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University of North Carolina at Chapel Hill, Ph.D., 1970
Anthropology

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THE PISGAH CULTURE AND ITS PLACE IN THE PREHISTORY OF THE SOUTHERN APPALACHIANS

by

Roy Selman Dickens, Jr.

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
Doctor of Philosophy in the Department
of Anthropology

Chapel Hill

1970

Approved by:

Adviser

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PREFACE

Background

Much of the interior of the Southern Appalachian Mountains, principally the area in western North Carolina bounded by the Great Smoky range on the west and by the Blue Ridge on the east, remained until very recently virtually unknown archaeologically. Among the deficiencies was a lack of data upon which to build a sound reconstruction of the origins and synthesis of the culture of the Cherokee Indians who were known to have occupied the area in the historic period. Archaeologists, however, did not refrain from speculating on the "Cherokee problem." They based their interpretations on ethnohistorical and linguistic grounds and on archaeological information obtained from surveys and limited excavations on the southern and western fringes of the mountains. In 1952, Joffre Coe (1961: 59-60) stated that

> by tradition, history, archaeology, and intuition the Cherokee have been moved south from the Ohio and the St. Lawrence, west from Mississippi, east into Tennessee, and north out of Georgia. For the most part, the conclusions regarding the Cherokee have come about as the byproduct of work oriented toward other problems. . . . I do not believe, however, that work on the periphery will ever solve the heart of this problem. A thorough investigation of the Middle and Valley towns of the Cherokee must be completed before many of the present questions can be answered.

In 1960 an investigation of the Middle and Valley town areas was begun by the Research Laboratories of Anthropology of The University of North Carolina at Chapel Hill, under the direction of Coe. Field work,

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continued until the present, was financed in part by the National Science Foundation. Laboratory analyses and interpretive studies are in progress and will continue in the future.

Objectives

In the following discussion the Pisgah culture is defined on the basis of a unique assemblage of material remains manifest in ceramics, artifacts, structures, features, burials, and food refuse. Descriptions of these remains are presented, and a particular emphasis is placed on the delineation of diagnostic traits. The pottery, defined in partial terms by past studies, is examined in detail and organized into a series of types.

Comparative and distributional analyses are used to place the Pisgah culture within generalized temporal and geographical bounds. The derivation of specific traits is examined in terms of origins within the local developmental framework and with reference to possible interaction with non-mountain cultures.

An important aspect of the study naturally relates to the problem of Cherokee origins. In this regard, traits of the Pisgah culture are compared with traits known to be part of the historic Cherokee culture, the intention being to detect patterns of continuity or change from the late prehistoric to the historic period.

Resources

Information utilized in this study comes from surface collections and excavations in western North Carolina, northwestern South Carolina,

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eastern Tennessee and southwestern Virginia. Artifact collections were examined first-hand in most instances, but in others the author relied on photographs or on published or unpublished descriptions.

Accounts of excavations were available for a few sites, but either the work was of limited extent or the sites were peripheral to the Pisgah culture. Also, some of this work was conducted as long ago as 1880, when archaeological recovery techniques and data reporting were crude by modern standards.

The work of the Research Laboratories of Anthropology of The University of North Carolina, conducted between 1960 and 1969 in western North Carolina, was of primary importance. Extensive survey data was acquired during that period, and excavations were conducted at key sites. Intensive excavation at the Warren Wilson and Garden Creek sites produced the bulk of the data relevant to the Pisgah culture. The author was field supervisor of the Warren Wilson project during the summers of 1966, 1967, and 1968.

Terms

In this paper, the term "culture" is used to mean "a recurrent complex of artifacts and traits which can be empirically distinguished by the archaeologist from other such 'cultures'" (McMichael 1960: 12). Preference for this term over those of "phase" or "focus" rests upon a belief of this author that the latter terms are too restrictive in their usefulness. "Phase" tends to imply a segment of a narrowly defined linear sequence, while "focus" recalls the taxonomic pigeon-holing to which the McKern system was subjected.

The designation Southern Appalachians is used here essentially as

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it is by physiographers, to denote the southern portion of the Appalachian Mountain chain. Archaeologists have used the term in a broader sense to include the area in which paddle stamped pottery predominated in late prehistoric times. For instance, Holmes' "South Appalachian Province" (1903: 130 and Plate IV) included all of Georgia and South Carolina and adjacent portions of Alabama, Florida, North Carolina and Tennessee. More recently Caldwell (1958: 34-52 and Fig. 6) has discussed the "Southern Appalachian Tradition" in terms of roughly the same geographical area as Holmes. While the broader, ceramic-based definition is certainly applicable to the area under consideration, references to the Southern Appalachians in the following discussions are to be taken in the narrower physiographic sense unless otherwise noted.

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I am indebted to a number of people who contributed directly or indirectly to this study. Foremost among these is Dr. Joffre L. Coe, who directed the western North Carolina archaeological project in which I served as one of the field supervisors. Dr. Coe also was my graduate program advisor and chairman of my dissertation committee. His advice and counsel were always invaluable.

Dr. Donald Brockington also served on the dissertation committee and provided timely suggestions and encouragement. Other members of the committee were Dr. William Politzer, Dr. Guy B. Johnson and Dr. Richard Lonsdale.

I owe a deep debt of graditude to Dr. William Klein, Professor of Sociology and Anthropology at Warren Wilson College, Swannanoa, North Carolina, who brought the Warren Wilson site to the attention of the

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Research Laboratories and who worked with me in the field during three summers of excavation. Dr. Klein's interest, enthusiasm and energy were an inspiration to all concerned.

Other members of the Warren Wilson College faculty and staff who were especially instrumental in furthering the archaeological project were Dr. Arthur Bannerman, Dr. Henry Jensen, Roger Stuk, Mark Trumbo, Ernst Larsen, Samuel Miller and Mrs. William Klein. Space does not permit mentioning by name the numerous other individuals at Warren Wilson who worked in behalf of the "dig", so their cooperation is here collectively acknowledged.

The field crews at the Warren Wilson site were composed of students from both Warren Wilson College and The University of North Carolina. The names of these students are given in the following list together with the years in which each one participated in the project.

Mitchell Arney	1967	Steven Jones	1966
Jennifer Baird	1967	Robert Keeler	1968
Stanley Bates	1968	Earl LeQuire	1966
Robert Bowers	1967 & 68	Cynthia Love	1967
Jane Braun	1966	Dale Morris	1968
George Brookshire	1966	Ruth Neal	1968
Catherine Brutsch	1967	Janice Reinhard	1966
William Collins	1967	Patricia Sanford	1968
Ila Mae Cox	1966	Ulys Smith	1966 & 67
Douglas Dellinger	1966	Judy Summey	1968
Raymond Dunton	1966 & 67	Kathleen Surber	1967
Wilma Eliassen	1967 & 68	Christa Thomas	1968
Elizabeth Evans	1968	Ann Tony	1967
Theresa Godfrey	1966, 67 & 68	James Willis	1967 & 68
Sterling Hopper	1967	Jane Willis	1966 & 67

Able assistance in the field and laboratory was provided by Veletta Canouts, Frank Weir, John Mattson, Patricia Sanford and Robert Keeler.

Information on the excavations at Hw^{o}1 and Hw^{o}2 was furnished by Leland Ferguson, Bennie C. Keel and James J. Reid. I am also indebted to these individuals for their suggestions during various aspects of the

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study.

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CHAPTER I

INTRODUCTION

The Cherokee Archaeological Project

The Research Laboratories of Anthropology, under the direction of Joffre Coe, began an intensive program of archaeological research in western North Carolina in 1960 through grant GS717 of the National Science Foundation. The purposes of this project were to provide data for the reconstruction in general terms of the prehistoric sequence in the mountain area, and to investigate specifically the origins of Cherokee Indian culture.

As a preliminary to excavation, site surveys were initiated in several of the mountain counties as early as 1958. Through these surveys, many new sites were located and an effort was made to pinpoint historically documented Cherokee towns. The collections made at this time were used to set up a tentative cultural taxonomy; they have continued to be of value in distributional studies such as that of Pisgah ceramics in Chapter II.

In 1964, excavations at two house sites, one on the Tuckasegee River in Jackson County ($Jk^{v}12$) and another on the Hiwassee River in Cherokee County ($Ce^{v}15$), produced valuable information on the 18th-century Cherokee (Coe and Keel 1965: 5) (Fig. 1).

In 1965, larger-scale digging commenced at two mound-and-village sites. One of these ($Hw^{o}1$) located at the juncture of the Pigeon River

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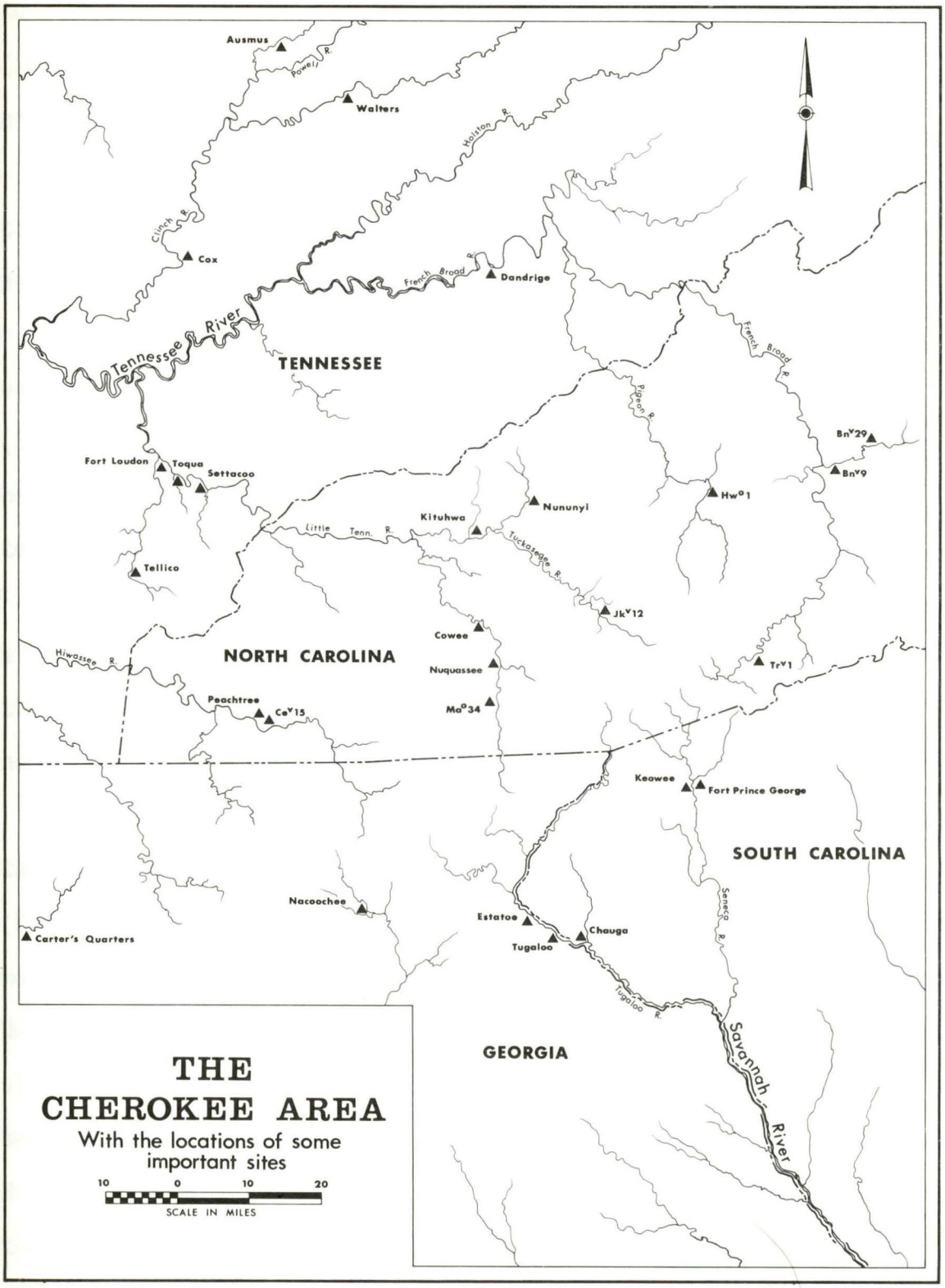
THE
CHEROKEE AREA
With the locations of some important sites
10 0 10 20
SCALE IN MILES
Ausmus
Powell R.
Walters
Holston R.
Clinch R.
Cox
French Broad R.
Dandrige
Tennessee River
TENNESSEE
French Broad R.
Pigeon R.
BnV29
BnV9
Fort Loudon
Toqua
Settacoo
Hw°1
Nununyi
Kituhwa
Little Tenn. R.
Tuckasegee R.
Tellico
JkV12
Cowee
NORTH CAROLINA
Hiwassee R.
Nuquassee
TrV1
Peachtree
CeV15
Ma°34
Keowee
Fort Prince George
SOUTH CAROLINA
Seneca R.
Nacoochee
Estatoe
Chauga
Carter's Quarters
Tugaloo
Tugaloo R.
GEORGIA
Savannah River

FIGURE 1

and Garden Creek in Haywood County, and the other ($Ma^{O}34$) at the juncture of the Little Tennessee River and Coweeta Creek in Macon County (Fig. 1). Work at the former site was concluded in 1967, whereas work at the latter is still in progress.

In 1966, excavations were begun at a village site ($Bn^{V}29$) on the campus of Warren Wilson College in Buncombe County (Fig. 1). This project also is still in operation.

Additional test excavations and surveys have been continued throughout the duration of the project. In 1967, tests at a stratified site ($Bn^{V}9$) located at the confluence of Gashes Creek and the Swannanoa River near Asheville (Fig. 1) were instrumental in defining the relative temporal placement of several cultural complexes.

The procedures and techniques of excavation employed at two of the sites--the Garden Creek and Warren Wilson sites--will be discussed in the following paragraphs. These sites contained strong Pisgah components and produced the bulk of the data utilized in this study.

The Garden Creek site occupies approximately 20 acres of ground on the south side of the Pigeon River, above its juncture with Garden Creek (Fig. 2). Actually several roughly contiguous sites are involved. A mound at the northeast end of the area, nearest Garden Creek, is labeled $Hw^{O}1$ (Plate I), and the village area around it is designated $Hw^{V}7$. On slightly higher ground, about 1200 feet west of $Hw^{O}1$, a second, somewhat smaller mound is labeled $Hw^{O}2$. The village area around it is designated $Hw^{V}8$. The remnant of a third mound is located approximately 900 feet to the south of $Hw^{O}2$ and is labeled $Hw^{O}3$. There is no apparent village debris around this third mound.

The earliest investigation of $Hw^{O}2$ was conducted in 1880 by

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A. J. Osborne for the Valentine Museum of Richmond, Virginia. Osborne's work consisted of digging a large hole into what he believed to be the center of the mound. He succeeded in finding several poorly preserved burials accompanied by shell beads (see Chapt. IV, p. 195). When the Research Laboratories began work on this mound in 1965 it was actively being destroyed by the owner for the acquisition of fill dirt. A large section of the remaining structure already had been bulldozed away. The excavation of $Hw^{O}2$ was completed in 1966.

$Hw^{O}1$ also had been tested in past years as was evidenced by two "potholes" found at the approximate center of the remaining structure. One of the holes had been dug at a fairly early date and may have been the work of Osborne or of one of the Valentine brothers. A second, smaller hole had been dug in more recent times by local residents. The Research Laboratories began the excavation of $Hw^{O}1$ in 1965 and continued the work for successive field seasons until completion of the mound unit in the fall of 1967.

Excavation was not feasible in the village area around $Hw^{O}2$, but there was some work in the village area adjacent to $Hw^{O}1$.

Excavations at both $Hw^{O}1$ and $Hw^{O}2$ were carried out along a five-foot horizontal grid. In both cases an effort was made to avoid deep vertical cuts in order to preserve the remaining portions of floors and building stages. In short, the techniques of excavation were aimed at dismantling the mounds in the reverse order of their construction. Necessary stratigraphic profiles were obtained at the mound margins and were carried down in stages as the horizontal stripping progressed.

At $Hw^{O}1$, two five-foot wide trenches, begun well off the mound, approached the center at right angles (Plate II). Initially, only the

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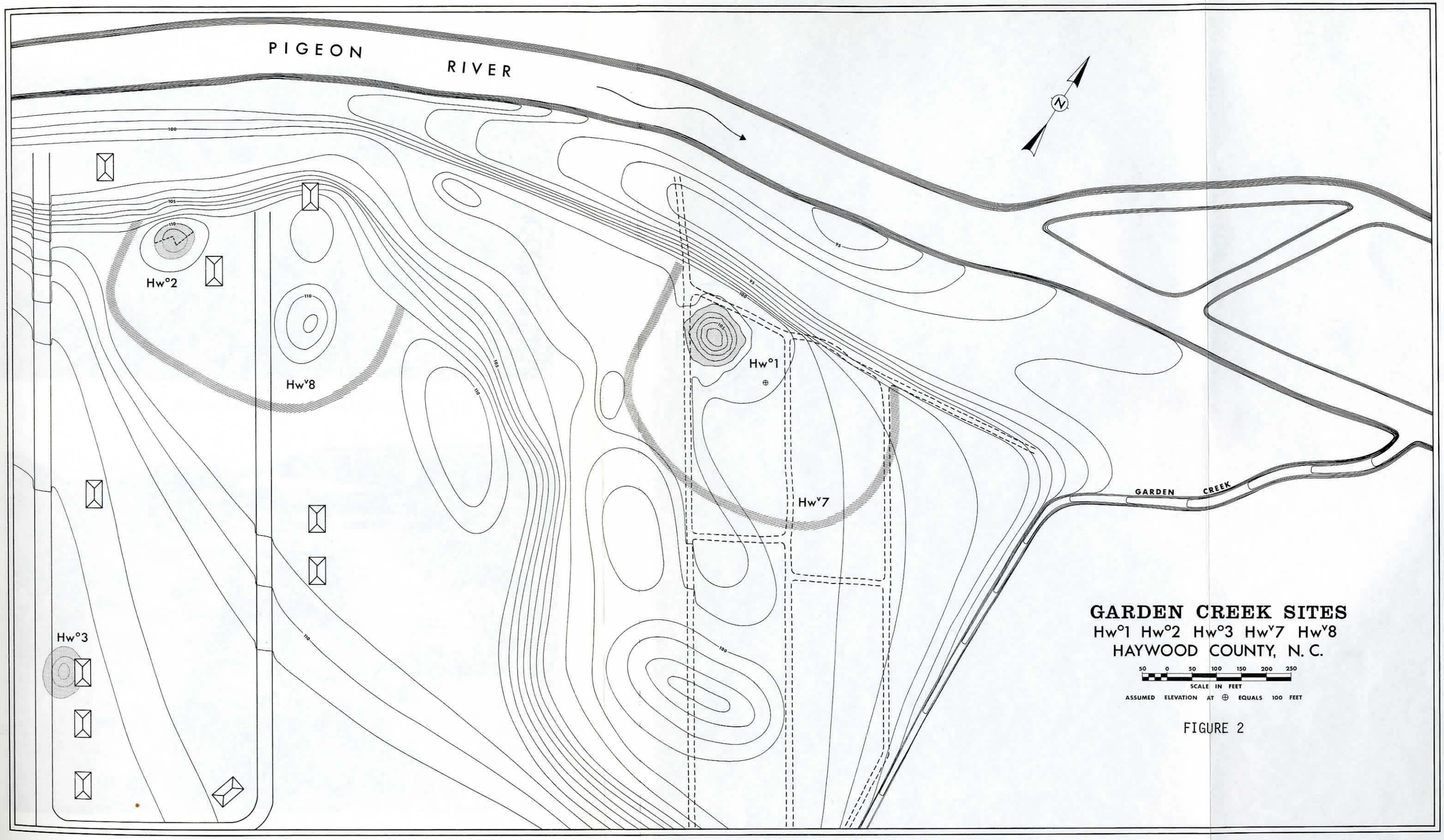
PIGEON RIVER
GARDEN CREEK
Hw°1
Hw°2
Hw°3
Hw^v7
Hw^v8
100
105
110
95
GARDEN CREEK SITES
Hw°1 Hw°2 Hw°3 Hw^v7 Hw^v8
HAYWOOD COUNTY, N. C.
50 0 50 100 150 200 250
SCALE IN FEET
ASSUMED ELEVATION AT ⊕ EQUALS 100 FEET

FIGURE 2

PLATE I
Hw^{o}1 Before Excavation, Looking North.

PLATE II
Hw^{o}1 Preliminary Trench, Looking West.

plowed soil was removed in these trenches, but even from this there were indications of two superimposed floors. Additional removal of plowed soil along the mound periphery yielded information on the extent of erosion damage and revealed a ramp area on the southeast side.

Excavation from this point involved the removal of slump and outwash zones on the mound margins and the delineation of the toe of the most recent mound fill. The structure was then dissected by removing the successive floors and fill stages. Except for zones of relatively sterile clay fill, all soil was sifted through 1/4- or 1/2-inch screens. Both hand-operated and mechanical sifters were employed. Midden-bearing pitfill and outwash were sifted through fine-mesh screen.

Horizontal control was maintained by the use of a five-foot grid and vertical control was established at a permanent datum located to the west of the mound proper. Photographs and scaled plottings were used to record structural information encountered during excavation.

The Warren Wilson site ($Bn^{V}29$) is located on the north bank of the Swannanoa River in Buncombe County. It comprises about 3 acres of ground on a low natural terrace in the interior of a bend in the river (Fig. 3 and Plate III). At this point, the river has just passed through a hilly region to emerge into a stretch of relatively broad alluvial bottoms. Within this stretch are a number of additional sites, several of which have produced remains of the Pisgah culture.

Prior to excavation at the Warren Wilson site and following two separate plowings, systematic surface collections were made along a 50-foot grid. In the winter of 1965 the site was mapped and a test excavation was made. More intensive work was begun in 1966 with the objective of digging on the site for a single summer. Several factors,

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however, soon made it advisable to extend these plans. Early in 1966 it was learned that a TVA reservoir was scheduled to flood the Swannanoa Valley by around 1975. Also, it soon became apparent that the site contained the relatively well preserved plan of a Pisgah village and that there were underlying strata containing the remains of earlier occupations. In addition, an excellent working arrangement between Warren Wilson College and the Research Laboratories led to plans for a co-sponsored field school. The work is now to continue until the completion date of the reservoir.

The Warren Wilson site is naturally stratified, with cultural remains extending to a depth of approximately four feet over most of the site (Plate IV). There is a plow zone 0.8 to 1.2 foot deep which contains mixed remains of the Pisgah, Connestee, and Pigeon cultures. The Pisgah remains are overwhelmingly the most numerous. On reaching the bottom of the plow zone, an undisturbed tan-colored sand is encountered. Within this zone, which is from 0.5 to 0.8 foot thick, are found in situ remains of the Swannanoa culture. Also appearing at this level are numerous pits and postmolds which are intrusive from the Pisgah village level. Below the Swannanoa zone (Zone B) are two successively older pre-ceramic zones (Zones C and D), and below these there is sterile river sand and finally gravel.

Excavation proceeded along a 10-foot grid; vertical control was maintained from a permanent datum set in the ground at the southeast corner of the site. The plowed soil was removed in two equal levels and sifted through 1/2-inch mesh screens which were either manually or mechanically operated (Plates V and VI). A large portion of the artifact assemblage from the site came from this zone and would have been

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lost if the plowed soil had not been sifted. In addition, missing pieces from artifacts or pottery vessels found in pits often turned up in the material from the overlying plowed soil.

When the plowed soil had been completely removed from a square, plow scars were cleaned out and the excavation floor was carefully troweled. Then a ten-foot tower was moved to the edge of the north side of the square so that overhead photographs in black-and-white and color could be taken (Plate VII). The camera lens was at an angle of about 30° from vertical, making these photographs impractical for constructing aerial mosaics as Joffre Coe has done for the Town Creek site. They nevertheless have provided valuable reference supplements.

In plotting the features in each square, steel tapes were attached to two adjacent grid points and measurements were made by triangulation (Plate VIII). Using this method, all postmolds, pits and features in each square were drawn to a 1 inch = 1 foot scale. These drawings later were transferred to a master plotting (Fig. 13).

Postmolds usually were not excavated except in those squares which were to be taken to deeper levels, since the primary goal of the project was to record as large a portion of the village area as possible within the limited period for excavation. Squares not excavated below the plowed soil were backfilled and can be reopened for additional work in the future.

Large disturbances, such as burial pits, refuse pits, hearths, etc., always were excavated, since they contained the only comprehensive samples of culturally associated Pisgah remains. The contents of these features were given careful treatment both in the field and in the laboratory. The soil was subjected to fine-screening and flotation in the

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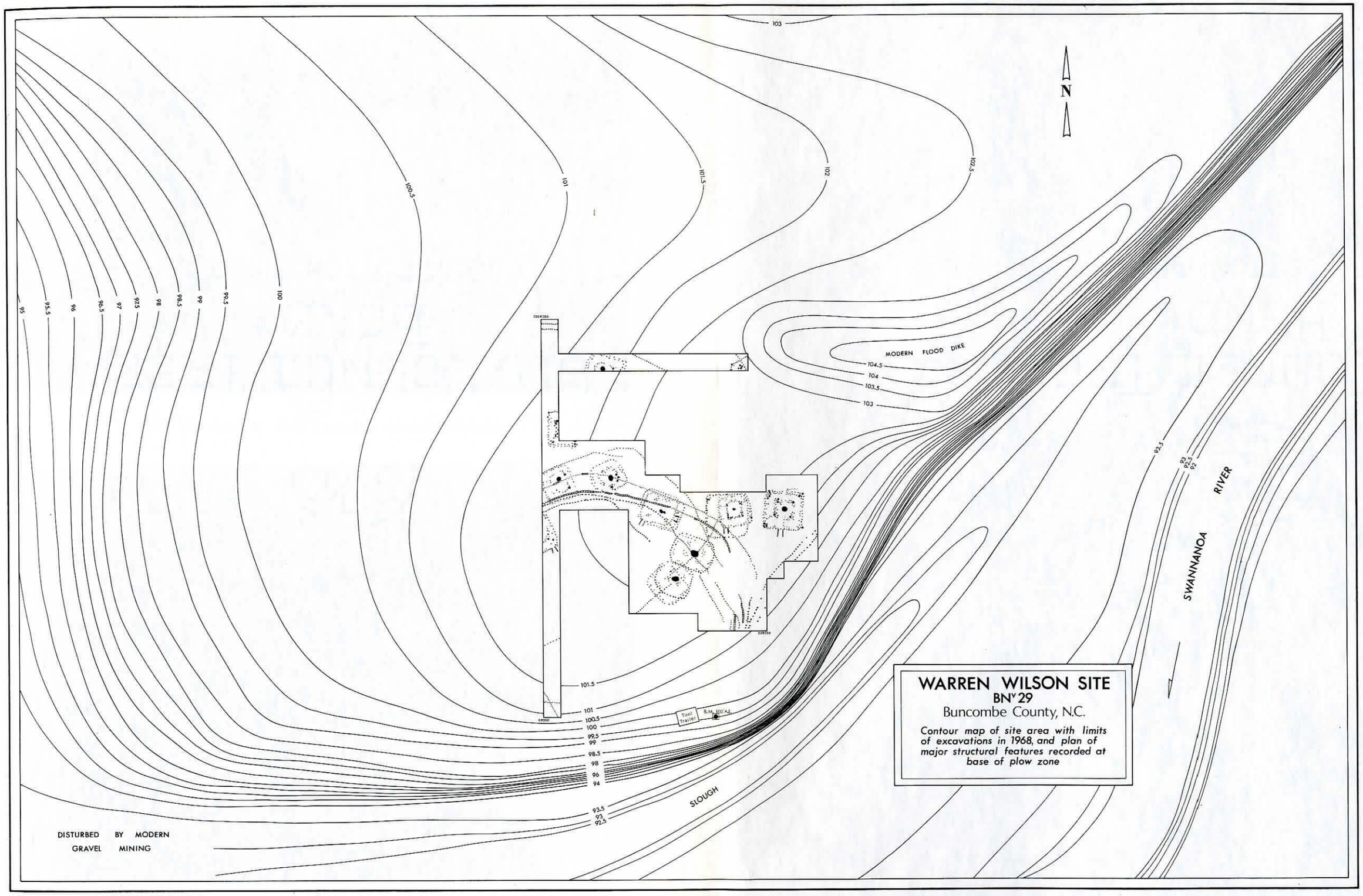
WARREN WILSON SITE
BNY 29
Buncombe County, N.C.
Contour map of site area with limits of excavations in 1968, and plan of major structural features recorded at base of plow zone
N
MODERN FLOOD DIKE
SWANNANOA RIVER
SLOUGH
DISTURBED BY MODERN GRAVEL MINING
Tool Trailer
B.M. 100 Adj.
103
102.5
102
101.5
101
100.5
100
99.5
99
98.5
98
96.5
96
95.5
95
97
97.5
94
93.5
93
92.5
92
104.5
104
103.5

FIGURE 3

PLATE III
$Bn^{V}29$ During 1968 Season, Looking South.

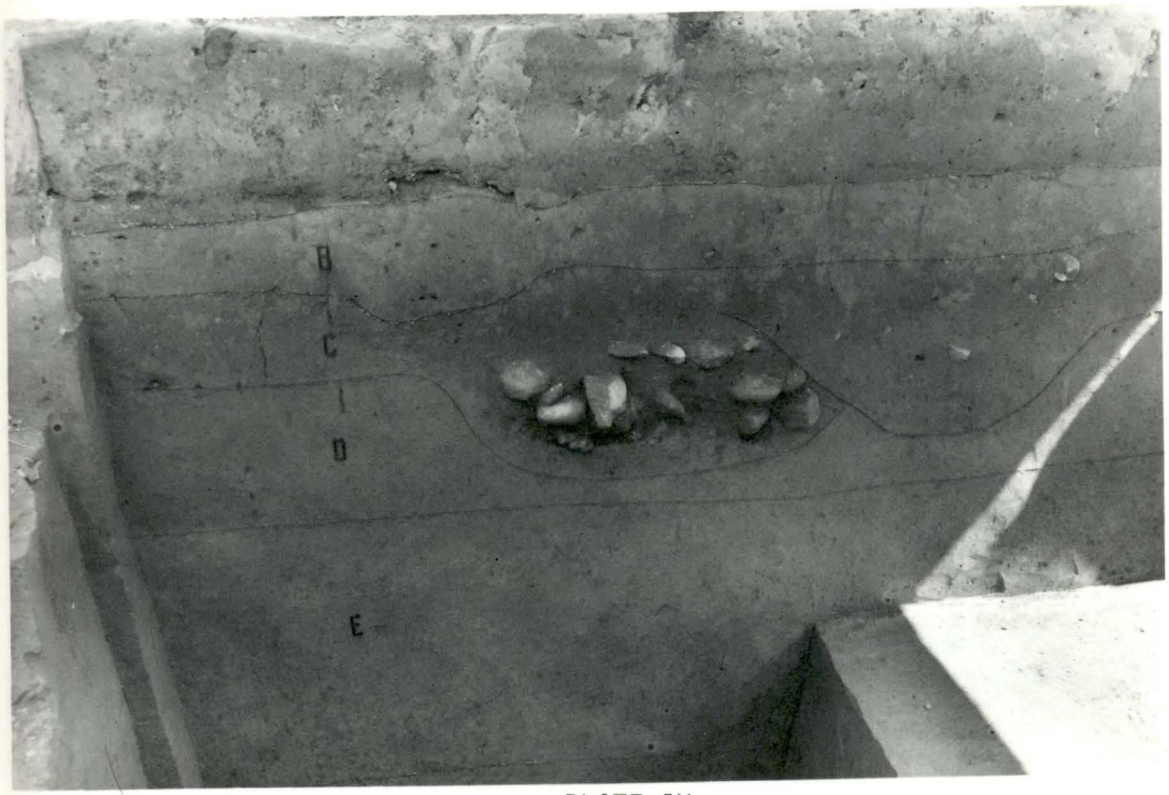

PLATE IV
Soil Profile at $Bn^{V}29$.

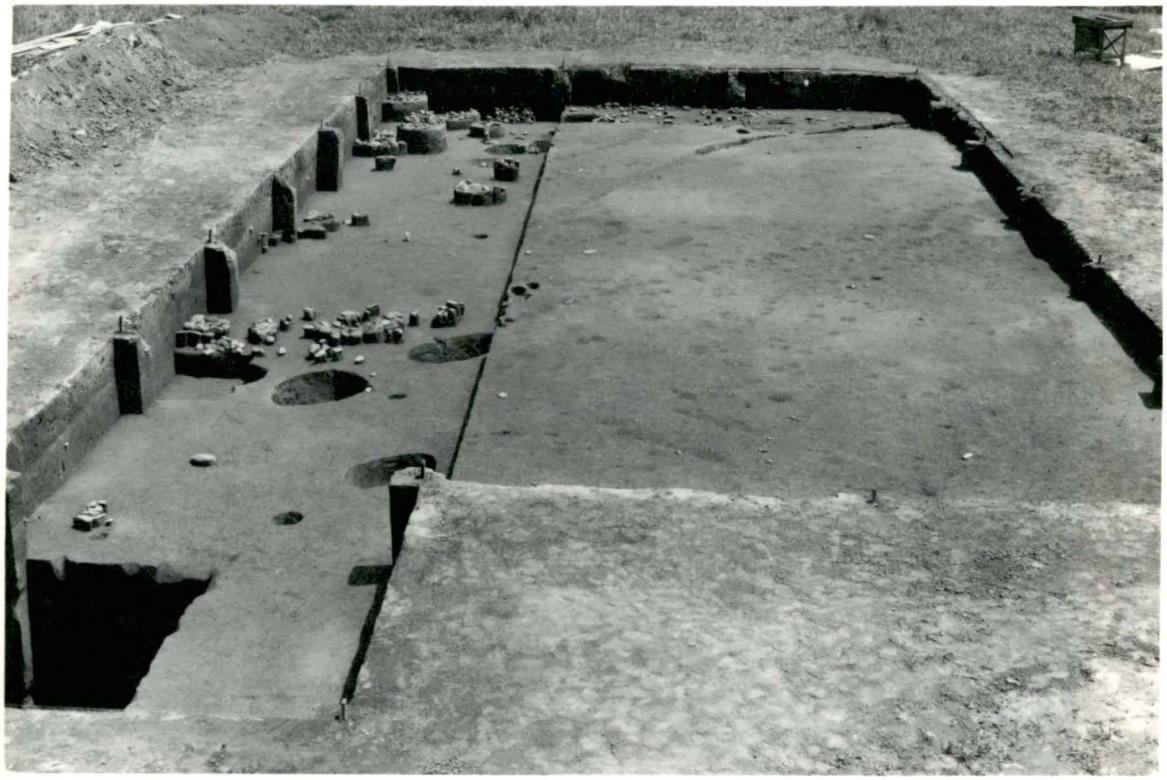

PLATE V
$Bn^{V}29$ Near the Close of the 1966 Season, Looking East.

PLATE VI
$Bn^{V}29$ During 1967 Excavations in Area of House C.

PLATE VII
Vertical Photograph of Portion of Pisgah Level at $Bn^{V}29$, Showing Postmolds in Area of House E.

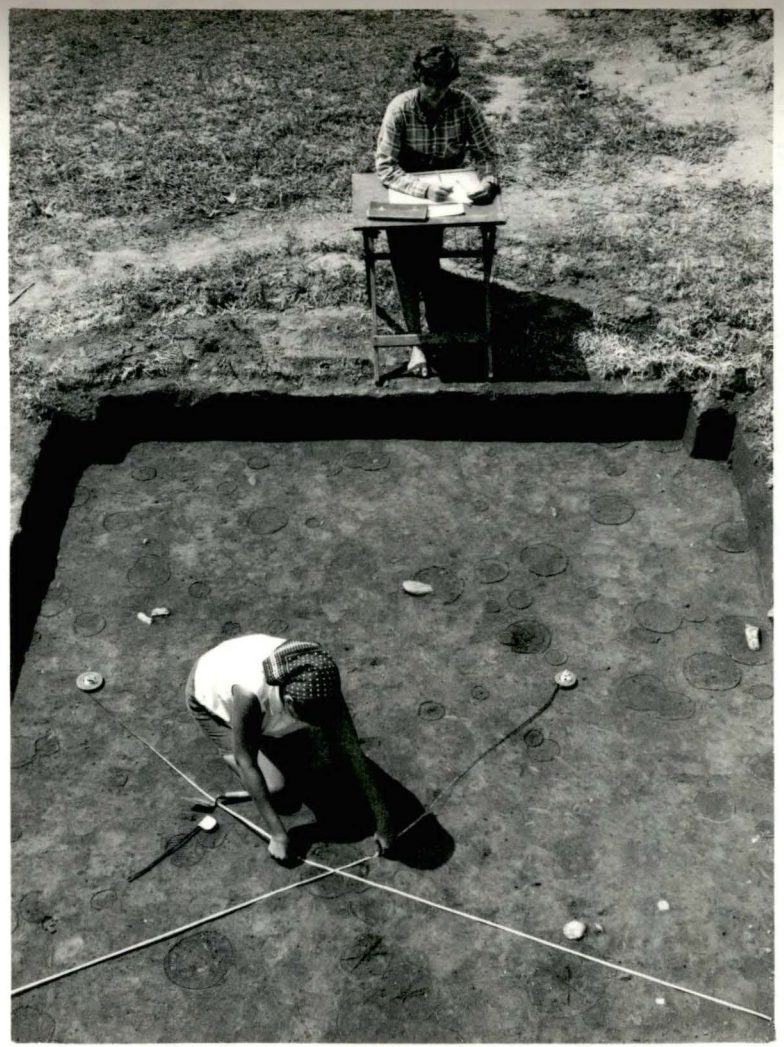

PLATE VIII
Students Plotting Postmolds at the Base of the Plowed Soil at $Bn^{V}29$.

field, or in some cases it was boxed and taken to the laboratory for processing.

In subsequent chapters, the remains from the Warren Wilson site will receive the most detailed attention. Analyses are still to be completed on most of the Pisgah materials from the Garden Creek site.

Outline of the Mountain Sequence

The recent work of the Research Laboratories in western North Carolina has succeeded in delineating a number of cultural complexes which heretofore were either unknown or only partially known from information gathered on the peripheries of the mountains. The spatial extents and temporal relationships of these cultures are still not fully understood in most cases, but it is possible nevertheless to present an outline of the sequence as it is understood to date.

The so-called Paleo-Indian period is known from the mountains only by occasional fluted, lanceolate projectile points which appear in private collections. These points turn up with enough regularity to suggest that there was human activity in most of western North Carolina prior to the development of an Archaic tradition.

Early Archaic cultures are recognized through the presence of Hardaway and Palmer projectile points in surface collections. For instance, Holden (1966: 50) found Palmer points made from quartz, quartzite,and chert on ten different sites in Transylvania County. Several broken sections of bifacially-flaked artifacts of heavily patinated "Carolina slate", exhibiting chipping characteristics of tools found in early Archaic contexts farther to the east, were found in the lowest levels (Zone D) at the Warren Wilson site.

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Middle to Late Archaic artifacts have appeared in surface collections from all of the western counties and have been recovered in several of the recent excavations. Holden (1966: 50-54) recognized Kirk, LeCroy, Stanly, Morrow Mountain, Guilford,and Savannah River projectile point types in her survey of Transylvania County. Examples of all of the above were noted by the author in his examinations of surface collections from the other counties, but as yet no quantified distributions have been acquired. These points are most commonly made of quartz and quartzite, but chert occurs with frequency in the far western counties and slate is of minor importance on the eastern mountain fringe.

At the Warren Wilson site a few Morrow Mountain projectile points of quartz have been found at the bottom of Zone C. The upper portion of Zone C has produced an abundance of information on a culture having medium-sized stemmed projectile points mostly from "Carolina slate". In some respects these points resemble the Savannah River type, and it is suspected that they represent an intermediate stage between larger, "classic" Savannah River points and smaller, crudely-stemmed points of the early ceramic period. Also associated with this complex are fully-grooved axes, pear-shaped manos, mortars, hammerstones, and steatite vessels. There are numerous stone-lined pit hearths, some of which are grouped around roughly circular patterns of rocks, which may represent the remnants of living floors. Additional evidence of this same Late Archaic culture was found beneath the lowest pottery-bearing zone at the Gashes Creek site, which is located on the banks of the Swannanoa River several miles downstream from the Warren Wilson site.

Remains of the Swannanoa culture overlie the Late Archaic zone at

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the Warren Wilson site. Pottery is present in abundance. The sherds are orange to brown in color and have a rather friable texture. They are tempered with abundant grit and usually have a cord marked surface finish. Fabric Marked pieces are next in frequency, followed by plain, bold simple stamped and bold check stamped. The vessel form is a large conoidal pot with a pointed or rounded bottom. The rim is straight with a rounded lip. Rare decorations of the rim area include notches or punctations along the top of the lip or short incisions running down the outer vessel surface just below the rim. A few examples were noted on which the incisions were crossed to form a band of "X's" around the rim.

Swannanoa ceramics are present in surface collections from most of the mountain counties. Holden (1966: 60-64) referred to this pottery as the "Early Series" and described in some detail two types--Early Cord Marked and Early Fabric Marked. Close parallels to Swannanoa pottery are found in the Vincent and Badin series of the North Carolina Piedmont (Coe 1964) and in the sand-tempered variety of Watts Bar Cord Marked and Watts Bar Fabric Marked of eastern Tennessee (Lewis and Kneberg 1957: 7). On the basis of these affinities, the Swannanoa culture can be dated roughly to the late centuries B.C., perhaps lasting in some areas until as late as A.D. 500-600.

Associated with this pottery are small crudely-stemmed projectile points of chert, quartzite or slate, expanded-center bar gorgets, tubular clay pipes, celts and steatite vessels. Hearth areas are present in the form of large clusterings of fire-fractured rocks. These mostly appear to have been constructed on the surface of the ground and rarely in shallow pits.

The <u>Pigeon culture</u> is known primarily from the excavations at Hw^{o}2.

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Additional data come from the surface surveys and from the excavations at the Warren Wilson site. Pigeon ceramics are characterized by medium-sized pots with round or flat bottoms and tetrapodal supports. Rims are straight to slightly recurved. Temper is composed of moderate to large amounts of crushed quartz. The outer surfaces of the vessels usually are check stamped, simple stamped or plain. Plain sherds exhibit tooling marks from having been lightly rubbed with a piece of steatite. This left the surface with a slight sheen. Other minority forms of surface finish include linear check stamping, cord marking and complicated stamping.

Vessels finished with the check design frequently are stamped only as far up as the shoulder, with the remaining area between the shoulder and the lip being left plain and having the steatite tooling. Complicated stamping consists of both curvilinear and angular designs. The curvilinear designs are very similar to those found in Swift Creek Complicated Stamped (Broyles 1968: 49-55 and Wauchope 1966: 54-57) and the angular patterns are reminiscent of those in Napier Complicated Stamped (Wauchope 1966: 57-60).

In the surface surveys, Pigeon pottery was most frequent in the eastern and central mountain counties, with its distribution extending into Tennessee along the Pigeon and French Broad rivers and into South Carolina on the upper Saluda and Savannah drainages. Holden (1966: 64-67) described three types for the Pigeon Series in Transylvania County--Pigeon Simple Stamped, Pigeon Check Stamped and Pigeon Plain.

At the Warren Wilson site, Pigeon pottery was found in the plowed soil overlying the Swannanoa zone. According to the field directors of the 1969 excavations at this site (James Reid and Velletta Canouts,

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personal communications), a midden deposit along an old river bank remnant has yielded Pigeon and Connestee pottery together in a zone of more recent age than Swannanoa and older than Pisgah.

At Hw^{o}2 Pigeon pottery occurred primarily in the mound fill and in the pre-mound humus. Several pits contained, in addition to the pottery, a number of prismatic flake blades made from exotic chert together with fragments of clay anthropomorphic figurines. Also present in these same contexts was a small number of rocker-dentate stamped and zone-punctated sherds. These sherds, along with the blades and figurines, can be compared with similar remains from the Mandeville site in Georgia (Keel 1967: 4).

Whereas affinities for most Swannanoa ceramic traits are to the north and east, the presence of small amounts of check and simple stamping indicates some connections to the south. The more southerly influence became dominant in the development of the Pigeon Series, with obvious similarities to the stamping techniques and vessel forms of Deptford pottery (Wauchope 1966: 47-54). This interaction continued for some time, as evidenced by the later introduction of complicated stamping of both curvilinear and angular varieties. It is also probable, by virtue of the occasional presence of rocker-dentate stamped and zone-punctated sherds (along with blades and figurines), that the Pigeon culture participated in the radiation of Hopewellian traits which Griffin (1967: 136) has proposed. However, either this radiation lasted longer than Griffin indicates or there was some lag in its penetration into the western Carolina mountains. Pigeon ceramics probably began their development around A.D. 400-500 and persisted in some areas to possibly as late as A.D. 1100.

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The Connestee culture is recognized, as with the others, primarily through its distinctive ceramic assemblage. The surface surveys and the excavations at the Warren Wilson and Gashes Creek sites have produced some information, but probably the largest body of data comes from test excavations at a large site ($Tr^{V}1$) in Transylvania County (Joffre Coe, personal communication) and from the recent work at $Hw^{O}2$ on Garden Creek in Haywood County.

Connestee pottery is characterized by a vessel form not unlike that of the Pigeon Series. On the whole, however, the pottery is somewhat thinner, there is a greater tendency toward eversion of the rim, and there is a reduction in the size of,or loss of, the tetrapods. The ware is dark in color and is tempered with unaltered river sand having fine to medium-size particles. Surface finishes include plain, brushed, cord marked, fabric marked and check stamped, in approximately that order of frequency. There are also occasional complicated stamped pieces on which the motifs resemble closely those of Woodstock and Etowah Complicated Stamped (Wauchope 1966: 60-70). The plain wares are usually lightly tooled or scraped but are never rubbed with steatite. Decoration of the rim, when present, consists of notches, pinches or punctations along the top of the lip.

In the surface surveys, Connestee pottery seems to be most prevalent in the western counties, but it also is found in the easternmost sites. Its presence in southeastern Tennessee is attested by Egloff (1967: 29).

At the Warren Wilson site, Connestee sherds were found in the plowed soil overlying the Swannanoa zone. The 1969 excavations (Reid and Canouts, personal communication) produced them in a midden context

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along with Pigeon sherds. This midden post-dated the Swannanoa occupation but was older than the Pisgah. At the Gashes Creek site, there was a thick Connestee midden overlying a Swannanoa occupation. The tests revealed numerous postmolds and several refuse-filled pits, all originating from the Connestee level.

Mound stages 1 and 2 at Hw^{0}2 were attributed to the Connestee occupation (Bennie Keel, personal communication). This is the only case where there has been directly observable superposition of Connestee over Pigeon. The corner of a postmold pattern was found on the remaining portion of mound stage 1, and a complete pattern, roughly square in shape and measuring about 20 feet on a side, was present on the pre-mound surface. Both of these were Connestee structures.

Before stratigraphic information was available, Holden (1966: 85) stated that she felt that Connestee was "somewhat later in time than the Pigeon pottery because the legs are smaller and in some specimens are scarcely to be seen at all." On the other hand, she found it difficult under these terms to justify the popularity of cord marking and fabric marking which seemed to be more closely related to the Swannanoa than to the Pigeon Series. She concluded that Connestee was connected to the ceramic traditions of Eastern Tennessee (Candy Creek and Camp Creek) and that it represented an intrusion into western North Carolina.

The distribution of Connestee pottery does seem to be greatest toward the west, with its presence being noted with frequency in the far-western counties of North Carolina and in the adjacent counties of Tennessee. The temporal problems may be explained if we view Pigeon and Connestee as two partially contemporary manifestations which developed along slightly different lines. Under this hypothesis, Connestee was a

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more westward development which began somewhat later than Pigeon and replaced it in some of the eastern areas. A dating of ca. A.D. 600-700 to ca. A.D. 1100-1200 is suggested for Connestee. A radiocarbon date of A.D. 805 ± 85 years (Geochron Laboratories No. GX593) was obtained on charred wood from a feature containing Connestee pottery at Hw^{o}2.

The Pisgah culture, which would be the next to be discussed in this outline, is covered in detail in the chapters to follow. Suffice it to say here that this culture appears to have developed as a result of continued influences coming into the mountain area from the outside, as well as a culmination of internal developments preceding it. Pisgah is late prehistoric to early protohistoric with probable dates of ca. A.D. 1100 to ca. A.D. 1550.

The late protohistoric and historic periods saw the development of the Qualla culture over most of western North Carolina. Qualla ceramics have been identified in surface collections from all but the easternmost of the mountain counties. Further information comes from excavations of limited scale which have been carried out on several sites (Egloff 1967) and from the more intensive investigations at Hw^{o}1 on Garden Creek and at the Coweeta Creek mound.

Qualla pottery is characterized as possessing "the basic attributes of the Lamar style horizon: folded finger impressed rim fillets; large, sloppy, carved stamps; and bold incising" (Egloff 1967: 34). It differs from "classic" Lamar in that the stamped and incised motifs lack regularity and symmetry, angular complicated stamping is relatively important, check stamping, cord marking and corncob impressing are present, and reed punctations are absent entirely.

Large, everted-rim jars and cazuela bowls are the predominant

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vessel forms. The paste is characterized by moderate to abundant amounts of coarse grit. Vessel interiors are burnished; the exteriors are curvilinear or rectilinear complicated stamped, plain, burnished, check stamped, cord marked and corncob impressed, in that order of popularity. Everted rims are frequently decorated with finger impressed or notched fillets, and the inslanted portions of cazuela bowls are decorated with incised scrolls or angular motifs (Egloff 1967: 34-43). Qualla pottery has obvious counterparts in Boyd Check Stamped and Boyd Complicated Stamped of northeastern Georgia (Caldwell 1955: 279), and in the shell-tempered Overhill Complicated Stamped and Overhill Check Stamped of southeastern Tennessee (Lewis and Kneberg 1946: 105-106).

Associated with the Qualla culture are sub-structure mounds, shell grave associations, and in many cases European trade artifacts. At the Coweeta Creek site near Franklin, North Carolina, there was a series of superimposed townhouse floors comprising a low mound. The houses were square with rounded corners and were of post-and-daub construction. There was a central fire basin on the floor of each structure as well as several burial pits, some of which were of the shaft-and-chamber type. Although trade beads and other European-made artifacts were found in profusion on all but the lowest floor, there were only aboriginal shell and polished stone artifacts in any of the burials. The mound ramp faced onto a prepared plaza, around which there were several other houses.

At Hw^{o}1, Qualla remains were superimposed on those of the Pisgah occupation. The stratigraphy of the mound outwash zones showed that the Qualla people had utilized the top of a mound previously built during the Pisgah period. Radiocarbon dates on features associated with the

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Qualla occupation at Hw^{o}1 were A.D. 1730 ± 100 years (Geochron Laboratories No. GX0596) and A.D. 1745 ± 65 years (Geochron Laboratories No. GX0729).

The Qualla culture is seen as a development partially out of the pre-existing Pisgah culture and partially as a result of influence from cultures to the south through which curvilinear complicated stamping was introduced. The dating of Qualla is set at ca. A.D. 1500 to ca. A.D. 1880. The 1880 date is defined by pots which fit well into the Qualla classification and which are labeled as having been made by Cherokee women in 1880 for the Valentine Museum of Richmond Virginia (these pots are now in the Research Laboratories of Anthropology collections).

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CHAPTER II

CERAMICS

Descriptions of Pisgah ceramics have appeared in print before the present study. In 1884, William H. Holmes reported on pottery found at a mound site located at the juncture of the Pigeon and French Broad rivers near Newport, Tennessee. The mound had been partially excavated by Edward Palmer for Holmes in 1881. Holmes' descriptions were quite comprehensive and accurate, although he mistook fine-element complicated stamping for woven fabric impressions.

> Material. -- The clay is generally gray or dark-reddish gray in mass, and is apparently quite siliceous or sandy, numerous grains of quartz being visible. There is generally a sprinkling of finely-powdered mica, but no shell matter can be detected. When much weathered the surface is quite gritty.
>
> Form. -- The leading form is a round-bodied, pot-shaped vase. There is one small hemispherical bowl. The outlines have been quite symmetrical. The mouths of the pots are wide, and the necks deeply constricted. The lip or rim exhibits a number of novel features. That of the larger specimen, of which a considerable segment remains, is furnished on the upper edge with a deep channel, nearly one-half an inch wide, and more than one fourth of an inch deep. Others have a peculiar thickening of the rim, a sort of collar being added to the outside. This is about 1 inch in width, and is thicker below, giving a triangular section.
>
> The walls of the vessels are usually quite thin. The bottoms were probably round, or nearly so. No fragments, however, of the lower parts of the vessels were collected. There is but one example of handle, and this presents no unusual features.
>
> Ornamentation. -- The ornamentation is in some respects novel. The double or channeled rim of the larger specimen, the mouth of which has been 13 or 14 inches in diameter, is embellished with a line of flutings, which seem to be the impressions of a hollow bone or reed. The whole exterior surface is embellished with a most elaborate ornamental design, which resembles the imprint of some woven fabric. If a woven fabric has not been used, a pliable stamp, producing the effect of a fabric, has been resorted to. The

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> fact that the sharply concave portions of the neck are marked with as much regularity as the convex body of the vessel, precludes the idea of the use of a solid or non-elastic stamp. The pattern consists of groups of parallel indented lines, arranged at right angles with one another, the puzzling feature being that there is no evidence of the passing of the threads or fillets over or under each other such as would be seen if a woven fabric had been used. The outer surface of the triangular collar peculiar to many of the pots has been decorated with a herring-bone pattern, made by impressing a sharp implement. The handle in one case is similarly ornamented. This handle has been added after the figure previously described was impressed upon the neck of the vessel. One small fragment shows another style of indented or stamped pattern, which consists of series of straight and curved lines, such as are characteristic of many of the vessels obtained from the Gulf States (Holmes 1884: 440-441).

Patricia Holden (1966: 72-77), on the basis of an analysis of sherd collections from Transylvania County, North Carolina, compiled the first type categories. Under the Pisgah Series, she included Pisgah Complicated Stamped, Pisgah Smoothed-Over Complicated Stamped, Pisgah Check Stamped and Pisgah Plain. Holden's descriptions were based on reference to tentative type groupings already set up by Joffre Coe. Brian Egloff (1967) referred to Holden's descriptions in his analysis of ceramics from various historic Cherokee towns.

Richard and James Polhemus (1966: 13-24) published a description of Pisgah pottery from the Clinch and Holston rivers in Tennessee under the name Cobb Island Complicated Stamped. Although additional type names were not assigned, the Polhemuses noted that other forms of surface finish on this pottery consisted of simple stamping, check stamping, linear check stamping, "herring-bone" stamping, and diamond stamping within a "stair step pattern."[1]

C. G. Holland's (n.d.) Lee Series pottery of southwestern Virginia

[1]I am indebted to Richard and James Polhemus for permission to examine and photograph sherds from their Clinch and Holston river collections.

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also conforms to the Pisgah designation. Holland recognized four types within the series: Lee Linear Stamped, Lee Check Stamped, Lee Plain and Lee Simple Stamped.[2]

In compiling the present descriptions, the author made first-hand examinations of collections from western North Carolina, northeastern Tennessee and northwestern South Carolina. Most of this pottery was from surface collections. Observations were made of paste characteristics, temper, vessel form, rim form, surface finish, and decoration.

In addition to the examinations of surface collections, an analysis also was made of sherds from the plowed-soil zone in 51 squares at the Warren Wilson site. Pisgah Series sherds in this sample numbered 26,019.

The highly fragmented and weathered condition of most of the surface-collected sherds, as well as of many of the plowed-soil pieces, made precise observations difficult. Consequently, in order to obtain a control sample of unweathered sherds from relatively undisturbed contexts, all of the pottery from the fill of pit features and burials at the Warren Wilson site was examined in detail. Pisgah Series sherds in this sample numbered 4125. Differences in design motifs, which usually could not be differentiated on the surface-collected and plowed-soil specimens, were noted (Table 1). Rim sherds were classified as to form and decorative treatment. On a random selection of body sherds (approximately every twentieth sherd), sherd thickness and temper size were measured, the ratio of temper to clay was estimated, and the

[2]Dr. Holland kindly supplied me with a type-written copy of his manuscript, "An Archaeological Survey of Southwestern Virginia," which included descriptions of the Lee Series pottery and photographs of some of the type sherds.

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characteristics of texture, color and hardness were evaluated (Table 2).

The Pisgah Ceramic Series[3]

Pisgah Rectilinear Complicated Stamped

PASTE:

Method of Manufacture: Thin annular strips were coiled around a small basal plate. Coils usually were well eradicated in the finished vessel.

Temper: Fine to coarse river sand (usually from about 0.12 to 0.5 mm. in diameter). Occasional inclusions are up to 2 or 3 mm. in size. Mica flecks are abundant, particularly in sherds from west-central North Carolina, but this probably was a property of the clay and not of the temper. A small percentage of sherds contain crushed quartz temper. Polhemus and Polhemus (1966: 20) found crushed particles in about 25 percent of the Tennessee sherds. A few shell-tempered specimens also are found in Tennessee (Plate XXVIII, two sherds on bottom left).

Texture: Usually coarse and compact. Temper particles comprise from 20 to 40 percent of the paste.

Hardness: 2 to 3; varies with firing characteristics, abundance of temper particles, and degree of weathering.

Color: Interior surfaces are gray to almost black; exterior surfaces are usually light gray, tan or buff. Sometimes radical color changes are found on the same sherd.

---

[3]A ceramic series is composed of "pottery types which occur on the same ware and which are the product of a cultural group at a particular period of time" (Sears and Griffin 1950: 1).

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SURFACE FINISH (exterior):

In the plowed-soil sample from Warren Wilson, rectilinear complicated stamped patterns were present on 88 percent of the sherds with identifiable surface finish. They were found on 86.6 percent of the sherds from features and burials at the same site. Details of design motifs usually were not recognizable on sherds from the plowed soil. However, on sherds from the features and burials, three distinct rectilinear designs were present. All appear to have been applied with a carved paddle, wood-grain striations being present in a number of cases.

Rectilinear Design A: This design occurs with the greatest frequency. It accounted for 73.9 percent of the identifiable surface finish on sherds from the features and burials at Warren Wilson. The basic motif is a pair (or sometimes 3 or even 4) vertical grooves flanked by rows of 8 or more horizontal grooves (Fig. IV and Plate IX). The horizontal grooves usually are shorter and slightly more closely spaced than the vertical grooves. In many cases it appears that the paddle had two additional sets of vertical and horizontal grooves on either side of the basic design (Fig. IV), but this is difficult to determine on small sherds or on sherds that had been overstamped. Table 3 gives the widths, lengths and number of the lands and the grooves of 29 sherds.

Stamping was begun at the bottom of the vessel. The paddle was then applied in contiguous units around the pot. When one complete circuit had been made, a new row was begun directly above the first. It appears that an effort usually was made to stagger the design from row to row, creating an uneven lined-block effect (Plate X). In many cases the impressions on one row overlapped slightly with those of the

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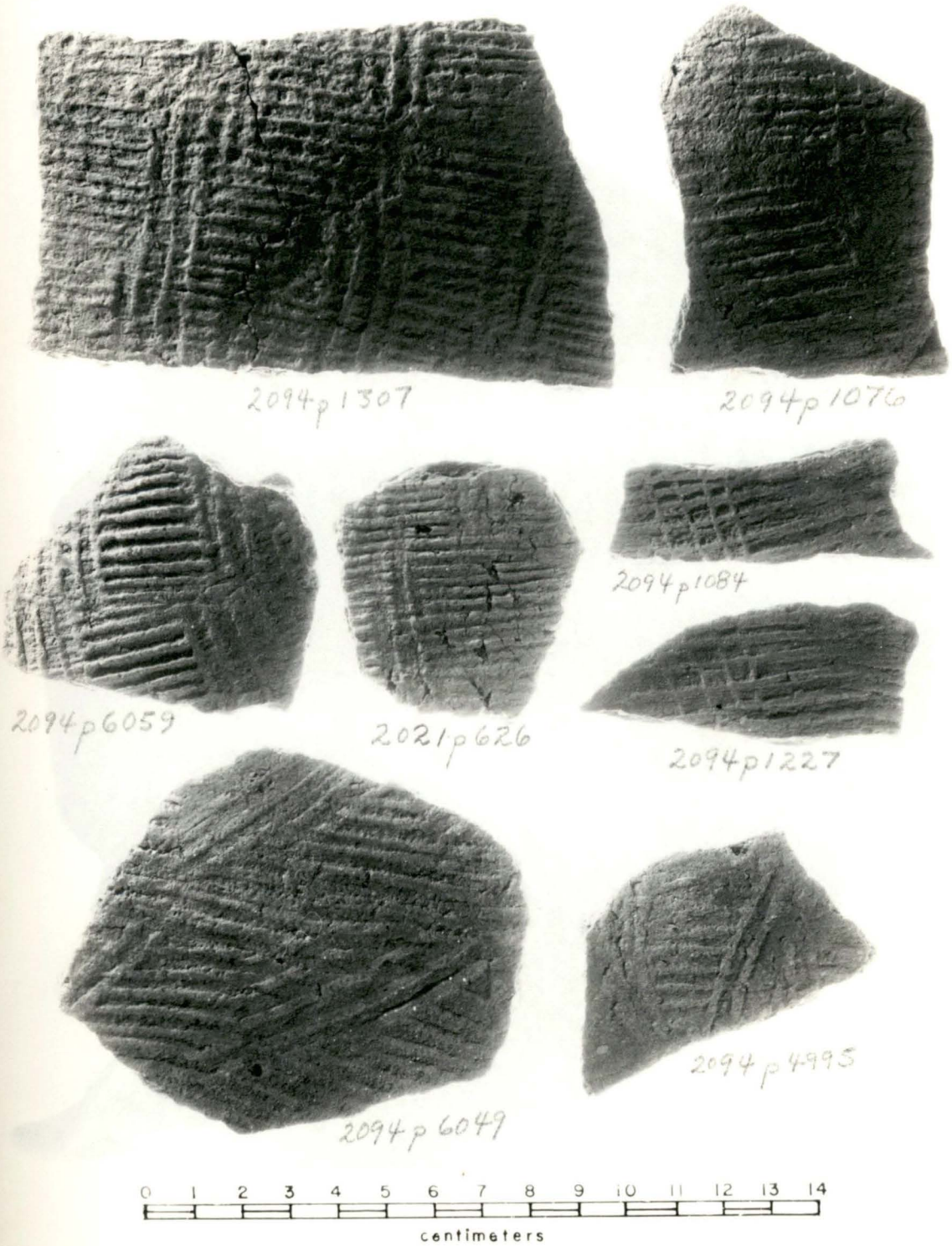

PLATE IX
Pisgah Rectilinear Complicated Stamped Pottery Designs
Upper and Middle Left, Design A; Lower,
Design B; Middle Right, Design C.

PLATE X 2164p19

Pisgah Collared Jar, Rectilinear Complicated Stamped Design A (From Western N.C., Site Unknown).

PLATE XI

Pisgah Rectilinear Design A. Upper, Bowl ($Bn^{V}29$); Lower, Jar ($Hw^{O}1$).

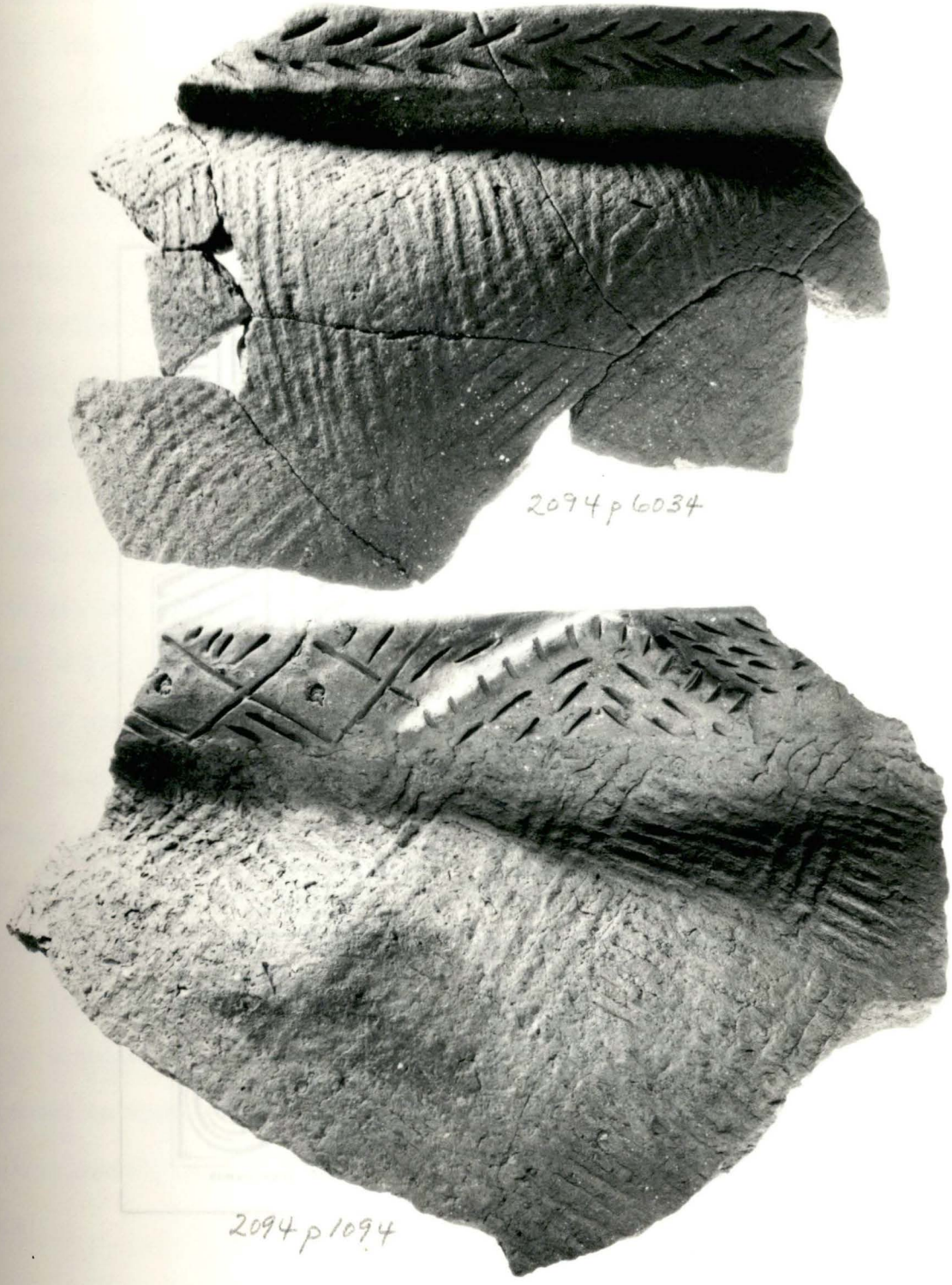

PLATE XII
Pisgah Rectilinear Complicated Stamped
Upper, Design B; Lower, Design A.

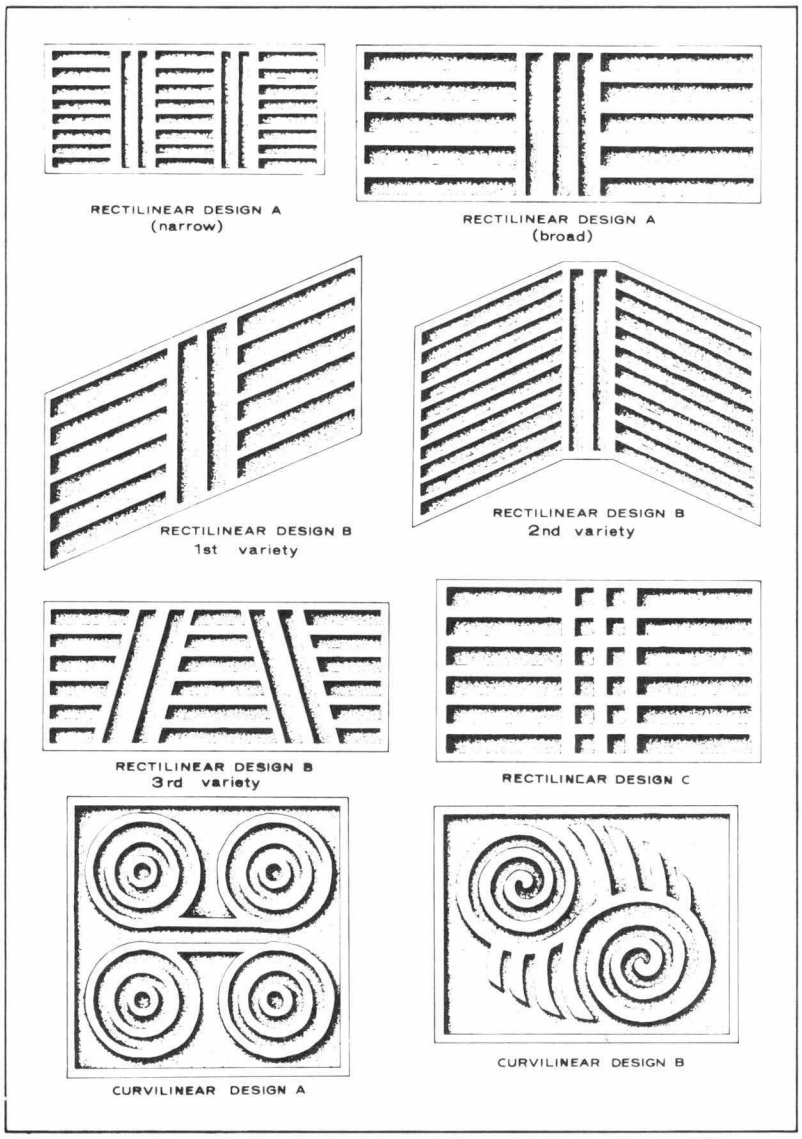

FIGURE 4

PISGAH COMPLICATED STAMPED POTTERY DESIGNS

preceding row, partially eradicating the earlier impressions. Occasionally, the intersecting rows are not parallel to each other. In such cases, portions of adjacent impressions may crisscross and overlap in a confusing manner (Plate XI, top).

Two distinct forms of Design A were recognized in the collections studied. It is believed that these differences are temporal, a topic for further discussion later in this chapter. In one form the horizontal grooves are short (10 mm. or less) and the lands (raised portions) and grooves (depressed portions) of the entire motif are narrow (0.75 to 1.5 mm.) (Fig. 4 and Plate XIV). In the other form the horizontal grooves are long (20 to 40 mm.), occasionally longer than the vertical grooves, and the individual lands and grooves are broad (1 to 4 mm.) (Fig. 4 and Plate XII, bot.).

In west-central North Carolina the narrow form occurs only 25 percent as frequently as the wide form and is present most often on vessels with thickened or unmodified rims. In Tennessee and portions of northwestern South Carolina the narrow form is in the majority and is present on sherds with unmodified, thickened and collared rims.

The wide, broadly-cut form is found most frequently in collections from Buncombe and Haywood counties, North Carolina. It almost always is present on vessels with either collared rims or straight, pinched rims. Larger overall vessel size also is indicated for sherds with this large motif.

Rectilinear Design B: This variety of Pisgah Rectilinear Complicated Stamped accounted for 11.2 percent of the surface finish on sherds from features and burials at Warren Wilson. It differs from Design A in that either the vertical grooves or the horizontal grooves are slanted

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(Plate IX). Three forms were identified. In one, the alternating pairs of vertical grooves are parallel, but the flanking grooves are slanted at a slight angle, all running in the same direction (Fig. 4). In a second form the flanking grooves alternate in direction, one set running up and the next down (Fig. 4). In a third form the flanking grooves are all horizontal, but the central grooves are alternately slanted to form open ended "V's" (Fig. 4). When impressions of this design have been applied in adjacent rows, they resemble lined-diamonds.

The three forms of Design B are most prevalent in North Carolina collections. However, they do appear infrequently in Tennessee and South Carolina. Polhemus and Polhemus (1966: 17-18) probably are referring to the second-described form when they speak of a "herring-bone stamp."

Rectilinear Design C: This design differs from Design A in that instead of the central grooves being continuous they are broken to form checks or rectangles (Fig. 4 and Plate IX). The execution is always rather bold and seems to be most frequently associated with the larger form of Design A and with the various forms of Design B. This design was not observed outside of west-central North Carolina. It accounted for 1.5 percent of the surface finish in the features and burials at Warren Wilson.

SURFACE FINISH (interior):

The interior surface finish of Pisgah Rectilinear Complicated Stamped ranges from lightly smoothed to burnished. There had been enough smoothing on most sherds to float the finer clay particles to the surface and to submerge the larger particles. Infrequently the surface

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Feature	Rect. Comp. A	Rect. Comp. B	Rect. Comp. C	Curv. Comp.	Check	Plain Smooth	Plain Rough	Cord Mkd.	Uniden.	Total
2	15	0	0	0	0	0	1	0	18	34
3	1	0	0	0	0	0	0	0	6	7
4	5	1	1	1	1	0	0	0	10	19
5	1	0	0	0	0	0	1	0	4	6
6	1	0	0	0	0	0	1	0	2	4
7	395	96	30	8	59	13	10	1	478	1090
8	3	0	0	0	0	0	0	0	5	8
9	3	0	0	0	1	0	0	0	4	8
14	0	0	0	0	3	0	0	0	6	9
37	15	0	0	0	0	0	0	0	11	26
40	2	3	0	0	1	0	0	0	5	11
41	5	0	0	0	0	0	0	0	7	12
47	36	5	0	0	0	0	0	0	35	76
53	16	2	0	0	1	0	0	0	23	42
54	12	3	0	0	6	0	0	0	27	48
55	8	0	0	0	0	0	0	0	4	12
56	29	15	2	1	5	3	0	0	28	83
57	280	0	0	9	11	0	6	0	545	851
85	23	0	0	0	0	0	0	0	15	38
86	73	0	0	0	4	4	4	0	25	110
107	27	3	0	0	15	4	0	0	38	87
108	55	4	0	2	6	4	1	0	32	104
136	198	88	0	1	17	2	1	0	152	459
137	22	4	0	0	2	0	0	0	24	52
140	62	0	0	0	6	9	0	0	21	98
Burial										
1	6	0	0	0	0	0	0	0	2	8
2	2	0	0	0	0	0	0	0	3	5
3	2	0	0	0	0	0	0	0	0	2
4	0	0	0	0	0	0	0	0	0	0
5	3	0	0	0	0	0	0	0	5	8
6	0	0	0	0	0	0	0	0	1	1
7	33	0	0	0	1	1	1	0	47	83
8	23	1	0	0	1	3	1	0	12	41
9	0	0	0	0	0	0	0	0	0	0
10	5	0	0	0	1	0	0	0	1	7
11	7	0	0	0	0	0	0	0	0	7
12	14	0	0	0	1	0	0	0	9	24
13	36	4	0	0	0	2	5	0	38	85
14	1	0	0	0	1	1	0	0	4	7
15	26	4	0	1	2	0	1	0	34	68
16	9	0	0	0	2	0	0	0	21	32
17	8	0	0	0	4	0	0	0	19	31
18	25	0	0	7	9	1	0	0	24	66
19	45	0	0	0	5	0	0	0	20	70
20	8	0	0	0	0	0	0	0	8	16
21	41	1	0	0	7	1	0	0	48	98
22	14	2	0	0	0	0	0	0	24	40
23	7	4	0	0	2	1	0	0	21	35
24	1	2	0	0	0	0	0	0	1	4
25	2	0	0	0	1	0	0	0	0	3
26	8	0	0	0	0	0	0	0	12	20
27	4	2	0	0	1	0	0	0	6	13
28	9	0	0	1	1	0	0	0	13	24
29	1	0	0	0	1	0	0	0	2	4
30	2	0	0	0	0	0	0	0	2	4
31	0	0	0	0	0	0	0	0	0	0
32	1	1	0	0	0	0	0	0	3	5
33	3	2	0	0	3	0	1	0	11	20
TOTALS	1633	247	33	31	181	49	34	1	1916	4125

TABLE 1

DISTRIBUTION OF SURFACE FINISHES ON PISGAH SHERDS
FROM FEATURE AND BURIAL FILL AT BN^{V}29

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Feature	Paste	Temper Type	%	Color Interior	Color Exterior	Exterior Finish	Thickness MM.	Interior Finish
2	hard & compact	coarse sand	15	tan	dk. gray	Rec. A	6.5	rough
2	hard & compact	med.-coarse sand	15	gray/buff	gray/buff	Rec. A	4.5	burnished
4	friable & lumpy	med.-coarse sand	35	lt.gray/buff	dk. gray	Check	8.5	burnished
4	very hard & compact	medium sand	15	buff	gray	Rec. B	7.0	burnished
7	med. hard & compact	med.-coarse sand	20	buff	gray	Check	6.5	burnished
7	very hard & compact	med.-coarse sand	20	lt. gray	dk. gray	Check	6.0	burnished
7	very hard & compact	med.-coarse sand	20	tan	dr. gray	Check	7.0	smoothed
7	very hard & compact	coarse-very coarse sand	25	tan	gray	Check	7.0	smoothed
7	very hard & compact	fine-med. sand	15	tan	gray	Rec. A	5.5	smoothed
7	med. hard & compact	med.-very coarse sand	30	tan	gray	Rec. A	8.0	burnished
7	very hard & compact	med.-coarse sand	20	tan	gray	Rec. A	6.5	smoothed
7	med. hard & compact	coarse-very coarse sand	40	buff	gray	Rec. B	8.5	smoothed
7	hard & compact	medium sand	25	buff-dk. gray	lt. gray	Rec. B	6.5	burnished
9	hard & compact	fine-medium sand	20	tan	gray	Check	7.0	smoothed
37	hard & compact	coarse-very coarse sand	25	tan	dk. gray	Rec. A	6.5	smoothed
47	hard & compact	med.-coarse sand	15	tan	dk. gray	Rec. B	6.5	burnished
47	very hard & compact	med.-coarse sand	15	tan	dk. gray	Rec. A	7.0	burnished
53	friable & compact	fine-medium sand	40	red	black	Red. A	5.5	burnished
53	friable & compact	med.-coarse sand	40	pink	black	Rec. A	8.0	smoothed
53	very hard & compact	med.-coarse sand	15	tan	tan	Rec. B	7.5	smoothed
54	very hard & compact	medium sand	25	tan	pink	Rec. B	7.5	smoothed
56	very hard & compact	med.-very coarse sand	20	gray	gray	Check	7.0	burnished
56	hard & compact	fine-med. sand	30	buff/gray	black	Rec. A	6.0	smoothed
56	frible & compact	med.-coarse sand	40	gray	gray	Rec. A	7.0	smoothed
57	hard & compact	med.-coarse sand	20	lt. gray	lt. gray	Check	8.0	smoothed
57	hard & compact	med.-coarse sand	25	lt. gray	dk. gray	Rec. A	8.0	burnished
57	med. hard & compact	fine-medium sand	25	tan	black	Rec. A	6.5	smoothed
57	med. hard & lumpy	med.-coarse sand	40	tan	tan	Rec. A	6.0	smoothed
57	friable & lumpy	fine-coarse sand	40	buff	gray	Rec. A	5.0	rough
57	hard & compact	coarse sand	20	gray/tan	dk. gray	Curv.A	6.0	smoothed
57	hard & compact	med.-coarse sand	25	buff	gray	Rec. A	6.0	burnished
85	med. hard & compact	medium sand	35	gray/tan	dk. gray	Rec. A	6.5	smoothed
86	hard & compact	very fine sand	30	lt. gray	lt. gray	Rec. A	8.0	burnished
86	hard & compact	coarse sand	15	buff	gray	Rec. A	6.2	smoothed
107	med. hard & lumpy	medium sand	25	tan	gray	Rec. A	8.0	burnished
107	med. hard & lumpy	coarse sand	20	tan	tan	Rec. A	6.5	burnished
107	hard & compact	medium sand	15	red	black	Rec. A	6.0	burnished
108	med. hard & lumpy	medium sand	50	tan	tan	Check	5.5	smoothed
108	med. hard & lumpy	medium sand	50	buff	black	Rec. A	5.5	smoothed
108	med. hard & lumpy	medium sand	25	buff	gray	Rec. A	6.0	smoothed
136	med. hard & lumpy	fine sand	30	buff	gray	Rec. A	7.0	burnished
136	med. hard & lumpy	fine sand	30	black	black	Rec. A	7.0	burnished
136	med. hard & lumpy	medium sand	15	buff	gray	Rec. A.	5.5	burnished
136	med. hard & lumpy	medium sand	25	red	dk. gray	Rec. A	6.5	rough
136	med. hard & compact	very fine sand	35	lt. gray	dk. gray	Rec. A.	7.0	smoothed
137	friable & lumpy	med.-coarse sand	45	buff	tan	Rec. A	8.0	rough
Burial								
7	hard & compact	very coarse sand	20	buff	gray	Rec. A	6.5	burnished
8	hard & compact	coarse sand	15	tan	gray	Check	8.5	burnished
8	med. hard & compact	very coarse sand	20	buff	gray	Rec. A	5.5	smoothed
8	med. hard & compact	medium sand	25	buff	gray	Plain R.	8.0	smoothed
13	soft & friable	med.-coarse sand	40	buff	buff	Rec. A	6.5	smoothed
16	hard & compact	fine-coarse sand	20	buff	black	Check	8.0	smoothed
16	hard & compact	medium sand	25	buff	buff	Check	6.5	burnished
18	hard & compact	fine-medium sand	25	tan	gray	Check	6.5	smoothed
18	med. hard & lumpy	med.-coarse sand	40	buff	buff/gray	Rec. A	6.0	burnished
19	hard & compact	med.-coarse sand	25	buff	gray	Rec. A	6.5	smoothed
19	med. hard & compact	med.-very coarse sand	20	buff	gray	Rec. A	5.5	smoothed
21	hard & compact	fine-very coarse sand	50	buff	gray	Rec. A	7.0	smoothed
21	med. hard & compact	med.-coarse sand	25	dk. gray	tan	Rec. A	6.5	smoothed
22	hard & compact	fine sand	25	tan	buff	Rec. B	4.5	burnished
27	med. hard & lumpy	coarse sand	15	buff	gray	Rec. B	6.0	smoothed
28	hard & compact	coarse sand	15	buff/gray	dk. gray	Rec. A	6.5	burnished

TABLE 2

SHERD ANALYSIS
RANDOM SELECTION OF SHERDS FROM FEATURES AND BURIALS

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FEATURE	CHECKED STAMPED			RECTILINEAR DESIGN A								RECTILINEAR DESIGN B							
				Vertical Elements				Horizontal Elements				Vertical Elements				Horizontal Elements			
	Width Groove	Width Land	No. per Inch	Width Groove	Length Groove	No. of Grooves	Width Land	Width Groove	Length Groove	No. of Grooves	Width Land	Width Groove	Length Groove	No. of Grooves	Width Land	Width Groove	Length Groove	No. of Grooves	Width Land
2				4	40	3	1.5	3.5	20	8	1.5								
4	4.5	1.5	3.5									1.5	17	3	1	1	7	8	1
7	4	1.5	3.5	2	22	2	1.5	1.5	6.5	10	1	2.5	40	3	1.5	2	28	20	1.5
7	3.5	1.5	4	2.5	40	3	2	2.5	17	10	2	2	40	4	1.5	1.5	26	15	1
7	3.5	1.5	4	2	2.5	2	1	1	10	10	1								
7	2.5	1	6																
7	3	1	5.5																
9	5	2	3	3	40	3	2	3	25	8	1.5								
37				3.5	30	2	2	2.5	18	8	1.5								
40												2	35	2	1.5	2.5	20	10	1
47				3	30	2	1.5	2	22	8	1.5	2	25	2	1.5	1.5	18	8	1.5
54	3	1.5	5									2	25	3	1	1.5	13	8	1
55	3.5	1.5	5	3	38	2	1	2	32	10	0.8								
55	4	1	5	2	30	3	1	1.5	20	9	1.3								
57	5	1	4.5	3.5	33	3	1.5	2.5	30	10	1								
57	5	1	4.5	2.5	32	2	1.5	2.5	28	10	1.5								
57				2	33	2	1	2	21	10	1.5								
85				3	70	3	2	2.5	24	20	2								
86	3	1	7	2	25	2	1	1.5	7	10	0.5								
86				2.5	25	2	1	2	27	10	1								
107	2	1.5	8	2	35	2	1	2	40	10	1	2	35	2	0.8	1.5	20	10	0.8
107	3	1.5	5	1.5	30	2	0.8	1	10	8	0.8								
108	4.5	1.5	3.5	1.5	20	2	1.5	1	10	8	1	2	35	2	1	1.5	25	10	1
136	4	1	4	2.5	35	2	0.8	1.5	13	10	0.8	3	30	2	1.5	3	40	5	1.5
136	5	1	4.5	1.5	35	3	1.2	1.2	18	10	1.5	3	40	3	1.5	3	65	8	1.5
137	3.5	1	6									3	45	2	2	2.5	60	8	1.5
140	3	1	5	3	35	4	1.5	2.5	20	10	1.5								
140	5	1.5	4	3.5	40	3	2	3	23	7	2								
BURIAL																			
7				3	35	3	1.5	2	22	10	1								
13				2.5	?	3	1.5	2	?	12	1.5								
18	3	1	5	2.5	35	2	1.5	1.5	30	10	1.5								
21				2.5	30	3	1.5	2.5	24	7	1								
23	3	1	6	3.5	?	2	1	2	?	10	1								
26	4	1.5	4									3.5	34	3	1	2	20	10	1
28	2.5	0.8	7	2	30	2	1.5	1.5	8	12	1								
28				2	40	2	1.5	2.5	21	10	1.5								
33	4	1.5	4																

TABLE 3

MEASUREMENTS OF STAMPED MOTIFS ON SHERDS FROM FEATURE AND BURIAL FILL AT BN^{V}29

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is gritty. On most sherds the interior surface sparkles from the high mica content of the clay.

DECORATION:

One of the most striking features of Pisgah pottery is the ornate decoration of the rim area. Since the form of the rim apparently had a great deal to do with determining the decorative style, descriptions of decoration are taken up under three categories of rim form--collared, thickened and unmodified. The temporal implications of these different forms are discussed later in this chapter.

Decoration on Collared rims: The most frequent form of decoration on collared rims is a series of short angled punctations or gashes (Plates XIII, XXV and XXVII). These usually occur in 2 or 3 parallel rows. Sometimes there is only a single row, or there may be as many as 4 rows. The punctations usually are applied diagonally to the rim line. When two or more rows are present the direction of the punctations in alternated on each row. A double row of punctations forming open-ended chevrons is probably most common. However, a wide range of variation in the size, spacing and angle of the punctations was employed.

Sometimes the collar is decorated with one or two horizontal incised lines, or there may be combinations of incisions and punctations (Plate XII, bot.). Oblique-angled incised patterns (Plate XIX, lower right; and XXVI, upper right) compose a consistent minority form of rim decoration in collections from North and South Carolina but are virtually absent in those from Tennessee.

Rarely, collars are undecorated (Plate XIII, lower left). On a

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few sherds from Tennessee the collars are stamped with the same design as the body of the vessel (Plate XXVIII, left).

Decoration on thickened rims: The tops of thickened rims are decorated in similar fashion to the collared rims (Plate XIV, left). However, since the available space is more restricted, the decoration usually consists of only one or two rows of punctations or a single incised line. Sometimes punctations are found just below the outside lip, instead of on the top. Thickened rims occasionally have no decoration.

Decoration on unmodified rims: Unmodified (i.e., uncollared or unthickened) rims are decorated about 50 percent of the time. Straight rims occasionally are punctated in the same fashion as the collared forms (Plate XV, right), or more frequently they have a series of closely spaced pinches or notches along the outside of the lip (Plate XI, top; and XVII). The pinched form is found in west-central North Carolina, but is infrequent elsewhere. On this form a thin band of clay usually was added to the front of the lip so that the flutes would stand out more sharply.

Unmodified everted rims usually are undecorated, but occasionally they have punctations similar to those on the collared forms (Plate XVI).

Inslanted rims are punctated, incised, or undecorated (Plate XVIII).

FORM:

Rim: At the Warren Wilson site approximately 75 percent of the rims were everted, 20 percent were straight and 5 percent were inslanted (Fig. 5). Roughly equivalent percentages were observed throughout west-central North Carolina. In South Carolina the inslanted form seemed to

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be less numerous, and only a few sherds of that form were noted in Tennessee.

Collars usually are present on the everted form. These were constructed by adding a strip of clay to the inside top of the rim. This strip was approximately the same thickness as the rest of the vessel and from 7 to 40 mm. high (height was in proportion to the overall size of the vessel). In most cases the outer face of the collar was carefully aligned with the original lip and the inner face was smoothed to erase its juncture with the interior surface of the vessel (Fig. 5). On some vessels the collar was set back somewhat, leaving the original lip protruding slightly (Fig. 5).

Everted rims sometimes were thickened without the addition of a collar (Fig. 5). In these cases, one or two strips of clay were molded to the upper interior of the rim. Occasionally, a strip also was placed on the outside. Decoration, when present, usually is on the top of the thickened lip. The top of the lip may be flat if trimmed off, or ridged if the molded strips were left unaltered (Plate XIV, left). Unthickened and uncollared everted rims are rare, but they nevertheless form a consistent minority in collections from all areas (Plates XVI and XXVIII, right).

Straight rims usually are unmodified, but they can be thickened in the manner described above. They also may have a thin pinched or notched strip added to the top exterior of the lip (Plate XVII).

Some rims are inslanted at an angle of less than 30°. The inslanted portions measure from about 15 to 25 mm. They are decorated with angled punctations or with oblique-angled incised patterns (Plate XVIII). This form may have come about through influence from early

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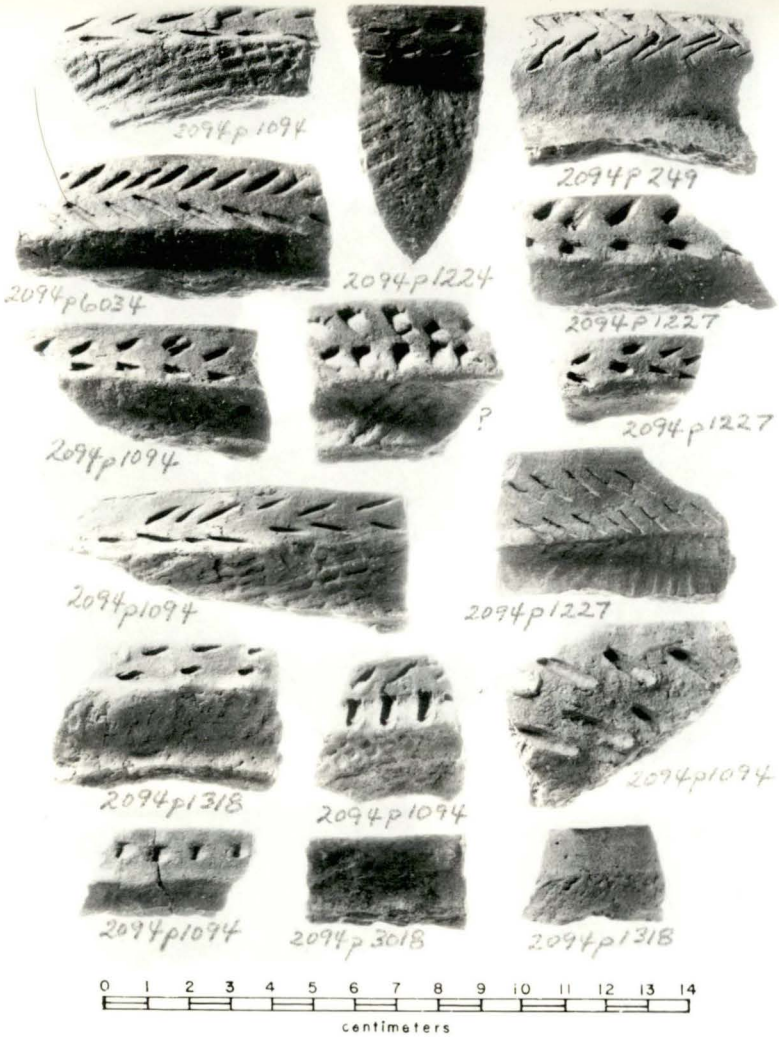


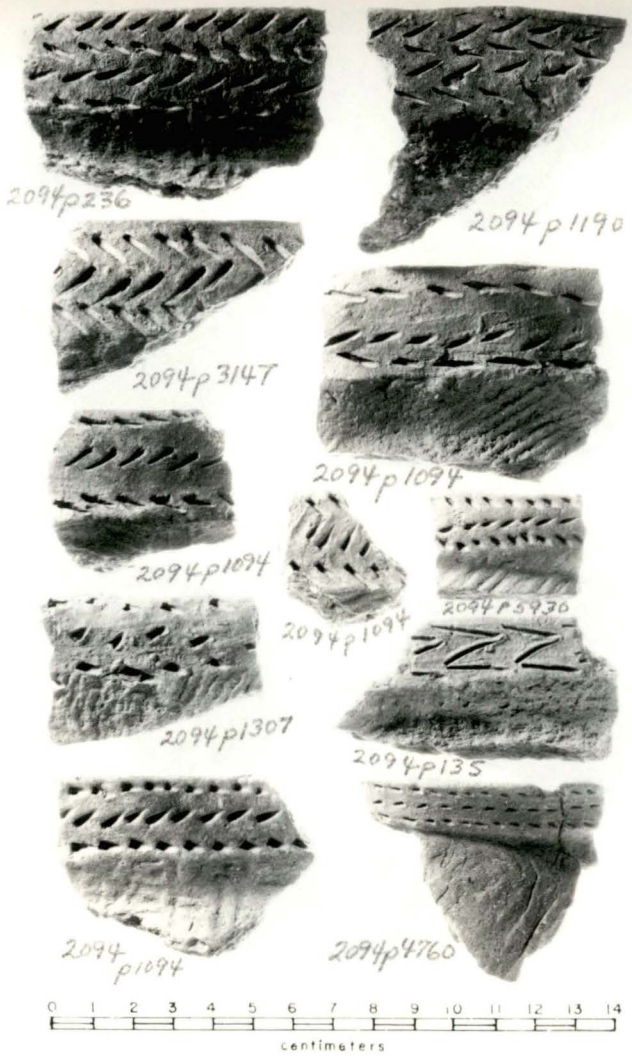
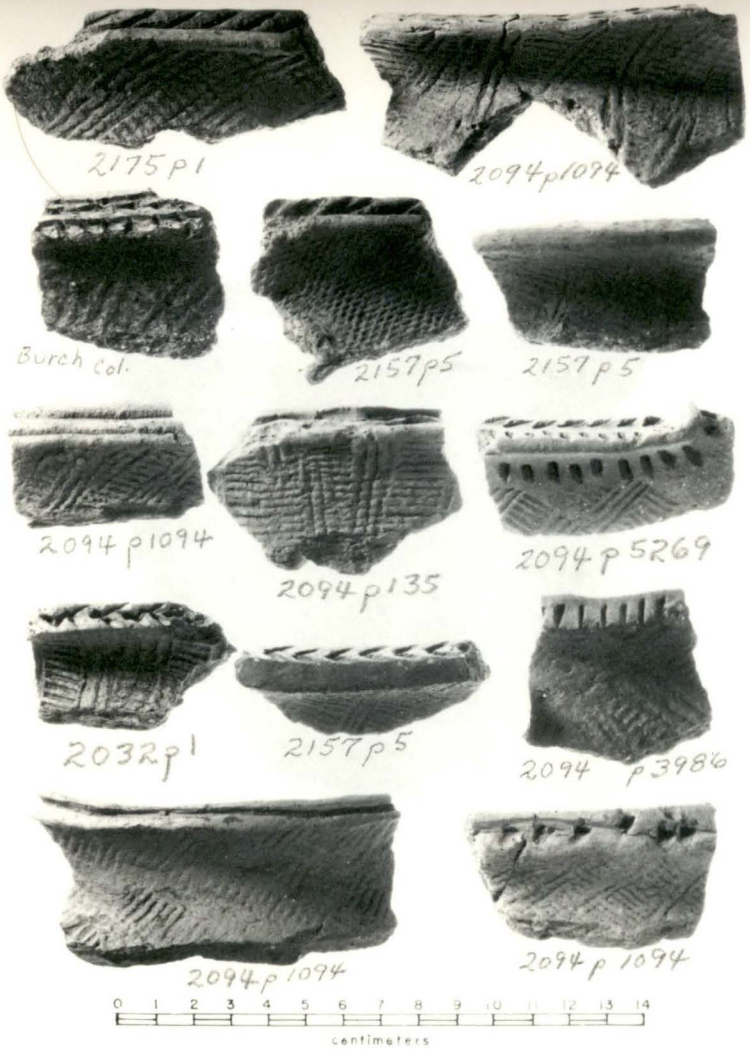


PLATE XIII
Pisgah Collared Rims (Bn^V29).



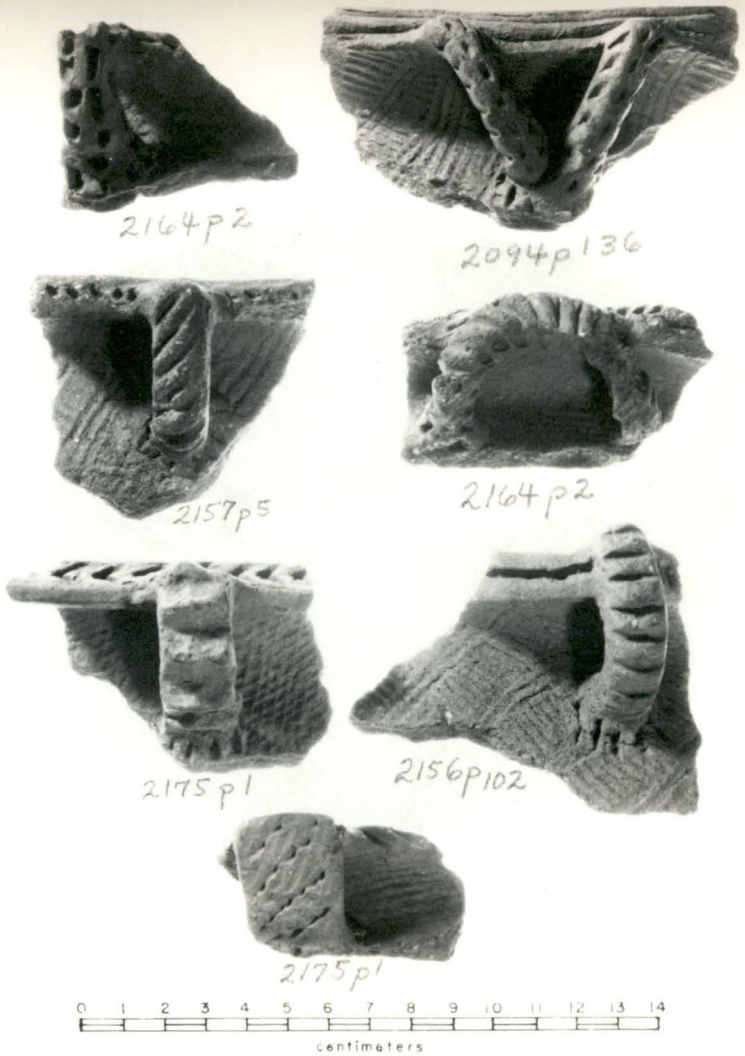


PLATE XIV
Pisgah Thickened Rims (Various Western N.C. Sites).

2094 p 6029

1952 p 15 (JkV129)

PLATE XV

Pisgah Vessels. Left, Plain Jar (Bn^{V}29, Feature 136); Right, Check Stamped Bowl (Jk^{V}129).

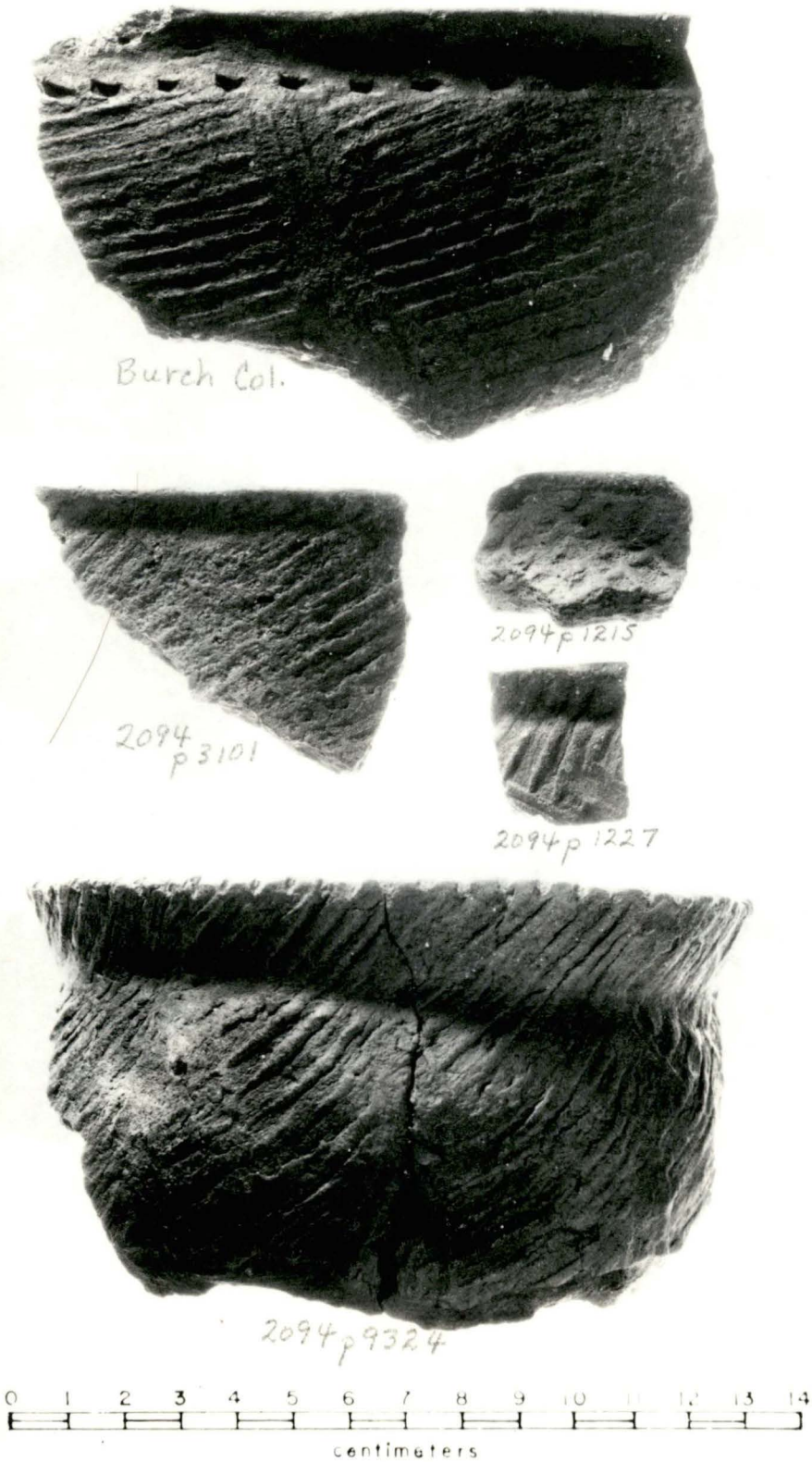


PLATE XVI
Pisgah Everted, Unmodified Rims.

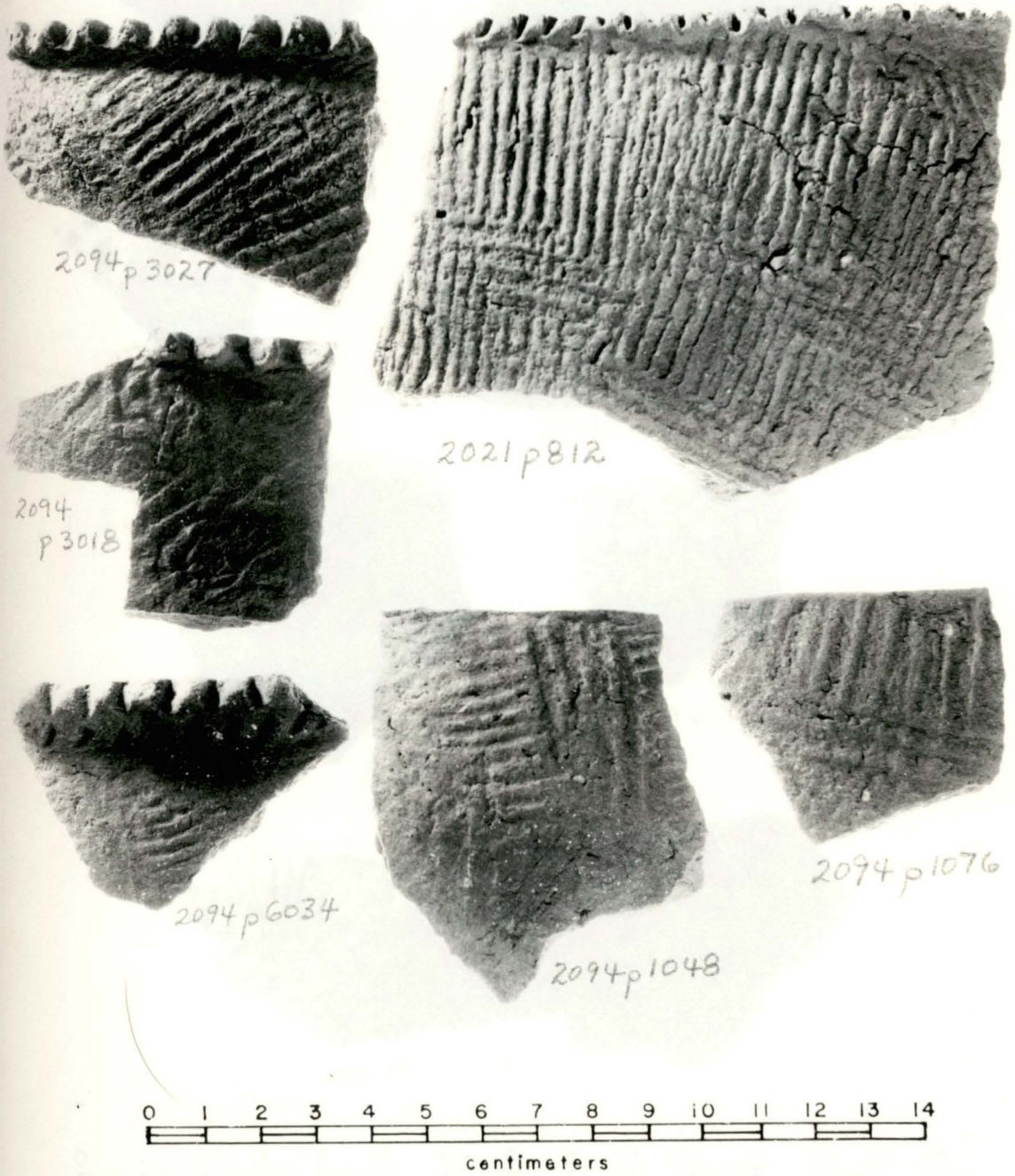


PLATE XVII
Pisgah Straight Rims.

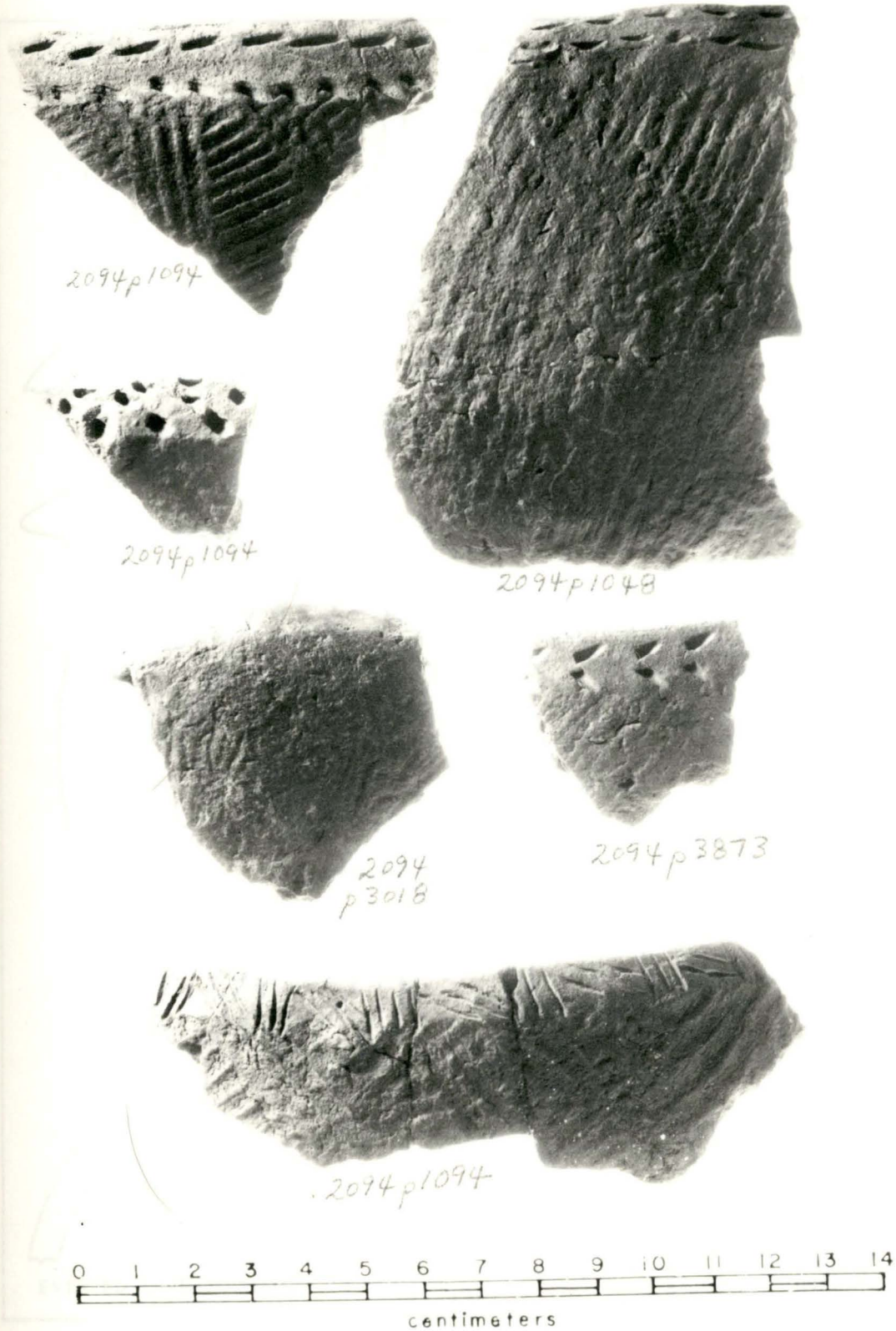


PLATE XVIII
Pisgah Inslanted Rims.

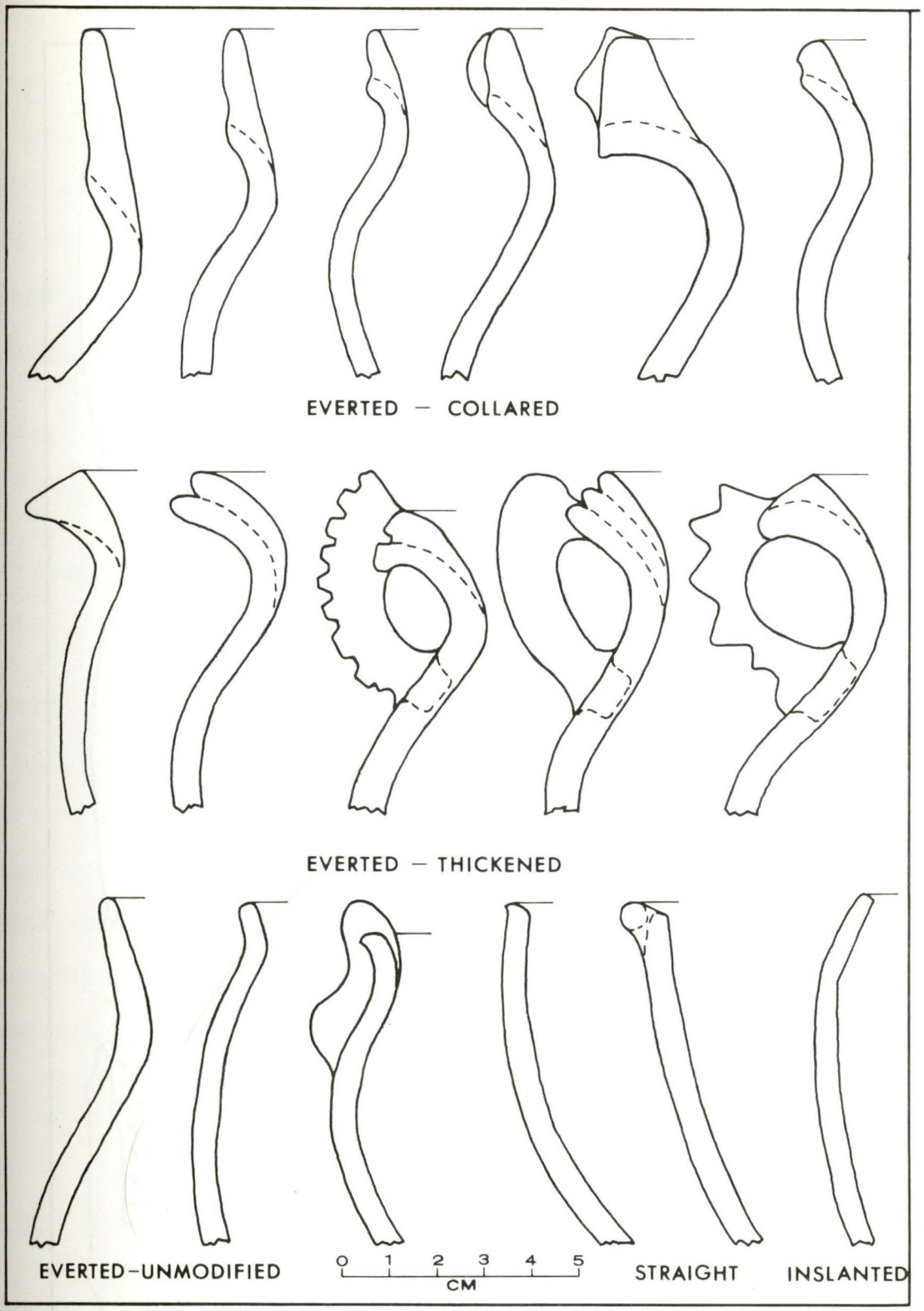


FIGURE 5

PISGAH RIM PROFILE

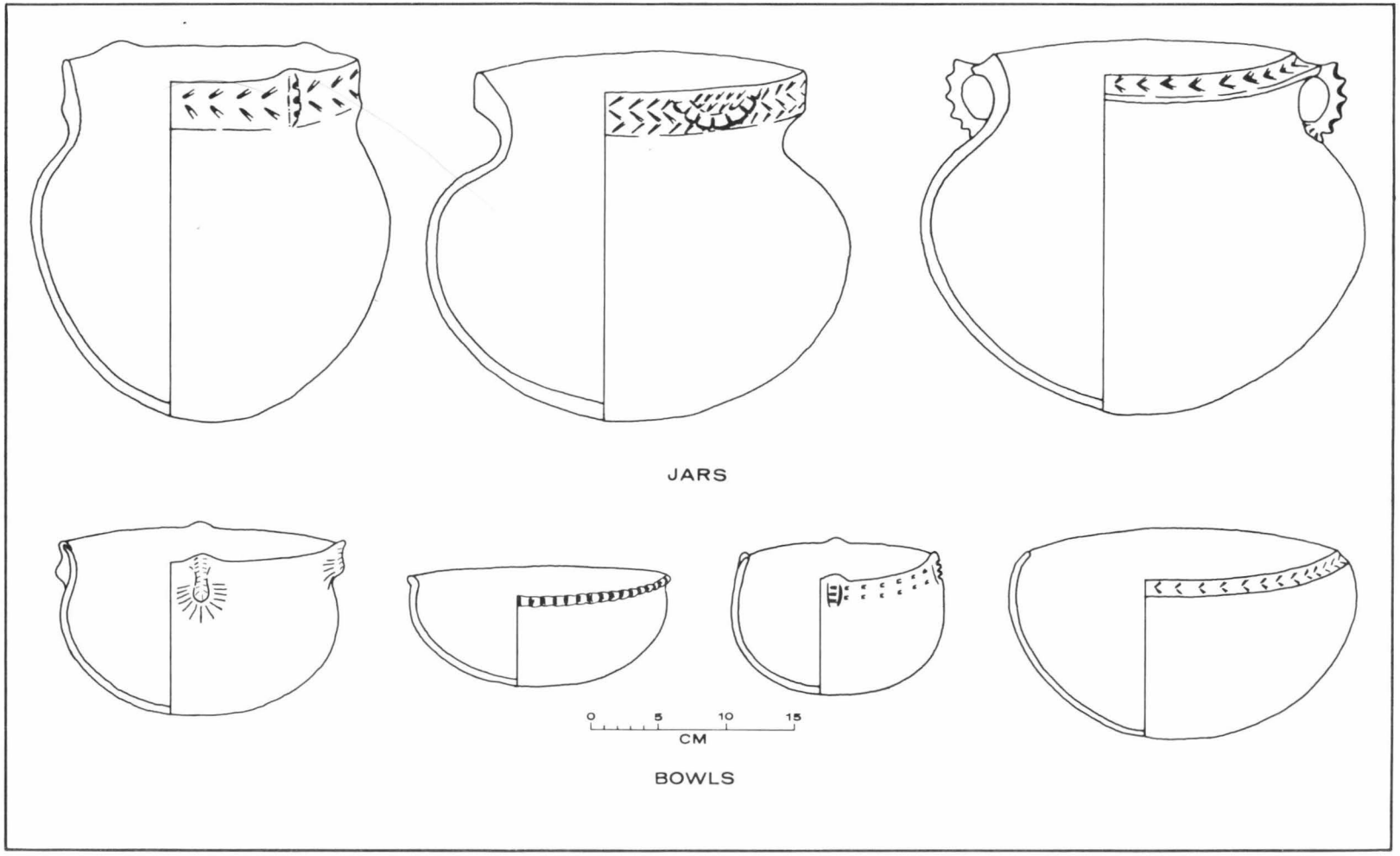


FIGURE 6

PISGAH VESSEL FORMS

Qualla styles. It was most frequently found in west-central North Carolina.

Lip: Either rounded or flattened.

Body: Globular jars and open bowls (Fig. 6). Orifice diameters range from 10 to 40 centimeters. Vessels tend to be largest for presumably later forms of surface finish (broadly cut and varied rectilinear designs).

Base: Rounded to slightly pointed on jars; rounded to slightly flattened on bowls.

Thickness: Vessel walls are from 4.5 to 8.5 mm. thick (6.5 mm. average). Basal and rim sherds may be somewhat thicker.

Appendages: A number of ornate appendages are found on the rims of Pisgah vessels. These consist of notched appliqued strips (which may be attached horizontally or which may be "U" or "V"-shaped), vertical lugs, nodes, small castellations, loop handles, and strap handles. Appliqued strips, vertical lugs, nodes and castellations are more common on collared rims (Plate XIX). Handles are more common on thickened rims, and usually are themselves notched, incised or punctated (Plate XIV, right).

Pisgah Curvilinear Complicated Stamped

Curvilinear stamped designs accounted for 1.7 percent of the surface finish on sherds from the plowed soil, and 1.4 percent on sherds from the features and burials at the Warren Wilson site. They were even more

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abundant in the collections from the Garden Creek Mound ($Hw^{O}1$), occuring in greatest percentages in peripheral mound pits and in the mound outwash. No Pisgah sherds with curvilinear stamping were observed by Holden (1966) in the Transylvania County collections, nor were any reported by Polhemus and Polhemus (1966) from the Clinch and Holston rivers in Tennessee. This form of stamping probably can be attributed to influence from the Qualla ceramic development in Western North Carolina.

PASTE:

The same as Pisgah Rectilinear Complicated Stamped

SURFACE FINISH:

The exterior surface exhibits a complete covering of contiguous curvilinear impressions. The stamping in all cases was done with a carved wooden paddle. It appears that two distinct curvilinear designs are present.

Curvilinear Design A: This design is most frequent. It consists of a pair of concentric circles separated from an adjacent pair by a single linear groove (Fig. 4 and Plate XX). On three measured specimens, the outer rings of the circles were from 25 to 35 mm. in diameter. The individual grooves were from 3 to 4.5 mm. wide and the lands were from 1 to 1.5 mm. wide.

Curvilinear Design B: This design, which appears to be less frequent than Design A, consists of two interlocking scrolls, each scroll being opposed by several short parallel grooves (Fig. 4 and Plate XXI, bot.). The interior surface finish for both designs is the same as for Pisgah

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Rectilinear Complicated Stamped.

DECORATION:

The few rim sherds recovered thus far have punctated collars or pinched, straight rims. No thickened rims or handles were noted on curvilinear complicated stamped sherds.

FORM:

The same as Pisgah Rectilinear Complicated Stamped.

Pisgah Check Stamped

PASTE:

The same as Pisgah Rectilinear Complicated Stamped.

SURFACE FINISH:

The entire outer vessel surface is covered with a checked design, presumably applied with a carved wooden paddle (Plates XV, right; XX; and XXI, top). This form of surface finish was found on 9 percent of the sherds from the plowed soil at the Warren Wilson site. It was present on 8.2 percent of the sherds from features and burials at the same site.

The individual elements of the checked pattern usually are square, although a slightly rectangular shape is not infrequent. Only rarely are the elements diamond-shaped. The grooves vary from 2 to 5 mm. across, and the intervening lands from 0.75 to 2 mm. across. There are from 3 to 8 checks per inch. Small checks, 2 to 3 mm., are more frequent in Tennessee and South Carolina collections than in those from

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North Carolina. The interior surface finish is the same as for Pisgah Rectilinear Complicated Stamped

DECORATION:

The same as Pisgah Rectilinear Complicated Stamped.

FORM:

The same as Pisgah Rectilinear Complicated Stamped.

Pisgah Plain

A plain exterior surface finish was found on 1.2 percent of the sherds from the plowed soil at the Warren Wilson site. It was present on 3.7 percent of the sherds from the features and burials at the same site.

PASTE:

The same as Pisgah Rectilinear Complicated Stamped.

SURFACE FINISH:

A smooth finish was present on 2.2 percent of the sherds from the features and burials at Warren Wilson (Plate XV, left). A rough finish was found on 1.5 percent. The smooth finish ranges from lightly smoothed to moderately burnished.

DECORATION:

The same as Pisgah Rectilinear Complicated Stamped.

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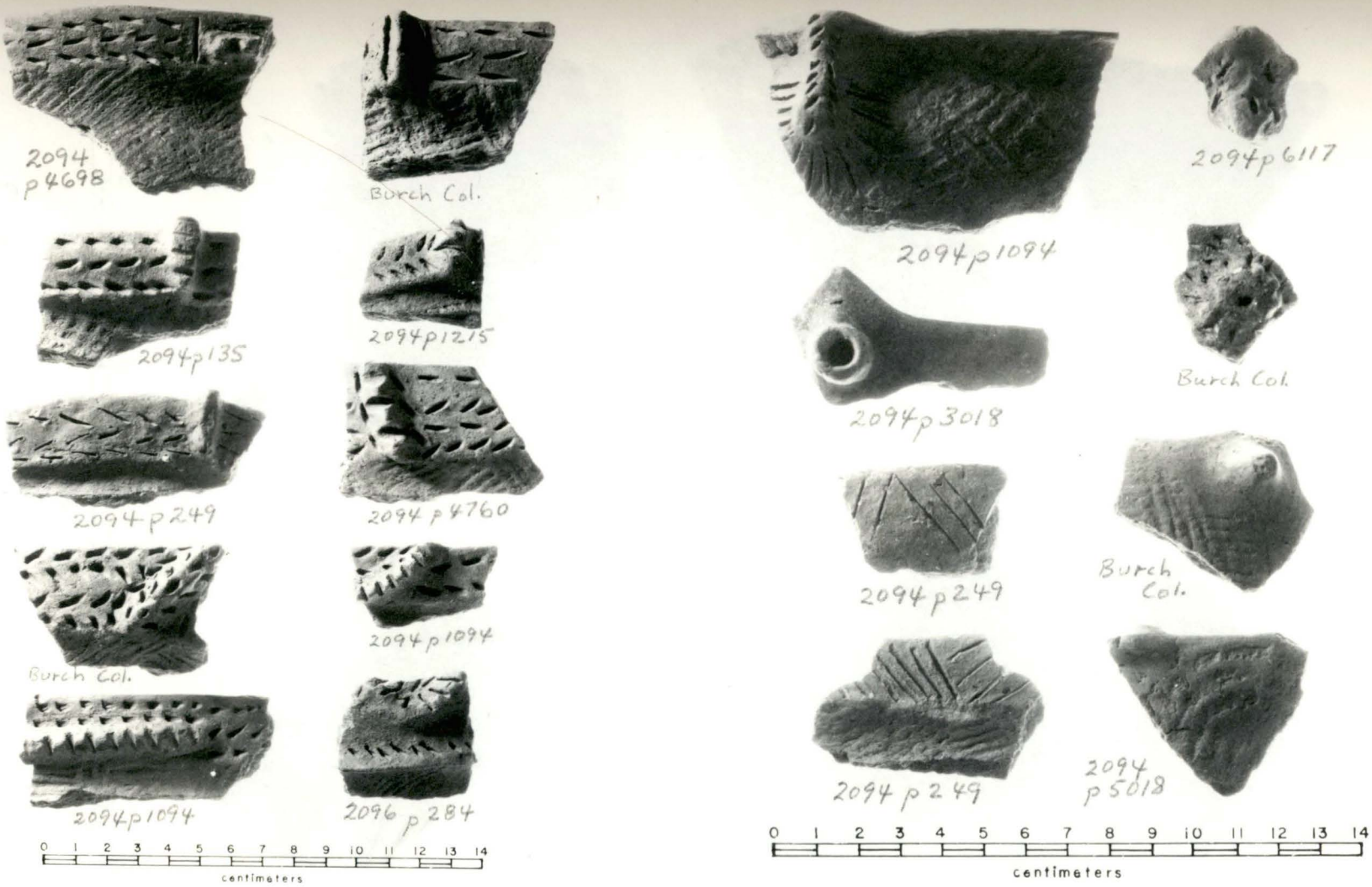

PLATE XIX
Pisgah Rims with Appliqued Strips, Lugs, Nodes, and Incised Patterns.

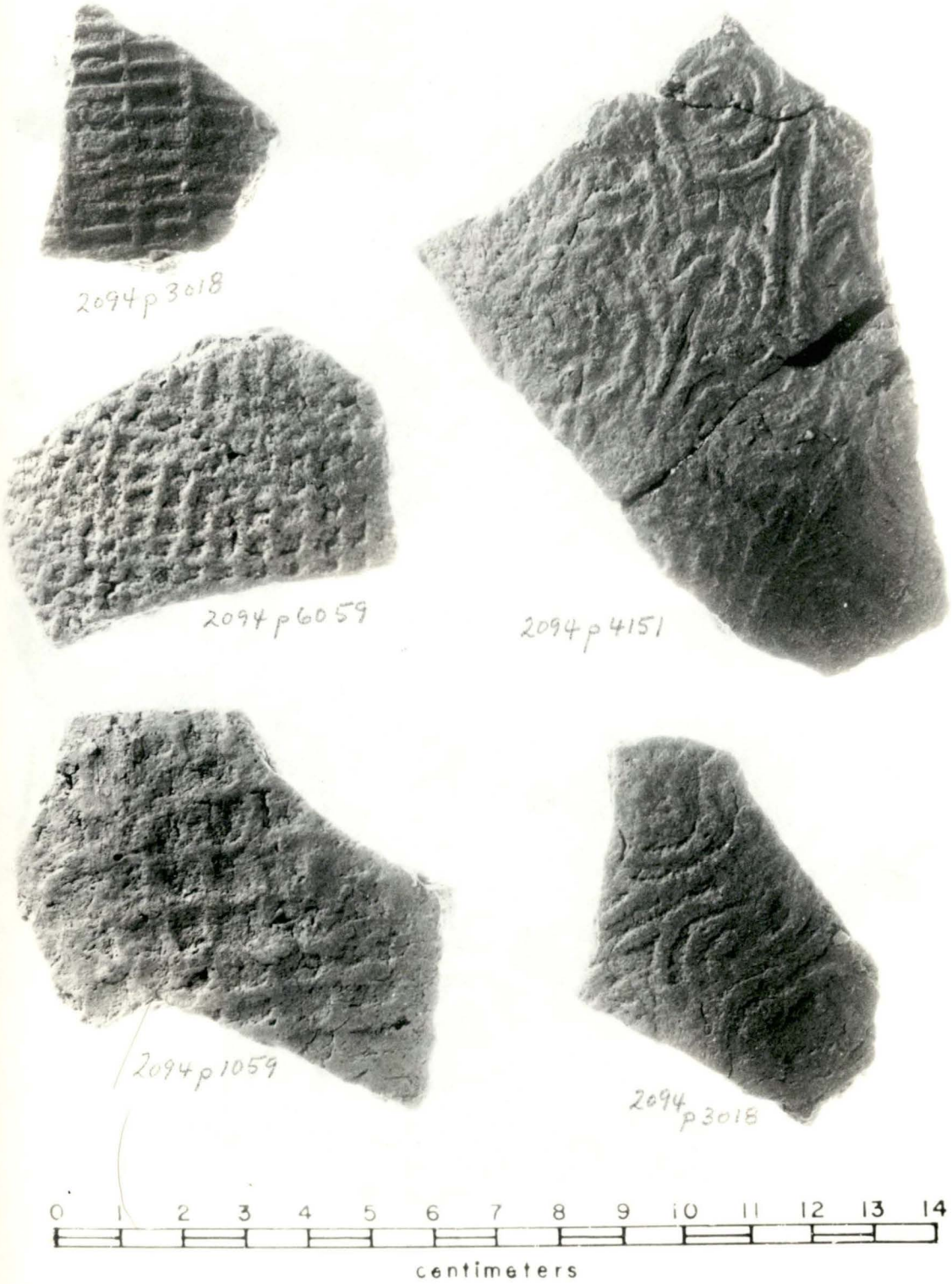

PLATE XX
Pisgah Check Stamped, Left; Pisgah Curvilinear Complicated Stamped (Design A), Right.

Plate XXI
Pisgah Check Stamped, Upper; Pisgah Curvilinear Complicated Stamped (Design B), Lower.

FORM:

The same as Pisgah Rectilinear Complicated Stamped.

Minority Forms of Surface Finish

Other forms of surface finish occurred infrequently on Pisgah sherds from the plowed-soil sample at Warren Wilson site. They are as follows: Five woven-reed (or quill) impressed, 4 corncob impressed, 3 cord marked, 2 fabric marked, and 1 net impressed (Plate XXII). Simple stamping, described for Tennessee (Polhemus and Polhemus 1966) and Virginia (Holland n.d.), was not encountered by the writer in any of the collections he examined.

Distributions of Pisgah Ceramic Types by House Area at the Warren Wilson Site

Percentage distributions were computed for ceramic types from 6 house areas. In the cases of House A and B, only the sherds from house-associated feature and burial pits were used. For Houses F, G and H, sherds from the overlying plowed soil also had been analyzed, so both these and the sherds from pits were used. In the case of House K, only a corner of which had been excavated, the sample came just from the plowed soil. The distributions are depicted in Table 4.

In these samples there was little departure from the type percentages represented in the total sherd populations from the plowed soil and from the feature and burial pits. Only the feature and burial sample from House G showed any appreciable differences, but in this case the sample was relatively small. There were somewhat larger percentages

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of check and curvilinear stamped sherds in the four samples from Houses F and G, and conversely there were slightly larger percentages of rectilinear and plain sherds in the samples from Houses A, B, H and K. Determining whether these differences are temporal or cultural will have to await the study of a larger number of samples.

It should also be noted that surface finish, on which the present type categories are based, may not be the best indicator of ceramic variability. This writer is inclined to think that traits associated with the form and decoration of the rim area of vessels were more important than surface finish as a means of individual and/or kin group expression among Pisgah potters. These traits may also be the most sensitive indicators of temporal change. Generally, only the rim sherds from pits are suitable for an attribute analysis since plowed-soil sherds are too small and eroded. At present, samples considered to be adequate are available only from Houses B and F.

Ceramics from Surrounding Cultures

A small number of sherds from non-mountain cultures was recognized in the plowed-soil and feature samples from the Warren Wilson site. Most of these cultures are thought to be at least partially contemporaneous with Pisgah.

Easily recognized because of their steatite temper were 38 sherds with plain or complicated stamped surface finish which belong to an as yet undefined ceramic series which may be a product of the protohistoric Catawba tribe (Joffre Coe, personal communication) (Plate XXIII). Sites producing this pottery in quantity are found on the

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HOUSE	CONTEXT	PERCENTAGES OF IDENTIFIED SHERDS					TOTAL IDENTIFIED SHERDS	UNIDENTIFIED SHERDS	GRAND TOTAL
		Rect. Comp.	Curv. Comp.	Check	Plain	Other			
House A	F & B	87.1	0	4.3	8.6	0	93	27	120
House B	F & B	89.7	0.8	3.2	6.3	0	126	125	251
House F	PZ	85.4	2.1	11.4	1.1	0	726	602	1328
	F & B	80	3.9	15	1.1	0	180	110	290
House G	PZ	86.4	2.6	10	1.0	0	1206	1325	2531
	F & B	65	1.7	26.6	6.7	0	60	47	107
House H	PZ	90	1.0	9.0	0	0	441	408	849
	F & B	80.5	0	7.8	11.7	0	77	25	102
House K	PZ	86.2	1.4	10.6	.8	0	349	344	693
Plowed Soil (50 sqs.)		88	1.7	9.0	1.2	0.1	14935	11084	26019
Features & Burials		86.6	1.4	8.2	3.7	0.1	2246	1916	4125

F = features
B = burials
PZ = plow zone

TABLE 4

PERCENTAGE DISTRIBUTION OF PISGAH CERAMIC TYPES AT BN^{V}29

Catawba River in Burke and Caldwell counties, immediately east of the mountains.

Pee Dee Series sherds numbered 25. These included Pee Dee Plain, Pee Dee Complicated Stamped and Pee Dee Textile Impressed (Plates XXIII and XIV). This pottery is found on the south-central Piedmont of North Carolina along the Pee Dee River, and on the South Carolina Piedmont-Coastal Plain fringe along the middle drainages of the Pee Dee, Santee and Savannah rivers. Coe (1952: 209) believes this pottery to be a product of a proto-historic Muskogean group. Reid (1967) has demonstrated that Pee Dee ceramics, as well as other aspects of the culture, had direct ties with the Savannah-Irene development of the South Carolina and Georgia Coastal Plain.

Pottery of the Dan River Series (Coe and Lewis 1950) was represented by 12 sherds. Included were Dan River Net Impressed and Dan River Cord Marked. This series is presumed to have been a product of the proto-historic and early historic Sara Indians. Sites are found mainly along the Dan River and its tributaries on the Piedmont of southern Virginia and northern North Carolina.

Two Etowah Complicated Stamped sherds (Wauchope 1966: 64-77), both of the "nested diamonds" variety, were present (Plate XXX, two sherds on bottom right). The paste and temper characteristics of these sherds were well within the range for the Connestee Series. Sherds with Etowah and Etowah-like stamping become more frequent as one moves southwest from the Swannanoa River. In the lower part of western North Carolina and in Northwestern South Carolina, Etowah ceramics occur regularly.

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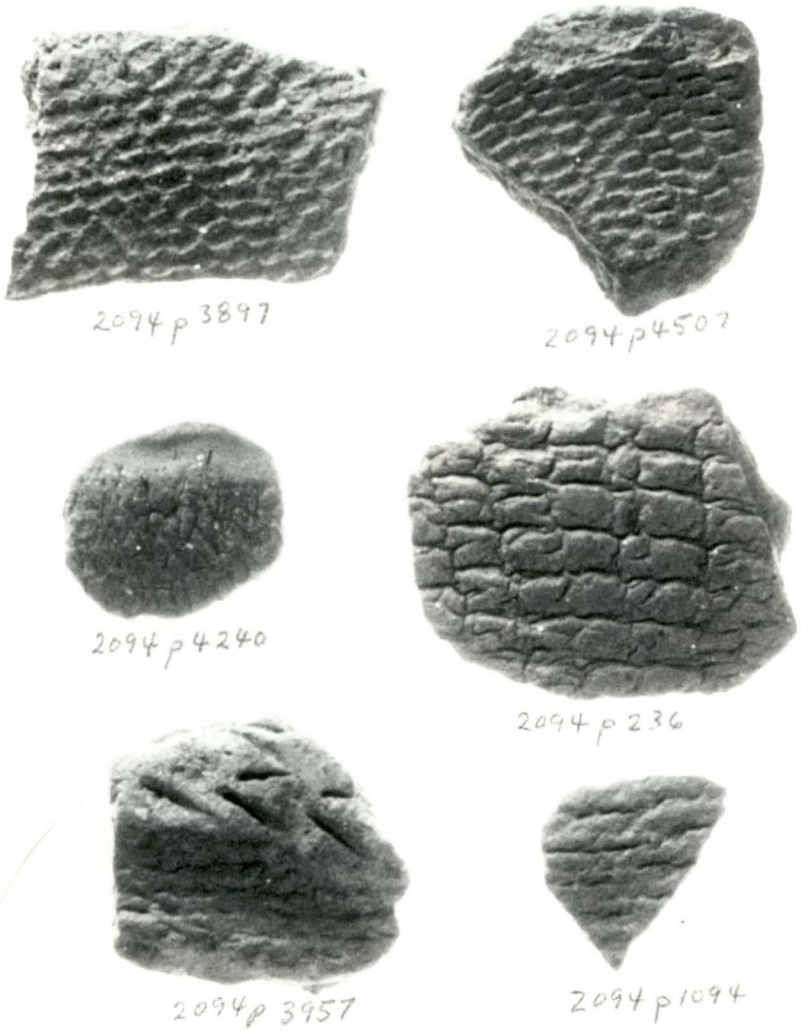

PLATE XXII
Minority Forms of Surface Finish on Pisgah Pottery
Woven Reed (or Quill) Impressed, Upper; Corncob
Impressed, Middle; Cord Marked, Lower.

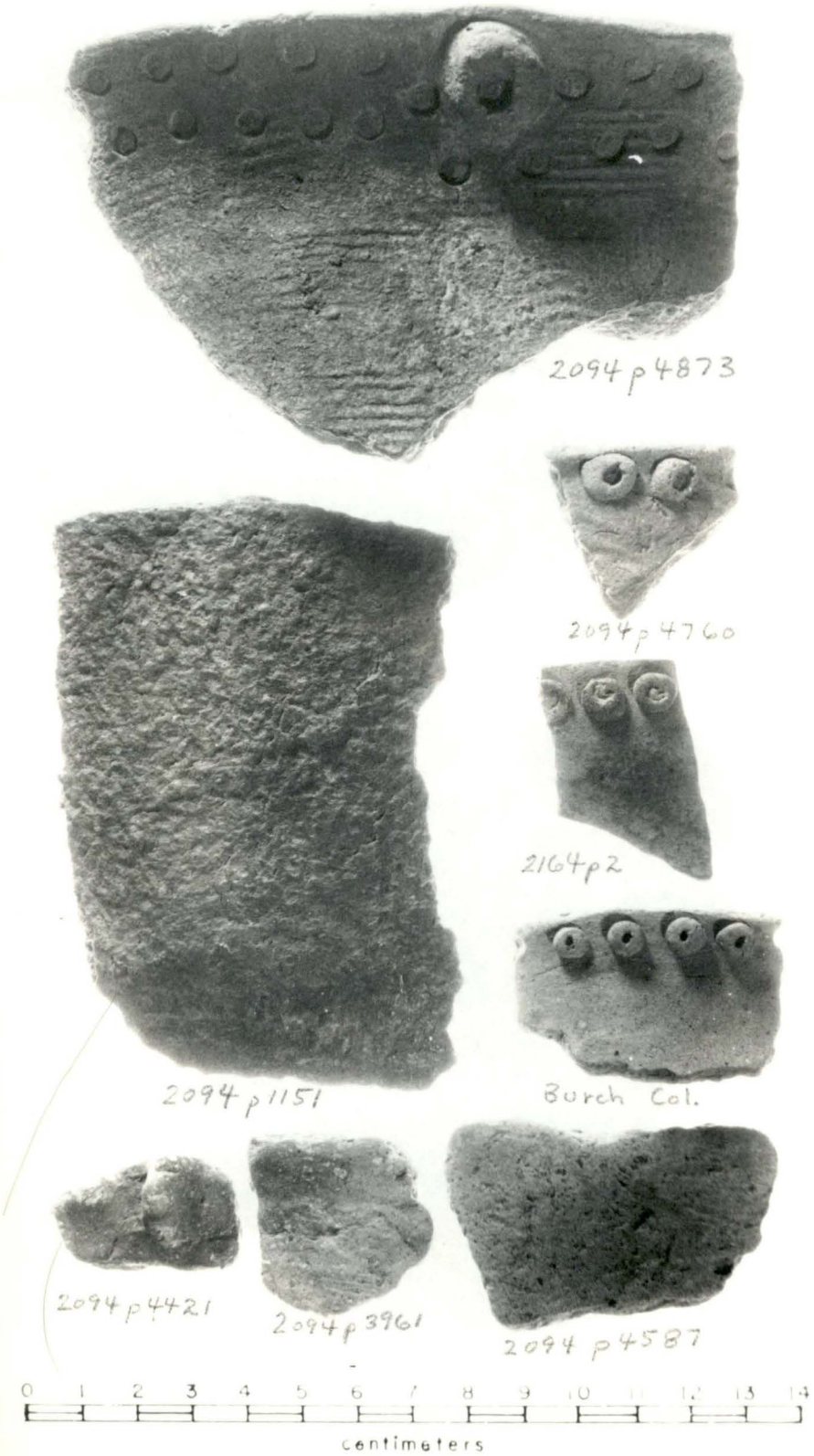

PLATE XXIII

Pee Dee Complicated Stamped, Upper; Pee Dee Textile Impressed Middle Left; Pee Dee Plain, Middle Right; Catawba Plain (Steatite-Tempered), Lower.

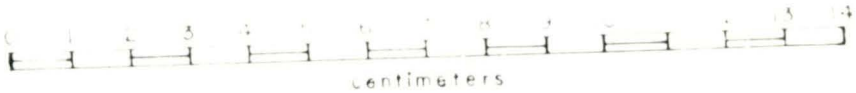

PLATE XXIV
Pee Dee Plain ($Hw^{O}1$, Feature 10), Upper; Qualla Check Stamped with Pisgah-Like Collar ($Hw^{O}1$), Lower.

Geographical Distribution of Pisgah Ceramics

Survey collections containing pottery were available for all of the western counties of North Carolina. Many of the sites had been located in the period 1958-69, during the planning and excution of the Cherokee Project. When counties were known through previous studies and field observations to contain sites with Pisgah ceramics, all available collections were examined. In the far-western counties, known to be outside the focus of distribution, only sample collections were examined. For Haywood and Transylvania counties, many of the collections had been previously studied by other archaeologists.[4] In these cases, the author relied on the prior analyses.

Sections of northwestern South Carolina had received good survey coverage through the work of the Research Laboratories teams and through the efforts of Wesley Breedlove of Marietta, South Carolina.

Research Laboratories groups had made cursory explorations of the lower portions of the Pigeon, French Broad and Nolichucky rivers in Tennessee. Sherds also were available from sites on the Clinch and Holston rivers in northeastern Tennessee. These collections had been made by Richard and James Polhemus of Mascot, Tennessee.

A few sites were reported in southwestern Virginia, on the upper extensions of the Clinch and Powell rivers (Holland n.d.). C. G. Holland kindly provided photographs and descriptions of some of the sherds from those sites.

---

[4]Haywood County collections have been tabulated by J. L. Coe and B. C. Keel (Research Laboratories of Anthropology archaeological survey files); Transylvania County collections have been tabulated by Patricia Holden (1966: Table 1).

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In the examination of a surface collection, the first step was to tabulate the total number of sherds. Then, if there were any Pisgah Series sherds, these were separated out and the number recorded. The major ceramic components on the site were noted, but no specific counts were made of categories other than Pisgah.

On the distribution map (Fig. 7), site symbols were darkened when Pisgah Series sherds amounted to 25 percent or more of the total counts for those sites. If the total was 10 sherds or less or if the sherds were greatly fragmented and eroded, percentages were not expressed.

A division at the 25 percent level was totally arbitrary. The writer is cognizant of the sampling problems when dealing with surface collections. Also, he is aware of the wide range of cultural and temporal factors that can affect the apportionment of ceramics on any given site. For instance, if a site had been occupied only during the late prehistory of the area, even a very moderate use by Pisgah peoples might have resulted in their pottery accounting for a large percentage of the total ceramic assemblage. If, on the other hand, a site had seen a long history of occupation by ceramic-using cultures, even a large Pisgah settlement might have left an amount of pottery which would account for only a small percentage of the total assemblage. However, since the entire area under consideration is thought to have had an approximately equivalent duration of ceramic usage, the percentages, if taken in a relative sense, may have some validity in demonstrating the extent and intensity of Pisgah occupation.

In viewing the distribution map, the reader should remember that there are obvious weak areas, and even very large gaps, in the survey information. An attempt will be made to point these out in the

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following discussions.

North Carolina

For the counties located on the eastern periphery of the Blue Ridge--Polk, Rutherford, McDowell and Avery-- survey data is not extensive. Two sites with Pisgah pottery have been reported on the upper Catawba River. It is suspected that there are more Pisgah sites in these counties, and it would be helpful to have more complete survey data for the headwater drainages of the Tyger, Broad, and Catawba rivers. It is not probable, however, that the distribution extends very far east of the mountains, since ceramics of the various proto-historic Siouan cultures predominate over the western part of the Piedmont Region (Joffre Coe, personal communication).

The northern counties of Madison, Yancy and Mitchell also are poorly known, but the rugged topography and sparsity of bottomland suggest that ceramic-bearing sites would not be numerous. Nevertheless, it is suspected that some additional Pisgah sites might be found on the tributary streams of the Nolichucky and French Broad rivers. To date, 3 sites with Pisgah ceramics are known in Mitchell County, 4 in Yancy County and 1 in Madison County. Out of these 8, 4 produced numbers of Pisgah sherds that amounted to 25 percent or more of the totals.

Relatively good survey data are available for Buncombe County. Credit for much of that work can be given to Harold T. Johnston, who under the direction of Joffre Coe, made a thorough coverage of the county between 1940 and 1942. The writer examined ceramic collections from 117 sites. Of these, 68 were found to contain Pisgah series sherds. Pisgah sherds accounted for 25 percent or more of the totals at 31

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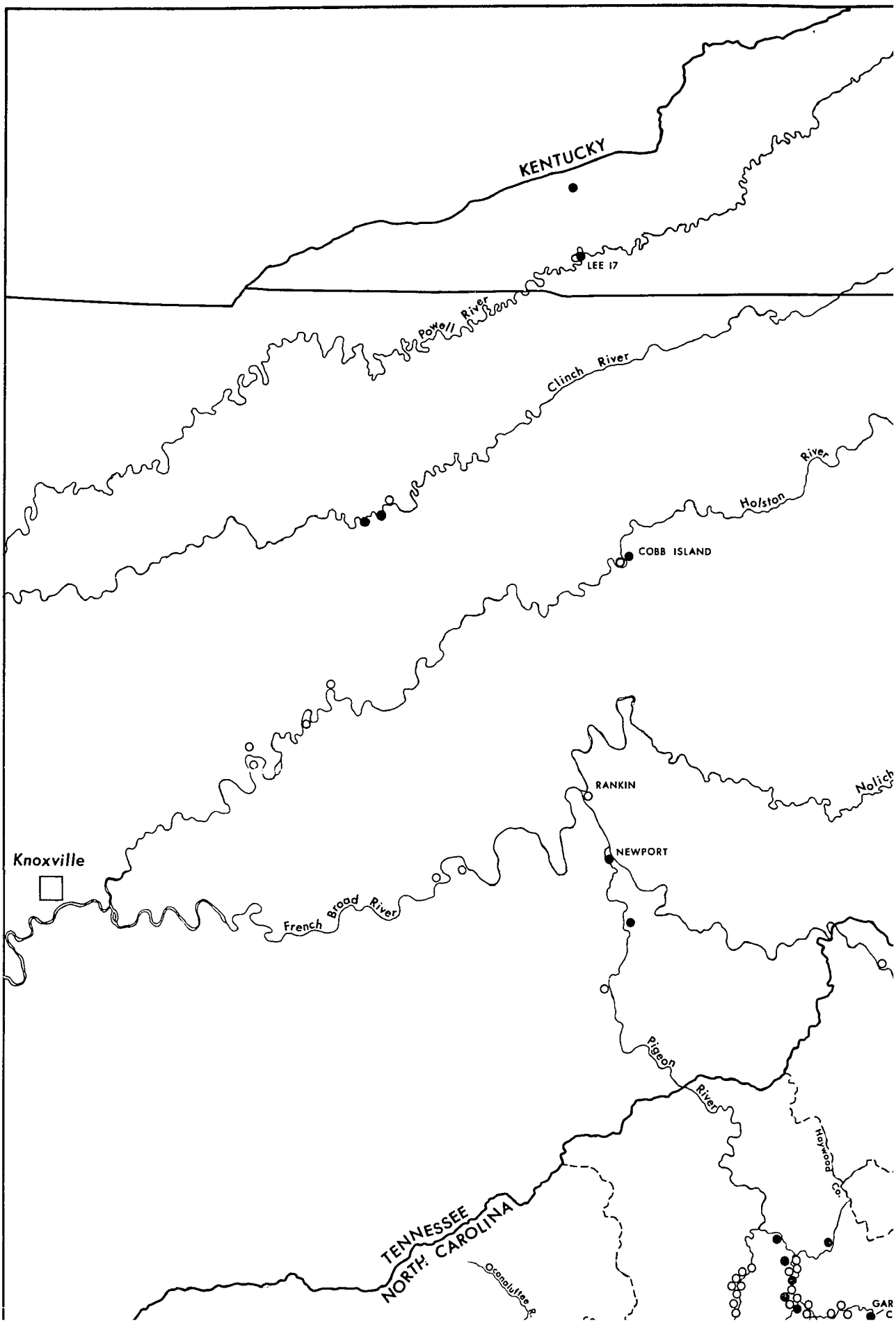

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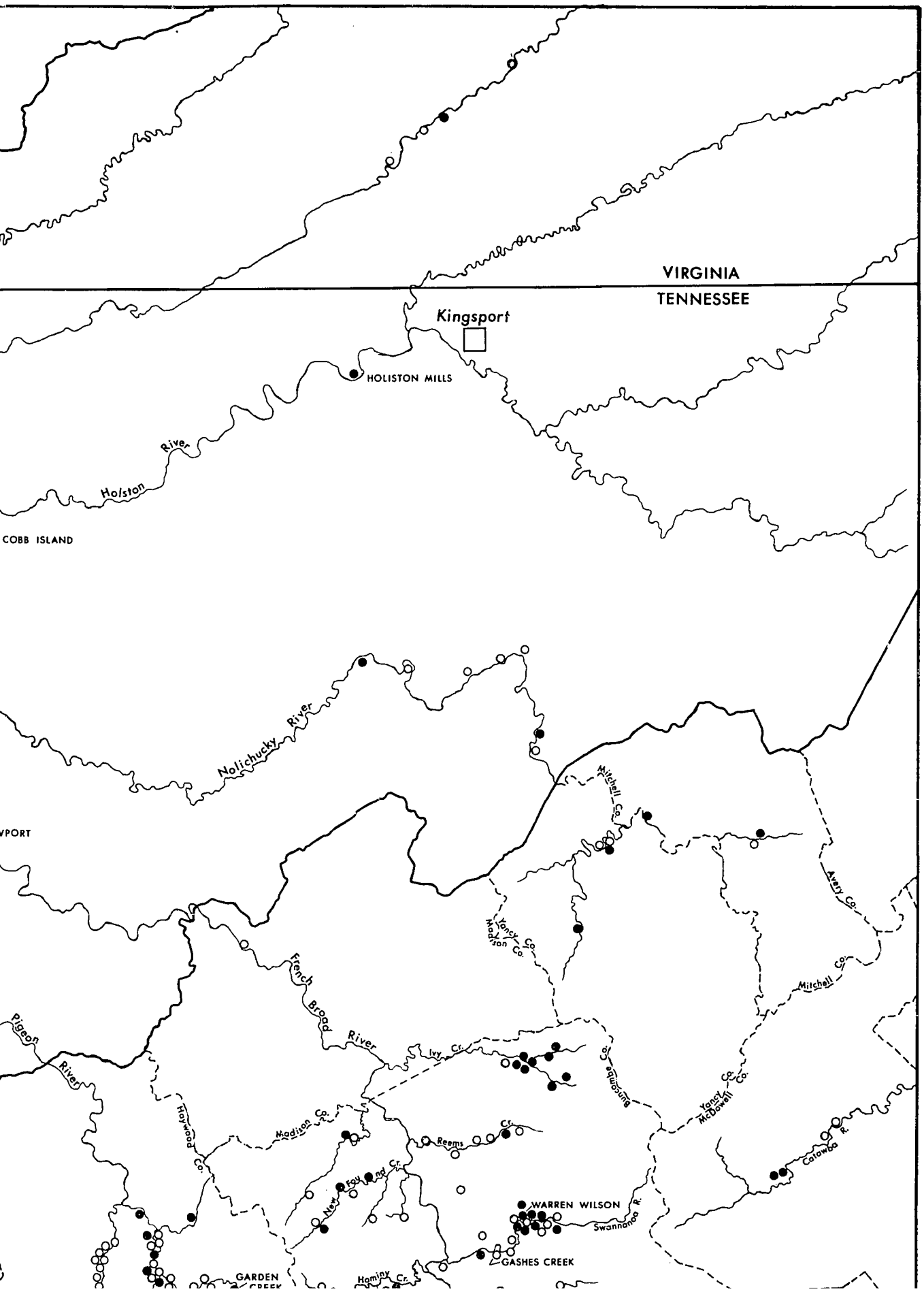

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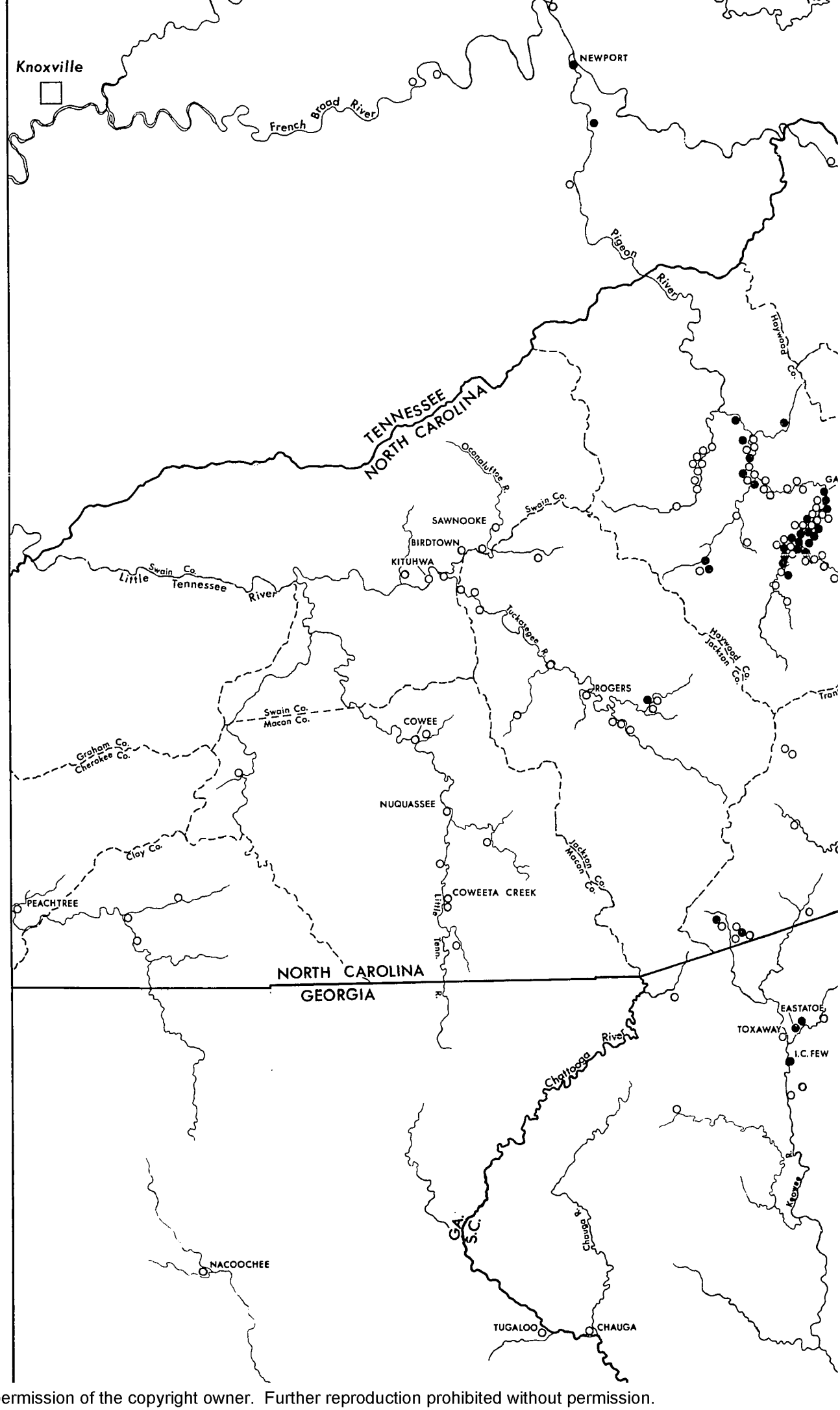

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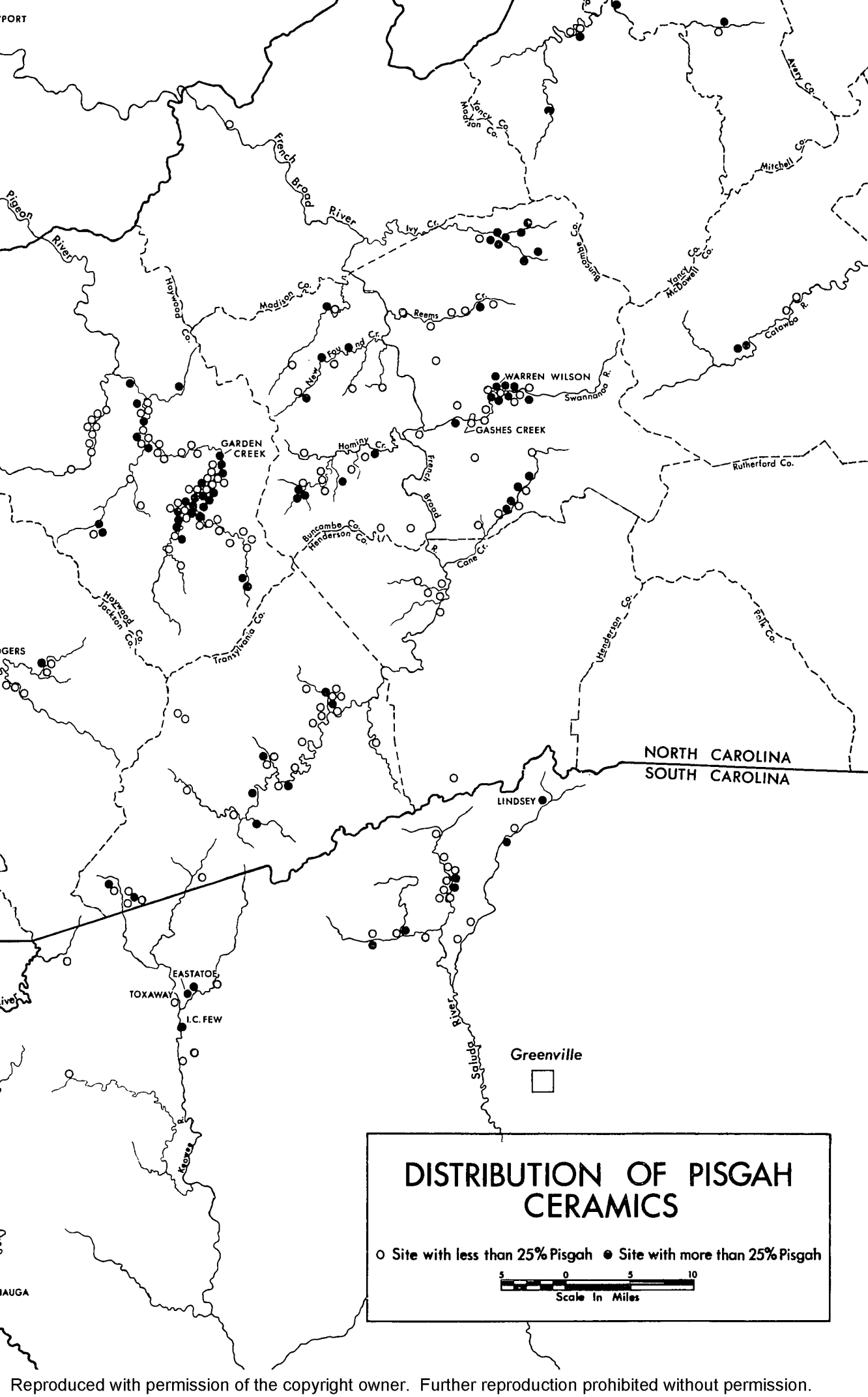

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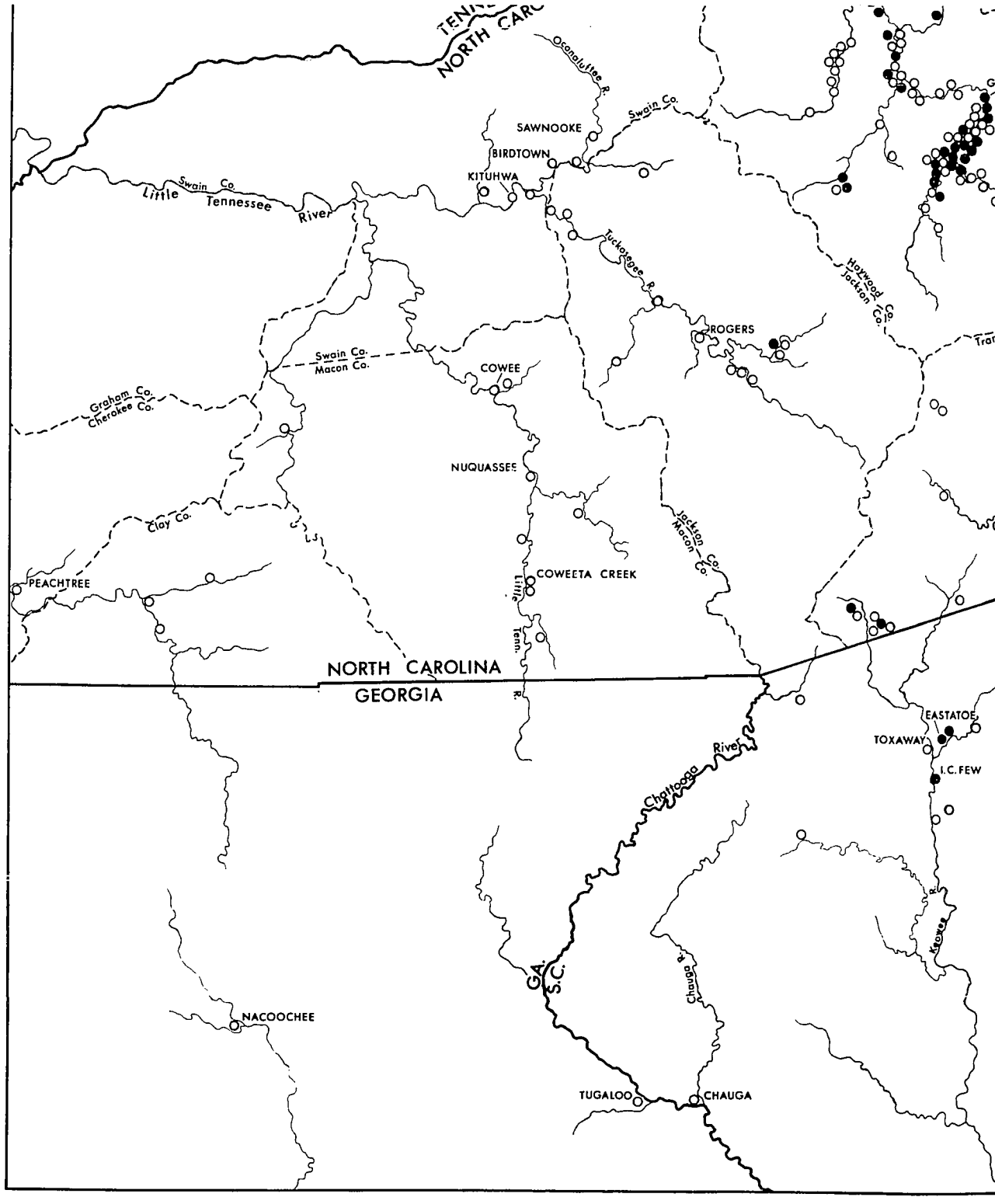

FIGURE 7

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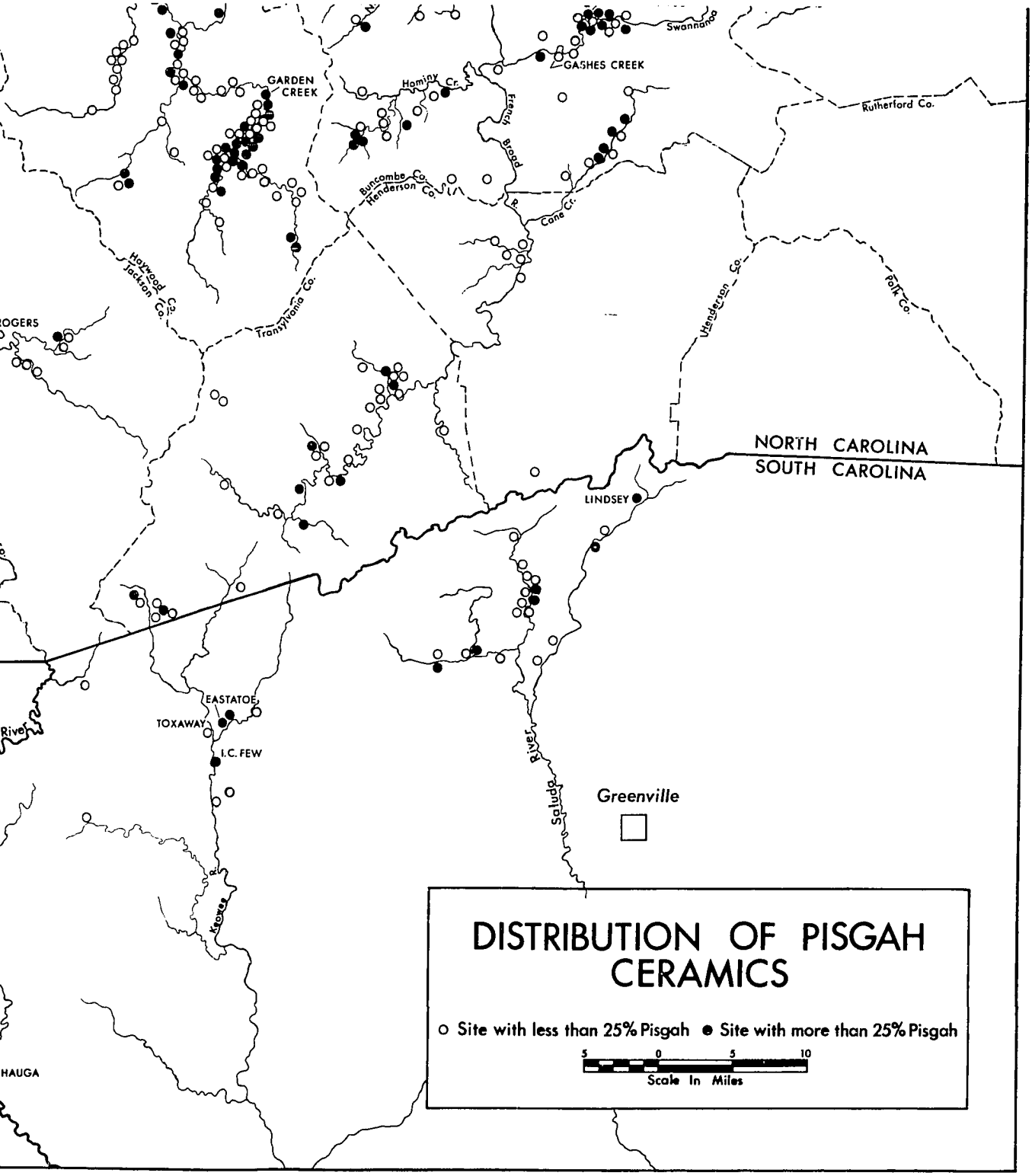

FIGURE 7

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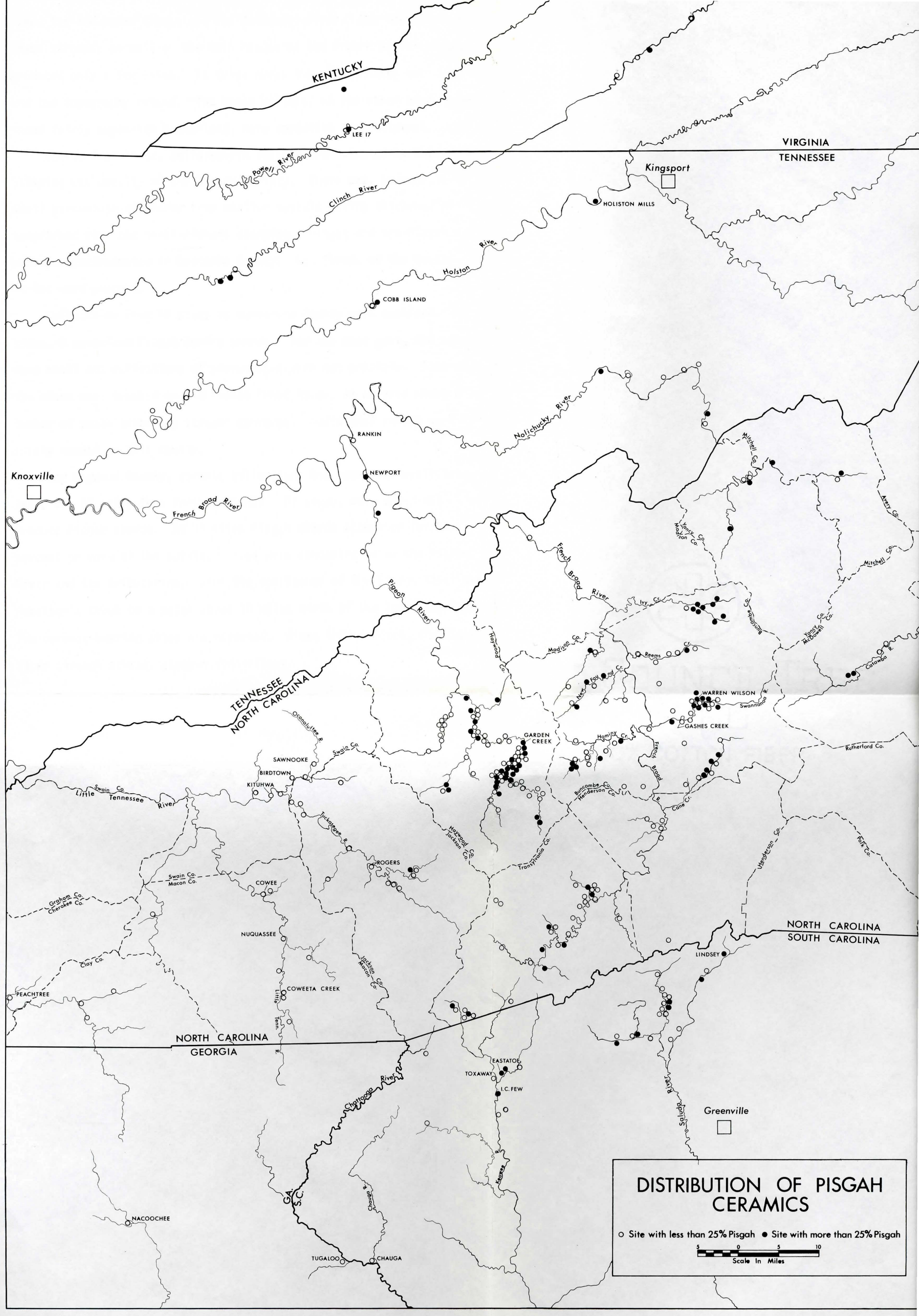
KENTUCKY
VIRGINIA
TENNESSEE
LEE 17
Powell River
Clinch River
Kingsport
HOLISTON MILLS
Holston River
COBB ISLAND
Knoxville
RANKIN
NEWPORT
Nolichucky River
French Broad River
Mitchell Co.
Avery Co.
Yancy Co.
Madison Co.
Pigeon River
Haywood Co.
Ivy Cr.
Buncombe Co.
Reems Cr.
New Found Cr.
Catawba R.
TENNESSEE
NORTH CAROLINA
WARREN WILSON
Swannanoa R.
GASHES CREEK
Oconaluftee R.
Swain Co.
GARDEN CREEK
Hominy Cr.
Rutherford Co.
SAWNOOKE
BIRDTOWN
KITUHWA
Little Tennessee River
Buncombe Co.
Henderson Co.
Cane Cr.
Tuckasegee R.
Jackson Co.
Transylvania Co.
ROGERS
Polk Co.
Swain Co.
Macon Co.
COWEE
Graham Co.
Cherokee Co.
NUQUASSEE
NORTH CAROLINA
SOUTH CAROLINA
LINDSEY
Clay Co.
PEACHTREE
COWEETA CREEK
Little Tenn. R.
NORTH CAROLINA
GEORGIA
EASTATOE
TOXAWAY
I.C. FEW
Chattooga River
Saluda River
Greenville
GA.
S.C.
Chauga R.
Keowee R.
NACOOCHEE
TUGALOO
CHAUGA
DISTRIBUTION OF PISGAH CERAMICS
Site with less than 25% Pisgah
Site with more than 25% Pisgah
5 0 5 10
Scale In Miles

FIGURE 7

sites. Pisgah sites were most numerous on the upper portions of the tributary streams of the French Broad River. These included Hominy, Cane, Ivy and Reems creeks and the Swannanoa River. The lower ends of these streams, as well as the main course of the French Broad itself, produced only a few sites. In these areas the stream banks were high and the topography rugged. The upper valleys, on the other hand, provided fairly expansive bottomland, more conducive to settlement.

Sherds from large, collared-rim vessels predominated in this area. Stamping was usually of the larger variety. There was, however, a small percentage of sherds from smaller vessels having thickened or unmodified rims and small-element stamping. Pisgah and pre-Pisgah ceramics predominated in Buncombe County. Few sherds of the Qualla Series were present.

Collections from 14 sites in Henderson County were examined. Of these, 6 contained Pisgah Series sherds. For the most part, the samples were small and estimations of percentages were not possible. Four of the sites were located on the French Broad River, in an area where a number of small tributary streams converge. Additional survey work is sorely needed in this county.

For Haywood County, ceramic collections had been previously tabulated for 82 sites (see footnote p.63). Of these, only 3 did not produce Pisgah sherds. At 31 sites Pisgah sherds accounted for 25 percent or more of the totals. Sites were concentrated on the Pigeon River and its tributaries. From the confluence of the Pigeon River and Jonathan's Creek to a point about 10 miles north of the Tennessee line, few ceramic-bearing sites are reported. Along this stretch, the Pigeon flows through narrow, steep-sided valleys.

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The Pisgah pottery from Haywood County is much like that just described for Buncombe County. At the Garden Creek Mound (Hw°1), near Canton, there was a good transition from Pisgah vessel form and surface finish to those of the Qualla Series. Many sherds exhibited traits of both series (Plate XXIV).

For Transylvania County, the pottery from 48 sites had been previously tabulated (see footnote p. 63). Of these, 31 produced Pisgah Series sherds. At 8 sites Pisgah sherds accounted for 25 percent or more of the totals. Only a few Qualla or "transitional Qualla" sherds were reported from this area (Holden 1966: 77).

Collections from 37 sites in Jackson County were examined. Twelve of these had Pisgah Series sherds. At only one site did Pisgah sherds account for as much as 25 percent of the total. Qualla Series sherds predominated in most of the collections examined by the writer.

Collections from 26 sites in Swain County were examined. There were Pisgah sherds at 6 sites, with the largest amount being 5 percent. Two of the sites were the historically documented Kituwah and Nununyi, both with temple mounds.

As a result of the extensive survey coverage of Macon County, it was possible to examine collections from 99 ceramic-bearing sites. Of these, 9 contained small amounts of Pisgah pottery, all less than 25 percent. The largest amount, 10 percent, came from test excavations at the Nuquassee mound, on the Little Tennessee River, an important Middle Town center of the Historic Cherokee. In this county, Qualla sherds were more numerous by far than those of any other series.

Clay County was known through field observation to have produced few examples of Pisgah ceramics. Nevertheless, an examination was made

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of collections from 43 sites. Of these, three sites yielded a total of 6 Pisgah sherds. Qualla Series sherds again were predominant in the collections.

Only a few sample sites were examined for the far-western counties of Graham and Cherokee. Large sherd collections were chosen, but these yielded no Pisgah sherds. Qualla Series sherds were most frequent. It should be noted, however, that several Pisgah and Pisgah-like sherds were found at the Peachtree mound site, located on the Hiwassee River near Murphy (Setzler and Jennings 1941: Plate 37, A, bottom row, 2 and 4; and Plate 43, middle row, 3 and 5)

South Carolina and Georgia

Collections from 84 sites in northwestern South Carolina, mainly in Greenville and Pickens counties, were examined. A number of these sites, primarily those in the Saluda drainage, were reported by Wesley Breedlove of Marietta, South Carolina (Plates XXV and XXVI). The remainder had been located by survey teams from the Research Laboratories. Of the 84 collections, 33 contained Pisgah ceramics. In 9 of the collections, Pisgah sherds comprised 25 percent or more of the total counts.

Pisgah sites were found to be most numerous on the upper tributaries of the Saluda River. There were a few sites farther to the west on the Keowee River and its tributary, Eastatoe Creek. In the latter area, two historically documented sites--Toxaway and Eastatoe--contained Pisgah sherds. The I. C. Few site, on the Keowee River near the site of Fort Prince George, has a ceramic assemblage which appears to be predominately Pisgah. The surface finishes, however, are overwhelmingly plain and check stamped, and only a few sherds are complicated stamped

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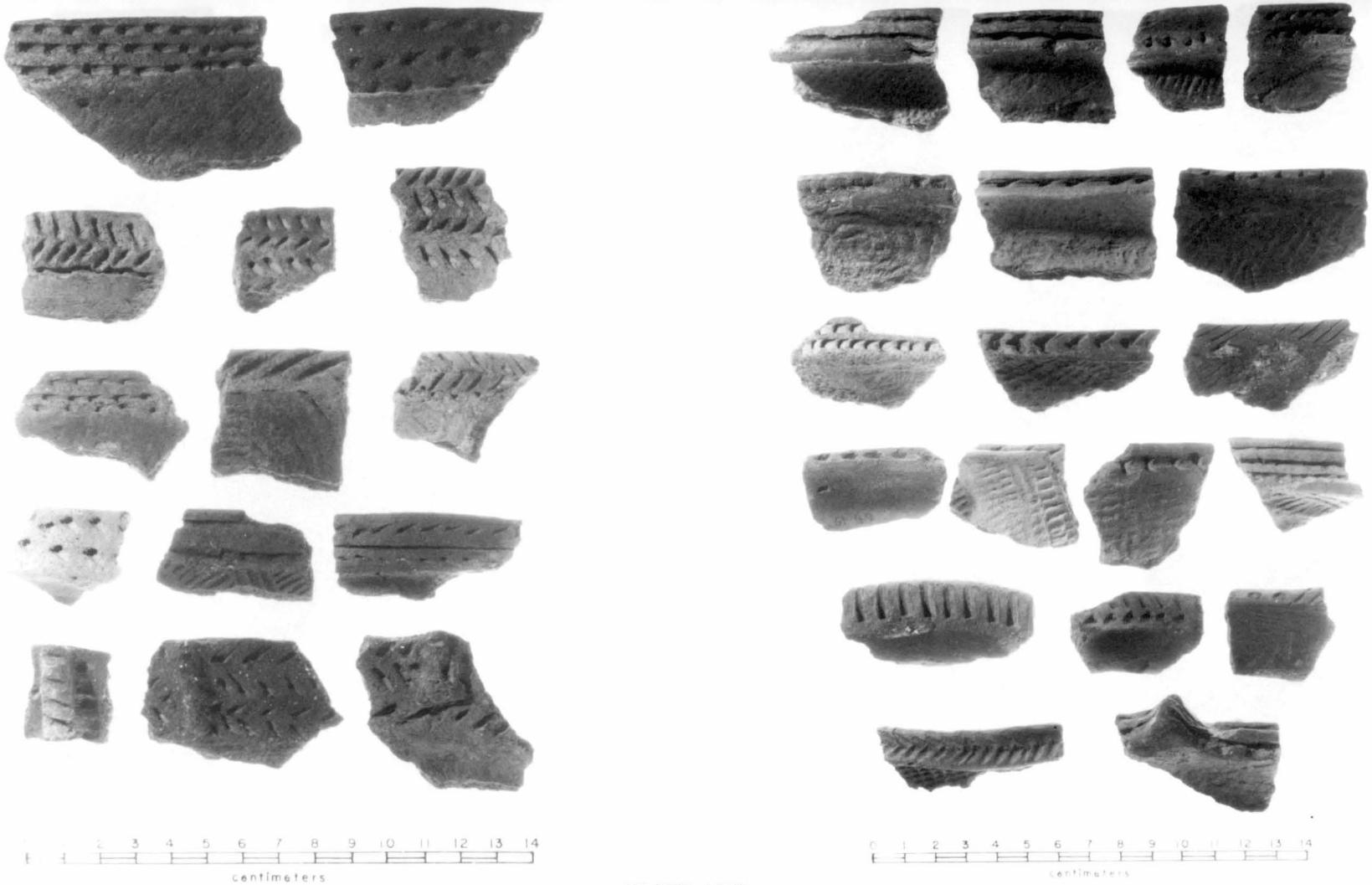

PLATE XXV
Pisgah Collared Rims (Left) and Thickened Rims (Right) From
Northwestern South Carolina (Breedlove Collection).

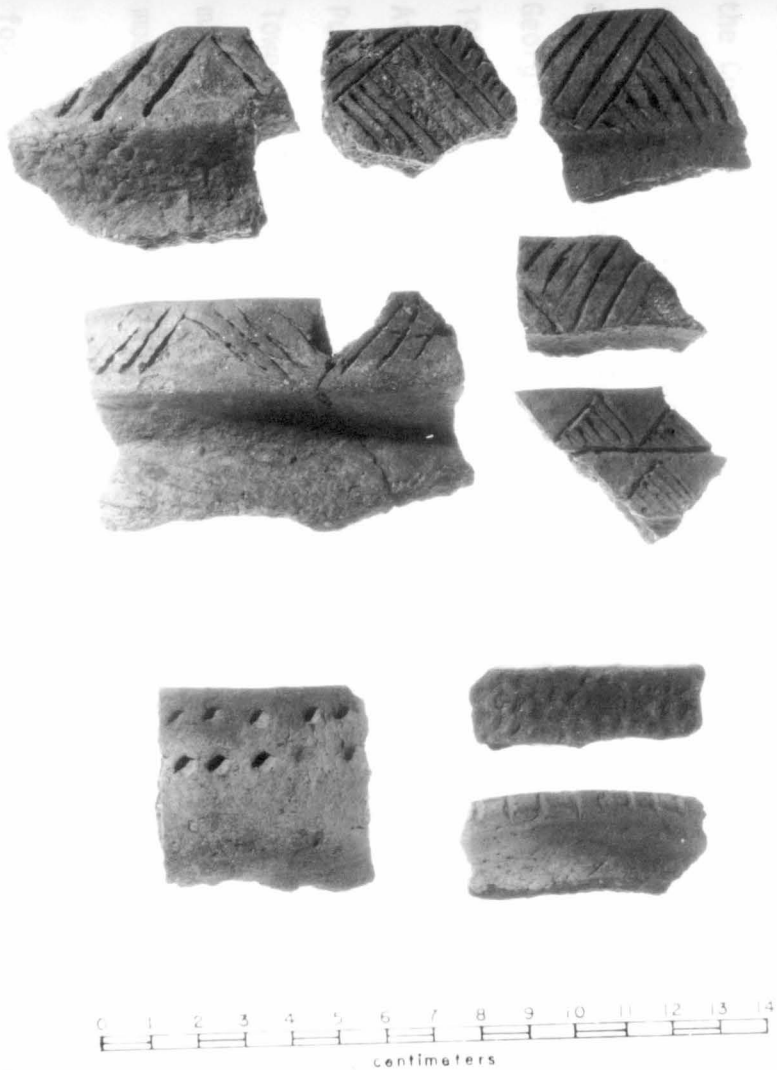

PLATE XXVI

Pisgah Rims with Applique, Lugs, and Handles (Left) and with Incised Patterns and Straight Rims (Right) from Northwestern South Carolina (Breedlove Collection).

(Roger Grange, personal communication). Still farther to the west on the Chatooga River, one site had a few Pisgah sherds.

Extensive excavations at the Chauga mound and village site, located at the juncture of the Tugaloo and Chauga rivers in Oconee County, Georgia, produced a small amount of Pisgah pottery (Kelly and Neitzel 1961). Otherwise, few sherds have been reported from that far south. At Chauga the Pisgah ceramics were referred to as "Pseudo-Iroquoian Punctate" (Kelly and Neitzel 1961: 36-37, Plate II, and Illustration VI, lower). It would appear that only rim sherds were identified. These made up as much as 2 to 5 percent of the pottery in several of the mound stages, and also were found in the premound village midden.

Caldwell (personal communication) reports that Pisgah sherds were found in the mound and village units at the historically documented Tugaloo site. This site is located on the Georgia side of the Tugaloo River, a few miles west of the Chauga site.

Additional survey work in northwestern South Carolina and northeastern Georgia would be beneficial. Of particular interest are the various stream valleys on the upper drainage of the Savannah River, the Enoree-Reedy drainage, and the upper drainage of the Tyger River.

Tennessee

Limited survey work had been carried out by the Research Laboratories in the extreme eastern part of Tennessee. The collections examined came primarily from sites on the Pigeon, French Broad and Nolichucky rivers. Out of 30 sites, 10 produced Pisgah Series sherds. At 4 sites, Pisgah sherds made up 25 percent or more of the totals. It is believed that these few sites represent only a fraction of the number

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that would be found through more intensive surveys.

A mound located at the junction of the French Broad and Pigeon rivers was reported by Holmes (1884: 440-441) to contain pottery which is unquestionably Pisgah (see quote from Holmes at the beginning of this chapter). A site has been reported by Research Laboratories surveyors for this same location, but the mound no longer is visible.

Richard and James Polhemus have reported nine Pisgah sites on the Clinch and Holston rivers in Grainger, Jefferson and Claiborne counties, Tennessee (Richard Polhemus, personal communication) (Plates XXVII, XXVIII and XXIX). They suspect the existence of numerous other sites covered by the waters of Norris and Cherokee lakes. No Pisgah ceramics have been found by them below the juncture of the Holston and French Broad rivers.

At the Holiston Mills site on the Holston River below Kingsport, Tennessee, the ceramic assemblage is composed of about 70 percent Dallas Series sherds and 30 percent Pisgah (Richard Polhemus, personal communication). The houses, palisades and burials which have been excavated at this site are thought to be products of the Dallas occupation, but this has not been absolutely confirmed in every case (Charles Faulkner, personal communication).

A few Pisgah sherds were found at the Rankin site, a primarily Early Woodland site located on the west bank of the French Broad River at its juncture with the Nolichucky River (Smith and Hodges 1968: 84-87). A single intrusive Pisgah burial was accompanied by an intact Pisgah vessel (Smith and Hodges 1968: Plate XLIV). The burial was of a young child, and the pot was inverted next to the skull (David Smith, personal communication).

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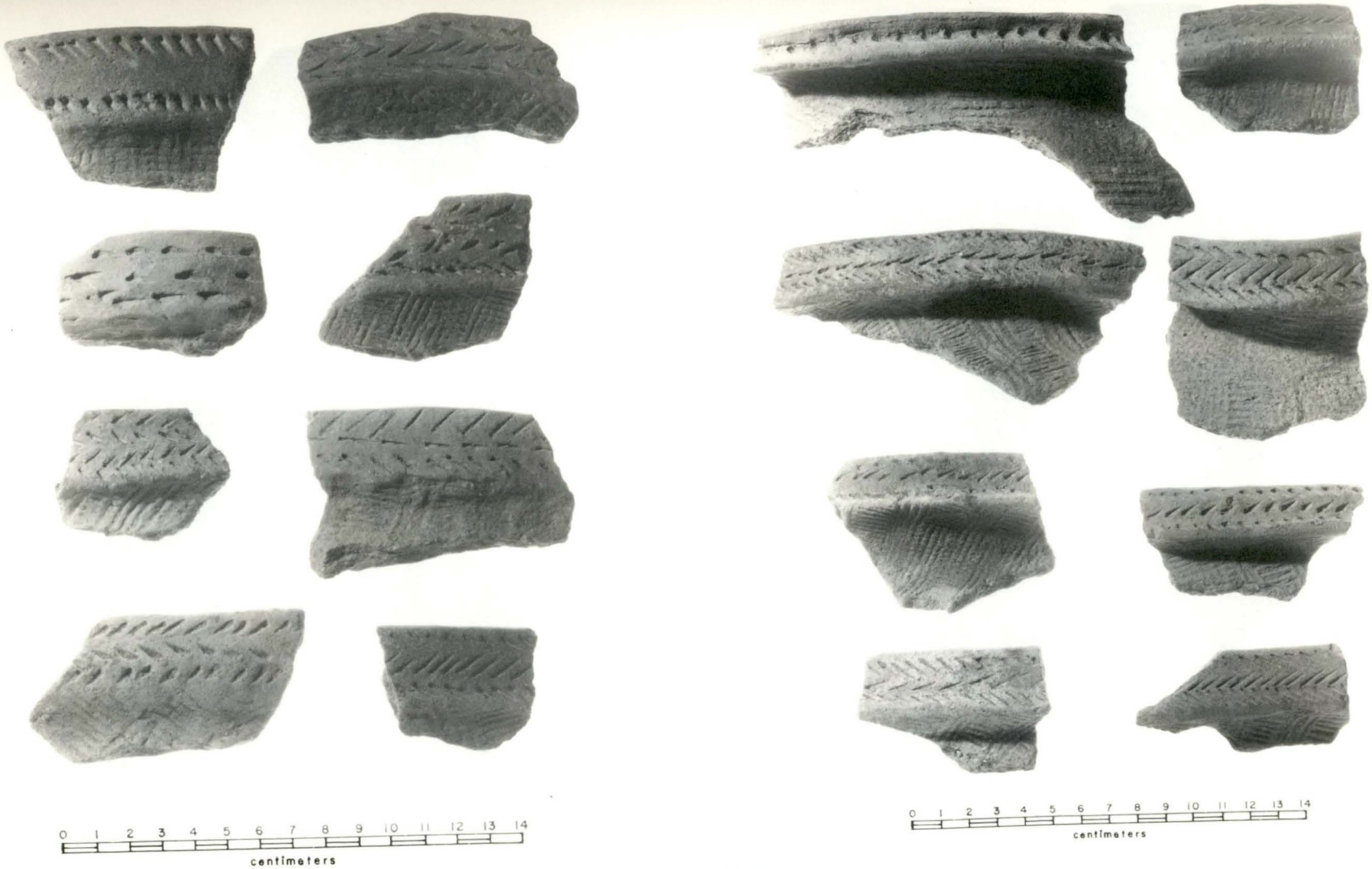

PLATE XXVII
Pisgah Collared Rims from Eastern Tennessee (Polhemus Collection).

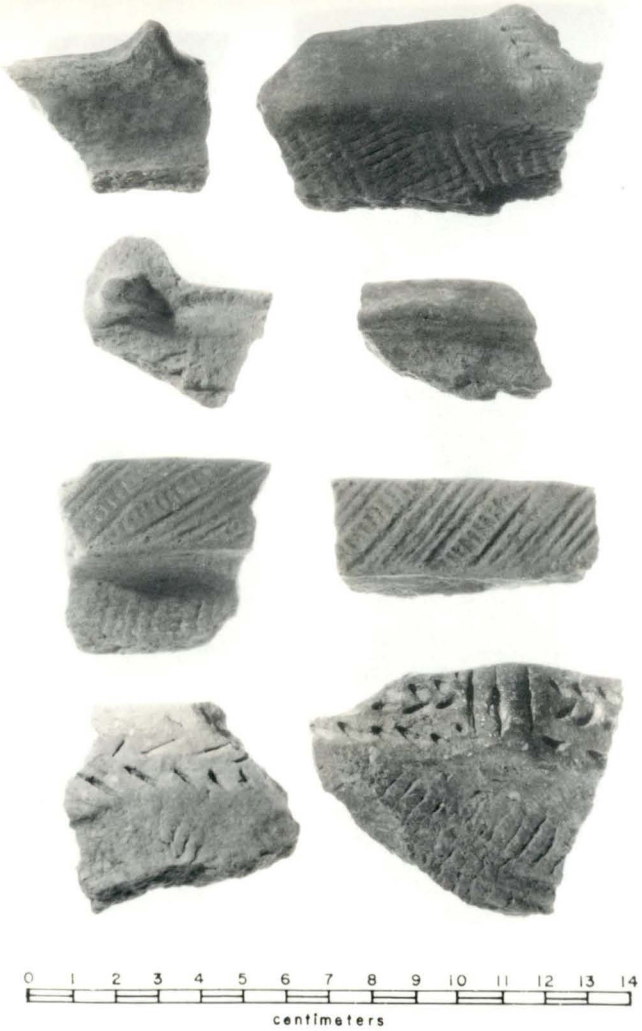

PLATE XXVIII
Pisgah Collared Rims (Left) and Everted and Straight Rims (Right)
from Eastern Tennessee (Polhemus Collection).

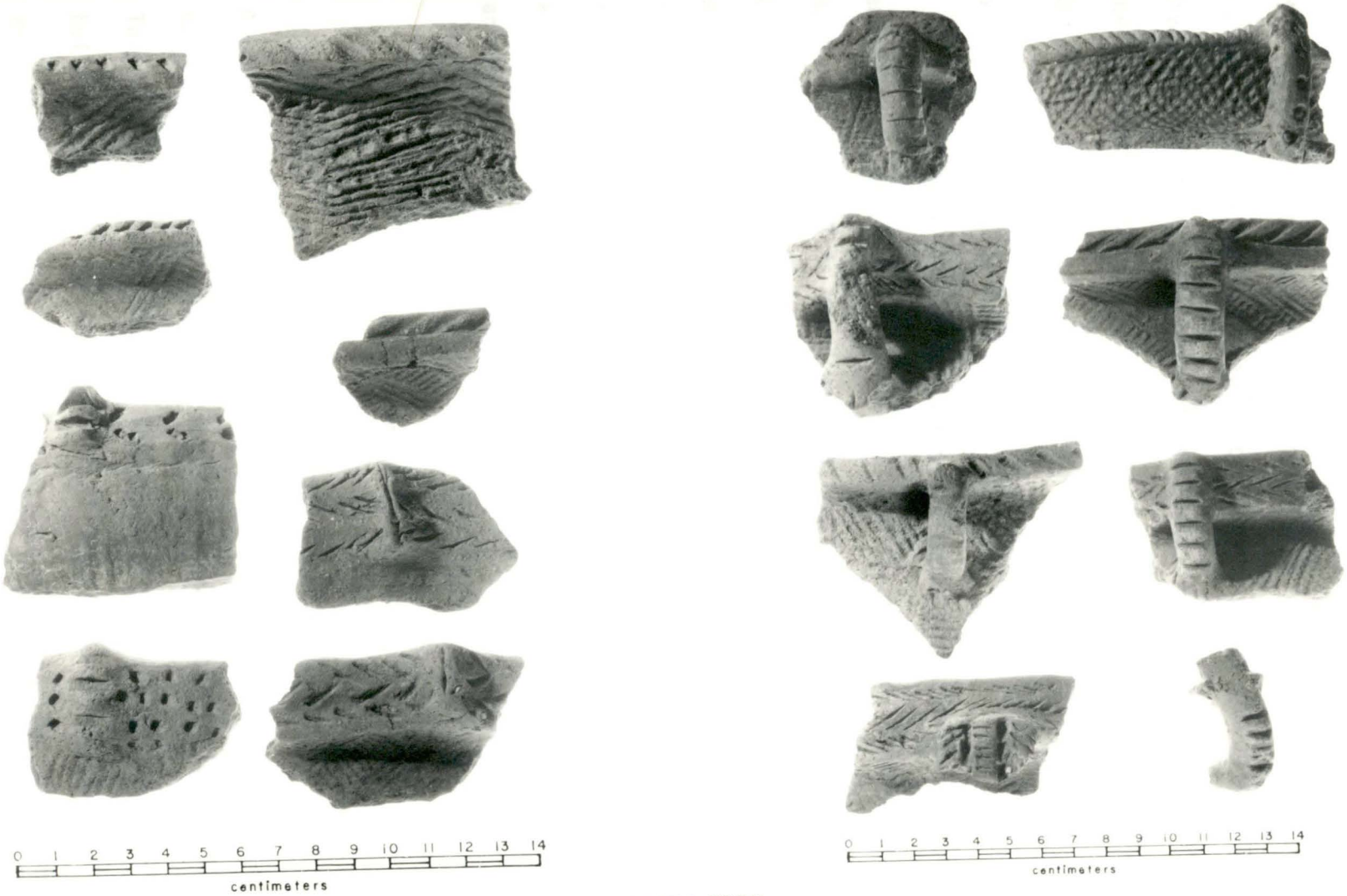

PLATE XXIX
Pisgah Rims with Lugs and Handles from Eastern Tennessee (Polhemus Collection).

Virginia

There is an apparent extension of Pisgah ceramics along the major river systems into southwestern Virginia. C. G. Holland (n.d.) reports 4 sites on the Clinch River in Scott County and 2 sites on the Powell River in Lee County. At both of the Scott County sites and at one of the Lee County sites Pisgah sherds accounted for 25 percent or more of the totals.

Outlying Sites

Several Pisgah-like rim sherds are reported by James Reid (1967: 62; and Plate VIII, first row) from the Town Creek mound, Montgomery County, North Carolina. This mound was constructed by the Pee Dee culture. Excavations at the Nacoochee Mound on the upper Chattahoochee River in White County, Georgia produced a few rim sherds similar to Pisgah forms (Heye, Hodge and Pepper 1918: Figs. 24 and 25). James Kellar notes that 22 sherds from a single "Cobb Island Complicated Stamped" vessel were found at the Angel site near Evansville, Indiana (1967: 480, 484: and Fig. 192).

Temporal Placement of Pisgah Ceramics

Charcoal from a refuse-filled pit (Feature 10) adjacent to the Garden Creek mound ($Hw^{0}1$), near Canton, North Carolina, yielded a radiocarbon date of A.D. 1435 $\pm$ 70 years (Geochron Laboratories No. GX0595). This pit probably was dug for the acquisition of subsoil clay used in building either Floor 1 or Floor 2 of the mound. In the pitfill there were 732 Pisgah Rectilinear Complicated Stamped sherds, 78 Pisgah Curvilinear Complicated Stamped sherds, 35 Pisgah Check Stamped sherds,

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107 Pisgah Plain sherds, and 6 Pisgah sherds with cord or textile impressions.

C. G. Holland (n.d. and personal communication) reports a date of A.D. 1210 ± 120 years (Smithsonian Radiation and Organisms Laboratory No. 131) on charcoal from the 18- to 24-inch level in square "B" at site number 17 in Lee County, Virginia. Pottery from the 18- to 24-inch level consisted of 1 Lee Series sherd and 4 New River Series sherds. The finding of only one Lee Series sherd gives this date a tenuous association with Pisgah.

Two dates at the Chauga Mound in Oconee County, South Carolina, were obtained from contexts in which there were small percentages of Pisgah pottery (Kelly and Neitzel 1961: 64). The pre-mound level was dated at A.D. 1070 ± 150 years (Michigan Memorial-Phoenix Project Radiocarbon Laboratory No. 934), and the Mound 3 stage was dated at A.D. 1120 ± 150 years (Michigan Memorial-Phoenix Project Radiocarbon Laboratory No. 933).

Since several sherds of Pee Dee pottery have been found in close association with Pisgah sherds (Feature 10, $Hw^{o}1$; and Feature 37, $Bn^{v}29$), it is important to note a series of four dates from the Town Creek Mound in Montgomery County, North Carolina (Joffre Coe, personal communication). The pre-mound level was dated at A.D. 1205 ± 140 years (Florida State University Radiocarbon Laboratory No. 174). Temple 1 was dated at A.D. 1355 ± 50 years (F.S.U. No. 175). Two dates were obtained from Temple 2, A.D. 1280 ± 40 years (F.S.U. No. 176) and A.D. 1350 ± 140 years (F.S.U. No. 145). Joffre Coe (personal communication) views all of these dates as being somewhat too early. He prefers to date Pee Dee at around A.D. 1450.

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The Origins and Development of Pisgah Ceramics

Certain traits of Pisgah pottery, in terms of technology and basic form, can be seen to have evolved out of the ceramic development in the mountain area.[5] Paste characteristics, vessel shape, and some forms of surface finish are products of this tradition.

The abundant grit tempering of the Swannanoa Series gave way to crushed quartz in the Pigeon Series. This was partially replaced by fine-to-coarse river sand in the Connestee Series. The Pisgah potters appear to have used both crushed quartz and unmodified river sand in their first pottery, but later they utilized unmodified river sand exclusively.

Vessel forms evolved from a large conoidal pot in the Swannanoa Series to a smaller, thinner-walled, flatter-bottomed pot in the Pigeon Series. Tetrapodal supports also were present in the Pigeon Series. Little difference in vessel form can be found between Pigeon and Connestee. There was, however, a tendency toward outslanting the rims and reducing the size of tetrapods in Connestee. The predominant Pisgah vessel form was essentially the same as that for Pigeon and Connestee, but without tetrapods and with more everted rims.

Plain surface finish was present on some of the earliest Swannanoa pottery and continued as a minority finish through to the historic period. Check stamping began late in the development of the Swannanoa Series. Its appearance, along with simple stamping, marked the beginning of a long history of interaction between mountain potters and those of

[5]Work is continuing on the clarification and definition of the various ceramic series of the upper Tennessee drainage. Preliminary statements on some of these can be found in Holden (1966) and Egloff (1967).

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the Piedmont cultures to the south. At first the checks were large and the stamping was sloppy in execution. Later, in the Pigeon Series, the checks were small and carefully executed. In the Connestee Series, check stamping was infrequent, but when present the checks were large in size and lightly impressed into the clay. The earliest check stamping of the Pisgah Series was a small-element form which resembled the checking of the Pigeon Series. Later, the checks were larger, as in the Connestee Series. The small-element checking is found to be particularly abundant in collections from northeastern Tennessee and northwestern South Carolina. Small checks also are more commonly associated with unmodified or thickened rims than with collared rims.

Complicated stamping first appeared as a minority form of surface finish in the Pigeon Series. Curvilinear motifs seem to have been first. These were similar, if not identical, to varieties of Swift Creek Complicated Stamped of central and northern Georgia (Wauchope 1966: 54-56). Later, there were more angular forms not unlike Napier Complicated Stamped (Wauchope 1966: 57-60). In the Connestee period stamping similar to Woodstock Complicated Stamped (Wauchope 1966: 60-62) appeared. Presumably at a later date there was a "split-diamond" stamp resembling Etowah Complicated Stamped (Wauchope 1966: 64-69). Complicated stamping was an infrequent form of surface finish in both the Pigeon and Connestee series, usually amounting to less than one percent. Examples of the Napier, Woodstock and Etowah types of stamps are illustrated in Plate XXX.

The presumed earliest forms of stamping in the Pisgah Series are composed of narrow, ladder-like rectilinear patterns and small check patterns (Plate XIV) which are quite similar to those just described for

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Pigeon Series. The paste and temper of most of the sherds with this stamping are closer to Pigeon than to Connestee. As was previously noted, the small-element complicated and check stamped Pisgah sherds, associated with unmodified and thickened rims, are most abundant in collections from the lower French Broad and Pigeon rivers and from the Clinch and Holston drainages. They, nevertheless, form consistent minorities in collections from west-central North Carolina and northwestern South Carolina.

It is suggested here, in the form of an hypothesis that must be tested through further excavation (hopefully producing stratigraphic data) and areal survey, that the small-element stamped, uncollared variety of Pisgah pottery developed more or less from the Pigeon Series.[6] The Connestee Series which almost certainly began later and persisted to a later date than Pigeon, may also have contributed to this early development. On the basis of these proposed relationships, the author is of the opinion that the origins of Pisgah ceramics should be dated to about A.D. 1100. The geographical focus of this early development is uncertain, but it appears most likely that it was on the headwater drainages of the French Broad and Pigeon rivers in Tennessee and North Carolina. From there it spread northward into extreme northeastern Tennessee and southwestern Virginia and southward into South Carolina.

It is probable that collared rims appeared first in Tennessee. Here they are found on sherds with small-element stamping, a combination which is much less frequent on sites to the south. By the time collared

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[6]The derivation of Pisgah from Pigeon was suggested by Holden in 1966 (86).

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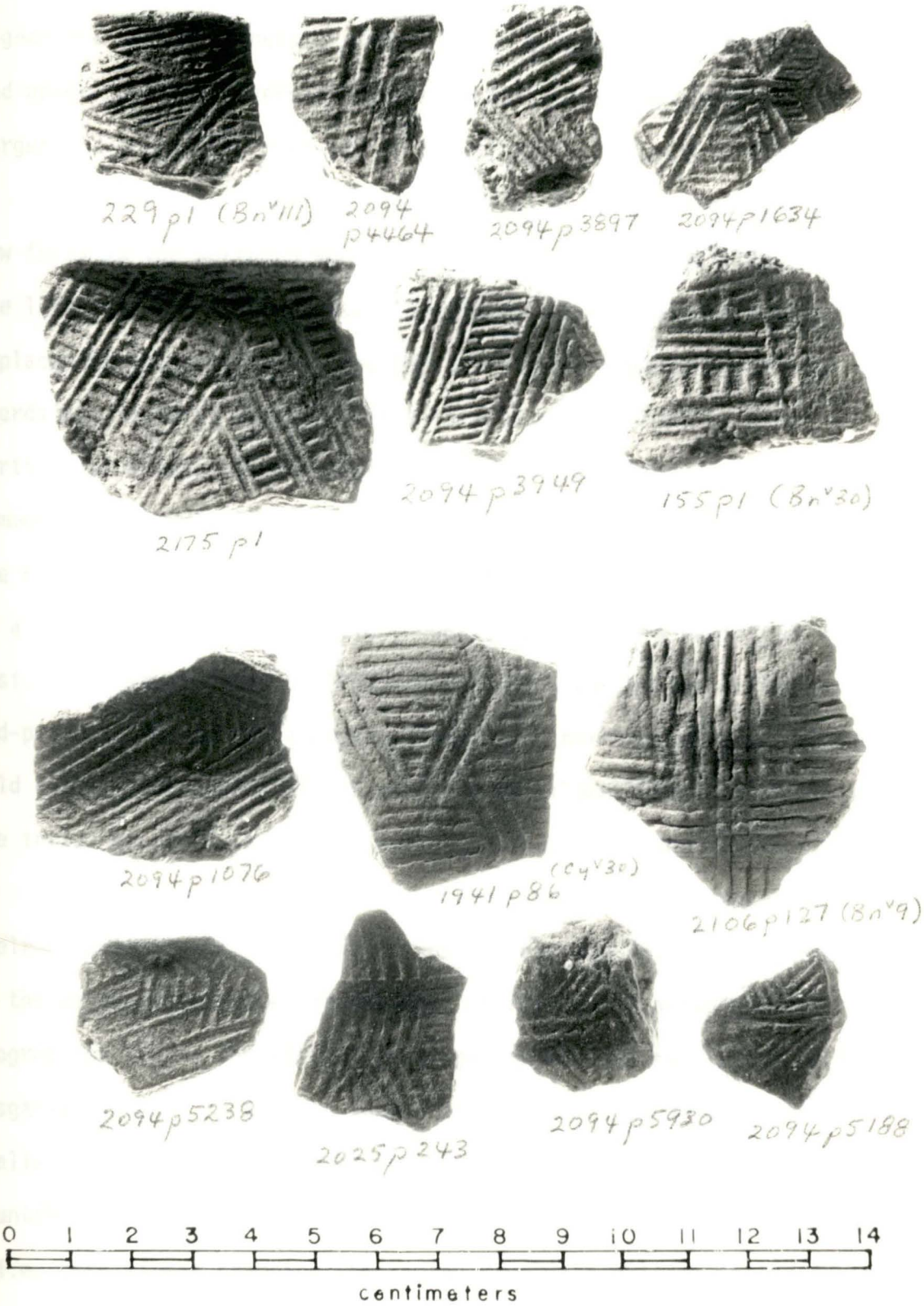

PLATE XXX
Pigeon Complicated Stamped (Napier-Like), Upper Two Rows; Connestee Complicated Stamped (Woodstock and Etowah-Like), Lower Two Rows.

rims had spread to sites on the upper reaches of the French Broad, Pigeon and Little Tennessee rivers in North Carolina and to the Saluda and upper Savannah rivers in South Carolina, stamping was becoming larger and the motifs more varied.

Pisgah ceramics seem to have merged with and/or were replaced by new forms in the northern and southernmost areas by about the middle of the 15th century. In Tennessee, on the Clinch and Holston rivers, replacement probably was by the Dallas culture. Dallas and Pisgah sherds are found at the same sites in this area, and when there is vertical separation Pisgah underlies Dallas (Richard Polhemus, personal communication). In South Carolina and in North Carolina southwest of the Pigeon river, Pisgah pottery was influenced and gradually replaced by a curvilinear stamp tradition. Qualla pottery, "a variety of the basic Lamar style horizon" (Egloff 1967: 39), can be identified as the end-product of this replacement. However, a northeastward spread of bold curvilinear styles of Savannah and/or Wilbanks derivation preceded the influx of developed Lamar, probably as early as the mid-15th century.

In the interior basins of the upper Pigeon, upper French Broad and their tributaries, Pisgah ceramics persisted well into the 16th century. At the Garden Creek site near Canton, sherds can be arranged in a progression from a few with early Pisgah traits, to some with combined Pisgah-and-Qualla traits, to those with exclusively Qualla traits. Qualla styles never superseded Pisgah in the eastern extremities of the mountains. Some Pisgah sherds from these areas exhibit Qualla influence --i.e. curvilinear stamping, inslanted rims with oblique-angled incised patterns, etc.--but there is no evidence of replacement by Qualla. In fact, there are little or no historic ceramics of any kind from this area.

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Although many of the characteristics of Pisgah ceramics can be credited to preceding styles in the mountain sequence or to interaction with closely neighboring cultures, the derivation of the thickened and collared rim forms is less easily explained. Equally as problematical are the decorative elements (bands of diagonal punctations, incised patterns, vertical lugs, handles, appliqued strips and castellations) that accompanied these rim forms. There are no antecedents in the mountain area for such traits, singly or in combination. Their appearance essentially as a unit, or at least in a period of no more than a few centuries, suggests outside stimulation.

Kelly and Neitzel (1961) implied a relationship between Pisgah collared-rim pottery and Iroquoian ceramics when they used the term "pseudo-Iroquoian" to describe sherds found at the Chauga site. It is true that similarities can be found in late-prehistoric ceramics from the Iroquoian area. They are represented most strongly in pottery from Erie and Neutral sites in western New York state and southeastern Ontario. The vessel is a globular jar with a constricted neck and may or may not have a collar. A smooth exterior surface finish is typical. Collared rims are decorated with bands of incised lines arranged in oblique-angled patterns. A protruding strip at the base of the collar where it joins the original lip may be notched, resembling the notched strips on Pisgah rims. There also are vertical lugs accompanied by slight castellations. Pottery types exhibiting these traits include Ripley Triangular, Lawson Opposed, Lawson Incised, Uren Noded, Ontario Oblique, and Uren Dentate (McNeish 1952: Plate IV, Figs. 2, 5, and 8; Plate V, Figs. 11 and 12; and Plate VIII). McNeish (1952: 82, 87) suggests that these types developed out of Owasco ceramics in the

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period A.D. 1100 to 1350.

The most striking similarities to Pisgah rim forms yet observed by this writer are found in the Oliver Phase of central Indiana. Important sites of this culture are the Oliver, Bowen, and Strawtown sites on the White River north of Indianapolis (Griffin 1966; and John Dorwin, personal communication). Oliver pottery is primarily grit tempered, and the vessel form is a globular jar with an everted rim which may be unmodified, thickened or collared. The exterior surface is plain or cord marked. Collared rims are frequently decorated with rows of angled impressions made with the edge of the cord-wrapped paddle. The impressions are in rows parallel to the rim and may be either horizontal or diagonal, with some forming open-ended chevrons as on Pisgah rims. Also present are vertical lugs, castellations, notched rim strips and handles. Griffin (1966: 261-267) expresses the view that Oliver pottery was basically a Late Woodland product, but that it also was influenced by Fort Ancient and possibly by Iroquois ceramics.

The pottery of the Anderson Focus of the Fort Ancient Aspect (Griffin 1966: 107-118) also exhibits some rim traits similar to Pisgah. Thickened rims are decorated with angled punctations, punctated strap handles, notched lugs, and notched appliqued strips (Griffin 1966: Plates XLI and XLII). Sites of this culture are found in southwestern Ohio.

In attempting to explain the means by which the collared rim and its associated decorative traits might have been transmitted across several hundred miles from the Mid-west and Great Lakes cultures to the Pisgah culture of the Tennessee and North Carolina mountains, it is useful to comment on a recent hypothesis. John Dorwin (n.d: 7-8 and

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personal communication) has suggested that the Pisgah culture, Fort Ancient Aspect, Oliver Phase, Langford Phase, Oneota Aspect, Wisconsin Late Woodland and Cambria Phase all participated in the exchange of ceramic and other traits "along a broad transfer zone" on the frontier between the expanding Mississippian and Late Woodland cultures. Substantiation of these relationships, as they pertain to the development of Pisgah ceramic traits, will have to await a more complete study of the northern extension of Pisgah and of temporally comparable cultures of eastern Kentucky.

Pisgah Ceramics and the Cherokee Problem

In 1961, Joffre Coe (59) provided a brief description of Pisgah ceramic traits, and noted that "these characteristics appear on pottery that seems to be ancestral to that used by at least some of the historic Cherokee." We already have speculated that Pisgah pottery in west-central North Carolina was affected by developing Qualla styles in the period ca. A.D. 1400 to 1500. By the middle of the 16th century it would appear that Pisgah styles had been completely amalgamated into Qualla. Population shifts, generally in a westward direction, accompanied the decline of Pisgah pottery, as is evidenced by the virtual abandonment of some areas on the eastern mountain periphery in the historic period.

Some Pisgah ceramic traits definitely were perpetuated in historic Qualla pottery. Among these were burnishing of vessel interiors, check stamping, rectilinear complicated stamping, and the use of notched rim applique. There were other survivals, occasionally represented by rim

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castellations, nodes, and handles.

Qualla pottery was found by Egloff (1967) to be the dominant ceramic series (45 to 98 percent) at most of the historically documented Cherokee sites in the Middle, Valley, and Out Town areas. It also was present in relatively large percentages (14 to 55 percent) on sites in the Lower Towns, but it was only slightly represented in the Overhill Towns. Pisgah pottery also was found at many of the same historically documented sites, as was noted in the preceding discussions of distributions. In fact, small numbers of Pisgah sherds were present at important Cherokee town-center and mound sites--such as Chauga, Tugaloo, Peachtree, Nuquasee and Kituhwa--when they were absent on many other sites in the same locales.

On the basis of these observations, there seems to be little doubt that Pisgah pottery was important in the development of the ceramic assemblage of the historic Cherokee. This influence was strongest in the Middle, Valley, and Out Town areas, but also was present to some degree in the Lower Towns. In the Overhill area, the legacy of Pisgah ceramic styles is less well understood. Nevertheless, the presence of Pisgah sherds on the Clinch, Holston and lower French Broad rivers in early contexts (ca. A.D. 1100-1250) certainly provides grounds for questioning the theory of a late arrival of the Cherokee in eastern Tennessee (Webb 1938; and Lewis and Kneberg 1946). Sears' (1955: 147) suggestion that Cherokee pottery styles "developed in the Underhill area and later spread to the north" is at least partly supported by the present data, but it does not take into consideration the existence of an indigenous ceramic development in the Carolina mountains or of the part played specifically by the Pisgah potters.

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CHAPTER III

ARTIFACTS

Artifacts of stone, bone, shell, wood, and clay (other than pottery) will be taken up in this section. Although cursory examinations were made of artifacts from the Garden Creek excavations and from numerous surface collections, only the artifacts from the 1966, 1967, and 1968 excavations at the Warren Wilson site will be treated in detail. Whenever the other collections can provide supportive or contradictory evidence, appropriate reference will be made to them.

Stone Artifacts

Stone artifacts are discussed under 4 broad categories: chipped stone, ground or polished stone, pecked stone, and cut stone. It is obvious that some stone artifacts were the products of more than one of the manipulations implied by the above classifications. For instance, a celt usually was first roughly pecked into shape and later ground on all or a portion of its surface in the final stages of finishing. Since the resulting piece is always at least partially ground, these artifacts are classed as ground-stone tools.

Chipped stone

Most Pisgah chipped-stone artifacts were fashioned from small flakes of chert, milky quartz, quartzite, or slate. The cherts are

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black, gray, or tan in color. Some of them probably were obtained from local sources; others may have come from eastern Tennessee. Quartz and quartzite pebbles could have been acquired in any local stream bed. The slate, which is a highly metamorphosed form, came from the Carolina Piedmont, principally from the Uwarrie Hills area.

The characteristic stone projectile point of the Pisgah culture is a small isosceles or equilateral triangle manufactured on a flake of one of the above materials. These points are recurrent in the feature and burial fill and in the plowed soil. Some exhibit careful bifacial flaking and are symmetrical in outline and of even thickness. Most often, however, a thin flake had simply been retouched along one face in order to achieve a roughly triangular form. The bases either are straight or slightly concave and the lateral edges sometimes are serrated. These points presumably are arrow tips.

A sample of thirty relatively complete points from various contexts at the Warren Wilson site were examined in detail. A summary list of traits and measurements is provided in Table 5. They are illustrated in Plate XXXI. Within this sample the most frequent material is chert, black being the most abundant, then gray, and then tan. Quartz and quartzite are next in frequency, followed by slate. The lengths range from 16 to 30 mm., with the mean at 24.5 mm. The widths (across the base) range from 11 to 21 mm., with the mean at 15 mm. Straight bases are twice as numerous as concave bases.

In addition to the projectile points, there are numerous small flake tools with one or more edges prepared for cutting, scraping, sawing, boring or graving. These all are worked on relatively small primary flakes as are the projectile points. Chert was almost always

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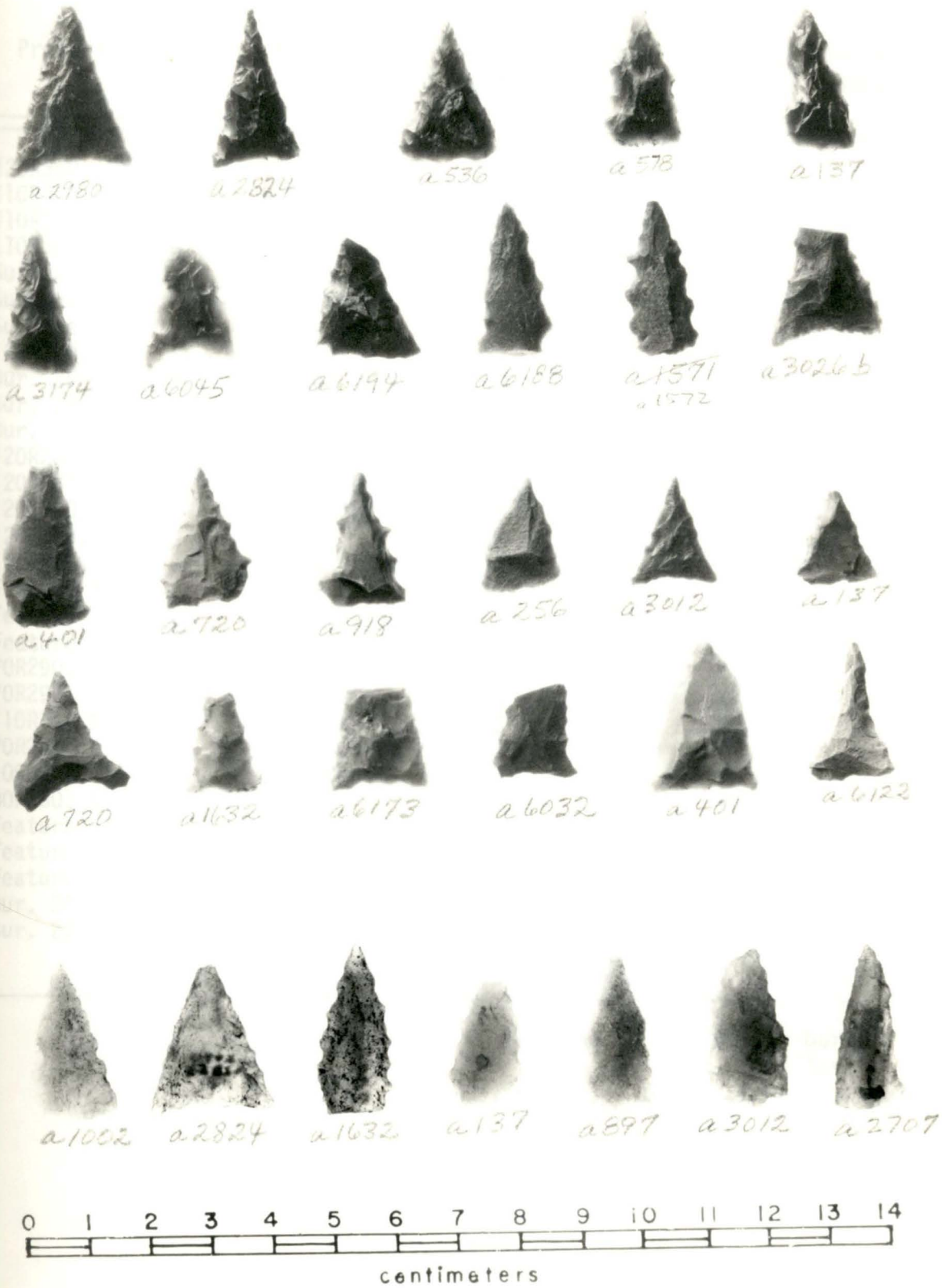

PLATE XXXI
Pisgah Chipped-Stone Projectile Points from Bn^{V}29. (2094)

Provenience	Material	Width Across Base MM.	Length MM.	Straight Base	Concave Base
120R360, PM 5	Black Chert	21	30		X
110R350, L.2	Black Chert	15	26		X
110R350, L.2	Quartz	21	27		X
110R320, L.1	Black Chert	17	25	X	
Surface	Quartz	13	25?	X	
Surface	Gray Chert	14	16	X	
Surface	Black Chert	12	25	X	
120R310, L.1	Quartzite	13	26	X	
Bur. 26, fill	Slate	13	26	X	
Bur. 26, fill	Gray Chert	19	25	X	
Bur. 19, fill	Tan Chert	15	23	X	
120R280, L.2	Gray Chert	15	23	X	
120R280, L.2	Gray Chert	20	22		X
120R310, L.2	Gray Chert	15	22	X	
120R320, L.2	Quartz	16	27	X	
120R250, L.2	Black Chert	13	25	X	
Feature 137	Black Chert	17	24?		X
Feature 136	Gray Chert	14	?		X
Feature 136	Quartzite	12	?	X	
70R290, L.2	Gray Chert	13	23?	X	
70R290, L.2	Quartzite	11	28	X	
110R310 PM 30	Quartz	12	27	X	
70R280, L.2	Black Chert	14	25	X	
100R310, L.1	Gray Chert	14	20	X	
80R280, L.2	Slate	12	26	X	
Feature 57	Quartz	14	30?	X	
Feature 57	Slate	19	?		X
Feature 107	Gray Chert	15	18		X
Bur. 24, fill	Gray Chert	17	?		X
Bur. 27, fill	Black Chert	18	21	X	

Bur. = burial
L. = level
PM = post mold

TABLE 5

PROJECTILE POINTS FROM BN^{V}29

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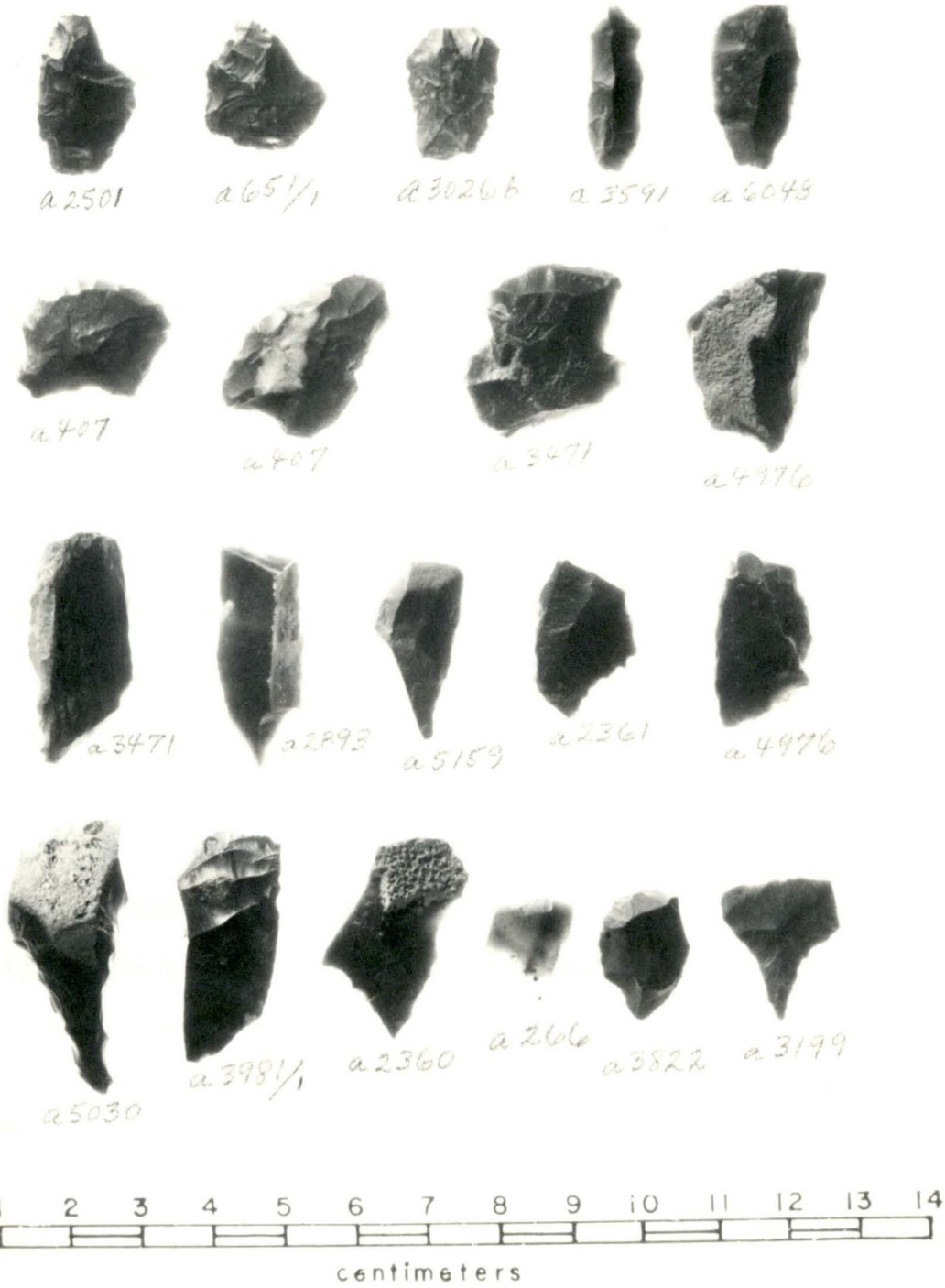

PLATE XXXII
Pisgah Small Flake Tools from Bn^{V}29. (2094)

Provenience	Material	Graving Point	Cutting Edge Bif.	Cutting Edge Unif.	Scraping Edge	Concavity	Drill
Surface	Gray Chert		X				X
110R330, PM 3	Black Chert	X	X				
120R270, L.1	Gray Chert		X				
100R330, L.2	Gray Chert	X	X			X	
100R330, L.2	Gray Chert			X			
120R230, L.2	Black Chert		X				
110R290, L.2	Gray Chert	X			X	X	
110R290, L.2	Gray Chert			X		X	
90R210, L.1	Black Chert	X					
130R350, L.2	Black Chert	X		X			
130R210, L.2	Gray Chert			X			
130R210, L.2	Black Chert	X		X			
220R210, L.1	Gray Chert	X		X			
70R330, L.1	Black Chert	X		X			
200R310, L.2	Black Chert	X			X		
200R3.0, L.2	Black Chert	X		X			
70R320, L.1	Black Chert	X		X			
Feature 137	Black Chert	Edges utilized but no alteration					
100R330, L.1	Black Chert	X		X			
100R330, L.1	Gray Chert	X					

Bif. = biface
Unif. = uniface
L. = level
PM = post mold

TABLE 6

SMALL FLAKE TOOLS FROM BN^{V}29

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used for these tools, with only a few being made from quartz, quartzite, or slate. Most often, one edge of the flake is unifacially retouched to produce a fine cutting or sawing edge. In some specimens the flaking is steep and the prepared edge obviously was for scraping purposes. Sometimes two converging edges are trimmed in order to provide a fine graving point. In several examples, there is a graving point plus one or more cutting edges on the same tool. Also, on several flakes there are concavities or "spoke shaves."

Twenty specimens of these flake tools were examined in detail, and a summary list of traits is provided in Table 6. They are illustrated in Plate XXXII. All twenty are made on flakes of black or gray chert. Thirteen of the 20 specimens have more than one tool preparation. Usually there is a combination of a cutting or scraping edge and a graving point. "Spoke shaves" are present on 3 specimens and a drill point is on one. These tools could have served a multitude of purposes in hide preparation, woodworking, and bone and shell carving.

Several small polyhedral cores of chert, from which the flakes for the above tools and points had been acquired, were found in the excavations. Some of these exhibit a prepared striking platform, whereas others are simply small nodules which were irregularly struck and then discarded.

Ground and polished stone

Ground-stone celts are present but not numerous in the various collections. The form is basically rectangular with the bit-end somewhat wider than the butt-end. In cross-section they are flat to slightly biconvex. Some specimens are roughly pecked, with only the

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bit-ends being polished. Others are ground all over and a few are rather well polished. Celts are primarily made from mafic igneous rocks in which the texture ranges from diorite-gabbro to diabase. Two well polished specimens (Plate XXXIII, top; and XXXV) were found in Burial 25 at Hw^{o}1. One of these is made from peridotite and the other from slate. This is the only known case of celts being included as Pisgah burial accompaniments.

Numerous small ground-stone discs were found in the plowed soil and fill of features and burials (Plate XXXIV). These are made from a variety of materials including diorite, diabase, gneiss, schist, and steatite. The sizes range from 1.5 to 6 cm. in diameter and from 5 to 15 mm. in thickness. They usually are flat-sided, but occasional specimens are biconvex in cross section. The degree of finishing varies considerably. Some are only roughly formed, with no secondary grinding or polishing, and it is difficult to determine whether they are pieces abandoned before completion or crude finished products. Others exhibit secondary grinding and a few are highly polished. A cache of three polished discs (Plates XXXIV, top; and XXXVI) was found in Burial 11 at Hw^{o}1. There were no other instances of discs being included with burials.

One small polished-stone tool, possibly a reworked broken celt, has a single-bevel bit (Plate XXXIII, top right). This tool probably was used as an adze or plane in woodworking.

A single polished-stone pipe (Plate XLII, upper left) was found on the surface of the Warren Wilson site. It is quite similar to clay pipes that were found in excavated Pisgah contexts.

Several river pebbles exhibit a high degree of polish on one or

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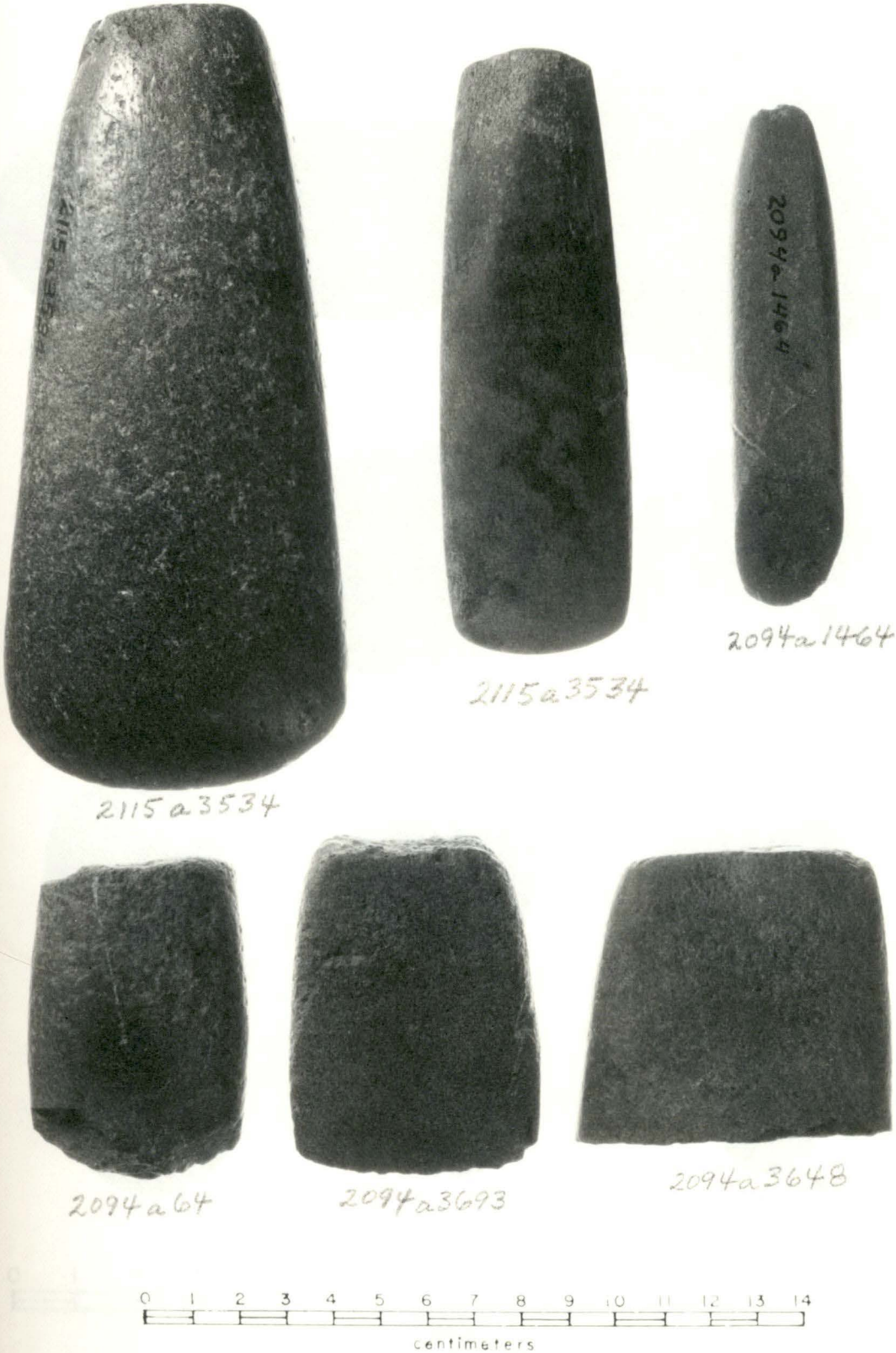

PLATE XXXIII

Pisgah Ground-Stone Tools. Two Celts Upper Left from Burial 25 at $Hw^{O}1$; Adze Upper Right and Three Celts Lower from $Bn^{V}29$.

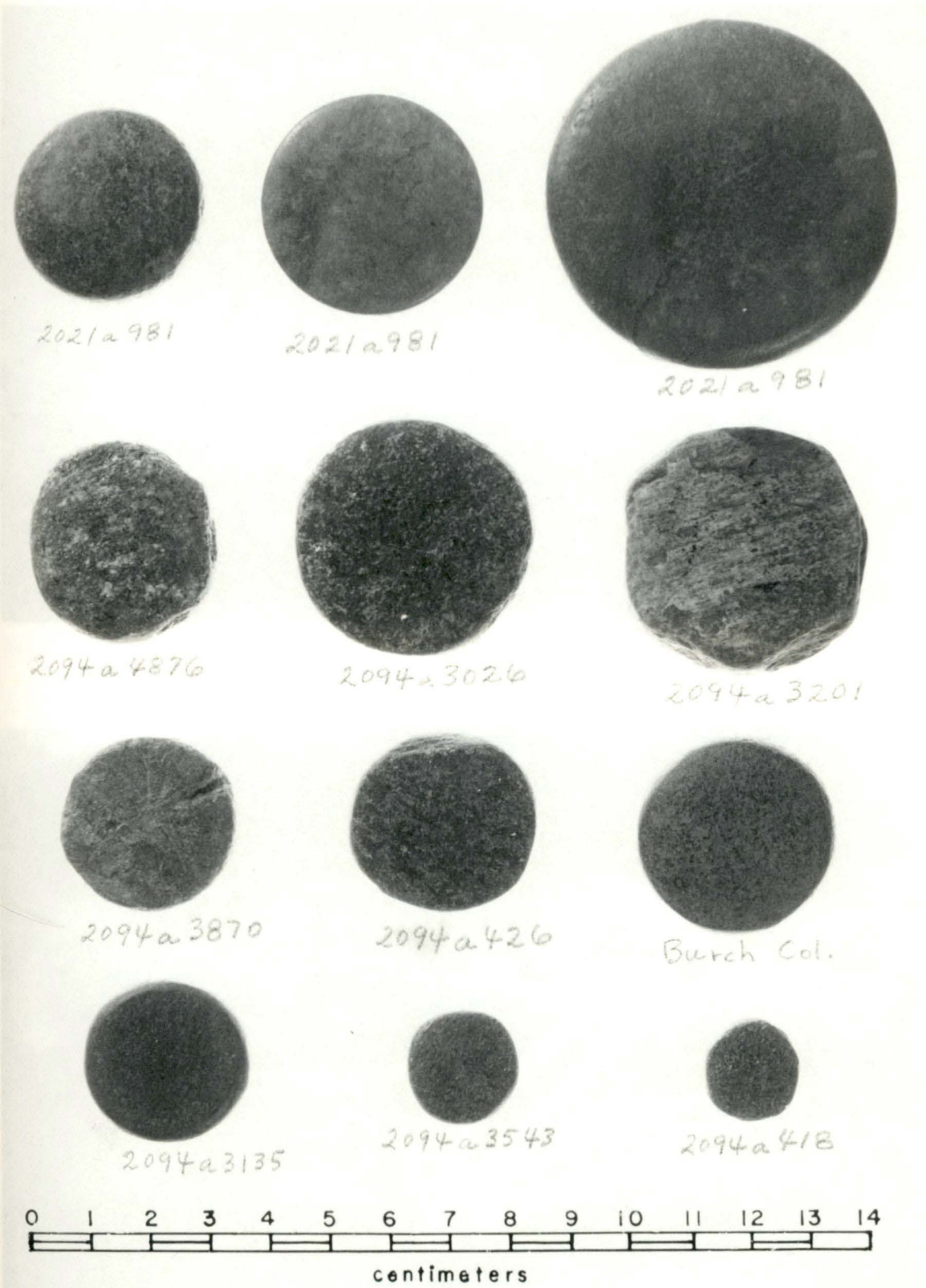

PLATE XXXIV
Pisgah Ground-Stone Discs. Top Three Discs from Burial 11 at Hw^{O}1; Remaining Discs from Bn^{V}29.

PLATE XXXV
Burial 25 at Hw^{o}1, Showing Two Ground-Stone Celts with Burial.

PLATE XXXVI
Burial 11 at Hw^{o}1, Showing Three Ground-Stone Discs with Burial.

more surfaces (Plate XXXVIII). Such pieces quite probably were used to smooth and polish the interiors of pottery vessels.

Pecked stone

In this category there are mortars, anvil stones, grinding stones, and hammerstones. Mortars are infrequent in Pisgah contexts, but the few that were recovered consist of flat boulders with one or more abraded surfaces or shallow dish-shaped depressions. These stones probably were used as platforms in grinding vegetable foods.

Anvil stones are more numerous. They vary in size and shape and exhibit small shallow depressions or pits on one or more surfaces. Such pieces probably served as platforms in stoneworking and in cracking nutshells. Some of these doubled as hammerstones (Plate XXXVII, upper left).

Grinding stones or manos are represented by a few river pebbles which are abraded on one of the flat faces. Perhaps these were the pestles used with the above described mortars in food preparation.

Hammerstones are by far the most numerous tool in the pecked-stone category. These can be separated into two major groupings by size and roughness of the pecking marks. Some are approximately fist-size or larger and are heavily mutilated on the ends, or in some cases on all surfaces (Plate XXXVII). Sometimes small depressions on one side, or on two opposing sides, show that they also were used as anvils (Plate XXXVII, upper left). Most of these larger, rougher tools probably were employed in cracking nutshells and breaking up seeds. Smaller hammerstones, 1 or 2 inches in diameter, exhibit small peck marks and uniform wear (Plate XXXVIII). These may have been chipping

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hammers used in manufacturing and retouching chert flakes.

Cut stone

Fragments of cut mica were present in pitfill and in the plowed soil at both the Warren Wilson and Garden Creek sites. These pieces usually appear to have been broken from larger carved sheets, presumably "preforms." Numerous indications of aboriginal mica mining were reported by geologists and mining engineers working in western North Carolina in the late 19th and early 20th centuries (Ferguson n.d.). It is probable that mica was traded from the mountains by the Pisgah peoples in exchange perhaps for marine shell and chert. Mica artifacts have been found in burial contexts roughly contemporaneous with Pisgah at Hiwassee Island, Tennessee (Lewis and Kneberg 1946: 123); at Town Creek on the North Carolina Piedmont (Joffre Coe, personal communication); at the Chauga mound and village site in northwestern South Carolina (Kelly and Neitzel 1961: 29); and at the McCollum mound in Chester County, South Carolina (Smithsonian Institution, Museum of Natural History negative number 37318-E).

Cut-mica artifacts were present in one burial (Burial 7) at the Warren Wilson site. Fifteen small solid discs and two small perforated discs (Plate XXXIX) were found in the neck area, and 6 larger perforated discs (Plate XL) were distributed down the front of the skeleton. The perforated specimens have four cut-out slots similar to the circular shell gorgets from the same site (Plate LII).

Cut and abraded pigment stone was present in various Pisgah contexts at both the Warren Wilson and Garden Creek sites. Lumps of hematite, limonite, and graphite are represented. A cache of red ochre was found with Burial 7 at the Warren Wilson site.

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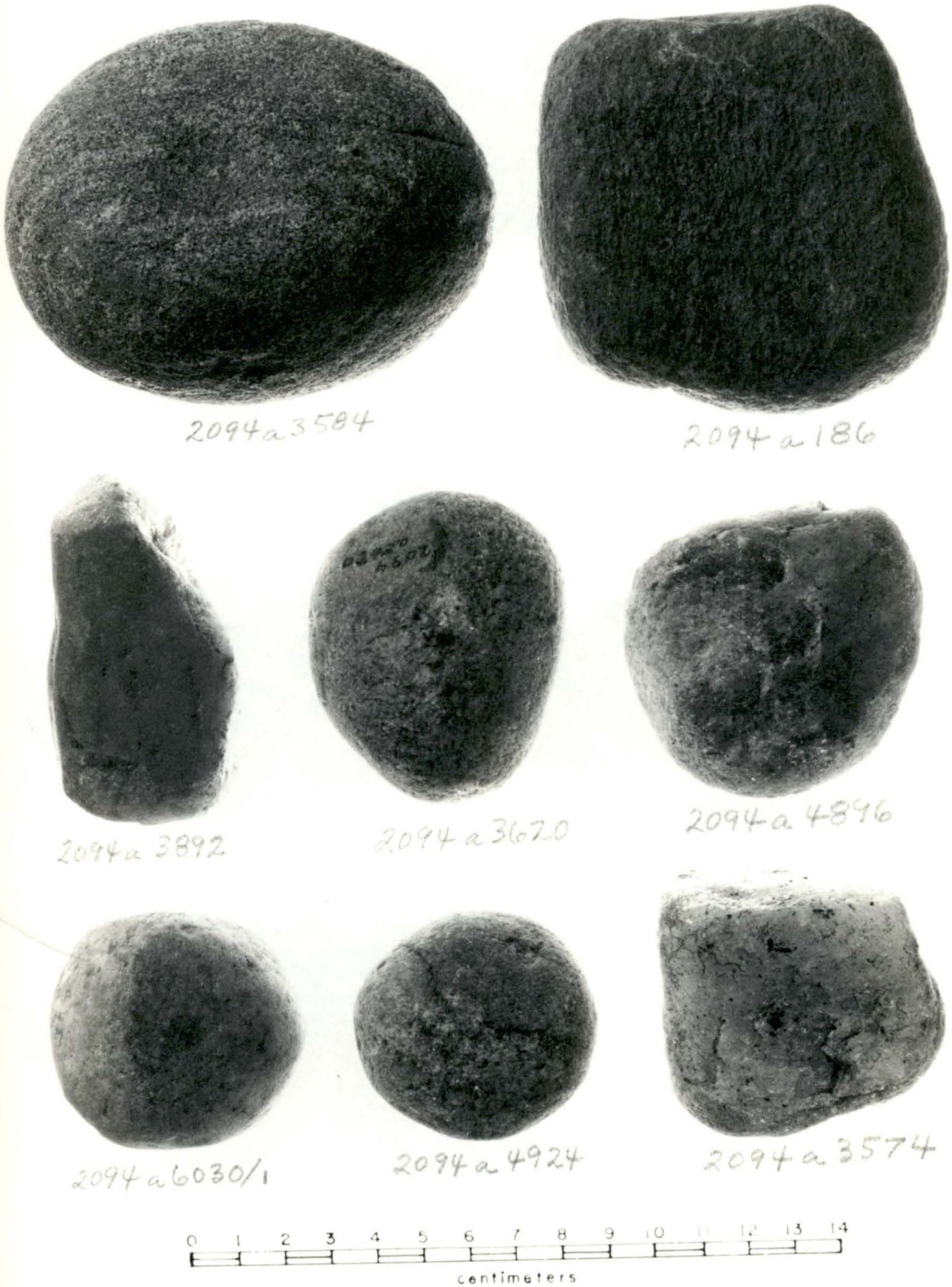


PLATE XXXVII
Pisgah Large Hammerstones.

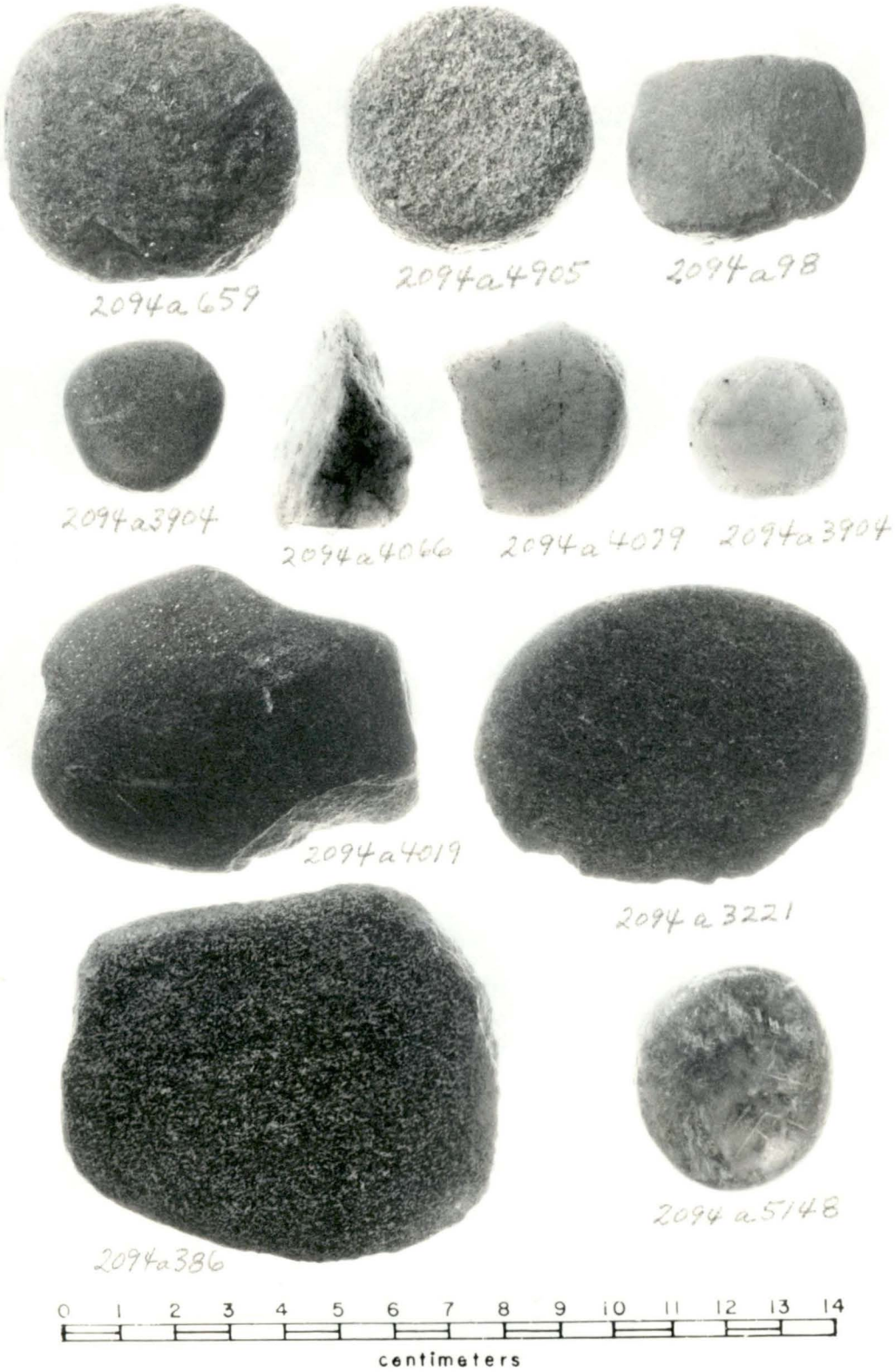
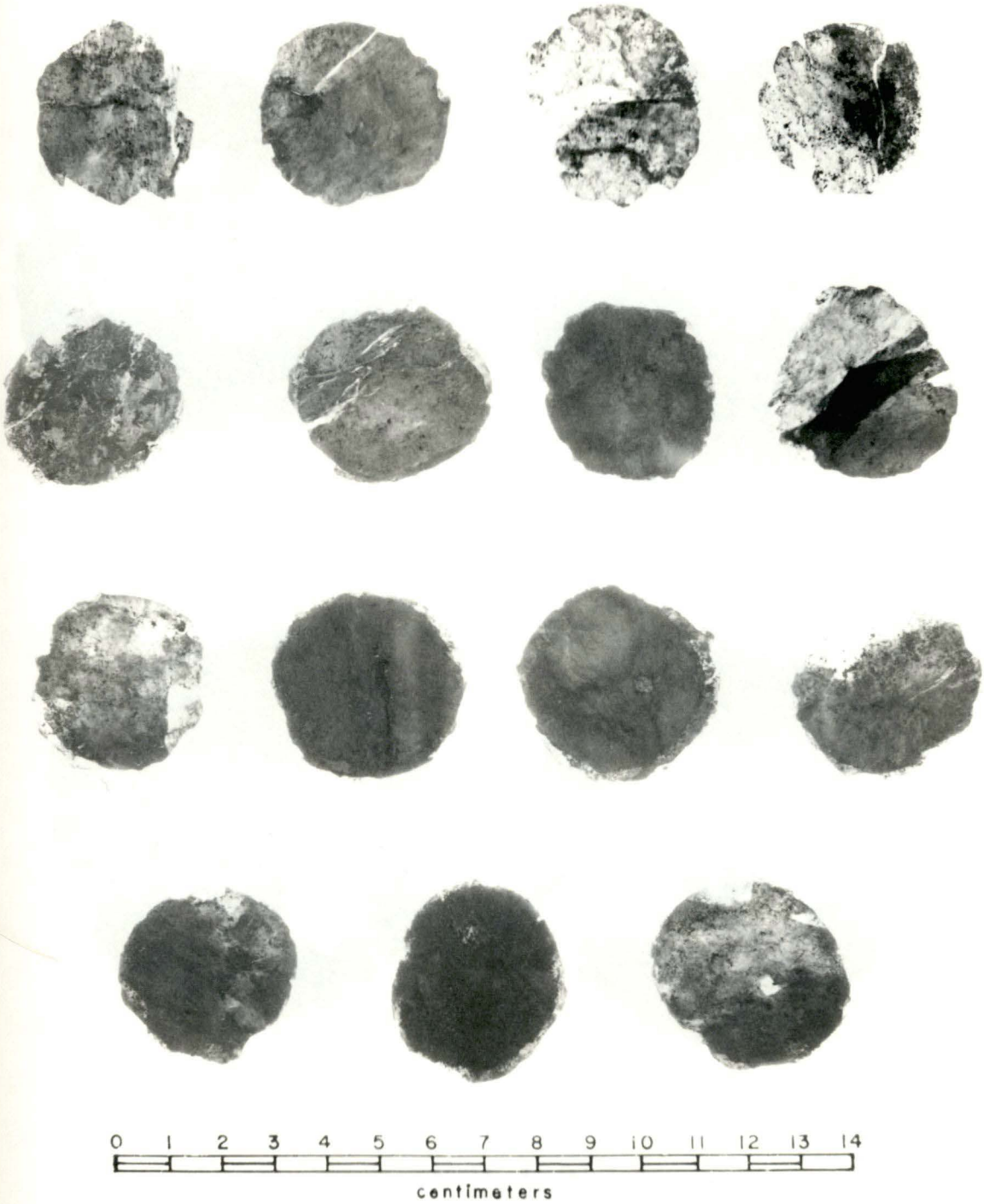


PLATE XXXVIII
Pisgah Small Hammerstones, Upper Two Rows;
and Polishing Stones, Lower Two Rows.



Bn^{V}29 Burial 7
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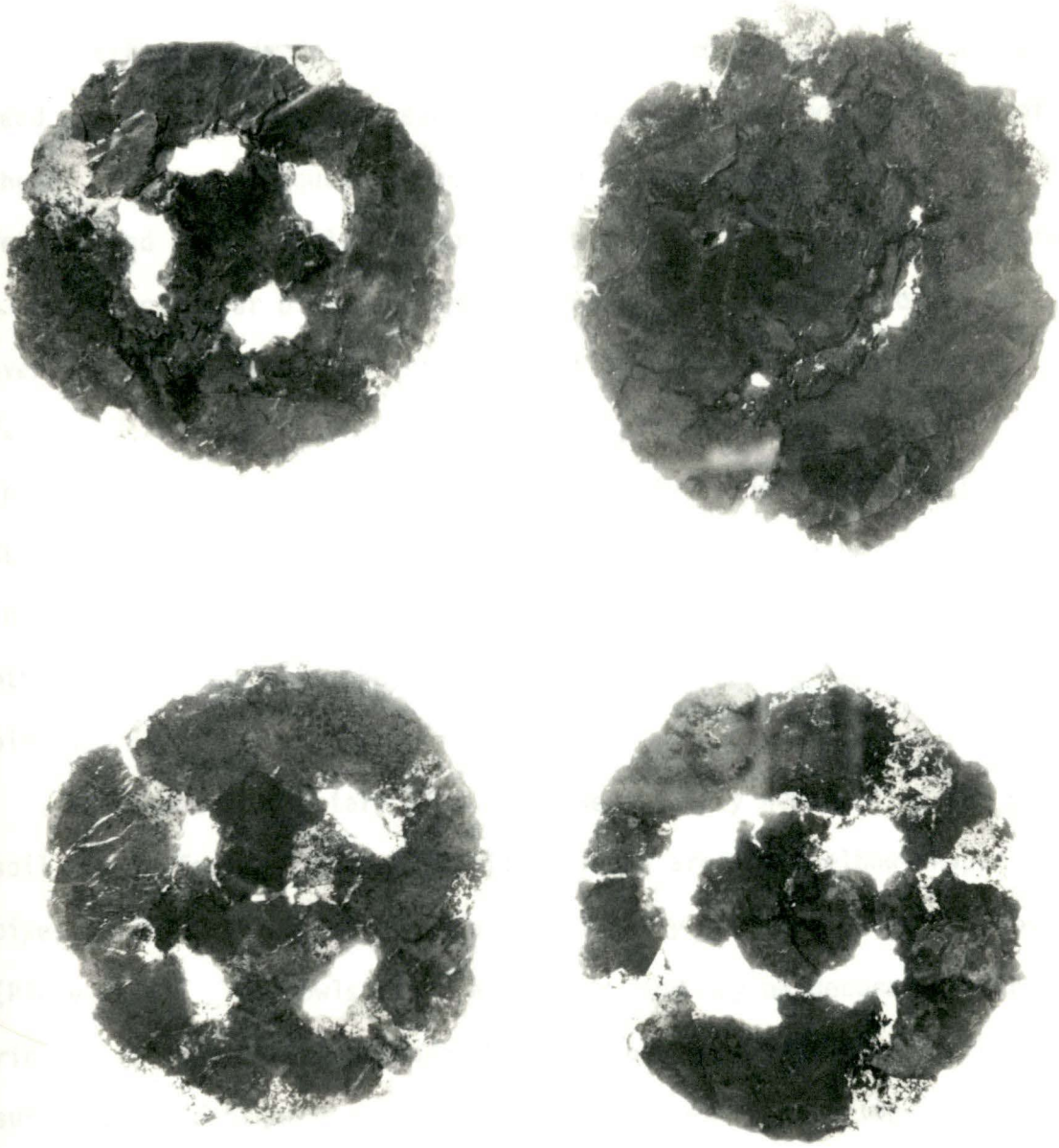
PLATE XXXIX
Small Mica Discs from Burial 7 at Bn^{V}29.



Bn^{V}29 Burial 7
2094a1297

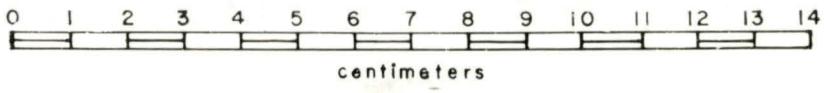


PLATE XL
Large Mica Discs from Burial 7 at Bn^{V}29.

Clay Artifacts

Artifacts made from pottery clay consist of discs, pipes, animal head representations, and beads. Clay discs are the most numerous of these. They are frequently encountered in the plowed soil and in feature and burial fill. In most cases a potsherd was chipped to form a roughly circular piece and then ground on the edges to produce an evenly finished disc. Occasionally, it appears that the disc was fashioned from wet clay and fired. Some pieces are quite symmetrical in shape and thickness, while others are only crudely finished (Plate XLI). The size varies from 1 to 5 cm. in diameter and from 4 to 9 mm. in thickness. No interpretation of the use of these discs can be given other than to say that they probably served as gaming or counting pieces.

Whole and fragmentary clay pipes were fairly numerous in the plowed soil and in feature and burial fill. These are small elbow-shaped pipes on which the stems are usually slightly shorter than the bowls (Plate XLII). The bowls flare at the top and may be decorated with ridges, incised lines, or nodes. Some pipes have highly burnished surfaces while others are only lightly smoothed. Tempering particles are of smaller size and are less abundant in the clay used to make pipes than in the clay used for pots. A heavy cake of burnt organic material is present in most of the intact pipe bowls.

Twelve small clay animal heads were found in the excavations at Warren Wilson, and a few similar pieces were reported from Hw^{o}1 at Garden Creek (Plate XLIII). In only one case was there a complete animal represented. This one resembles a bear (Plate XLIII, third row, left). The others, all of which seem to represent in simplified form

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the heads of deer, are broken at the bases of the necks. It is not known to what these were attached, since no whole figures (other than the bear) were found. It is possible that they were pot rim appendages, although no rims with heads were noted in the analyzed sherd samples.

Forty-four small clay beads were found in the Warren Wilson excavations. A few of these also were reported from Garden Creek. The forms are spherical, oblong, elongated with an expanded center, spool-shaped, and pear-shaped (Plate XLIV). The spherical and oblong shapes are most common and range from 5 to 15 mm. in diameter. These clay beads have never been found as burial accompaniments and must be interpreted as "casual" ornamentation, either strung, sewn on garments, or worn as dangles.

Several miniature pottery vessels were found at the Warren Wilson site (Plate XLIII). They are crude representations of the larger vessels and probably were made for children's toys.

Bone Artifacts

Bone tools were relatively abundant in refuse-filled pits, where preservation was at an optimum. These consist mainly of pointed implements (awls, punches, and needles) made from large bone segments or from small splinters. The splinter tools usually exhibit little polish and are considered to have been of only temporary use (Plate XLV). More carefully manufactured tools were made from deer ulnae and metatarsi or turkey tarsometatarsi (Plate XLVI). Some of these tools are highly polished and short in length, evidence of their having been resharpened and used over a long period. Most of them are classed as awls, but two

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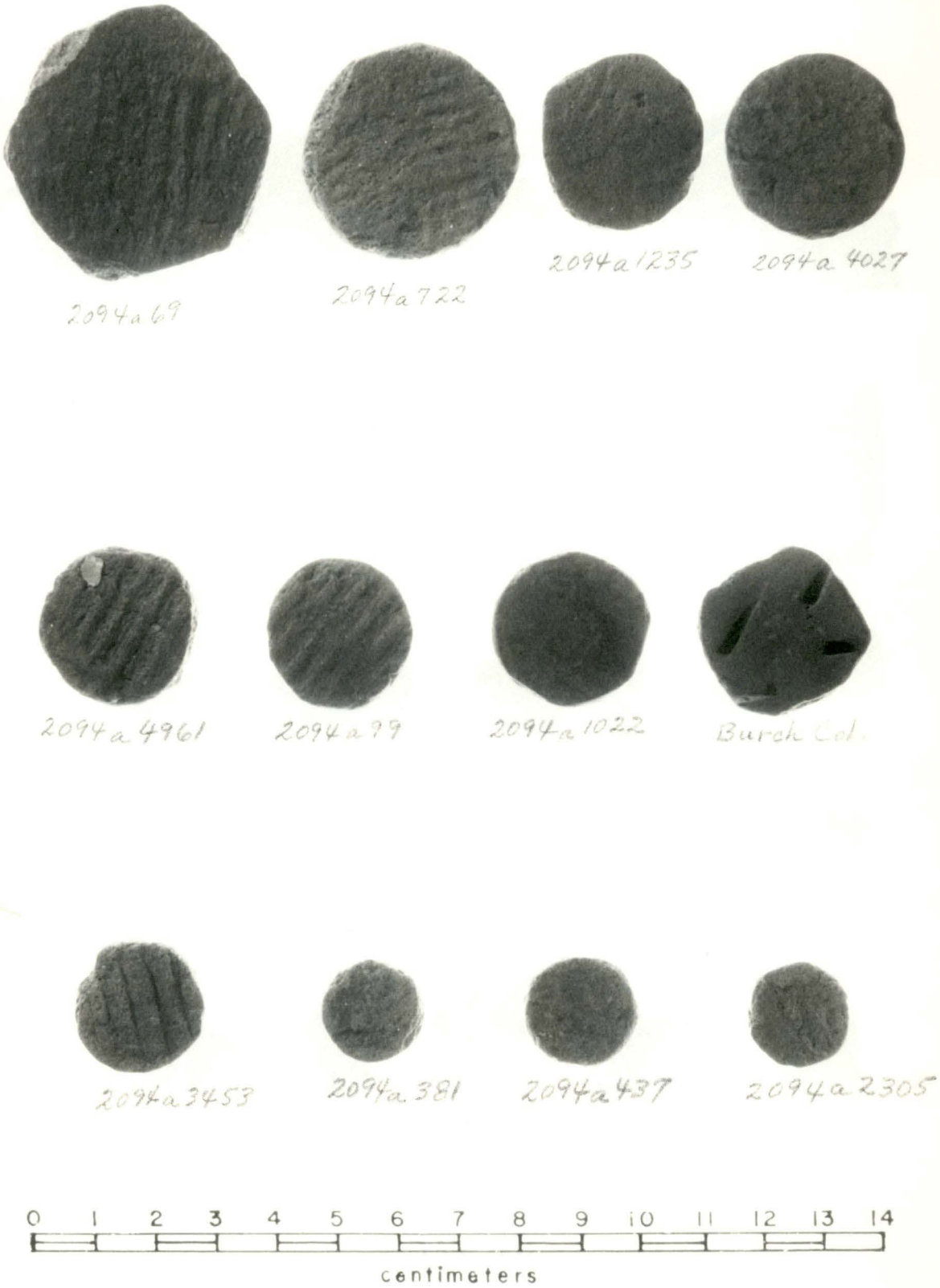

PLATE XLI
Pisgah Clay Discs.

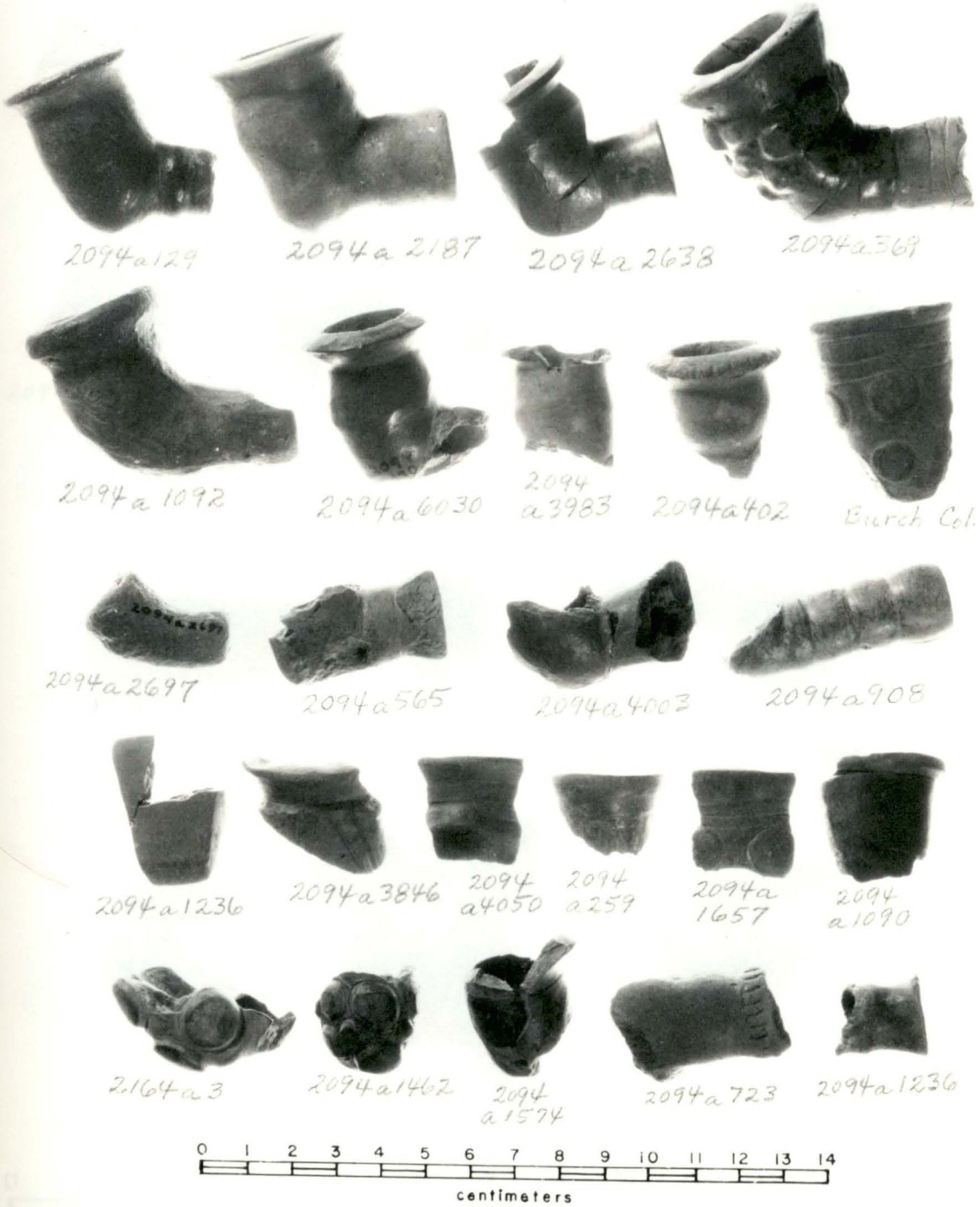

PLATE XLII
Pisgah Pipes. Pipe on Upper Left of Stone;
Remaining Pipes of Clay.

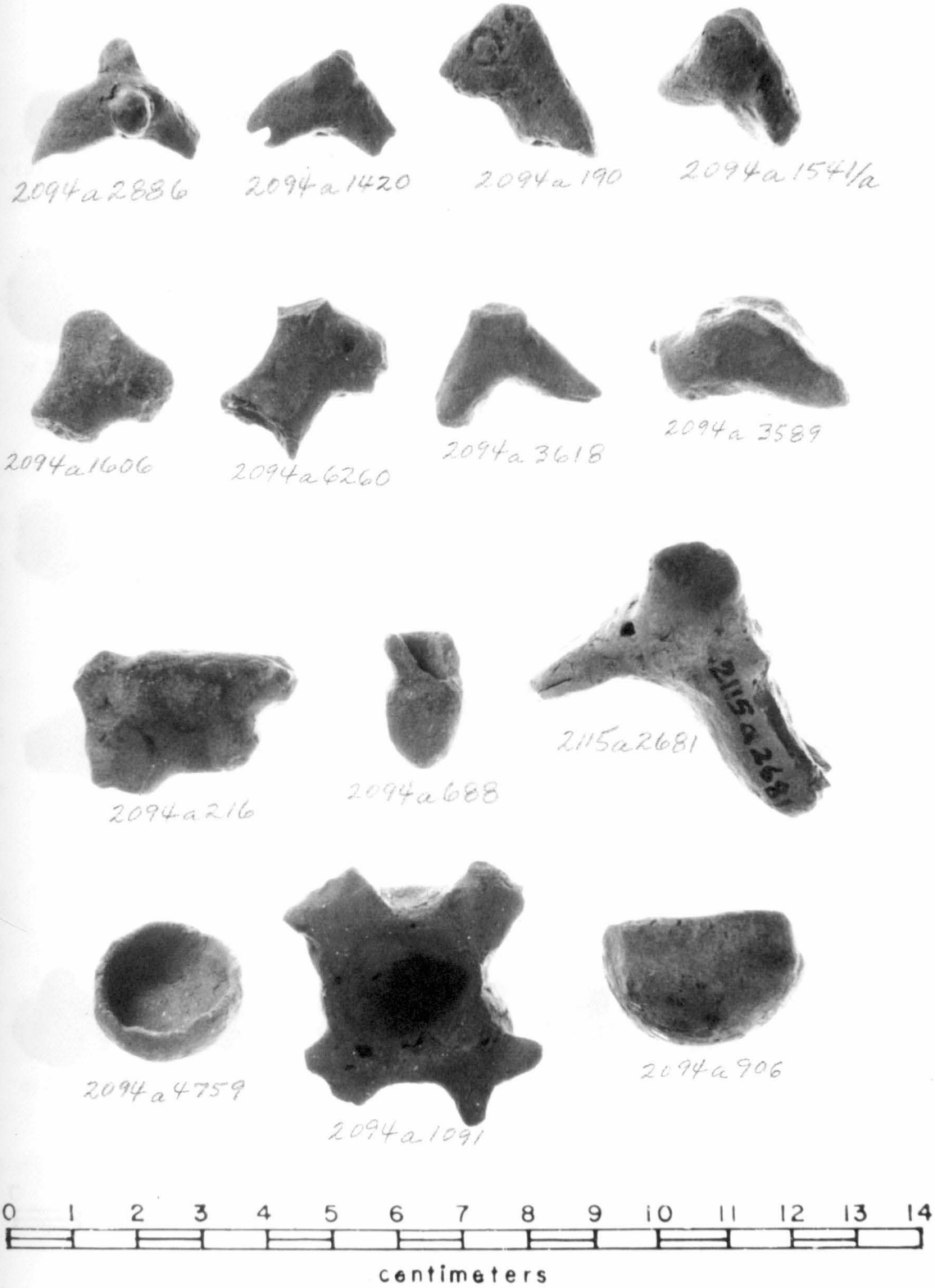

PLATE XLIII
Pisgah Clay Animal Heads, Bear Effigy, and Miniature Pots.
All Objects from Bn^{V}29 Except Animal Head on
Third Row Right from Hw^{O}1.

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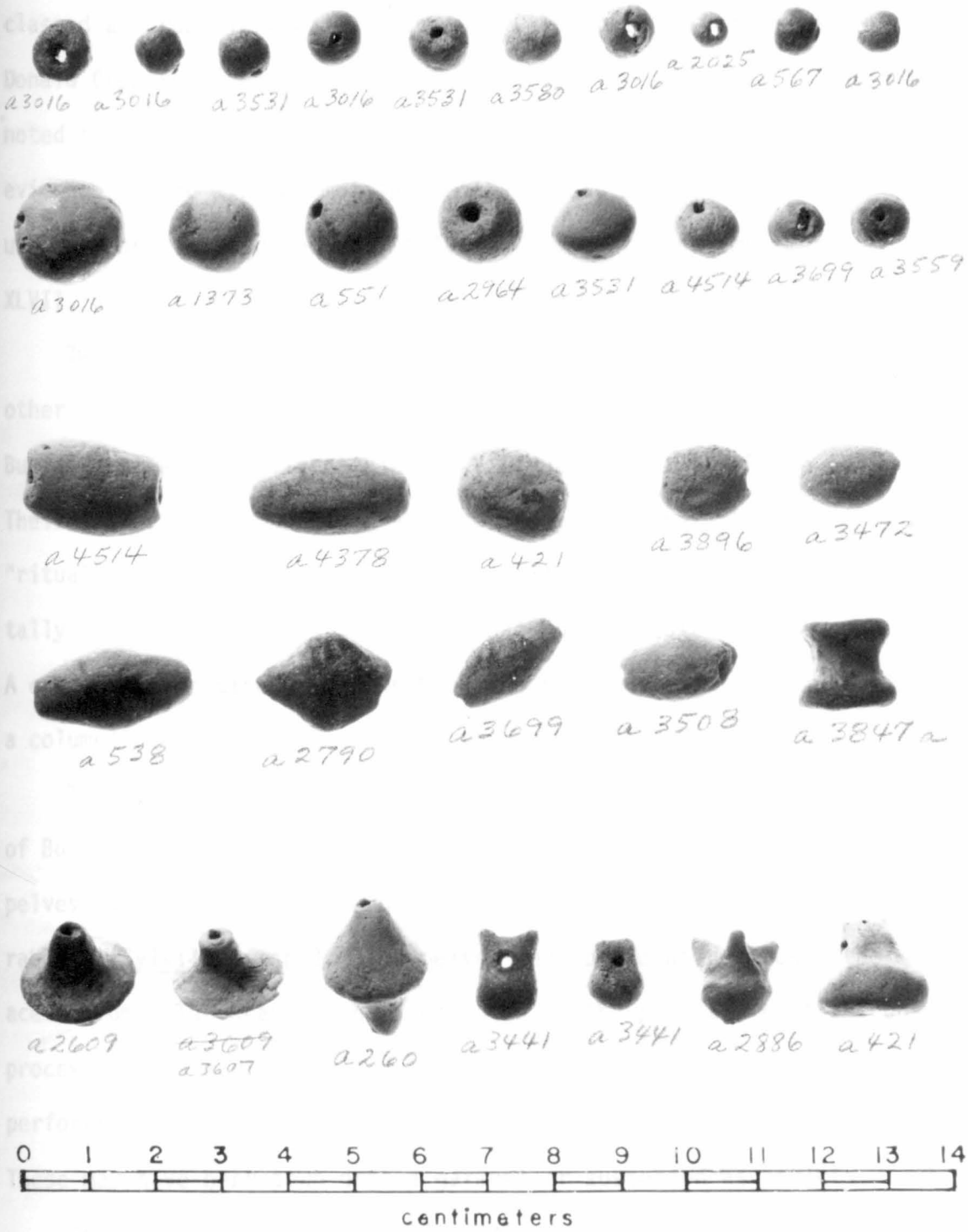

PLATE XLIV
Pisgah Clay Beads.

deer ulnae with blunt ends may have been used to finish hides.

Several antler tines with hollow bases and incircling grooves were classed as probable projectile points (Plate XLVII, bottom row). Donald Crabtree (Personal communication) examined several of these and noted that the ends, although they may have been sharpened, showed no evidence of the kind of mutilation that would have resulted from their use as stone flaking tools. At least two other bone implements (Plate XLVII, upper right) may also be projectile tips.

Two implements resembling awls, one made from a deer ulna and the other from a turkey tarsometatarsal, were found next to the skull of Burial 7 at Warren Wilson (Plate XLVII, upper left;and Plate LVI). Their inclusion with other grave goods suggests that they probably were "ritual" tools. Two bone pieces found in the plowed soil were ornamentally carved and probably served as hair pins (Plate XLVII, upper left). A carved antler tine with a knob at the base may be a representation of a columella ear pin (Plate XLVII, top row, center).

Thirty-six perforated animal bones were found in the lower leg area of Burial 33 at Warren Wilson. Approximately half of these bones were pelves (innominate bones) and the other half were scapulae, all from rabbits (Sylvilagus sp.). The pelves were perforated through the acetabulum. The scapulae had the edges of the pre- and post-spinous processes, the acromions, and the glenoid cavities ground off, and were perforated just above the ventral end (Plate XLVIII, bottom two rows). These may have been sewn onto a garment or suspended as anklets.

The remains of turtle shell rattles were found in Burial 16 and 29 at the Warren Wilson site (Plate LIV). In both cases there were two rattles, one at each ankle. These rattles were made from the carapaces

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of young box turtles (Terrapene carolina). Each shell had been scraped out and filled with 20 to 30 small round pebbles (2 to 5 mm. in diameter). A pair of tying holes is present on the top of one restored specimen from Burial 29 (Plate XLVIII, upper right). Six panther (Felis concolor) phalanges were found with Burial 7 at Warren Wilson (Plate XLVII, middle row).

Shell Artifacts

A few fresh-water mussel shells were found in the pitfill at Warren Wilson and at Garden Creek, but these shells showed no evidence of having been used as tools or ornaments. Mussel shell "hoes," however, were found in association with Pisgah pottery on the Clinch and Holston rivers in Tennessee (see p. 193).

At the North Carolina sites shell artifacts were made exclusively from various marine mollusks. With the exception of a few small disc and tubular shell beads recovered in pitfill, these shell artifacts were found only as burial associations. The conch (Busycon sp.) was used most frequently as a source for the raw material. Large beads were made from the columella, and these ranged from 1.5 to 4 cm. in diameter (Plates XLIX, L, and LI). The columella was cut from the shell, sectioned, and each section drilled lengthwise. The sections were then ground into spheroids, which usually at least partially obliterated the spiral groove. Columella beads were found in 5 burials at $Bn^{V}29$ and in 4 burials at $Hw^{O}1$. In 3 of the $Bn^{V}29$ burials they had been worn as bracelets (Plates LVI, LVII, and LVIII). In the 4 burials at $Hw^{O}1$ and in 2 of the burials at $Bn^{V}29$ the beads were in the form of necklaces (Plate LIX).

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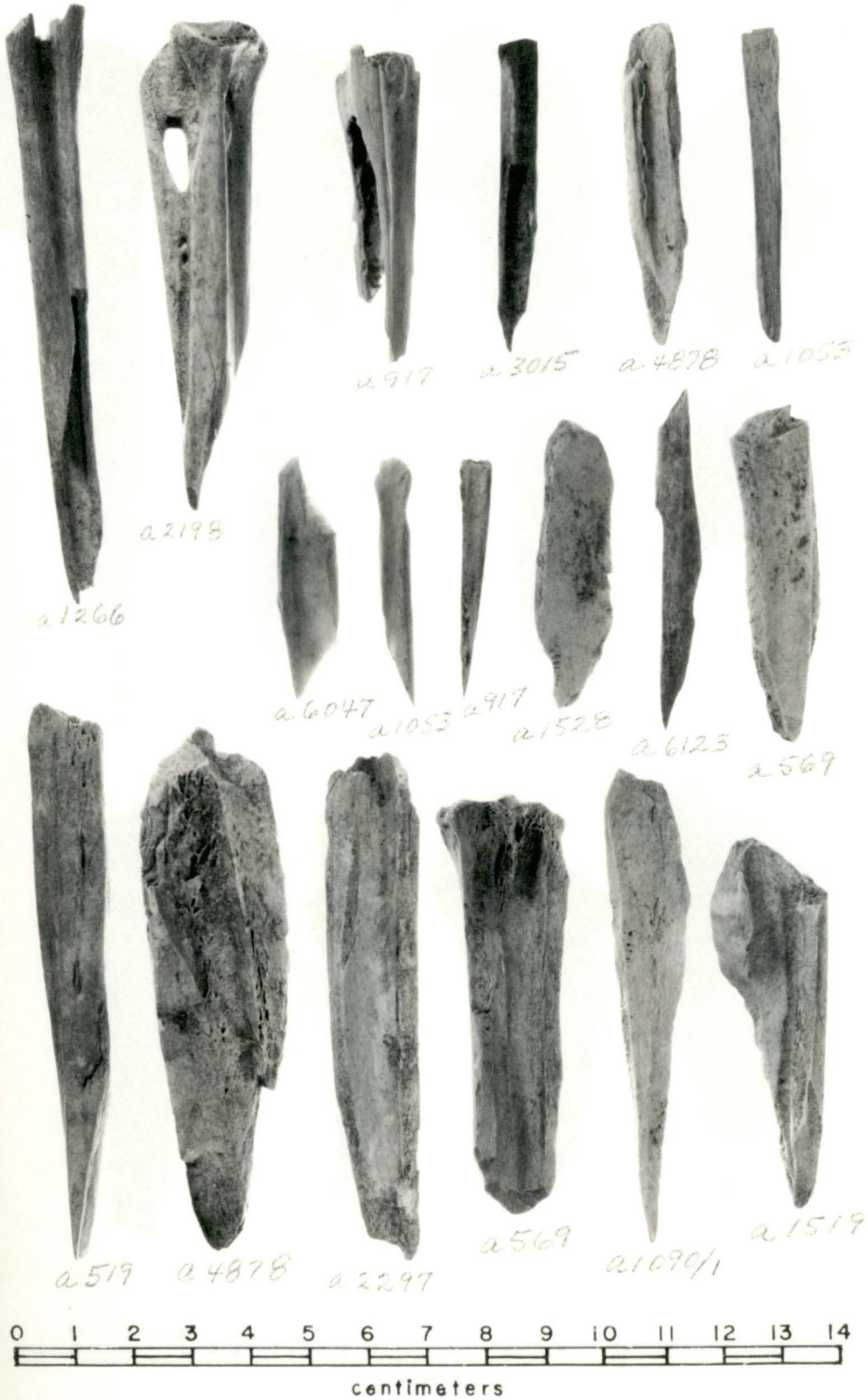

PLATE XLV
Pisgah Bone Splinter Tools.

PLATE XLVI
Pisgah Large Bone Tools.

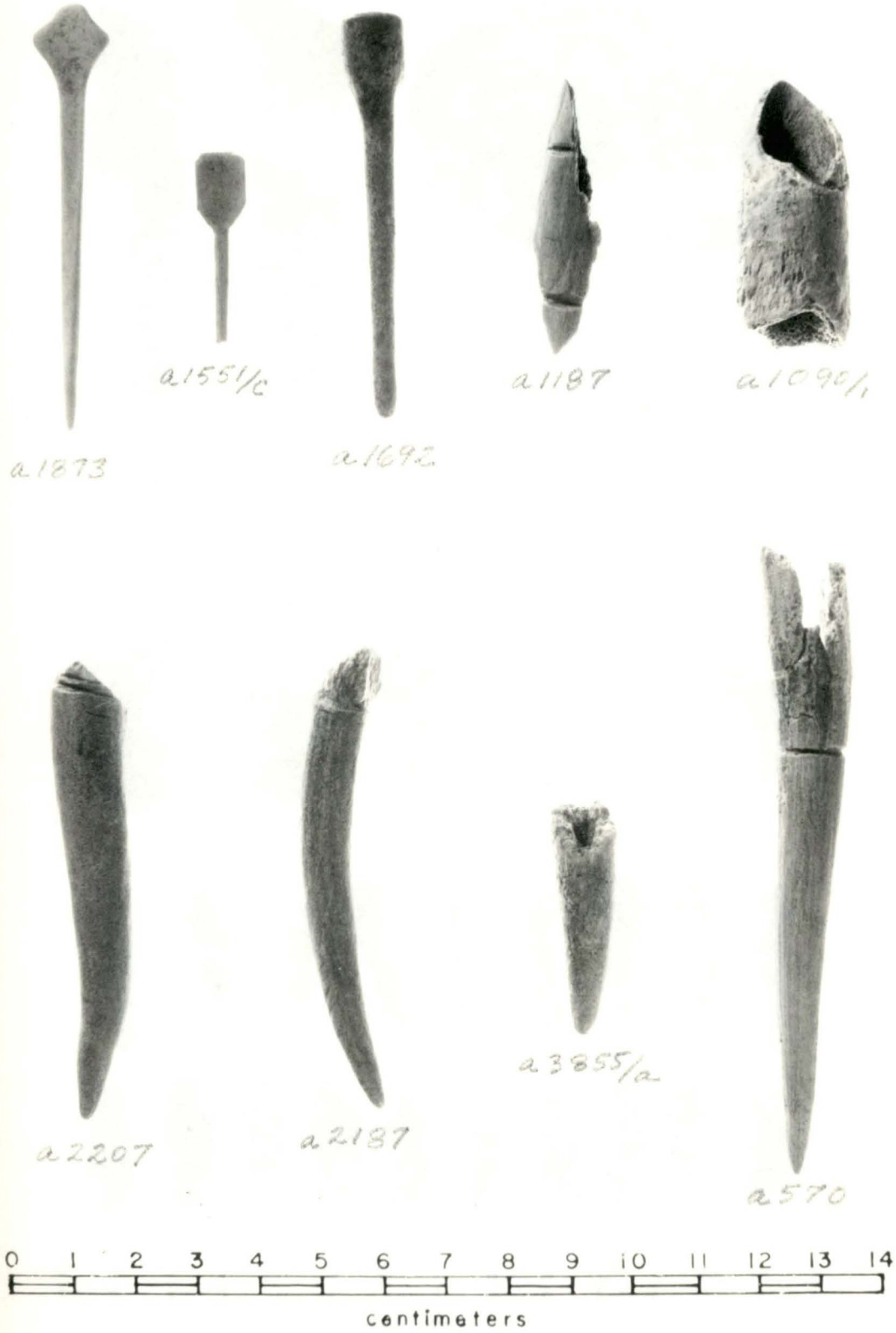

PLATE XLVII

Pisgah Bone Artifacts. Three Upper Left, Ear or Hair Pins; Two Upper Right, Probable Projectile Points; Lower, Antler Projectile Points.

PLATE XLVIII
Pisgah Bone Artifacts from Bn^{V}29 Burials. Upper Left, Bone Implements, Burial 7; Upper Right, Turtle Shell Rattle, Burial 29; Middle, Panther Phalanges, Burial 7; Lower, Rabbit Pelves and Scapulae, Burial 33.

Small disc and cylindrical shell beads, made from the conch walls, also were present (Plate XLIX). They were found as necklaces in 8 burials at $Hw^{O}1$, 3 burials at $Hw^{O}2$, and 2 burials at $Bn^{V}29$. As noted earlier, a few of these small shell beads also were recovered in the pitfill of features and burials.

Shell gorgets were found in 3 burials at $Bn^{V}29$, 6 burials at $Hw^{O}1$ and 1 burial at $Hw^{O}2$. These also were made from the walls of large conch shells. All of the specimens are circular in shape, except for 2 quadrilobed squares found in Burial 5 at $Bn^{V}29$.

Most of the circular gorgets are partially engraved and partially excised to produce the desired design motif. The engraving always is on the concave face of the disc. The most common design is a stylized rattlesnake which Muller (1966: 29) refers to as the "Lick Creek style" (Plate LII, bottom three). One gorget from the Garden Creek site has a stylized human figure which Kneberg (1959: 15-19) calls the "conventionalized dancer design."

Basic to the rattlesnake design are four concentric circles. Between the outer two circles, four equally spaced sections were cut out. On each of the areas left between the excisions, a small hole was drilled partially through the surface. In the middle of the inner circle, three sections were cut out to produce a stylized head with mouth open. At the center of the head, a "forked eye" was engraved, and in the middle of the eye another shallow pit was drilled. Two suspension holes were drilled completely through the gorget above the head and between the outer circle and the edge of the disc (Plate LII, bottom three).

One of the two square gorgets found at Warren Wilson exhibits a

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double-line engraved pattern. The pattern follows the outline of the edge of the gorget and has loops at each of the corner lobes. Within each loop is a small drilled pit. Two holes are provided for suspension. The other square gorget is badly encrusted and no engraving can be detected. It has a single suspension hole (Plate LII, top row).

Perforated Marginella shells were found in 2 burials at $Bn^{V}29$ and in 1 burial at $Hw^{O}2$. In all three cases the burials were of infants, and in all three cases shell gorgets were present. The arrangements of these shells in the burials suggest that they were sewn to garments and not strung as bracelets or necklaces.

Shell pins were found in one burial at $Bn^{V}29$ and one burial at $Hw^{O}1$. These are made from the columella of the conch shell, are pointed at one end, and have a knob at the other end (Plate LI). They were found in pairs, with one pin at each side of the skull in the temporal area. A function as ear ornaments is indicated.

A small unaltered conch shell was found in Burial 7 at $Bn^{V}29$ (Plates L and LVI). It was filled with red ochre. A large conch shell bowl was found in Burial 16 at $Bn^{V}29$ and another in Burial 16 at $Hw^{O}1$ (Plates LIII and LIX).

Wooden Artifacts

Evidence for wooden artifacts was present in both direct and indirect forms. Charred split-cane matting was found on the outlying house floor at $Hw^{V}7$ (Plate LXXXI). Impressions of similar matting were present on the benches of Earth Lodge 2 at $Hw^{O}1$. Charred fragments of split cane were recovered in pitfill at Warren Wilson. Wooden digging

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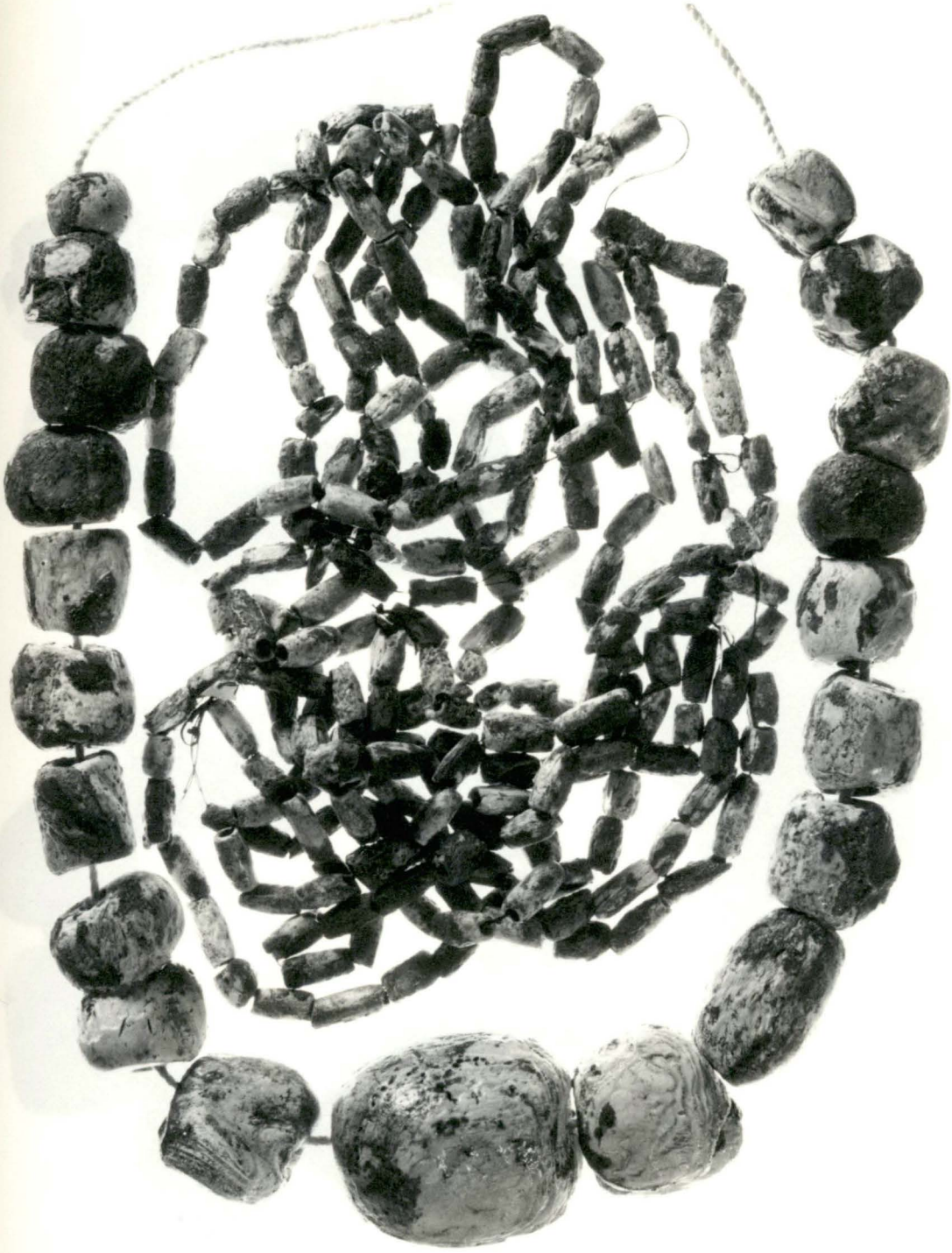

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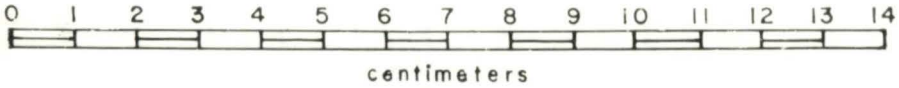
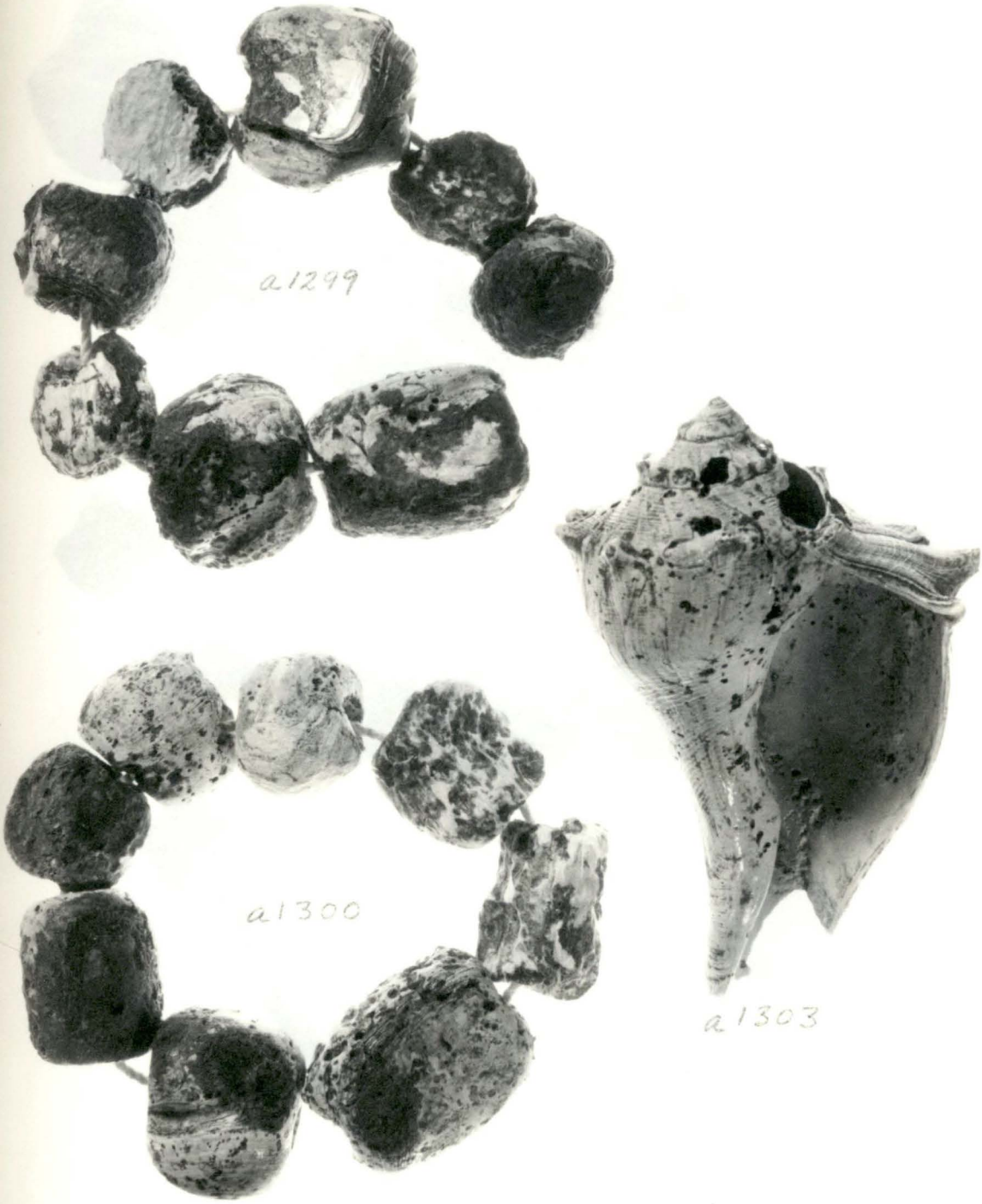


PLATE XLIX
Columella and Small Tubular Shell Bead Necklaces
from Burial 15 at BnV29.



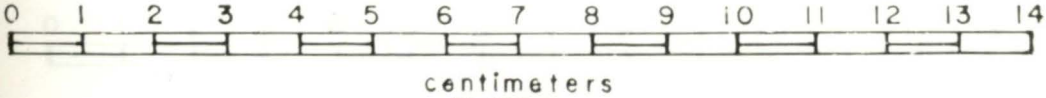
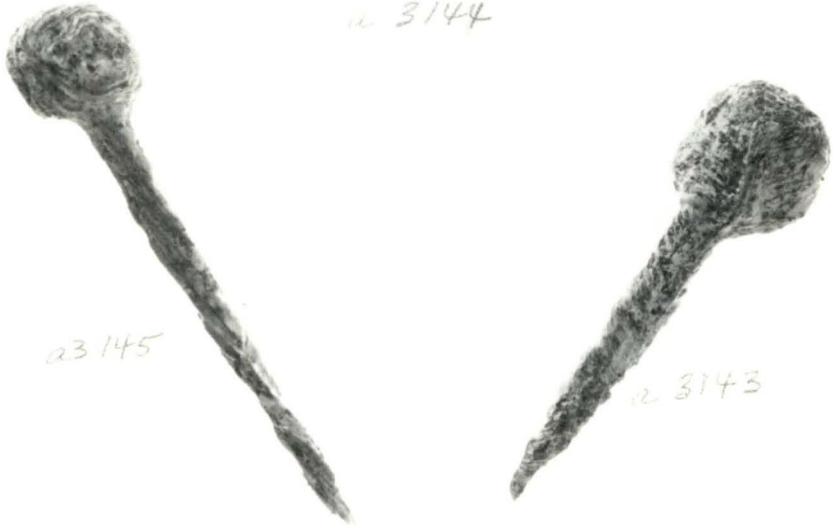


PLATE L
Columella Bead Bracelets and Small Conch Shell from Burial 7 at $Bn^{V}29$.



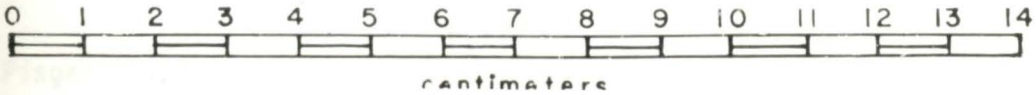


PLATE LI
Columella Bead Bracelets and Ear Pins from Burial 13 at Bn^{V}29.

PLATE LII
Pisgah Shell Gorgets. Upper Four Gorgets from Burial 5 at Bn^{V}29; Lower Gorget from Burial 9 at Bn^{V}29.

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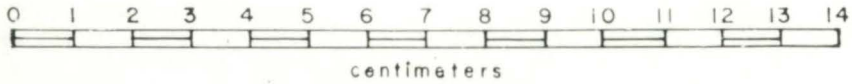

PLATE LIII
Conch Shell Bowl from Burial 16 at Hw^{O}1.

PLATE LIV
Turtle Shell Rattles at Ankles of Burial 29 at $Bn^{V}29$.

PLATE LV
Cache of Shell Beads and Six Shell Gorgets in Burial 6 at $Hw^{O}1$.

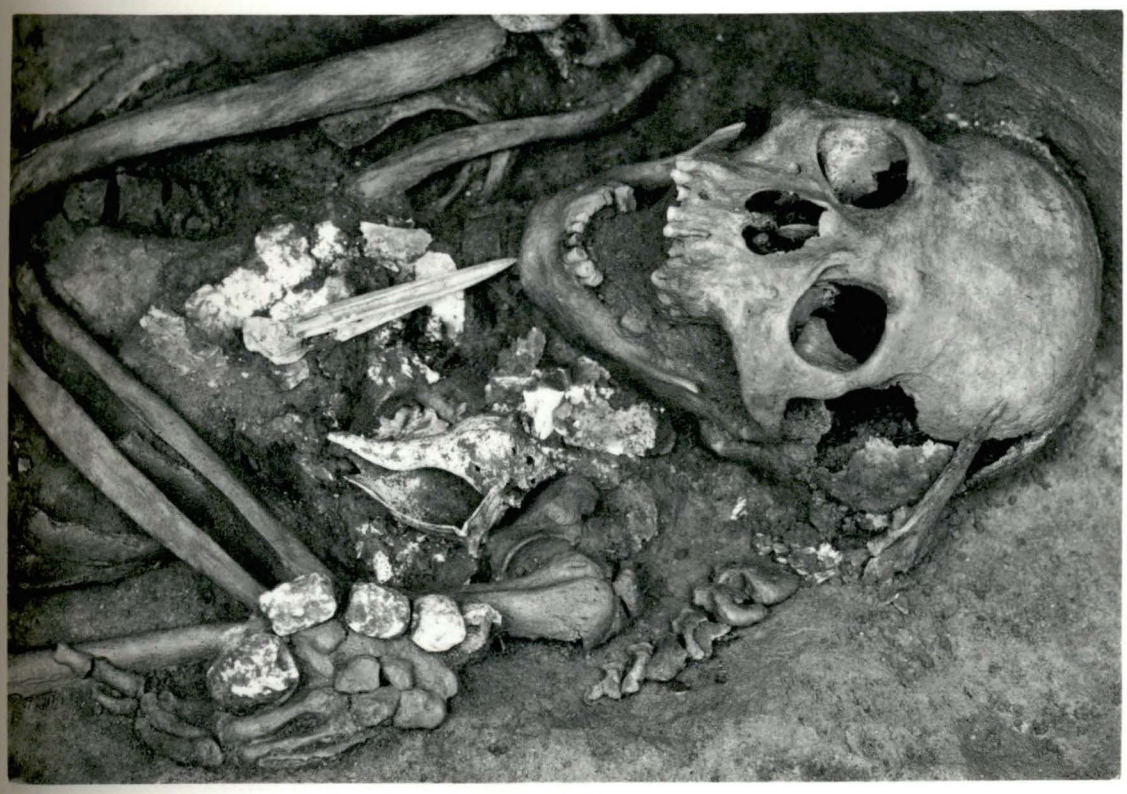

PLATE LVI
Upper Part of Burial 7 at $Bn^{V}29$, Showing Artifacts in Place.

PLATE LVII
Left Side of Burial 7 at $Bn^{V}29$, Showing Columella Bead Bracelets.

PLATE LVIII
Upper Part of Burial 13 at Bn^{V}29, Showing Columella Bead Bracelets.

PLATE LIX
Burial 16 at Bn^{V}29, Showing Columella Bead Necklace and Conch Bowl.

sticks were evidenced by the marks found on pit walls. Cloth, net, and cord impressions were present on a few pottery sherds and occasionally on bits of unfired pottery clay found in pitfill.

Areal and Temporal Relationships

In form and technique of manufacture the small triangular projectile points of the Pisgah culture are indistinguishable from points associated with most of the Late Woodland and Mississippian-influenced cultures of regions surrounding the Southern Appalachians. Solely on the basis of the frequent lack of careful retouching and the presence of serrated edges, these points perhaps resembled most closely points found on Dallas sites in the Norris Basin (Webb 1938: Plates 64, 66 and 81). However, since many reports illustrate only the "finer" specimens, there are few opportunities for comparisons.

The small retouched flakes, which seem to be an important part of the tool assemblage at the Warren Wilson site, are not reported for surrounding cultures. This may be due at least partly to a lack of recognition of them as tools or to a low estimation of their importance.

Mortars, grinding stones, anvil stones, and hammerstones have a broad distribution both temporally and spatially in the East and thus seem to be nondiagnostic.

Celts of the rectanguloid form with thin cross sections were reported by Lewis and Kneberg (1946: 120) for the Dallas component at Hiwassee Island, by Webb (1938: Plates 64 and 104) for the Norris Basin, and by Wauchope (1966: Fig. 114) for the Etowah and Chattahoochee river drainages of northern Georgia.

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Stone discs are another fairly wide-spread trait in the East. They are particularly abundant, however, in collections from late prehistoric and historic sites in the Cherokee area.

Cut-mica discs seem to have a rather restricted distribution. Two examples, one ring-shaped and the other a solid disc, were found in a Dallas context at Hiwassee Island, Tennessee (Lewis and Kneberg 1946: 123 and Plate 75). Two specimens with four cut-out sections, identical to those from Burial 7 at $Bn^{V}29$ (Plate XL), were found in a burial at Town Creek, North Carolina (Joffre Coe, personal communication). Another disc, also with four cut-out slots, was found in the McCollum mound in Chester County, South Carolina (Smithsonian Institution, Museum of Natural History negative number 37318-E).

Clay discs, made from potsherds, have been found in a wide range of late prehistoric contexts in the East. Lewis and Kneberg (1946: 106) associated them with the Dallas culture of eastern Tennessee, Wauchope (1966: 189, 191) found them in various Mississippian contexts in northern Georgia, and Caldwell and McCann (1941: 53) reported them from the Irene site on the Georgia coast.

There are close similarities in form and decoration between Pisgah clay pipes and those found at sites of the same general time period in surrounding areas. Note should be taken of the pipes illustrated by Webb (1938: Plates 67a, and 81a) for "large-log town house" sites (Dallas culture) in the Norris Basin, by Wauchope (1966: Figs. 139 and 254) for Mature Mississippi (Etowah culture) and Late Mississippi (Wilbanks culture) sites in northern Georgia, by Coe (1952: Fig. 165) for the Pee Dee culture of the Carolina Piedmont, and by Caldwell and McCann (1941: Plate XVIII) for the Savannah and Irene cultures of the

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Georgia and South Carolina coastal plain.

Clay beads, of spherical or oblong shape, have been reported by Lewis and Kneberg (1946: 106 and Plate 64) for the Dallas component at Hiwassee Island in Tennessee, by Wauchope (1966: 207 and Fig. 253) for the Mature Mississippi (Wilbanks) and Protohistoric (Lamar) phases in northern Georgia, and by Coe (personal communication) for the Pee Dee Focus of south-central North Carolina. The beads from these cultures lack the variety of form exhibited by the Pisgah beads.

Small clay animal heads are found on many late prehistoric sites, but usually these are detached from the rims of pottery vessels. The heads from Pisgah sites have not been identified positively as pot appendages.

Bone tools, fitting the descriptions of the ones found in Pisgah contexts, have a broad temporal and spatial distribution and appear to be nondiagnostic.

Carved bone pins, similar to the ones from the Warren Wilson site, were found in Dallas contexts at Hiwassee Island (Lewis and Kneberg 1946: 125 and Plate 78) and in "large-log town house" (Dallas) contexts in the Norris Basin (Webb 1938: Plates 676 and 119b). Carved antler ear pins, quite similar to the one from the Warren Wilson site, were found in several Dallas burials at Hiwassee Island (Lewis and Kneberg 1946: 126 and Plate 79).

Turtle shell rattles were found in Dallas burials at Hiwassee Island (Lewis and Kneberg 1946: 126-127), but their locations were in the area of the arms rather than at the ankles as with the Warren Wilson burials. Caches of small pebbles, probably the remains of rattles for which the casings had decomposed, were found in burials in

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the Pickwick Basin (Webb and DeJarnette 1942: 223 and Plate 254), the Chauga site (Kelly and Neitzel 1961: 29), and the Town Creek site (Joffre Coe, personal communication).

Perforated rabbit pelves have been found at several early 18th-century Siouan sites on the Piedmont of North Carolina (Joffre Coe, personal communication). Howard MacCord (1966: 27 and Plate IV) also found them in two burials at the McLean mound on the Cape Fear River near Fayetteville, North Carolina. There were 10 bones with Burial SK250 and 11 with Burial SK265. Joffre Coe (personal communication) suggests a date of ca. 1350-1450 for the "sand mound complex" to which the McLean site belongs.

Photographs of the shell gorgets from the Warren Wilson site were sent to Jon Muller of Southern Illinois University who had previously examined photographs of several similar gorgets from Hw^{o}1. Dr. Muller's comments were as follows:

> The three rattlesnake theme gorgets from the Warren Wilson site [Plate LII, bottom three] are executed in the style which I have named the Lick Creek style. This style is characteristic of the area north of Knoxville in the Clinch and Holston drainages during the period following the "Southern Cult" proper. The style also extends into the western portion of North Carolina. There is no evidence that any one center in this area was responsible for the manufacture or distribution of these objects. Indeed, there is evidence from several sites of the local nature of the tradition. I would estimate that the Lick Creek style started sometime around the middle of the 15th century or slightly earlier and persisted to the end of the 16th century. At the end of the Lick Creek style, new directions were followed which probably led to the development of a more stylized treatment which I have called the Citico style [see Muller 1966: 25-39]. Despite great differences in this general area in ceramic technology, the art in shell in the Lick Creek and Citico styles seems relatively uniform over the area.
>
> In more detailed terms, the three specimens from the Warren Wilson site fall into a hypothetical second phase of the Lick Creek style. One of the characteristics of this phase is the use of a single-line border for the head. These particular specimens, however, are a special kind of Lick Creek gorget which is usually

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very small in size and is characterized by greatly simplified structures and forms including the "forked eye" treatment on the head. These simplified gorgets seem usually to have been found with infant or child burials. From this view, the simplified treatment is the result of deletions and simplifications of designs found on more complex, larger gorgets rather than an indication of an early place in the development of the style. While the smaller gorgets do not seem to be earlier than the more complex gorgets, it is possible that they are present in all three hypothetical phases of the Lick Creek style and perhaps even in the transitional phases in the development of the Citico style.

One difficulty is that provenience data are so very poor for most of the material from Eastern Tennessee. Specimens with details on associations are very rare. Accordingly, a number of alternative explanations of the data are conceivable. One of these is that some of the differences among these "phases" may be reflections of social and regional differences.

The other two gorgets from Burial 5 at the Warren Wilson site [Plate LII, top row] portray a cross theme that is very difficult to place stylistically. This rather simple theme may well have started in early Mississippian times in the region between Chattanooga and Knoxville [see Kneberg 1959: 4-5], but the theme persists until very late times in the same area. To the best of my knowledge, however, these are the only examples of the theme ever recovered together with Lick Creek gorgets. It is probable that these were either brought in from the Tennessee Valley or were copies of items from that area. Contacts between prehistoric Carolina and Tennessee are already attested to by the association at the Canton site of Lick Creek gorgets with a stylized human gorget of very late "Dallas" phase time.

Examples of Muller's hypothetical "first phase" of the Lick Creek style are illustrated in Holmes (1884: Figs. 121-124) and in Lewis and Kneberg (1958: 112). On these gorgets, there is considerably more elaboration of the rattlesnake, which includes bands of criss-crossed incisions on the body, representations of the rattles, and additional engraved patterns around the eye and on the mouth. One of the gorgets at $Hw^{0}1$ exhibited some of this elaborate work. Most of the gorgets of this form, however, have come from eastern Tennessee where Lewis and Kneberg (1958: 110) relate them to the Dallas culture.

Gorgets of the "Citico style" (Muller 1966: 25-39), which exhibit still greater elaboration of the rattlesnake motif, have been found in

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definite historic Cherokee contexts. Muller notes that there are structural and formal continuities between the Lick Creek and Citico styles, and he goes on to speculate that they may "represent the different styles of the same society or societies at different points in time."

The "stylized human gorget" from the Garden Creek site resembles those referred to by Kneberg (1959: 15-19) as the "conventionalized dancer design." They are found primarily in Dallas contexts in eastern Tennessee.

Marine shell beads, ear pins and vessels are fairly common in late prehistoric contexts in the East. They were found in Dallas burials at Hiwassee Island (Lewis and Kneberg 1946: 129-131 and Plates 82 and 84) and in the Norris Basin (Webb 1938: Plate 64), in Wilbanks and Lamar burials in northern Georgia (Wauchope 1966: 198, 207, and 209; and Lewis Larson, personal communication), in Savannah and Irene burials at the Irene site (Caldwell and McCann 1941: 53-54), and in Pee Dee burials at the Town Creek site (Joffre Coe, personal communication).

In conclusion, it should be emphasized that there is a definite continuity in form and material between most Pisgah artifacts and those of the historic Cherokee. For comparison, one should refer to the artifacts illustrated in the Peachtree mound report (Setzler and Jennings 1941: Plates 10, 19, 24, 25, and 26). This continuity also has been observed at the Garden Creek and Coweeta Creek sites (Joffre Coe, personal communication).

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CHAPTER IV

STRUCTURES AND FEATURES

Since excavations on Pisgah sites have not been numberous, information relating to house structures, village patterns, and mound architecture comes almost entirely from the work conducted in western North Carolina between 1960 and 1969. Excavations at the Warren Wilson site ($Bn^{V}29$) (Fig. 3) have revealed several complete postmold patterns of Pisgah houses as well as portions of palisade lines. At the Garden Creek site (Fig. 2), the remains of a platform mound ($Hw^{O}1$) and of a pair of sub-mound earth lodges have been fully excavated. Another mound at this site ($Hw^{O}2$), possibly utilized terminally by the Pisgah culture, also has been completely excavated.

Outside of the work at Warren Wilson and Garden Creek, the only other data on structures and features come from unpublished reports on limited testing in eastern Tennessee. Additional reference will be made, however, to published accounts of excavations at sites in northeastern Georgia, northwestern South Carolina and central North Carolina which have produced small quantities of Pisgah remains or at which there is evidence for interaction with the Pisgah culture.

The Warren Wilson Site ($Bn^{V}29$)

By the end of the 1968 season, 11 different house patterns, 11

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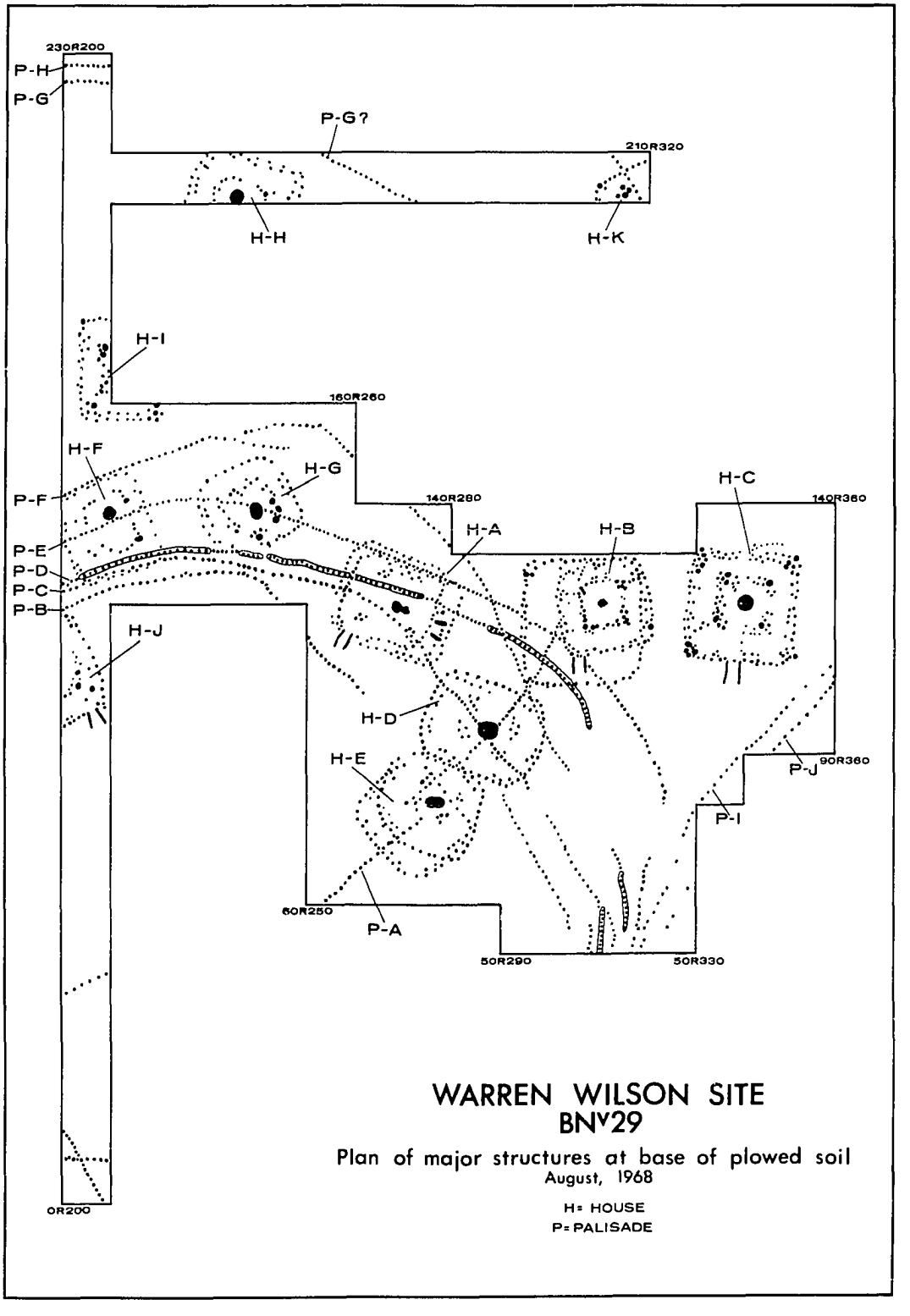

FIGURE 8

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partial palisade lines, and 32 features had been recorded and assigned to the Pisgah phase of occupation at the Warren Wilson site. Four of the house patterns were completely exposed, while the areas containing seven others were only partially excavated by the close of work in 1968. Other possible house areas, i.e., areas containing large concentrations of postmolds, were noted but distinct patterns could not be recognized. Plowing and erosion have removed the actual house floors in the areas worked thus far. In one instance there was a small section of a floor (House A), and in a few cases there were remnants of clay hearths. No palisade line has been as yet completely uncovered. An area at least twice to three times as large as that opened by 1968 would have to be excavated in order to expose completely even one of the smaller enclosures.

Under the category of "feature" were recorded such remains as borrow pits, refuse middens, hearths, house entrance trenches, sections of excavated palisade trenches, and storage pits. Most pits and depressions, regardless of their original functions, had become filled with refuse--pottery sherds, chipped-stone artifacts, bone, charcoal, burnt clay, stones, etc.--if they had been left open for any length of time after their abandonment. Ones which had been backfilled immediately after being dug had refuse only in the top few inches as a result of slumping.

Following are descriptions of each house pattern, palisade line, and feature. An attempt will be made to establish the succession of structures when several patterns overlapped, or when there was evidence of house rebuilding. Although the postmolds, burials and features from the 1969 season were added to the master plotting (Fig. 13), they will

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not be described here (See Appendix IV for a summary of the 1969 work).

Houses

A portion of the postmold pattern for House A was encountered during the early part of the 1966 season in the area of squares 100R270, 100R280, 110R260, 110R270, 110R280, 120R260, 120R270, and 120R280 (a square is designated by the number for the lower-right, southeast, coordinate) (Fig. 8 and Plate LX). Three additional squares (130R260, 130R270, and 130R280) containing the northwest corner of this structure were opened in 1968. This house was rebuilt completely at least once, as evidenced by two superimposed patterns of postmolds having roughly the same orientation (Fig. 9). House A^1 was rectangular in shape, measuring 20 feet from northeast to southwest and 24 feet from northwest to southeast. The corners were slightly rounded. A pair of parallel entrance wall trenches, about 3 feet in length, extended out from the west corner of the southwest wall, and patches of burnt clay were encountered at the approximate center of the floor. Burials 1 and 2, adults deposited in simple pits, were in the floor area of both house building phases and could not be assigned to either one specifically. Burial 1 lay directly under the burnt clay patches noted above. Feature 8, a shallow circular pit, also was located in the northwest portion of the floor areas of both building phases.

The northern and western walls of House A^2 lay outside of those of House A^1. The assignment of A^2 to a later date than A^1 was made on the basis of the superposition of postmolds where the walls of the two structures crossed. In addition, Burial 4, which was within the wall of House A^2, cut through and obliterated a portion of the southeast wall of A^1. The orientation of the walls was very close to that of House A^1,

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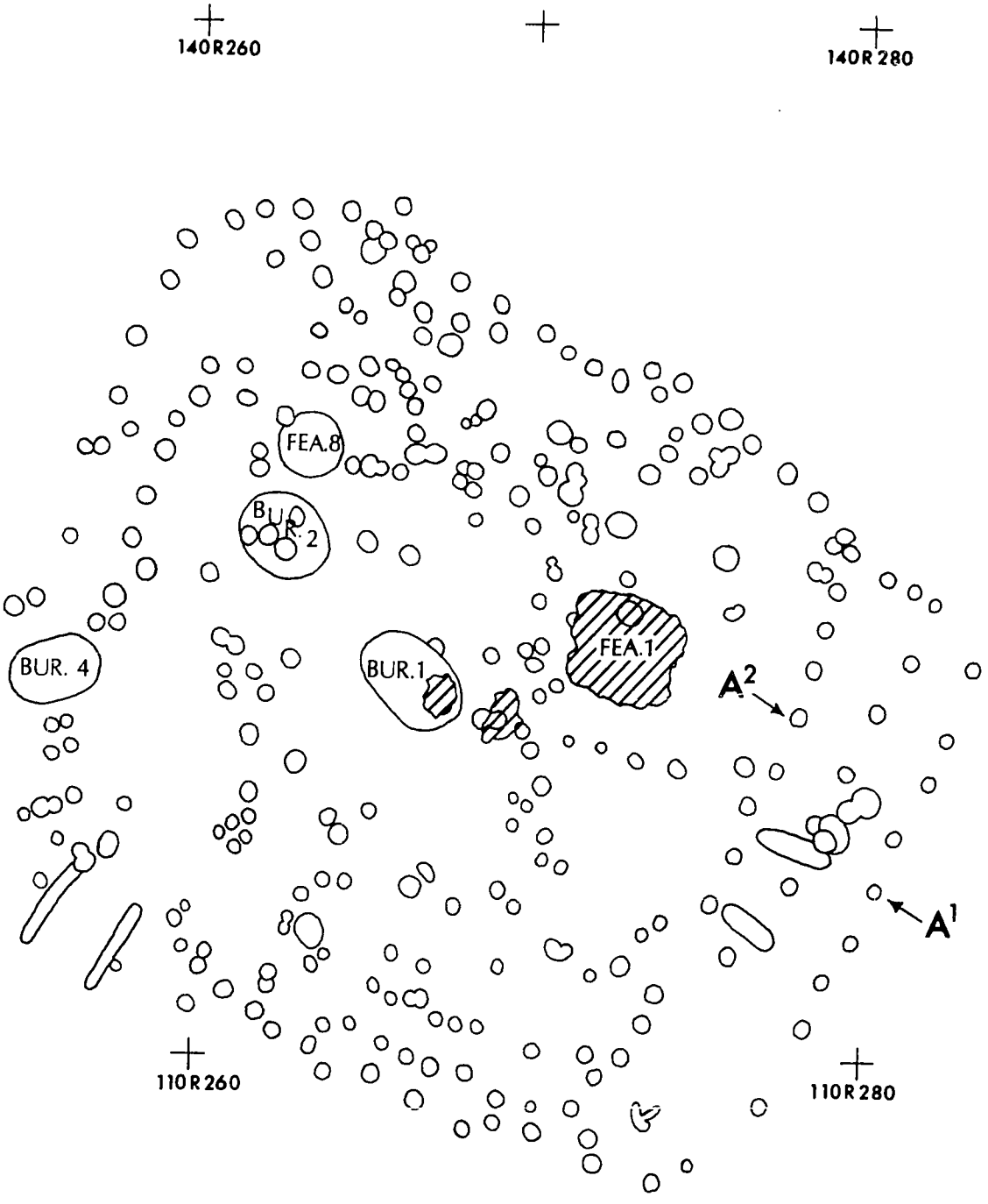

HOUSE A
(A^1 and A^2)

FIGURE 9

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PLATE LX
House A at Bn^{V}29, Looking East.

PLATE LXI
Southeast Entrance Wall Trenches of House A.

so it might be logically concluded that A^2 was a re-building of A^1 and was not just a chance intrusion of a temporally unrelated structure. House A^2 measured approximately 20 feet from northeast to southwest and 22 feet from northwest to southeast. It too had slightly rounded corners. A pair of entrance trenches protruded from the middle of the southeast-facing wall. They were 2.5 feet long (Fig. 9 and Plate LXI). A hearth remnant, Feature 1, was located a few feet northeast of the center of the floor. It consisted of a mass of burned clay measuring 3.20 feet by 2.90 feet across and 0.6 foot thick. It was considerably disturbed from plowing activity. Burials 1 and 2 and Feature 8 could have been associated with this structure, but they also were inclusive within the floor area of House A^1.

Postmolds along the outer walls of both House A^1 and House A^2 measured from 0.4 to 0.7 foot in diameter (about 0.5 foot average) and from 0.2 to 1.35 feet deep (about 0.6 foot average). They all were vertical. Several larger postmolds located on the floor area, possibly the remains of interior roof supports of either or both structures, measured from 0.7 to 0.8 foot in diameter (0.75 foot average) and from 0.6 to 1.15 feet in depth (0.83 foot average). Stones found in several of these larger molds might have served as wedges around the posts. None of the molds of either house showed evidence of having contained burned posts. Because the postmolds of House A^1 and A^2 overlapped those of Palisades C, D, and E, the patterns of inner roof supports or of other possible interior structural features could not be discerned.

At the extreme northwest corner of House A^2, along the profile 130R260 to 130R280, there was a small area of depressed house floor below the base of plow disturbance. This was only about 0.4 foot deep

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at its deepest point. When troweled out, it was found to contain a fairly rich midden accumulation, but there was no hard-packed surface at the bottom. In fact, it would have been difficult to detect this depression had it not been for the profile along the 130 line. This profile is reproduced in Figure 12.

The postmold pattern for House B was revealed in the 1966 season during the excavation of squares 100R300, 100R310, 100R320, 110R300, 110R310, 110R320, 120R300, 120R310, and 120R320 (Fig. 10). A few postmolds on the eastern margin were not uncovered until 1967, when squares 110R330 and 120R330 were opened. Like House A, this structure showed evidence of one complete re-building phase. House B^1, the earlier structure, was square in shape and had outer wall limits of 24.5 feet. No entrance trenches were present, but these may have been undefinable in the dark-colored fill of Feature 7, which was located at the southwest margins of the structure. There were no remains of a hearth, but since erosion and plowing had cut deeply in this area, any such feature probably would have been obliterated.

Two basin-shaped pits (Features 3 and 4), probably borrow pits for clay, were located in the northwestern portion of the floor area of House B^1 and were cut through by postmolds of the west wall of House B^2. Both of these pits contained small amounts of household refuse in the upper portions of the fill. Another small pit, Feature 37, was located in the southwestern part of the floor area of this house. Hard-packed lenses of burnt sand and ash on the bottom of the pit indicate that it might have served as a secondary hearth or a small pottery kiln. Feature 53, another refuse-filled pit, was located within the southeast corner of House B^1. Postmolds of the outer wall of House B^2 cut through

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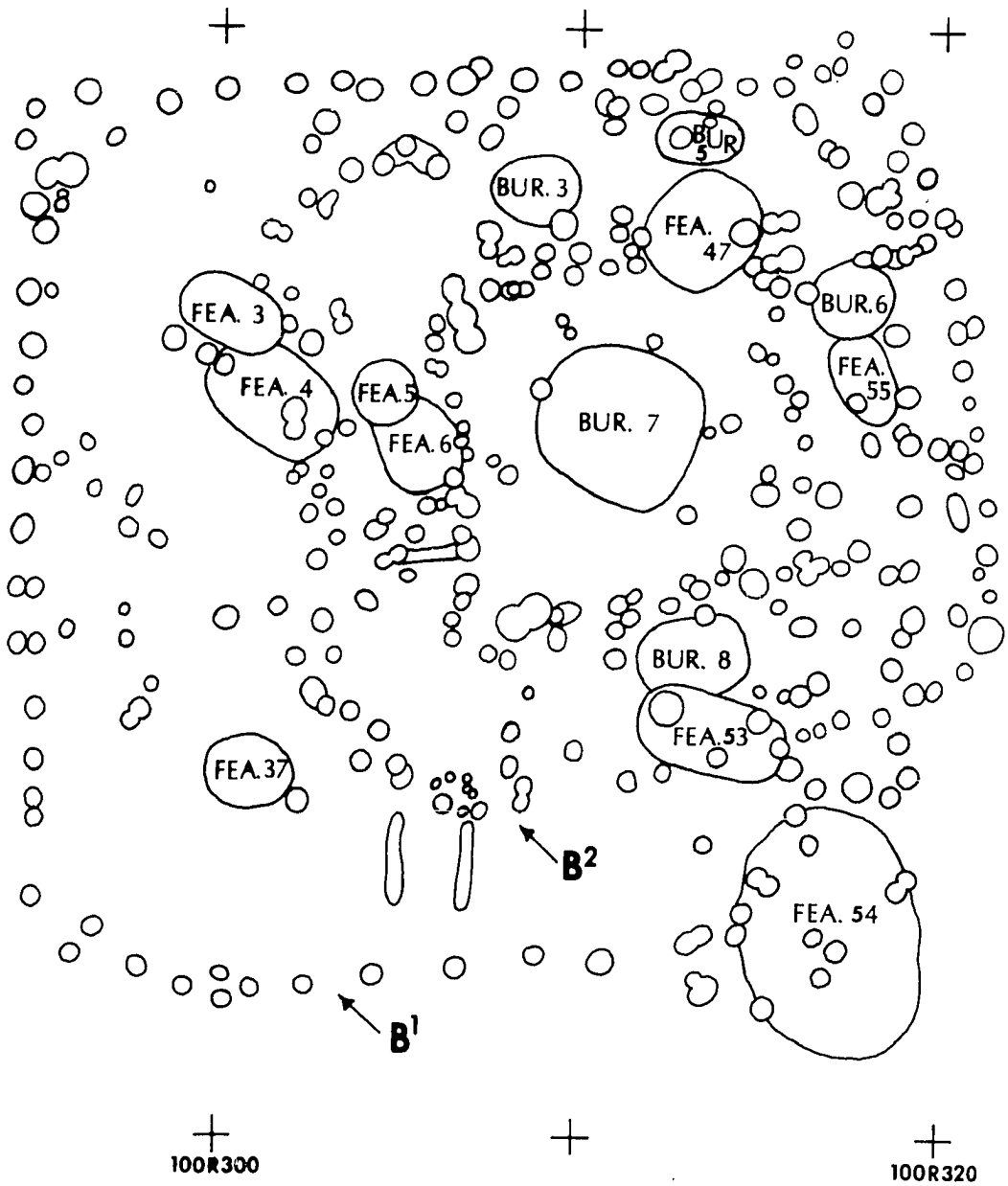

HOUSE B
(B1 and B2)

FIGURE 10

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the fill of this pit, which related the pit to the earlier structure. In turn, Feature 53 was intrusive into Burial 8, which also can be attributed to House B^1. Feature 54 (Fig. 15 and Plates LXII and LXIII), a large, oval, basin-shaped pit, overlapped the southeast corner of House B^1. Since this pit cut through several of the outer wall postmolds of House B^1, it must be assigned to a date later than the house.

Postmolds on the outer walls of House B^1 measured from 0.3 to 0.7 foot in diameter (0.54 foot average) and 0.25 to 0.65 foot in depth (0.47 foot average). They all were vertical. Two adjoining molds at the northwest corner of the outer wall measured 0.8 foot in diameter each and were 0.65 and 0.9 foot in depth, and two similarly placed ones at the northeast corner measured 0.7 and 0.45 foot in diameter and 0.55 and 0.6 foot deep respectively. Interior roof support postmolds could not be detected. It is quite probable that they were obliterated by the extensive pit digging on the floor of House B^2.

The walls of House B^2 were similarly oriented to those of B^1. It was a somewhat smaller structure, however, and it overlapped B^1 slightly on the east side. It was square-shaped and measured approximately 18 by 18 feet along the outer walls. An inner pattern of roof supports was easily defined about 4 feet in from the outer walls. A pair of entrance wall trenches protruded from the southwest corner of the south wall and were about 2.5 feet in length. There was no clearly definable hearth, but chunks of burnt clay were found in the upper portion of the fill of Burial 7.

Burial 7 was located at the exact center of this structure (Fig. 10) and consisted of a deep shaft-and-chamber pit which contained the remains of a middle-aged male wearing columella bead bracelets and

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having an elaborate "medicine bundle" and mica ornamentation. Burials 3 and 5, both of which were simple pit interments of infants, were found on the north side of the structure. Burial 5 was accompanied by a cache of 4 shell gorgets. Burial 6, a shaft-and-chamber interment of an infant, was found on the east side of the structure.

Several refuse-filled pits, Features 5, 6, 47, and 55, were located within the wall limits of House B^2. No one of them, however, could be assigned to this structure with any greater certainty than to B^1. The fact that interior postmolds of House B^2 cut through some of them (Feature 6 for instance) does not rule out their association with that structure, since the posts in question could have been part of propping-up or patching work on B^2 at a date later than the features.

Since B^2 was the later of the two structures, the outer and inner wall patterns could be defined more clearly (Fig. 10). Postmolds along the outer walls were from 0.35 to 0.6 foot in diameter (0.53 foot average) and from 0.35 to 1.2 feet deep (0.71 average). At the corners there were postmolds of somewhat wider and deeper dimensions. At the northwest corner there were two molds measuring 0.7 and 0.6 foot across and 1.2 and 1.1 feet deep respectively. At the southwest corner, one mold measured 1.1 feet in diameter and 1.5 feet deep. And at the southeast corner there was a mold measuring 1.05 feet in diameter and 1 foot deep.

Interior roof supports were indicated by large postmolds located about four feet in from each corner of the outer wall. The northwest roof support was represented by a mold measuring 0.9 foot in diameter and 1.3 feet deep. The northeast one measured 1.05 feet across and was 1.4 feet deep. Two adjoining southwest molds, evidence of either

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reinforcement or replacement of the post at that corner, measured 0.9 and 1.05 feet in diameter and 1.05 and 1.1 feet deep respectively. And at the southeast juncture there were two postmolds measuring 0.7 and 0.75 foot in diameter and 1.65 and 1.35 feet in depth respectively.

Postmolds connecting the larger supports formed an inner wall which enclosed an area measuring 10 feet square. In size and depth these molds were duplicates of those along the outer walls. Stones were found in several of the larger corner molds on both the inner and outer walls. These probably had been wedged around the posts. All of the postmolds were vertical in cross section, except for the corner post at the northeast outer wall the top of which slanted inward toward the center of the structure.

A portion of the west wall of House C was encountered when squares 120R330 and 120R340 were opened in 1966. In 1967, squares 100R330, 100R340, 100R350, 100R360, 110R330, 110R340, 110R350, 110R360, 120R350, 120R360, 130R340, 130R350, and 130R360 were excavated in order to reveal the entire structural pattern (Fig. 11 and Plate LXII). This house would appear to have been constructed somewhat more symmetrically than others discovered thus far. The clarity with which the pattern was defined, however, was at least partially due to the fact that there were no other earlier or later patterns within the same area. House C showed evidence of considerable post reinforcement and replacement along both the inner and outer walls, but there was no indication of total rebuilding as with Houses A and B.

House C faced to the south. It measured 22 by 22 feet square along the outer walls, which were slightly rounded at the corners. An inner wall pattern, connecting the interior roof supports, lay 5 feet in from

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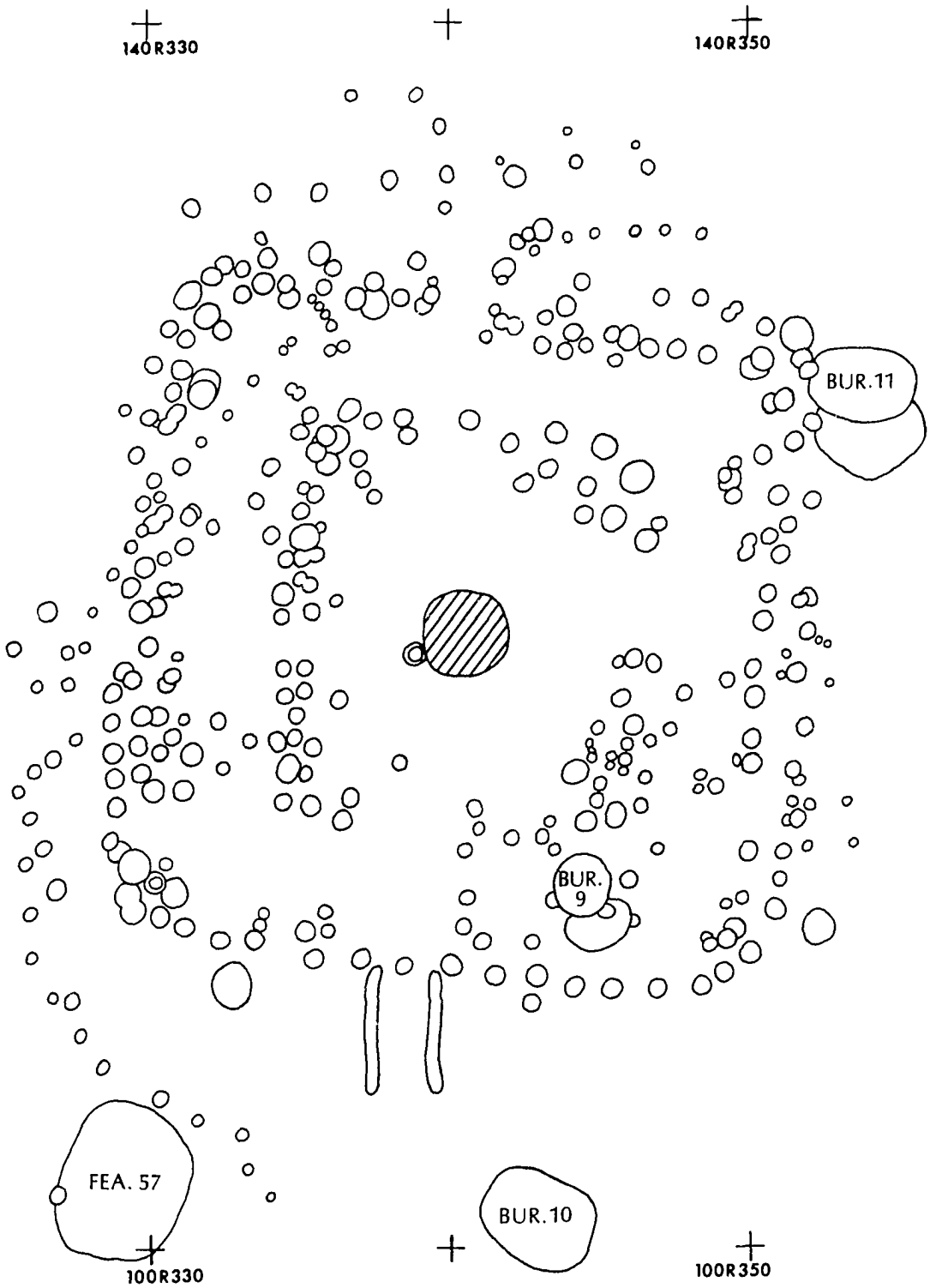

HOUSE C

FIGURE 11

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PLATE LXII
House C at $Bn^{V}29$ After Excavation of Pits and Postmolds, Looking North.

the outer walls and enclosed an area approximately 12 feet square. The bottom portion of a basin-shaped clay hearth (Feature 152) was found at the exact center of the structure and pieces of fired clay were scattered in the plowed soil in the same general vicinity. A set of entrance wall trenches 4 feet long was located at the center of the south wall. There was a single shallow postmold between these trenches, which probably had served as a retainer for some type of door stop.

Burial 9, an infant accompanied by shell beads and a gorget and deposited in a shaft-and-chamber pit, was the only disturbance on the floor of House C. Other pits may have been eradicated by the heavy erosion in this area of the site. Burial 11 was found at the northeast corner of this structure, but since posts of the outer wall intruded through the pitfill, it was concluded that the burial was of an earlier date than the house. The intrusive posts, however, might represent replacement posts, with the burial being from an earlier phase of occupation of the same structure. Another burial, Burial 10, was located 7 feet to the south of House C. Whether or not it was related to the structure is indeterminable. A large shallow depression filled with ash, charcoal, bone, pottery, and other refuse (Feature 57) was located 8 feet to the southwest of House C. This feature could have resulted from the occupation of either House B or C, or from neither.

Erosion damage was greatest at the southeast corner of House C. Consequently, postmolds were very shallow in that area, and a few were lost in the process of troweling the area after the plow zone had been removed. This may explain the thicker distribution of posts along the west and north walls. It would appear that House C, as in the case of B^2, was divided into two separate living areas by the erection of posts

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between the four interior roof supports. These additional posts probably served also to help support the horizontal roof beams. Openings were left in each of these interior walls, the widest of these being on the south side opposite the entrance. A gap in the back (north) wall might represent a second entrance to the house, and a row of posts running roughly parallel to the back wall might have served to support a wind-screen across that opening (Fig. 11).

Postmolds on the west outer wall, where erosion had cut less deeply, were from 0.4 to 0.7 foot in diameter (0.57 foot average) and from 0.5 to 1.65 feet deep (1.04 feet average). Larger and deeper molds again were found at the corners of the outer walls. At the northwest corner there was a cluster of three large posts measuring 1.35, 0.8, and 1.20 feet in diameter and 1.25, 1.3, and 1.75 feet in depth. At the northeast corner a single large mold was 1.2 feet across and 0.75 foot deep. at the southwest corner two postmolds measured 1 foot and 0.9 foot in diameter, and 1.2 feet and 1 foot in depth respectively. At the eroded southeast corner, the largest mold was 0.7 foot across and 0.8 foot deep. There were four large inner roof supports. The one on the northwest was .75 foot in diameter and 1.5 feet deep; the one on the northeast was 0.95 foot across and 0.9 foot deep; the one on the southwest was 1.1 feet across and 1.3 feet deep; and the one on the southeast was 0.8 foot in diameter and 2.3 feet deep. Several of the corner posts on the outer wall slanted inward slightly toward the center of the structure. The deeply-set southeast roof support also slanted in this manner. Profiles of the postmolds along the north and south outer walls of the entrance trenches, and of the four inner roof supports are provided in Fig. 12.

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Other house patterns have been recognized in the area thus far excavated. However, their dimensions and structural details are less well defined than for Houses A, B, and C. In some cases this was due to the complexity created by several postmold patterns intersecting (as in the case of House F, which overlay four earlier palisade lines); at other times it was because the excavations had exposed only a portion of the pattern.

House D was exposed in the 1967 season. It was located just to the south of Houses A and B. The pattern was roughly rectangular in shape, with the end walls bulging slightly (Figs. 8 and 13). The outer walls measured about 18 feet along the northeast-to-southwest axis and approximately 25 feet along the northwest-to-southeast axis. Interior roof supports were located at points about 8 feet in from the northwest and southeast walls and about 6 feet in from the northeast and southwest walls. In the center, was the plow-disturbed remnant of a baked-clay hearth (Feature 147). No entrance wall trenches were found and no other form of entrance area was discernable. There were no pits or burials in the floor area of this structure, although Burials 26 and 32 were located just outside of the southeast corner. This house pattern overlay portions of Palisades A, C, and F.

House E was represented by a concentration of postmolds located immediately to the southwest of House D (Figs. 8 and 13; and Plate LXIV). At least two separate structures, probably a rebuilding sequence, as with House A and B, were indicated. It was difficult to determine for certain which of the houses was earlier. Possibly it was the one located slightly farther to the southwest and oriented more in a northeast-southwest direction than the other (Fig. 13). Both patterns

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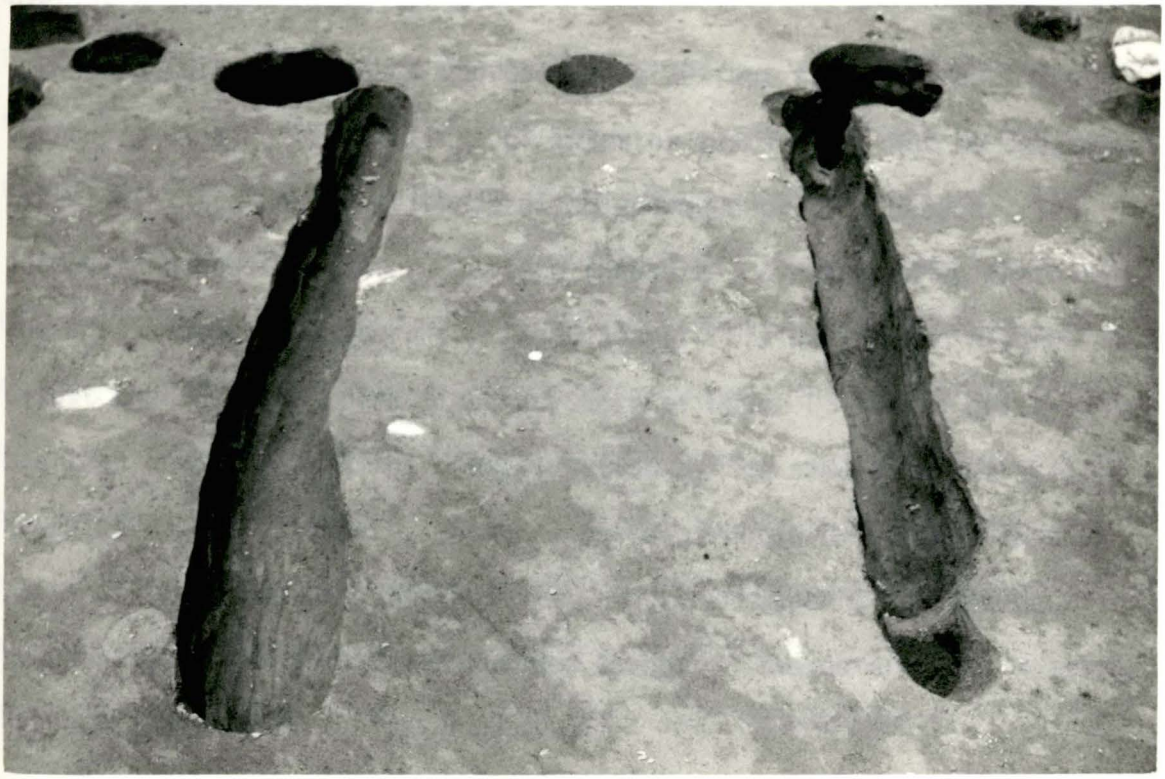

PLATE LXIII
Entrance Wall Trenches of House C at $Bn^{V}29$.

PLATE LXIV
House E and Palisade A at $Bn^{V}29$, Looking Northeast.

overlay a section of Palisade A.

Structure E^1 measured approximately 20 feet along the northwest-to-southwest axis. The locations of interior posts could not be determined. Likewise, there was no evidence of an entrance or of a hearth. The second, and possibly later, pattern (House E^2) overlapped on the north and east sides the pattern described above. Its walls were aligned in almost the identical directions as those of House D. It is quite possible that House D was a third construction by the same family that occupied Houses E^1 and E^2. Several posts of House D intruded through posts of the north wall of House E^2. House E^2 appears to have been roughly square in shape with rounded corners. The outer walls measured approximately 18 feet along each side.

Two adults (Burials 13 and 15) and an infant (Burial 12) were buried in the floor of House E^2. All three pits were of the central-chamber type. Burial 15 was partially covered by the remains of a baked-clay hearth, and burnt clay, charred wood, and ash were generously distributed through the upper portion of the fill of the burial pit. Four large postmolds marked the location of interior roof supports for this house. These were located about five feet in from each corner of the structure. Burials 14 and 16 were located just outside of the eastern margin of the House E complex. Both were of the central-chamber variety.

The pattern for House F was uncovered during the summer of 1968. Postmolds along the east and west outer walls were easily defined, but those for the north and south walls were difficult to pick out because they were intermingled with postmolds of Palisades C and F (Figs. 8 and 13). The pattern was roughly square and was oriented on a slight

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diagonal to the north-south line. The outer walls measured about 23 feet from east to west and 20 feet from north to south. It was possible to pick out several interior postmolds, but these were distinctly defined only on the east side. No entrance area was located.

On the north-central floor area of House F, a partially intact clay hearth (Feature 154) was uncovered within a large shallow pit (Fig. 16 and Plate LXXIX). On excavating the pit, it was found that the hearth overlay a burial pit (Burial 19). In the pitfill around the hearth and in the topmost fill of the burial pit, there were chunks of burnt clay and charred wood. It is quite probable that an old hearth had been removed by the digging of Feature 153. Following that, the burial had been made and a new hearth (Feature 154) constructed over it.

Five other burials (Burials 17, 18, 20, 21 and 22) were found in the floor area of House F. Four of these were shaft-and-chamber burials of infants. In the case of Burial 18 the chamber had been sealed with large flat stones. Burial 22 was of the central-chamber variety and included the remains of an adolescent. It was intrusive into a large, shallow pit, filled with refuse (Feature 143).

Postmolds and pits of House F were superimposed on four palisade lines. The south wall posts overlapped posts of Palisades C and D. Features 153 and 154 and Burials 18 and 19 overlay Palisade E. Burial 21 and Feature 143, as well as postmolds from the north wall of the house, intruded into Palisade F.

The postmold pattern for House G was indistinct. Portions of the northwest wall (in squares 140R230 and 140R240) and of the southwest wall (in squares 130R230 and 130R240) were defined early in the 1968 season (Figs. 8 and 13). Later, after the surrounding squares had been

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opened, the remaining portions of the pattern could not be clearly discerned. The overall pattern probably was quite similar in size and orientation to House F. Portions of a fire-hardened clay hearth (Feature 87) were encountered at the approximate center of the structure, and there were two large refuse-filled pits (Features 107 and 108) just to the north and northeast of this hearth. Feature 108 contained a small burial pit with the remains of a young female. House G is believed to post-date Palisade E since Feature 87 cut through several postmolds of that palisade line.

The pattern for House H was partially uncovered in 1968 during the excavation of the east-west trench along the 200 line (Figs. 8 and 13; and Plate LXVI). It was situated at a slight diagonal to the trench and appeared to be aligned with Palisade G, which cut across the excavation about 10 feet farther to the east. Only parts of the northwest, northeast, and southeast walls were exposed. From northwest to southeast the structure measured approximately 20 feet. Interior postmolds were found at points six feet in from the outer walls. A clay fire-basin (Feature 140) was located at what probably is the approximate center of this structure. Beneath the hearth was the shaft-and-chamber burial of an adult (Burial 33). This burial was found to have had a well-constructed log covering over the chamber. Two other burials were found on the northeastern portion of the floor area. Burial 34 was a shaft-and-chamber burial of an infant and Burial 35 was a simple pit burial, also of an infant.

House I was defined by a postmold pattern which was partially uncovered in 1968 (Figs. 8 and 13). The west and south walls were fully exposed in squares 150R210, 160R210, 170R210, and 150R220. All of the

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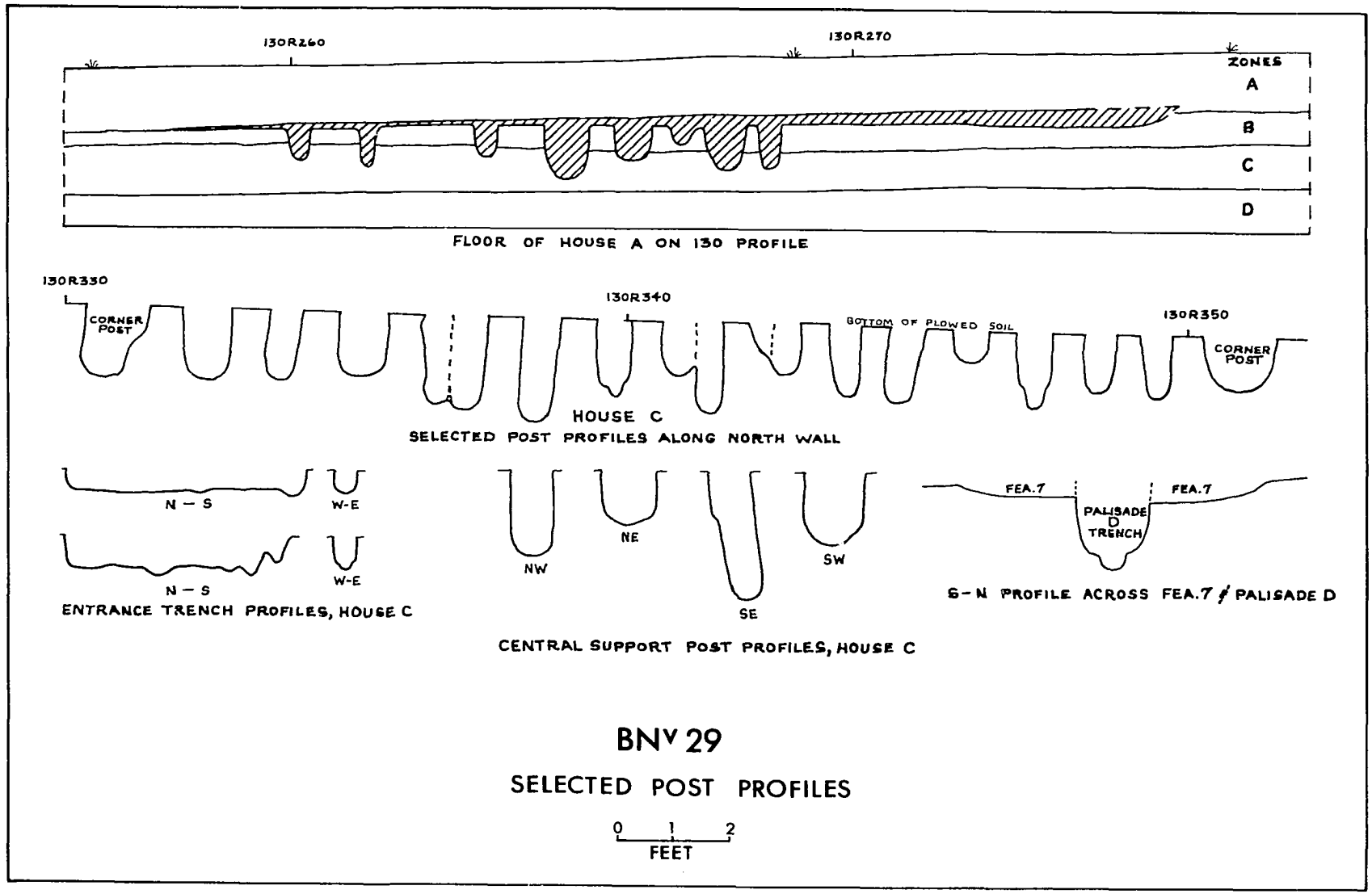

FIGURE 12

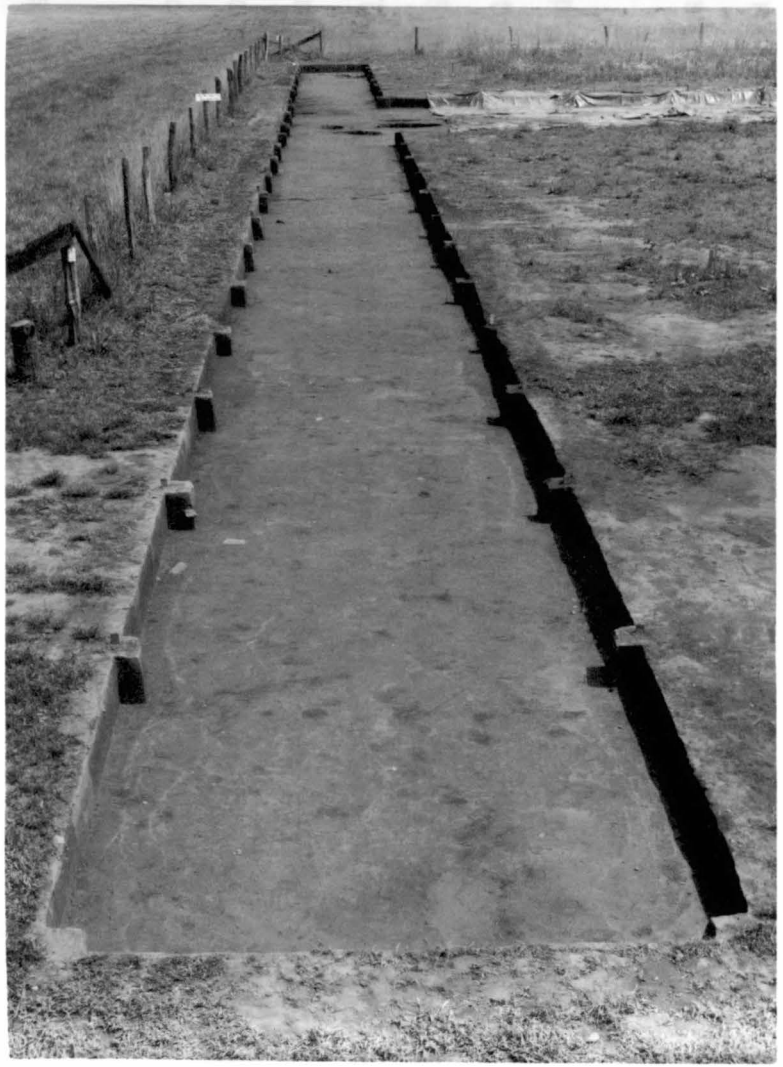

PLATE LXV
North-South Exploratory Trench Along
R210 Line at Bn^{V}29, Looking North.

PLATE LXVI
East-West Exploratory Trench Along
200 Line at Bn^{V}29, Looking East.

east wall and most of the north wall lie in adjacent unexcavated squares. This house was oriented almost due north-south by east-west. It measured 20 feet along the west wall and about 16 feet along the south wall. Interior posts were clearly indicated in a line about 5 feet in from the west wall. There were no pits on the portion of the floor area exposed thus far. Burial 31 lay just outside of the west wall, and Burial 24 was located near the southwest corner.

Another house pattern was partially exposed in the north-south trench, in squares 90R210, 100R210 and 110R210 (Figs. 8 and 13; and Plate LXV). It was designated House J. The trench revealed the entire east wall and a portion of the south wall. The structure was aligned with the palisades found immediately to the north. The east wall was 19 feet long and the corners were slightly rounded. Entrance trenches were present at the southeast corner of the south-facing wall. There were several large postmolds marking the position of the southeast interior roof support. A single simple pit burial (Burial 25) was found in the southeast corner of the floor area, just behind the entrance.

House K was represented only by the northwest corner of a wall pattern. It appeared in square 200R300, the easternmost extension of the east-west trench. (Figs. 8 and 13; and Plate LXVI). Approximately 5 feet in from this corner (southeast) was a cluster of large postmolds. These probably marked the location of the structure's northwest interior roof support. A portion of a palisade line, probably Palisade H, also crossed this location. The temporal priority of the two constructions could not be determined.

In summary, it should be noted that the houses at the Warren Wilson site ranged in plan from a roughly-shaped square or rectangular

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structure, without entrance wall trenches and with an ill defined pattern of central roof-support postmolds (as Houses D, E, and F), to a more definitely square-shaped structure having entrance wall-trenches and four central support postmolds (as Houses A, B, and C). These differences may have temporal meaning, but it cannot be determined until a larger portion of the village area has been plotted.

For all of the structures the outer wall patterns usually measured about 20 feet on a side. Pits, probably dug for acquiring clay, for food storage, and/or for refuse disposal were found on and around the floor areas of most of the houses. Burials also were made in the floors or immediately outside of the houses. In several instances (Houses A, B, E, F, and H) a burial pit was found under the central hearth. In the case of House F, it was evident that an old hearth had been removed to make way for Burial 19 and that a new hearth had been constructed over the burial pit.

It is not known whether the house floors were on the top of the ground or sub-surface. If they were sub-surface, it is probable that the excavations were shallow. No building materials, outside of the remains of charred wood in some of the postmolds were found. Clay plaster or daub, which is commonly found on late prehistoric sites in the eastern United States, was not present. Either daub fragments have not been preserved or some other wall-covering material was used. Possibly bark served this purpose. The use of bark as a covering for burial chambers was indicated in several of the burials at the Warren Wilson site (see Chapter V, p. 247). It is also possible that earth was heaped up around the walls, as in the cases of the pre-mound ceremonial structures at Hw^{o}1 (to be described later in this chapter). If this had been the case,

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however, one would expect to find some evidence of the embankments in the areas around the house patterns. The roofs of the houses probably were covered either with bark sheets or with broomstraw thatch.

House patterns having the same general construction features as those at the Warren Wilson site are found on late prehistoric sites over much of the eastern United States. Entrance wall trenches are somewhat restricted in their distribution. They are associated with structures at Pee Dee sites of the North and South Carolina Piedmond Region (Joffre Coe, personal communication), at the Irene site on the Georgia coast (Caldwell and McCann 1941) and on Mouse Creek sites in the Chickamauga Basin of Tennessee (Lewis and Kneberg 1941). The practice of burying under hearths seems also to be of rather restricted distribution. More will be said on this in Chapter V.

Palisades

Twelve segments of linear postmold patterns, having somewhat larger and more closely spaced posts than the house patterns, were uncovered in the three seasons of work. These were designated palisades A through L. In the case of one of these (Palisade D) the posts had been set in a trench along most of the line. In a few instances, by noting the superposition of postmolds at points where two rows intersected, relative temporal relationships of the palisades could be determined. Complete reconstructions of this type, however, will have to await the careful excavation of additional portions of the site. Likewise, the total areas included within any of these enclosures and their overall shapes could only be estimated.

A line of postmolds running in a northeast-southwest direction

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across the central part of the excavated area was labeled Palisade A. Five other patterns, Palisades B, C, D, E, and F, crossed this line in a perpendicular fashion (Fig. 8). Postmolds of Palisades D and F definately were intrusive through those of Palisade A, and since F was intrusive through E and D, it was concluded that D, E, and F were all of more recent construction than A. Houses B, D, and E also overlay Palisade A.

Palisade A had a distinct offset of about 4 feet where it crossed units 70R280 and 80R280. At the time these units were being troweled and recorded, the writer thought that he could detect a square pattern of postmolds enclosing this offset, possibly an entrance tower or bastion. Later, it was concluded that this was more probably the interior post pattern of House E^2, which happened to be superimposed over the offset of the earlier palisade line (Fig. 8 and Plate LXIV).

Palisade B was traced across the west-central area of excavation, and was found to turn to the southeast in square 120R240 and then to disappear in square 90R280 (Fig. 8). Deep plowing may have erased the postmolds in the latter area. What is believed to be the same line of posts was picked up in square 70R300. It continued to the southeast but was again lost in square 50R310. Palisade B conformed in general to the alignment of Palisades C, D, E, and F. If it can be assumed that these enclosures were built in a sequence of expansions of the village, then Palisade B would represent the oldest of the five constructions.

Palisade C lay just outside of Palisade B (Fig. 8). It conformed in general to the direction taken by B, running northeast from square 120R210, meandering somewhat, and then curving to the southeast. It appeared to be turning back to the southwest in square 50R320. There

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was a missing section in squares 80R300 and 70R310, which again could be attributable to deep plowing and erosion in that particular part of the site. Palisade C was cut through by Palisade D at a point where the two intersected in square 50R320. It also was overlain by postmolds from House D, E, F, and G.

Palisade D lay just outside of Palisade C and conformed to the directions taken by both B and C (Fig. 8). It was intersected by two later house patterns, Houses A and B. The line was lost for a distance of about 25 feet along the east side, but it reappeared in squares 50R320 and 60R320. This palisade line differed from the others on the site in that the posts along most of the line were set in a relatively deep trench (Plate LXVIII). A shallow depression (Feature 7) bordered both sides of this trench in squares 100R300 and 100R310. Feature 7 contained a dense concentration of charcoal, animal bone, pottery, and other village debris. Postmolds from House B cut through the fill of both the palisade trench and Feature 7 (Fig. 13).

The missing section of this palisade is difficult to explain, since the trench was rather deep at the point where it abruptly ended in square 90R310. However, at the base of the plow zone in this square there was a large, thickly clustered group of stones which were determined to be the remains of a Swannanoa Period hearth. The palisade trench ended at the northwest edge of these stones. It is conceivable that as the trench was being dug the sub-surface rocks were encountered and that for the next 30 or so feet the posts were set in the ground individually at shallower depths. The molds of these shallower posts might then have been lost to erosion as were parts of other palisade patterns in this area.

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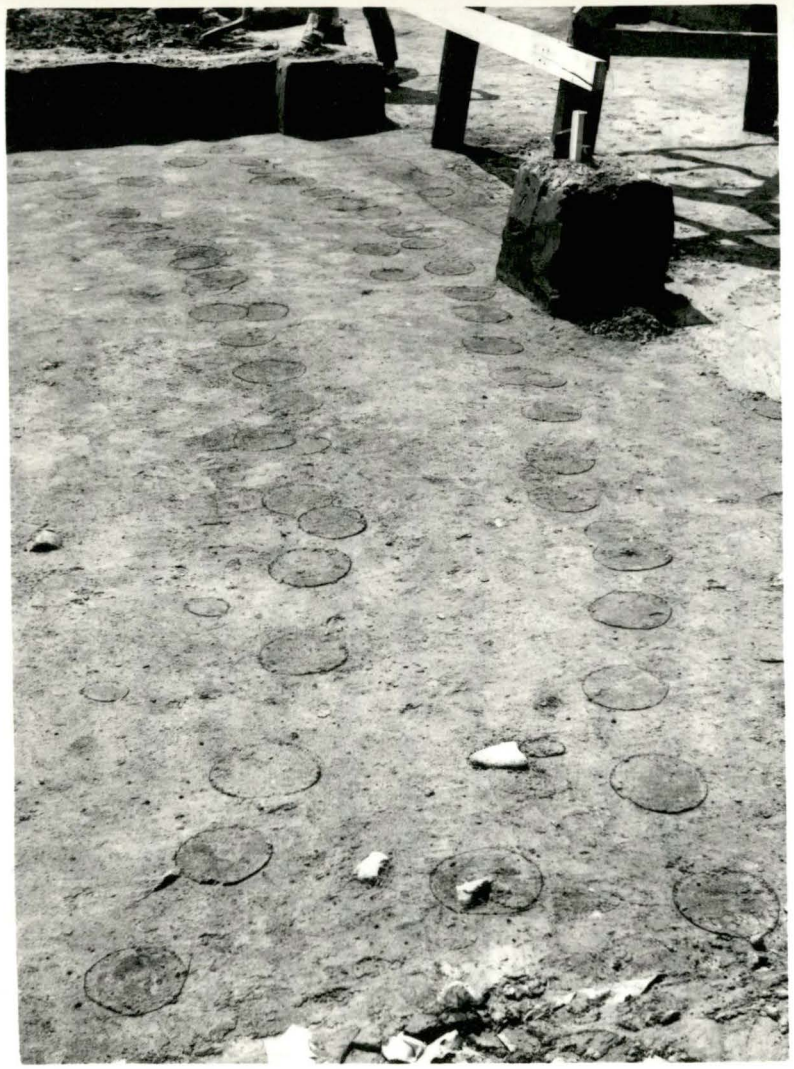

PLATE LXVII
Portions of Palisades B and C at $Bn^{V}29$,
Looking Northwest at 120R240.

PLATE LXVIII
Portion of Palisade D at $Bn^{V}29$,
Looking Northwest at 100R310.

A possible overlap in the pattern of Palisade D in squares 50R320 and 60R320 may represent an entrance (Fig. 13). However, additional excavating south of the 50 line would be necessary before this could be determined with certainty.

Palisade E lay outside of Palisade D, and was aligned in a similar fashion (Fig. 8). It was separated from D by as much as 10 feet on the north and by as little as 3 feet on the east. On the north side of square 80R330 the postmolds were lost, again probably due to deep plowing and erosion, but they were redefined in squares 50R320 and 60R320. Palisade E was intersected by four later house patterns, Houses A, B, F, and G.

Palisade F was represented by a line of postmolds which ran from approximately grid point 140R200, on the west extremity of the excavations, along a line northeastward to about grid point 160R250, where it turned rather sharply to the southeast (Fig. 8). As it proceeded southeastward the line crossed over, in turn, Palisades E, D, and A. The pattern was lost in square 80R310, but a short segment of what was believed to be a continuation of this line was picked up on the east side of square 50R310.

Two parallel rows of postmolds which crossed square 220R210 in the north end of the excavation were interpreted as being segments of palisade lines (Fig. 8). The southernmost of these was labeled Palisade G, and the northernmost was designated Palisade H. These lay some 80 feet north of Palisade F. A continuation of Palisade G is believed to be present in a row of postmolds aligned diagonally across squares 200R260, 200R270, and 200R280 (Fig. 8).

Palisades I and J were represented by parallel rows of postmolds on

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the eastern periphery of the excavated area. These patterns were aligned with the river bank, and it is conceivable that they would connect with Palisades G and H. A midden deposit (Feature 141) was encountered just outside (southeast) of Palisades I and J in squares 50R330 and 90R360. Additional excavation in the southeastern part of the site in 1969 revealed that this midden was present in a continuing belt along the outside of the palisade lines and that it sloped in the direction of the river to a depth of about 5 feet (see Appendix IV).

A possible palisade line, designated Palisade K, was present in the south end of the excavation in squares 0R210 to 10R210 (Fig. 8). The row of postmolds was aligned northwest to southeast. This pattern might connect with any of the palisades described thus far, except Palisade A.

As noted earlier, Palisades D, E, and F all were more recent in age than Palisade A. It also was determined, on the basis of the superposition of intersecting lines of postmolds, that F was more recent than D and E and that D was more recent than C. By assuming that the construction of each of these palisades represents successive enlargements of the village, it may be postulated that the sequence from oldest to youngest is A, B, C, D, E, and F. Having uncovered such limited extents of Palisades G, H, I, J, and K, it was not possible to interpret their temporal relationships to one another or to the other palisades. However, since Houses A, B, D, E, F, and G were found to overlie one or more of the palisades in the group A through F, it must be concluded that these houses were surrounded by a different enclosure (assuming that they were within an enclosure). Palisades G, H, or K could be part of such an enclosure.

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The segments of palisades uncovered thus far are too small to allow accurate estimates of the shapes and sizes of the overall patterns. Nevertheless, by assuming that the topography of the site has not been greatly altered in modern times (although there certainly have been some changes), and that in spite of the meandering character of the patterns there was some degree of overall symmetry to the enclosures, an attempt can be made to project the missing portions. For instance, by superimposing the southeast side of Palisade E onto the northwest side, thus allowing for an equal amount of curve on both corners, and then by completing the pattern to form an irregular, round-cornered square (bringing it just to the edge of the steep bank on the south), a hypothetical plan of the complete enclosure is obtained. It would have measured about 150 to 180 feet on each side and contained an area of around 22,000 to 32,000 square feet. Palisades B, C, and D probably would have enclosed slightly smaller areas, whereas F may have been somewhat larger and perhaps more rectangular in shape. Entrances to palisades A and D probably were on the southeast side facing the interior of the bend in the river. At least there seemed to be offsets in two of the postmold patterns in that area. The offset in Palisade A was fairly distinct; the one for D was less certain.

The overall dimensions and shapes of the more expansive enclosures, indicated by Palisades G and H, and possibly by K and L, could not even be estimated. However, from the indications of plowing (upturned charcoal, burnt clay, and other village debris), the total inhabited area covers about 100,000 to 150,000 square feet. This essentially is the area bounded on the east, south and west by the 100-foot contour line and on the north by the large depression at about where the contour

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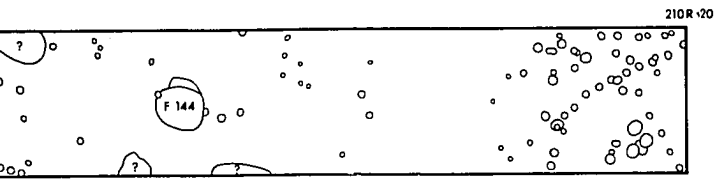

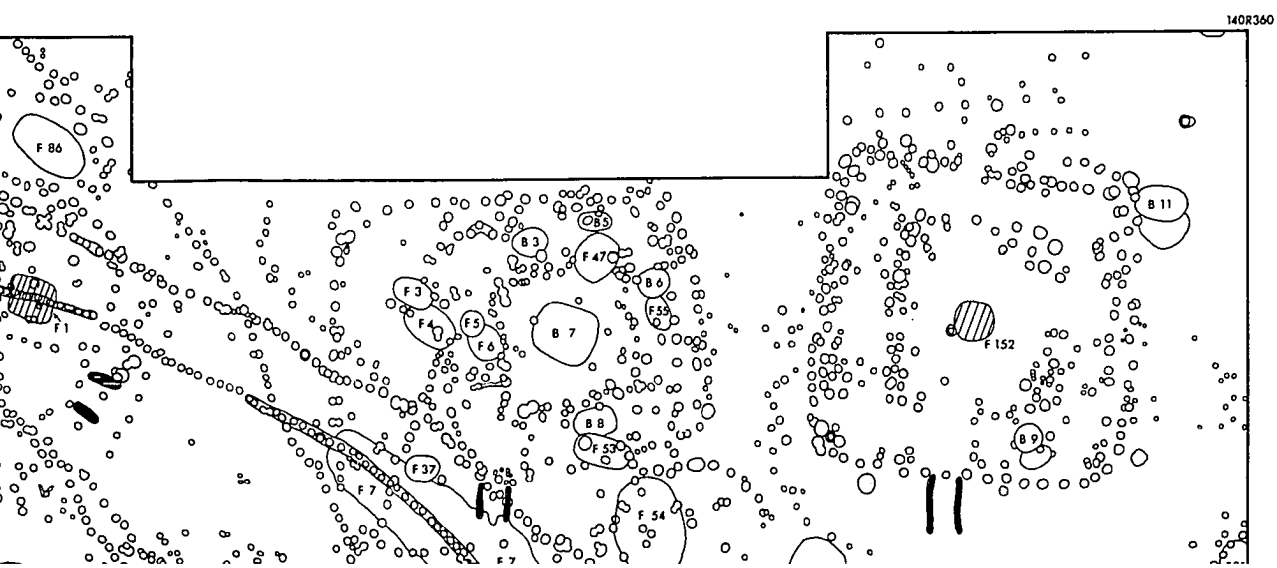

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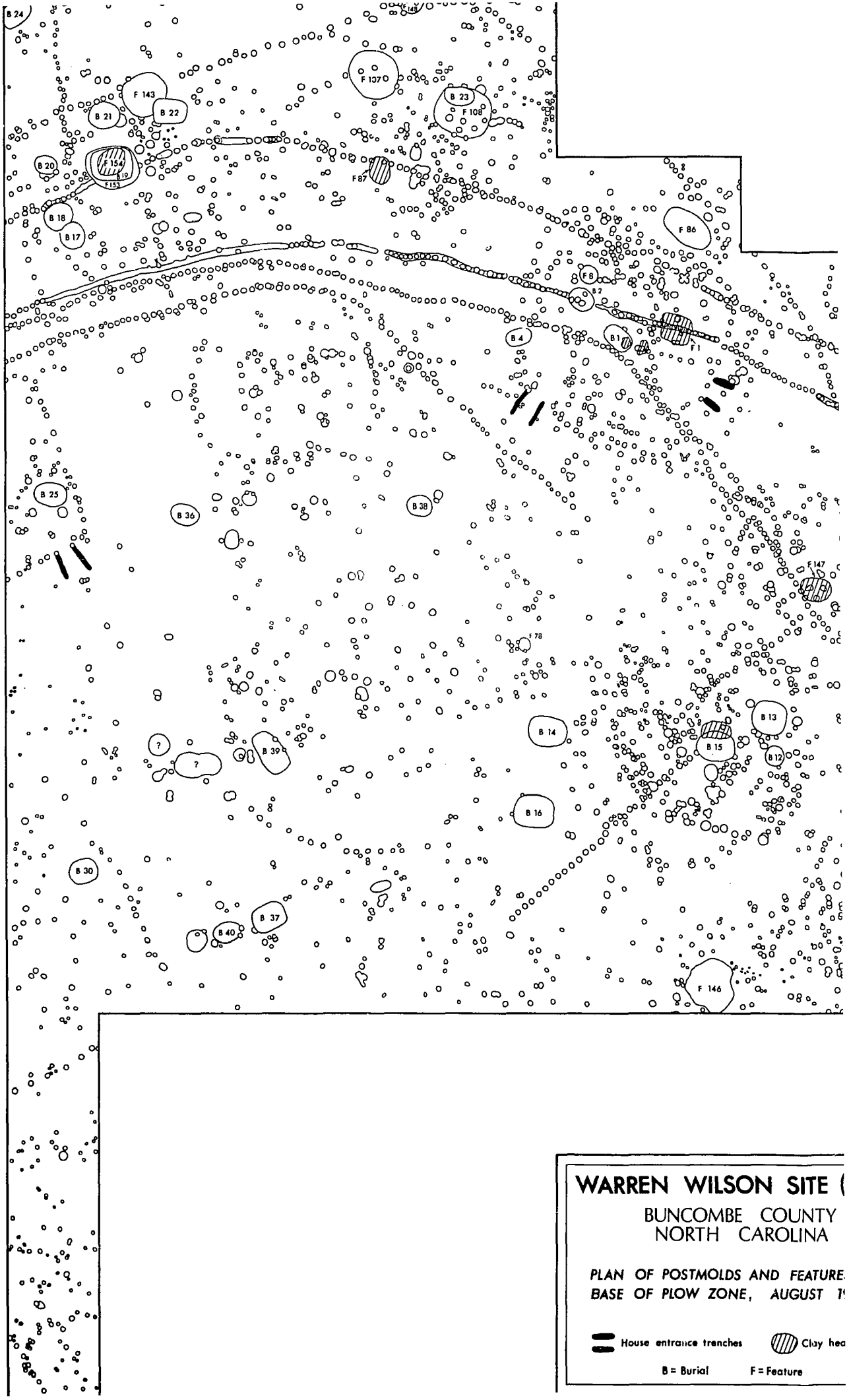

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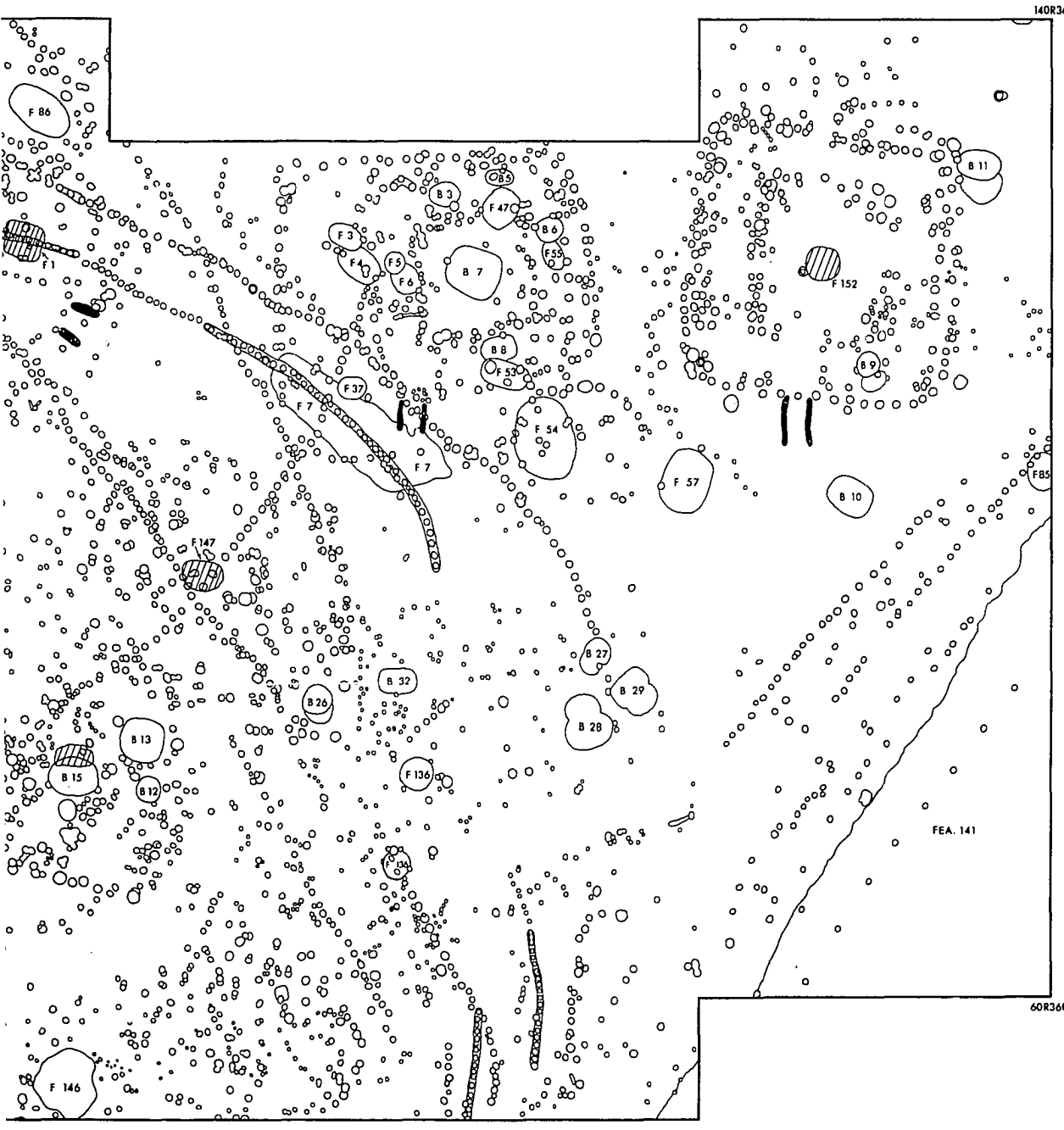

I WILSON SITE (BnY29)

INCOMBE COUNTY
IORTH CAROLINA

POSTMOLDS AND FEATURES AT
PLOW ZONE, AUGUST 1969.

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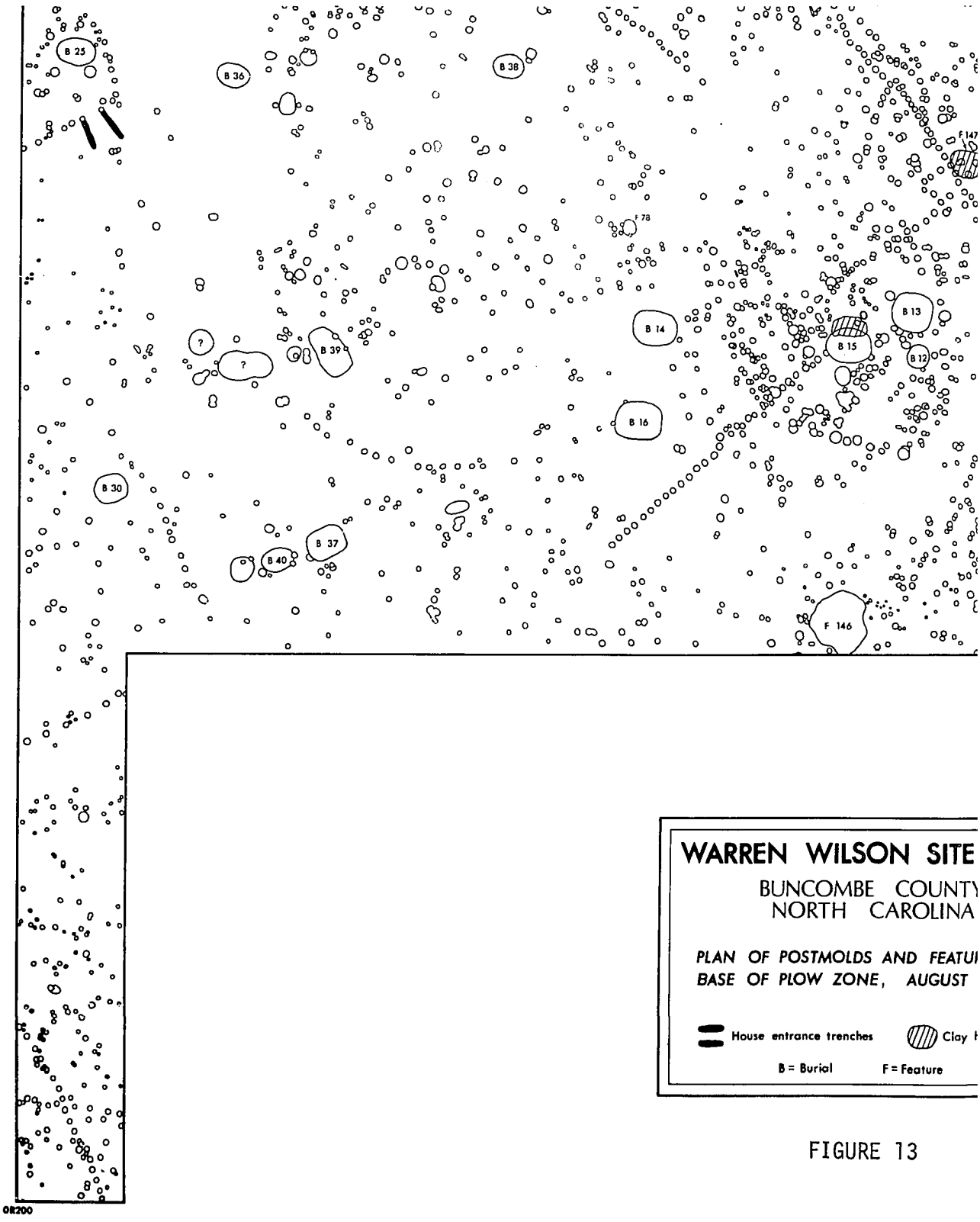

FIGURE 13

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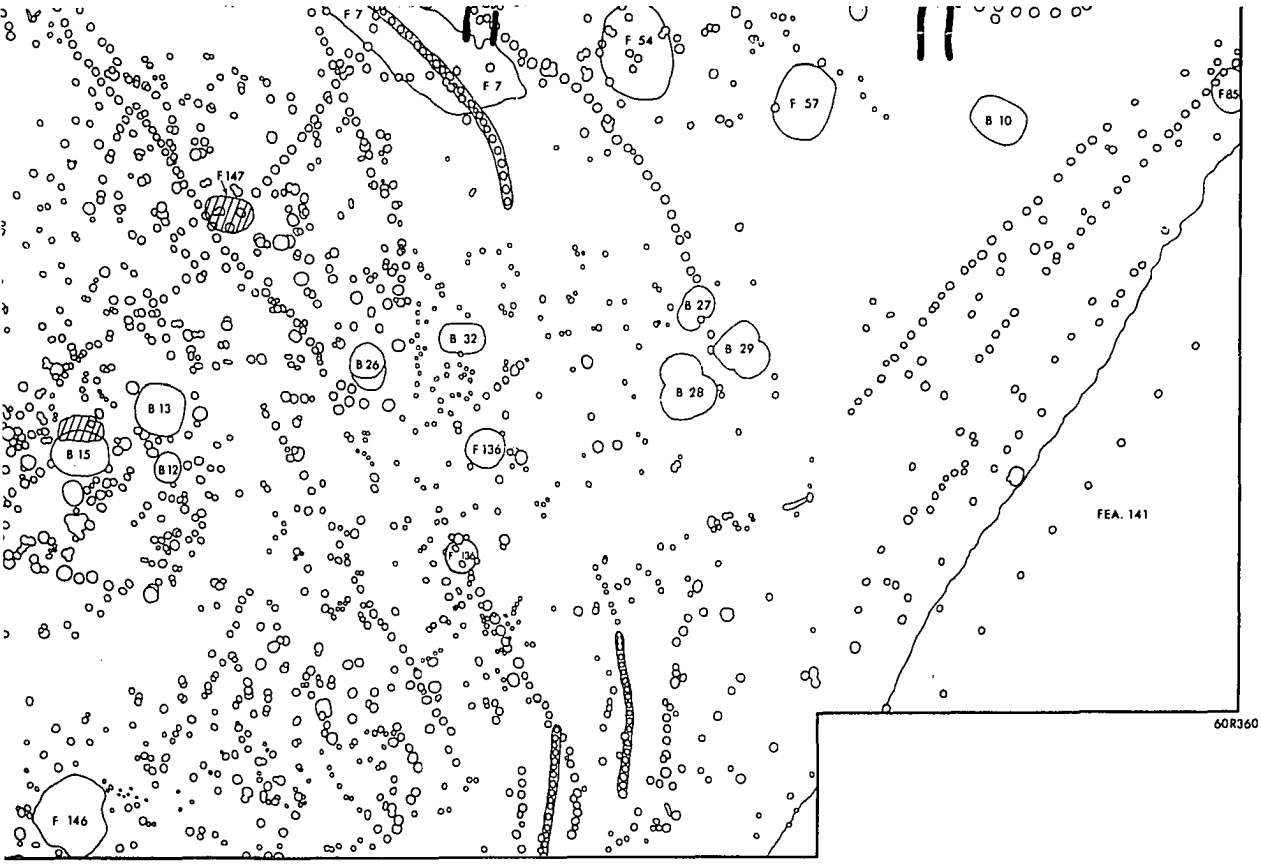

WILSON SITE (BnY29)

NCOMBE COUNTY
ORTH CAROLINA

'OSTMOLDS AND FEATURES AT
'LOW ZONE, AUGUST 1969.

trance trenches — Clay hearth area

= Burial — F = Feature

FIGURE 13

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WARREN WILSON SITE (BnY29)

BUNCOMBE COUNTY
NORTH CAROLINA

PLAN OF POSTMOLDS AND FEATURES AT BASE OF PLOW ZONE, AUGUST 1969.

House entrance trenches — Clay hearth area

B = Burial — F = Feature

FIGURE 13

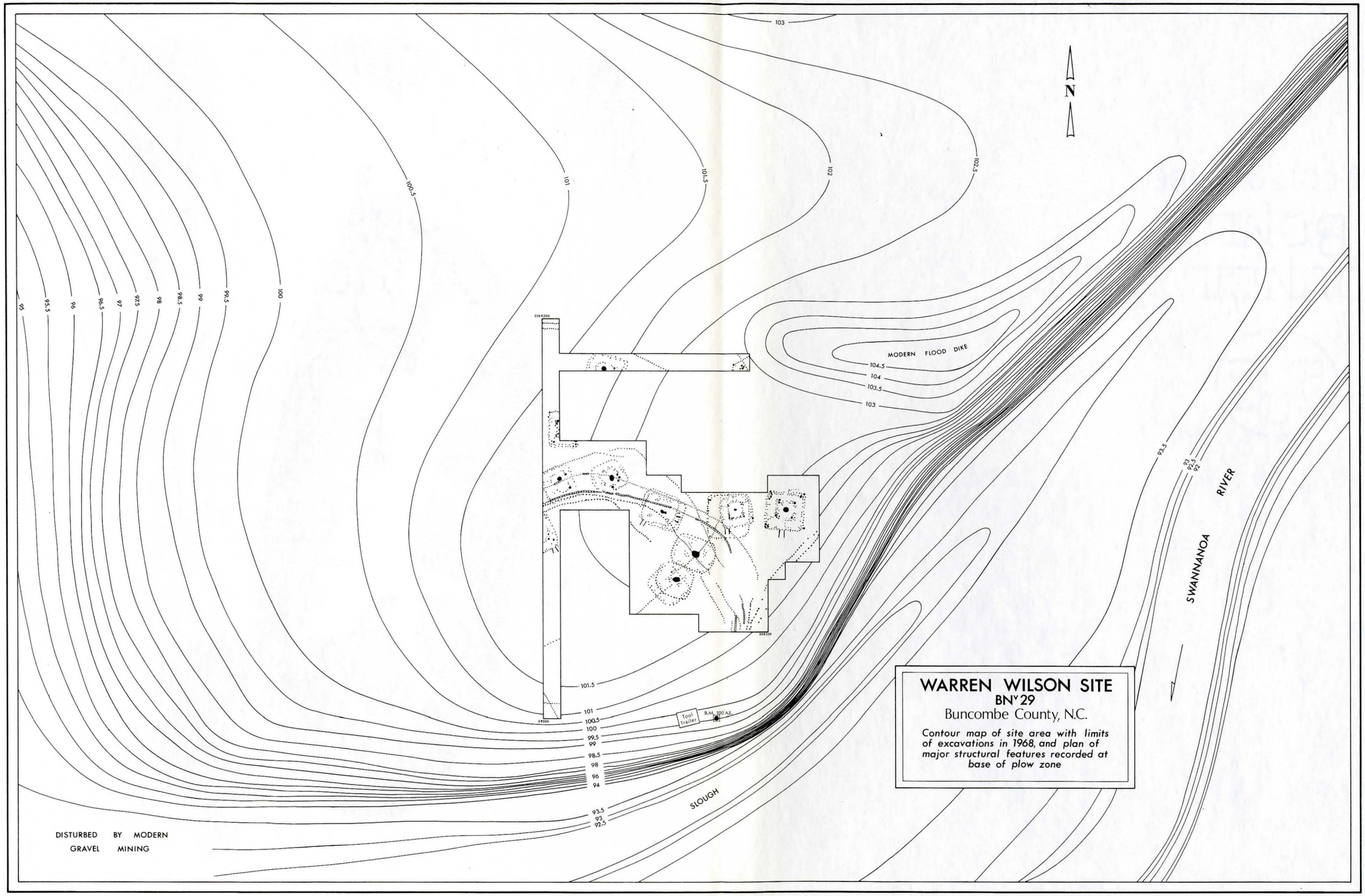
WARREN WILSON SITE
BNY 29
Buncombe County, N.C.
Contour map of site area with limits of excavations in 1968, and plan of major structural features recorded at base of plow zone
N
MODERN FLOOD DIKE
SWANNANOA RIVER
SLOUGH
DISTURBED BY MODERN GRAVEL MINING
Tool Trailer
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FIGURE 14

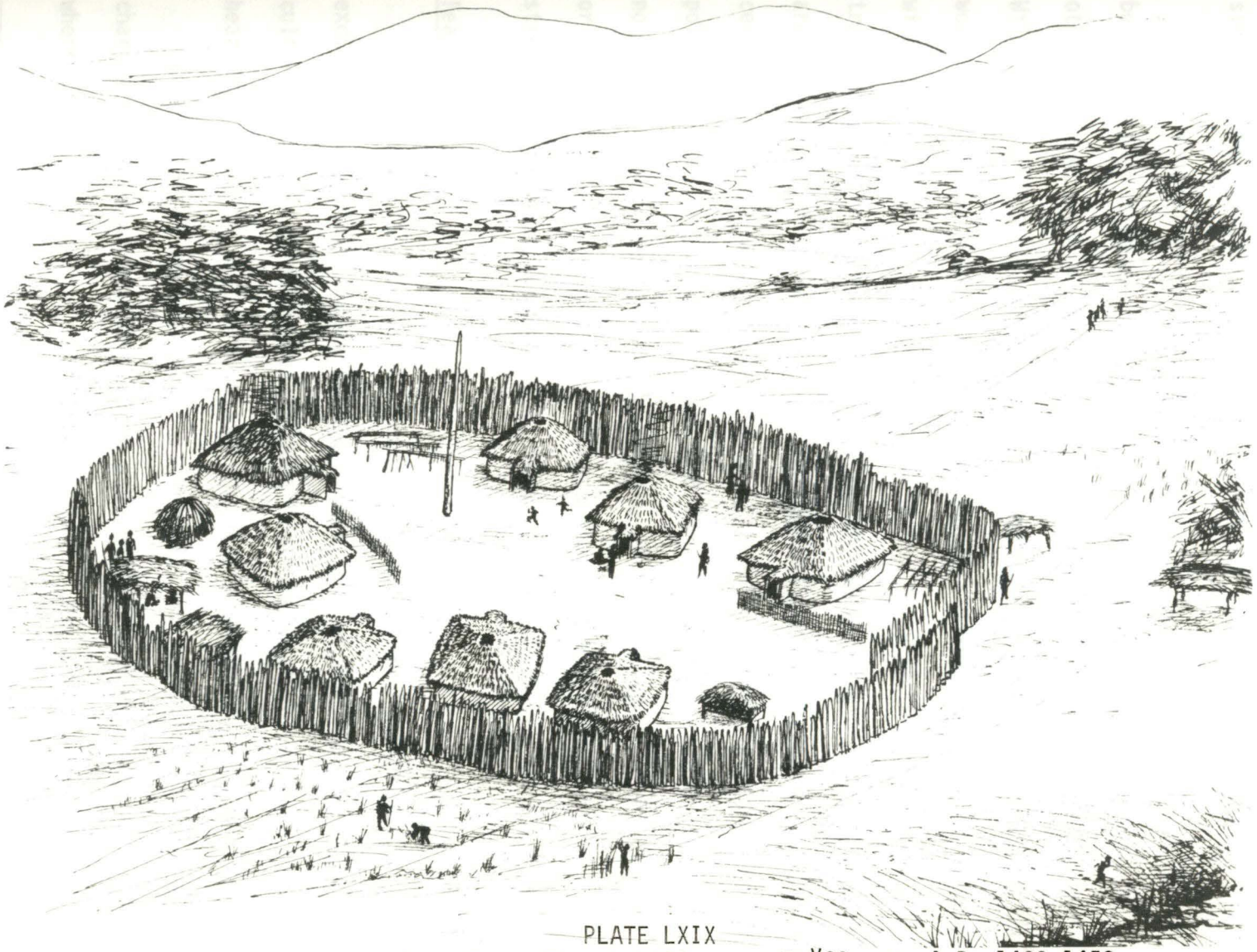

PLATE LXIX
Artists Reconstruction of the Pisgah Village at Bn^{V}29, ca. A.D. 1400-1450.

intervals are marked on Figure 14. One should not conclude that all of these 3 or more acres were occupied and surrounded by a palisade at any single moment in time.

More excavation and interpretation will be needed before there can be any serious attempts to reconstruct the arrangement of houses and other features within the various Pisgah village phases at the Warren Wilson site. Only a few speculations are in order at this stage in the work. Except for Houses B and C, the house patterns seem to be aligned with the palisades. In the cases of Houses A and J the entrance trenches were facing inward toward the probable center of the enclosed area. Such an arrangement, in which several houses surround a cleared central area with the whole enclosed by a palisade of closely-spaced poles, is depicted in Plate LXIX. At this point in the work, there is no information to support the existence of a prepared "chunkey ground" or "plaza." There is also no evidence for ceremonial or communal structures, such as squareground sheds, earth lodges, or mounds.

Features

Outside of the previously described structural remains[1] and exclusive of isolated individual artifacts and of burials, all in situ cultural manifestations were assigned "feature" numbers. These included hearths, refuse pits, borrow pits, and midden deposits.

Each feature was excavated as carefully as possible. Soil and charcoal samples always were taken and in the cases of some of the pits where there were recognizable quantities of food refuse, all of the

[1]In a few instances feature numbers also were assigned to sections of palisade line or to house entrance trenches.

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pitfill was retained in boxes, carried to the field laboratory, and processed for the removal of small-scale materials. These processes included fine-screening and flotation. Among the micro-remains recovered in this manner were seeds; nutshells; maize kernels; the bones of birds, fish, reptiles, amphibians and small mammals; beads; stone chips; and small fragments of various other artifacts. The writer considered these remains to be as important as any on the site, and every precaution was taken in their recovery and processing.

An effort will be made to describe fully each Pisgah feature, to give its relationship, if any, to other features, burials, or structures, and to list its contents. The descriptions of contents will be of a general nature here. More specific information on ceramic types and animal and plant species from each feature appears in the chapters devoted to these topics. The feature numbers are not consecutive because work was carried out simultaneously on several levels of the site, resulting in the assignment of some numbers to non-Pisgah features.

Feature 1. This was a low platform of burnt clay encountered at the base of the plowed soil in square 120R280 (Fig. 9). Although heavily damaged by plowing, a semblance of its original form remained. It measured 3.2 by 2.9 feet across and was 0.63 foot thick. The location of this feature was near the center of House A^2, and it was interpreted as being a remnant of the central fire place of that structure. In cleaning off this feature the excavators found 6 pieces of animal bone and 2 stone chips.

Feature 3. Feature 3 was one of several relatively shallow pits found on the floor areas of Houses B^1 and B^2 (Figs. 10 and 15; and Plates LXX

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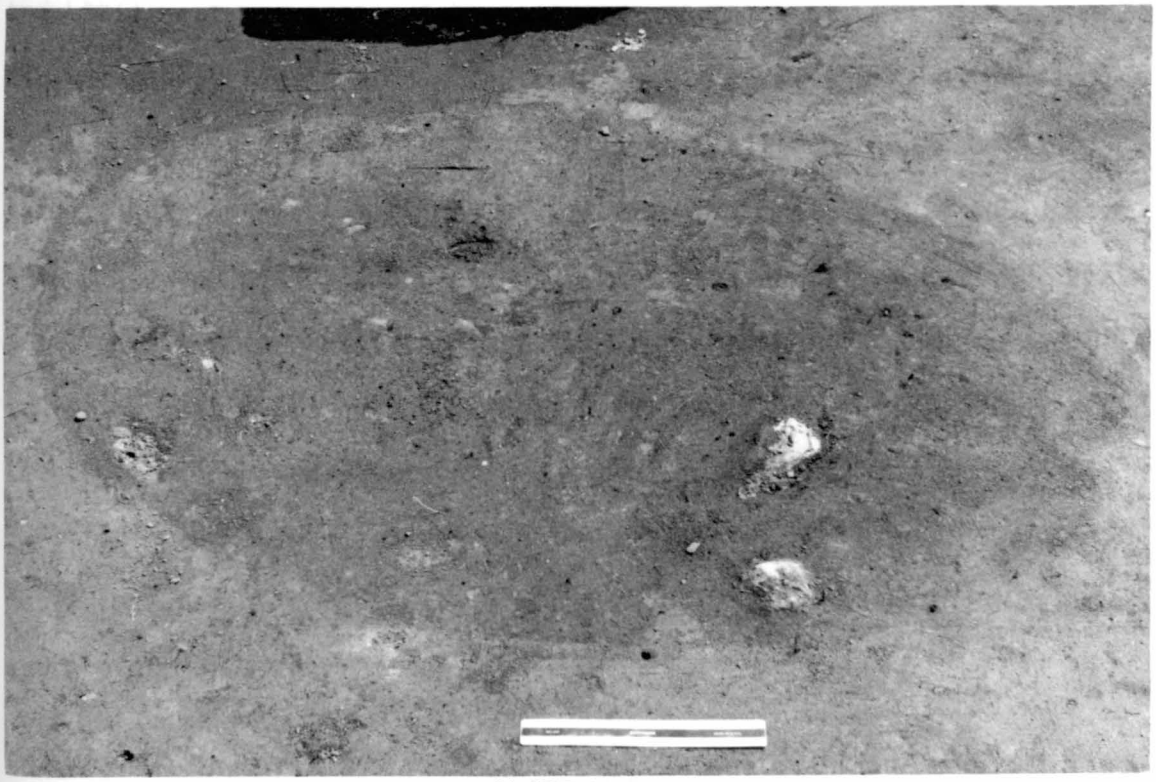

PLATE LXX
Feature 3 at $Bn^{V}29$ as it Appeared at the Base of the Plowed Soil.

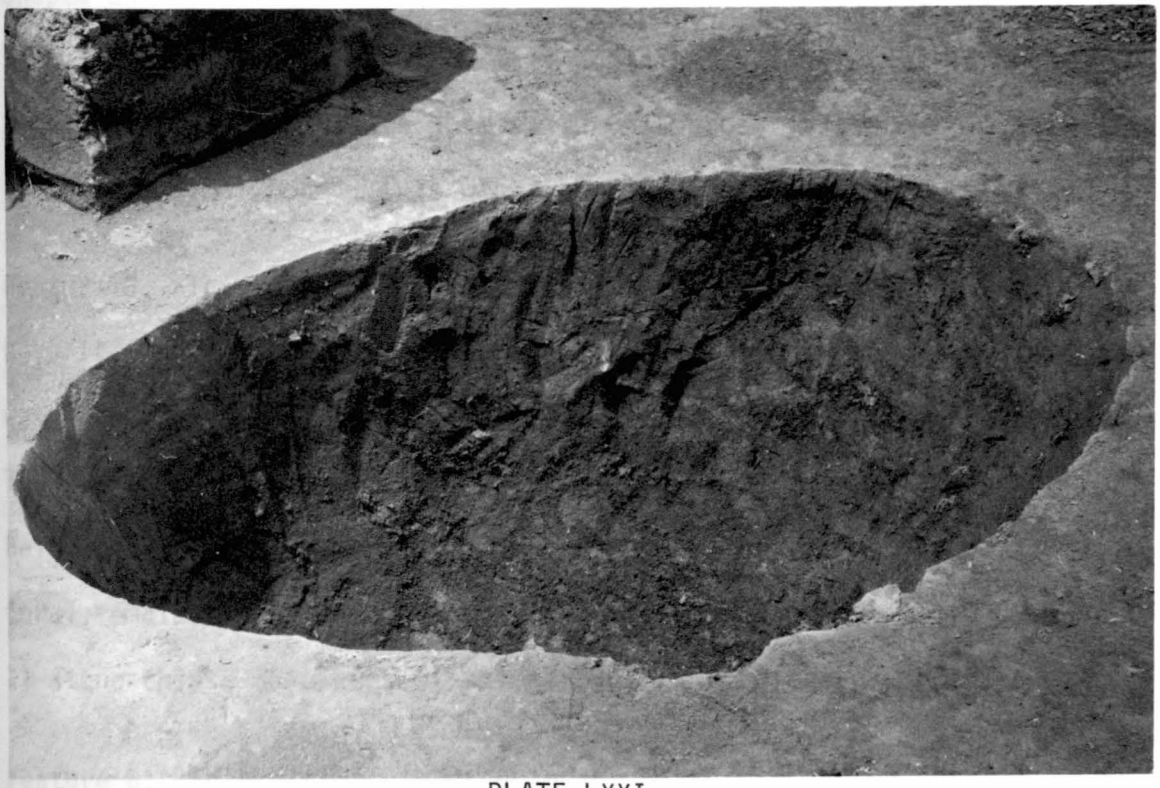

PLATE LXXI
Feature 3 Completely Excavated.

and LXXI). It was crosscut by postmolds of the west wall of House B^2, and was considered to be associated with the earlier of the two structures. The upper few tenths of fill in this pit contained household refuse, but the lower portion was relatively sterile. This could have been a storage pit or a borrow pit for clay. The latter seems to be the most logical interpretation. The sterile consistency of the lower fill would indicate that the hole was at least partially refilled soon after being dug. The feature measured 2.8 by 2 feet across the top and was 1.45 feet deep. The sides sloped inward toward the bottom. The contents included 27 potsherds, 19 stone chips, 3 fragments of animal bone, and a piece of a charred log.

Feature 4. This pit was intersected by Feature 3. It also was intruded by several postmolds from the west wall of House B^2. The pit was basin-shaped and measured 2.05 feet deep and 2.5 feet across the top. As in Feature 3, the top 0.7 foot of fill contained refuse. This consisted of 3 chipped-stone projectile points, 30 potsherds, 19 stone chips and 12 pieces of animal bone. This was probably a refilled borrow pit.

Feature 5. This was a circular, basin-shaped pit on the floor of House B^2. It intersected Feature 6. Across the top it measured 1.9 feet and was 1.25 feet deep. Again, the fill was divided into distinct zones. The top 0.4 foot was dark in color and contained household refuse. Below that, the fill was light-colored and relatively sterile of cultural remains. The top portion contained 13 potsherds, 1 steatite sherd, 11 stone chips, 35 pieces of animal bone and 1 piece of mussel shell.

Feature 6. This pit was intersected by Feature 5 and by several

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interior postmolds of House B^2. Like the previously described features, this was a shallow, basin-shaped pit. It measured 2.5 by 2.05 feet across the top and was 1.6 feet deep. The fill was dark and contained refuse in the top 0.55 foot, but was lighter in color and had only a few cultural remains in the bottom 1.05 feet. A re-filled clay borrow pit is indicated. Contents included 1 chipped-stone projectile point, 2 hammerstones, 1 piece of abraded steatite, 9 potsherds, 14 stone chips, 3 animal bone fragments, and 1 mussel shell.

Feature 7. Feature 7 lay in squares 110R300, 100R300, and 100R310. It consisted of a large shallow depression having an irregular shape and an undulating floor. The overall length was 17.2 feet and the width varied from 3.2 feet near the northwest end to 5.3 feet near the southeast end. The depth at the deepest point was 0.45 foot (Fig. 12). This depression is believed to have resulted from the building of Palisade D, which it straddled.

It is possible that in digging the trench for Palisade D, one of the numerous Swannanoa hearths was encountered. A shallow excavation then would have been necessary to remove these stones so that the trench could be continued uninterrupted. Such an explanation would account for the numerous stones found in the fill of this feature. Following the construction of Palisade D, the depression was backfilled with its original dirt mixed with abundant village refuse. The Pisgah remains from this feature are listed below:

2	chipped-stone projectile points
1	stone discs
3	clay discs
1	grinding stone
1	complete clay pipe bowl
5	clay pipe bowl fragments

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3	bone awls
697	potsherds (including several partially reconstructed vessels)
58	stone chips
1604+	fragmentary and whole animal bones
3	fragmentary mussel shells
-	charcoal and soil samples

The bulk of the fill from this feature was washed through fine-mesh screens and subjected to flotation in order to obtain collections of small-scale floral and faunal remains (See Chapter VI and Appendices I and II).

Feature 8. This was a circular pit found in the northwest floor area of Houses A^1 and A^2. It could not be assigned to either structure specifically. The feature measured about 2 feet in diameter and was 1.35 feet deep. The sides were straight and the bottom flat. It might have functioned as a clay borrow pit, unfinished burial pit, or storage pit. The fill was rather consistent in color and in refuse content from top to bottom. The remains, few in number, included 18 potsherds, 2 stone chips, and charcoal.

Feature 9. This feature number was assigned to a section of Palisade D excavated early in the 1966 season in square 120R250. This portion of the trench was from 0.4 to 0.55 foot deep and contained 12 postmolds. The bottoms of the individual postmolds penetrated from 0.1 to 0.4 foot below the bottom of the trench. Cultural remains included 24 potsherds, 1 hammerstone, 1 grinding stone, and 2 stone chips.

Feature 14. This number was assigned to another section of Palisade D in square 120R260. This section was from 0.4 to 0.6 foot deep and contained 11 identifiable post impressions in the bottom. These penetrated from 0.05 to 0.8 foot below the bottom of the trench. Contents

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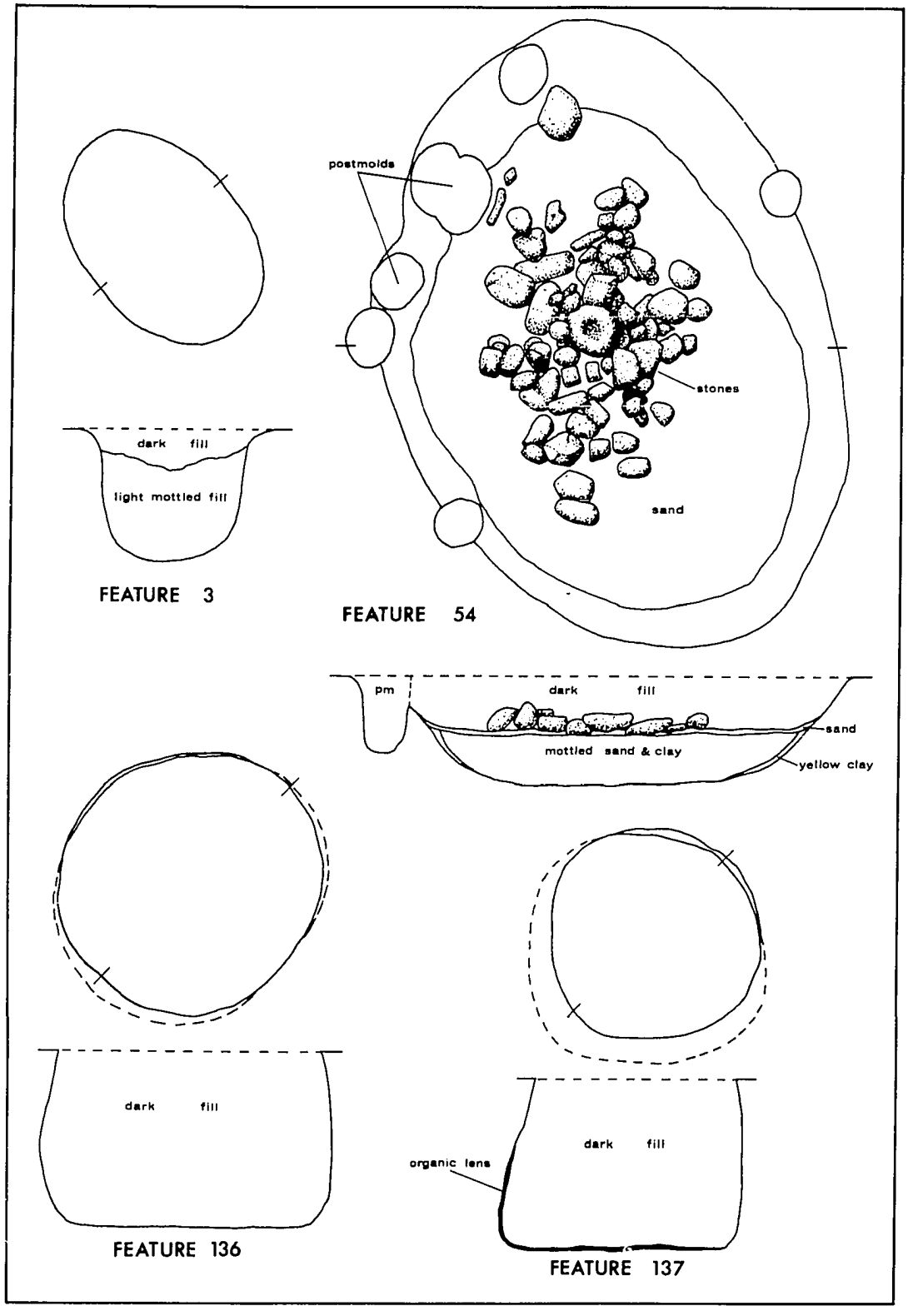

FIGURE 15
Features 3, 54, 136, and 137 at Bn^{V}29

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consisted of 1 chipped-stone projectile point, 21 potsherds, 6 stone chips, and charcoal.

Feature 37. This was a shallow, circular, basin-shaped pit located on the southwest portion of the floor of House B^1. It was intrusive through Feature 7. The pit measured 2 feet in diameter and was 1 foot deep at the center. The lower sides and bottom were lined with burnt sand and ash. It might have functioned as a secondary cooking pit for House B^1 or as a small pottery kiln. The contents included 1 pipe fragment, 1 pitted hammerstone, 1 grinding stone, 26 potsherds, 1 steatite sherd, 9 stone chips, 63 pieces of animal bone, and charcoal.

Feature 40. This number was given to the entrance wall trenches of House A^2. The northernmost trench measured 0.75 foot wide, 2.5 feet long, and 0.55 foot deep. The southernmost trench was 0.7 foot wide, 1.4 feet long and 0.6 foot deep. Individual post impressions were not encountered in the bottoms of the trenches. Contents consisted of 1 chipped-stone projectile point, 1 fragment of polished stone (celt?), 24 potsherds, 12 stone chips, a few fragmentary animal bones, and charcoal.

Feature 41. This number was assigned to the entrance wall trenches at the southwest corner of House A^1. The northwesternmost trench measured 3.4 feet in length, 0.5 foot in width, and 0.55 foot in depth. The southeasternmost trench was 2.9 feet long, 0.4 foot wide, and 0.6 foot deep. There were no individual post impressions in the bottoms of the trenches. The contents consisted of 19 potsherds, 9 stone chips, a few small fragments of animal bone, and charcoal.

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Feature 47. This was a bathtub-shaped pit in the northeast portion of House B^2. It was intersected by at least one large postmold of that structure, possibly an inner roof support. The feature measured 3.1 by 2.75 feet across the top and was 2.15 feet deep. It might have been a clay borrow pit or an abandoned burial pit. It appeared to have been dug symmetrically as was usually the case with burial pits. The sides were rather straight and the bottom slightly rounded. The contents of the pit were cataloged as 1 section of a small wooden shaft (charred), 1 pointed bone tool, 1 piece of cut mica, 15 Marginella shell beads, 1 chipped-stone projectile point, 1 clay disc, 1 stone disc, 94 potsherds, 1 steatite sherd, 81 stone chips, 109 pieces of animal bone, and charcoal. The top 0.8 foot of the fill was darker in color than the lower portion and contained most of the items listed above.

Feature 53. This was an elongated pit on the floor of House B^1. Postmolds of the south wall of House B^2 cut through it. The shape of the pit suggests that it probably was begun as a burial pit. In cleaning out the fill, the excavator found that the pit extended only to a depth of 1.1 feet at which level a mass of large stones was encountered. This mass later proved to be a stone-lined hearth of the Archaic occupation. It would seem rather certain that Feature 53 had been abandoned before completion because of the location of the hearth. The fill contained 13 Marginella shells, 1 small piece of cut shell, 2 pieces of cut mica, 79 potsherds, 1 steatite sherd, 23 stone chips, 44 pieces of animal bone, 2 mussel shells, and charcoal.

Feature 54. This feature was a large, oval basin located at the southeast corner of the postmold pattern for House B^1. It measured 7 feet

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PLATE LXXII
Feature 54 at $Bn^{V}29$ Excavated to Sand and Rock Level.

PLATE LXXIII
Feature 54 Completely Excavated.

from northwest to southeast and 5 feet from southwest to northeast. It was 1.3 feet deep at the center. This feature truncated several postmolds on the outer wall pattern of House B^1. Therefore, it was assigned to a period later than the house; it may, however, have been associated with House B^2. At the bottom of the plowed soil, this feature appeared as a large oval patch of dark fill mottled with yellow clay. At a depth of 0.5 foot, a cluster of stones was encountered. These were found to be resting on a thin layer of white sand. This sand overlay a layer of mottled sand and clay which extended to the bottom of the pit. The lower sides of the pit were lined with bright yellow subsoil clay (Fig. 15 and Plate LXXII). Artifact remains were found among the stones in the central part of the fill. These consisted of 1 chipped-stone scraper, 1 grinding stone, 98 potsherds, 24 stone chips, and 6 animal bone fragments. The function of this feature is uncertain. Possibly it served as a large cooking pit or a pottery kiln. Also, it might have been the sub-surface floor of a sweat house or granary. There appeared to be a partial, roughly circular, pattern of postmolds surrounding the feature (Fig. 15).

Feature 55. This was an oblong, bathtub-shaped pit on the floor of House B^1. It measured 2.6 by 1.4 feet across and was 0.8 foot deep. It contained 1 chipped-stone projectile point, 1 clay pipe fragment, 21 potsherds, 16 stone chips, and charcoal. It probably was a clay borrow pit or an unfinished burial pit.

Feature 56. This number was assigned to a section of Palisade D which was partially excavated late in the 1966 season and completed in 1967. This section, approximately 18 feet long, was in squares 100R300,

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100R310, and 110R300. The trench varied in depth from 0.6 to 1.6 feet. Some of the postmolds penetrated to a depth of 1.2 feet below the bottom of the trench. Others were marked by only a slight depression of 0.05 foot or less in depth. The width of the trench varied from 0.7 to 1 foot. The contents consisted of 1 shell disc bead, 111 potsherds, 11 steatite sherds, 53 stone chips, 133 pieces of animal bone, 1 mussel shell, and charcoal.

Feature 57. This was a large oval depression similar to Feature 54. It was located 8 feet southeast of Feature 54 and 8 feet from the southwest corner of House C. It measured 6 by 4.3 feet across the top and was 0.48 foot deep at the deepest point. The pit was filled with refuse which included a 1.5 by 3.5 foot concentration of stones, ash, clay, animal bones and charcoal. Also in the fill were 4 chipped-stone projectile points, 2 pipe bowl fragments, 3 stone discs, 1 abrading stone, 11 bone splinter tools, 18 shell and clay beads, 1 piece of graphite, 1 fragment of polished stone (celt?), 3 retouched flakes, 5 lumps of unfired pottery clay, 14 lumps of fired pottery clay, 84 stone chips, 1012 potsherds, 1549 pieces of animal bone,[2] 6 fragments of mussel shell, and charcoal.

Feature 85. This feature was on the eastern border of the excavated area in square 100R360. A small portion of the pit extended into the R360 profile and has not yet been excavated. The pit measured 3.2 feet from north to south and was 0.69 foot deep at the center. The contents

[2]A relatively high percentage of bones from rodents, small birds and snakes suggests to Elizabeth Wing that this feature might have been the floor of a granary (see Appendix II).

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included 1 pebble core, 1 pitted anvil stone, 1 abrading stone, 33 potsherds, 5 pieces of animal bone, 4 stone chips, 1 piece of fired clay, and charcoal. This part of the site has undergone heavy erosion, greatly reducing the depth of pits and postmolds.

Feature 86. This was a large trough-shaped pit located a few feet north of House A (Fig. 13; and Plates LXXIV and LXXV). It measured 5.8 feet from northwest to southeast and 3.2 feet from northeast to southwest. It was 0.95 foot deep at the deepest point. The fill of this pit contained a number of large stones, as well as 2 fragments of miniature pots, 1 clay pipe fragment, 2 retouched flakes, 218 potsherds, 3 steatite sherds, 7 pieces of cut mica, 2 pieces of animal bone, 33 stone chips, and charcoal. This pit might have been dug purely for refuse disposal.

Feature 87. This was a burnt clay area, all that remained of the central hearth of House G. It measured 2.6 by 2.15 feet across and was 0.23 foot thick. Almost all of the hearth had been removed by plowing and there was no indication of its original form. There were no artifact remains in association with this feature.

Feature 107. This was a large, shallow, refuse-filled pit located at the northwest corner of House G. Three corner posts of the house cut through the pitfill, indicating that the house probably post-dated the feature. The pit measured 5.6 by 5.1 feet across the top and was 0.5 foot deep. The walls were straight and the floor was almost flat. The contents consisted of 1 chipped-stone projectile point, 2 pebble hammerstones, 2 scrapers, 1 abraded piece of steatite, 208 potsherds, 5

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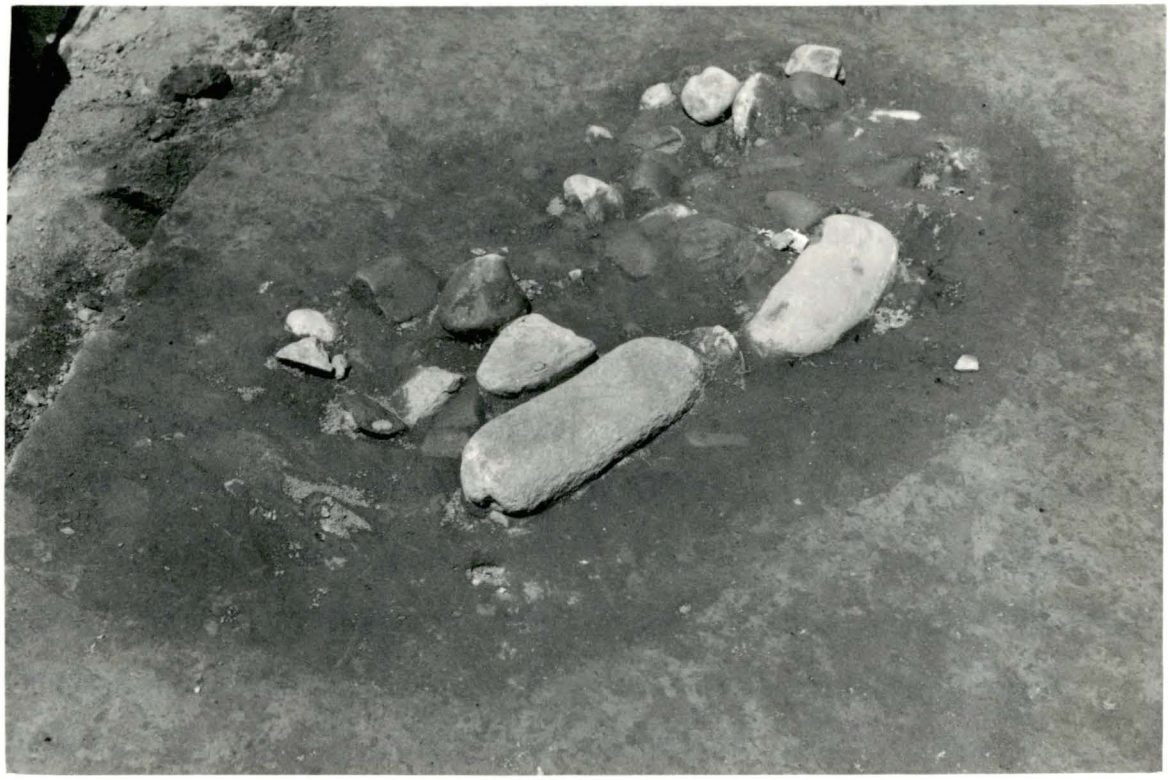

PLATE LXXIV
Feature 86 at $Bn^{V}29$ as it Appeared at the Base of the Plowed Soil.

PLATE LXXV
Feature 86 Completely Excavated.

steatite sherds, 30 fragments of animal bone and 7 stone chips.

Feature 108. Feature 108 was almost identical in size and shape to Feature 107 and was located just 5 feet southeast of that feature. It measured 6.3 by 5.45 feet across and was 0.6 foot deep. The sides were straight and the bottom flat.

On the north side of the floor of Feature 108 there was a small pit which contained a burial (Burial 23) (Plate CIV). It could not be determined for certain whether the burial pit had been dug before or after the excavation of Feature 108. It definitely had not been dug through the fill of the larger pit. Since the burial contained mottled fill and no mottling was noted in the fill of the feature, it is suspected that the feature was excavated first and that while it was still open the burial was made and backfilled. Then the feature was refilled at a later date. Feature 108 contained 1 chipped-stone projectile point, 1 clay disc, 235 potsherds, 2 steatite sherds, 21 fragments of animal bone, 11 stone chips, and charcoal.

Feature 136. This was a small circular pit located to the southeast of House D in square 70R310 (Fig. 15 and Plate LXXVI). At the orifice it was 2.9 feet in diameter. It was 1.92 feet deep. The sides expanded near the bottom to a diameter of 3.2 feet. The floor of the pit was flat and hard-packed. The surfaces of the walls also were rather hard and the fill flaked away easily, indicating that the pit had seen a good deal of use before being refilled. It probably was used for food storage. The fill was homogeneously saturated with refuse from top to bottom. Included, along with fire-cracked stones and a great deal of charred vegetal matter, were 1 small Pisgah Plain vessel (Plate XV,

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left), 2 clay pipe fragments, 1 hammerstone, 2 stone discs, 2 chipped-stone scrapers, 2 chipped-stone projectile points, 1 clay bead, 481 potsherds, 1631+ pieces of animal bone, 26 stone chips, and charcoal.

Feature 137. This pit was located 5 feet south of Feature 136 and was almost identical to it in size and shape. The orifice was 2.3 feet in diameter. Near the bottom, it expanded to a diameter of 2.75 feet. It was 1.88 feet deep (Fig. 15 and Plate LXXVII). The floor was flat and, as with Feature 136, the sides and bottom were packed hard. In this case there was a thin layer of dark organic material on the lower walls and floor. The fill of this feature contained less refuse than that of Feature 136, and most of it was concentrated in the top few tenths. The remains consisted of 1 chipped-stone projectile point, 3 shell beads, 1 piece of sharpened bone, 1 retouched flake, 58 potsherds, 372+ pieces of animal bone, 2 stone chips, and charcoal. This feature also was determined to have been a food storage pit. In the laboratory processing of artifacts from Features 136 and 137 it was found that sherds from both features fit together. It may be concluded that they were backfilled at the same time and that they probably were in use contemporaneously.

Feature 140. This feature number was assigned to a baked-clay hearth overlying the pit and chamber of Burial 33 (Fig. 16 and Plate LXXVIII). This apparently had been constructed in the top of the burial pit in a period not long after the interment had been made. Sometime following this, the chamber of the burial had collapsed thereby lowering the hearth slightly. The slumped hearth then had become filled with refuse. The hearth was 2.6 feet in diameter (the total collapsed area measured 3 by 2.6 feet) and 0.25 foot deep. The baked clay was 0.25 foot in

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PLATE LXXVI
Feature 136 at Bn^{V}29 Completely Excavated.

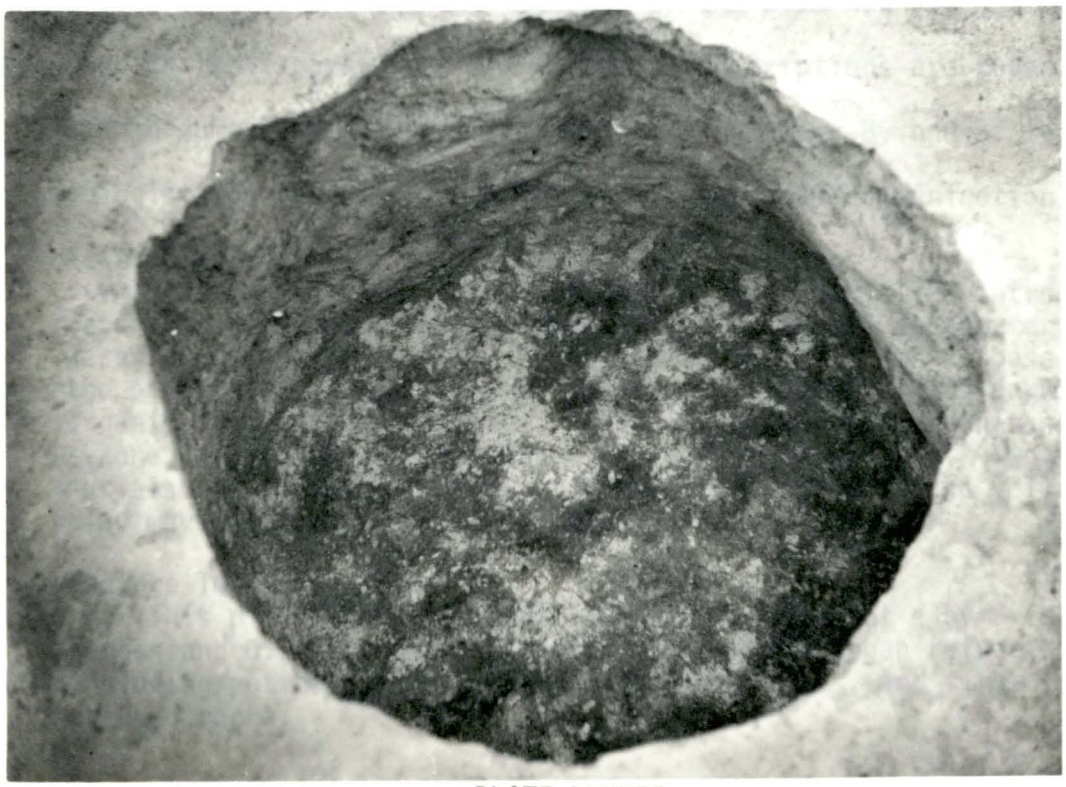

PLATE LXXVII
Feature 137 at Bn^{V}29 Completely Excavated.

thickness. Dark soil which filled the depression and overlay the hearth contained 3 clay pipe fragments, 1 anvil stone, 1 hammerstone, 135 potsherds, 75 fragments of animal bone, 1 stone chip, and charcoal.

Feature 141. On the extreme southeastern limits of the 1968 excavations, a dark-colored, artifact-bearing soil was found to underlie the plow zone and to slope toward the southeast. It seemed to run parallel to the river for some distance, beginning just outside of the lines of Palisades I and J. No attempt was made to excavate this feature in 1968. It was decided, however, to suspend further investigation until the 1969 season, when a larger area could be opened. The 1969 findings are summarized in Appendix IV.

Feature 143 and 144. The outlines of both of these features were defined in 1968, but complete excavation was not carried out until 1969. At the time of this writing the contents of the pits had not yet been processed in the laboratory. The following descriptions are those provided in summary weekly reports sent to the writer by one of the archaeologists on the site (Veletta Canouts, personal communication).

> Feature 143:
>
> Feature 143 was a pit about 5 by 5 feet (Burial 22 intruded into the southeast corner). Bone, flint, charcoal and pottery were found in the pit. At the bottom (0.8 foot from the base of the plow zone) a thin layer of yellow clay, mottled with dark organic soil, was encountered. This flaked off and brown sand --Zone C--was found uniformly at the bottom of the pit. Two burials lie adjacent to the pit (Burials 21 and 22); the yellow clay may have come from these deeper pits.
>
> Feature 144:
>
> This pit, located in square 200R290, was about 4 by 3 feet across and 0.5 feet deep. It was filled with Pisgah refuse, including pottery sherds, charcoal, animal bones, and fire-cracked rocks.

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Feature 147. This constituted the plow-disturbed remains of a baked-clay hearth located at the approximate center of House D. In its original form it probably was a low platform having a diameter of around 3 feet. There were no associated artifacts.

Feature 152. This was the plow-disturbed remnant of a baked-clay hearth located at the center of House C (Fig. 11 and Plate LXII). It was about 3 feet in diameter, but probably had been larger in its original form. There were no associated artifacts.

Feature 153 and 154. These features were found in the central part of the floor of House F. Feature 153 was a shallow pit which measured 5.5 feet from east to west and 4.5 feet from north to south. Situated within this pit was a baked clay hearth platform, Feature 154, which was 0.6 foot thick and roughly 2.6 feet in diameter (Fig. 16 and Plate LXXIX). In the fill of Feature 153 and surrounding the hearth there was a quantity of burnt clay, ash, and wood, including a large section of a charred log. Beneath the hearth was found the pit of Burial 19 (Fig. 16 and Plate CIII).

It is hypothesized that Feature 153 was dug by the Indians for the purpose of removing a hearth on the floor of House D so that Burial 19 could be placed under the hearth area. After the completion of the burial, a new hearth (Feature 154) was constructed in the place of the old one. The cavity around the new hearth was then backfilled with the burnt clay, ash, and charred wood from the old hearth area.

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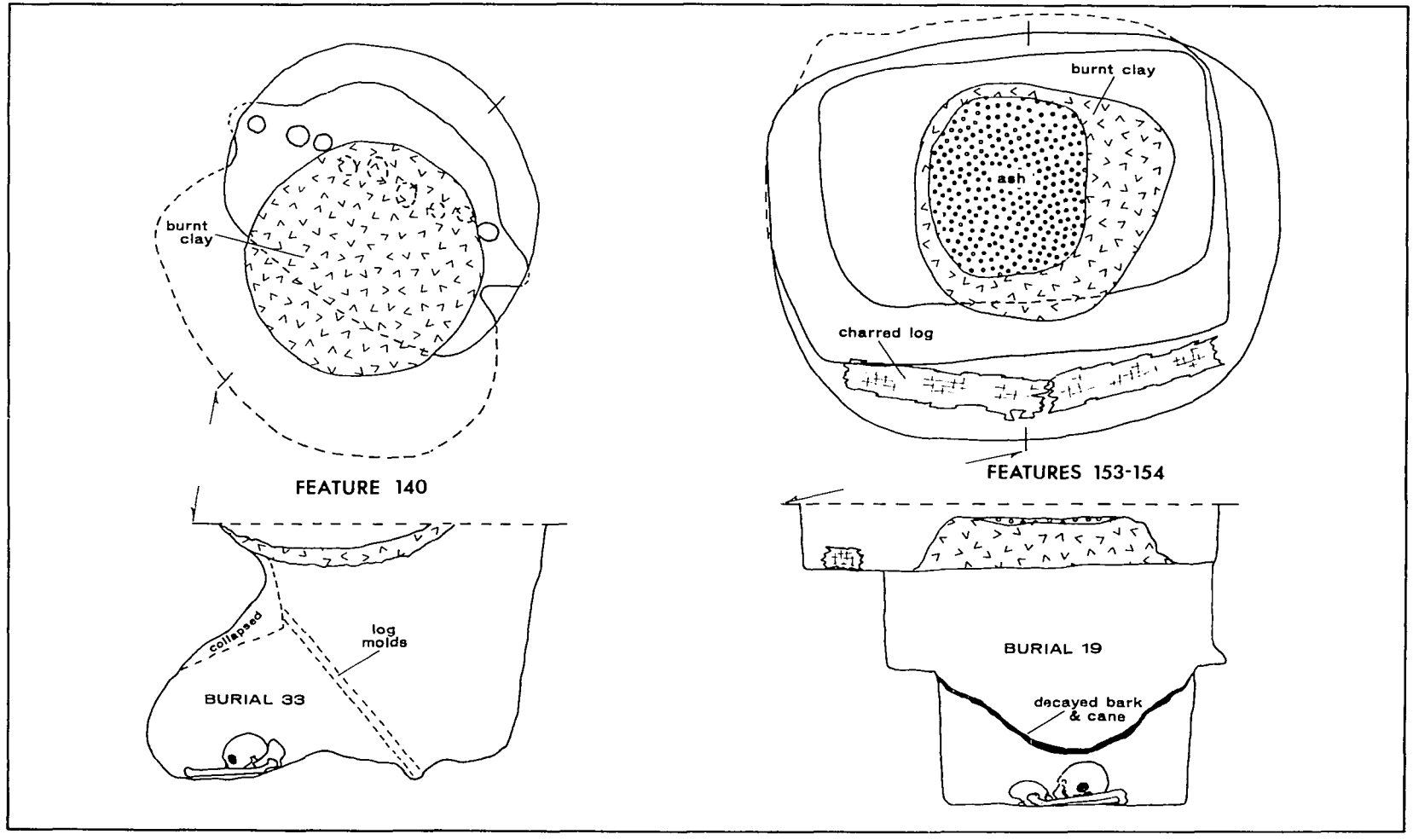

FIGURE 16
Features 140, 153, and 154 at $Bn^{V}29$.

PLATE LXXVIII
Feature 140 (Hearth) Overlying Burial 33 at Bn^{V}29.

PLATE LXXIX
Feature 153 (Large Pit) Containing Feature 154 (Hearth) at Bn^{V}29.

Houses at the Garden Creek Site ($Hw^{v}7$)

Excavations by the Research Laboratories at the Garden Creek site were restricted primarily to the two remaining mounds, $Hw^{o}1$ and $Hw^{o}2$. The village area around $Hw^{o}2$, designated $Hw^{v}8$, was not explored. The village area around $Hw^{o}1$, designated $Hw^{v}7$, was tested to some extent immediately east of the mound. Here, a section measuring 100 by 100 feet was stripped of plowed soil and the features recorded and excavated (Fig. 17). An additional area of 30 by 35 feet was opened a short distance to the east of the above excavations after plowing had turned up charred timbers and burnt clay.

Numerous postmolds and refuse-filled pits and several burials were encountered in the village excavations. Two probable house patterns were located in the area immediately east of the mound and a definite house floor was found beneath the area of plowed-up refuse. The two house patterns nearest the mound were not clearly defined but appeared as clusters of postmolds roughly 20 feet square. Each had a pair of entrance trenches. In one instance the entrance was at the southwest corner, facing south; in the other it was at the northwest corner, facing north.

The house floor detected through plow disturbance turned out to be a clearly defined, shallow depression which measured 18 by 20 feet (Plate LXXX). The long axis ran northwest to southeast. Burned timbers, fragments of cane matting (Plate LXXXI), patches of ash, mussel shells, and animal bones were scattered over the floor. Also in the floor area were 3 burials, several refuse-filled pits similar to the ones at $Bn^{v}29$, and a central fire basin 4.8 feet in diameter. The postmold pattern

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PLATE LXXX
Pisgah House Floor at Hw^{v}7.

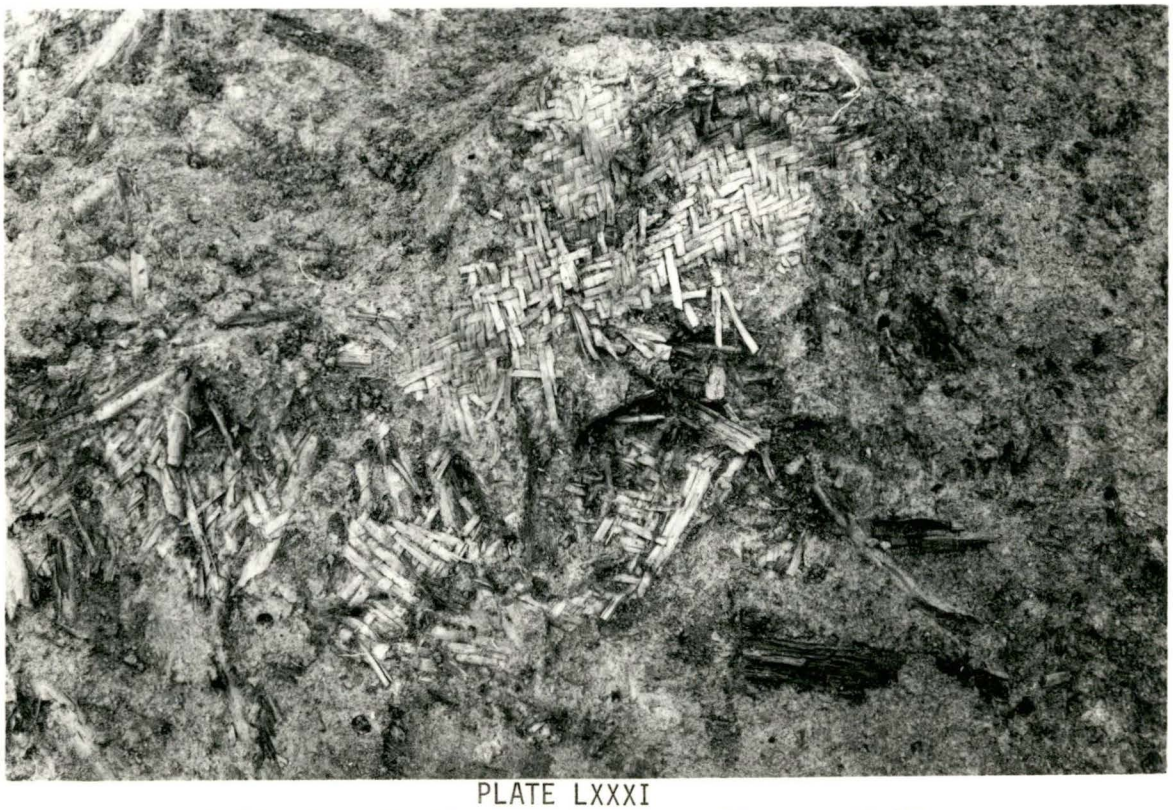

PLATE LXXXI
Split Cane Matting on the House Floor at Hw^{v}7.

associated with this floor was well defined only along the southeast side. Here, the postmolds were from 0.6 to 0.8 foot in diameter and were set at intervals of about 2 feet. Most of them contained the remnants of charred posts.

Another feature of importance was a segment of palisade trench which was traced across the northern portion of the village excavation and under the toe of the mound. After the mound was fully excavated, this palisade was recorded in greater extent (Fig. 19). It is discussed later, in the section on the excavation of Hw^{o}1.

Houses at the McCullough Bend and Cobb Island Sites, Tennessee

Richard Polhemus of Mascot, Tennessee has conducted test excavations at several sites along the Clinch and Holston rivers in northeastern Tennessee. At site T-71, located just downstream from McCullough Bend on an island in the Clinch River, he uncovered two Pisgah house floors. Since this site is partially covered by Norris Lake, work had to be conducted when the water was at a low level.

Polhemus summarizes the structural remains as follows:

> One structure was totally excavated; one was outlined but not excavated to the floor level. They were rectangular house structures with the floor level at least one foot below present ground surface. They each have an entrance on the northwest side. Postmolds (shallow and of small diameter) ring the perimeter of the house floor. Posts at the corners and on each side of the entrance are larger and deeper than the wall posts. There was a hearth in the center represented by a fired area on the floor. There was a clay seat or bench against the northeast wall. Interior postmolds were present (Polhemus, field notes on excavations at T-71, December 1965).

More detailed descriptions of each structure also were included in Polhemus' field records.

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T-71 (McCullough Bend) House 1 December, 1965

Orientation: NW-SW; Entrance NW.
Number of posts: Wall 43; Inside 10
Average number of posts to a side: 9.5 (Small side 9;Large 11)
Average post diameter: 5" (Min. 3"; Max. 8")
Average post depth: 7" (Min. 4"; Max. 13")
Dimensions: 17'x16'
Entrance: Sloping side entrance, orientation NW.
Depth of floor below ground level: 13"
Wall remains: Possible melted daub around perimeter near post alignments.
Charred structural remains: None
Interior structures: Seat or bench 8" above floor level with sloping sides (Length 2' 6"; Width 2')
Associated artifacts: 1) Cobb Island Complicated Stamped sherds[3], grit tempered check stamped, 2) shell tempered cord marked and plain sherds, 3) large shell tempered loop handle, 4) large calcite bead, 5) bone awls, cut bird bone, 6) utilized flakes, 7) three whole projectile points and one fragment, 8) shell "hoe," 9) animal bone, shell, and stones, 10) celt
Charred Plant remains: Charred wood and charred nut (acorn)

T-71 (McCullough Bend) House 2 December, 1965

Orientation: Same as House 1
Number of posts: Not known
House dimensions: 15'x15'
Entrance: Sloping side entrance, orientation NW.
Depth of floor below ground surface: 12" to 13", plus that removed by cultivation.
Remains of walls: No sign of daub, melted or fired, near perimeter of the structure. This would seem to indicate walls of a more temporary nature than wattle/daub construction. Portions of the floor (where excavation was carried to the floor) were found to be burned red, but not enough to indicate a fire of more than a brief nature. No interior structures noted, although only a small portion of the structure has been excavated all the way to floor level.
Associated Artifacts: Grit tempered, Cobb Island Complicated Stamped pottery; shell tempered plain pottery; projectile point fragment; a little animal bone; no shell found.

Other features of Pisgah provenience noted at this site were "pits and hearths filled with quantities of fire broken rock, small Cobb Island sherds, and bone" (Richard Polhemus, personal communication).

---

[3]Polhemus' Cobb Island Complicated Stamped type is identical to Pisgah Rectilinear Complicated Stamped (see Chapter II, p. 25).

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At the Cobb Island Site (T-60) on the Holston River, another house floor of probable Pisgah provenience was partially excavated. The following is excerpted from Polhemus' field notes of December, 1964.

> Excavations were made south of test pit 1. Located partly standing burned daub wall. Found solid evidence that the floor of the structure (H-1) was 20-21 inches below present ground level. Much charred structure--bark, grass, wood, cane, etc., in good state of preservation. Collection of sherds was made off the floor. A projectile point was found. Structure is rectangular with definite enclosed corners.

A single burial, accompanied by two cord marked, shell-tempered vessels with strap handles, was found near the above structure. In the fill of this burial were nine Cobb Island Pisgah Complicated Stamped sherds (Richard Polhemus, personal communication).

The Garden Creek Mounds
($Hw^{O}1$, $Hw^{O}2$ and $Hw^{O}3$)

It already has been noted that the excavations of the Research Laboratories of Anthropology at Garden Creek were restricted to a thorough investigation of two of the mounds ($Hw^{O}1$ and $Hw^{O}2$) and to minor testing in one of the village areas ($Hw^{V}7$). A third mound ($Hw^{O}3$) was explored by George G. Heye of the Museum of the American Indian, Heye Foundation, New York in 1915. The location of the mound presently is marked by a small brick house.

From Heye's report, it could be determined with reasonable certainty that $Hw^{O}3$ (referred to by Heye as the James Plott Mound) was built in pre-Pisgah times. A layer of stones used to cover the initial surface of the mound (Heye 1919: 35-43 and Plate II) constituted the only resemblance to Pisgah mound building methods. It is quite possible, however, that some of the burials found in the mound represented

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intrusive Pisgah interments.

The descriptions of artifacts found in the general mound fill and in various mound and sub-mound features would lead this writer to speculate that the mound was a product of the Connestee, or possibly even of the earlier Pigeon, occupation at Garden Creek. Pottery sherds, for instance, were described as including "several short, knob-like legs of jars,"and "several bottoms of jars of the pointed type" (Heye 1919: 38-41). Heye concluded that "the mound was not designed for mortuary purposes." He believed, instead, that "it was used by the Cherokees in playing their ball game . . . to mark the limits of the ball field" (Heye 1919: 38-41).

The earliest investigations of Hw^{o}2 were conducted by A. J. Osborne in 1880 for Benjamin B. Valentine of the Valentine Museum, Richmond, Virginia. At that time, it was known as the Smathers' Mound. Osborne sank a test pit into the center of the mound and reported to Valentine that

> inside the mound was made of loose rich soil, except where the corpses lay, that was made of clay mortar and burned. It was 7 or 8 feet deep. In the center of the mound there were three buried one on top of the other, with about 1 1/2 feet of soil between--and so on all over. These bones were nearly all decayed. I could only tell where they lay by the clay [shell] beads (Osborne's report regarding opening of mound on George Smather's land, Haywood Co., North Carolina, 1880).

The heavily eroded remains of Hw^{o}2, which measured approximately 110 by 150 feet across and 4 feet high, were in the process of being leveled for fill dirt when the Research Laboratories began excavations in 1965. These excavations, completed during the 1966 field season, uncovered portions of two early mound stages and an intact house pattern on the pre-mound surface. Ceramic and other remains associated with

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the early building phases were predominately of the Connestee culture. A Connestee pit, intrusive into mound stage 1, was dated A. D. 805 ± 85 years (Geochron Laboratories No. GX0593). Pigeon and Swannanoa sherds, and some pre-ceramic artifacts, were found in the mound fill, but these all were determined to be incidental inclusions and not related to the period of mound building (Bennie Keel, personal communication).

Pisgah postmolds, features, and burial pits (Osborne's burials probably were Pisgah also) intruded into and through the mound stages. The burials totaled 8, consisting of 2 infants, 1 child, 2 adolescents, and 3 adults. Six of these were simple pit interments and 2 were shaft-and-chamber burials. Intrusive Pisgah postmolds were numerous, but no definite patterns were discerned. It could not be determined whether the Pisgah people used this mound as a substructure or whether it was simply in the area of their later village activity. When Osborne investigated the mound in 1880, it was estimated by him to be 7 or 8 feet high (see above quotation). This, together with the stratigraphy of the marginal mound profiles, would indicate that there had been additional construction above the two stages revealed by the Research Laboratory excavations.

Three possibilities are open. Either the mound was not used for ceremonial purposes during the Pisgah period but was simply in the area of the village; it was re-used during the Pisgah period in its existing form as a ceremonial substructure; or it was enlarged during the Pisgah period. The latter alternative seems most probable in view of the density of Pisgah features in the mound area proper. This density was roughly equivalent to that in $Hw^{o}1$, a definite Pisgah construction.

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Hw^{o}1, the largest of the Garden Creek mounds (Fig. 2), was excavated in its entirety by the Research Laboratories during the summer and fall months of 1965, 1966, and 1967. It is not certain whether Osborne dug into this mound during his explorations of 1880. His correspondence with Valentine states that permission to dig could not be acquired (records Relating to the Affairs of the Valentine Brothers, 1879-80's: 46 and 49). A narrow trench-like disturbance in the center of the mound, penetrating to the bottom, may nevertheless have been the work of Osborne or of one of the Valentine brothers. A roughly circular disturbance, adjacent to the above mentioned pit, was dug by local citizens at a more recent date (Fig. 18).

In 1919, George G. Heye described Hw^{o}1 as follows:

> The Richard Plott mound is conical in form and averages eighty feet in diameter by eighteen feet in height. On the sloping side of the mound many potsherds and broken chunkee stones of quartz were found. As before mentioned, in the center of the mound grows an old apple tree. Fifteen feet west of it lay the remains of a burial, consisting of many human bones and a shell bead that had been exposed by plowing. On the same site, but nearer the base of the mound, a deposit of charred acorns and nuts was discovered, and in several places masses of charcoal were seen. This superficial examination was made during a preliminary survey of the valley, when the presence of growing crops made excavation impracticable. During our sojourn the owner of this mound informed us that several human skeletons had been unearthed in plowing its surface (Heye 1919: 37).

In 1965, the heavily eroded and plowed-over mound stood about 7 feet high at the center and measured roughly 150 feet in diameter (Plate I). The initial excavations were in the form of 2 five-foot wide test trenches which were begun well off the mound periphery. They approached the center from the northeast and southeast (Plate LXXXIII). These trenches were excavated only to the base of the plowed soil. Deep cuts into the remaining mound structure were avoided, as they would have

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PLATE LXXXII
$Hw^{o}1$ at the Beginning of Excavations in 1965, Looking North.

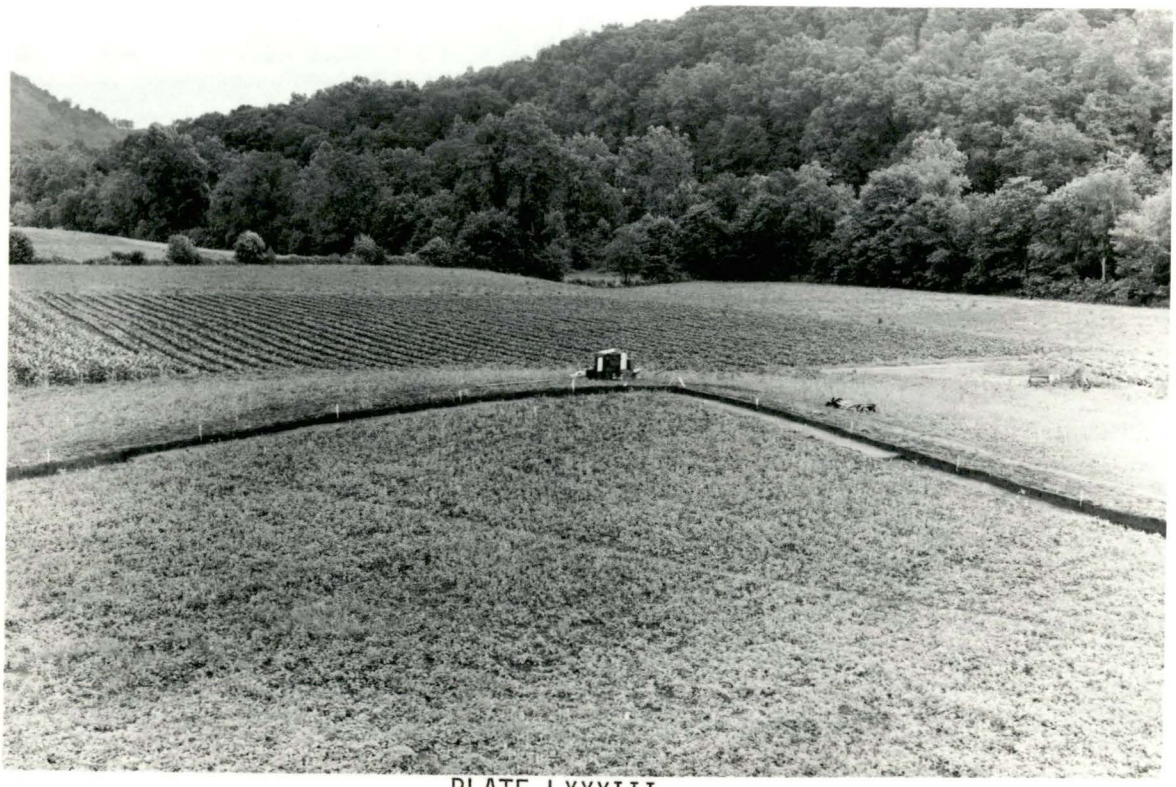

PLATE LXXXIII
$Hw^{o}1$ with Preliminary Trenches, Looking West.

PLATE LXXXIV
Hw^{o}1 After the Removal of Plowed Soil on East Side of Mound in 1965.

PLATE LXXXV
Hw^{o}1 in 1966, at the Level of the First Mound Stage.

PLATE LXXXVI
Structure A on Floor 2 at Hw^{o}1, Looking South.

PLATE LXXXVII
Profile of Basket-Loaded Mound Fill at Hw^{o}1.

mutilated any extant floors.

When the initial trenches were completed, the remaining portion of the summer was devoted to clearing the plowed soil from the northeast and southeast slopes of the mound and from an area on the eastern periphery (Fig. 17 and Plate LXXXIV). This work revealed sections of two eroded floors (Fig. 17 shows 3 floors; this resulted from Floors 1 and 1-A being interpreted at that time as two distinct construction phases), as well as a ramp area and a number of intrusive postmolds, pits, and burials. The overall mound conformation was found to be roughly rectangular with the long axis running east-west and with the ramp facing east.

Even though the margins of Floor 2 had been cut away by erosion, the greater parts of three structural patterns could be detected. These consisted of two house patterns and an enclosure (Fig. 18). At least seven burials also originated from this floor. Structure A consisted of an outer wall pattern which measured approximately 28 feet square (Plate LXXXVI). The posts were about 0.6 foot in diameter. Three larger inner support postmolds measured from 1.6 to 2 feet in diameter. A fourth support postmold was probably removed by the digging of the most recent pot hole (noted above). Structure B measured 15 feet square. The outer wall postmolds were about 0.6 foot in diameter. In two instances they cut through posts of Structure A. Two pairs of entrance wall trenches were associated with this structure. One pair protruded from the middle of the north wall, and another from the northeast corner of the east wall (Fig. 18).

The enclosure extended around the outer limits of the mound summit (Fig. 18). Because of the loss of much of this marginal area through

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erosion and plowing, the postmolds of this enclosure usually were encountered at lower levels than Floor 2. At the corners, particularly at the northwest corner, the pattern was lost altogether. A gap in the pattern on the east side, in line with the ramp, probably represents an entrance.

In the village area immediately surrounding the mound, there were abundant postmolds (see p. 190) and a number of shallow basin-shaped pits, presumably borrow pits for clay used in the mound construction (Fig. 17). These pits seemed to be concentrated around the toe of the mound. The presence of sherds from the same vessels in several different pits suggests that some of the pits had been open at the same time. One such pit (Feature 10), which was located about 30 feet from the southeast toe of the mound, was dated by radiocarbon at A.D. 1435 ± 70 years (Geochron Laboratories No. GX0595).

During the 1966 season, mound outwash zones were removed and the remaining plowed soil was stripped from the mound proper and from a narrow perimeter around the base, thereby isolating the entire mound structure. Following this, the half of the mound to the right of the R100 line (i.e., the northeast and southeast portions) was excavated to the level of Floor 1 and 1-A. Plate LXXXV shows the mound at this stage of excavation, near the end of the 1966 season. Clearly visible in this photograph are the two depressed areas which overlay the collapsed pre-mound earth lodges. The fill has been removed from the exposed portion of the depression over Earth Lodge 1 (on the left adjacent to the profile), but the fill has not yet been excavated from the depression over Earth Lodge 2 (rectangular dark patch to the right). The only construction feature originating from the surface of Floor 1 was a

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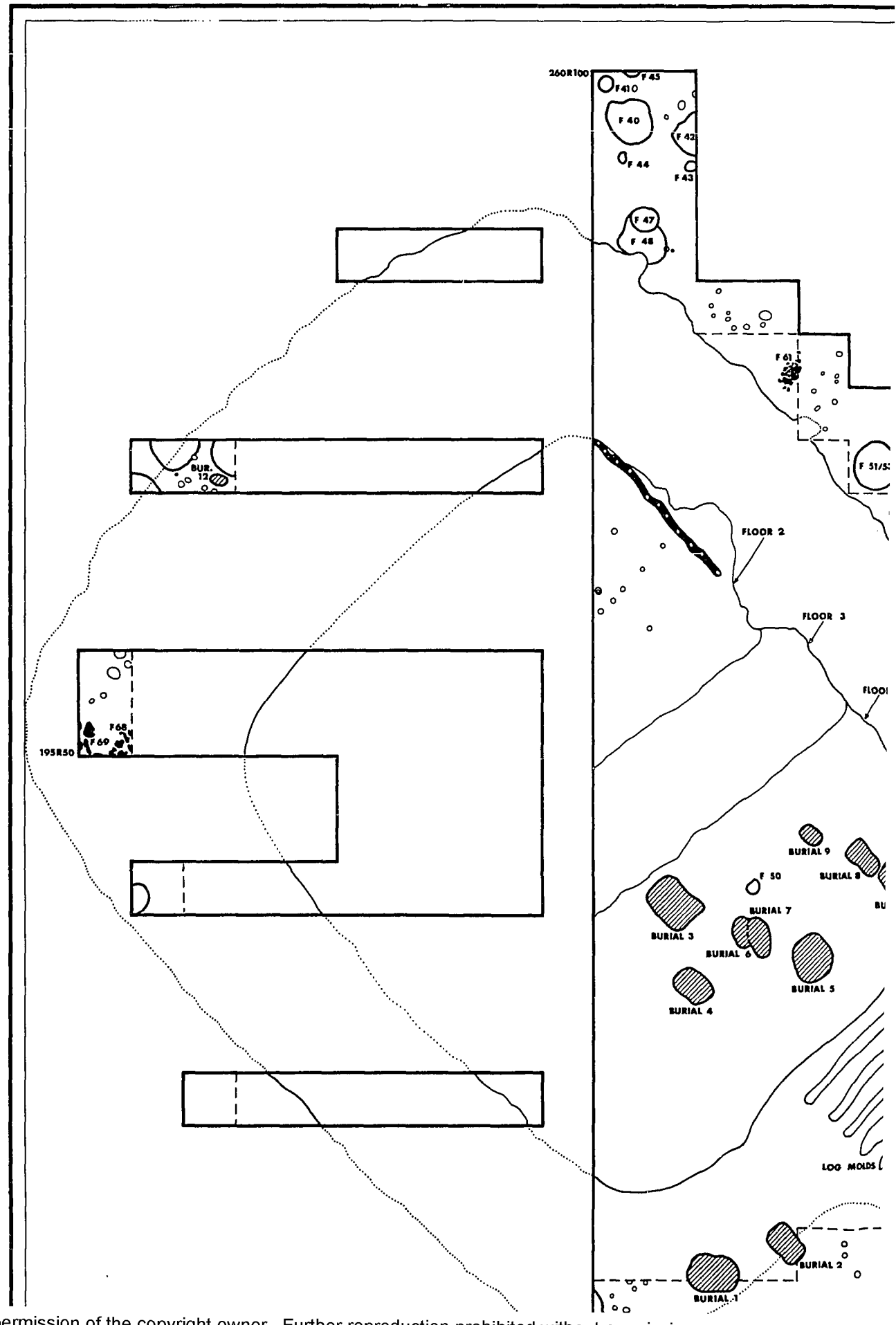

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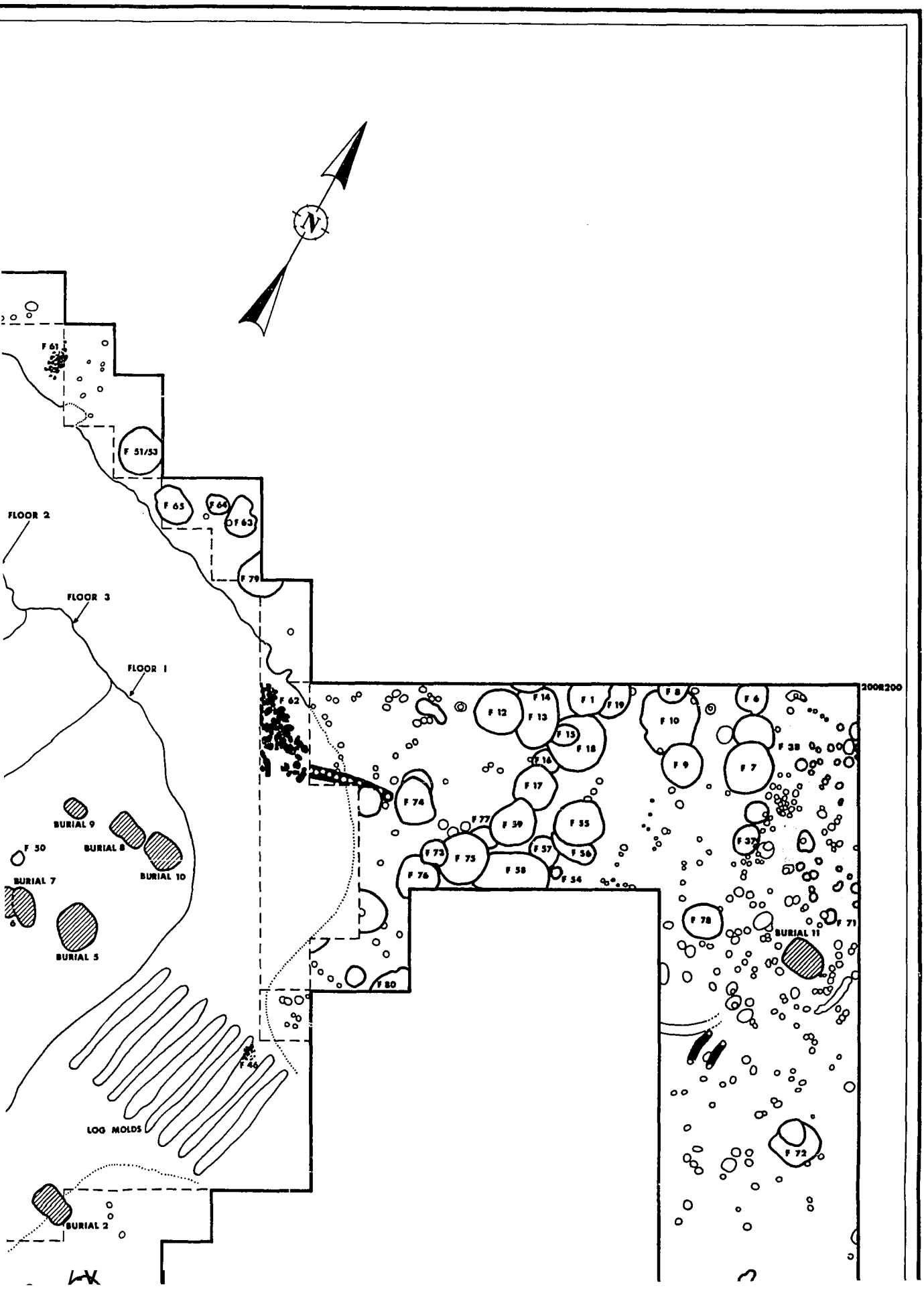

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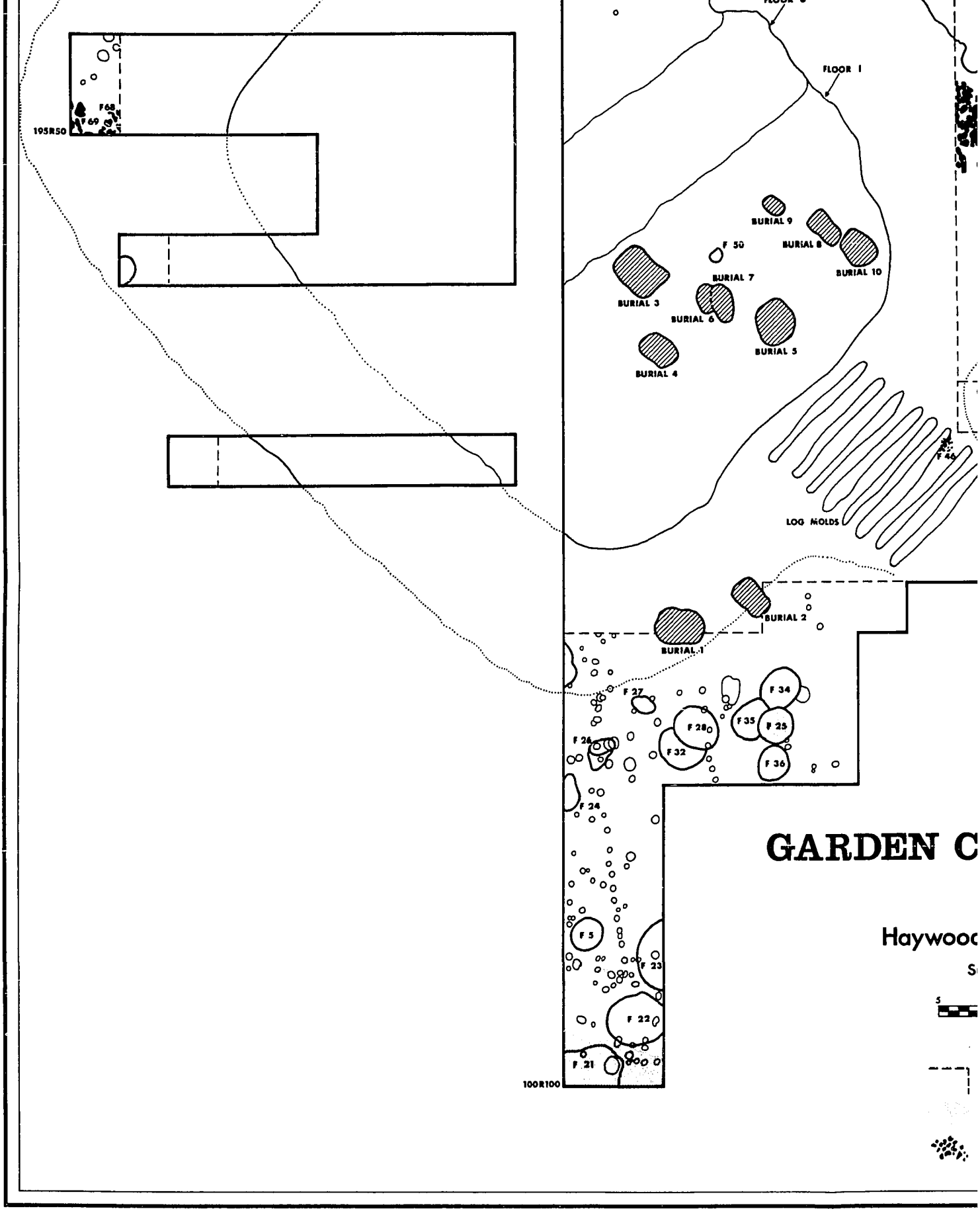

FIGURE 17

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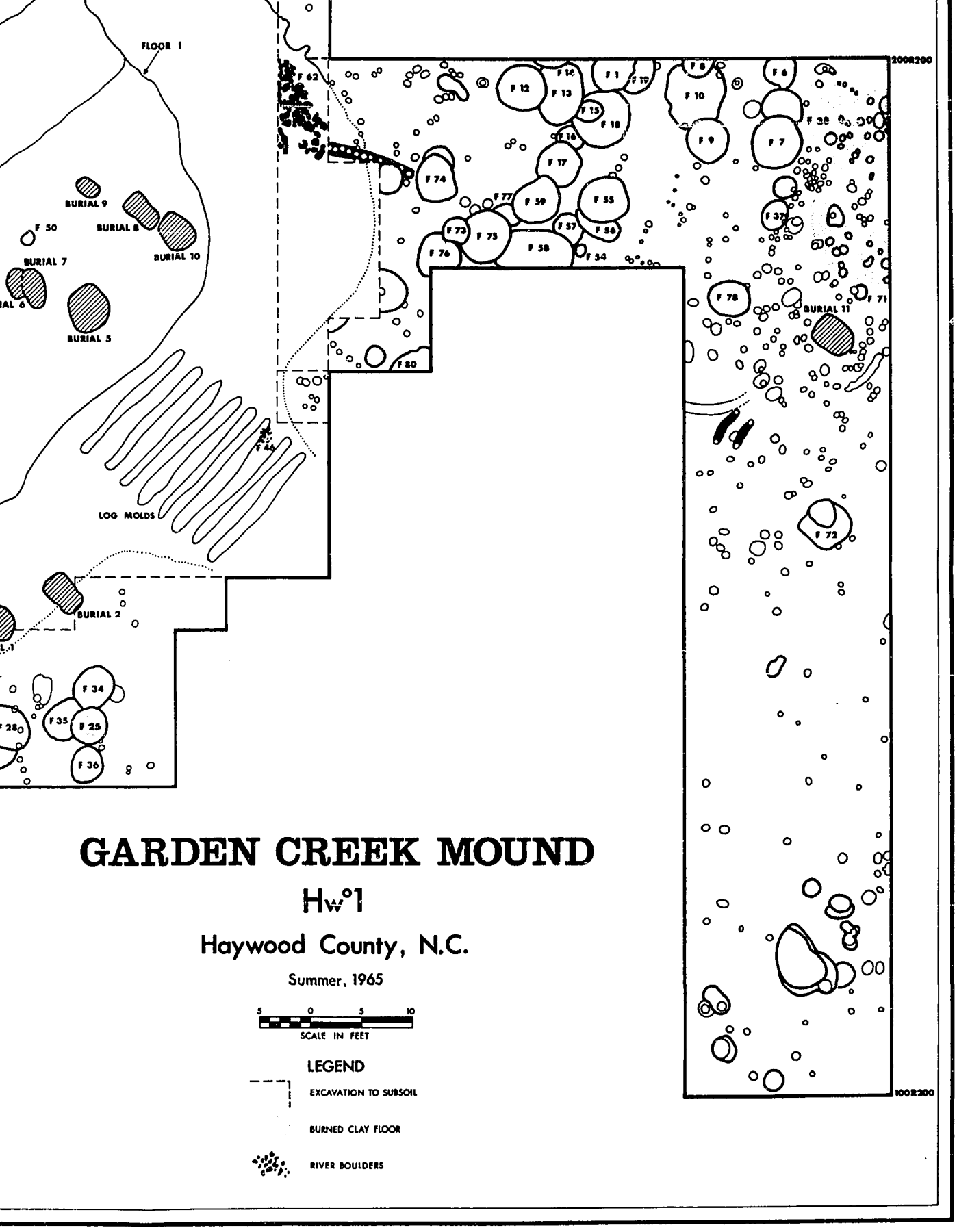

FIGURE 17

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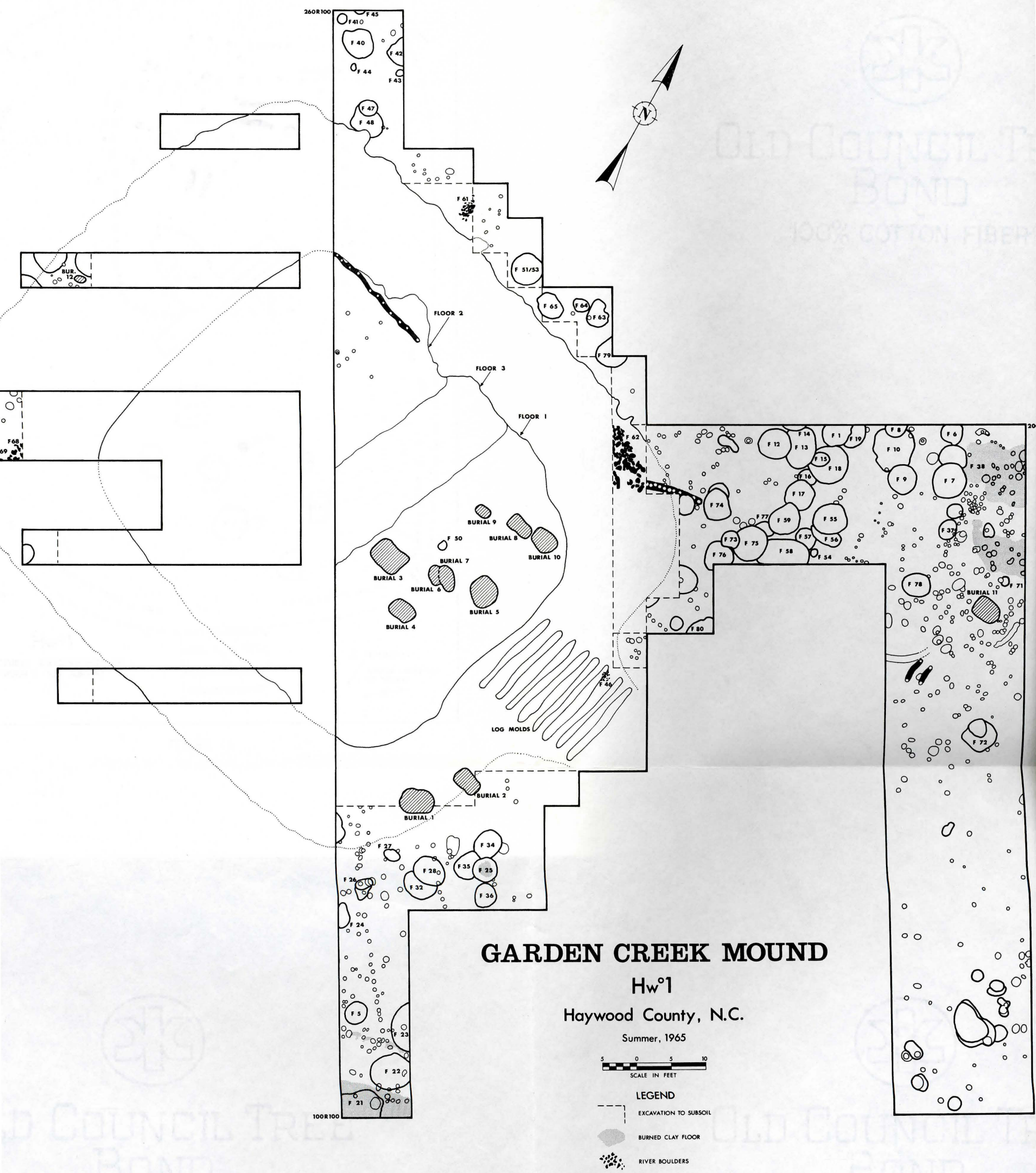
GARDEN CREEK MOUND
Hw°1
Haywood County, N.C.
Summer, 1965
SCALE IN FEET
LEGEND
EXCAVATION TO SUBSOIL
BURNED CLAY FLOOR
RIVER BOULDERS
260R100
100R100
FLOOR 1
FLOOR 2
FLOOR 3
LOG MOLDS
BURIAL 1
BURIAL 2
BURIAL 3
BURIAL 4
BURIAL 5
BURIAL 6
BURIAL 7
BURIAL 8
BURIAL 9
BURIAL 10
BURIAL 11
BUR. 12

FIGURE 17

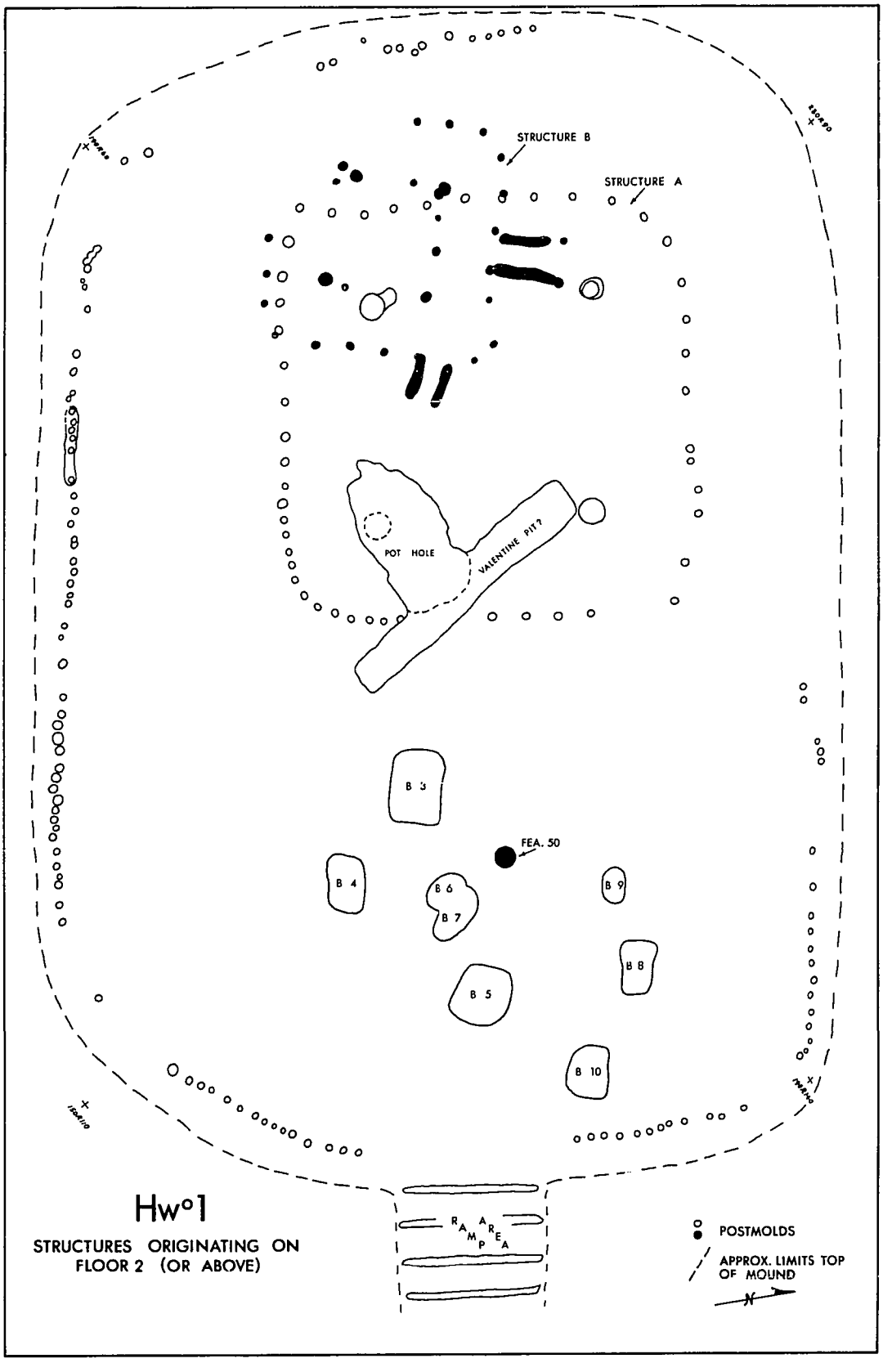

FIGURE 18

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single wall trench 18 feet long (Fig. 17).

The ramp leading to the surface of Floor 1 was defined more clearly in 1966. In addition, the lower two steps of a later and more heavily used ramp were found just to the northeast of the first ramp. The later ramp was wider than the first and probably had led to a surface considerably above either of the extant floors (Plate LXXXV).

The previously mentioned mound outwash which was removed during the 1966 season consisted of two major zones. The outer of these (Zone B in Fig. 21) was composed of slumped earth from erosion which had taken place after the abandonment of the mound. This was thickest on the northeast and southeast slopes and was relatively barren of artifact remains. The inner zone (Zone A) was composed of refuse and earth which had been thrown and/or washed down from the last period of use of the mound surface. This deposit was thickest on the northwest or back side of the mound. In it was found material of the historic period, including glass trade beads, metal objects, Qualla Series pottery, ash, and burnt clay. All of this could be attributed to a terminal use of the mound by the Qualla occupation. A charcoal sample from Zone A was dated A.D. 1745 $\pm$ 65 years (Geochron Laboratories No. GX0729).

In 1967, the excavation season lasted from early June until late November. Much of this time was spent in removing the clay cap of Floor 1 and the mound fill which underlay Floors 1 and 1-A (Fig. 21). The cap was of relatively sterile yellow clay; the fill was composed of dark-colored soil which had been brought in from the village area. The latter contained occasional sherds and other midden debris. Basket loading was clearly evident throughout these zones (Plate LXXXVII).

When the last of the mound fill had been removed, several important

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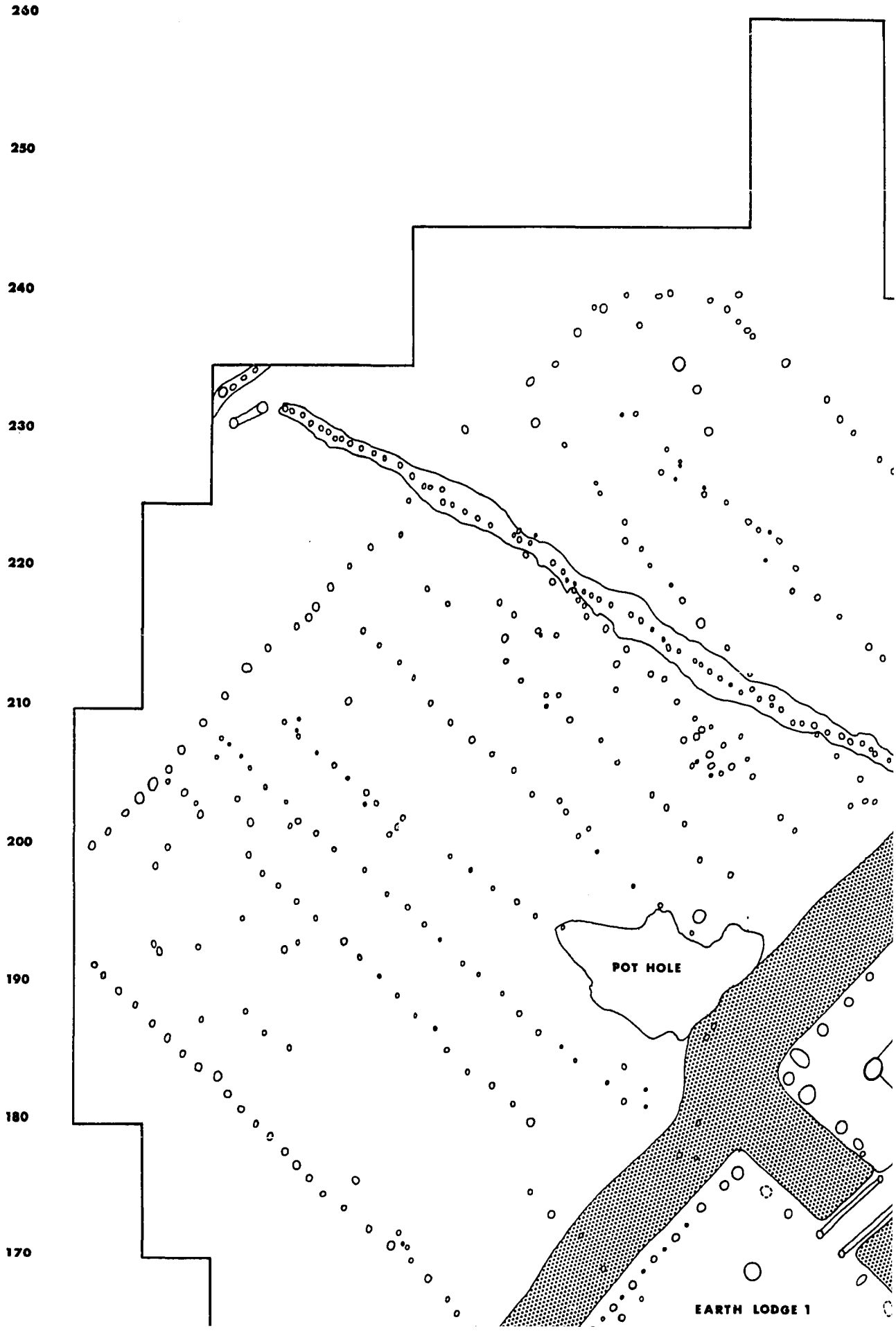

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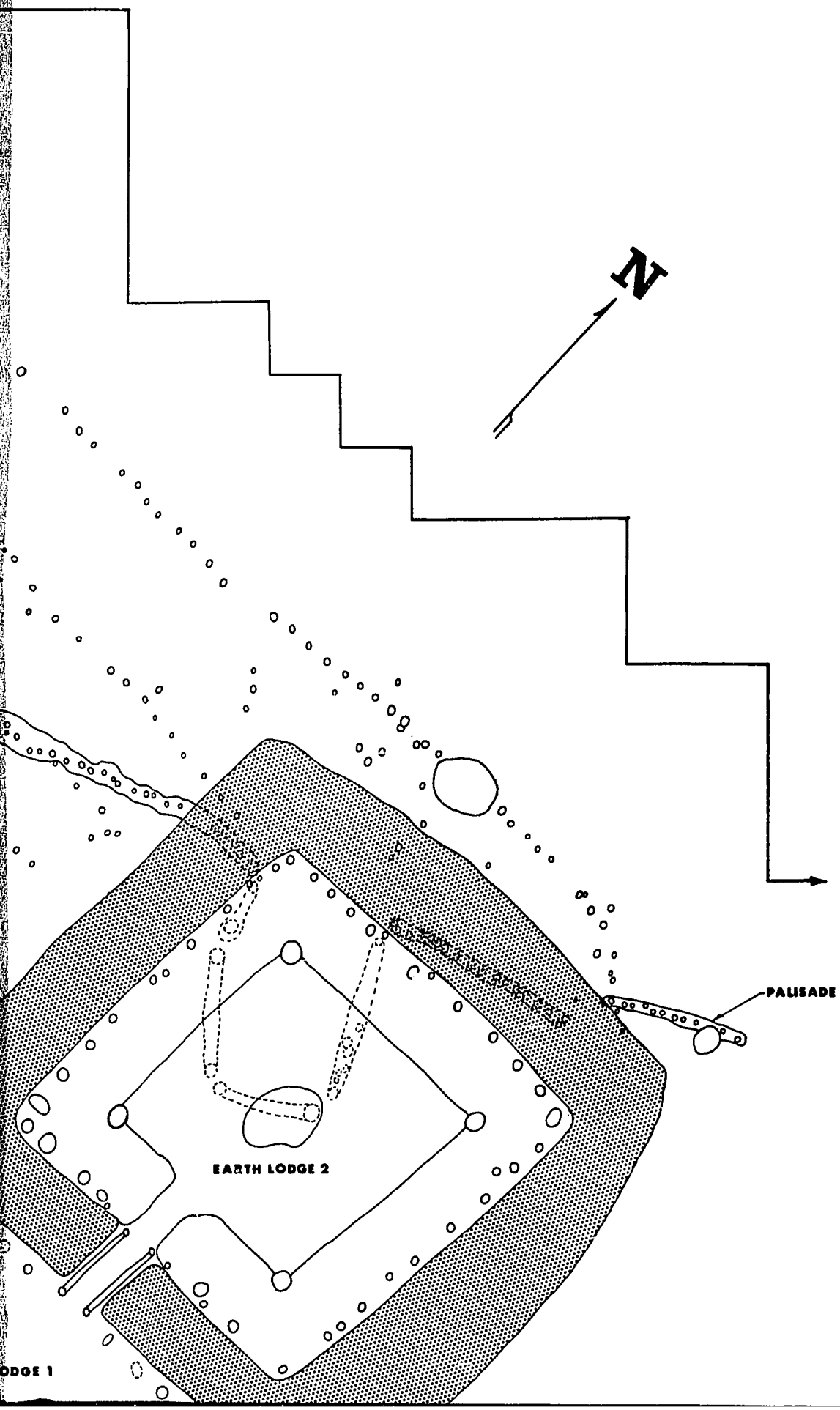

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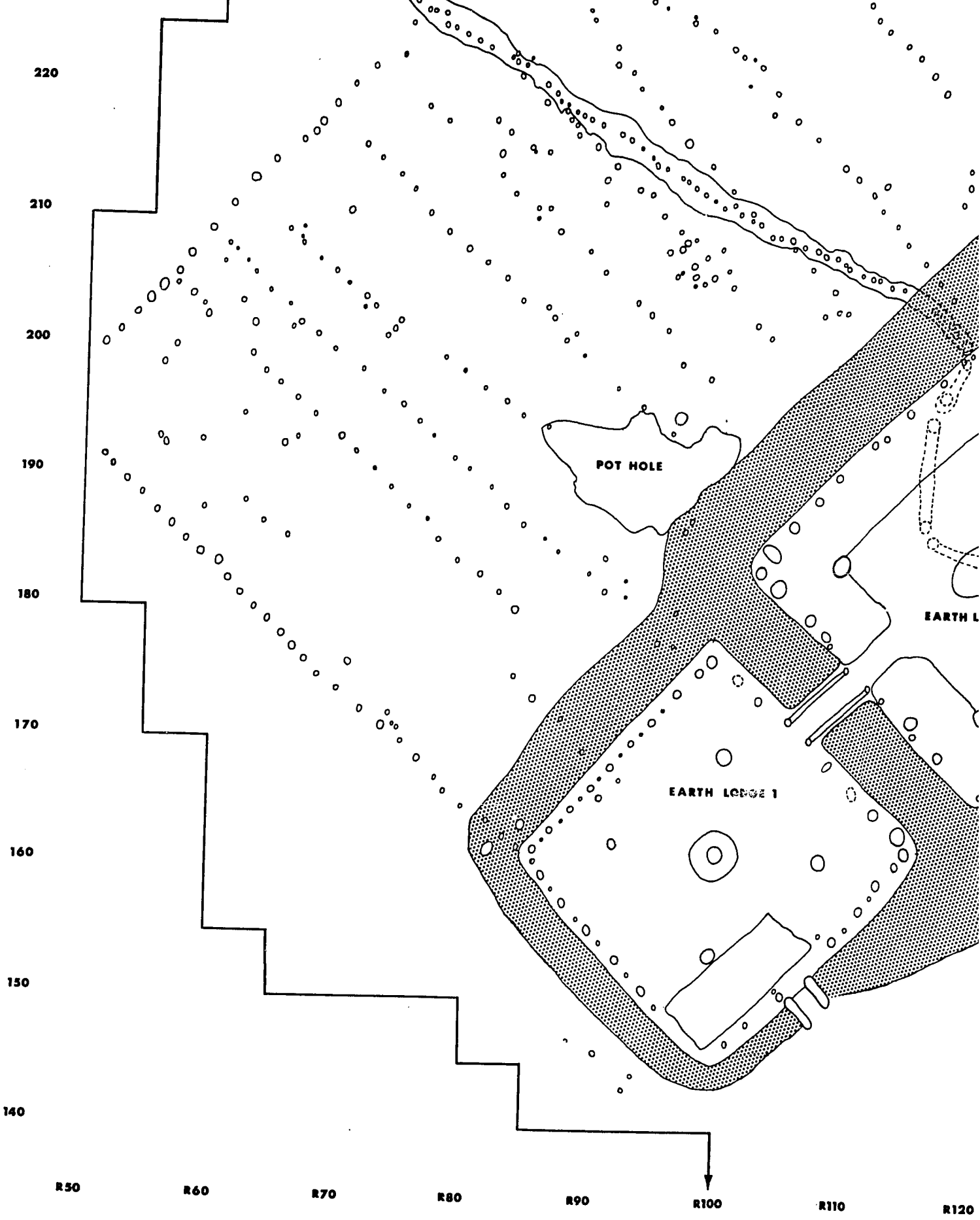

FIGURE 19

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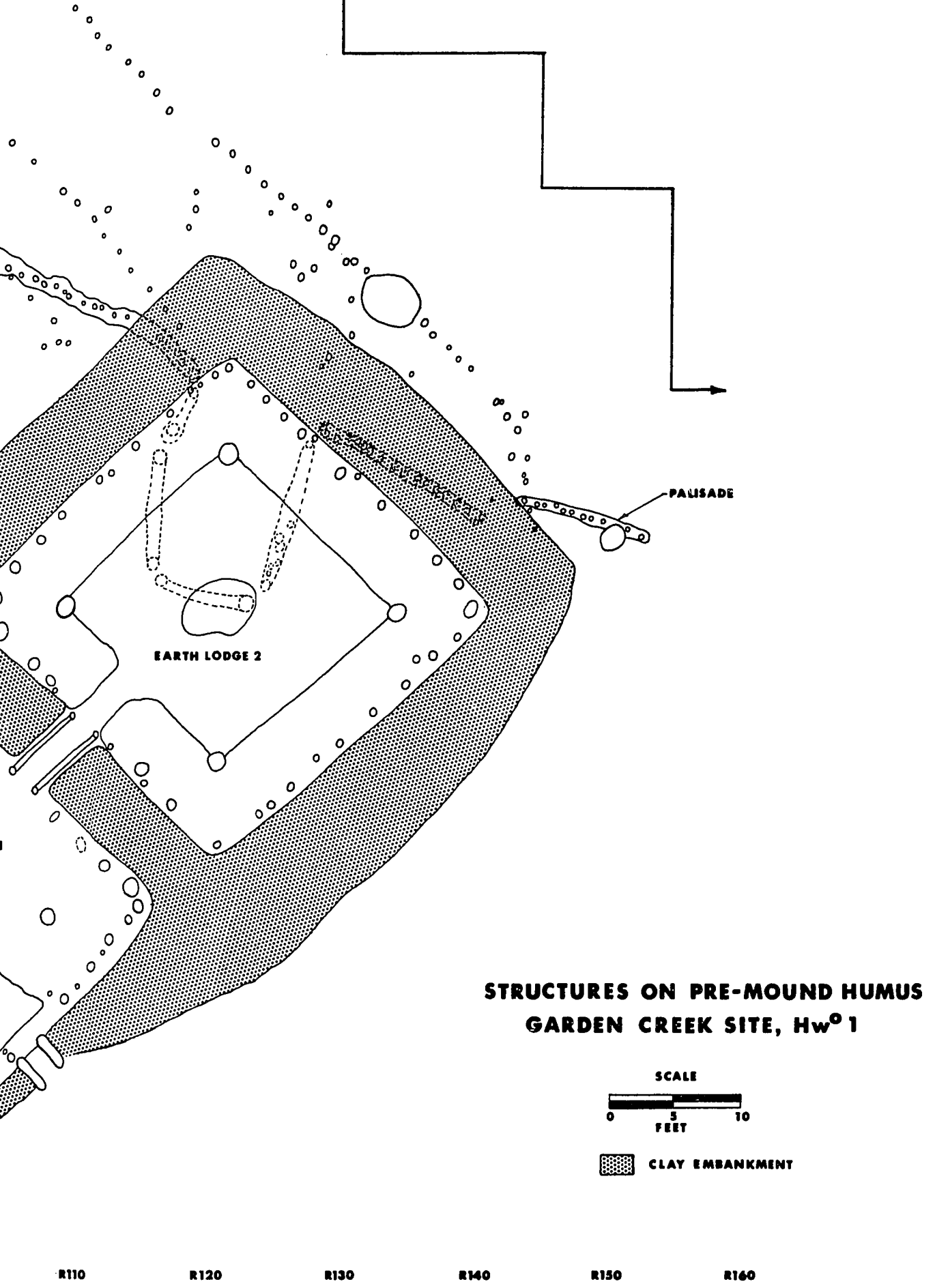

GURE 19

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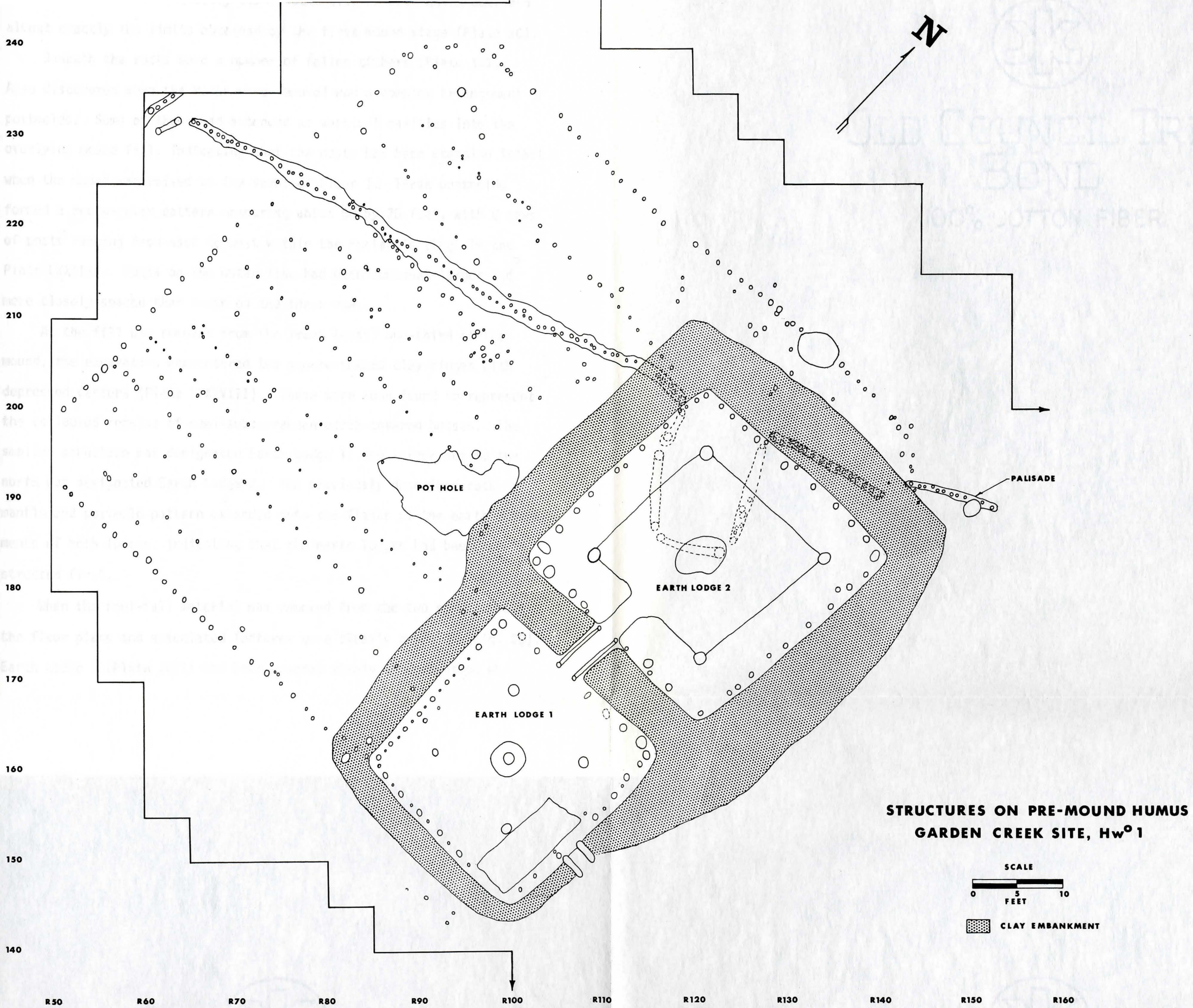
N
240
230
220
210
200
190
180
170
160
150
140
POT HOLE
EARTH LODGE 2
EARTH LODGE 1
PALISADE
R50
R60
R70
R80
R90
R100
R110
R120
R130
R140
R150
R160
STRUCTURES ON PRE-MOUND HUMUS
GARDEN CREEK SITE, Hw°1
SCALE
0
5
10
FEET
CLAY EMBANKMENT

FIGURE 19

pre-mound structural features were revealed. A concentration of rocks, discovered during the first summer at the northeast corner of the mound, was found to underlie the entire back (west) two-thirds of the mound (Fig. 19; and Plates LXXXVIII, XC and XCI). These river cobbles and boulders were rather uniformly distributed over an area which outlined almost exactly the limits obtained by the first mound stage (Plate XC).

Beneath the rocks were a number of fallen timbers (Plate XCI). Also discovered when the rocks were removed was a complex arrangement of postmolds. Some of these had extended as vertical cavities into the overlying mound fill, indicating that the posts had been standing intact when the mound was raised to the level of Floor 1. These postmolds formed a rectangular pattern measuring about 50 by 70 feet, with 8 rows of posts running from east to west within the rectangle (Fig. 19 and Plate LXXXIX). Posts on the outer line had been somewhat larger and more closely spaced than those on the inner rows.

As the fill was removed from the front (east) one-third of the mound, the excavators encountered two square-shaped clay ridges with depressed centers (Plate LXXXVIII). These were soon found to represent the collapsed remains of semi-subterranean earth-covered houses. The smaller structure was designated Earth Lodge 1; the larger one to the north was designated Earth Lodge 2. The previously described rock mantle and postmold pattern extended onto the flanks of the earth embankments of both lodges, indicating that the earth lodges had been constructed first.

When the roof-fall material was removed from the two structures, the floor plans and associated features were clearly revealed (Fig. 20). Earth Lodge 1 (Plate XCII) had been erected within an excavation which

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measured roughly 24 feet square. This had been cut to a depth of 2.2 feet below the existing ground surface. A platform of clay 4.5 by 11 feet across and 1 foot high was left at the southeast corner. Four central support posts, which measured between 1 and 1.5 feet in diameter, stood approximately 8 feet in from the corners. Outer wall posts were set in the floor about 2 feet in from the limits of the excavation. These posts were alternately large and small, the large ones measuring about 0.8 foot in diameter and the smaller ones about 0.3 foot. A wall entrance trench was located on the west side and a central platform-hearth measured 4 feet in diameter. An interesting feature of the hearth was a narrow, carefully dug trough which surrounded the base of the platform and led to a sump located on the west side (Fig. 20). Remnants of several fallen timbers were found on the earth lodge floor, as were parts of at least three broken Pisgah vessels. Outside of this, the floor was relatively clean.

Earth Lodge 2 was located immediately to the north of Earth Lodge 1 (Fig. 20 and Plate XCIII). A connecting passageway between the two structures (Fig. 20) was evidence that both had been used, at least for a time, simultaneously. The supports of this passage were set in wall trenches, in the same manner as the outside entrance. The depression for Earth Lodge 2 was 30 feet square and 1.2 feet deep. An area in the center, roughly 17 feet square, was 0.6 foot deeper. This left a "bench" six feet wide around the wall. The height of the bench had been increased another 0.4 foot by the heaping upon it of clay excavated from the central area (Fig. 21). Impressions of split-cane matting were present in several places on the bench.

Four interior roof support molds measured from 1.1 to 1.6 feet in

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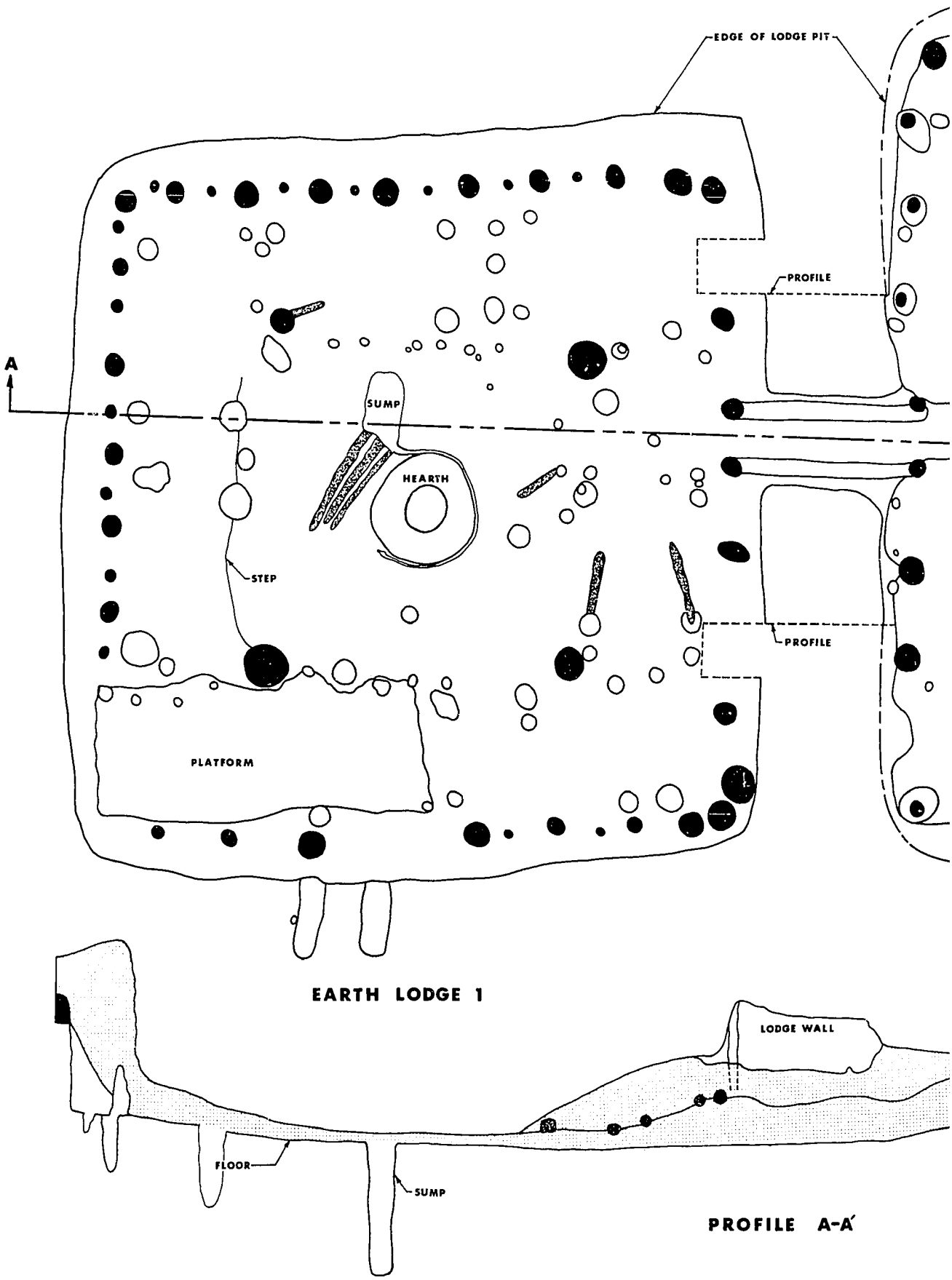

EARTH LODGE

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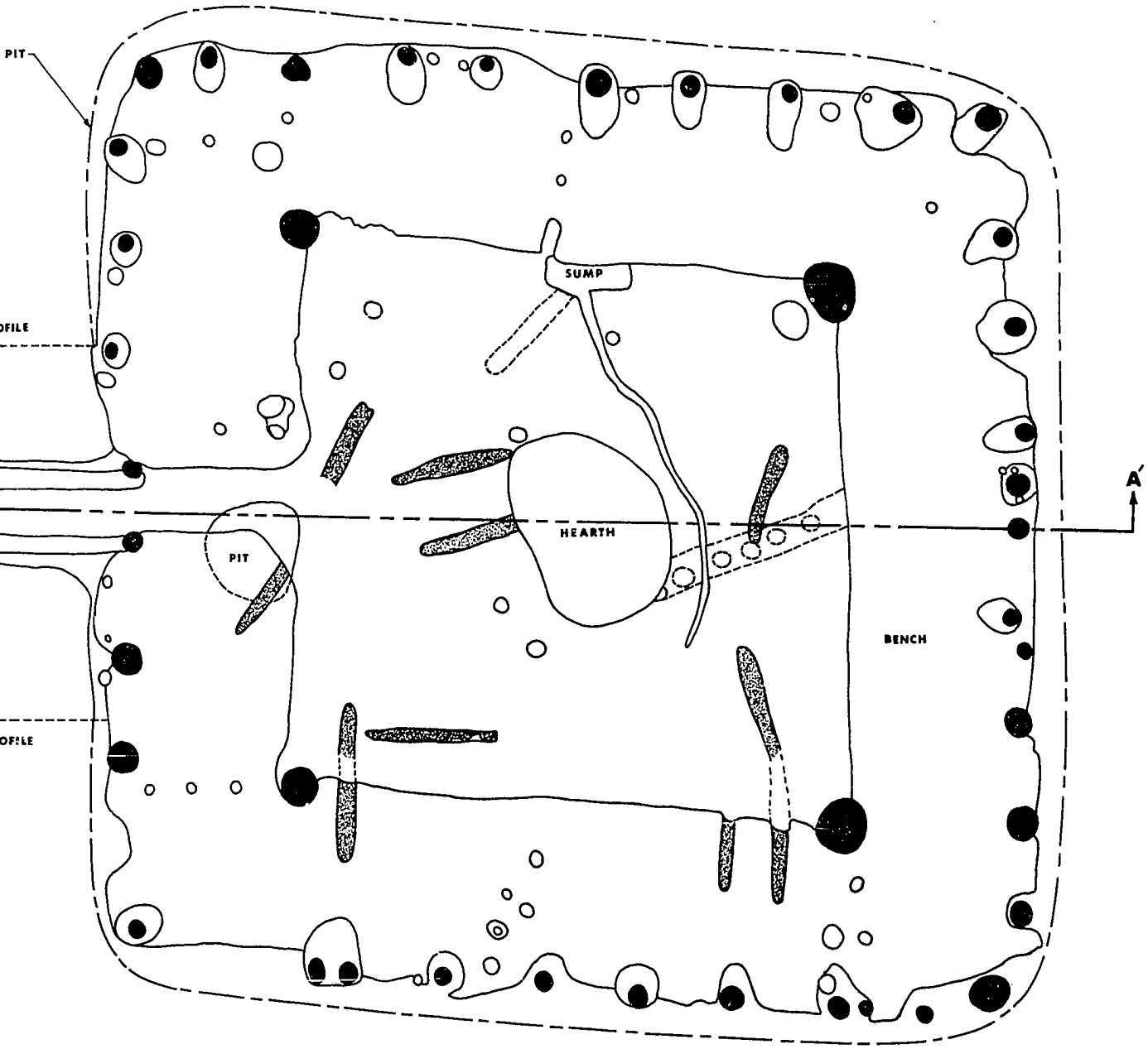
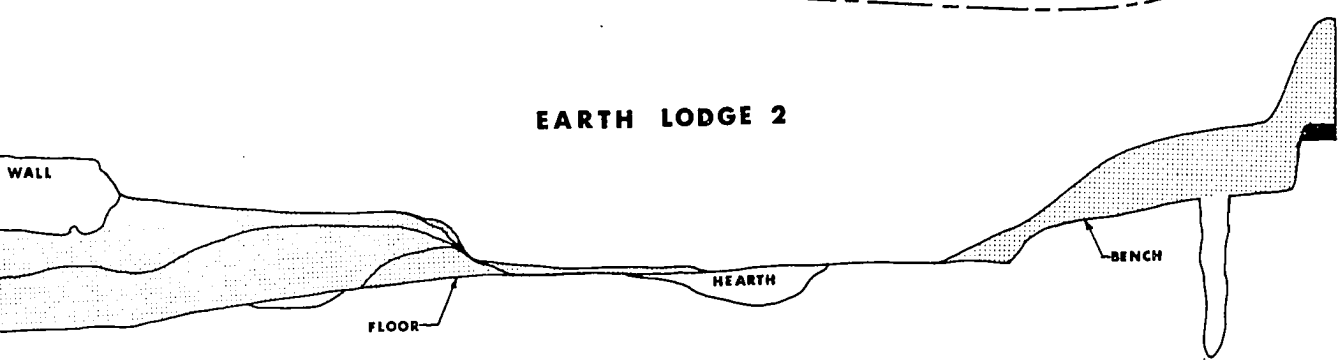


EARTH LODGE 2



A-A'

KEY

ROOF FALL

LOG IMPRESSIONS

HUMUS

LODGES

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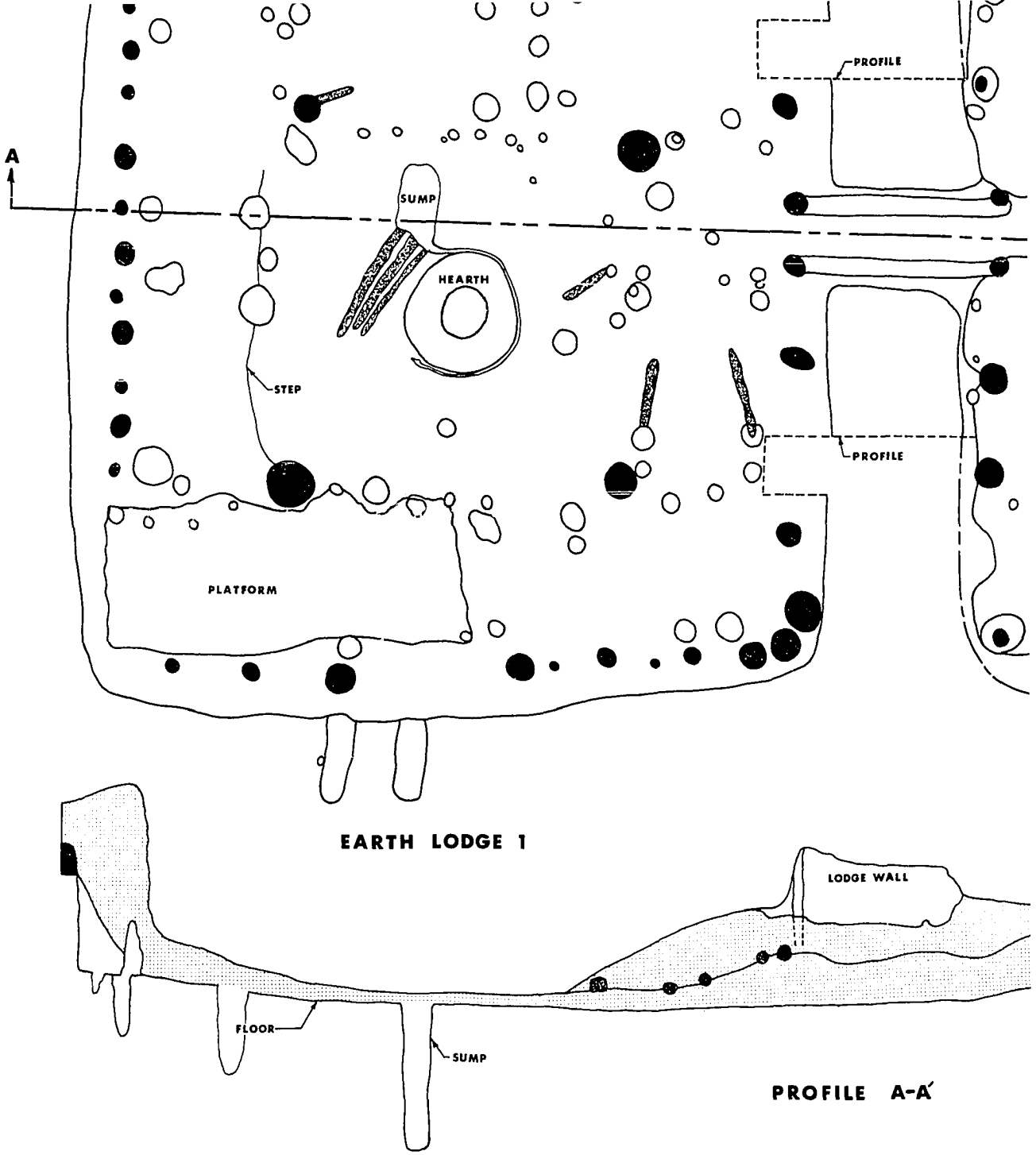

EARTH LODGE

GARDEN CREEK S

HAYWOOD COUNTY, N.C.

2 0 2 4
SCALE IN FEET
V.E. 2

FIGURE 20

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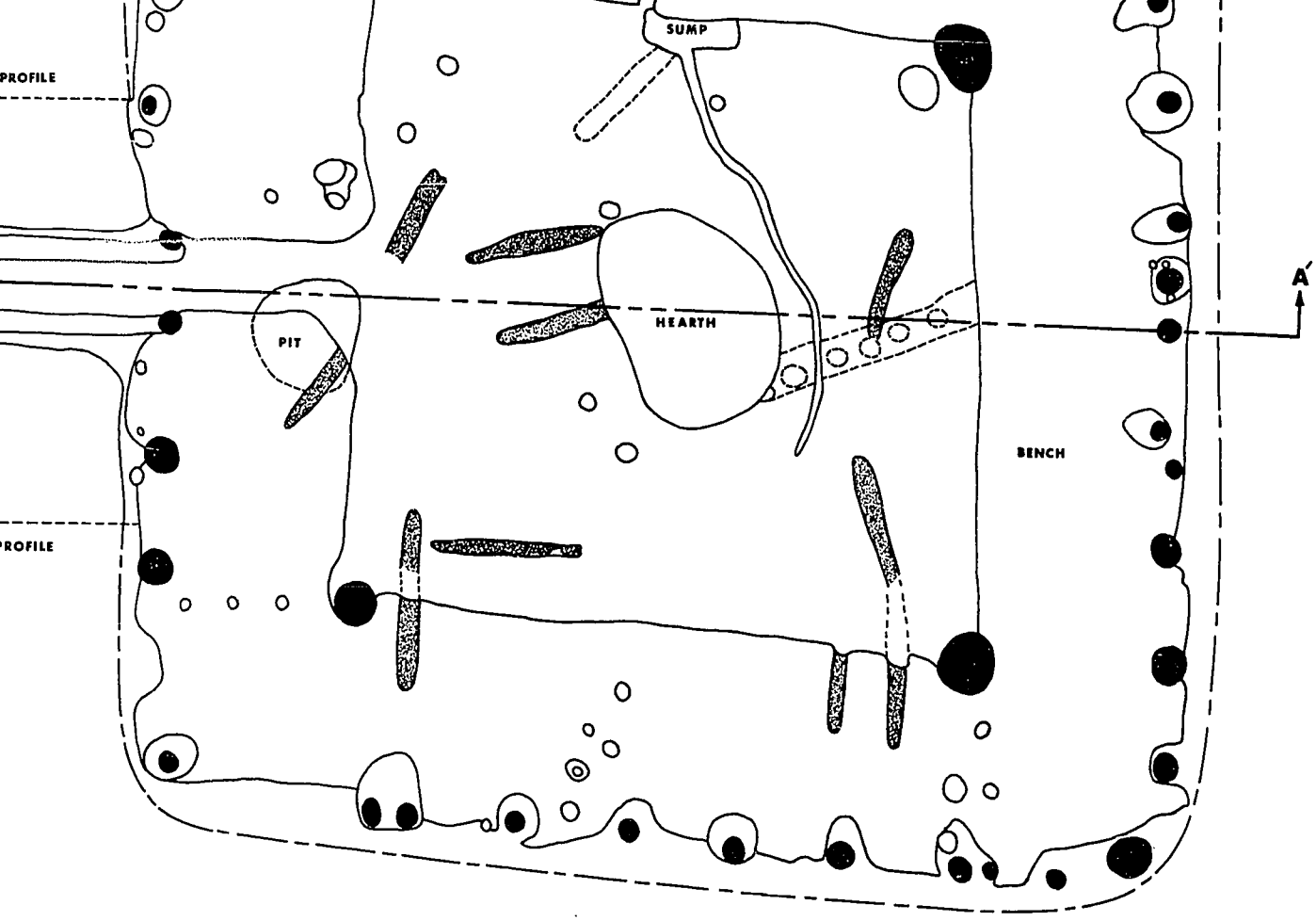
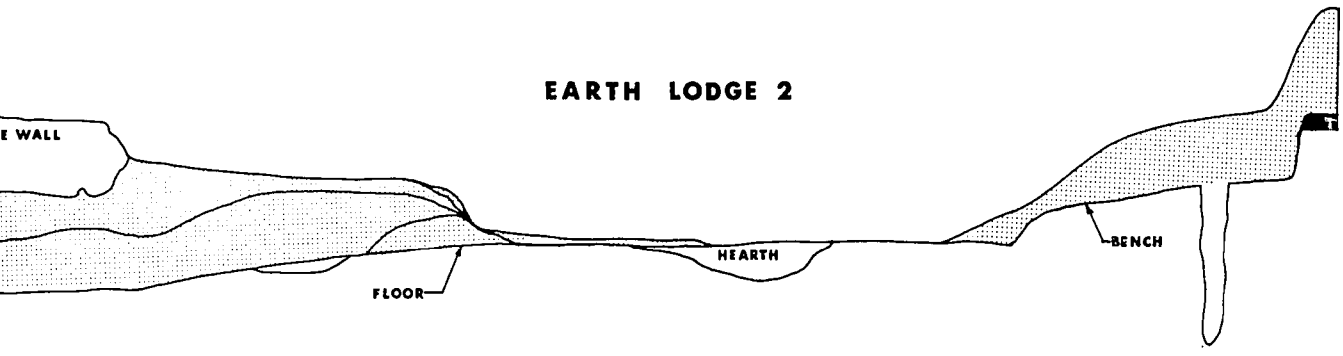


EARTH LODGE 2



E A-A'

KEY

ROOF FALL

LOG IMPRESSIONS

HUMUS

STRUCTURAL PATTERN

LODGES

EEK SITE, Hw°1

OUNTY, N.C.

2 4
N FEET
2

20

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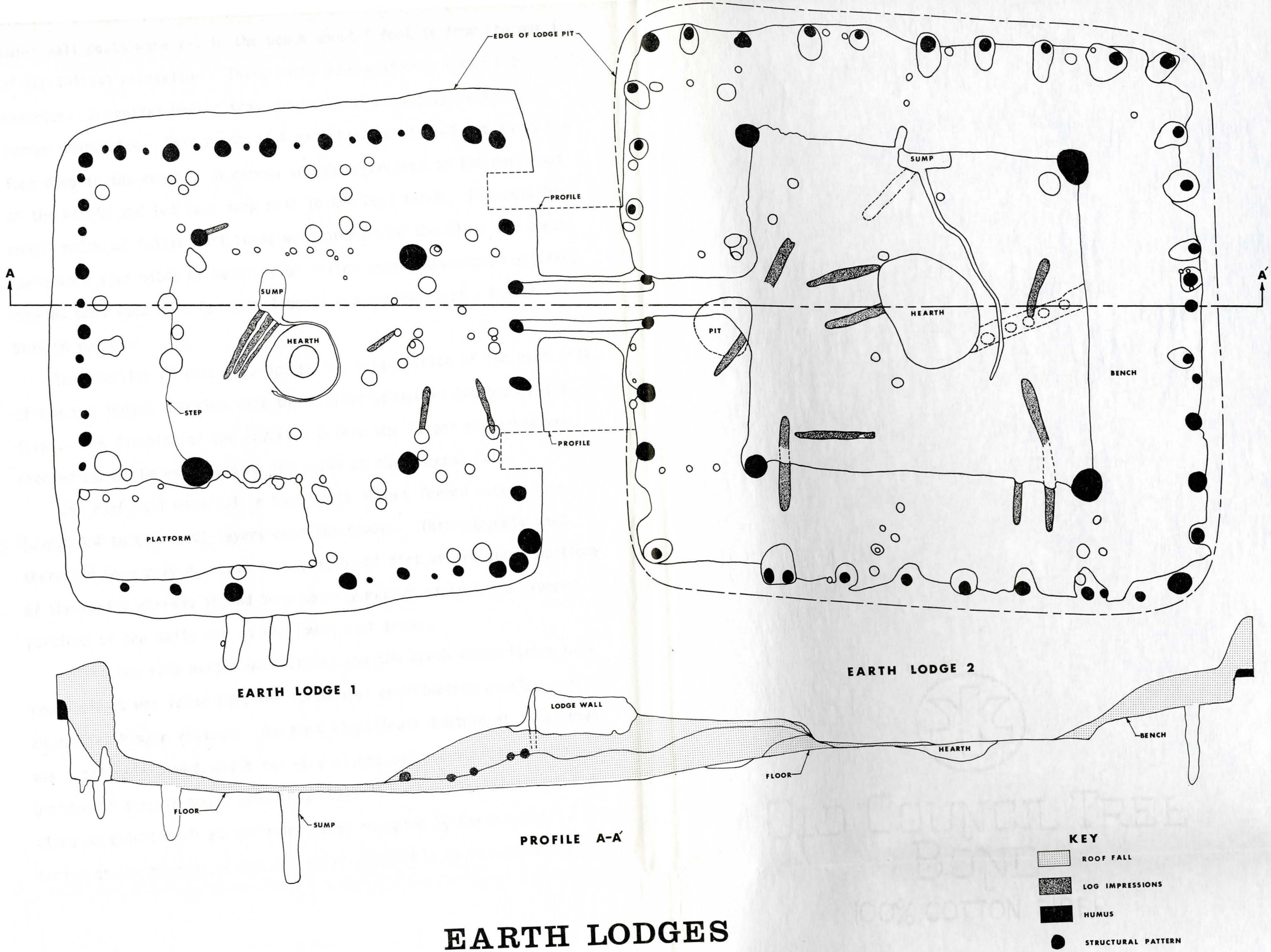

EARTH LODGES

GARDEN CREEK SITE, Hw°1

HAYWOOD COUNTY, N.C.

2 0 2 4
SCALE IN FEET
V.E. 2

FIGURE 20

diameter and were placed at points 8 feet in from the corners. The outer wall posts were set in the bench about 1 foot in from the margins of the initial excavation. These posts were uniformly about 0.8 foot in diameter. A central hearth area consisted of a roughly oval-shaped burned depression. This measured 4 by 6 feet across and was about 0.4 foot deep in the center. A narrow trough began just to the northeast of the hearth and led to a sump next to the west bench. Numerous horizontal molds of fallen roof beams were present on the floor and bench. There were also molds of sections of fallen cane. Associated artifact remains consisted of a few animal bones and a portion of a Pisgah Check Stamped vessel.

The profiles of cuts made across the intersection of the roof fill of the two lodges revealed that the smaller structure had been built first. The duration of the interval before the larger structure was erected cannot be estimated on the basis of the present data.

The roof-fall material in both earth lodges formed rather thin (about 0.4 to 0.6 foot) layers over the floors. This suggests that there had been only a sparse accumulation of dirt on the upper portions of the roofs, whereas it had been heavily massed against the exposed portions of the walls and on the lower roof areas.

After the rock mantle was removed and the earth lodge floors were troweled, it was found that the ceremonial architecture overlay part of an earlier Pisgah village. The most significant feature at this level was a palisade trench which ran at a slight angle across the north portion of the pre-mound area (Fig. 19). A rectangular bastion was defined on this trench at the point later occupied by Earth Lodge 2. The bottom of the bastion trench was still detectable in the earth lodge

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floor (Fig. 2). Parts of two other probable bastions of this palisade were recorded in the extreme eastern and western limits of the excavation.

Twenty-four burials were encountered in the excavation of $Hw^{o}1$. These originated on Floor 2, in the flanks of the mound at the stage of Floor 2 or later, and in the pre-mound humus. Others were intrusive through Floors 1, 1-A, and 2, having originated from higher levels. Chapter V should be consulted for additional information on the burials at $Hw^{o}1$.

A conjectural reconstruction may now be presented for the sequence of building activity at $Hw^{o}1$. First, on a portion of a pre-existing village area, a semi-subterranean, earth-covered structure was erected. After some unknown period of time, a second earth lodge was built adjacent to the original structure, and the two were then used simultaneously.

Following the erection of the earth lodges, and again after some unknown interval of time, a multicorridored arrangement of posts was set up at the rear of the lodges. Along the north side, the outer wall of posts came all the way to the northeast corner of the second earth lodge. In several instances posts were actually imbedded in the rear portions of the earth roof-coverings of both lodges. It is not known whether this elaborate arrangement of posts was covered with any type of roof. One guess is that there was some form of light-weight covering, consisting of straw or small branches. This would have created a large open-air structure, such as might have been used for public gatherings during the warmer months.

Either at a point when the earth lodges were becoming dilapidated,

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or when some socio-religious event signaled the need for a new form of ceremonial architecture, a layer of boulders was placed over the area previously occupied by the rows of posts. Some posts were left standing; fallen ones had rocks laid directly on them (Plate XCI).

Basketloads of soil were now brought in and heaped up on the area outlined by the rocks and by the remaining posts. This soil (labeled Zones F and G in Fig. 21) was collected in old midden areas and contained artifact remains from all previous occupations at the site. The fill was raised to nearly the height of the earth lodge roofs, and at that point a cap of clean yellow clay was spread over the top of the fill (Zone E in Fig. 21). At first, the clay abutted with but did not cover the top of the earth lodges. On this surface (Floor 1) a construction was begun, but only one wall was finished before the earth lodge roofs gave way. This created two large concavities on the front floor of the mound. When these depressions had been filled with more village humus, the old roof areas were covered with a thin cap of clay (Floor 1-A). This provided a clay floor over the entire raised surface, which at this time measured approximately 50 by 70 feet.

Before this surface could be put to any use, however, the earth lodges collapsed further, causing the dejected mound builders to add a completely new cap of clay over the whole surface. This layer (Zone D) was from 1.5 to 2 feet in thickness and was surfaced with a thin layer of white sand. Although the east end of this floor (Floor 2) continued to sag, it was stable enough to serve as the base for the first significant ceremonial activity. At least two buildings were erected at different periods on the more trustworthy western portion of Floor 2, a total of seven burial pits were dug on the eastern side, and a log

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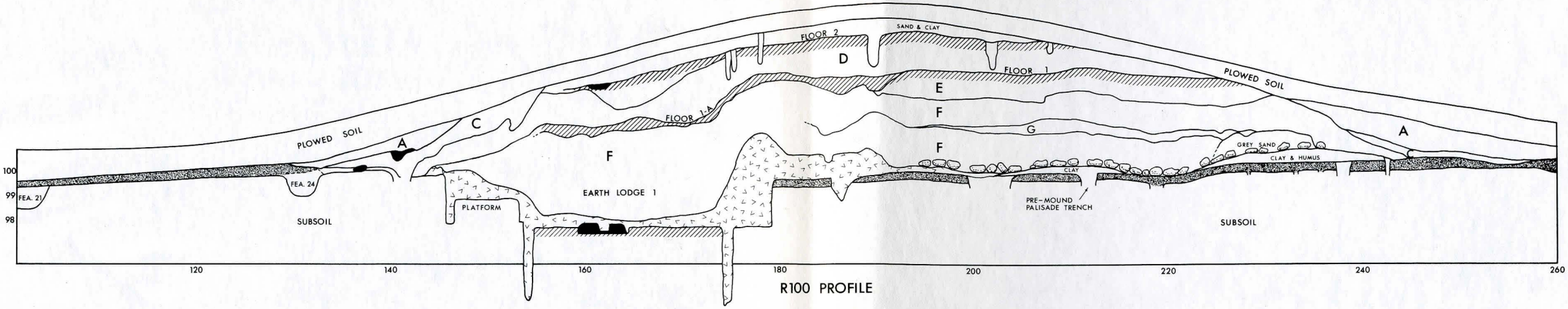
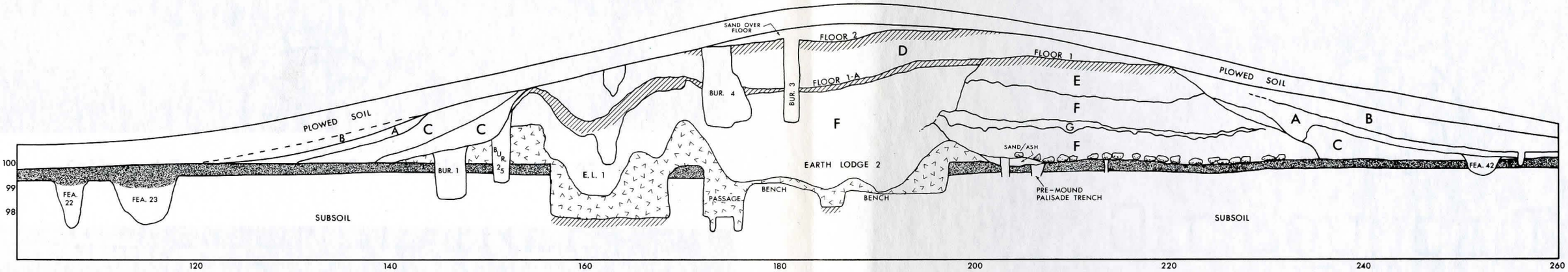
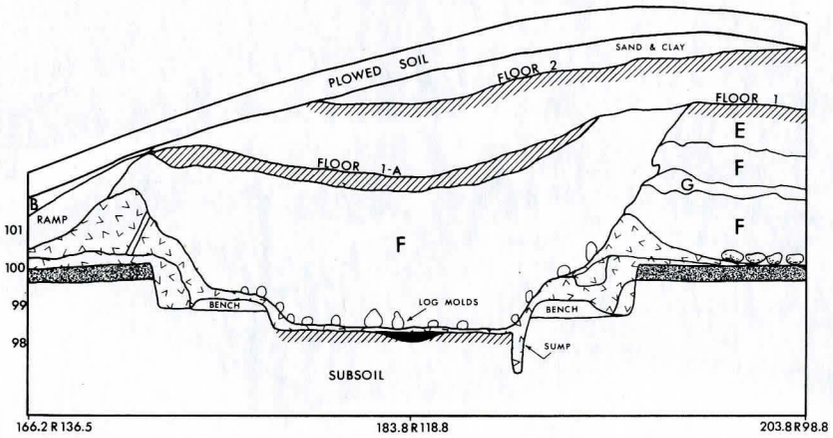


R100 PROFILE



R110 PROFILE



E.-W. PROFILE ACROSS EARTH LODGE 2

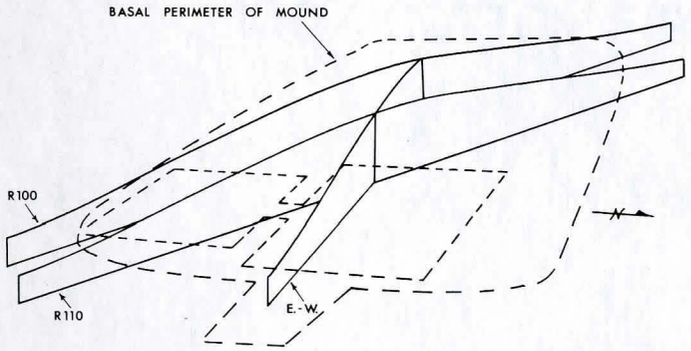
GARDEN CREEK MOUND
Hw° 1

HAYWOOD COUNTY, N.C.

LEGEND

- STRUCTURAL FLOORS
- ROOF-FALL OF EARTH LODGES
- PRE-MOUND HUMUS LAYER
- BURNT CLAY
- RIVER BOULDERS

- A MOUND OUTWASH (with refuse)
- B DARK MOUND SLUMP
- C GRAY-TAN MOUND FILL
- D YELLOW CLAY MOUND FILL
- E CLAY CAP OF FLOOR 1
- F DARK-LENSED MOUND FILL
- G GRAY-BROWN MOTTLED LAYER



ORIENTATION OF DEPICTED PROFILES

FIGURE 21

PLATE LXXXXVIII
Collapsed Earth Lodges and Rock Mantle at Bottom of $Hw^{o}1$.

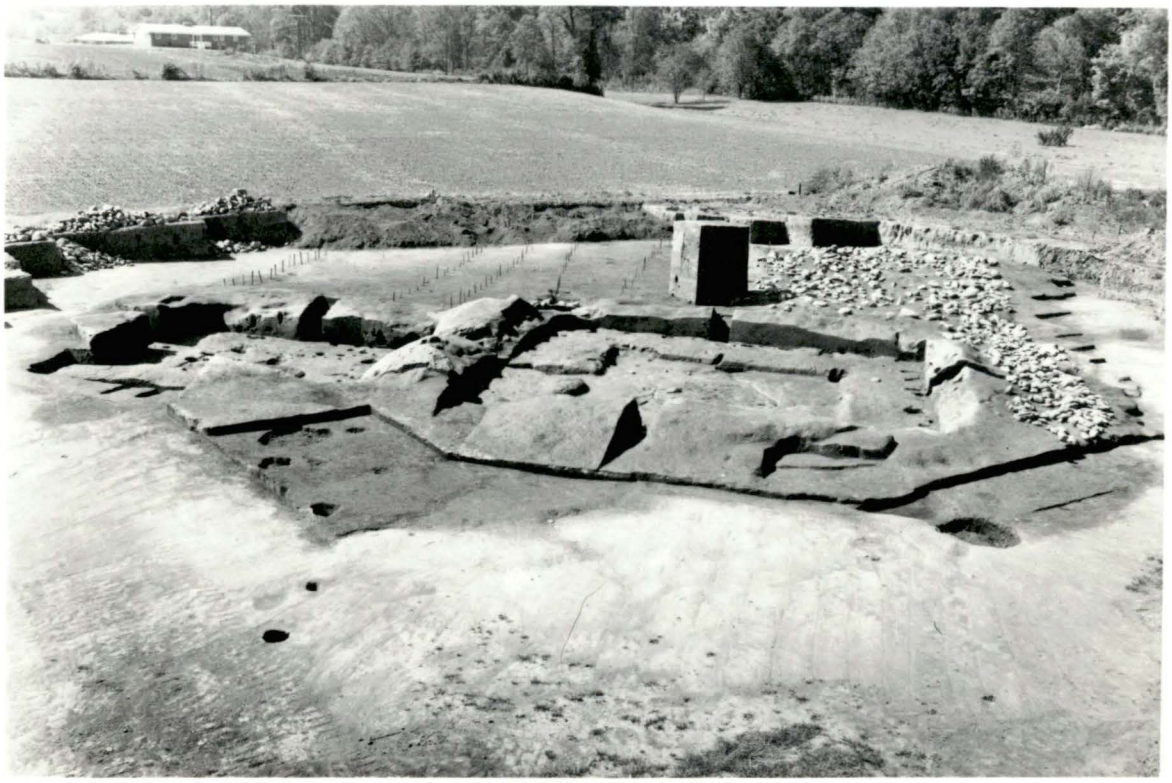


PLATE LXXXIX
Roof Fall Removed from Earth Lodges and Rock Mantle Partially Removed.

PLATE XC
Rock Mantle at Bottom of $Hw^{o}1$, Looking South.

PLATE XCI
Rocks Overlying Fallen Posts at Bottom of $Hw^{o}1$.

PLATE XCII
Earth Lodge 1 After Removal of Roof Fall, Looking West.

PLATE XCIII
Earth Lodge 2 After Removal of Roof Fall, Looking South.

enclosure was built around the entire top perimeter.

The mound probably went through several building stages subsequent to Floor 2. Its final use was during the Qualla period.

Additional Mounds Having Possible Pisgah Relationships

North Carolina

Pisgah ceramics have been found at other mound sites in western North Carolina, occuring either in surface collections or in material obtained in test excavations. In no case, however--excepting the Garden Creek Sites--could any of these mounds or any particular phase in their construction be attributed positively to the Pisgah culture. These sites (see Figs. 1 and 7) included the Nuquasee Mound ($Ma^{0}2$) and Cowee Mound ($Ma^{0}5$) on the Little Tennessee River in Macon County; the Sawnooke Mound ($Sw^{0}3$, probably the historic town of Nununyi) and the Birdtown Mound ($Sw^{0}7$) on the Oconaluftee River in Swain County; the Rogers' Mound (probably $Jk^{0}2$) located near the juncture of Cullowee Creek and the Tuckasegee River in Jackson County; the Kituhwa or Governor's Island Mound ($Sw^{0}2$) on the Tuckaseegee River in Swain County; and the Wells' Mound (specific location not known) on the Pigeon River a short distance from the Garden Creek site (site information obtained from files at Research Laboratories of Anthropology in Chapel Hill).

The number of Pisgah sherds in the collections from most of these sites is small, usually amounting to less than 5 percent. At the Sawnooke Mound, however, Pisgah sherds numbered 34 out of a total of 218 specimens surviving from excavations made by Edward P. Valentine in 1882 (sherds now in Research Laboratories collections). Valentine kept

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surprisingly good records for his day. He took special note of a layer of river boulders at the bottom of the mound. His description of this feature reads:

> The rocks were very large rolled stones from the river. This pile of stones reached from 3 ft. below the surface to the bottom of the mound and had there a base of 21 1/2 ft. diam.--they however were not supported but were pushed into this position with the earth of Mound.
>
> The laying of them was rough (Edward P. Valentine n.d. 9-10).

It is highly possible that a portion of the construction of this mound can be attributed to the Pisgah period.

All of the mound sites mentioned thus far are located in the central portion of western North Carolina on the Little Tennessee, the Ocona-luftee, the Tuckasegee and the Pigeon rivers. There seems to be little evidence to indicate Pisgah mound building in other areas. This lack of evidence may be due at least partially to incomplete surveys and limited excavations.

Cyrus Thomas (1894: 350) reported finding a mound in Buncombe County, "about 4 miles from Asheville." The site has not been located by the author, but since there is little or no evidence for historic period occupation on the Swannanoa it is possible that this was a Pisgah construction. Thomas described the internal features of the mound in the following manner.

> This mound is about 4 miles from Asheville on the bottom land, not more than 100 yards from the river, is circular, 80 feet in diameter, and 9 feet high. A wide trench cut through it from side to side and down to the natural soil brought to light the fact that it was built partly of stone and partly of earth. The core or central portion, to the height of 4 feet above the original surface and covering a space about 30 feet in diameter, was built of irregular blocks of stone, heaped together without order or plan. The remainder of the mound was made of dark surface soil. The top layer of earth being removed down to the rock pile, the entire surface of the latter was found to be covered with charcoal and evidences that it had been burned here. Among the coal were numerous joints of charred cane (Thomas 1894: 350).

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The descriptions of a burned structure and of a "rock pile", possibly a mantle as at Hw^{o}1, lend support to the possibility of this being a Pisgah mound.

The Peachtree mound, near Murphy on the Hiwasee River, was found to have gone through similar construction phases to Hw^{o}1. These were summarized by Setzler and Jennings (1941: 28) in the following manner:

> Upon this village site was built a hard-packed area which later became the floor of a large ceremonial structure of stone and wood. This was covered by a small round-topped mound, about 60 feet in diameter. Over this mound, and separated from it by a sand stratum, was a larger secondary mound which underwent at least two major periods of construction and several minor additions. The secondary mound had upon it three successive ceremonial buildings, as evidneced by the three superimposed floors.

The stone portion of the initial sub-mound structure was thought by the excavators to represent a "bench" (Setzler and Jennings 1941: 24). The pre-excavation photographs (Setzler and Jennings 1941: Plates 5, B and 6, B) of this feature, however, show that it was almost certainly a rock mantle similar to the one at Hw^{o}1. A close look at the mound cuts illustrated in Plates 2 and 3 of the report reveals that there was a depressed area in the central part of the profile, possibly the remains of a collapsed earth-covered structure.

Only a few Pisgah sherds were recovered at Peachtree, or at any rate only a few were illustrated in the final report (Setzler and Jennings 1941: Plate 37, A, bottom row, 2 and 4; and Plate 43, middle row, 3 and 5). The early stages of mound construction, however, seem almost certainly to have taken place prior to European contact (Setzler and Jennings 1941: 18).

In Chapter II (p. 60) it was noted that pottery sherds of the central North Carolina Pee Dee culture were found at the Warren Wilson

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site and that Pee Dee decorative influence was present on Pisgah sherds from the surveyed areas. In the light of this apparent comtemporaneity of Pisgah and Pee Dee, it is important to note that the remains of an earth-covered house were found at the bottom of the Pee Dee mound ($Ma^{o}2$) at the Town Creek site on the Little River in Montgomery County, North Carolina. Features of this earth lodge were similar to those at $Hw^{o}1$, Garden Creek, with the only difference being that the floor of the Town Creek lodge was not subterranean. All of the mound-associated houses at Town Creek also had parallel entrance wall trenches, such as were typical of the houses at the Garden Creek and Warren Wilson sites. Four radiocarbon dates from the Town Creek Mound average A.D. 1298 (Florida State University Radiocarbon Laboratory No. 145, 174, 175, and 176).

South Carolina

The Chauga mound and village site (380cl) located in Oconee County, South Carolina, at the confluence of the Tugaloo and Chauga rivers has produced some evidence for a Pisgah occupation, or at least an occupation in contact with the Pisgah culture. Pisgah sherds were found in the middle mound stages, Stages 3, 4, 5, and 6, where they comprised from 2 to 5 percent of the total sherd counts (Kelly and Neitzel 1961: Plate II). Additional sherds also were found in the pre-mound village midden and in the mound outwash deposits. Mound construction at Chauga exhibited a number of similarities with that at Garden Creek ($Hw^{o}1$), North Carolina. These included thin clay caps, relatively sterile of cultural remains, over each successive mound stage; large collections of boulders, possibly used here to stabilize the clay coverings on the mound flanks; a postmold pattern (enclosure?) associated with the initial

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mound margins; and clay embankments, possibly remnants of earth-covered buildings (Kelly and Neitzel 1961: 10-20). It is likely that the builders of the Chauga mound were at least in contact with the builders of the Pisgah mounds and that there was an exchange of ideas regarding construction techniques. Radiocarbon dates from the Chauga mound are A.D. 1120 ± 150 years, A.D. 1070 ± 150 years, and A.D. 770 ± 150 years (Michigan Memorial-Phoenix Project Radiocarbon Laboratory No. M-933, M-934, and M-935).

On the west bank of the North Saluda River in Greenville County, South Carolina, there is a mound having possible Pisgah affiliations. The Lindsey Mound (38Gr27, Breedlove; SC:Gv:2, Charleston Museum) is a small truncated pyramid. Pisgah sherds have been found in a cultivated field to the south and east of the mound and in a small area of eroding midden immediately to the northwest (Wesley Breedlove, personal communication). A shaft was dug into the top of this mound in 1917. The excavator reported finding a series of superimposed floors with baked clay hearths (Bragg 1918: 19-20). Two burials also were found, but outside of ashes and animal bone, no artifacts were recorded.

Georgia

At the Nacoochee Mound, located on the upper Chattahoochee River in northeastern Georgia, a stone layer was present on the pre-mound surface. This layer of "rough pieces" and "bowlders" measured 25 feet 6 inches across and averaged 2 feet in depth (Heye, Hodge, and Pepper 1918: 34). Many of the stones were found to rest on pieces of "bark." Two Pisgah-like rim sherds are illustrated in the Nacoochee report (Heye, Hodge and Pepper 1918: Figs. 24 and 25). The building of the Nacoochee mound

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probably dates to the Etowah period of northern Georgia (ca. A.D. 1000-1200).

Although it is outside of the known distribution of Pisgah remains, the Wilbanks site (9Ck5) on the Etowah River in north-central Georgia is important in that the mound there had at its core an earth-covered structure quite similar to the one excavated at Garden Creek, North Carolina. The structure did not have a depressed floor as at Hw^{o}1, but apart from this feature it appears to have been built in much the same manner. Sear's interpretation (1958: 142-144 and Fig. 5) of the roof construction as having slanted rafters "held in the proper angled position across the top of the large horizontal logs used to outline the structure," does not seem tenable to this writer. It is difficult to see how such a roof could have held up when covered with even a thin layer of earth. Vertical wall posts might have been discovered if the total wall buttress deposit had been removed. Sears (1958: 171) dates the Ck-5 earth lodge to the latter part of the Etowah period (ca. A.D. 1200).

The remains of sub-mound earth lodges were found on two other Etowah Valley sites--Long Swamp (Ck-1) and Horseshoe Bend (Ck-4)--by Robert Wauchope (1966: 303, 324) in his 1938-40 survey. These sites are probably late Etowah to early Wilbanks (ca. A.D. 1100-1300).

Tennessee

Richard Polhemus has found Pisgah sherds at the Loy site, located on the east bank of the Holston River in Jefferson County, Tennessee. At this site there was a substructure mound with a possible palisade-and-ditch surrounding the six-acre occupation area. The mound, now

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completely destroyed by relic collectors, was thought to be a product of the Dallas occupation, and not of the earlier and sparsely represented Pisgah occupation (Polhemus, personal communication).

In 1881, Edward Palmer investigated a mound at the junction of the Pigeon and French Broad rivers in Cocke County, Tennessee (Holmes 1884: 440). Descriptions of the pottery found in this mound (see above, Chapter II, p. 24) provide evidence for a possible Pisgah association. William H. Holmes described the mound as follows:

> The mound from which these fragments were obtained was located 3 miles from Newport. It was 12 feet square and 6 feet high. The original height was probably much greater. The pottery was mixed with ashes and debris of what appeared to be three fire-places. No human remains were found (Holmes 1884: 440).

The mounds excavated by the Smithsonian Institution in the Norris Basin on the lower Clinch and Powell rivers are also important. Although substantial amounts of Pisgah pottery have been recently reported from sites in this same general area (Polhemus, personal communication), no such ceramics were mentioned or illustrated in the Norris Basin report (Webb 1938). However, structural features of several of the mounds were comparable with those at Hw^{O}1. Mound No. 1 at the Lee Farm site contained a floor "with an oval ridge about the edge" (Webb 1938: 146 and Plate 96, a). This "ridge" quite probably represented the marginal remnant of an earthen roof covering (compare with profiles of Hw^{O}1, Fig. 21). At the Cox Mound there was again evidence for a primary earth-covered structure (Webb 1938: 163). Over the collapsed remains of this structure were "more than 200 irregular rocks" (Webb 1938: 167 and Plates 128-131).

Two mound sites on the lower French Broad River, Fain's Island and Zimmerman's Island, produced small amounts of Pisgah pottery (Richard

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Polhemus, personal communication). The excavations were carried out by the University of Tennessee in the late 1930's; both sites are now inundated by Douglass Reservoir. Although a few Pisgah sherds were found at these sites, the major occupations and the ones responsible for the platform mounds appear to have been in the historic period.

Pisgah Architecture and the Cherokee Problem

Square wall-post houses and earthen platform mounds were both present in west-central North Carolina prior to the development of Pisgah. A relatively pure Connestee site ($Bn^{v}9$) on the Swannanoa River, near Asheville, contained an abundance of postmolds. Unfortunately only limited excavations were conducted and no overall structural patterns were defined. A roughly square (20 by 20 feet) postmold pattern was found on the earliest mound stage at $Hw^{o}2$, near Canton. This phase of the mound probably dates to around A.D. 800.

Square and rectangular house patterns of the Pisgah culture already have been described. Likewise, it has been shown that semi-subterranean earth lodges and platform mounds were used by the Pisgah culture at least as early as the beginning of the 15th century.

All of this makes it quite obvious that Cherokee-type architecture was present in the Southern Appalachians long before the historic period. It would not be worthwhile to belabor here the contentions of early observers and of some archaeologists that the Cherokees were not mound builders and that they used only circular ceremonial structures.[4] Suffice it to say that the above data refute such contentions.

[4]For a discussion of these theories see Coe 1961: 51-60.

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It also has become evident that certain specific architectural traits of the Pisgah culture were carried over into the historic period. For instance, at an early 18th-century town-house mound on Coweeta Creek south of Franklin, North Carolina, there were square ceremonial buildings with rounded corners and wall trench entrances. The use of rock mantles in mound construction, which began in Pisgah or possibly even in pre-Pisgah times, was carried over to the historic period (De Baillou 1960: 1-30). And the use of earth coverings on ceremonial buildings, a well-documented historic Cherokee trait (Bartram 1791: 298; Timberlake 1765: 59; et. al.), can be traced to the Pisgah culture.

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CHAPTER V

BURIALS

Human burials from Pisgah contexts have been found at the Warren Wilson site and in the mounds ($Hw^{O}1$ and $Hw^{O}2$) and village area ($Hw^{V}7$) at the Garden Creek site. They also have been reported from a site in Tennessee and from a site in South Carolina. Of the North Carolina burials, the author will describe in detail only those recovered during the 1966, 1967, and 1968 seasons at Warren Wilson. General observations (taken from data provided on burial forms filled out in the field) will be made on the burials from Garden Creek, and any significant differences between them and the Warren Wilson burials will be brought out.

The Warren Wilson Site ($Bn^{V}29$)

Between 1966 and 1968, 35 burials were excavated at the Warren Wilson site. It became obvious early in the work that the burial pits were clustered in the house areas, either on the floors or immediately outside of the wall patterns. These pits first appeared as distinct discolorations at the base of the plowed soil. Usually there was subsoil clay mixed in the pitfill, giving it a mottled appearance (Plate XCIV). This differed from the typically homogeneous dark fill of clay borrow pits and refuse pits (Plate LXX).

Three distinctly different forms of burial pits were encountered.

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The first was a simple pit, which usually was oblong in plan and had straight sides and a flat bottom (Fig. 22, left). The second was a central-chamber variety. In this form there was an initial pit as above, but with a smaller excavation in the bottom to contain the corpse (Fig. 22, right). The shelf around the chamber was used to support a wooden covering over the body. The third variety utilized a shaft and a side chamber. The initial pit was either oblong or circular and had a chamber recessed in the base of one of the walls (Fig. 22, center). The floor of the chamber was slightly deeper than the floor of the shaft. There was usually evidence for a covering over the chamber either in the form of logs, or in one case of flat stones.

Before secondary excavation of a burial pit was begun it was first carefully troweled over to ascertain the extent of the pit walls and then was photographed for future reference. Next, the area surrounding the pit was covered with boards to shield the surface (which might contain other yet unexcavated pits and postmolds) and to protect the edges of the burial pit itself during excavation.

Fill troweled from the pit was either fine-screened on the site or, if there was an indication of the presence of small-scale botanical remains, was stored in boxes for flotation. As the removal of the fill progressed downward, the excavator left a thin buffer zone of fill around the walls of the pit. Before the excavator finally reached the level of the bones, this layer was peeled away to expose the actual pit walls. In this way there was little destruction to the walls, and it was often possible to detect aboriginal digging stick marks.

Because of the acid content and moisture-holding capacity of the subsoil clay, the skeletal remains usually were in a poor state of

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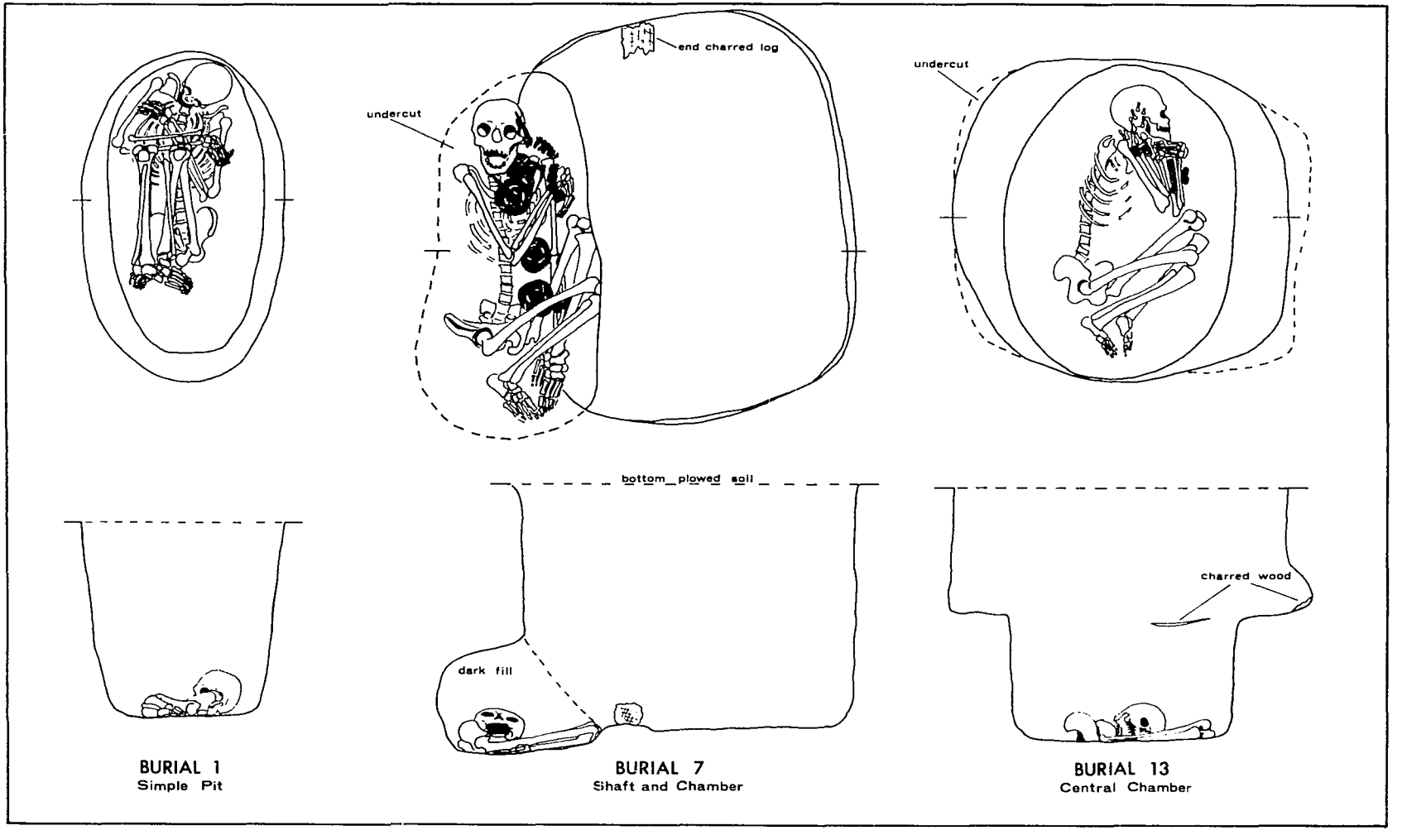

FIGURE 22
Burials 1, 7, and 13 at Bn^{V}29

preservation. The bones were carefully cleaned in place, treated with a water-soluble acrylic (Bedacryl 277), and allowed to dry. Prior to the removal of any bones, scale drawings were made, photographs were taken in color and black-and-white, transit readings were acquired, and all other pertinent information was recorded. As little cleaning as possible was given the pelvic bones and the skulls. These bones usually were removed on pedestals of clay, sealed in collapsable wooden boxes, and taken to the laboratory for final cleaning, preservation and reconstruction.

Cranial deformation was observed on all of the preserved adult skulls from Warren Wilson. This was of the fronto-parieto-occipital form, which Neumann (1942: 309) found "to be confined to the territory occupied by the Cherokee in northern Georgia, eastern Tennessee, and western North Carolina." The same form of deformation was also noted at $Hw^{o}1$ and $Hw^{o}2$.

Following, are descriptions of each burial pit, of the position of the interment, and of any associated artifacts. Analyses of the poorly-preserved skeletal remains were limited to determinations of sex and age.[1]

Burial 1

The pit for this burial showed up as a yellow mottled area at the approximate center of House A (Fig. 9 and Plate XCIV). It could not be assigned to one specific phase of the structure, A^1 or A^2. Patches of burnt clay partially covered the pit, suggesting that this burial, as

[1]Age estimates were based primarily on tooth eruption, tooth wear, and endocranial suture closure. In a few cases, it was possible also to observe the degree of pubic symphysial development.

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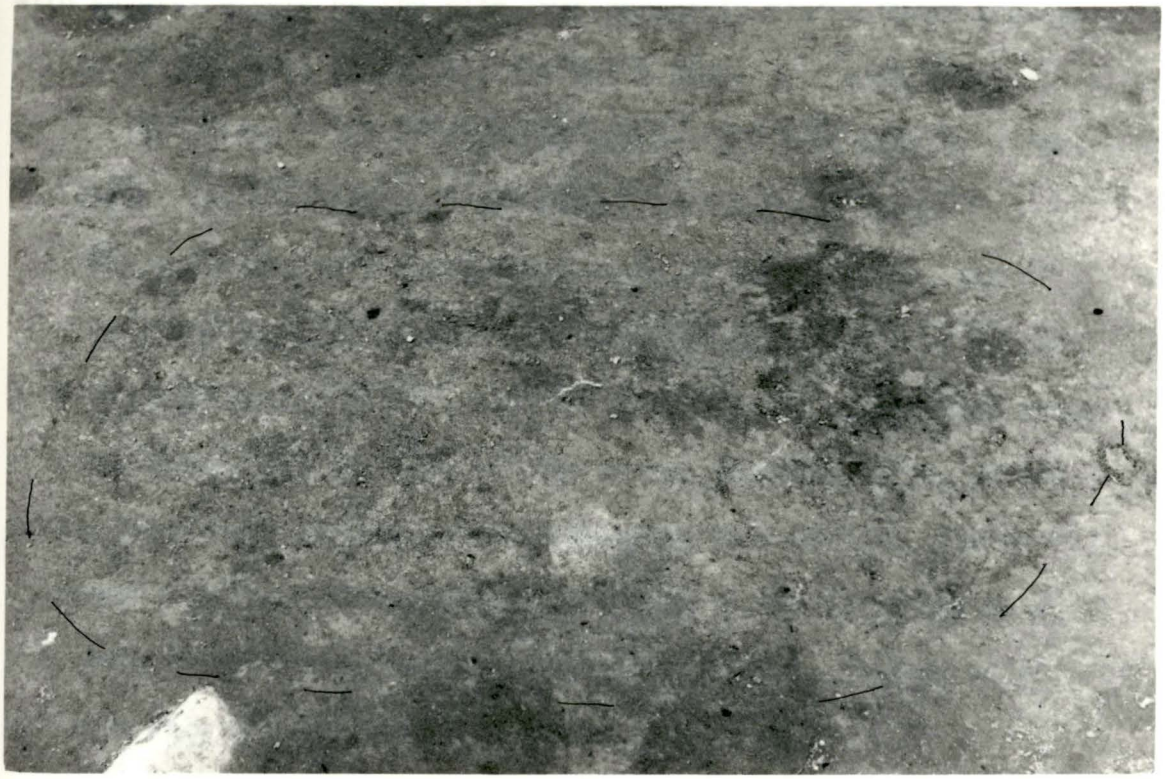

PLATE XCIV
Pit of Burial 1 at $Bn^{v}29$ as it Appeared at the Base of the Plowed Soil.

PLATE XCV
Burial 1 Completely Excavated.

with several others on the site, was purposely placed under the central hearth of the house (Fig. 16). It was a simple pit with vertical walls and a flat bottom. The orifice was oblong, 2.5 feet wide by 4 feet long. The depth from the bottom of the plowed soil was 2.6 feet.

The skeleton, in a fairly good state of preservation, was of a female, 30 to 35 years of age. The body had been placed on its back with the legs pulled up in a tightly flexed position, the arms crossed over the chest, and the head pointed to the southeast (Fig. 22 and Plate XCV). There were no artifacts accompanying this burial. The pitfill contained 2 chipped-stone projectile points, 1 tubular shell bead, 1 bone awl, 20 potsherds, 5 fragmentary animal bones, 5 stone chips, and portions of a charred corncob.

Burial 2

This burial was located a few feet northwest of Burial 1. Like Burial 1, it could not be assigned specifically to one or the other phase of House A. The pit, clearly intrusive through Palisade D, appeared as a yellow mottled oval which measured 3.3 by 2.6 feet. It was 2.6 feet deep. The sides were vertical and the floor was flat.

The skeletal remains were poorly preserved, but were determined to be a male, 40 to 50 years old at death. The body had been placed on its left side with the head to the northwest. The legs were flexed and the hands were at the knees. There were no grave goods.

Refuse from the pitfill consisted of 1 fragmentary polished-stone bar gorget (pre-Pisgah), 16 potsherds, and 3 stone chips.

Burial 3

This burial was on the floor of House B^2. The pit was almost

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circular across the top, measuring 2.6 by 2.75 feet. It was 2.2 feet deep. All that remained of the interment was a small patch of dark organic stain and a few tooth crowns. These were determined to have belonged to an infant or newborn, sex undetermined. No grave goods were present.

The pitfill contained 2 splinter bone tools, 1 hammerstone, 1 grinding stone, 43 potsherds, 1 steatite sherd, 103 fragmentary animal bones, 23 stone chips, and charcoal.

Burial 4

This burial was in the southwest corner of the floor of House A^2. It was intrusive through the line of postmolds on the outer wall of House A^1. The pit measured 3.2 by 2.2 feet across the top and 1.8 feet deep. The skeletal remains were in a highly decomposed state, with only a few fragments of longbone and the teeth remaining. It was estimated that the bones were of a child, 3 to 6 years of age, sex undetermined. The body had lain on its left side, in a tightly flexed position. The head was to the west and faced north. No artifacts accompanied the burial.

The pitfill of this burial was relatively barren of cultural debris. There were 5 potsherds and a few flecks of charcoal.

Burial 5

This burial was located a few feet northeast of Burial 3 and also was on the floor of House B^2. The oblong-shaped pit was 1.5 by 2.7 feet across and 1.8 feet deep. The walls were vertical and the bottom flat. A small cluster of bones and teeth, found at the approximate center of the pit floor, was determined to have belonged to an infant, 6 months to

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2 years in age, sex undetermined. Grouped with the bones were 4 shell gorgets (Plate LII) and 8 perforated Marginella shells.

Inclusions in the pitfill consisted of 18 potsherds, 17 animal bones, 2 stone chips, and charcoal.

Burial 6

Burial 6, also on the floor of House B^2, was located a few feet to the southeast of Burial 5. The pit was of the shaft-and-chamber variety. The orifice of the shaft measured 2.1 by 2.5 feet and was 1.8 feet deep. The chamber, offset in the bottom of the north wall, measured 2.7 feet from end to end, 1.5 feet from front to back, and was 1.1 feet deep from ceiling to floor. The floor of the chamber was 0.6 foot deeper than the floor of the shaft. A row of short logs, covered by a layer of bark, had protected the opening of the chamber. The charred ends of two of the logs and a lens of decayed bark were still present.

The skeletal remains were located in the east end of the chamber. They were covered by a layer of organic material which may be animal skin, possibly the remains of a garment or of a protective covering. The bones were of an infant of less than 6 months of age. The sex was undetermined. Accompanying the bones were 31 small, tubular shell beads.

The pitfill of this burial contained 4 potsherds and 6 stone chips.

Burial 7

The shaft of Burial 7 showed up as a bright yellow mottled area at the precise center of the floor of House B^2. The upper portion of the fill contained several chunks of burnt clay, probably from the central hearth of the house. Additional concentrations of this clay were found

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in the plowed soil overlying the burial pit.

The shaft was almost rectangular in shape. From northwest to southeast it measured 5 feet across, and from southwest to northeast it was 4 feet across. It was 3 feet deep. The chamber was recessed in the bottom of the south wall of the initial shaft (Plate XCVI). The fill within the chamber was dark and loose. The chamber measured 4.4 feet from end to end, 2 feet from front to back, and 1.3 feet from ceiling to floor. The floor was 0.35 foot below the floor of the shaft. Evidence for a covering over the entrance of the shaft was present in the form of a section of a charred log (Fig. 22).

The skeletal remains were of a robust male, 32 to 37 years old at death. The bones were in a good state of preservation. The body had been placed in the chamber on its back with the legs flexed to the left side. The right arm lay across the chest; the left arm was extended beside the body and under the legs. The head was to the northwest and faced upward (Fig. 22 and Plate XCVII).

A piece of cut mica was found directly above the skull. One bone awl or pin lay against the left side of the skull and and another lay in front of the mandible. A small conch shell bowl rested on the left shoulder and contained red ochre. Additional red ochre, mixed with garfish (Lepisosteus sp.) scales, was scattered around the conch shell. Just above the left shoulder there was a cluster of 6 bones, identified as the terminal phalanges of a panther (Felis concolor). In the neck area there were 18 small cut-mica discs (32 to 42 mm. in diameter). Distributed along the front of the skeleton, beginning in the upper chest area and ending in the abdominal area, were 4 large cut-mica discs (all about 82 mm. in diameter) (Plate XL). All of the large discs and 2 of the smaller ones had areas cut out around the center in the

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same manner as the shell gorgets found in other burials. Around the wrists were columella bead bracelets, 8 beads each. The artifacts from Burial 7 are illustrated in Plates XXXIX, XL, XLVIII, and L.

The fill from the shaft of Burial 7 contained 1 chipped-stone projectile point, 99 potsherds, 3 steatite sherds, 66 fragmentary animal bones, 3 mussel shells, 41 stone chips, and charcoal.

Burial 8

This was a simple pit interment located a few feet to the south of Burial 7, on the floor of House B^2. The pit measured 2.2 by 4 feet across and was 2.6 feet deep. The walls were vertical and the floor was flat. It was intersected on the south side by Feature 53.

The bones were those of a female, 25 to 30 years of age at the time of death. The body had been placed in the pit on its back with the legs drawn up in a flexed position at the left side. The arms were crossed over the body just below the chest. The head pointed to the west and faced upward. The bones were in a poor state of preservation. There were no grave goods.

The pitfill contained 1 clay pipe fragment, 1 polished celt fragment, 5 chipped-stone projectile points, 72 potsherds, 18 animal bone fragments, 6 stone chips, and several small bits of mussel shell and mica.

Burial 9

This burial was located at the southeast corner of the floor of House C. It was a shaft-and-chamber interment. Due to the depth of plowing and erosion in this area, the chamber had been truncated. The pit appeared as a double-lobed intrusion at the base of the plowed soil.

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PLATE XCVI
Burial 7 at $Bn^{V}29$ Before Excavation of Chamber.

PLATE XCVII
Burial 7 Completely Excavated.

The shaft measured 2 by 2.2 feet across and 0.5 foot deep. The chamber, on the south side of the shaft, measured 2.4 feet from end to end, 1.6 feet from front to back, and was 0.4 foot deeper than the shaft.

The skeletal remains were found in a small cluster at the west end of the chamber. They were of an infant or newborn, sex undetermined. Included with the burial were 20 columella beads, a shell gorget, and 27 small tubular shell beads. The columella beads appeared to be grouped in two separate piles of 10 beads each and may have been strung as bracelets, as in Burial 7.

The fill of the shaft contained 4 potsherds, 4 pieces of animal bone, and 1 stone chip.

Burial 10

Burial 10 was located outside and to the south of House C. It may or may not have been associated with that structure. The oval-shaped pit measured 3.25 feet in length and 4.2 feet in width. Erosion had reduced the overlying soil so that the bottom of the pit was only 0.85 foot below the plow line.

The skeletal remains were of a male, 23 to 28 years old. Preservation was fair. The body had been placed in the pit on its left side in a tightly flexed position. The head was to the west. There were no artifacts included with the burial.

The pitfill contained 10 potsherds, 3 chips, and small flecks of charcoal.

Burial 11

Burial 11 was located just outside of the northeast corner of House C. Two postmolds of the house were intrusive through the west edge of

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the burial pit. The pit was a shaft-and-chamber, the upper portions of which had been truncated by erosion. The shaft measured 2.4 feet from north to south, 4.2 feet from east to west, and 1.1 feet deep. The chamber was on the south side of the shaft. It measured 2.6 by 3.7 feet and was 0.5 foot deeper than the floor of the shaft.

The skeletal remains were in a very poor state of preservation; only one longbone fragment, a few skull fragments, and the teeth remained. These were determined to be from a child, 5 to 10 years of age, sex undetermined. The body probably had been on its back with the legs drawn up to the left side. The head was oriented in a westward direction and faced upward.

Pitfill refuse consisted of 2 chipped-stone projectile points, 11 potsherds, 2 fragmentary animal bones, and 8 chips.

Burial 12

Burial 12 was located on the east portion of the floor of House E^2 (Plate XCVIII). The pit, one of the central-chamber variety, was approximately circular with a diameter of 2.3 feet. The depth to the top of the ledge was 1.2 feet, and from the ledge to the floor was 0.5 foot. The chamber measured 1.5 feet by 2 feet.

The skeletal remains were clustered in the northwest end of the chamber. They were from an infant or newborn, sex undetermined. There were 6 small tubular shell beads included with the burial.

The pitfill contained 1 stone disc, 30 potsherds, 16 fragments of animal bone, 5 stone chips, and charcoal.

Burial 13

This burial was found to the north of Burial 12 and was also on the

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floor of House E^2. It was of the central-chamber variety. The top of the pit measured 3.9 feet from east to west and 4 feet from north to south. The depth to the ledge was 1.55 feet, and from there to the floor was another 1.6 feet. The wall just above the ledge, especially on the north side, was undercut. In this crevice were found the charred ends of several of the logs which had covered the burial chamber (Fig. 22; and Plates XCVIII and XCIX). The skeletal remains were of a female, 22 to 27 years old. The bones were in a fairly good state of preservation.

The body had been placed in the chamber in a loosely flexed position on its left side. The arms were positioned so that the left hand was under the mandible and the right hand was on the right side of the skull. The skull pointed to the west and faced north.

At each wrist of Burial 13 there were columella bead bracelets. On the right arm there were 7 large beads and on the left arm 6 smaller ones. On either side of the skull, in the temporal area, there was a columella ear pin (Plate LI).

In the pitfill were 1 clay pipe fragment, 1 chipped-stone projectile point, 227 potsherds, 41 fragments of animal bone, 22 stone chips, and a large quantity of charcoal.

Burial 14

This burial was located just to the west of Houses E^1 and E^2. It also was of the central-chamber variety. The pit measured 4 feet from east to west and 2.95 feet from north to south. The ledge, slightly undercut on both sides, was 1.7 feet below the pit top. The central chamber was another 0.65 foot deeper.

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PLATE XCVIII
Burials 12 and 13 on the Floor of House E at $Bn^{V}29$

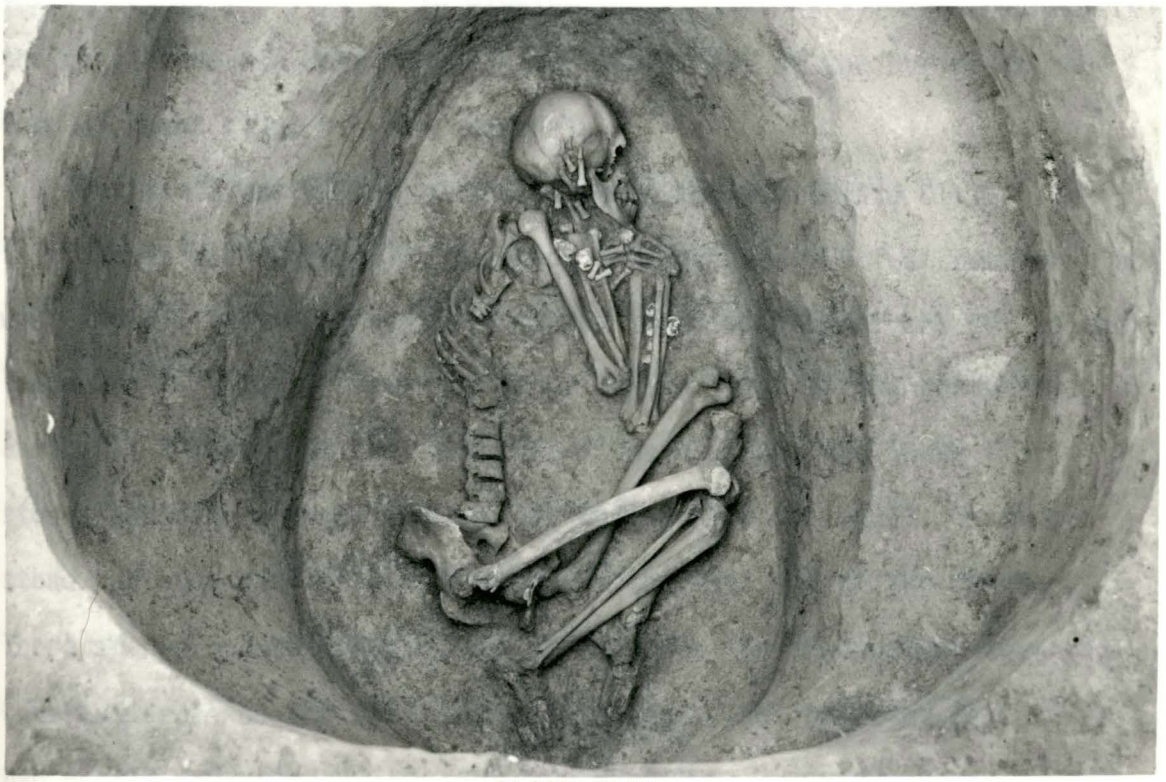

PLATE XCIX
Burial 13, Closer View.

The poorly preserved skeletal remains were determined to be of a female, 18 to 25 years old. The body had been placed in the chamber on its back with the legs drawn up to the left side. The arms were partially flexed with the hands at the knees. The head was oriented to the west and faced upward. There were no artifact associations.

The pit contained 1 blade, 2 retouched flakes, 97 potsherds, 1 animal bone, and 9 stone chips.

Burial 15

The pit for this burial first appeared as a highly mottled area at the center of the floor of House E^2. Partially overlying the pit were the remains of a hearth platform. This was represented by a plow-disturbed patch of burnt clay which measured 2 feet wide and 5 feet long. There was evidence that an earlier hearth had been removed by the occupants of House E^2 in digging the pit for Burial 15. Remnants of the earlier hearth were found in the upper fill of the burial in the form of burnt clay, ash and charcoal.

Burial 15 was of the central-chamber variety (Plate CII). The initial pit was rectangular in shape and measured 4.3 feet from east to west and 2.7 feet from north to south. From the top of the pit to the ledge was 1.65 feet. From the ledge to the floor of the chamber was another 1.2 feet. At the west end of the chamber, two large flat stones had been propped against the wall behind the skull. A single stone had been similarly positioned at the east end of the chamber. These stones probably had served as supports for the chamber covering. Undercut areas on the walls above the ledge also indicated that there had been a covering.

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The body had been placed in the chamber on its left side. The legs had been flexed with the elbows at the knees and the hands under the head. The head pointed to the west and faced north. The bones were those of a female, 35 to 40 years old. Preservation was fair. A 0.2 foot-thick layer of decayed organic matter was found under the bones. This possibly was the residue of a layer of bark, cloth or skins which had been placed on the floor of the chamber prior to the interment.

In the area of the wrists and neck were approximately 250 small tubular shell beads and 20 columella beads (Plate XLIX). Although there had been some disturbance in this area, caused by the collapse of the chamber covering, it would appear that both the columella beads and the tubular beads had been suspended around the neck in several strands.

In the pitfill of Burial 15 were 1 polishing stone, 1 retouched flake, 99 potsherds, 33 fragmentary animal bones, 1 mussel shell, and 20 stone chips.

Burial 16

Burial 16 was located just outside of the wall pattern for House E^1 and a few feet south of Burial 14. The pit was of the central-chamber variety. The top of the pit measured 4.25 feet from east to west and 3.3 feet from north to south. From the top of the pit to the chamber ledge was 1.27 feet. From the ledge to the floor was 1.6 feet. The body had been placed in the chamber on its right side with the legs loosely flexed; the right arm was extended under the legs. The head was to the west and faced south. The bones were of a male, 35 to 40 years old. Preservation was fair.

At the position of the left hand and just above the left knee was

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a large, poorly-preserved conch shell bowl (Plate LIX). Around the neck was a necklace of 20 columella beads, and at each ankle was a rattle made from a juvenile box turtle (Terrapene carolina) carapace filled with small round pebbles.

Refuse in the pitfill of Burial 16 consisted of 1 chipped-stone projectile point, 78 potsherds, 27 stone chips, and flecks of charcoal.

Burial 17

This was a shaft-and-chamber burial on the floor of House F (Plate C). The north edge of the shaft was intrusive through the south edge of Burial 18. Across the top, the shaft measured 2.5 by 2.9 feet. It was 1.7 feet deep. The chamber was on the south side of the shaft and it measured 1.35 feet from end to end, 1 foot from front to back and 1 foot from ceiling to floor. The floor of the chamber was 0.5 foot below the floor of the shaft. At the opening of the chamber there was a shallow trench which probably had served to anchor the lower ends of logs in front of the entrance. Molds of the ends of several of these logs were found in the bottom of the trench (Plate C).

The chamber contained the badly decomposed remains of an infant or newborn, sex undetermined. There were no grave goods.

Contents of the pitfill of Burial 17 consisted of 56 potsherds, 20 fragments of animal bone, 1 mussel shell, 5 stone chips,and flecks of charcoal.

Burial 18

This burial, another of the shaft-and-chamber type, was located immediately north of and partially intruded by Burial 17 (Plate CI). The shaft was oblong-shaped and measured 3.2 by 2.6 feet. It was 1.6

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feet deep. The chamber was on the southwest side of the shaft and it measured 1.9 feet from end to end, 1.7 feet from front to back, and 1.2 feet from ceiling to floor. The floor was 0.45 foot below the floor of the shaft. The entrance to the chamber was covered by 3 large, flat river boulders (Plate CI).

The fill behind the stones was dark and loose, but no skeletal remains were encountered. Probably the bones had been of a newborn or infant and had completely decomposed.

In the shaft fill there were 2 retouched flakes, 1 stone disc, 21 potsherds, 70 fragmentary animal bones, 18 stone chips, and a large quantity of charcoal.

Burial 19

Burial 19 was at the center of the floor of House F. The burial pit was found in the bottom of a larger shallow pit (Feature 153) and under a prepared clay platform hearth (Feature 154) (Fig. 16 and Plate LXXIX). The fill of the shallow pit overlay the burial and contained part of a charred log, ash, and fragments of burnt clay. The following interpretation of these features is proposed. Feature 153 was dug by the inhabitants of House F for the purpose of removing an existing hearth. Then the pit for Burial 19 was dug in the position formerly occupied by the hearth. After the burial pit had been backfilled, a new hearth (Feature 154) was constructed. The cavity around the new hearth was then refilled with the debris from the old hearth (see Chapter IV, p. 187).

Burial 19 was of the central-chamber variety. The top of the pit measured 4.1 by 5 feet across. From the top (bottom of Feature 153)

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PLATE C
Burial 17 at Bn^{V}29, Showing Impression of Log Chamber Covering.

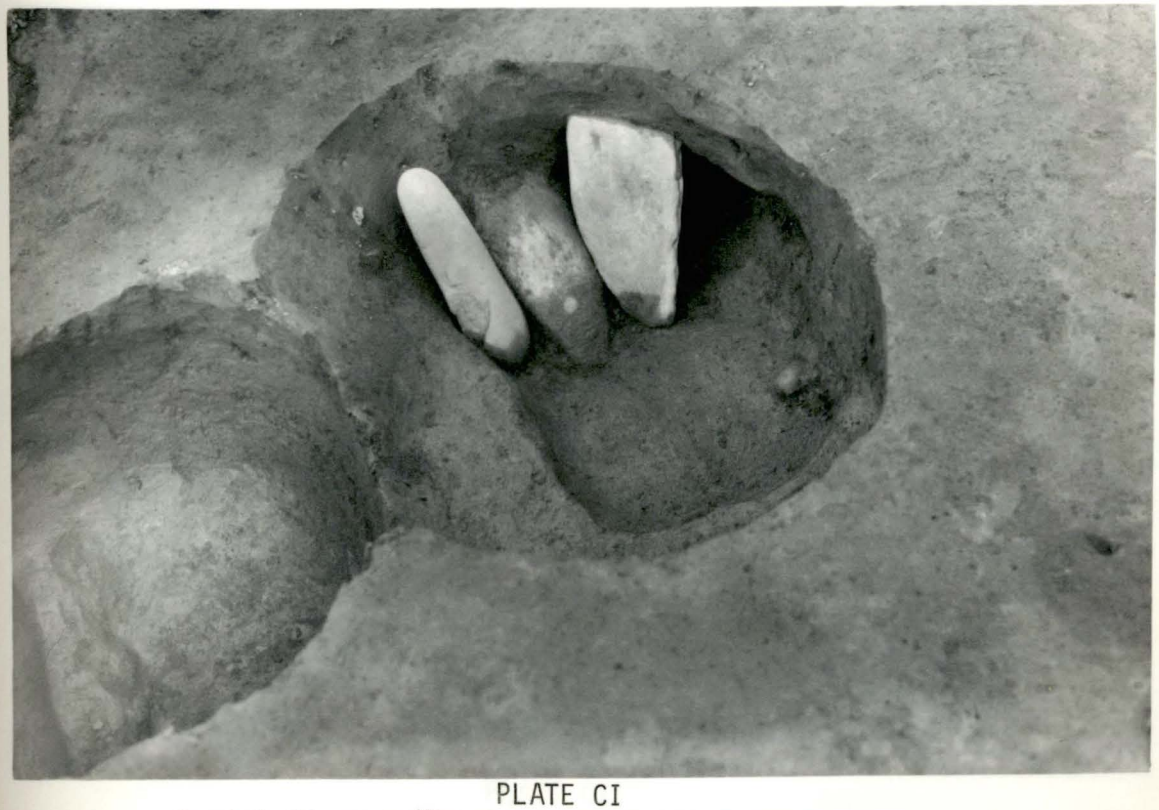

PLATE CI
Burial 18 at Bn^{V}29, Showing Rocks Over Chamber.

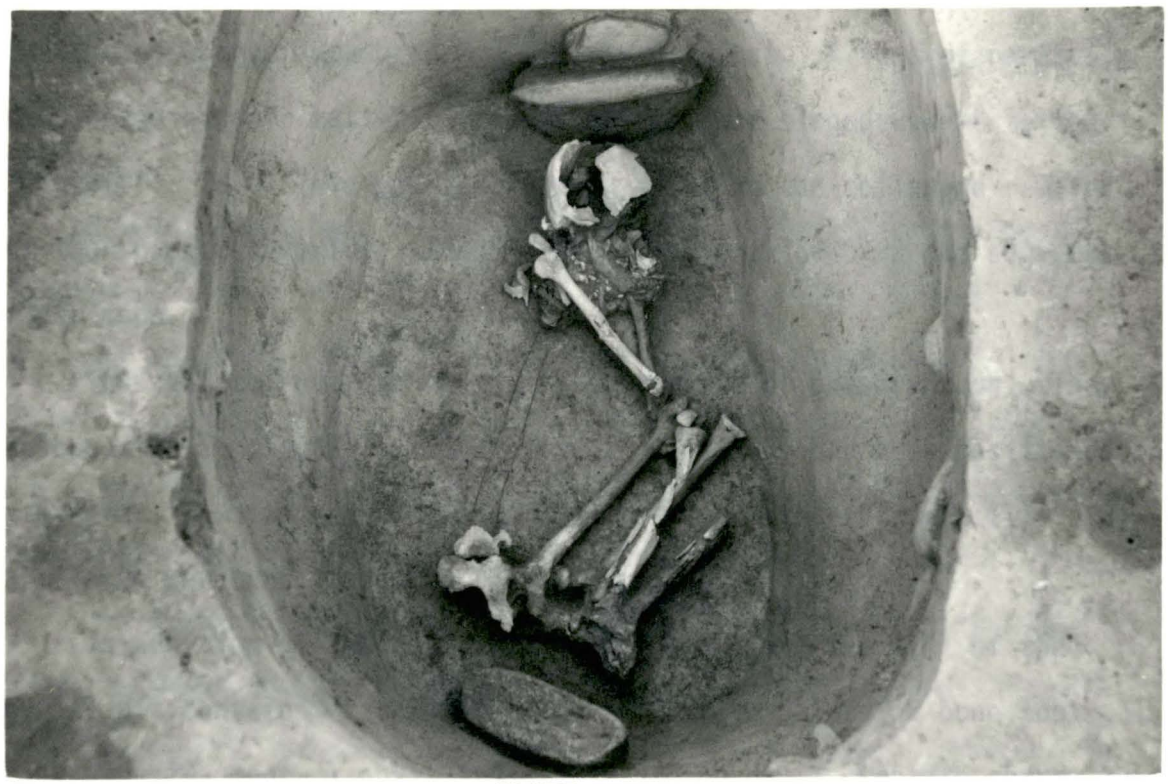

PLATE CII
Burial 15 at Bn^{v}29. Note Rocks at Each End of Pit to Support Covering.

PLATE CIII
Burial 19 at Bn^{v}29.

to the ledge was 1 foot; from the ledge to the chamber floor was 1.5 feet. The chamber measured 3.3 feet by 4.3 feet. A lens of partially decomposed organic matter covered the bones and sloped upward to the ledge (Fig. 16). This was interpreted as being the collasped remains of the chamber covering. Identified were pieces of bark and segments of river cane.

The skeletal remains were in a good state of preservation. They belonged to a male, 20 to 25 years old. The body had been positioned on its left side with the arms and legs loosely flexed (Plate CIII). No artifacts were included with this burial.

In addition to charcoal, ash, and burnt clay, the fill of the burial pit contained 2 chipped-stone projectile points, 2 bone tools, 1 clay pipe fragment, 1 anvil stone, 235 potsherds, 1 steatite sherd, 30 animal bone fragments, and 8 stone chips.

Burial 20

Burial 20 also was located on the floor of House F, a few feet from Burials 17, 18, and 19. It was a shaft-and-chamber interment. The shaft was 2.4 feet in diameter and 0.9 foot deep. The chamber was on the south side of the shaft and it measured 2.7 feet from end to end, 1.6 feet from front to back, and 1 foot from ceiling to floor. The floor of the chamber was 0.4 foot below the floor of the shaft. Logs had been propped diagonally against the opening of the chamber as was evidenced by a shallow trench in which the end molds of several of these logs were found.

There were no skeletal remains in the chamber of Burial 20. This probably had been an infant or newborn burial and the fragile bones had

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decomposed.

The fill of the shaft contained 33 potsherds and 1 stone chip.

Burial 21

Burial 21 was located just to the north of Burial 19 on the floor of House F. It was of the shaft-and-chamber variety. The shaft measured 3.7 feet long by 2.7 feet wide and was 1.6 feet deep. The chamber was on the northwest side. It measured 3 feet from side to side and 1.6 feet from front to back. The top of the chamber was truncated by plowing; the floor was .4 foot below the floor of the shaft.

The skeletal remains were in a small cluster in the middle of the chamber. They were of a newborn or infant, sex undertermined.

The pitfill contained 177 potsherds, 6 stone chips, several mica fragments, and charcoal.

Burial 22

Burial 22, also on the floor of House F, was located a few feet northeast of Burial 19. It was of the central-chamber variety. The top of the pit measured 3.9 feet from east to west and 3.05 feet from north to south. It was 0.9 foot from the top of the pit to the ledge. From the ledge to the floor of the chamber was 0.8 foot. The chamber measured 2 by 3.8 feet.

The body had been placed in the chamber in a flexed position on its left side. The head was to the west. The bones, poorly preserved, were of a male, 14 to 16 years old. No artifacts accompanied the burial.

In the pitfill there were 1 chipped-stone projectile point, 1 chipped-stone scraper, 1 hammerstone, 1 clay pipe fragment, 223

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potsherds, 3 steatite sherds, 25 fragments of animal bone, 8 stone chips, and charcoal.

Burial 23

The pit for Burial 23 was found within Feature 108, a large refuse-filled depression on the floor of House G (Plate CIV). The mottled disturbance of the burial pit was not encountered until the fill had been removed from the feature. The simple burial pit measured 2.1 by 3.7 feet across the top and was 2.3 feet deeper than the bottom of the feature.

The skeletal remains were poorly preserved, but they were determined to be of an adult 20 to 30 years of age at death. The sex was indeterminate. The body had been placed in the pit on its right side with the head to the west. The legs were tightly flexed. There were no grave goods.

This burial was not intrusive into Feature 108, and there was no mottling in the fill of the feature to indicate that the burial had been there when the feature was dug. Therefore, it is concluded that the burial was made while the feature was still open. Although the feature and burial are in the floor area of House G, it does not appear that they were associated with the removal and rebuilding of a hearth, as with Burial 19.

Feature 108 was heavily saturated with refuse (see Chapt. IV, p. 183). The fill of Burial 23 contained 57 potsherds, 11 fragments of animal bone and 7 stone chips.

Burial 24

This was a simple pit interment located just outside of the

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southwest corner of House I. The pit measured 2.9 by 3.35 feet across the top and 3 feet deep.

The skeletal remains were of a child, 3 to 6 years of age, of indeterminate sex. Preservation was poor. The body had been placed on its left side with the head to the southwest. The arms and legs were loosely flexed. There were no associated artifacts.

Refuse in the pitfill consisted of 1 chipped-stone projectile point, 1 chipped-stone scraper, 84 potsherds, and 6 stone chips.

Burial 25

This burial was located on the east side of the floor of House J. It was a simple pit which measured 2.5 by 3.5 feet across the top and 1.47 feet deep.

The skeletal remains, poorly preserved, were of a male, 20 to 30 years old at death. The body had been positioned on its left side with the head to the west. The arms and legs were moderately flexed. There were no grave goods.

Pitfill inclusions consisted of 1 chipped-stone projectile point, 8 potsherds, and 1 steatite sherd.

Burial 26

This was a shaft-and-chamber burial located just outside of the southeast corner of House D. Because the chamber roof had completely collapsed, it was difficult to determine the size of the original shaft. It was estimated to have been about 2.6 feet in diameter and 0.6 foot deep. The chamber was on the north side and measured approximately 2.4 feet from front to back and 2.3 feet from side to side. The floor of the chamber was 0.54 foot below the floor of the shaft.

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The skeletal remains were located near the opening of the chamber. They consisted of the bones of an infant or newborn, sex undetermined. Included with the burial was an almost completely decomposed shell gorget and a cluster of 36 perforated Marginella shells. The gorget was in the area of the skull; the shells were adjacent to the pelvis.

The pitfill of Burial 26 contained 3 chipped-stone projectile points, 33 potsherds, 3 steatite sherds, 11 fragments of animal bone, 17 stone chips, and flecks of charcoal.

Burial 27

This was a shaft-and-chamber burial located in the highly eroded area east of Houses D and E and south of Houses B and C (Plate CVII). The shaft measured 2.3 feet by approximately 2.5 feet across the top and the 0.9 foot deep. The chamber measured 2.1 feet from front to back and 2.3 feet from end to end. The floor of the chamber was 0.3 foot lower than the floor of the shaft.

A small cluster of skeletal remains was found in the northwest end of the chamber. They were of an infant or newborn, sex undetermined. There were no grave goods.

In the pitfill there were 1 chipped-stone projectile point, 13 potsherds, 10 fragments of animal bone, and 5 stone chips.

Burial 28

Burial 28, another shaft-and-chamber interment, was located a few feet to the south of Burial 27 (Plate CVII). The shaft measured 4 feet by approximately 3 feet across the top and was 0.9 foot deep. The chamber measured 4 feet from end to end, 2 feet from front to back, and was 0.2 foot deeper than the shaft.

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The skeletal remains were poorly preserved. They were determined to have belonged to an adolescent, age 15 to 18 years, sex undertermined. The body had been placed in the chamber on its right side with the head to the west. The arms and legs were loosely flexed. There were no associated artifacts.

The pitfill contained 1 hammerstone, 1 retouched flake, 1 piece of abraded steatite, 31 potsherds, 1 steatite sherd, 60 fragments of animal bone, 18 stone chips, and charcoal.

Burial 29

This was another shaft-and-chamber burial, located a few feet to the east of Burial 27 and 28 (Plate CVI and CVII). Due to the proximity of these three burials and the similarity of the pits, it is probable that they were products of the same family group. Perhaps they were associated with a house structure, for which the postmold pattern has been obliterated through erosion.

The shaft of Burial 29 measured 3.4 by 2.2 feet across the top and was 1.46 feet deep. The chamber measured 3.2 feet from end to end and 2.2 feet from front to back. Its floor was 0.1 foot lower than the floor of the shaft.

The skeletal remains were in a relatively good state of preservation, with the exception of the skull which had been crushed by the collapse of the chamber. The remains were of a male, 18 to 20 years of age at death. The body had been positioned on its back with the head to the southwest. The legs were flexed to the left side and the arms were crossed over the chest. At each ankle were found the remains of a turtle carapace rattle (Plates XLVIII and LIV). Each rattle contained

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approximately 30 small round pebbles.

The pitfill of this burial contained 7 potsherds, 2 steatite sherds, 4 stone chips, and charcoal.

Burial 30

Burial 30 was found in the main north-south trench, in square 60R210 (Plate CV). A possible house pattern was detected in this area in 1969. The burial was in a simple pit which measured 3.3 by 2.6 feet across the top and 1.96 feet deep. The walls of the pit were vertical on the east and west sides, but were slightly undercut on the north and south sides.

The skeletal remains were in a fair state of preservation. They belonged to a female, 18 to 20 years of age at death. The body had been placed on its back with the legs loosely flexed to the right side. The arms had been pulled up to each side with hands lying on the shoulders. The skull pointed to the west and faced upward. There were no grave goods.

Inclusions in the pitfill consisted of 27 potsherds and 14 stone chips.

Burial 31

This was a simple pit interment located just outside of the west wall of House I. Two postmolds of the wall were intrusive through the edge of the burial pit. The pit measured 2.7 by 3.8 feet across the top and was 3.14 feet deep. The walls slanted inward slightly toward the bottom of the pit.

The skeletal remains in this burial were poorly preserved. They were determined to have belonged to a male, 38 to 45 years of age. The

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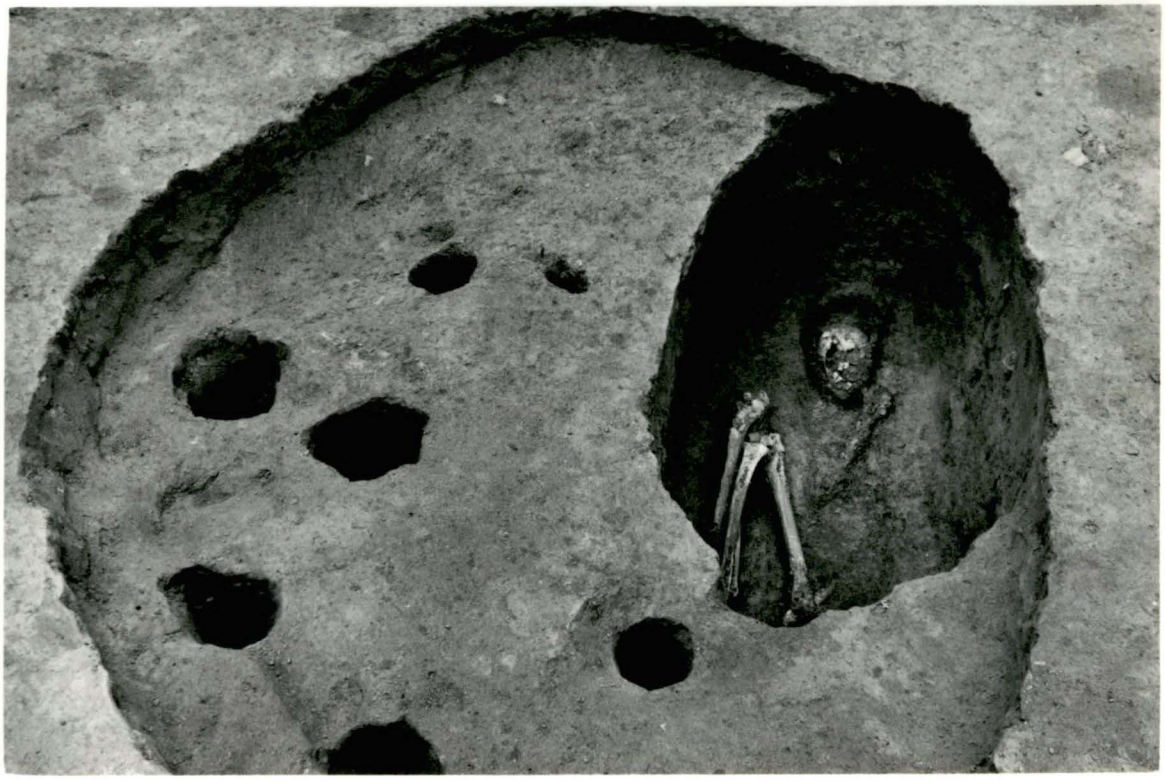

PLATE CIV
Burial 23 within Feature 108 at $Bn^{V}29$.

PLATE CV
Burial 30 at $Bn^{V}29$.

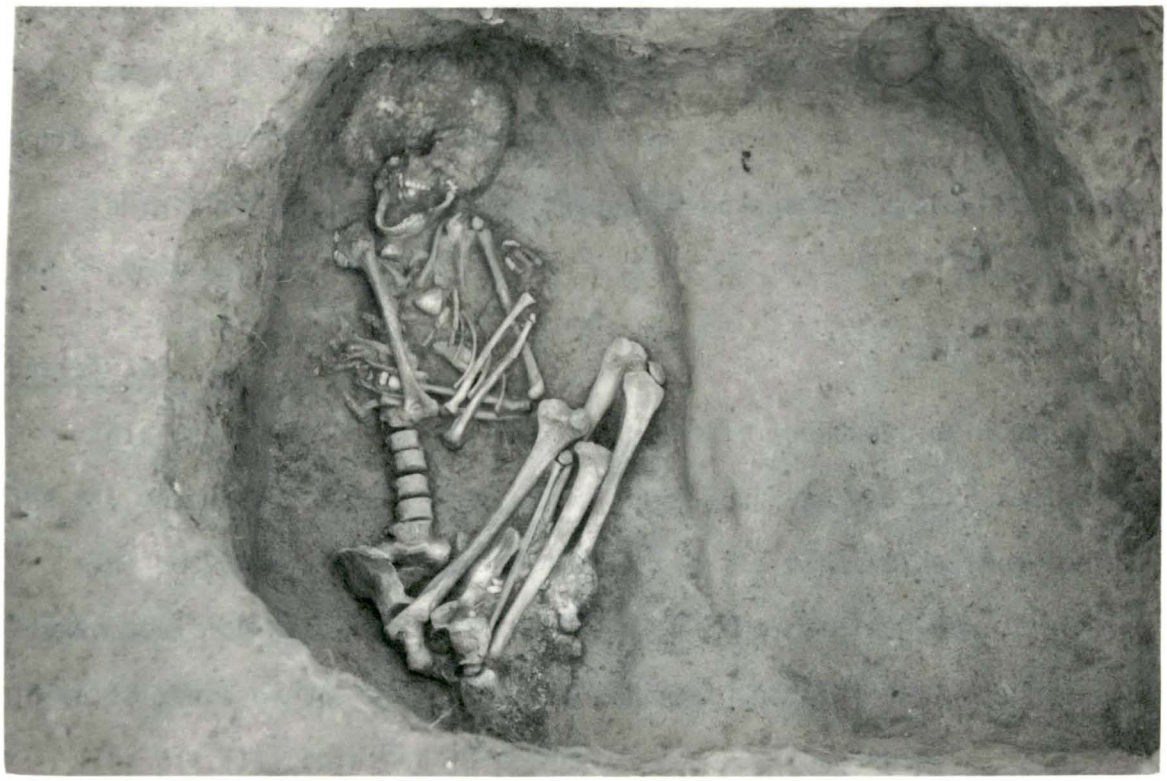

PLATE CVI
Burial 29 at $Bn^{V}29$.

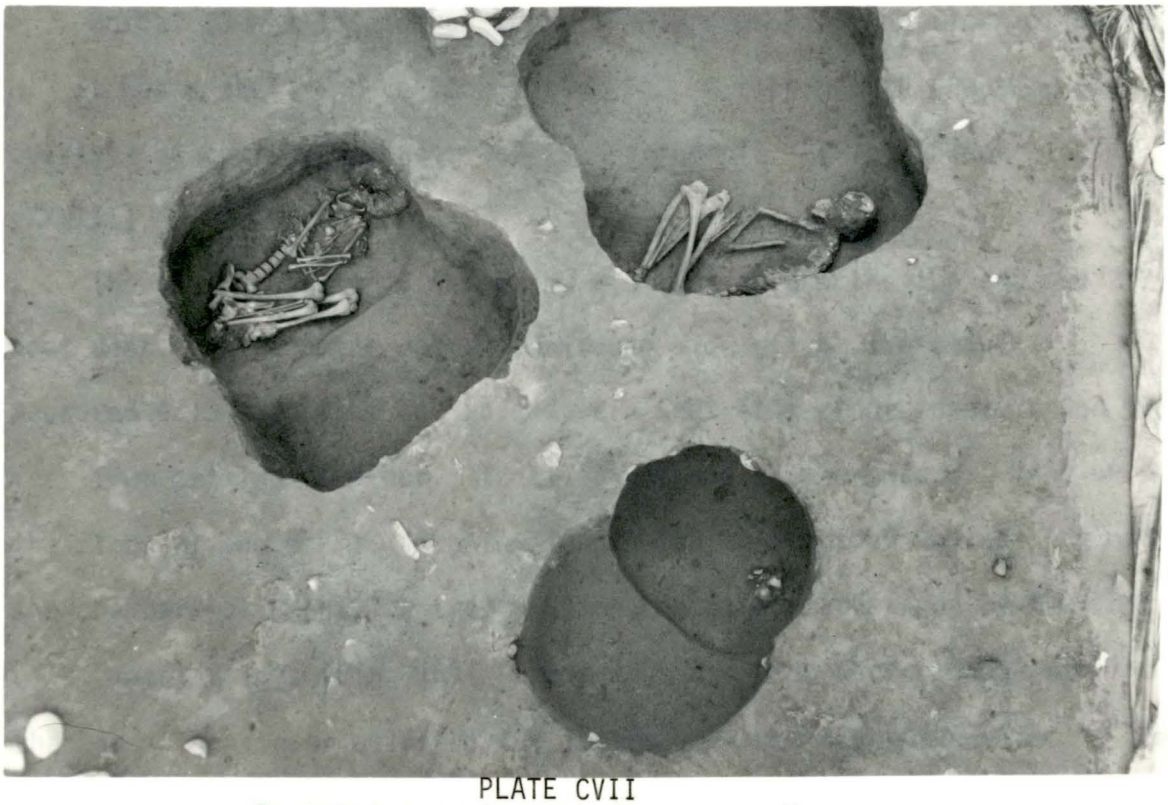

PLATE CVII
Burial Group 27, 28, and 29 at $Bn^{V}29$.

body had been placed in the grave on its left side with the arms and legs moderately flexed. The skull pointed to the west and faced to the north. No grave goods were present.

The pitfill of Burial 31 contained 27 potsherds, 2 steatite sherds, and 8 stone chips.

Burial 32

This was a simple pit burial located just southeast of House D. The pit measured 2.2 feet wide by 3.7 feet long and was 1.23 feet deep.

The body had been placed in the pit on its right side in a loosely flexed position with the head to the west. The remains were of a male, 16 to 18 years of age at death. No artifact associations were present.

The pitfill contained 15 potsherds and 26 stone chips.

Burial 33

Burial 33 was located at the probable center of the floor of House H. It was a shaft-and-chamber interment. A clay hearth (Feature 140) overlay the collapsed chamber of the burial pit. (Fig. 16 and Plate LXXVIII).

The shaft measured 3.4 feet by 3.8 feet across the top and was 2.7 feet deep. The chamber was on the south side of the shaft and it measured 4.15 feet from end to end, 2.3 feet from front to back, and 1.6 feet from ceiling to floor. The floor of the chamber was 0.2 foot below the floor of the shaft. Running lengthwise in front of the opening of the chamber was a shallow trench which contained marks made by the ends of at least 8 logs (Fig. 16). These logs had been used to seal off the chamber. The linear molds of the logs themselves were discovered in the excavation of the shaft fill (Plate CVIII).

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The skeletal remains were of a young male, 14 to 16 years of age. Preservation of the bones was fair. The body had been placed in the chamber on its right side with the head to the west. The arms and legs were loosely flexed. Between the lower leg bones was found a group of 36 perforated rabbit bones (Sylvilagus floridanus). There were 16 innominate bones and 16 scapulae (Plate XLVIII). These probably had been suspended from the calves or ankles.

Pitfill refuse consisted of 53 potsherds, 6 stone chips, several animal bone fragments, and charcoal.

Burial 34

Because of a lack of sufficient time at the close of the 1968 season, the pits of Burials 34 and 35 were not excavated until 1969. Both burials were located on the floor of House H, a few feet northeast of Burial 33.

Burial 34 was a shaft-and-chamber interment. The shaft measured 1.85 feet by 2.1 feet across the top and was 0.75 foot deep. The collapsed chamber was 1.8 feet from front to back, 2.15 feet from end to end, and 1.4 feet deep. The bottom of the chamber was 0.65 foot deeper than the bottom of the shaft.

Only a few teeth were present, located on the west side of the chamber. These were determined to be from an infant or newborn, sex undetermined. There were no grave goods.

The pitfill contents await laboratory processing.

Burial 35

Located adjacent to Burial 34, Burial 35 was a simple pit interment. The pit was 1.85 feet wide, 2.7 feet long, and 1.60 feet deep.

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PLATE CVIII
Logmolds Over Chamber of Burial 33 at $Bn^{v}29$.

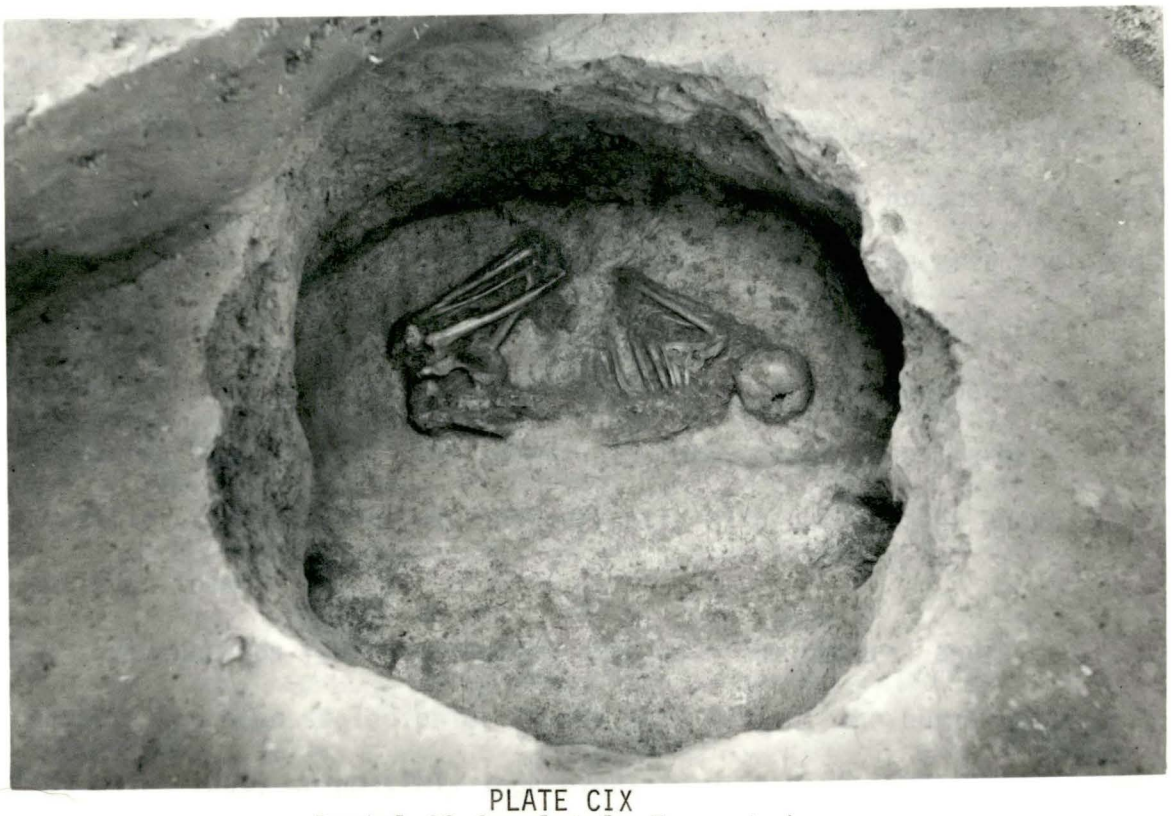

PLATE CIX
Burial 33 Completely Excavated.

There was only a thin lens of dark organic material in the bottom of the pit to indicate that bones had once been present. From the size of the pit it is suspected that the burial had been of an infant or young child. There were no grave good.

The pitfill materials have not yet been processed.

Summary of Warren Wilson Burials

The Warren Wilson burials usually were found on or adjacent to house floors. Several seemingly isolated burials may have been associated with houses for which the patterns were not defined. Of the 35 burials recovered by the close of the 1968 season, 14 were in simple pits, 7 were in central chambers, and 14 were in side chambers. The central-chamber burials all were associated with Houses E and F. House E was located well within the area enclosed by Palisades B, C, D, E, and F, and probably can be considered an earlier house than those which overlay the palisades. Although House F was intrusive to Palisades B, C, D, and E, it still may well have been earlier than Houses A, B, and C. Since only one shaft-and-chamber burial was found in the area enclosed by Palisades B, C, D, E, and F it may be postulated that the central-chamber form of burial was earlier than the shaft-and-chamber form at the Warren Wilson site. The simple pit form, found in all areas of excavation, probably was used concurrently with both of the above mentioned forms.

Evidence was found to suggest that both the central and side chambers had been sealed prior to the refilling of the burial pits. In most cases logs, or possibly logs overlaid with bark and/or cane, were

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used for this purpose. In one instance three large flat stones had been used to cover the mouth of a side chamber. In another case, stones had been employed to support the logs over a central chamber.

In all cases the bodies had been placed in the pits in flexed positions. In all but one case (Burial 1) the heads were oriented in a westward direction.

Interment under the central hearth of a house was definitely present in 3 cases (Burials 15, 19, and 33). Two other probable instances of the same practice were Burials 1 and 7. In the case of Burial 19 (House F) an old hearth had been removed for the purpose of burying an individual in that specific location, and following the interment a new hearth had been constructed over the burial pit.

Of the 17 burials on which sex determinations could be made, there were 11 males and 6 females. As for age, 12 were less than 6 months, 4 were from 6 months to 10 years, 5 were from 10 to 20 years, 8 were from 20 to 30 years, 4 were from 30 to 40 years, and 2 were from 40 to 50 years.

The degree of fronto-parieto-occipital deformation was evaluated on 15 skulls. Of these, 11 had pronounced deformation, 3 had medium deformation, and in one case the deformation was only slight.

Grave accompaniments were present in 11 out of 35 burials, or at least preservation was such that they were recognized in that many cases. In 9 burials, the artifacts had been worn in some way by the deceased. These artifacts consisted of shell beads, shell gorgets, shell ear pins, cut mica discs, turtle shell rattles, and perforated animal bones. Columella beads, worn either as bracelets or necklaces, occurred most frequently. There also were small tubular shell beads and perforated

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Marginella shells. The latter may have been sewn to garments rather than strung. Only 2 of the 11 burials contained "non-ornamental" artifacts. One (Burial 7) had a small conch shell bowl, a cache of red ochre and garfish scales, two bone awls or pins, and 6 panther phalanges. Another (Burial 16) had a single large conch shell bowl.

Of the burials on which sex determination were possible, 4 out of 11 males and 2 out of 6 females had grave accompaniments. As for age, 4 were infants, 2 were 10 to 20 years, 1 was 20 to 30 years, and 3 were 30 to 40 years. The three shell gorgets were with infant burials.

Three out of 5 burials on the floor of House B and 4 out of 5 in the vicinity of House E had accompanying artifacts. On the other hand, none of the burials on the floors of Houses A and F had artifacts. Even Burial 19 (House F), which apparently had received a great deal of attention in the preparation of the burial pit, contained no grave goods.

On the basis of the above, it would appear that age and sex had little to do with determining the disposition of grave artifacts. A much larger sample is needed, however, before definite conclusions can be drawn. There does appear to be differentiation on the basis of family or household units. This may indicate differential ranking among kin groups in the community, or it may be the result of temporal variation in the utilization of grave goods. The fact that sumptuary items, especially beads and gorgets made from conch shells, were included with certain infants and newborns, might also suggest that ranking followed heriditary lines.

The two occurrences of turtle shell rattles were both with male individuals. This is interesting in the light of the fact that early observers among the southeastern Indians always reported such rattles as

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Burial	House	Pit Type	Position	Heading	Sex	Age	Deformation	Grave Associations
1	A	Simple pit	Flexed on back	SE	F	30-35	Medium	None
2	A	Simple pit	Flexed on left side	NW	M	40-50	Pronounced	None
3	B^2	Simple pit	?	?	?	-6 mos.	?	None
4	A^2	Simple pit	Flexed on left side	W	?	3-6	?	None
5	B^2	Simple pit	?	?	?	1/2-2	?	4 shell gorgets, perforated *Marginella* shells
6	B^2	Shaft and chamber	?	?	?	-6 mos.	?	Tubular shell beads
7	B^2	Shaft and chamber	Flexed on back	W	M	32-37	Pronounced	Columella bracelets, conch shell, bone awls, ochre, fish scales, mica discs, panther claws
8	B^2	Simple pit	Flexed on back	W	F	25-30	Medium	None
9	C	Shaft and chamber	?	?	?	-6 mos.	?	Columella beads,gorget
10	C?	Simple pit	Flexed on right side	W	M	23-28	Pronounced	None
11	C?	Shaft and chamber	Flexed on back?	W	?	5-10	?	None
12	E^2	Central chamber	?	?	?	-6 mos.	?	6 tubular shell beads
13	E^2	Central chamber	Flexed on left side	W	F	22-27	Pronounced	Columella bead bracelets, shell ear pins
14	E?	Central chamber	Flexed on back	W	F	18-25	Pronounced	None
15	E^2	Central chamber	Flexed on left side	W	F	35-40	Pronounced	Columella bead necklace, tubular bead necklace
16	E?	Central chamber	Flexed on right side	W	M	35-40	Pronounced	Columella bead necklace, turtle shell rattles, conch bowl
17	F	Shaft and chamber	?	?	?	-6 mos.	?	None
18	F	Shaft and chamber	?	?	?	-6 mos.	?	None
19	F	Central chamber	Flexed on left side	W	M	20-25	Medium	None
20	F	Shaft and chamber	?	?	?	-6 mos.	?	None
21	F	Shaft and chamber	?	?	?	-6 mos.	?	None
22	F	Central chamber	Flexed on left side	W	M	14-16	?	None
23	G	Simple pit	Flexed on right side	W	?	20-30	?	None
24	I?	Simple pit	Flexed on left side	SW	?	3-6	?	None
25	J	Simple pit	Flexed on left side	W	M	20-30	Pronounced	None
26	D?	Shaft and chamber	?	?	?	-6 mos.	?	*Marginella* shells, shell gorget
27	?	Shaft and chamber	?	?	?	-6 mos.	?	None
28	?	Shaft and chamber	Flexed on right side	W	?	15-18	?	None
29	?	Shaft and chamber	Flexed on back	SW	M	18-20	?	2 turtle shell rattles
30	?	Simple pit	Flexed on back	W	F	20-25	Slight	None
31	I?	Simple pit	Flexed on left side	W	M	38-45	Pronounced	None
32	D?	Simple pit	Flexed on right side	W	M	16-18	Pronounced	None
33	H	Shaft and chamber	Flexed on right side	NW	M	14-16	Pronounced	Perforated rabbit pelves and scapulae
34	H	Shaft and chamber	?	?	?	-6 mos.	?	None
35	H	Simple pit	?	?	?	adult?	?	None

TABLE 7

BURIALS AT THE WARREN WILSON SITE (BN'29)

being worn exclusively by females (see references cited in Lewis and Kneberg 1946: 127).

Burial 7 contained an uncommon abundance of grave goods. The individual wore a columella bead bracelet on each wrist. Probably affixed in some way to his garments were 22 cut-mica discs. Also present was a small conch shell filled with red ochre, two bone awls or pins, 6 panther phalanges, and a scattering of red ochre and garfish scales. It is likely that this individual was a clan leader or a shaman.

The information on the Warren Wilson burials is summarized in Table 7.

The Garden Creek Sites

Hw^{o}1

Twenty-three burials were found in the excavation of Hw^{o}1. Four others were found in a house floor in the village area east of the mound. All of these burials were judged to be of probable Pisgah origins.

The number of infant burials at Garden Creek was fewer than at Warren Wilson. Otherwise the proportions of age groups were similar. Preservation was generally poorer at Garden Creek and only 8 burials were identifiable as to sex; there were 4 males and 4 females. All of the skeletons were in flexed positions but the headings were in any direction, not just to [illegible]t as at Warren Wilson.

There were 6 sh[illegible]a-chamber burials and 21 simple pit burials. The central-chamber form was not present. Its absence in the mound

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structure, which probably was a late feature on the site, is not surprising.

Grave goods accompanied over half of the burials at $Hw^{o}1$. This compares with only 30 percent at the Warren Wilson village site. Such a difference may be indicative of higher rank for the individuals buried in the mound. Columella beads, tubular shell beads, shell gorgets, and shell ear pins were the most frequent accompaniments in the mound burials. One burial contained a conch shell bowl, another had a rattle (only a cluster of pebbles remained), another had a cache of 3 stone discs, and another had 2 stone celts. The inclusion of stone artifacts in burials was a trait of the historic Qualla culture and probably represents a late (post-A.D. 1400) addition to Pisgah burial practices.

A summary list of traits of the $Hw^{o}1$ burials is provided in Table 8.

$Hw^{o}2$

Eight intrusive burials were found in this mound. They were similar to the burials in the larger mound ($Hw^{o}1$) and to those at the Warren Wilson site. A summary list of traits is provided in Table 8.

Additional Sites with Pisgah Burials

A single Pisgah burial was excavated at the Rankin site on the French Broad River in Cocke County, Tennessee. It was the burial of a child, sex undetermined, age estimated at 6 years. The pit was circular, with a diameter of 27 inches. It was 31 inches deep and had a flat bottom. The skeleton was on its right side, flexed, and oriented to the northwest (David Smith, personal communication). A small Pisgah Plain vessel with a collared rim (Smith and Hodges 1968: Plate XLIV) was

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Burial	Provenience	Pit Type	Heading	Sex	Age	Grave Associations
$Hw^{O}1$						
1	Intrusive toe of mound	Simple pit	W	F	Adult	Small shell beads, 1 ear pin
2	Intrusive toe of mound	Simple pit	SE	?	Juvenile	None
3	Below Floor 2	Shaft and chamber	NW	?	Juvenile	1 gorget, small shell beads
4	Below Floor 2	Shaft and chamber	E	?	Juvenile	Columella beads, small shell beads
5	Floor 2	Simple pit	N	?	Adult	None
6	Below Floor 2	Shaft and chamber	SW	?	1-3	Small shell beads, 6 gorgets
7	Below Floor 2	Simple pit	?	?	Infant	Columella beads, small beads
8	Below Floor 2	Shaft and chamber	NW	?	Juvenile	Gorget, columella beads
9	Below Floor 2	Simple pit	?	?	Infant	None
10	?	Simple pit	SE	?	Juvenile	None
11	?	Simple pit	NW	M	19	Columella beads, 3 stone discs
12	?	Simple pit	E	?	3-5	1 shell bead
13	?	Simple pit	W	?	12-15	Small shell beads, shell gorget
14	?	Simple pit	N	?	Adult?	None
15	?	Simple pit	S	?	4-6	Small shell beads, 2 gorgets
16	Intrusive mound fill	Simple pit	SE	?	40-50	Conch bowl
17	Intrusive mound fill	Simple pit	NW	M	40-50	1 shell bead
18	Intrusive Floor 3	Simple pit	N	?	?	Rattle?
19	$Hw^{V}7$ (1)	Simple pit	NW	M	Adolescent	None
20	$Hw^{V}7$ (2)	Shaft and chamber	?	?	Infant	None
21	$Hw^{V}7$ (3)	Shaft and chamber	W	?	6-8	None
22	$Hw^{V}7$ (4)	Simple pit	NW	F	Adult	Gorget
23	Floor 1-A	Simple pit	NW	F	Adult	None
24	Pre-mound humus	Simple pit	NW	F	Adult	None
25	Intrusive toe of mound	Simple pit	?	?	Infant	2 celts
26	Pre-mound humus	Simple pit	?	?	?	None
27	Pre-mound humus	Simple pit	N	M	30	None
$Hw^{O}2$						
1	Mound stage 2	Simple pit	?	?	Infant	1 shell bead
2	Intrusive mound	Simple pit	?	?	Infant	2 *Marginella* shells, 2 disc shell beads, gorget
3	Mound stage 2	Simple pit	W	?	14-16	None
4	?	Simple pit?	?	?	Juvenile	None
5	Through mound 2	Shaft and chamber	NW	F	Adult	None
6	Mound stage 2	Shaft and chamber	S	?	Adult	Shell beads
7	Mound stage 2	Simple pit	W	M	Adult	None
8	Mound Stage 1	Simple pit	E	M	Adolescent	None

TABLE 8

BURIALS AT THE GARDEN CREEK SITE ($HW^{O}1$ AND $HW^{O}2$)

inverted behind the skull.

Burials having presumed Pisgah origins have been found at the I. C. Few site located on the Keowee River in South Carolina. The archaeologist in charge of excavations described these burials as being "in pits, flexed, usually without artifacts but sometimes with shell beads or discs" (Roger Grange, personal communication).

Temporal and Areal Relationships

Burying in shaft-and-chamber pits and in pits under hearths, which was characteristic of the Pisgah culture, also was practiced by the historic Cherokee. At the Coweeta Creek mound near Franklin, North Carolina, both traits were present in an early 18th-century Qualla context (Joffre Coe, personal communication).

Shaft-and-chamber burials have been found at sites on the Carolina Piedmont occupied by the Sara and Occaneechi tribes at the beginning of the 18th century (Coe 1969: 8). They also have been found as intrusions on the Town Creek site, presumably the result of a post-Pee Dee occupation by an unidentified Siouan group (Joffre Coe, personal communication). One shaft-and-chamber burial was found in the village area of the Etowah site in Georgia. The pit was roofed with poles 6 inches in diameter. Association probably was with the Wilbanks culture (Lewis Larson, personal communication).

Burial Number 17 at the Chauga site in South Carolina lay partially under a platform hearth. Both of these features originated from the surface of Mound stage 1 (Kelly and Neitzel 1961: 12). At the Cox site on the Clinch River in Tennessee a "late Mississippian" (Dallas?)

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burial was found under a clay hearth basin (Myers 1961: 22-25).

Together with shaft-and-chamber and below-hearth burials, there was a continuation of the use of shell grave accompaniments from the Pisgah to the Qualla periods. Columella beads and ear pins were identical for both. Shell-gorgets were similar in decorative theme, probably representing a style continuum (see Chapt. III, p. 133).

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CHAPTER VI

FOOD REMAINS

Most of the pitfill and plowed soil at the Warren Wilson and Garden Creek sites contained food remains in the forms of animal bones, charred vegetal matter and occasional mollusk shells. These remains were most abundant in the fill of pits, depressions, and postmolds. Large masses of material sometimes indicated instances of garbage disposal following a single meal or sequence of meals. Usually, however, the material was scatter sparingly in the fill, having collected there randomly with other household debris.

Burial pits seldom contained any kind of refuse in the lower portions of the fill. Refuse, including food remains, was frequently present in the upper part of burial fill, however, having collected there after the pitfill settled. These inclusions usually were sparse and did not appear to represent intentional garbage disposal.

All pitfill was excavated carefully in order to retrieve the micro-artifact content, including food remains. The fill was first washed through a screen having 1 mm. wire mesh. Charcoal was then separated by flotation. At the Warren Wilson site, most of the screening was done at a facility set up near the site, while most of the flotation was carried out at the Research Laboratories of Anthropology in Chapel Hill.

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Faunal Remains

Ten samples of animal bone from the Warren Wilson site were examined by Elizabeth Wing, Assistant Curator in Zooarchaeology at The Florida State Museum, Gainesville, Florida. Included were Features 7, 53, 57, 136 and 137; Burials 3 and 7; a 25-foot section of Palisade D; a group of postmolds associated with House E; and a plowed-soil sample from one 10-foot square. All of the bone was acquired through fine-screening, except for the plowed soil sample which was obtained by sifting with 1/2-inch-mesh screens. Dr. Wing's list of identified species by minimum numbers of individual animals, along with her preliminary observations, are attached to this paper as Appendix II.

The identifications indicate that a wide range of faunal resources was utilized by the Pisgah villagers. These animals were hunted and collected for their meat primarily, but also for their bones, fur and carapaces. It is probable that certain "incidental species" represent household and granary pests and were not "food animals."

Large mammals (deer and bear) were important for their meat, but small mammals, birds, amphibians, and fish also were eaten. The "incidental" category contains mice, small birds, snakes, and toads. Some of these may also have been eaten. Aquatic species were only about one-fourth as important to subsistence as terrestrial species. Buffalo (Bison bison) and elk (Cervus canadensis) bones, which were found in small amounts at the Garden Creek site, were not present in the Warren Wilson sample.

The occurrence mostly of bones of small animals in the tops of burial pits is predictable, since these pits do not appear to have been

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used specifically as garbage repositories. The smaller bones would be expected to accumulate accidentally in the burial depressions, whereas larger bones would have been less likely to end up there.

Dr. Wing suggests that the relative abundance of bones of rodents, small birds, and snakes in Features 7 and 57 might be indicative of granary sites. This interpretation seems quite reasonable for Feature 57, but less likely for Feature 7 which has been interpreted as an excavation related to the building of Palisade D (see Chapter IV, p. 173). Other large depressions (Features 54, 107, 108, and 143 for example) located adjacent to houses may also have been the sub-surface floors of granaries.

The relative abundance of the bones of fur-bearing animals in the total collection has suggested to Dr. Wing that these animals were hunted possibly as much for their fur as for their meat.

The distributions of species by house area (B, C, D, and E), are of little value at the present stage in the work at Warren Wilson. However, after the bone collections from additional house areas have been analyzed and after more information has been acquired on the chronology of the structures on the site, it may be possible to determine if there are temporal differences in the subsistence pattern.

Floral Remains

Charcoal from six features--Feature 7, 56, 57, 136, 137, and 140--was analyzed by Richard Yarnell, Assistant Professor of Anthropology at Emory University, Atlanta Georgia. All of the charcoal from each feature, except for small amounts of wood charcoal retained for possible

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radiocarbon dating, was submitted. Dr. Yarnell's report, together with a quantified list of identified plants, is attached to this paper as Appendix I.

Cultigens were present in the samples in the form of corn, squash (or pumpkin), and beans. Sumpweed (Iva annua) may also have been cultivated. Hickory nuts, acorns, walnuts, and butternuts were gathered, as were several fruits and possibly some small seeds.

In overall quantity, nut remains were most abundant, followed by cultigens, then fruits, and finally seeds (poorly represented). Yarnell suspects that corn and possibly beans, squash, and sumpweed, were under-represented because of their relative fragility and that their importance to the economy was greater than indicated by the quantities in the analyzed samples.

Most of the identified cultigens and wild plants were harvestable in summer and autumn, however the evidence provided by a stockaded village pattern, permanent house type, and food-storage pits (see Chapt. IV), attests to the probability of a year-around occupancy of the site. The great abundance of wood charcoal, which Yarnell points out is reminiscent of northern sites or of winter occupations, might be explained by the fact that the author purposely picked features with the greatest amounts of charcoal for analysis. In doing this he may have biased the samples toward autumn and winter features while slighting summer features.

The corn from the six samples is of the Eastern Complex and probably had eight or ten rows. Separate cob fragments analyzed by Olin McCormick (see Appendix III) had eight rows with the possibility of some ten-row specimens. Corn remains also have been identified in

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charcoal from $Hw^{o}1$ at Garden Creek, but detailed examinations of this corn have not yet been made.

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CHAPTER VII

SUMMARY AND CONCLUSIONS

In the preceding chapters it has been shown that a recurring complex of artifacts and traits comprise a unique culture in the late prehistory of the Southern Appalachians. This culture has been termed Pisgah. Discussions have centered around five major categories of archaeological remains--ceramics, artifacts, structures and features, burials, and food remains.

Ceramics of the Pisgah Series can be grouped, on the basis of surface finish, into four types--Pisgah Rectilinear Complicated Stamped, Pisgah Curvilinear Complicated Stamped, Pisgah Check Stamped, and Pisgah Plain. There are a few sherds with woven-reed (or quill), corncob, cord, fabric, or net impressions. Within the rectilinear stamped category there are three designs. The most common form is composed of groups of parallel lines set perpendicular to each other in a series of ladder-like patterns. Less frequent variations have slanted lines either on the central or the flanking portion of the design element. There are two curvilinear designs, one consisting of two pairs of concentric circles separated by a single line, and the other composed of interlocking scrolls flanked by sets of parallel lines. The plain category contains both smooth and rough finishes. In most collections, rectilinear stamping is dominant, followed by check stamping, plain, and curvilinear stamping.

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The basic vessel form is a globular jar with an everted rim, on the top of which has been attached an additional clay strip to form a collar. There are also unmodified and thickened everted rims, straight rims, and inslanted rims. Rim decoration consists of bands of punctations or incised patterns. There are rim appendages in the forms of handles, nodes, vertical lugs, and appliqued strips. Shallow bowls are frequently decorated with a thin, pinched or notched strip around the outer edge of the lip. Temper is fine to coarse river sand, occasionally crushed quartz, and rarely shell (seen only in Tennessee). The color is light gray to buff on the exterior of the vessel and dark gray to black on the interior. There is frequently a high percentage of mica in the clay.

Pisgah artifacts were made from stone, clay, bone, shell, and wood. Chipped-stone implements consist of projectile points and also tools for working wood, shell, bone, and hides. All of these were made on small flakes of chert, quartz, quartzite, or "Carolina slate." The points are triangular in shape and have striaght or concave bases. A variety of small flake tools have edges which are either unifacially or bifacially flaked to serve the functions of cutting, scrapping, sawing, boring, or graving.

Ground or polished stone is represented by rectangular celts, small discs, and pipes. There are also pottery-burnishing stones.

Pecked stone implements consist of hammerstones, anvil stones, grinding stones, and occasionally mortars. Small finely-pecked hammerstones probably were used in flintworking while larger, rougher ones probably served to pound nuts and seeds.

A fourth category of stone artifacts is termed cut stone. Mica is

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important here, since roughly-cut and finished pieces of it are frequently found in Pisgah contexts. There is abundant evidence for aboriginal mica mining in the Appalachian area, and it is possible that the Pisgah peoples exchanged this material with non-mountain groups for exotic goods such as marine shell. Also included in the category of cut stone are various pigments--hematite, limonite, and graphite. These were found in cut and abraded lumps. Red ochre was present in one burial.

Clay artifacts consist of small elbow pipes, discs made from potsherds, beads in a variety of shapes, small animal heads, and occasionally miniature pottery vessels. The pipes usually have a bowl which flares out at the top and is larger than the stem. The bowl and stem may be decorated with incisions or nodes.

Bone tools were made from large sections of animal longbones, such as deer ulnae and metatarsi and turkey tarsometatarsi, and from small bone splinters. There are awls, needles, and other similar implements. The splinter tools appear to have been of short-term use, while the larger pieces show polish and retrimming, the result of extended use. A few carved bone pins, probably hair or ear ornaments, also were found. Turtle shells filled with small pebbles were used for rattles. These were found at the ankles of two burials. In one instance, a group of perforated rabbit pelves and scapulae was present in the lower leg area of a burial.

Shell artifacts of a utilitarian nature have been found only in Tennessee, where river mussel shells may have been used for hoes. Marine mollusks were made into a number of non-utilitarian items which are found almost exclusively in burial contexts. Included are beads,

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gorgets, earpins, and vessels. Large spheroidal beads were made from the columella of the conch shell, and small tubular and disc beads were made from the wall of the conch shell. The columella beads were worn as both necklaces and bracelets, while the small beads appear to have been worn only as necklaces. Perforated Marginella shells were sewn to the burial garments of infants and children. Shell gorgets are found most frequently in the burials of infants and children. The common form is circular, with an engraved and excised representation of a coiled rattlesnake, or in one case a dancing human figure. Another form is a small quadralobed square. Knobbed earpins were made from the conch columella. Large conchs, with their internal structures removed, were placed in burials, probably to serve as ritual containers.

Pisgah villages were located on or immediately adjacent to alluvial creek and river bottomland. The upper portions of the mountain valleys were often favored over the lower portions. Surface indications, and some excavation data, point to settlements varying from as small as one acre to as large as ten or twelve acres.

The Warren Wilson site probably is typical of the small village. In an early phase it covered about one acre. Later, it was enlarged to take in possibly as much as three or four acres. The houses were constructed of upright posts and measured about twenty feet on a side. They were roughly square to rectangular, with round corners. There was a central platform hearth. In the presumably early house form on this site, the overall plan was not symmetrical and the entrance probably was just a break in the wall. A presumably later form had fairly straight and parallel walls and there was a canopied entrance on the south or east side. The walls of both forms seem to have been covered with a

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perishable material, probably bark; the roofs were likely to have been covered with bark or with straw thatch.

Houses were arranged in a roughly circular or rectangular pattern within the village. The whole was surrounded by a palisade of closely-spaced logs. The entrance to the village, at least in its early phase, was formed by an offset in the southeast side of the palisade closest to the river.

Burials were made in the house floors or immediately outside of the houses. The bodies were interred in simple pits, central-chambered pits, or side-chambered pits. Central chambers probably preceded side chambers at this site. The chambers were sealed with logs, or with stone (only one instance to date). Sometimes burials were made under the central hearth of the house. An old hearth might even be removed to make way for a burial, after which a new hearth was constructed over the burial pit.

The bodies were placed in the pits in loosely flexed positions with their heads to the west. Columella shell beads were included with adult males, adult females, and infants. Adults also had shell ear pins, shell bowls, and turtle shell leg rattles. Infants and children were the most frequent recipients of shell gorgets and perforated Marginella shells. Fronto-parieto-occipital deformation was present on all of the preserved adult skulls.

Grave goods were found with burial groups in and around certain houses, but were totally absent in groups associated with other houses. This difference may be interpreted as evidence for social stratification or of temporal changes in the use of grave goods. Such an interpretation has further support in the greater frequency of grave goods in the mound

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burials at $Hw^{o}1$ over those in the village burials at $Bn^{V}29$.

Although there have been only minor excavations in one of the village areas at the Garden Creek site, it appears that the settlement was much larger than at Warren Wilson. Midden materials cover two tracts of approximately 5 to 6 acres each. These tracts may have been inhabited by the Pisgah culture at different periods or at the same period. In addition to being larger than Warren Wilson, the site also contained ceremonial structures. In one of the village areas a mound built during an earlier period was utilized during the Pisgah period. In a second and slightly larger village area, there were two conjoined semi-subterranean earth lodges. At the rear of these buildings, a multi-corridored arrangement of posts may have supported the roof of an open-air communal structure. Eventually, the area of posts was covered with river boulders and then mounded with earth up to and adjoining the tops of the earth lodges. This surface was not used because the earth lodges collapsed. A further layer of fill was added over the whole, and the mound then served as the base for an above-ground building which was surrounded by a log enclosure.

Large villages with ceremonial buildings, like the village at Garden Creek, probably were the forerunners of the "town centers" of the historic Cherokee. As the study of the surface-collected ceramics shows, many of the historically important towns of the Middle, Valley, and Underhill areas--Nuquassee, Kituwah, Peachtree, Tugaloo, and others--were occupied in late prehistoric times by the Pisgah culture. Platform mounds at some of these sites, with structural features similar to $Hw^{o}1$, probably were begun during the period of Pisgah occupation. Smaller villages without major ceremonial facilities, such as Warren Wilson, may

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have been aligned politically and religiously with the larger centers.

Corn was cultivated by the Pisgah villagers at both the Warren Wilson and Garden Creek sites. Other cultigens identified at the Warren Wilson site are squash and beans. Corn was present in major amounts in each of five analyzed samples of charred plant remains from the Warren Wilson site, a fact which suggests that it was an important food item. Wild plant foods included nuts, fruits, and seeds, in that order of importance. Vegetal foods were stored in below-ground pits and possibly above-ground granaries with shallow sub-surface floors.

A wide assortment of animals was hunted and collected for meat, hides, bones and carapaces. Remains of mammals, birds, snakes, amphibians, and fish were identified in bone samples from the Warren Wilson Site.

Temporal and Spatial Considerations

On the basis of similarities in design elements, vessel forms, and tempering characteristics, Pisgah pottery seems to have been primarily an outgrowth of the Pigeon Series, and to a lesser degree of the Connestee Series. These ceramic similarities, along with several radiocarbon determinations from South Carolina and Virginia, suggest a beginning date of ca. A.D. 1100 for the Pisgah culture. This culture was thoroughly altered or replaced (at least in terms of ceramics) in Tennessee, and probably in most of far-western North Carolina and South Carolina, by around A.D. 1400.

In the basins of west-central North Carolina--primarily the Pigeon and French Broad drainages-- the Pisgah culture persisted in modified

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form until perhaps as late as A.D. 1550. In the 15th and 16th centuries, late Pisgah culture was affected by influences from the south which are seen most clearly in the appearance of curvilinear complicated stamped pottery.

The Qualla culture, whose ceramics contain elements of the far-ranging Lamar style, superseded Pisgah in west-central North Carolina by the late 16th century. The differences between Pisgah and Qualla are primarily ceramic, since many traits of house construction, mound building, stone and shell work, and burial practices, to name a few, are nearly identical in the two cultures.

Pisgah ceramic traits are found to cluster in two major groupings which may represent temporal stages. A proposed early stage includes vessels of small size, small-element rectilinear and check stamping, crushed quartz temper, and unmodified or thickened rims. In a proposed later stage there are larger vessels, large-element stamping with varied rectilinear and curvilinear motifs, unmodified river sand temper, and collared rims. The former traits probably were dominant from ca. A.D. 1100-1300 while the latter traits were dominant from A.D. 1300-1550.

The presence in the Southern Appalachians of thickened and collared rims, accompanied by punctated and incised decorations, cannot be explained in terms of the local developmental sequence. It is probable that these traits were introduced from the outside. Similar forms are found in the temporally comparable Oliver, Fort Ancient, and pre-Iroquoian ceramics of central Indiana, southern Ohio, and western New York.

Pisgah pottery is found as far south as the Chauga site in Oconee County, South Carolina; as far north as Lee County, Virginia; as far west as Knoxville, Tennessee; and as far east as McDowell County, North

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Carolina. Known sites are most numerous in the basins of the upper French Broad and upper Pigeon rivers in North Carolina. The pottery from these latter sites has a predominance of the traits proposed for the period A.D. 1350-1550.

Traits of non-ceramic artifacts, architecture, and burials, as recovered mainly in contexts of the proposed later phase of Pisgah (ca. A.D. 1300-1550), are found in several surrounding cultures of the same general time period. These include the Pee Dee culture of the North Carolina Piedmont-Coastal Plain fringe, the Savannah culture of coastal South Carolina and Georgia, the Etowah and Wilbanks cultures of northern Georgia, the various late prehistoric to early historic Siouan cultures of the North Carolina Piedmont, and the Dallas culture of eastern Tennessee.

Perhaps the most numerous and striking similarities are in the Dallas culture. It might even be suggested that in such features as the decoration on shell gorgets, where both cultures shared the Lick Creek style, certain generalized Cherokee traits had emerged. Aside from obvious differences in the ceramics of the two cultures (Dallas pottery is a shell-tempered ware which is plain or cord marked), there is little to keep this writer from considering Dallas to be the somewhat more Mississippian-oriented Overhill counterpart of Pisgah--i.e. proto-historic Overhill Cherokee.

The classification of Pisgah itself as Cherokee appears to be in little doubt on the basis of the evidence presented in this study. It has been shown above that historic Cherokee pottery (Qualla Series) was a product of the merging of Pisgah styles with those of the Lamar "horizon." Many of the sites in the Middle, Valley, and Underhill areas

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were occupied by the Pisgah people prior to occupation by the people of the Qualla culture. Some of these sites, such as Garden Creek, show a definite transition in ceramics and mound building from Pisgah to Oualla. Even as late as the mid-18th century, as at the Coweeta Creek site, surviving Pisgah traits were present in house forms and mortuary practices.

In conclusion, the Pisgah archaeological remains represent a unique culture in the prehistory of the Southern Appalachians. This culture was the product both of internal developments in an indigeneous mountain sequence and of influences from outside the mountains, probably the most far-ranging of which was the introduction from the north of thickened and collared pottery rims. The culture was distributed over an area that included much of western North Carolina and eastern Tennessee, along with portions of southwestern Virginia, northeastern Georgia, and northwestern South Carolina. It had a rather long history which has been tentatively dated from A.D. 1100 to A.D. 1550. It was the primary base from which the historic Middle Cherokee culture developed.

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APPENDIX I

FLORAL REMAINS FROM THE WARREN WILSON SITE

Richard A. Yarnell

The floral remains from the Warren Wilson site which were analyzed consist of 1334 grams of material recovered by fine screening and flotation from six pits associated with house floors. Quantities per feature range from 30 to 419 grams. Of the total, 949 grams is a residue of fragments passing through a screen with 2.4 mm. openings. Small seeds, small snails, fish scale fragments, bone fragments, and flint chips were recovered from the residue. Otherwise the reported remains are from the 385 grams remaining, all of which were quantified. All but 6 grams of the quantified remains is carbonized plant material, of which 81 percent is wood charcoal and 14 percent is presumed food remains. Analysis of the plant food remains indicates that the died of the occupants of the site included considerable quantities of corn, hickory nut, and acorn and lesser quantities of beans, squash or pumpkin, sumpweed seeds (marshelder), walnut, butternut, and several kinds of fleshy fruit. Various carbonized weed seeds were identified also, but their dietary significance was probably slight if they were eaten at all. Quantified results are presented in Table 1.

The great abundance of wood charcoal is reminiscent of northern sites. This may be because of the relatively high elevation of the Warren Wilson site or because primarily winter occupation is represented.

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Otherwise, the best indicators of season of occupation are the fruit seeds: persimmon, grape, and maypops (Passiflora incarnata). Persimmons are generally inedible until autumn, which is also the grape season. Maypops, however, are available from midsummer to autumn and probably are the least storable food represented and thus the best indicator of season of occupation. As usual, late summer and autumn are indicated by the wild plant foods. Summer and autumn are indicated by the cultigens. Thus, we have no evidence from the plant remains to oppose an inference that the site was occupied throughout the year.

As a result of identification of many of the larger pieces of wood charcoal, it appears that the vegetation in the vicinity of the site was dominated by pine and oak. Quantification was not attempted except in a very rough way, as indicated in Table 2. Both the red and white oak groups are well represented. Beyond this only hickory and chestnut were identified more than tentatively but, surprisingly, only once each. Questionable identities include locust and (or) honey locust, cherry, poplar, and birch. An unidentified diffuse porous wood is relatively abundant but no trees other than pine and oak are represented in great abundance. The large quantity of hickory nutshell (two-thirds of all plant food remains) indicates a substantial number of hickory trees, and walnut and butternut shell indicates the presence of these trees. A single non-carbonized, dark-brown cherry pit (Prunus serotina) may be prehistoric.

Grape vines tend to grow near streams and forest edges. Otherwise the plants represented generally grow in open ground, especially on new or old garden plots. In addition to the cultigens, these plants include maypops, poke (Phytolacca americana), knotweed or smartweed (trigonous

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seeded Polygonum), cleavers (Galium), common ragweed (Ambrosia artemesiifolia), chenopod, a grass (2 seeds, 2.4 x 1.3 x 1.0 mm. carbonized), a small flowered composite (8 dome shaped discs, 4 to 10 mm. diameter carbonized), probably a nightshade (Solanum?) and sumac (uncertain identifications), possibly blackberry or raspberry (Rubus, noncarbonized), and perhaps several plants represented by unidentified seeds, the majority of which are small and indistinctive.

Five large and quite distinctive seeds of a single type were found in the material from Feature 7. These are entered in Table 1 under the label "Kamp Mound." In August, 1963, I collected berry-like fruits and leaves from an herb, approximately two feet in height, growing at the center of the top of the Hopewellian Kamp Mound. This earth work is densely covered with large shrubs and small trees and is located on the west bank of the Illinois River in Calhoun County, Illinois. The seeds from this plant and those from Feature 7 are the same, but I have never noticed the plant or the seeds elsewhere.

As usual, many non-carbonized weed seeds were found in the samples. Ordinarily I do not report non-carbonized plant remains unless special circumstances seem to warrant it. Materials which are obviously recent occur in almost all samples of archaeological plant remains which are sent to me; and, in most cases, plant remains which occur carbonized are different from the non-carbonized remains. A major exception is Chenopodium. Two carbonized chenopod seeds were found in the Warren Wilson flotation samples along with over 100 non-carbonized chenopod seeds, many of which appear to be relatively fresh, a few freshly germinated. It cannot be assumed that any but the two carbonized seeds are contemporary with the site occupation, and it is likely that they

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originated from incidental weeds, perhaps allowed to grow in garden plots and eaten as greens. Poke and cleavers may have been utilized in this way also.

Common ragweed seeds frequently occur in some abundance in samples of archaeological plant remains but never until now in the carbonized state. Nevertheless, only the seven carbonized achenes can safely be assumed to be contemporaneous with the Warren Wilson occupation. The many non-carbonized achenes are too likely to be intrusive. The same interpretation is appropriate for the single carbonized seed and many non-carbonized seeds of the tentatively identified nightshade and also for poke with one seed carbonized and three not carbonized.

Identified seeds in the samples with no carbonized representatives include flat-seeded Polygonum (many), nodding spurge (Euphorbia maculata, few), amaranth (few), and unidentified legumes and grasses (few). Galium and trigonous seeded Polygonum are not represented by non-carbonized seeds. Thus there is apparently a considerable representation of modern weeds and also weeds contemporaneous with aboriginal occupation at the site. The lack of complete overlap between them may indicate that the effects of aboriginal disturbance were in some ways different from the effects of modern disturbance. However, the difference may be one of degree rather than kind. I hope that this discussion adequately indicates the value of floristic surveys of archaeological sites before and during excavation.

The largest areas of disturbed ground probably were the dwelling sites and the garden plots which may have been together in one area. Mississippian sites tend to be located on relatively fertile and easily cultivated sandy loam soils in river valleys or near major streams. The

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abundant evidence of cultigens in the Warren Wilson plant remains indicates that the people who lived there were in a relatively good agricultural situation. Corn is represented in the plant food remains in quantity second only to hickory nut. However, it is likely that corn was more significant to subsistence since it is much more likely to be under-represented in the carbonized plant remains. Beans, squash, and sumpweed (Iva annua var. macrocarpa) are probably under-represented also. All together the cultigen remains are 22.2 percent of the total plant food remains. Nut remains constitute 76.5 percent of the total and fruit seeds only 1.3 percent. However, the fruits probably contributed major amounts of certain vitamins, especially Vitamin C. Various beverages made from plant products also would be significant if not essential vitamin contributors, but archaeological evidence for beverages, like tubers and greens, rarely is found.

Acorn, like the cultigens, is probably considerably under-represented in the plant food remains. This is suspected because of the high proportion of oak in the wood charcoal and because acorn, being relatively delicate when carbonized, is less likely to be preserved and recovered than hickory nut. In addition, the amount of food represented by a given weight of acorn shell is much greater than for the same weight of hickory nutshell. Thus it appears that hickory nut, acorn, corn, and possibly also beans were the major plant foods at the Warren Wilson village, though not necessarily in this order of importance. My general impression is that food from the gardens and plant foods from elsewhere were somewhere nearly equal in the average year. Some years the intentionally cultivated crops would be expecially productive, but other years the poeple would be forced to rely more heavily on the

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products of the natural vegetation. Fluctuations in the availability of various animal foods would further complicate annual subsistence variation.

The corn grown is apparently what has been called Northern Flint and Eastern Complex. The few whole kernels found have the characteristic broad, low shape with embryos detached. Cob is represented almost entirely by individual cupules. However, one small cob section apparently had formed part of an eight- or ten-row ear.

The most surprising items to appear in the samples were seeds of Iva annua. Like the sumpweed seeds from the Late Hopewellian Apple Creek site in Illinois, they are lacking the achene coats, though the Warren Wilson seeds are a little larger. Average measurements of the seven seeds are 3.5 x 4.6 mm. Adding approximately 1 mm. for the achene coat and 10 percent for shrinkage as a result of carbonization to each dimension, these figures become approximately 5.0 x 6.2 mm. This is about the size of the Early Woodland Salts Cave and Newt Kash Hollow sumpweed achenes which probably were cultivated, though this is not a unanimous conclusion among ethnobotanists. Modern Iva annua achenes are only half as large as the Warren Wilson reconstructed average size, and the modern range of the species is primarily in the Mississippi Valley region and somewhat westward. The Warren Wilson Iva seeds are the most easterly of those so far discovered and thus are the ones farthest removed from the current natural range of the species and the only ones recovered east of the Appalachian Mountains. Apparently this is the youngest evidence of Iva cultivation. Its cultivation may have continued here after it was dropped farther west, perhaps indicating either a less suitable habitat here for corn or that the Pisgah region was

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something of a backwater area relative to some of the Mississippian developments to the south and west. The history of cultivated sumpweed appears to be similar to that of cultivated sunflower, though the latter apparently originated farther west, reached a higher cultigen level, and persisted to the present.

Cane is not well represented in the samples, and the fragments are all small. Apparently this is Arundinaria (A. gigantea or A. tecta).

The vast majority of the unidentified material is composed of two kinds of easily recognized carbonized substances. The largest amount, approximately 10 grams, is from Feature 56. It has the appearance of thin, wrinkled, knobby bark but probably is not. The bulk of the unidentified material from Feature 7, approximately 3 grams, has somewhat the appearance of thick, fleashy leaf. It is composed of a multitude of long cylindrical cells between thin epidermal layers. This material occurs also in the other features, especially in Features 57 and 140. Except for these two substances, the unidentified material is mostly amorphous and unrecognizeable, probably largely carbonized bark, and totals approximately 4 grams.

Flint chips and fish scales are poorly represented as compared to flotation materials from other sites which I have examined, and bone is not abundant. More than half the bone from Feature 136 is carbonized, which is unusual. The ubiquitous small snail shells (1 to 2 mm. diameter) are present but are not numerous except in Feature 56. Larger snail shells, usually present, are absent from the samples.

Sifting prior to flotation may be responsible for the relatively low representations of stone and animal remains. In fact, the samples were relatively clean and easy to work with, almost all soil having been

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previously removed. Such cleaning is helpful to the plant remains analyst; but unfortunately, it ordinarily contributes considerably to fragmentation of carbonized material. Screening and flotation are essential but not entirely satisfactory techniques for the recovery of carbonized material.

It was indeed surprising to find a complete and undamaged carbonized insect in the sample from Feature 56. It measures 3 mm. long by 1 mm. wide but has not yet been identified. Its presence could be an indication of warm season deposition, and it could have ecological significance as well.

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FEATURE	7	56	57	136	137	140	TOTALS	PERCENT
Total weight in grams	217.5	269.8	314.2	419.4	82.4	30.4	1333.7	
Residue	165.7	227.0	210.0	277.8	48.1	20.3	948.9	71.15
Stone	0.14	1.25	0.53	0.28	0.06	x	2.26	0.17
Coal	0.06	0.01	x				0.07	x
Flint chips	0.08	0.04	0.05				0.17	0.01
Bone	0.66	0.96	0.60	0.99	0.06	0.32	3.59	0.27
Fish scale	x	0.01	0.01	0.01			0.03	x
Small snails	x	0.03	x	x	x		0.03	x
Plant remains	50.85	40.53	102.99	140.27	34.22	9.79	378.65	28.39
Carb. wood	40.34	20.86	91.6	114.8	31.06	6.88	305.54	80.69
Cane	0.60	0.20	0.20	0.10		0.07	1.17	0.31
Unidentified	3.08	10.38	1.33	0.88	0.43	1.26	17.36	4.58
Weed seeds	0.04	0.05	0.13	0.20	0.01	0.01	0.44	0.12
Composite head			0.02	0.14			0.16	0.04
Plant food	6.79	9.04	9.71	24.15	2.72	1.57	53.98	14.26
Hickory nutshell	3.41	7.71	3.14	19.70	2.02	0.52	36.50	67.62
Walnut	0.41	0.13	0.54	0.13	0.17	0.07	1.45	2.69
Butternut	0.24	0.07		0.03			0.34	0.63
Acorn shell	0.07	0.14	0.77	0.55	0.06	0.12	1.71	5.58
Acorn meat	0.23	0.36	0.35	0.36			1.30	
Corn cupules	1.90	0.38	1.11	1.75	0.18	0.40	5.72	21.32
Corn kernels	0.30	0.24	3.41	1.39	0.16	0.29	5.79	
Squash shell			0.01	0.01			0.02	0.13
Squash seed			0.02	0.03			0.05	
Beans			0.22	0.13			0.35	0.65
Iva			0.03	0.01			0.04	0.07
Fruit seeds	0.23	0.01	0.11	0.06	0.13	0.17	0.71	1.32

x = less than 0.01

TABLE 1
FLORAL REMAINS FROM THE WARREN WILSON SITE

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FEATURE	7	56	57	136	137	140	TOTALS
Number of seeds							
Fruits:							
Persimmon			1	1			2
Maypops	2	1	1			13	17
Grape	8		2	9	4	2	25
Sumac?	1						1
"Kamp Mound"	5						5
Black cherry					1 NC		
Rubus	2 NC						
Weeds:							
Polygonum					1	1	2
Galium				1	1		2
Ragweed	4	1	2				7
Chenopod		1	1				2
Poke		2 NC	1 NC	1			1
Solanum?	1						1
Grass	2						2
Unidentified	12	6	26	18	4	12	78

NC = non-carbonized

TABLE 1 (Continued)
FLORAL REMAINS FROM THE WARREN WILSON SITE

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Feature	Pine	Red Oak Group	White Oak Group	Locust or Honey Locust?	Cherry?	Other
7	2	1	3	1	1	
56	3	1	2	1	1	conifer
57	2	2	1	1	1	
136	3	2	1	1	1	hickory
137	2	1				chestnut
140	2	1	1	1		birch? poplar?

3 = very abundant
2 = abundant
1 = present

TABLE 2

WOOD CHARCOAL IDENTIFICATIONS, WARREN WILSON SITE

APPENDIX II

FAUNAL REMAINS FROM THE WARREN WILSON SITE

Elizabeth S. Wing

A sample of faunal remains associated with the Pisgah occupation at the Warren Wilson site provides us with information about the use of animal resources by this late prehistoric Cherokee village. The site is located in Buncombe County, North Carolina, near the Swannanoa River, which offers a source of aquatic vertebrates in addition to land vertebrates. On the basis of these faunal materials there was evidently almost four times as much hunting as fishing. An important element included among these remains is what I am considering "incidental animals," too small to have been food.

The faunal remains were excavated from four houses. Within these houses the animal remains are associated with features such as depressions, pits, and burials. In the entire site a total of 208 minimum numbers of individuals of 30 different species are represented (Table 1).

For analysis of this faunal assemblage the species have been grouped according to their probable economic role. The groups are large game, small game, fur bearers, aquatic species, and incidental species. The first group, large game, consists of only white-tailed deer (Odocoileus virginianus). Opossum (Didelphis marsupialis), rabbit (Sylvilagus), woodchuck (Marmota monax), squirrel, both fox and gray (Sciurus sp., Sciurus niger, Sciurus carolinensis), turkey (Meleagris

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gallopavo), and box turtle (Terrapene carolina) comprised the second group, small game. The box turtle is the most abundantly represented in this group. The third category are the fur bearers. They are all carnivores and may not necessarily have been used exclusively for fur. Included are gray fox (Urocyon cinereoargenteus), raccoon (Procyon lotor), bear (Ursus americanus), least weasel (Mustela rixosa), bob-tail cat (Lynx rufus), and puma (Felis concolor). The aquatic species include beaver (Castor canadensis), frog (Rana sp.), hellbender (Cryptobranchus alleganiensis), brown water snake (Natrix sp.), mud snake (Farancia abacura), snapping turtle (Chelydra serpentina), terrapin (Chrysemys sp.), suckers (Catastomidae), and catfish (Icatalurus sp.). The last group, the incidental species, I would consider either accidental inclusions in the fauna or granary pests. In this group are small unidentified birds, unidentified mice, deer mouse (Peromyscus sp.), toad (Bufo sp.), unidentified amphibia and snakes, whip snake (Masticophis flagellum), king snake (Lampropeltris sp.), hognose snake (Heterodon sp.), and unidentified viper (Crotalidae).

The relative abundance of each of these groups differs in the three archaeological contexts: depressions, pits, and burials (Table 2). House B, which contains all three kinds of contexts, has a faunal composition virtually identical to that for the entire site. The relative abundances of large game and fur bearers are very similar in these three kinds of contexts whereas the relative abundances of aquatic, incidental, and small game animals differ considerably. There are more than twice as many aquatic forms represented in the pits than in the burials or depressions. Incidental animals are far more abundant in the depressions than elsewhere, and small game species, largely constituting

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box turtles, are very abundantly represented in the burials.

What these observed characteristics of the fauna mean in terms of man-animal relations can only be tentatively suggested and require larger samples for verification. This sample clearly indicates an emphasis on hunting as a supplement to agriculture. The unusually large number of carnivores represented in the site does, as indicated, suggest use perhaps primarily for their fur.

Small game animals are particularly associated with the three burials. Box turtle is the most abundant small game animal, but is no more abundantly represented in the burials than in other parts of the site. There is no very obvious reason for this apparent association of small game animals with burials.

The association between incidental animals and depressions suggests the possibility that the depressions were granaries which attracted small animals, particularly the mice.

To reiterate, the interpretations I have made are preliminary, based upon small samples. What they suggest above all is that a study of larger faunal samples from this site promises to reveal a variety of man-animal relationships, such as hunting for meat and fur, fishing, gathering by hand animals such as turtles, frogs, and snakes, and household fauna (those animals that were attracted to the houses or stored food).

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Species	House B MNI	House B %	House C MNI	House C %	House D MNI	House D %	House E MNI	House E %	Palisade & Plow Zone MNI	Palisade & Plow Zone %	Total MNI	Total %
Mammals												
Didelphis marsupialis	1	1.1	-	-	-	-	-	-	-	-	1	0.5
Sylvilagus sp.	1	1.1	1	2.4	1	2.4	2	13.3	-	-	5	2.4
Castor canadensis	1	1.1	-	-	-	-	-	-	1	4.5	2	1.0
Marmota monax	1	1.1	1	2.4	-	-	-	-	-	-	2	1.0
Sciurus sp.	2	2.3	-	-	1	2.4	2	13.3	-	-	5	2.4
Sciurus niger	2	2.3	-	-	-	-	-	-	-	-	2	1.0
Sciurus carolinensis	3	3.4	2	4.8	1	2.4	-	-	-	-	6	2.9
Unidentified rodent	-	-	5	11.9	4	9.8	-	-	-	-	9	4.3
Peromyscus sp.	-	-	10	23.8	-	-	-	-	-	-	10	4.8
Urocyon cinereoargenteus	-	-	1	2.4	1	2.4	-	-	1	4.5	3	1.4
Procyon lotor	2	2.3	2	4.8	1	2.4	-	-	1	4.5	6	2.9
Ursus americanus	4	4.5	1	2.4	2	4.9	1	6.7	1	4.5	9	4.3
Mustela rixosa	1	1.1	-	-	-	-	-	-	-	-	1	0.5
Lynx rufus	1	1.1	-	-	-	-	-	-	-	-	1	0.5
Felis concolor	1	1.1	-	-	-	-	-	-	-	-	1	0.5
Odocoileus virginianus	8	9.1	4	9.5	7	17.1	4	26.7	7	31.8	30	14.4
Bird												
Unidentified	4	4.5	3	7.1	2	4.9	-	-	1	4.5	10	4.8
Meleagris gallopavo	5	5.7	2	4.8	2	4.9	2	13.3	1	4.5	12	5.8
Auran												
Unidentified	-	-	-	-	1	2.4	1	6.7	-	-	2	1.0
Bufo sp.	24	27.3	5	11.9	1	2.4	-	-	2	9.1	32	15.4
Rana sp.	2	2.3	-	-	-	-	-	-	1	4.5	3	1.4
Cryptobranchus alleganiensis	1	1.1	-	-	-	-	-	-	-	-	1	0.5
Snake												
Unidentified	1	1.1	-	-	-	-	-	-	-	-	1	0.5
Colubridae	1	1.1	-	-	-	-	-	-	1	4.5	2	1.0
Farancia abacura	-	-	-	-	1	2.4	-	-	-	-	1	0.5
Masticophus flagellum	-	-	1	2.4	-	-	-	-	-	-	1	0.5
Lampropeltis sp.	-	-	1	2.4	1	2.4	-	-	-	-	2	1.0
Natrix sp.	2	2.3	1	2.4	1	2.4	-	-	1	4.5	5	2.4
Heterodon sp.	1	1.1	-	-	-	-	-	-	-	-	1	0.5
Crotalidae	3	3.4	-	-	-	-	1	6.7	-	-	4	1.9
Turtle												
Chrysemys sp.	1	1.1	-	-	-	-	-	-	-	-	1	0.5
Chelydra serpentina	2	2.3	-	-	-	-	-	-	-	-	2	1.0
Terrapene carolina	11	12.5	-	-	4	9.8	2	13.3	3	13.6	20	9.6
Fish												
Catastomidae	2	2.3	1	2.4	10	24.4	-	-	1	4.5	14	6.7
Ictalurus sp.	-	-	1	2.4	-	-	-	-	-	-	1	0.5
Total	88		42		41		15		22		208	

MNI = Minimum number of individuals

TABLE 1

FAUNAL LIST

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Site	Aquatic #	Aquatic %	Incidental #	Incidental %	Large Game #	Large Game %	Small Game #	Small Game %	Fur #	Fur %	Total #
House B	11	12.5	34	38.6	8	9.1	26	29.5	9	10.2	88
House C	3	7.2	25	59.5	4	9.5	6	14.3	4	9.5	42
House D	12	29.3	9	22.0	7	17.0	9	22.0	4	9.8	41
House E	0	0	2	13.8	4	26.2	8	53.8	1	6.2	15
Total	26	14.0	70	37.6	23	12.4	49	26.3	18	9.7	186
Depressions (7, 57)	9	9.8	49	53.3	8	8.7	18	19.6	8	8.7	92
Burials (3, 7, 15)	3	9.4	5	15.6	5	15.6	15	46.9	4	12.5	32
Pits (53, 136, 137)	14	26.9	14	26.9	8	15.4	11	21.2	5	9.6	52
Postmolds (House E)	0	0	2	13.8	4	26.2	8	53.8	1	6.2	15
Total (186 MNI)	26	14.0	70	37.6	23	12.4	49	26.3	18	9.7	186
Palisade	3		4		4		3		0		14
Plow Zone	1		0		3		1		3		8
TOTAL	30	14.4	74	35.6	30	14.4	53	25.5	21	10.1	208

MNI = Minimum number of individuals

TABLE 2

DISTRIBUTION OF ANIMAL KINDS

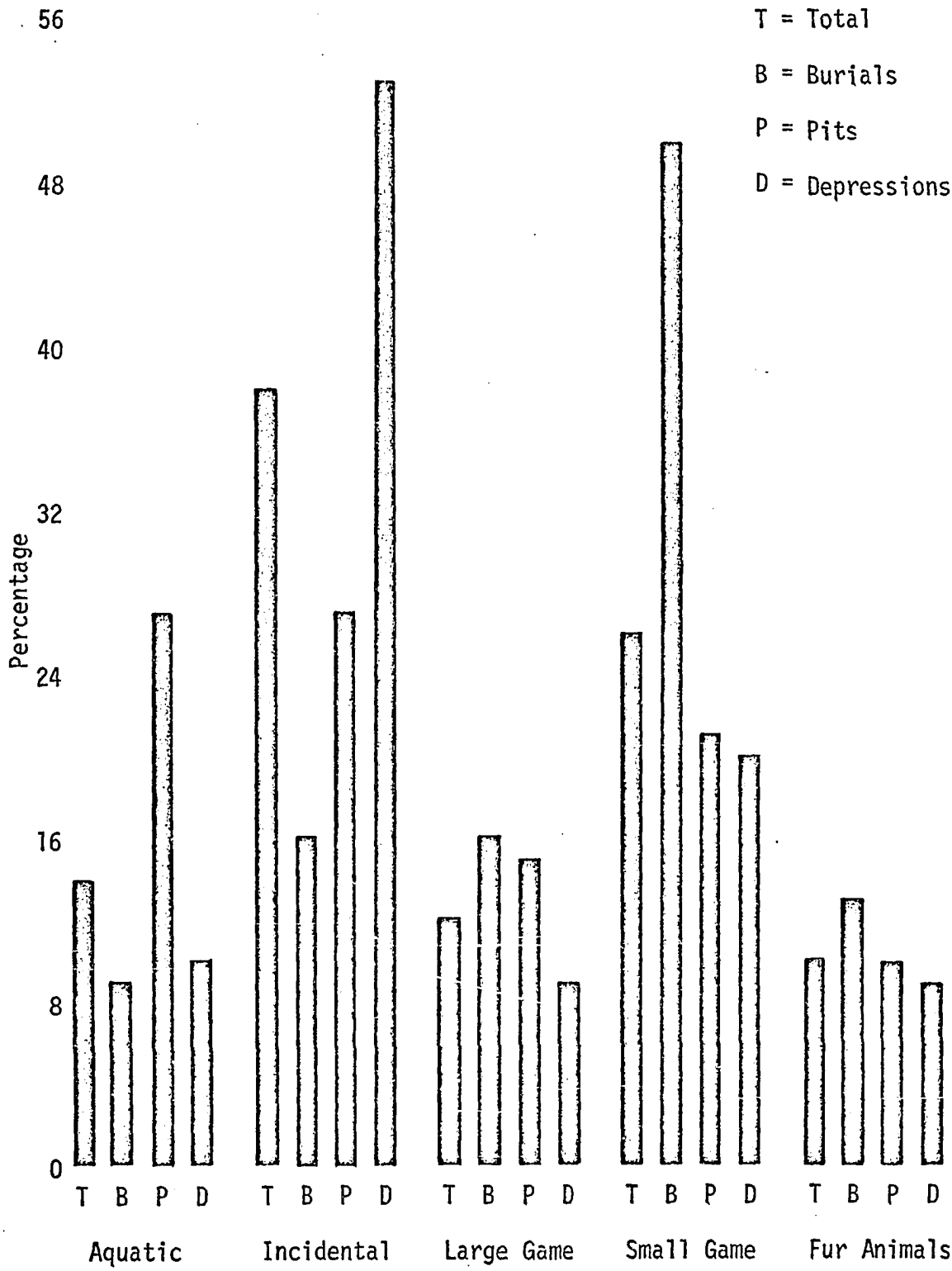

FIGURE 1

DISTRIBUTION OF ANIMAL KINDS

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APPENDIX III

INVESTIGATION OF CORNCOB FRAGMENTS FROM THE WARREN WILSON SITE

Olin F. McCormick III

In a recent research project, the purpose of which was to determine whether whole corncob characteristics could be determined from partial cob remains, carbonized whole and fragmented cupules from the Warren Wilson site were examined. Cob samples from nine features on three other North Carolina sites (Town Creek, Occaneechee, and Keyauwee) were frist examined to establish measurement averages. Care was taken to use only samples dating to approximately the same period as those from $Bn^{V}29$. The usable measurements taken on the cupule fragments from $Bn^{V}29$ are as follows:

	Avg. cup. width	Avg. cup. height	Avg. cup. depth
Burial 1 (16 items)	6.43 mm.	1.93 mm.	4.12 mm.
PM # 45, 120R300 (15 items)	4.93 mm.	2.63 mm.	-
Cob impression (pottery clay)	8.00 mm.	2.50 mm.	-

Two cob fragments from postmold 45 were complete enough to obtain the following row counts and measurements:

Cob	#1	#2
Number of rows	8	8
Projected length	17.00 mm.	16.00 mm.
Greatest diameter	10.00 mm.	11.00 mm.
Least diameter	9.50 mm.	10.00 mm.

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A compilation of the cupule width, height and depth for the six, eight, ten and twelve row cobs, together with the $Bn^{V}29$ data, is presented below:

Row #	6	8	10	12	$Bn^{V}29$
Avg. cup. width	9.20 mm.	7.60 mm.	6.40 mm.	7.60 mm.	5.80 mm.
Ave. cup. height	3.00 mm.	2.40 mm.	2.50 mm.	2.70 mm.	2.30 mm.
Avg. cup. depth	-	-	-	-	4.10 mm.

As may be seen, the cupule width for the $Bn^{V}29$ material is closer to the average for the ten-row cobs but it also falls within the range of a single site for eight-row cobs (5.60mm. to 9.00 mm). In cupule height the eight-row range is from 2.00 mm. to 2.80 mm., while the ten-row cobs ranged from 2.00 mm. to 3.10 mm. Thus the $Bn^{V}29$ cobs are closer in cupule height to the eight-row measurements.

From the above information it could be concluded that the majority of the cupules in the $Bn^{V}29$ samples came from eight-row cobs. One might also cautiously project an average cob greatest diameter of 12.50 mm. and an average cob length of approximately 16.50 mm.

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APPENDIX IV

SUMMARY OF 1969 EXCAVATIONS ON THE PISGAH LEVEL AT THE WARREN WILSON SITE

Veletta Canouts

Data recovered from the 1969 summer excavations at the Warren Wilson site confirm and supplement knowledge of the Pisgah culture gained from the three previous seasons of work. The following summary discusses information from the 1969 season in terms of each specific area of excavation.

The stripping of the plow zone in an area bounded by grid points 60R210, 60R250, 120R210, and 120R250 revealed what seems to be an early portion of the Pisgah settlement (Fig. 13, p. 166 of text). Within the previously discovered palisade lines, two house patterns were found. Though the inner walls of these structures were somewhat rectangular, there were no distinct outer wall patterns nor entrance trenches like those found in Houses A, B, and C. The former structures were more like Houses D, E, F, and G (Fig. 8, p. 135 of text).

No features or burials were associated with the house structure on the north border of the area, but one burial (Burial 39) was associated with the structure in the east-central area. Two other possible burials, both unexcavated, were also associated with this latter house.

Five burials of the simple pit type were found within the 1969 excavation area. Two of the pits (Burials 38 and 40) contained no bone; preservation of the bone in the other three was very poor. A middle-

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aged female (Burial 36), a middle-aged male (Burial 37), and a young adult of undetermined sex (Burial 39) all lay in semi-flexed positions with their skulls oriented to the west. None of the burials contained grave goods.

Excavation along the 50 line from R250 to R290 attempted to trace further post hole patterns. The stockade wall (Palisade A) approaching 50R260 did not continue in this square, perhaps indicating an entrance or bastion.

Post hole patterns in 50R290 completed what appears to be a house structure like those described above. A deep circular pit (Feature 146) was associated with this structure. It was filled with organic material and Pisgah artifacts and contained a layer of uncracked river boulders.

On the eastern edge of the site (within squares 50R330, 50R360, 90R330 and 90R360) excavation continued in a midden area first noted at the end of the 1968 field season and designated then as Feature 141. This feature consisted of refuse and erosion debris which had accumulated along an old margin of the river bank. A row of post holes ran along the edge of this slope (Fig. 13, p. 166 of text).

The excavation of Feature 141 reached to a depth of six feet, at which point sterile river-lain deposits were encountered. Five other major soil distinctions were from top to bottom (1) a recent plow soil containing Pisgah material; (2) a midden layer containing plow-disturbed Pisgah sherds, assumed to be deposited through older plowing and erosion; (3) a still older plow soil containing Pisgah material; and (4-6) eroded and discarded village debris of early Pisgah and pre-Pisgah age. An analysis of the sherds from levels 4 through 6 may provide much needed information on the development of Pisgah ceramic styles. Though it is

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obvious that mixing has occurred in strata 1 through 3, inferences about temporal differences in late Pisgah ceramics may be possible. Pee Dee ceramics also recovered in the same strata as the late Pisgah sherds give additional evidence for contact with Piedmont cultures.

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BIBLIOGRAPHY

Bartram, William
1791 Travels of William Bartram. Mark Van Doren, ed. (1940), Dover Pulications, New York.

Bragg, Laura M.
1918 Indian Mound Excavation in South Carolina. Bulletin of the Charleston Museum, Vol. 14, No. 4, pp. 17-20.

Broyles, Bettye J.
1968 Reconstructed Designs from Swift Creek Complicated Stamped Sherds. Proceedings of the 24th Southeastern Archaeological Conference, Bulletin 8, pp. 49-55.

Caldwell, Joseph R.
1955 Cherokee Pottery from Northern Georgia. American Antiquity, Vol. 20, No. 3, pp. 277-80. Salt Lake City.

1958 Trend and Tradition in the Prehistory of the Eastern United States. Memoirs of the American Anthropological Association, No. 88. Menasha.

Caldwell, Joseph R. and Catherine McCann
1941 Irene Mound Site, Chatham County, Georgia. The University of Georgia Press, Athens.

Coe, Joffre L.
1952 The Cultural Sequence of the Carolina Piedmont. In Archaeology of Eastern United States, edited by James B. Griffin, pp. 301-11. The University of Chicago Press, Chicago.

1961 Cherokee Archaeology. In "Symposium on Cherokee and Iroquois Culture," edited by John Gulick, pp. 53-60. Bureau of American Ethnology, Bulletin 180. Washington.

1964 The Formative Cultures of the Carolina Piedmont. Transactions of the American Philosophical Society, Vol. 54, Part 5. Philadelphia.

1969 Shaft and Chamber Burials of the 16th Century Cherokee. Abstracts of Papers, 34th Annual Meeting of the Society for American Archaeology, p. 8. Milwaukee.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Coe, Joffre L. and Bennie C. Keel
1965 Two Cherokee Houses in Western North Carolina. Abstracts of Papers, 30th Annual Meeting of the Society for American Archaeology, p. 5. Urbana.

Coe, Joffre L. and Ernest Lewis
1952 Certain Eastern Siouan Pottery Types. In Prehistoric Pottery of the Eastern United States, edited by James B. Griffin, Statement 1-52. Ann Arbor.

De Baillou, Clemens and A. R. Kelly
1960 Excavation of the Presumptive Site of Estatoe. Southern Indian Studies, Volume 12, pp. 3-30. Chapel Hill.

Dorwin, John T.
n.d. MS, The Role of the Frontier in Cultural Transmission.

Egloff, Brian John
1967 An Analysis of Ceramics from Historic Cherokee Towns. MS, Master's thesis, Department of Anthropology, The University of North Carolina, Chapel Hill.

Ferguson, Leland G.
n.d. MS, Prehistoric Mica Mines in the Southern Appalachians.

Griffin, James B.
1966 The Fort Ancient Aspect: Its Cultural and Chronological Position in Mississippi Valley Archaeology. Museum of Anthropology, The University of Michigan, Anthropological Papers No. 28. Ann Arbor.

1967 Eastern North American Archaeology: A Summary. Science, Vol. 156, No. 3772, pp. 175-91.

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, pp. 35-43. New York.

Heye, George G., F. W. Hodge, and G. H. Pepper
1918 The Nacoochee Mound in Georgia. Contributions from the Museum of the American Indian, Heye Foundation, Vol. 2, No. 1. New York.

Holden, Patricia Padgett
1966 An Archaeological Survey of Transylvania County, North Carolina. MS, Master's thesis, Department of Anthropology, The University of North Carolina, Chapel Hill.

Holland, C. G.
n.d. MS, An Archaeological Survey of Southwest Virginia.

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Holmes, William H.
1884 Illustrated Catalogue of a Portion of the Collections Made by the Bureau of Ethnology During the Field Season of 1881. Third Annual Report of the Bureau of Ethnology, 1881-82, pp. 427-510. Washington.

1903 Aboriginal Pottery of the Eastern United States. Twentieth Annual Report of the Bureau of American Ethnology, 1898-99. Washington.

Keel, Bennie C.
1967 Garden Creek Mound, Hw^{0}2, Haywood County, North Carolina. Abstracts of Papers, 32nd Annual Meeting of the Society for American Archaeology, p. 4. Ann Arbor.

Kellar, James H.
1967 Part 3, Material Remains. In Angel Site: An Archaeological, Historical, and Ethnological Study, Vol. II, by Glenn Black, pp. 431-87. Indiana Historical Society, Indianapolis.

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.

Kneberg, Madeline
1959 Engraved Shell Gorgets and Their Associations. Tennessee Archaeologist, Vol. 15, No. 1, pp. 1-39. Knoxville.

Lewis, T. M. N. and Madeline Kneberg
1941 The Prehistory of the Chickamauga Basin in Tennessee. Tennessee Anthropological Papers, No. 1 (Mimiographed), The Division of Anthropology, The University of Tennessee, Knoxville.

1946 Hiwassee Island: An Archaeological Account of Four Tennessee Indian Peoples. The University of Tennessee Press, Knoxville.

1957 The Camp Creek Site. Tennessee Archaeologist, Vol. 13, No. 1, pp. 1-48. Knoxville.

1958 Tribes That Slumber. The University of Tennessee Press, Knoxville.

McCord, Howard A., Jr.
1966 The McLean Mound, Cumberland County, North Carolina. Southern Indian Studies, Vol. 18, pp. 1-45. Chapel Hill.

McMichael, Edward V.
1960 The Anatomy of a Tradition: A Study of Southeastern Stamped Pottery. MS, Doctoral Dissertation, Department of Anthropology, Indiana University, Bloomington.

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MacNeish, Richard S.
1952 Iroquois Pottery Types: A Technique for the Study of Iroquois Pottery. National Museum of Canada, Bulletin No. 124. Ottawa.

Muller, Jon D.
1966 Archaeological Analysis of Art Styles. Tennessee Archaeologist, Vol. 22, No. 1, pp. 25-39. Knoxville.

Myers, Richard
1961 Important Discovery at the Cox Site Excavation. Tennessee Archaeologist, Vol. 17, No. 1, pp. 22-5. Knoxville.

Neumann, Georg K.
1942 Types of Artificial Cranial Deformation in the Eastern United States. American Antiquity, Vol. 7, No. 3, pp. 306-10. Menasha.

Osborne, A. J.
n.d. MS, Osborn's report [to B. B. Valentine] regarding opening of mound on George Smathers' land, Haywood County, North Carolina in 1880. Original document on file at the Valentine Museum, Richmond, Virginia.

Polhemus, Richard R.
n.d. MS, Field notes on excavations at Cobb Island and McCullough Bend sites, Tennessee.

Polhemus, Richard R. and James H.
1966 The McCullough Bend Site. Tennessee Archaeologist, Vol. 22, No. 1, pp. 13-24. Knoxville.

Reid, James Jefferson, Jr.
1967 Pee Dee Pottery from the Mound at Town Creek. MS, Master's thesis, Department of Anthropology, The University of North Carolina, Chapel Hill.

Sears, William H.
1955 Creek and Cherokee Culture in the 18th Century. American Antiquity, Vol. 21, No. 2, pp. 143-9. Salt Lake City.

1958 The Wilbanks Site (9Ck-5), Georgia. Bureau of American Ethnology, Bulletin 169, pp. 129-94. Washington.

Sears, William H. and James B. Griffin
1950 Fiber-Tempered Pottery of the Southeast. Prehistoric Pottery of Eastern United States, edited by James B. Griffin, Statement 6-50. Ann Arbor.

Setzler, Frank M. and Jesse D. Jennings
1941 Peachtree Mound and Village Site, Cherokee County, North Carolina. Bureau of American Ethnology, Bulletin 131. Washington.

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Smith, David C. and Frank M. Hodges, Jr.
1968 The Rankin Site, Cocke County, Tennessee. Tennessee Archaeologist, Vol. 24, No. 2, pp. 37-91. Knoxville.

Smithsonian Institution, Museum of Natural History, Photographic Laboratory, Negative Number 37318-E.

Thomas, Cyrus
1894 Report on the Mound Explorations of the Bureau of Ethnology. Bureau of Ethnology, 12th Annual Report. Washington.

Timberlake, Henry
1765 The Memoirs of Lieut. Henry Timberlake. Samuel Cole Williams, ed. (1948), Continental Book Company, Marietta.

Valentine, Edward P.
n.d. Report [to M.S. Valentine] on excavations at the Sawnooke Mound, Swain County, North Carolina in 1882. Original document on file at the Valentine Museum, Richmond, Virginia.

Wauchope, Robert
1966 Archaeological Survey of Northern 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.

Webb, William S. and David L. DeJarnette
1942 An Archaeological Survey of Pickwick Basin in the Adjacent Portions of the States of Alabama, Mississippi and Tennessee. Bureau of American Ethnology, Bulletin 129. Washington.

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