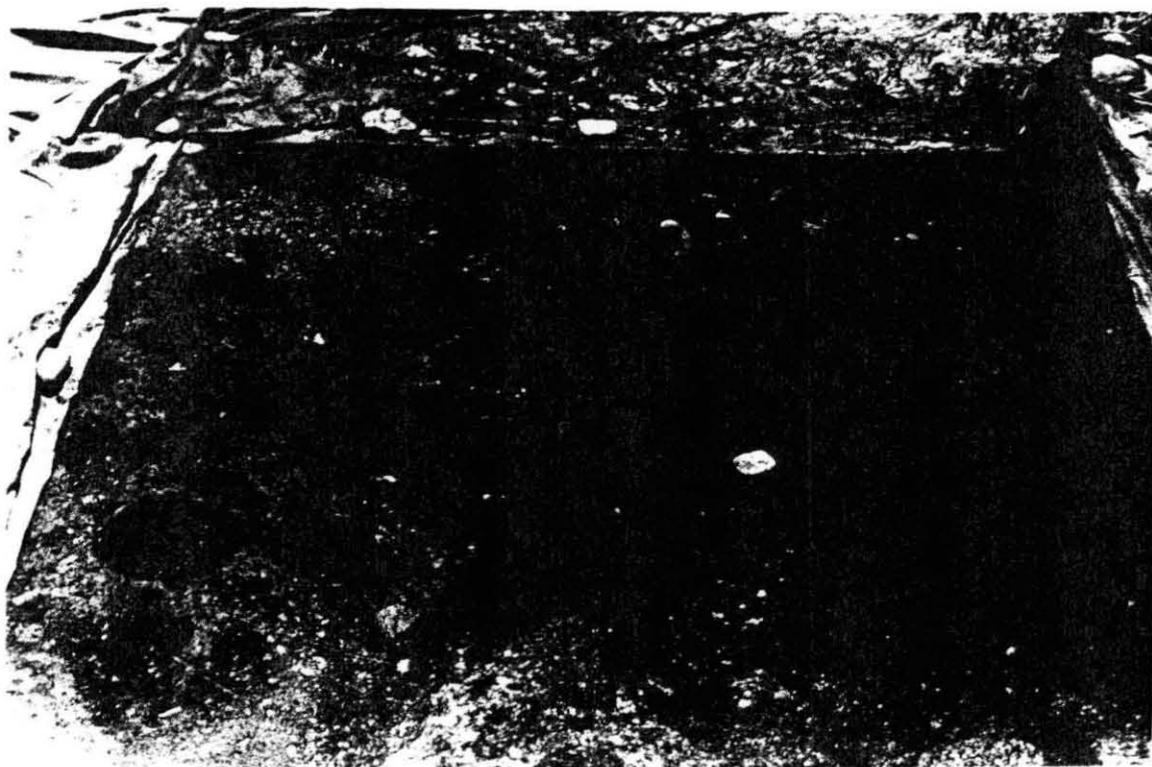


Plate XII  
Subsoil of 16OR110 at Ma<sup>34</sup>, Looking South

area in front of the main structure, and are probably associated with floors 2, 3, and 4 (Fig. 6). No European trade material was found in any of the burial pits on the entire site, even though some burials are correlated with assurance to levels of the mound that contain glass beads.

Two 20-foot trenches were excavated 30 feet to the north and west of the mound proper in order to discover the nature of the village area immediately surrounding the mound. The excavation was also extended to the south, and four squares of plow zone were removed from three separate localities on the ridge. Besides supplementing the mound excavation the peripheral test trenching gave the archaeologist an indication of the best place to concentrate the excavation next year.

1970

Since the excavation of the mound proper was terminated last year, this summer's work consisted of extending the excavation to surrounding areas.

The ridge to the south of the mound was of particular interest. Why was the mound not constructed on the highest elevation in the flood plain? Even though a few feet of subsoil had been plowed off the ridge, completely removing in some places all traces of house patterns, enough was left to indicate that at

some period in time a number of structures existed on top of the ridge. The excavated area was extended further to the southwest than first planned, following the configuration of a circular structure (Fig. 4).

A number of right-angle trenches were excavated, extending from the ramp area across the area to the southeast. Since few postmolds were found, the inference was made that the structure-free area was the plaza (Fig. 4 and 6).

Small bits of daub and other structural debris were observed previously in the plow zone to the southeast near the spot where the woods project into the field. Excavations this summer disclosed that a number of structures were located here, sitting across the plaza from the town house (Fig. 4). Two house floors were still intact. The preservation of the floors was due solely to the presence of the farm road and the manner in which the farmer cultivated the fields.

#### Summary

During the first two summers the excavation was conducted in smaller units and many features were carefully excavated that later did not seem to merit the time and effort. The principle that archaeologists should follow is to excavate initially in small units and

record all details until the significant features are determined. The kinds of artifacts, structural features and their relation will determine the form and direction of the program of excavation.

Limitations that are imposed upon the archaeologist are reflected in part by the manner in which the Indians built the mound, by the degree of preservation, by the natural features of the area, and by the method of excavation.

Most sites, like the Coweeta Creek site, will surprise an archaeologist by providing him with valuable data, but only if he is sensitive and flexible to the nature of the site. However, it is always impossible, unless the site is revisited and the undisturbed areas excavated, to know if better results could have been obtained had different methods been employed.

## Chapter V

### CONCLUSION

It is appropriate to conclude with a summary, divided into time periods, of trends in methods and problems of mound excavation. Many of the generalizations in the summary are not limited in relevance to the Southern Appalachian Area, but may be applied to areas throughout eastern United States.

#### 1784 to 1850, Discovery and Description.

The majority of the scholars of this early period who discussed the origins of the American Indian were either theologians or armchair antiquarians. Their insistence on attempting to derive the American Indian from either a superior race or from the ancient Greeks, Etruscans, or Phoenicians served to divorce archaeology from ethnology (Mittra 1933:101). Without being able to use ethnological data as a reference point, archaeology was limited in expansion by being deprived of a potential source of analogous material.

#### 1850 to 1900, Intensive Excavation in Burial Mounds

As the 1800's progressed the general consensus of opinion slowly changed from a belief that all

earthworks were erected by one superior and extinct race to a conviction that existing tribes were capable of such feats of construction.

A principal promoter of the later belief was Cyrus Thomas, who in the 1880's, with the identical purpose in mind as Squier and Davis and utilizing the same general methods of excavation, arrived at the opposite conclusion. He attempted to match earthworks with existing tribes. He thought that perhaps most of the mounds of eastern Tennessee and western North Carolina could be attributed to the Cherokee, while the box-shaped stone graves in the region south of the Ohio River could be attributed to the Shawnee (Thomas 1894:17). This approach now left the door open for uniting archaeology and ethnology and for studying prehistory of each tribe of Indians.

The financing of archaeological expeditions and the establishing of museums appear to have complemented each other during this period. There was an emphasis on filling the museum shelves with finely made relics and well preserved crania. In order to satisfy the financial promoters and uncover the most prized specimens, the fastest and most economical methods of excavation were employed. Most excavators, for reasons of profit, were concerned only with the center of the mound and the basal four to six feet. Vertical

units of excavation with pits and trenches were, and still are, the simplest and most expedient method of investigating the center of a mound. The only horizontal units of excavation, resorted to infrequently, were tunnels dug into the sides of some of the larger mounds.

Stratigraphy was recognized and often commented upon, but archaeologists failed to take full advantage of the opportunities it presented. They lacked the conceptual framework needed to unite stratigraphy with time, structures, and horizontal methods of excavation.

#### 1900 to 1933, Pioneer Archaeologists

Archaeologists were by now extremely inquisitive about the relics they had watched slowly gather dust on the museum shelves, and were searching for new approaches to old problems. Could such artifacts, besides being aesthetically pleasing, provide information on the prehistory of Indian tribes and on the age of man in the New World?

The historical approach to archaeology held the solution for answering this problem. The approach maintained that the prehistory of the American Indian could be studied by starting with the ethnographic accounts of the Indians that existed at the time of

contact, and by extrapolating this data back in time through older and older archaeological sites it was possible to arrive at a rough scheme of the prehistory of each tribe. Such an approach, since it is more diversified and complex in theory than previous approaches, eventually required more refined methods of excavation.

The supplanting of the older methods of solely vertical excavation, and the development of a new conceptual frame of reference progressed slowly throughout this period. At this time the only form of horizontal excavation consisted of removing thick arbitrary levels from the top of high mounds to reduce the probability of cave-ins when trenching, and the use of a team and scraper for a quick removal of the mound fill above the basal burials.

Finally stratigraphy was almost universally recognized as the key for providing time depth. Along with this, the practice of collecting a more representative sample of artifacts eventually made it possible in the next period to develop ceramic and lithic typologies and methods of seriation.

In the late 1920's the University of Chicago became the main center for the innovation and refinement of methods of excavation, and its disciples spread the new archaeology throughout eastern United States.

They still emphasized vertical trenching and minimized the importance of horizontal stripping, but they did stress the importance of a standardized grid system, making it possible to accurately plot all physical remains (Cole and Deuel 1937). Most archaeologists now became fully cognizant of the importance of all intra-site relationships between artifacts and stratigraphy.

A leaflet entitled A Guide for Amateur Archaeologists, published in 1930 by the National Research Council, reflects the recent advancement of archaeological methods. It was the first attempt to standardize and make available to everyone the basic methods of archaeological excavation.

#### 1933 to 1942, CWA and WPA Labor

A burst of archaeological activity occurred during the Depression because of the availability of WPA and CWA labor. The federal government was concerned with hiring the unemployed and archaeology, where overhead is minimal, was chosen as a suitable outlet for thrusting the greatest percentage of appropriated money into the pockets of the workers. Even though many archaeologists had their doubts about mass producing archaeology with unskilled labor, all this

activity led to a reconsideration of previous methods and the development of new approaches.

Methods of unit excavation were further refined to fit individual situations. For many years the composition of burial mounds and temple mounds had been differentiated, but now different methods of unit excavation were developed and applied to each. The prevailing tendency was to have the excavated units follow all natural levels of stratigraphy; and when using arbitrary levels, to excavate with a smaller, more sensitive standardized unit.

It was now a common practice in most areas to keep artifacts from successive levels separated. The segregated material would then be further restricted in context, and possibly be more reliable as indicators of the type of culture under investigation.

A systematic method of investigation developed which combined vertical and horizontal excavation with standing control profiles. This method made it possible not only to obtain rows of complete profiles along both axes, but also to expose each occupational level as a complete unit and leave structural features in place for overall viewing, drawing, and photographing.

1942 to 1970, Impetus from Other Scientific Disciplines

The majority of advances and refinements in methods in archaeology during this period have not originated within the realm of methods of unit excavation, but have been initiated by development in other scientific disciplines.

With radiocarbon dating archaeologists have been able to subdivide time further when studying pre-historic cultures. The tremendous potential of recording remains in terms of absolute time has coerced archaeologists to be more exact in the partitioning of their units of excavation. Also, the exact location and context of all organic remains have been recorded and carefully collected and stored, instead of being ignorantly discarded.

The same rigor and precision has to be maintained when collecting soil samples for pollen analysis or organic remains for ethno-botanical analysis. The introduction of the latter two disciplines has helped stimulate the recent upsurge in environmental research.

With the introduction of statistics and computers into archaeology, the trend has developed towards more refined methods of analysis. This has the effect of forcing archaeologists to be even more exact in collecting complete representative samples of all aboriginal remains for later quantitative studies.

A warning must be issued. The interpretations from data that may be manipulated by various statistical methods and by the computer are only as reliable as the initial accuracy attained when gathering the original data.

A recent orientation in the attitude of archaeologists is an increasing concern for the site as a whole. Early investigators were obsessed only with the middle of the mound. Later there arose a desire to investigate the entire mound and some of the surrounding village area; but the two areas were always thought to exist separately and were handled as dissociated units.

Now with the holistic approach a mound site, including portions of the encompassing village, may be totally excavated or sufficiently sampled to provide the archaeologist with abundant information for inter-site and intra-site investigation of culture dynamics.

In conclusion I would like to stress two points. First, archaeological discussions in the last two hundred years have shown a high level of objective reasoning with well formed and thoroughly analysed hypotheses. Some of the earlier discussions are completely modern and show a cycling of ideas.

However, it is unfortunate that objective reasoning, utilizing insufficient or incorrect data, was and still is a prominent theme in archaeology. This problem may be alleviated and reasonably reliable interpretations formulated only by maintaining a high level of organized field research.

Second, there exists a relationship -- a type of constant feedback and stimulation -- between purpose, field methods, conceptual framework, and final interpretations. I have found in reviewing the history of mound excavation that in most cases the purpose and final interpretations are predetermined by the level of conceptual framework in existence at that time, and that methods of excavation were of little consequence. Furthermore, at any one time the conceptual framework is always more advanced and sophisticated than the mechanical methods of excavation.

The constant endeavor of field archaeologists to lessen the gap between the leading conceptual framework and the trailing methods of excavation has in the past led to, and will continue to stimulate in the future, refinements and innovations in methods of excavation.

## BIBLIOGRAPHY

- Black, Glenn A.  
1967 Angel Site. Indiana Historical Society,  
Indianapolis.
- Cole, Fay-Cooper and Throne Deuel  
1937 Rediscovering Illinois. University of  
Chicago Press, Chicago.
- Harrington, M. R.  
1922 Cherokee and Earlier Remains on Upper  
Tennessee River. Museum of the American  
Indian, Heye Foundation, No. 24. New York.
- Haven, Samuel F.  
1856 Archaeology of the United States. Smith-  
sonian Contributions to Knowledge, Vol. 8.  
Washington, D.C.
- Heizer, Robert F. and John A. Graham  
1967 A Guide to Field Methods in Archaeology.  
National Press, Palo Alto, California.
- Heye, George G.  
1919 Certain Mounds in Haywood County, North  
Carolina. Contributions from the Museum  
of the American Indian, Heye Foundation,  
Vol. 5, No. 3. New York.
- Heye, George G., F. W. Hodge, and C. H. Pepper  
1918 The Nacoochee' Mound in Georgia. Contributions  
from the Museum of the American Indian,  
Heye Foundation, Vol. 2, No. 1. New York.
- Jefferson, Thomas  
1955 Notes on the State of Virginia. W. Peden,  
ed. University of North Carolina Press,  
Chapel Hill.
- Jones, Charles C.  
1873 Antiquities of the Southern Indians.  
Appleton and Company, New York.
- Kelly, A. R. and Clemens de Baillou  
1960 Excavation of the Presumptive Site of  
Estatoe. Southern Indian Studies, Vol. 12.  
Chapel Hill.

- Kelly, A. R. and R. S. Neitzel  
 1961 The Chauga Site in Oconee County, South Carolina. University of Georgia Laboratory of Archaeology Series, Report No. 3. Athens.
- Lewis, T. M. N. and Madeline Kneberg  
 1946 Hiwassee Island: An Archaeological Account of Four Tennessee Indian People. The University of Tennessee Press, Knoxville.
- Mitra, Panchanan  
 1933 A History of American Anthropology. University of Calcutta, India.
- Moore, Clarence B.  
 1915 Aboriginal Sites on Tennessee River. Journal of the Academy of Natural Sciences of Philadelphia, Vol. 5. Philadelphia.
- Moorehead, W. K.  
 1932 Exploration of the Etowah Site in Georgia. in Etowah Papers. Yale University Press, New Haven.
- National Research Council  
 1930 A Guide for Amateur Archaeologists. Division of Anthropology and Psychology. Washington, D.C.
- Osborne, A. J.  
 n.d. Report (to B. B. Valentine) on excavation at the Smather's Mound, North Carolina in 1880. Original document on file at the Valentine Museum, Richmond, Virginia.
- Setzler, Frank M. and Jesse D. Jennings  
 1941 Peachtree Mound and Village Site, Cherokee County, North Carolina. Bureau of American Ethnology, Bulletin 131. Washington, D.C.
- Squier, E. G. and E. H. Davis  
 1848 Ancient Monuments of the Mississippi Valley. Smithsonian Contributions to Knowledge, Vol. 1. Washington, D.C.
- Thomas, Cyrus  
 1894 Report on the Mound Exploration. Annual Report of the Bureau of American Ethnology, Vol. 12. Washington, D.C.

- Valentine, Edward P.  
n.d. Report (to M. S. Valentine) on excavation at the Birdtown Mound, McComb's Mound, and Sawnook Mound in North Carolina from 1880 to 1882. Original Documents on file at the Valentine Museum, Richmond, Virginia.
- n.d. Personal letter to M. S. Valentine dated to July 16, 1883. Original letter on file at the Valentine Museum, Richmond, Virginia.
- Waring, Antonio J.  
1968 The Waring Papers. Stephen Williams, ed. Peabody Museum Papers, Vol. 58. Harvard University, Cambridge.
- Wauchope, Robert  
1966 Archaeological Survey of North Georgia: With a Test of Some Cultural Hypotheses. Memoirs of the Society for American Archaeology, No. 21. Salt Lake City.
- Webb, William S.  
1938 An Archaeological Survey of the Norris Basin in Eastern Tennessee. Bureau of American Ethnology, Bulletin 118. Washington, D.C.
- Willey, Gordon R. and Philip Phillips  
1958 Methods and Theory in American Archaeology. University of Chicago Press, Chicago.