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A Preliminary Report on Archeological Explorations
at Macon, Ga.

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A PRELIMINARY REPORT ON ARCHEOLOGICAL EXPLORATIONS AT MACON, GA.

By A. R. KELLY

INTRODUCTION

The purpose of this paper is to present within narrow limits a statement of progress in site exploration at Macon during the last 4 years. Such implications of chronology as seem justified at present will be given in broad outline.

Necessarily the question of chronology must be approached very cautiously as exploration in the Ocmulgee Basin in central Georgia has resulted in a great mass of data and field collections which have not been completely studied or analyzed. The sites have yielded an unanticipated wealth of material. Stratigraphic indications of cultural continuity, coming both from physical superimposition of deposits and typological distinctions in collections made at several points (horizontal stratigraphy) offer a series of data permitting certain generalizations which now seem to be sufficiently substantiated to be worthy of consideration. It may be advantageous to give a preliminary conception of chronology along with the description of a specific site.

Inasmuch as each of the site explorations will ultimately require extended presentation to give all the essential field data, the present article must be confined to a broad summation of field results. The detailed facts of supporting evidence must await further opportunity for expression.

The method of presentation will be to summarize current results in connection with the specific sites which seem to represent periods of evolution or cultural change in the Ocmulgee Basin. In order to give continuity to interpretation, the key sites will be taken up in order of their apparent cultural annectence rather than the order of time in which they were explored (fig. 1).

A brief statement regarding the history of the work might be made for those who have not been informed. Work began in December 1933 under the auspices of the Smithsonian Institution, as a Civil Works Administration project. The Society for Georgia Archaeology cooperated in the initiation of the project. Large mound and

associated village sites in the Ocmulgee Basin near Macon, Ga., were selected for exploration. Investigation continued subsequently under various relief organizations. Archeological explorations have been continuous since December 1933 to the present time. In 1935 the Ocmulgee National Monument was established by act of Congress. At the present writing the National Park Service is completing explorations and beginning restoration of exhibits and prehistoric structures.

EVIDENCE OF A PREPOTTERY FLINT INDUSTRY ON THE MACON PLATEAU

The Macon Plateau has been the center of protracted and intensive study. Topographically it is not a true plateau but consists of a flat penepined hill section formed from the ancient east river terrace of the Ocmulgee River. The slopes dip very gradually on all sides to the river plain on the west, to low-lying marshes south and southeast, and to secondary ravines of drainage slopes north, northeast, and northwest.

The geological formation is basal Eocene. Top soils are weathered loam with characteristic A and B profile developments extending down into unmodified red clay. In the Central of Georgia Railway excavation, made in 1871 through the middle portion of the plateau, a good cross section may be seen. Underlying the Eocene red clay crust of the plateau are manganoous and ferruginous lensed clays, "calico clay," which lie unconformably over kaolinitic deposits of Cretaceous origin.

Macon is on the fall line which extends across central Georgia from Columbus to Macon, to Milledgeville, to Augusta. At or near the Macon Plateau the Ocmulgee cuts through the last remnants of the piedmont and follows a meandering course through broad marshy flood plains to join with the Oconee 90 miles downstream, whence, as the Altamaha, it reaches the Atlantic coast at Darien.

The summit of Macon Plateau is the seat of several large mounds, both conical and pyramidal truncates (fig. 2). Modern plantation cultivation has uncovered great quantities of pottery and worked flints implying heavy village occupation.

The evidences of a prepottery flint industry have been accumulating over a 4-year period of exploration. Proper presentation of all the facts would require much more space than is here available. It must suffice at this time to state the general nature of the problem.

First of all, several thousand worked flints have been dug from the plateau in extensive trench exploration. Typologically these exhibit many primitive chipping characteristics and indicate a surprising assemblage of specialized scrapers, any one of which, on technical grounds, might be sufficiently distinct to identify a flint industry (fig.

3). The worked flints are practically all made from secondary slivers or flakes and show chipping techniques reminiscent of the middle and late paleolithic in Europe (fig. 4). The convergence in workmanship is in many instances truly remarkable.

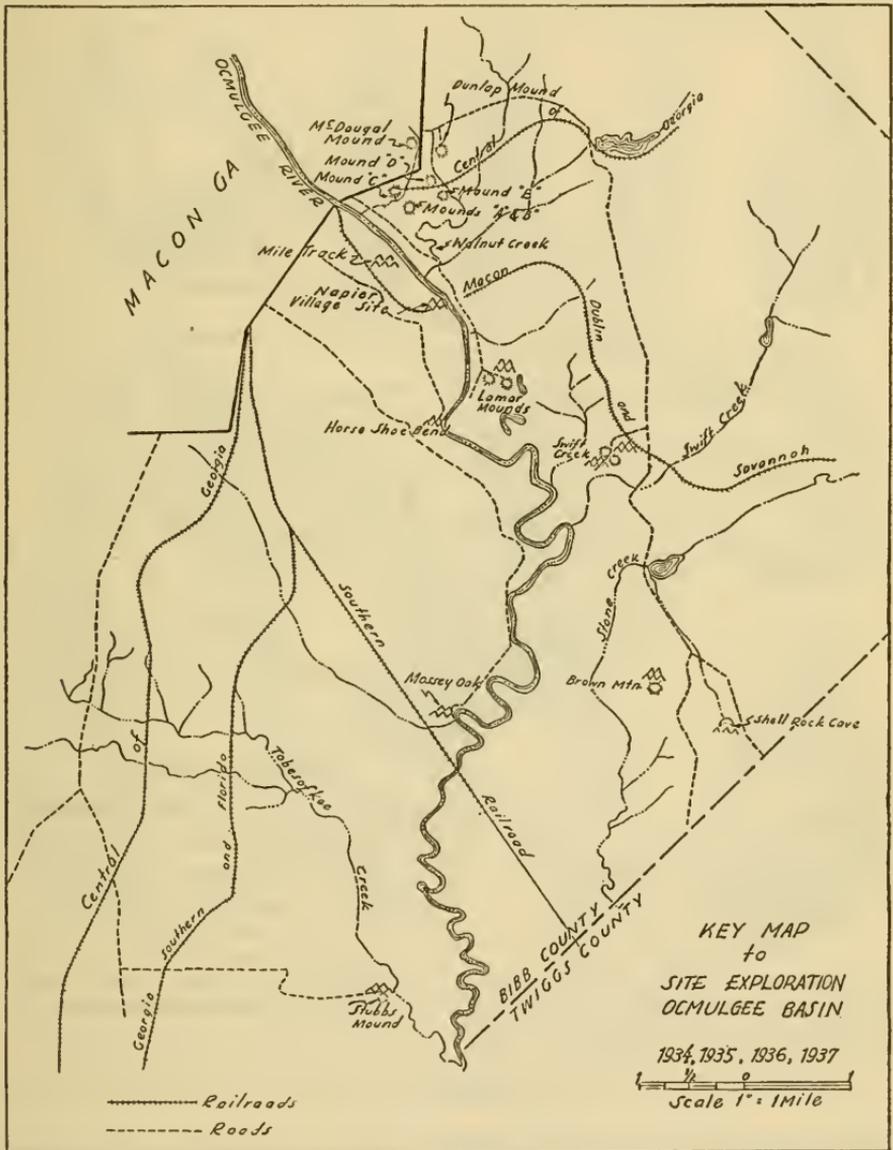


FIGURE 1.

The second consideration of importance in regard to the Macon flints relates to the stratigraphic distribution of these specimens, which have been described as having the specializations which might be expected of an early hunter people. A great majority show advanced decomposition or patination to an extent seldom observed in American

collections.¹ The possibility that this unusual change in flint cortex may be a response to soil conditions, climate, or special flint constitution peculiar to the area has not been ignored. Evidence at hand tends to show that flint artifacts of similar mineralogical nature in the same soil matrices do not change within 700 to 1,000 years.²

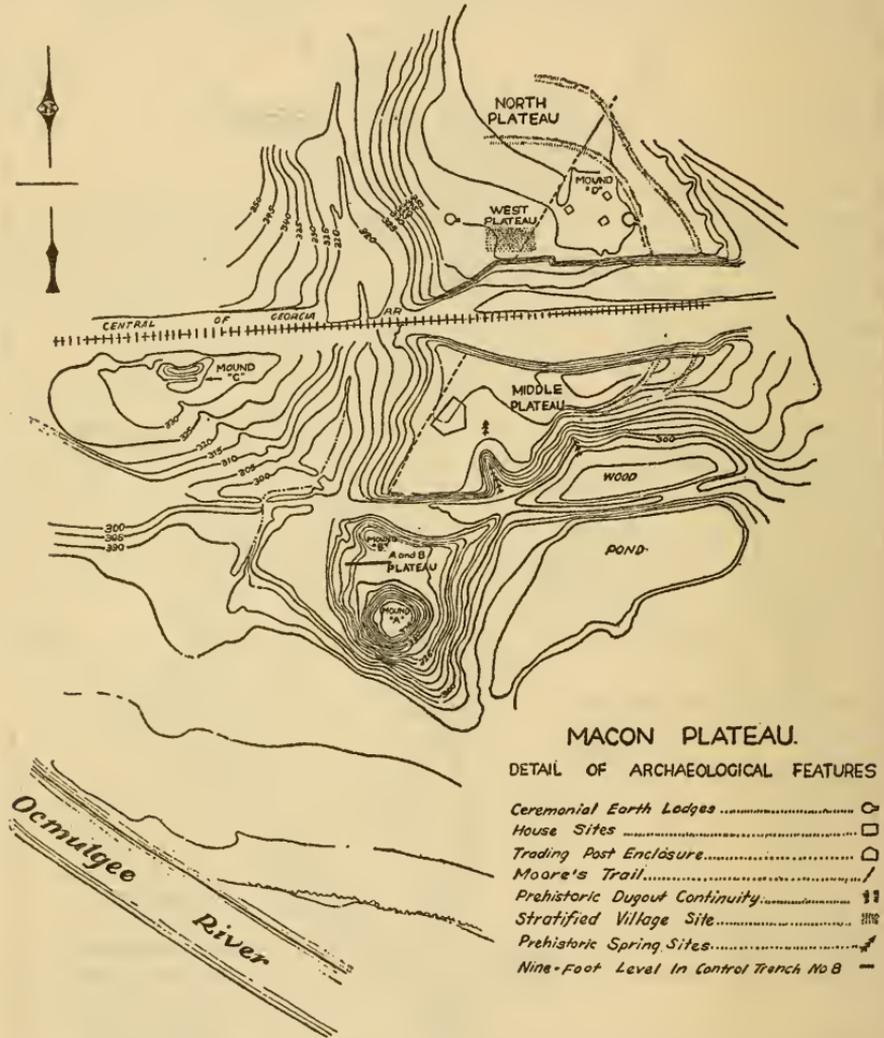


FIGURE 12.

Flint taken from the seventeenth century trading post, from prehistoric occupations and house sites, and from stratified deposits at

¹ It is probable that the marked modification of flint cortex observed in Macon flints should be referred to as decomposition, weathering, or alteration rather than patination. The measured degree of cortical change in some Macon specimens is greater than that in Kentian eoliths, England.

² Dean Leon P. Smith of Wesleyan College, Macon, Ga., carried out extensive investigations of the problem of flint decomposition in comparative series of worked flints collected on various sites in Georgia. His death in 1937 represents a great loss to science. He was one of the few individuals familiar, through long study, with local geology and had been interested for many years in the subject of weathering in rocks. Dean Smith was preparing a manuscript summarizing the results and tentative conclusions of his work at the time of his death.

several different points on the plateau show no modification of cortex, or only incipient change. On the other hand, cataloged flints from deep-lying weathered loam and fossil soils beneath the oldest mounds show a progressive increase in mean patination from original plateau surface to the lower soil zones. The progressive increase in decom-

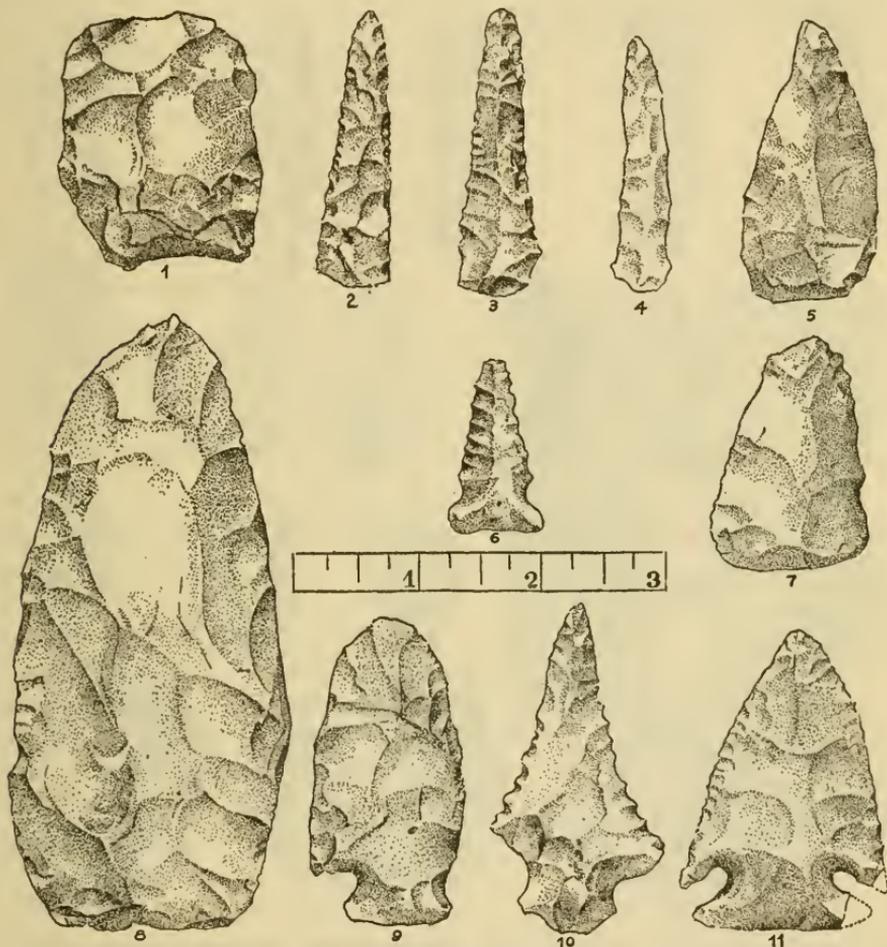


FIGURE 3.—Flint artifacts illustrative of the more "generalized" classes of tools from the Macon Plateau. Nos. 1 and 5 are chisel-like knives. Nos. 2, 3, and 4 are drills. No. 7 is a plano-convex type of end scraper with plateaulike upper surface replacing the usual median keel. No. 6 is a "spinner" projectile exhibiting the unilateral chipping and asymmetrical balance characteristic of this very prevalent type. Nos. 9, 10, and 11 exhibit notched forms whose typology, relative decomposition of cortex, and distribution in weathered soil zones would seem to indicate greater age conditions.

position amounts to as much as 100 percent at a level over 20 inches below the old plateau surface.

Correlated with the decomposition of the flint is a marked weathering of the exposed soils mantling the plateau. Soil profile developments assimilate features observed by soil scientists in the glacial area of the northern and eastern section of the United States. Along with the development of soil profiles goes the formation of nodular

soils with heavy precipitation of iron and manganeous nodes. The developments have been definitely perceived to take place in archeological contexts and the question has been raised as to how rapidly acceleration might take place under very favorable conditions in the semitropical southeastern area.³

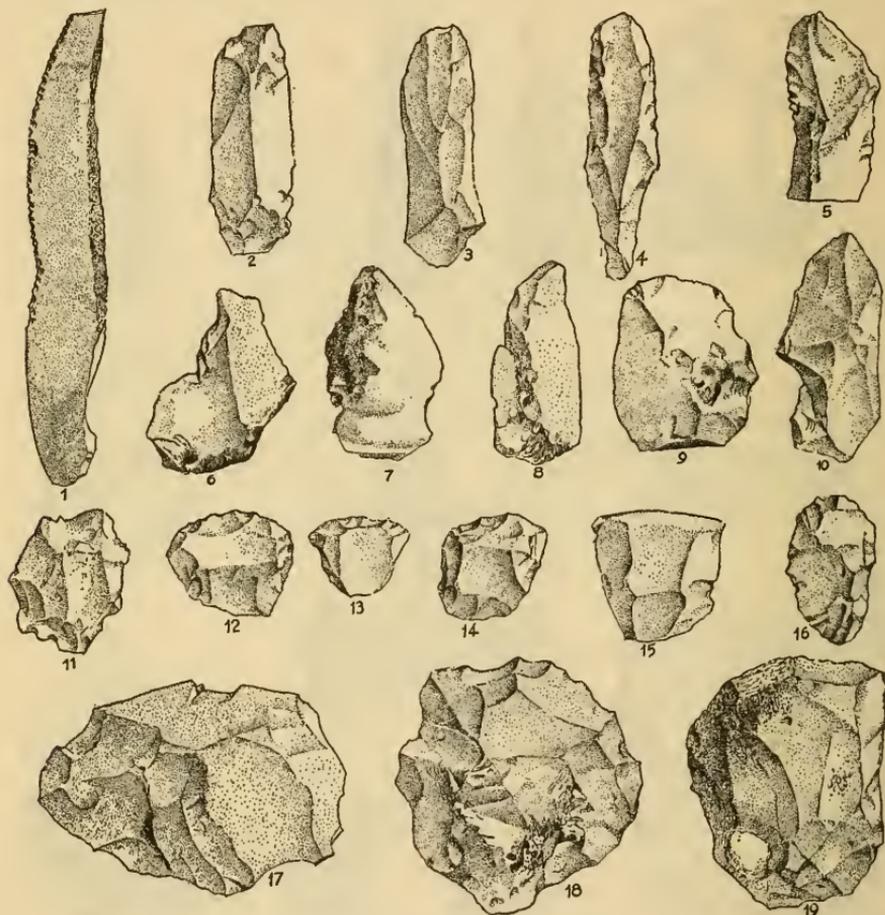


FIGURE 4.—Patinated (decomposed) flint artifacts from the Macon Plateau showing specializations for woodworking and skindressing. Nos. 1 to 10 are knives or composite tools illustrating the geometric form exhibited frequently in Macon collections cataloged from deep weathered loam. Nos. 11 to 16 show characteristic forms of end scrapers. Nos. 17, 18, and 19 are large "turtle backs," massive round or broad oval-end scrapers of specialized aspect.

Another important factor is the vertical distribution of flint with regard to pottery on the Macon Plateau. A 600-foot correlation test trench was excavated and over 10,000 sherds and pieces of flint scrap cataloged precisely to determine mechanical conditions of movement in the weathered soils. This experiment demonstrated that pottery and flint occur in approximately equal amounts in the upper

³ Two distinguished geologists, Dr. C. O. Sauer, University of California, and Dr. R. J. Russell, Louisiana State University, visited the site of explorations at Macon and observed the unusual soil profile features in archeological contexts and the heavy decomposition of flint artifacts.

occupation levels but that pottery diminishes and disappears from the lower weathered zones, whereas worked flints increase very markedly. The same conditions were found in correlations of flint and pottery distribution in fossil soils preserved beneath prehistoric mounds. Another feature related to this, but involving the horizontal distribution of old flints, is the fact that isolated small areas on the plateau show heavier concentration of rotten, decayed flint scrap suggesting flint knapping sites. From these spots strata box collections show notable increases at a depth of 15 to 24 inches. The overlying soil burden appears to be natural soil with normal profile development.⁴

Some interest in the problem comes from the fact that both the cutting tools and the projectiles have a "Folsomoid" aspect (fig. 5). One projectile cataloged from the Macon Plateau has been authenticated as a true southeastern type Folsom, replete with all the essential identifying characters.

Other projectiles from deep weathered loam show the same attenuated "Folsomoid" traits in less striking degree. The variations in fluting or longitudinal grooving, in form, and in the haft appear to be specializations peculiar to the southeastern Piedmont region, as comparable specimens occur elsewhere in Georgia in private collections.

The scrapers, knives, perforators, and drills more closely resemble western prototypes. However, several distinguishing specializations appear on the Macon Plateau.

A class of broad, snub-nosed, plano-convex scrapers with shelving haft are noteworthy.

Another specialized series of scrapers found only in deep weathered loam, and always exhibiting heavy decomposition, is represented by large, massive, round, plano-convex tools. These may be 2 inches or more in diameter and a half inch thick. The peripheral cutting edges are secondarily chipped.

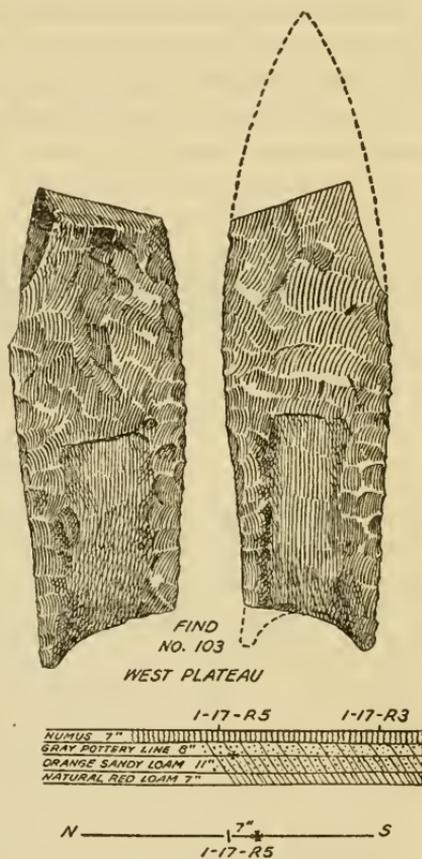


FIGURE 5.

⁴ The possibility of simple intrusion by way of stump holes, animal burrows, or soil lesions of any kind, has been ruled out by several extensive explorations undertaken solely to check distribution, including correlation studies made of soil zones in fossil soils beneath prehistoric mounds on Macon Plateau.

Long, double-ended scrapers with concave under side and longitudinally convex keel represent a peculiar form. These artifacts have cutting edges $2\frac{1}{2}$ to 4 inches in length which show secondary working.

A planing tool with stem haft, having the cutting plane chipped at an acute angle with the lines of the base, is another unusual form.

THE POTTERY-AGRICULTURE BASE IN OCMULGEE FIELDS

Within 100 yards of the spot where evidences of a prepottery flint industry were first noted on the Macon Plateau a very complex stratified accumulation of cultural debris has been intensively explored over a 2-year period. The method employed has been to make vertical cross-sectional cuts at 10-foot intervals through the area, as offsets from a system of control trenches. Subsequently, horizontal stripping,

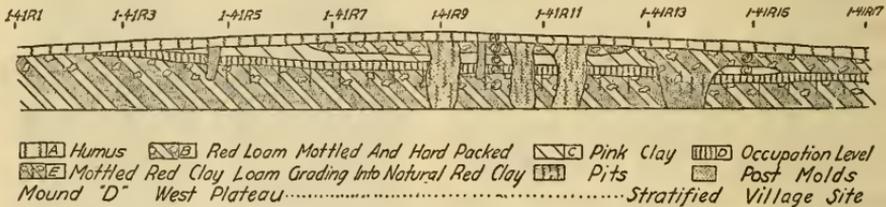


FIGURE 6.

with the taking off of each stratified level or soil element individually exhibited in the vertical profile panel, has been followed in order to give the maximum detail in cataloging and in describing context.

The evidence from this site, called the stratified village at Mound D (fig. 6), shows at least three occupation levels in which pottery, baked-clay basins, burials, domestic pits, and indications of house sites have been found. The domestic pits are clearly seen to be intrusive from several building levels. The materials from surface pits and house floors show that there was an historic Indian occupation with trade material in conjunction with Indian pottery and flint artifacts; also a top prehistoric series of house floors and clay basins characterized by a definite pottery complex; a deeper buried black soil midden containing numerous artifacts and pottery gives a heavy predominance of stamped ware of distinctive character. This stamped pottery in the deeper prehistoric level in the stratified village at Mound D is characterized by exceedingly small, neatly cut designs, geometric in form, but with suggestions of a highly conventionalized linear expression which may have been once naturalistic. The patterns have a cameo distinctness and fineness of execution which serve to identify all sherds belonging to this classification and to distinguish them easily in any site, however complex, in stamped pottery classes. We have, in fact, to deal with a pottery complex whose morphological determinants are quite distinct from the other classes of stamped pottery found in the area. This class of stamped pottery has a wide distribu-

tion, as shown in reconnaissance on several rivers in central Georgia. I have given it a nongeographical name, calling it simply "Delta" class ware.

The statistical analysis of the stratified village at Mound D has not yet been made. It will serve our purpose at present merely to state that the data indicate that Delta occurs in the lowest prehistoric level and that, in conjunction with this ware, we have indicated a marked increase in the use of quartz and quartzite stone implements. There is evidence that quartz and quartzite were used almost to the exclusion of flint, a peculiarity which seems to characterize sites located on the Oconee River 40 miles north where quartz increases to over 90 percent in all collections in association with heavy percentage of Delta ware.

Regarding again the profile panels through the stratified village site we note a soil zone beneath the lowest prehistoric occupation level, on which we have described Delta pottery and quartzite tools as being largely distributed, in which the original clay geological formation is seen to be weathered and mottled, exhibiting a normal profile development shading insensibly into unmodified red clay. At a point 5 to 6 inches below the lowest prehistoric occupation level quantities of decomposed, worked flint were cataloged. And in this substratum there was no pottery. The flints coming from the weathered loam beneath the occupation level show the primitive characteristics of chipping previously described and the specializations noted.

In the stratified village at Mound D, in addition to Delta there have been found significant percentages of other classes of early stamped ware and a large floating mass of very coarse, plain, grit-tempered sherds, poorly fired and generally much eroded. The surface finish and paste characteristics of this plain, coarse ware are quite different from that observed in the Delta stamp.

Mound D, seated on the northwest rim of the plateau within 100 yards of the stratified village just described, presents a neat picture of stratified layers relating to soil sheets developed on the sides of the original mound, the structure of the mound itself, and cultural features beneath the mound, including a buried occupation level which, in turn, shows a gradation through the zones of weathered soil presenting the same features described for the stratified village. In all, at least nine structural layers or levels have been determined for Mound D, briefly, as follows: (1) the accumulated soil creep and outwash soils developed on the slope of the mound covering; (2) a buried sod marking the original mound slope into which intrusive pits were made which contained seventeenth century glass beads, gun flints, iron, and other European trade objects in association with Indian materials; (3) a thick mantle of red clay entirely covering the mound and averaging 8 to 14 inches in thickness, beneath which (4) a series of super-

imposed house floors were brought out directly on the summit of the mound. Over 600 post molds were found on the summit of the mound beneath the red-clay plate, intrusive through a bluish or slate-colored clay floor prepared from river-bed clay. Two of these houses were determined to be large square structures, and one of them had a series of fired clay basins built in the floor. These are thought to have been used for storage of maize. Beneath the slate-colored clay floor of the house sites on top of the mound was found (5) the main body of the mound structure consisting of basket-laid white and tan-colored sand held in place by the clay plating as a bonding material. In the southwest quadrant of the mound survey an inclusive house mound was found beneath the basket-laid sand of mound body. The house mound was square, about 3 feet high, neatly ramped, with a prepared baked-clay floor, and with indications of galleries on the northwest and southeast ends of the building. Pottery from this large house site was predominantly plain, coarse, red or orange in color from firing, without specialized characteristics, and similar to the generalized common domestic ware found in the stratified village site. The mound had been built over and had enveloped the smaller house mound.

Beneath the house, and everywhere underlying the basket-laid sand in the mound body, was uncovered a series of artificially arranged rows of soil, a dark, chocolate color, rich with midden, contrasting with the white sand of the enveloping mound. In the vertical profiling of the mound we had perceived uniform undulations at mound base and suspected that we had chanced upon a buried field of cultivation. It proved comparatively easy to remove by troweling the overlying soil burden of basket-laid sand, due to the sharp contrast in soil texture and color. The operation was successful in uncovering and revealing intact the largest and best-preserved plot of cultivated ground belonging to prehistoric American agriculture. The area of the prehistoric cornfield uncovered was approximately 75 by 50 feet. About half of the mound was left standing, unexcavated, in place over the rest of the field. The included house mound was also troweled out in place over the prehistoric field. Altogether the combined exhibit presents a very compact area of more than ordinary archeological interest.

We have enumerated the basket-laid sand construction of the mound as the fifth stratigraphic element. Sherds and other archeological material were cataloged from the mound materials (5).

Collections from the floor of the included or enveloped house mound constitute another occupation, the sixth (6).

The cultivated field or mound base in this instance forms the seventh (7) catalog level.

Beneath the prehistoric field were found cache pits, some storage pits, and post-hole indications of large square houses, not built on clay platforms as was the house inside Mound D. There were two of these houses beneath the rows of the prehistoric field definitely belonging to a preceding occupation and materials taken from these yield study collections for the eighth level (8).

The ninth (9) and basically oldest stratified collection comes from the weathered loam and fossil soil beneath the house floors and other occupational features previously described under Mound D.

The oldest occupation here yields a heavy predominance of plain, coarse pottery having prepared grit temper but very poorly fired and much eroded from use. Pottery handles with nodal protuberances on rim and handle occur in conjunction with this plain, red or orange-fired pottery. Nodal, small button or teat-like protuberances on lip, rim junction or handle exhibit as many as 30 or more variations. A smaller inclusion of Delta and other classes of early stamping is noted. In the ninth level, the weathered soil zone, only decomposed flint having the highly specialized character for skin dressing and woodworking was found.

Still on the northeast rim of the plateau and within 30 yards of the site of Mound D a small artificial hillock was explored which turned out to be one of the most important discoveries in the Macon Plateau investigations. This was the base of a ceremonial earth lodge of unusual type. It was essentially a circular chamber 42 feet in diameter, covered by an earth shell. Illumination and ventilation, presumably, were provided by a smokehole in the central roof section and a tunnel entrance at least 25 feet long. The walls of the structure were still preserved in basal portions and were shown to be vertical. These were sun-dried or baked. The floor was of a slate-colored river-bed clay, puddled or hard-packed, possibly sun-dried, with a special arrangement of molded seats completely encircling the inner circumference of the room. A few degrees north of the due east azimuth an entrance passage 25 feet long with vertical log walls led into the structure. Clay buttresses or pilasters, U-shaped, projected inward to mark the immediate entrance into the chamber. Directly opposite was a specially prepared raised platform or dais molded in the form of an eagle, exhibiting a wingless body, shoulder, neck, head, beak, and symbolical eye. In the center of the chamber between the eagle platform and the entrance was located a large baked-clay lined pit or hearth.

The ceremonial earth lodge has subsequently been found to be characteristic of ceremonial structures in the older prehistoric phase at Macon, as two more earth lodges have been found. One of these, a small chamber only 25 feet in diameter, was brought out on the west rim of the plateau. This was in much poorer state of preserva-

tion as the floor section was only 5 to 6 inches below the present plowed ground surface and cultivation had effaced many of the important features. The third earth lodge was found in 1936 in archeological reconnaissance of a site located 9 miles away from the Macon Plateau, the Brown's Mount site, which in addition to a very poorly preserved ceremonial earth lodge yielded pottery and other indications of another prehistoric Macon Plateau site.

At present, definite stratigraphic data are not available to show the precise cultural relationship of the Macon ceremonial earth lodge to the rest of the Mound D stratigraphy or to the stratified village site in the same survey. The lodge had been destroyed by deliberate burning and apparently most of the cultural material removed. Over 2,000 specimens of burned wood, mostly pine with a little oak, were studied by students of the Laboratory of Anthropology in making collections for dendrochronological investigation.

It will be impossible within present limits to give even an outline of pertinent data gleaned from the exploration of the prehistoric dugouts on the Macon Plateau. Moreover, the interpretation of the dugouts as to origin and purpose, even now when most of the evidence is in, will almost certainly be the subject of much speculation and controversy.

Certain general conclusions have been accepted on the basis of present findings. These generalizations may be taken as given points in any theoretical explanation.

First, the dugouts were definitely of human origin and were remotely prehistoric.

Second, their extent, orientation, and distribution with reference to the terrain and contours of the Macon Plateau would seem to suggest definite plan or design in conforming them to the then existing topography.

Third, the archeological materials, i. e., flint artifacts and potsherds, cataloged from the five fill levels, give both stratigraphic and typological seriations indicative of cultural evolution or change.

Fourth, the observed conditions of soil eleutiation associated with heavy decomposition of flint seem to be related phenomena, an expression of age conditions much more marked than has hitherto been noted for soil changes in archeological contexts.

Macon Plateau chronology could not be discussed without reference to a remarkable series of prehistoric dugouts uncovered first along the rim of the plateau and the lower contour slopes in conjunction with the exploration of the ceremonial earth lodge just described. The entrance to the ceremonial earth lodge pointed east away from the main summit and body of the plateau, a feature which appeared strange since all of the building activity and occupational features explored previously had been found on the plateau. A general

exploratory trench was cut down slope from the rim of the plateau and the entrance of the earth lodge. This resulted in the uncovering of two series of large pits carved out of the red clay of the plateau. These dugouts were found to run continuously all around the north-east, north, and northwest rim of the plateau from the point at which they were first struck below the ceremonial earth lodge, and also extended around the plateau rim and lower slope in the southeast and south direction, converging upon the site of Mound A, a mile away at the south terminus of the plateau.

Three years have been spent in meticulous profiling and horizontal examination of soil fill in the dugouts. Profile panels made at 2½- or 5-foot intervals, depending on the complexity and change in the fill, showed from 5 to 14 stratified fill elements. These gave on analysis five levels of soil accumulation followed throughout the two series of dugouts, as follows: (1) top recent wash accumulated in the sinks made by the dugouts; (2) a buried sod 14-24 inches below the present surface showing occasionally early nineteenth century European materials and historic Indian pottery; (3) a light tan, weathered loam beneath the buried sod showing a lenticular or meniscus-shaped zonal distribution of soil decomposition extending down into (4), a semi-weathered loam containing nodular, ferrous and manganous oxide precipitates. The basal fill (5) shows a still more nodular formation with veining or streaking of a compact clay magma exhibiting physical change to an extent that the original excavation planes are difficult to make out in cross section. Pottery from this zone was generally so heavily encrusted with iron precipitations as to appear almost limonitic until broken and examined in cross sections. Worked flints showed a mean cortical decomposition of 1.28 mm.

Given so much, discussion has resulted in three general theories to account for the dugouts. A brief statement of each will be made.

The first consideration, the most logical and simple, was to view the Macon dugouts as prehistoric borrow pits or clay quarries from which great quantities of red clay were taken for mound or house construction

A second view has been to regard the dugouts as related in some manner to a scheme of fortification or defense of the plateau summit. The difficulty here is that structural auxiliaries which might be expected in conjunction with fossae have not been found. Moreover, the dugouts do not constitute simply a borrow ditch or fossa but comprise scores of long oval structures separated by narrow partitions of red clay left in place in carving out the plateau, sometimes with narrow passageways indicated in the chain of pits.

A third conception would explain the prehistoric dugouts as an elaborate chain of underground chambers or pit houses. If this view should be accepted, we would be confronted with the existence of a

type of residence and a plan of village organization without specific parallel in American archeology.

Our concern here is simply to note the existence of the prehistoric dugouts and to mention them as one source of data and materials which should be very significant in any ultimate chronological schematization for the older prehistoric occupation on the plateau. Analysis of several thousand study sherds from the basal fill to the prehistoric dugouts shows one of the most homogeneous pottery aggregates found in any archeological context in the Ocmulgee Basin. About 92 percent of all the sherds are plain, very coarse, grit-tempered, red and orange colored from overfiring, and characteristically roughened and worn from attrition or use. A smaller percentage of pottery, amounting to 2 or 3 percent, shows some very primitive ware evidently built up inside of nets or baskets. One characteristic form is a large pottery pan about the size and shape of a wooden dough mixer, showing heavy netting impressions covering all of the pot except for an area of several inches below the rim. Others show various types of basketry and weaving impressions. Several specialized rim sections show evidence that these were built up inside basketry containers rather than decorated subsequently with fabric-impressed stamps.

Finally it is significant that we do find a small percentage of the early stamped wares in the lowest levels of fill to the prehistoric dugouts. Moreover, domestic pits and definite occupation levels explored in situ, underneath the mound over the earth lodge, show the same pottery as that found in the prehistoric dugouts in conjunction with Delta pottery and other crudely stamped sherds. This description must serve to show a portion of the evidence on the basis of stratigraphy and typology definitely implying existence of a developed stamp ware in the oldest prehistoric levels at Macon in association with evidences of early agriculture and very primitive types of dwelling.

THE MOUND-BUILDING PERIOD ON THE MACON PLATEAU

It must be realized that the oldest prehistoric phases of cultural development in the Ocmulgee Basin are the most obscure and difficult to interpret. Despite the protracted and intensive investigations carried on much doubt still exists in regard to some very important points concerning the local chronology so far as the basic pottery substratum is concerned.

The evidence is not complete, but there are indications on both stratigraphic and typological grounds that the Macon mounds represent a later phase of prehistoric development on the Macon Plateau. The deep-lying occupational features on top of the plateau, including both series of prehistoric dugouts, the stratified village remains near Mound D, and house-building indications uncovered beneath Mound

D, suggest an earlier habitation of the plateau before any mounds were built.

However, present tentative studies of comparative pottery morphology while serving to give some distinction do not completely separate the cultural indices of these levels from strata box collections made in the cataloging of materials in mound exploration on the plateau.

The most likely explanation is that we have a cultural continuum with new trait complexes coming toward the end of a long period of internal development. It is quite possible that the mound building on the Macon Plateau comes in as a culmination of civilizational processes taking place in the area. Minor stylistic variation in pottery and artifacts would hardly be noticed in any casual or preliminary laboratory study. The impression has been growing steadily over a 4-year period as various information accumulated that the mounds were built later but there has been nothing definite to imply the necessity of bringing in new tribal elements or any radically different cultural infusion. There is evidence of increasing influence of trait activities from the outside as indicated by the emergence of new pottery complexes and the stronger occurrence of some of the older stamped wares previously met with in the deepest archeological levels on the plateau.

A brief summary of site exploration and a statement of the tentatively perceived chronological trend will follow:

Mound C of the Macon group was one of the first to be explored under C. W. A. organization. This mound, a large conical truncate, had been partially destroyed by steam-shovel excavations in cutting the right-of-way of the Central of Georgia Railway. The remaining half of the mound stood as a shell, crescentic in shape where the shovels had taken proportionately greater materials from the central portion of the mound. The exposed north face of the cut showed the presence of several superimposed clay platforms mantling basket-laid sand belonging to separate periods of mound building. The possibilities of stratigraphy led to the early investigation of the mound.

The method employed at Mound C was to make vertical profile cross sections through the remaining portions of the mound and through the slump or talus material accumulating in the railroad cut. It was necessary to make two jogs back into the mound in order to profile original mound structure and clear away all talus. This operation finally gave a complete cross-sectional picture of the history of the mound construction. It became apparent that Mound C proper really consisted of five distinct units of mound construction, superimposed, flat-topped, conical truncates, each succeeding mound built upon a predecessor. In all cases the bodies of the mounds were basket-laid sand capped with thick clay. The clay caps exhibited a marked selection of clay as to color and texture, and the same

materials extended from the mound summits as streamers or slope mantles. The profile panels yielded one of the most striking exhibits of composite mound structure known to southeastern archeology. The selection of clays and sands of many colors and the schematic arrangement of these in the successive periods of mound building presented an ensemble effect of unusual complexity and color contrast.

In addition to the architectural peculiarities of Mound C construction, other points of archeological interest related to the presence of burial pits made in each period of construction. The first or core mound had six tomb burials underneath its base. The tombs consisted of large burial pits 9 to 10 feet long and 4 to 6 feet wide in which were log crypts containing both single and multiple burials. In several instances there were evidences that the tombs were lined with bark or small saplings. The use of shell ornaments, bone artifacts, both shell and bone beads as burial furniture, was a feature of these submound interments. Also anatomical evidence that decomposed flesh had been partially stripped from the bones and that piecemeal disarticulation of the appendicular skeleton had been made in careful preparation for inhumation. The arrangement of the bodies in multiple burials and the occasional wrapping of individual burials in hide or bark before placing them in the log tomb implied an elaborate burial ceremonial.

The first or core mound at Mound C was also characterized by another unusual feature, that of a clay-molded stairway, consisting of 14 stairs 6 feet wide rising from the ground level to the mound summit of slate-colored river-bed clay. The stairway had very definitely molded stairs showing worn median portions from the treading of feet. The use of clay in stair construction instead of logs is exceptional.

Other burial pits were found intrusive through the clay summit of succeeding mound constructions or through the outwash slopes of water-laid sand and clay accumulating on the shoulders of the several mounds. In some instances these burial pits had slumped or faulted and the presence of water-laid sand both over and below the point of insertion implied inhumation carried out during the actual period of construction. Pottery and artifacts taken from the mound soils and found associated with the burials helped to show a cultural continuity in the history of Mound C construction.

Each clay summit had intrusive post molds and an organic black soil accumulation indicating building activity.

The final or fifth mound slope had developed a sod into which Indian burials had been made intrusively. Beads, pipes, and other European artifacts found associated with these historic burials were tentatively dated by experts as of late seventeenth century.

In addition to the intrusive historic burials in the south and east slopes of Mound C, a village site was explored in the terrain located

immediately around the mound. More burials, house indications, and numerous domestic pits were uncovered. Pottery and flint artifacts showed ware and decorative features not found with burials inside the composite mound.

Mound C burials in the first and second periods of mound construction had shown a special type of burial urn; small pottery vessels with long, slender necks and constricted mouths opening laterally, with modeled, conventionalized animal eyes and ears around the mouth. The shape, conventionalized animal modeling, and surface finish of these vessels indicated a prehistoric funerary ware which did not occur in the village outside Mound C.

The village at Mound C appeared to have both an historic and a proto-historic phase. Pottery was predominantly plain or incised. Morphological considerations showed relationship to intrusive burials and domestic pits previously encountered in the top levels of the stratified village at Mound D and the intrusive pits made into the slopes of Mound D. A negative feature, later to become significant, was the almost complete absence of stamped or paddle-marked pottery in the Mound C site complex.

McDougald Mound was explored late in 1936. This mound is located on a projecting spur about 500 yards northwest of Mound A, separated from the rest of the Macon Plateau by a deep ravine. Topographically McDougald is considered one of the Macon group of mounds.

Here again over three-fifths of the mound had been scraped away by road contractors borrowing dirt for the construction of the Macon-Dublin-Savannah Highway. Systematic profiling through talus and remaining basal portions of the mound succeeded in uncovering some very valuable information regarding mound architecture on the Macon Plateau.

The pen sketch by James A. Jackson made during an advanced stage of exploration at McDougald summarizes the essential structural features of this mound. The point of greatest interest relates to the apparently deliberate construction of a mound shell or protective mantle over the site of a smaller house mound. The analysis of successive vertical profile planes shows how neatly the clay plating of the mound shell coincides with the clay ramps of the included house mound. Also it is interesting to note how the floor level of the included house mound was extended on one side by filling in soil to provide a level base portion on which to begin the construction of the containing mound.

The house construction built on the platform at McDougald shows a striking convergence in rectangular shaped arrangement of vertical wall supports, the existence of galleries or veranda-like extensions at

the end, fired-clay basins, specially prepared floor with the house site uncovered beneath Mound D previously described.

It will be noted that this house was not burned but was apparently covered over with basket-laid sand. Then the whole enveloping sand mound was specially plated with thick red clay.

The sequence of events here recalls the structural features noted in the analysis of mound stratigraphy at Mound D. And the suggestion is made hypothetically that McDougald is representative of a class of mound constructions in the Ocmulgee Basin in which there appears to be deliberate intent to construct special mound shells over house sites having specific ceremonial significance. The idea is that these mound constructions serve a different purpose functionally and that from an archeological point of view they may be isolated as a structural group from other classes of mound construction more definitely undertaken for burial purposes or for pyramidal temple seats. The suggestion is offered that the McDougald Mound classification be considered as commemorative.

Another mound in the Macon group, explored subsequent to the McDougald investigations, uncovered a similar situation to that seen in McDougald. This mound, the Dunlap Mound, located to the east of the Macon Plateau, exhibited a contained house platform and several ramped terrace approaches mantled with red clay. Dunlap represents a variant of the situation described at McDougald.

Pottery from both of these mounds shows a predominance of the plain red or orange fired ware, very coarse tempered with prepared grit, and is like the basic ware generally found in the older plateau levels.

PREHISTORIC SPRING SITES ON THE MIDDLE PLATEAU

The central section of the Macon Plateau has in recent years been isolated by two railroad cuts from the north and south terminal spurs. The segment thus cut off has generally been referred to as the Middle Macon Plateau. Exploration here gives data comparable to results obtained on the north (Mound D) plateau incident to the further investigation of prehistoric dugouts around the rim and lower slope of the plateau; also several spring sites at the foot of the southern slopes which have shown signs of prehistoric use.

There were at least four springs issuing from the foot of the plateau at a prehistoric period. Subsequently, changes in the water table and a marked increase in erosion have led to the encroachment of the marsh. As a result the springs have been choked up and only one has been active in recent years.

In addition to the spring sites at the foot of the plateau, general trench exploration from the rim down slope to the lowland marsh has been made in several instances. These follow the contour intervals of the southern and southeastern slopes which converge upon the

large pyramidal mound, Mound A, of the Macon group, in the south end of the plateau.

Summarizing, explorations on the Middle Plateau were undertaken to investigate the evidences of artificial terraces, the dugout continuities followed south from the point at which they were first found in front of the ceremonial earth lodge in the northeast quadrant of the plateau, and the choked spring sites at the foot of the slope. Also on top of the plateau an ancient spring source was uncovered in general trench exploration. This evidently had been led off the plateau by a ditch which was traced out in its entirety by vertical profiling of fill at 5-foot intervals. Pottery found in the lower levels of fill to this prehistoric spring and drainage ditch on top of the plateau shows a very high percentage of the older plateau ware described for the prehistoric dugouts and in other situations known on stratigraphic grounds to belong to the earlier pottery levels on the plateau.

The prehistoric dugouts were traced in the Middle Plateau along the rim and lower slopes and found to dip down toward the largest of the prehistoric springs. This spring site was found to have cut back 20 feet into the plateau bluff intercepting one series of the dugouts. The same profile features of weathered nodular soil fill and the same pottery encrusted with ferruginous and manganous precipitations were encountered in the basal deposits of these dugouts.

EXPLORATIONS AT MOUNDS A AND B, MACON GROUP

Mound A is the large pyramidal truncate, originally 40 feet high and over 300 feet wide at the base, which dominates the Macon group and makes satellite structures of the remaining mounds. Mound B is located approximately 100 feet north and west of Mound A. Both mounds had been constructed on a narrow projecting spur of the south plateau. Preliminary exploratory trenches cut through the plateau between the two mounds have yielded evidence to the effect that the tongue-like south terminal spur of the plateau was not large enough to accommodate the construction of the two mounds. It became necessary, therefore, to make extensive fills of basket-laid sand and clay to extend the building surface. There is very definite evidence accumulating at present that this filling process went on for some time and that each successive fill was bonded or held in place by the device of plating loose friable sand with heavy bands or streamers of river-bed clay. The structural principle was the same as that employed in the clay mantling of mounds noted in foregoing discussions.

There is evidence also that superimposed house floors have been built over water-laid sand which extends out onto the wash from the slopes of earlier periods of mound construction. The superimposed houses in the upper levels of the plateau between the two mounds are shown stratigraphically to belong to the period of mound construction.

Pottery and other collections of artifacts cataloged from these levels are therefore representative of that period.

In the fossil soils preserved under Mound A and in the weathered loam explored beneath the 9 feet of stratified fill between the two mounds, deeper troweling was carried out. The old plateau floor here showed a typical weathered profile development with A and B soil horizons familiar to geomorphologists and soil scientists.

Four arbitrary levels, each 12 inches thick, were recognized in cataloging flints and pottery. Again the same phenomena of distribution were observed that had been previously noted in special excavations on the Middle and North (Mound D) Plateau sections.

Pottery and flint occurred in equal proportions in the first 12-inch level. In the second 12 inches potsherds occurred sporadically and were diminishing perceptibly. Cataloged flint continued to show numerical strength extending into the third zone. The fourth 12 inches was relatively unmodified red clay loam and was sterile except for a few rotten flints. Pottery occurred in the 24-40-inch level only in association with post holes or pit disturbances. Chronometric flint studies made by Dean Leon P. Smith, of Wesleyan College, showed 100 percent increase in measured decomposition of worked flint in the third soil zone.

On the other hand, excavation of general exploratory trenches carried down to the old plateau level shows heavy occupation before mound-building activities had taken place. Very thick midden and pottery accumulations here have definite stratigraphic implications for the earlier chronology of the Macon Plateau. Complexity of manifold building features and stratified layers in such a concentrated area requires the most meticulous methods in profiling, horizontal exploration of floors, and cataloging of materials. The work is still in progress and data accumulating has not been analyzed thoroughly. Any statement of progress should include reference to the 9 feet of stratified fill being profiled in the area between Mounds A and B. Here there is promise of still more significant information bearing on the earlier cultural history of the Macon Plateau.

Another important conclusion relates to the indications that the slopes of the Macon Plateau in the south terminal portion had been generally cut away to provide soil for mound construction at an earlier period. At a later time when the mounds were expanded in size and the plateau was found not to accommodate the building expansion it became necessary to fill the excavated slopes and to project the building surface laterally.

Several lines of evidence suggest that these explorations occurred at a later period from that represented by the dugout excavations in the central and southern plateau sections. For one thing, the dugouts do not have the pit-like character or shape which they have elsewhere

on the plateau. Again, the soil in the prehistoric excavations retains its structural integrity as to color, texture, and mechanical lie or position (basket-laid, lensed, water-laid, cross-bedded). There is no process of soil leaching or weathering apparent in the fill to dugouts in the south plateau section around Mounds A and B, whereas the dugouts in central and northern plateau periphery show normal profile developments and nodular soil accumulations in situ which competent soil scientists have pronounced to have occurred after the soil accumulated in the dugouts. If this be true, the almost certain weathering and nodular soil formation must be considered conditions of age sufficiently operative to indicate that the plateau slopes at Mounds A and B were cut away incident to mound construction and subsequently refilled as the mound-building program advanced to a more ambitious stage. The assumption implicit in these observations is that the prehistoric dugouts do not have the same character nor probably the same purpose, and are not of the same age in the southern terminal portions of the plateau.

Moreover, pottery cataloged and described as finds on house floors, in midden pockets, in pits, and in the general fill stratigraphically considered, in the 9-foot level between Mounds A and B shows the emergence of new types of pottery not previously encountered and also a heavier percentage of distribution of certain stamped wares which were not noted in the first 2 years of exploration in the central and northern plateau surveys.

In electing to make a tentative chronological summary and statement of progress covering site exploration to date in the Ocmulgee Basin, beginning with Macon Plateau, necessarily the most obscure and difficult problems have been tackled first. There are indications that the elucidation of these problems will come in large measure from explorations still in progress, particularly in the south plateau sector where Mounds A and B and the 9-foot level are being systematically profiled.

Certain definite tendencies in regard to older habitation levels on the Macon Plateau have consistently been apparent over a 4-year period. These may be briefly summarized as follows:

The prehistoric dugouts constitute a major structural feature of the plateau, completely encircling the topographic area except for the west slopes where the fill mantling and erosion have been proven to be most extensive in the last three or four hundred years. The pottery from the prehistoric dugouts yielded 92 percent of a primitive, coarse, plain, grit-tempered ware exhibiting considerable homogeneity in contrast to pottery collections coming from other contexts on the plateau. In addition to the fundamental plain Macon ware, whose ware and paste characteristics define it and distinguish it from all the decorative classes, there is a small percentage of other sherd classes

which show primitive pottery making. We have noted a small but striking percentage of pottery vessels which apparently were built up inside of nets or baskets. Also a series of very thick-walled pottery cylinders or jars with footed or annular bases. The thickness of these coarse, grit-tempered cylinder jars often approximates 1 inch.

Finally, there is a very small percentage of early stamped decorated ware in the basal deposits of dugouts, showing that stamping was contemporaneous with, or quite possibly antedated, the fundamental plain ware of the plateau.

The description of the site exploration on the plateau then proceeded to outline investigations of house sites and other habitation indications on top of the plateau enclosed by the prehistoric dugouts. Exploration is not yet complete but the field data show that the oldest habitation levels appear regularly enclosed by the inner series of dugouts. Inside the prehistoric continuity which runs along the plateau rim a rich brown or chocolate-colored loam containing much midden and showing some leaching has been found widely distributed. But between the inner dugout continuity and the outer encompassing series of dugouts following the lower contour slopes of the plates there is a notable decrease in habitation signs as indicated by house sites, domestic pits, burials, or basins. Also strata boxes show a marked decrease of materials from the surface between the dugout series. Finally, the profile panels show changes of soil texture, modifying from the rich chocolate of the older habitation site inside the inner series to an orange or reddish sandy loam much weathered and showing characteristic soil profile developments in the plateau slopes, outside the inner series of dugouts, extending down slope where sand mantles and soil creep of redistributed origin give the lie of the land.

The stratified village site in the North Plateau, with reference to Mound D explorations, was described as a profiled section through the older enclosed superimposed habitation levels.

The presence of considerable Delta class stamped ware in the lowest pottery level in the stratified village site is regarded as significant. This stamped ware is a definite pottery complex, technologically advanced with very sophisticated design elements. Its presence in the oldest stratified levels of the plateau implies a much greater antiquity in stamped pottery in the area than had been anticipated.

The exploration of the prehistoric spring sites, particularly the one which issued from a spring head uncovered on top of the plateau and the stratified fill to this spring site, yielded the fundamental plain ware of the Macon Plateau, thus substantiating conclusions previously arrived at for the North Plateau. Moreover, the exploration of prehistoric dugouts in the Middle Plateau survey confirms implications received in the protracted investigations of the same structures around Mound D.

The final stage of exploration on the Macon Plateau is now centered in extensive trenching of the area between Mounds A and B. These mounds were constructed in successive stages on the small south projecting spur or tongue of the plateau. The manner in which the plateau was built out with basket-laid sand and plated with clay streamers to provide an extended building platform has been described. Indications that a portion of the plateau slope had been carved out to provide borrow dirt for mound building were noted. Later these extensive excavations were refilled incident to the final period of mound construction. The absence of soil profile developments and the marked persistence of original soil features in the fill to these prehistoric excavations at Mounds A and B contrasted with the normal profile developments recorded for fill in the dugouts elsewhere on the plateau.

Finally, it was found, in beginning cataloging of materials in the 9-foot level between Mounds A and B, that new pottery classes were met with and that increasing percentages of some of the earlier stamps were noted in daily handling of materials taken from the different soil levels. The correlation of these typologically distinguished sherds with successive or superimposed house levels has not been determined, as the work of horizontal stripping is still in progress. Moreover, the precise relationship of the building activities on the superimposed platforms to the structures of the mounds must be meticulously recorded by successive analysis of profile panels made through the whole area. It is apparent that special mound plating or outwash sheets of water-laid sand occur over and below the floors of houses built between the mounds. Approximately 2 acres of ground comprising the sites of mounds and the intervening area thus represent the crux in very concentrated form of Macon Plateau chronology. The outlook here for clarification of many problems regarding the early pottery phases on the Macon Plateau is very promising.

It is important to remark that extended exploration and reconnaissance, carried on intensively in a relatively restricted territory, indicate a cultural hiatus implying possible discontinuity as between the older prehistoric sites on the Macon Plateau and other site manifestations in the Ocmulgee Basin, with the one exception of the Brown's Mount site which will be considered now. Persistent investigations have failed to indicate how complete or how prolonged this hiatus might be. It may well be that the apparent discontinuity is not real but comes simply from negative evidence or absence of contact in the particular sites explored.

ARCHEOLOGICAL RECONNAISSANCE OF BROWN'S MOUNT

The most prominent topographic feature of the Ocmulgee plain is a large erosional remnant of limestone and red clay located 6½ miles

southeast of Macon overlooking the east bank of the Ocmulgee River. Brown's Mount comprises an area of approximately 1 square mile, comparable with the extent of Macon Plateau. The summit is rounded, shelving gently to the plain on the northeast, with more precipitous approaches on the other sides. In the main, good purchase is afforded by topography for habitation over most of the top. The maximum elevation above the river plain is 180 feet.

In 1935 and 1936 archeological reconnaissance began with collection of surface flints and potsherds with notations made on indications of house sites and other structural features. A circular mass of red clay showing in a freshly plowed field on a small hummocky rise led to the only intensive excavation made during 1936. This proved to be a ceremonial earth lodge similar to the one uncovered on the Macon Plateau. The remaining portion of the structure was in poor state of preservation.

The following identifying features were worked out in the ceremonial earth lodge at Brown's Mount: a specially prepared floor of yellow river clay, a wall section of thickly massed red clay used as plating to retain sand fillers, a central hearth or fire with baked-clay lining, molded-clay seats arranged as a tier around the inner wall periphery. The four large supporting timbers set equidistant from the central fire which supported the roof stress in the Macon Plateau structure were not evident at Brown's Mount. Nor were there any assured traces of the clay molded platform or dais made in eagle form. The entrance or tunnel passage was intact for a distance of over 10 feet, with charred pine wall posts in place. Again, the orientation of the entrance passage to the east was observed, although at Brown's Mount the azimuth was directed a few degrees north of due east instead of south of east as in the plan of the original ceremonial lodge discovery on the Macon Plateau. Negative evidence from absence of features at Brown's Mount may not be significant of architectural evolution or variation, as destruction of the earth chamber by erosion and deep plowing in breaking new ground might have erased or modified some structural indications beyond recognition.

Surface collections and general trench exploration on the summit of Brown's Mount yield a study collection of 2,000 sherds which in preliminary analysis were found to be practically identical with pottery taken from the basal fill or floor deposits of the prehistoric dugouts on the Macon Plateau. The majority of Brown's Mount ware was very coarse, grit-tempered, red to orange-fired in color, with a small percentage of sherds indicating heavy, thick cylindrical jars and other vessels built up inside of nets or baskets. The proportion of stamped ware was less than 1 percent, smaller even than on the Macon Plateau. Absence of incised pottery, denticulate stamps, and painted pottery was noted. Numerous crudely molded animal-head effigies used as

pottery rim decoration, an outstanding peculiarity of early Macon ware, were also found in general trench exploration at Brown's Mount. The owl's-head effigy rim modeling was seen to predominate again in this pottery class and it was remarked that there was some slight stylistic change, one of several minor points which might imply an earlier or later temporal variation from the Macon Plateau phase.

In the 10-acre open field in which the Brown's Mount ceremonial earth lodge was uncovered were found surface indications of small, slightly sunken areas containing a different type of soil than was found in the surrounding ground. The absence of erosional scars or drainage outlets and the grouping of these sinks was considerably suggestive of filled dugouts. Exploration on this point to check against the situation discovered on Macon Plateau has not yet been undertaken.

Local sources are authority for the description of a rock terrace or wall which enclosed a 60-acre tract on top of Brown's Mount, opening down to a large spring site.⁵ The rocks have subsequently been removed by a railroad for use in riprapping a bridgehead on the Ocmulgee. The descriptions imply the use of the rock and earth enclosures as part of an aboriginal scheme of fortification. Exploration to afford archeological indications of this theory have not been carried out to date. Brown's Mount, on the basis of existing data, is strongly indicated to be related to the earlier prehistoric horizon at Macon Plateau.

In fact, the apparent absence of complicating superimposition of cultural remains at Brown's Mount might simplify site checking on many of the problems uncovered at Macon Plateau. It is worthy of note that preliminary survey and reconnaissance have shown only two sites, Macon Plateau and Brown's Mount, as representative of the older prehistoric level in central Georgia.

SWIFT CREEK AND THE EVOLUTION OF STAMPED WARE

The Swift Creek Mound and village site is located on the east side of the Ocmulgee about 3 miles southeast of the Macon Plateau and 1 mile from the Lamar Mound and village site on the same side of the river. The Swift Creek site is on property belonging to the county farm and has been under cultivation for some time. The terrain is broken and hummocky at a point where the east river terrace begins to emerge from the marshy outliers of the flood plain. Cultivation has served to render ambiguous the uneven character of the topography and uncertainty has been increased by the presence of numerous small

⁵ C. C. Jones, *Antiquities of the Southern Indians*, New York, 1873, p. 163. Elsewhere in the same work Jones notes similar structures located at various points in the Georgia piedmont. These have never been checked by archeological survey. At Fort Mountain State Park, near Dalton, Ga., a hilltop area is encircled by an artificial rock wall having the general features described by Jones as aboriginal fortifications. Ladd Mountain, overlooking the Etowah mound site near Cartersville, Ga., has a similar rock wall visited in 1936 by a group of Laboratory of Anthropology (Santa Fe) students led by the present writer.

rounded clay knobs, erosional remnants which simulate the configuration of mounds very strikingly. Inasmuch as several of these small natural eminences have been proven to have been used as refuge stations and camp sites by aborigines the difficulties of ascertaining deliberate construction were increased.⁶

However, one very definite mound construction, Mound A of the Swift Creek group, was extensively explored. This mound was cut into quadrants by intersecting cross trenches and further profiled in vertical sections by offsets made at 2½- or 5-foot intervals. The mound originally must have been more than 10 feet high but deep plowing and borrowing of dirt for road building has planed off considerable soil from the top and slopes. The shape of the mound was approximately round to round oval with a diameter or longitudinal axis approximating 200 feet.

The typical profile through the median plane shows features of construction not previously met with in the Ocmulgee Basin. It is evident that Mound A of the Swift Creek group belongs to a different category from other mounds described in the area.

Concisely, Mound A at Swift Creek exhibits in profile a picture of gradually accumulating hummocks, evidently filled in during the initial stages without any plan of eventual construction. In the beginning, efforts were directed toward the filling in of low-lying inequalities in the village level and the construction of slight elevations which served as refuge stations or as very inconsequential building sites. Later the intervening troughs were filled in to broaden the area lived upon. There are some slight evidences of post molds and other indications of house building. By and large it appears that the soil accumulation came out of efforts to fill in gradually the area and to provide slight elevation of temporary residence. In the end it may be that the enveloping heap took on more and more the appearance of a mound and that the purely occupational and structural growth might have become more deliberate with an eye to the building of a mound. If so, analysis of profile features in the different levels of growth does not convey any very definite impression as to the precise level at which formal mound building became a deliberate objective. I have offered the suggestion that Mound A of the Swift Creek group represents a type of mound which might be considered

⁶ Exploration by students of the Laboratory of Anthropology (Santa Fe) during July 1936 of a small "mound" in the Adkin's pasture, 300 yards south of the Swift Creek site, is an example in point. This structure profiled showed weathered tan loam extending into slightly modified natural "calico clay" of Eocene formation. No definite midden layers or "occupation levels" could be made out but the concentration of worked flint, including many finished artifacts, in conjunction with scattered sherds, implied continuous dropping of cultural materials in situ. The peculiar "occupational" accretion of cultural materials is also strikingly illustrated in the Tufts Spring site, on the west side of the Ocmulgee opposite Swift Creek (explored in August-September 1937). Here very black midden was mounded over a small rise in the river margin. Scattered pottery, numerous flint artifacts, bone, and shell occurred in the accumulation. Potsherds were confined to the top 12 inches of the midden and showed an early period of Swift Creek development. The "potteryless" horizon in the substratum extended down approximately 2 feet in places.

as occupational in contrast to the mound structures (Mounds A, B, C, D, McDougald, and Dunlap of the Macon group) which are either temple seats or were built to commemorate, as earth monuments, the site of ceremonial buildings. In any event the mounds in the Ocmulgee Basin were undertaken with a definite plan of construction in view and cross-sectional profile panels show that the entire structure breaks down into units implying consistent conception of design from mound base to mound plate. At Swift Creek, Mound A, we have a mushroom growth by accretion of soils apparently accumulated by indirection which in final form gives a definite organic grayish or black soil appearance when profiled. The intervening soils between the sod and midden accumulations were composed of basket-laid sand and midden of lighter color. Interbedded wood ash occurs frequently. These soils contain large collections of pottery and artifacts and appear to have been brought in by basket loads from the neighboring village site.

In working out the stratigraphic succession, it was found that there were six buried sod levels containing midden which appeared to run more or less continuously through the whole mound and thus represented consistent habitation levels which could be followed from one profile plane to another in horizontal stripping. Ultimately pottery from each of these six levels was taken for stratigraphic study and analyzed for typological distribution.

The typological studies undertaken on the stratigraphic basis just indicated show clearly an evolution of stamped pottery on the site. The statistical study of comparative pottery morphology from the seven levels has resulted in a mass of data and graphs which cannot be given in detail here.⁷ At present an outline of the general conclusions will be presented. Three important generalizations should be made at the outset in regard to the character of Swift Creek pottery.

First, Swift Creek stamped ware is predominantly curvilinear in design. The actual percentage for the total number of sherds studied from the mound is approximately 99 percent. This statement is not to exclude linear elements which enter into elaborate composite designs in the form of bars or rays.

Second, there is a perceptible although gradual improvement in both paste characteristics and design execution. The change becomes apparent in the third occupation level, is still more evident in the fourth or fifth, and may be considered to culminate either in the fifth or sixth levels.

Third, close observation revealed that a distinctive stamped ware appeared in the third level. This type was called Swift Creek, class A complicated stamp. The remarkable perfection in technique, both from the point of view of precision with which the stamp was cut and

⁷ Six occupation levels and the submound or premound level which also yielded material.

the care with which the impression was made, established this pottery as a definite decorative complex within the series. Class A stamp increases sufficiently in the upper levels to give statistical validity to the claims made for it on a typological basis. The actual percentage in the topmost, sixth, occupation drops slightly, but this discrepancy is ascribed to the fact that the summit of the mound had been cut away to provide borrow dirt for road construction.

Present studies indicate a development of complicated stamped design running through three distinct phases. There is an Early stage characterized by the presence of naturalistic patterns, simple and combined curvilinear compositions, poorer paste and less favorable decorative finish, less precise cutting of stamps, and in general a relatively inferior ware. This relative qualification applies only to the Swift Creek site series as even Early Swift Creek is superior to other stamped wares in the Ocmulgee Basin with the exception of Delta pottery. In the Middle stage of development class A stamp arises and undergoes a swift but bewildering transformation, producing elaborate composite patterns combining both curvilinear and linear motifs in a very sophisticated manner. The stamped designs are impressed with die-like precision. The designs themselves, although very intricate, are beautifully proportioned and restrained in execution. In this stage, pottery stamping, regarded both from technological and artistic standards, attains its evolutionary peak. It is probable, judging from personal observation of stamped pottery collections elsewhere in Georgia and the Southeast, that the Middle stage of Swift Creek marks a culmination of the art of pottery stamping for the whole area.

In the Late stage class A complicated stamp grows larger and more exaggerated, loses balance in composition, and in general becomes caricature of the earlier patterns. This stage of development at Swift Creek is not represented in pottery seriations from the mound proper. The material from the sixth occupation is definitely Middle Swift Creek. It is probable, however, that a change had taken place in the final period of mound occupation because the surrounding village site yields a significant percentage of this flamboyant stamp. Incident to borrowing and plowing, the likelihood is that a good proportion of the material originally in the top of the mound was redistributed over the village midden accumulations. One example of the decadent stylistic trend observed in the village, but not in the mound, is the presence of grotesque "tear drop" or "snowshoe" motifs, barred or rayed horizontally. In the plowed ground around the mound these are exaggerated in size and show a perceptible loss of balance in composition. Yet strangely enough the die-like precision of the stamped impressions is retained.

Immediately in the Macon area other site manifestations of late Swift Creek have not been found to date. Further removed in the

Ocmulgee Basin and elsewhere in the State, surface collections have indicated a more widespread diffusion. An outstanding site is the large mound and village site, Kolomoki, in Early County, near Blakely in southwest Georgia, located on Kolomoki Creek, a small stream running into the lower Chattahoochee. Preliminary study of Kolomoki collections belonging to the Society for Georgia Archaeology made available by Dr. C. C. Harrold, president of the society, reveals a heavy percentage of late Swift Creek designs. Nearer Macon, 40 miles south at the juncture of Big Indian Creek with the Ocmulgee, surface collections have disclosed a Late Swift Creek site on which the pottery exhibits the same highly specialized rims found with Swift Creek ware at Kolomoki. Preston Holder, conducting archeological explorations at the Evelyn Plantation site near Brunswick on the Georgia coast, recognizes Late Swift Creek components. These instances serve to strengthen impressions received from the Macon investigations. The comparative absence of Late Swift Creek components in the intensively explored area at Macon is significant. The chronological implications of this fact will receive more detailed attention later in the text.

Only a brief statement will be made at present concerning the classification of Swift Creek designs. It has already been observed that these are predominantly curvilinear. The patterns in the lower mound levels have a tendency to be either simple curvilinear or to be combinations of these simple elements: circles, ovals, almond-shapes, lozenges, lobate forms are recurrent. In Early Swift Creek are also found conventionalized symbols—six-pointed stars, cosmic circles, "Maltese crosses," the lyre, and forms which might be suggestive of plant life. These symbolical representations disappear in the upper occupations. On the other hand, many of the early patterns persist throughout the series in simple or elaborated form. While class A stamp is characterized by unusually intricate and sophisticated patterns, nevertheless the original simple curvilinear motifs of the early period continue to be executed in the new evolutionary style.

The plain ware at Swift Creek, as might be expected, is not so helpful in marking the type site. There are distinguishing characteristics, however, which have some validity in defining Swift Creek plain from the undecorated wares of other horizons. The main difficulty lies in separating Swift Creek plain from Macon Plateau plain. Swift Creek plain in general is very hard, tenacious, uniformly grit or sand tempered with very homogeneous paste structure regarded in cross section, usually having a grayish to tawny yellow color from firing. On the Macon Plateau, in the deepest levels, have been found quantities of a rough, coarse, grit-tempered or sand-tempered pottery, generally red to orange red in color. There is some question in regard to color on the Plateau as the ferruginous soils may produce a color change not

recorded in most Swift Creek collections as these latter sites tend to be located on lower river terraces where a blacker and sandier soil formation is found as the matrix. However, there seem to be rim specializations and indicated vessel shapes in the two series which will aid in identification. Also in the upper Plateau occupations red grit-tempered ware is replaced by vegetal, shell, or "muck" temper.

In addition to the evolutionary series of stamped pottery at Swift Creek mention should be made of several new pottery complexes. These are characteristic, have specific occurrence on Swift Creek sites, and thus have great value as "site markers" in central Georgia.

First of all is the vegetal or "fiber-tempered" ware. Initially this was referred to as "grass-tempered ware," the inference being that a type of "wire grass" growing on upper and middle coastal plain "crawfish" soils was used for tempering. Later the possibilities of palmetto fiber, moss, and pine needles were considered and consultation with other investigators in the area led to a general agreement that the term "fiber-tempered" was better. Paste, firing, color, and surface finish, as well as temper, help to define this pottery complex. Surface character particularly is important as the extruded vegetal fiber makes characteristic impressions incident to the smoothing of the paste before firing, producing a vermiculated appearance.

A second vagrant pottery complex present at Swift Creek, and also widely distributed in Georgia, is the checker stamp or grid-bar decoration. Generically, this class of pottery decoration suggests evolutionary modifications with itself as many sherds of this group found in lower deposits have a denticulate appearance suggesting the use of a rocker stamp or some sort of rouletting. On occasion it has been thought that the checker stamps appear to imitate in carved wooden paddle impressions the simple netting stamps found on Macon Plateau pottery. This hypothesis has no proof, however, and is purely speculative. Grid bar or checker stamp has a wide distribution in the Ocmulgee Basin, occurring on both Swift Creek and Macon Plateau sites. There are some indications that the checker stamp might have persisted into later horizons. As in the case of fiber-tempered ware, there are no pure sites of this pottery in the Ocmulgee, but data from reconnaissance on the Georgia coast and elsewhere in the upper piedmont of Georgia show heavier accumulations there.

Another important class of early stamped pottery in the Ocmulgee Basin, occurring sporadically at Swift Creek and on the Macon Plateau, is a simple linear, sometimes crisscross, grooved decoration. The most logical explanation is that of a linear grooved paddle, very crudely cut, in which the paddle is slapped irregularly over the decorative surface of the pottery vessel. One complete pot cataloged from Swift Creek shows the linear stamped depressions running in wide sweeping curves from the conoidal base to terminate at or near

the rim. In this case the use of a large rocker or carved wooden cylinder rather than the paddle is suggested. Laboratory experiments have shown that such simple linear decorations can be reproduced by using a wooden roller, a round stick or broom handle, which has certain roots or untwisted fibers wound round it. This type of linear stamp occurs frequently in small percentages on many sites in central Georgia. It comes out in Macon Plateau, less strongly at Swift Creek, but increasingly on several Late Swift Creek sites. Reconnaissance has revealed pure sites along the Oconee, 40 miles north of the Ocmulgee area. This stamp, tentatively regarded as early in the Ocmulgee chronology, has been a "rider" on so many sites whose cultural affinities or temporal span had not been determined that a non-committal appellation was used in referring to it—it has been called "Sigma Class" stamped ware in beginning laboratory studies. With increasing knowledge, however, and the assurance that we are dealing with a definitive pottery complex belonging to the central Georgia area, opinion has developed to the effect that a binomial nomenclature might be advantageously applied. Utilizing the name of a site on which such pottery appears to be "pure", I have decided to call this complex "Vining simple" stamp.⁸

An important class of vessels, not related to pottery, is the stoneware in the Swift Creek complex. These, judging from a number of large cataloged pieces, are bowl-shaped containers hewn from steatite or soapstone. Steatite ware appears to be correlated with some of the sherd classes just mentioned on other sites in the Ocmulgee Basin which seem related chronologically and typologically with the Swift Creek type station.

One negative feature of the Swift Creek pottery complex is very significant.⁹ The absence of incised ware is striking: this, despite the fact that thousands of sherds were cataloged from the mound and village midden, and that innumerable stratigraphic trenches and pits were dug. The absence of incised pottery from Swift Creek will be noted as very important in the light of discussions to come.

OTHER SITE EXPLORATION IN OCMULGEE RELATED TO SWIFT CREEK

The first of these which should be mentioned is the One Mile Track site located on the west margin of the Ocmulgee River opposite the point of junction of Walnut Creek and the Ocmulgee River. The site

⁸ The Vining site, located in the outskirts of Eatonton, Ga., 45 miles northeast of Macon, has been acquired by the Rural Resettlement Administration. 400 study sherds show over 90 percent of the simple linear stamp. More detailed collection of material is contemplated in the near future in an extension of survey from the Ocmulgee, using stratigraphic pits.

⁹ The term "pottery complex" has been used in these pages with divergent meanings. It has on occasion referred to a series of morphological pottery features which serve to give distinction to a type of pottery, i. e., the fiber-tempered, vermiculated ware; again, as above, it may refer to a number of sherd classes, present to an appreciable extent at any site, which, through adhesion of traits, give a rough chronological index to the site.

lies within the Central City Park and State Fair Grounds and is bounded by a mile-long race track; hence the name.

Exploration was carried out by sinking numerous pits, 10 by 20 feet, through the mantle of river alluvium which covers the occupation level to an average depth of 2 feet. A study collection of 1,500 sherds was obtained from village site midden along with other cataloged flint artifacts. At present our concern is with the pottery.

One Mile Track shows pottery of Early Swift Creek type in conjunction with the fiber-tempered pottery with the vermiculated surface finish, grid bar or checker stamp, and steatite stoneware. Again the absence of incised ware is remarked.

The pottery complex at One Mile Track is thus seen to approximate closely the proportion of sherd classes indicated for Swift Creek with the same relative inclusion and exclusion of types.

There were no mounds at One Mile Track. No burials were uncovered. House sites were obscured by river scouring except for sporadic post mold indications.

Another site showing typological resemblance to Swift Creek is the Shell Rock Cave site near Brown's Mount in the east Ocmulgee Basin survey. Technically, the site is a rock shelter rather than a cave. An overhang or arched ledge of Ocala limestone 20 feet high and 50 feet wide provided an appreciable area of habitation. In trenching through the debris and sand fill underneath and in front of the shelter, evidences of occupation came out in the form of ash and charcoal beds containing numerous flint artifacts and potsherds. Uniform deposits of rock beneath the midden showed that the shelter had once extended out 50 feet or more than at present. The ash and contained midden found in situ in front of and underneath the present rock ledge indicated occupation at a period subsequent to the gradual collapse and retreat of the rock dome.

Pottery from Shell Rock Cave showed Early Swift Creek stamp, Delta stamp, grid bar and fiber-tempered ware (Theta). Flint artifacts exhibited a heavy percentage of knives, scrapers, and projectiles made from an attractive rose-colored jasper. The absence of incised ware was observed in the Shell Rock Cave collections. The presence of Delta stamped ware is an anomaly, as this class occurred very sparingly at Swift Creek. On the whole, however, Shell Rock Cave serves to substantiate conclusions drawn from other site exploration as to the combination of pottery types which go to make up the Swift Creek series in the Ocmulgee Basin.

THE CHRONOLOGICAL POSITION OF SWIFT CREEK IN MACON CHRONOLOGY

The significance of Swift Creek lies unquestionably in the existence of a typological series of stamped sherds, stratigraphically distributed,

which show stylistic variation implying the evolutionary development of a distinctive pottery decoration over a period of several generations.

The depth of the midden deposits, as well as the interpretation of mound origins and growths, imply a perceptible interval of time. It does not seem profitable at present to attempt any relative computation of the interval covered. The important point is to recognize that stamped pottery was at one time the dominant technique in pottery ornamentation in the region, and that a clearly defined variation in generic patterns took place, representing an evolutionary series covering an appreciable period of time.

The typological variations in stamped design and in general pottery morphology which define Early, Middle, and Late components of Swift Creek are clearly defined. Likewise the stratigraphic distribution of these criteria is satisfactorily exhibited. Physical vertical stratigraphy with such clear-cut implications is most unusual.

At Swift Creek we have less material relating to the final or late period than we have for the initial or intermediate stages of development. As stated, this lack comes from the destruction of the upper 4 feet of the mound. The much disturbed, deeply plowed midden in the surrounding village gives some indications. Typologically, the lines of evolutionary change away from the culminating peak achieved in Swift Creek A complicated stamp are surely exhibited. In the top of the mound, the sixth level, we had indications that the last phase of occupation preserved in the mound was the one in which the complicated stamp showed the finest execution of designs. Along with a perceived refinement in execution went a corresponding improvement in the ware. In fact, the net result is sometimes hard to measure in the individual sherds in terms of fineness of execution or more effective preparation of the decorative surface associated with advances in paste composition. Over and above all, the sudden appearance of new, more elaborate, and sophisticated compositions made up of different motifs, recurrent from those observed in the lower mound levels, remains the outstanding feature of the Middle period.

The Late period of decline or "degeneration" needs further site exploration and comparison from different sites for ideal clarification. It might be anticipated on theoretical grounds that some difficulty would be experienced in studying collections from newly discovered Swift Creek sites in determining whether one had to deal with a beginning or terminal period of stylistic development. In determinations made thus far, however, on materials gathered from points 150 to 200 miles away from the key site, no such difficulty has been found. Early Swift Creek has an inherent stylistic range which tends to hold true everywhere. The associated sherd classes tend to adhere elsewhere to form part of the Swift Creek complex. Similarly, in Late Swift Creek the general loss of artistic balance in handling over-

elaborated patterns produces the same end results. Also, Late Swift Creek sites seem to have a number of associated sherd classes, which distinguish these sites as a group from Early Swift Creek. Finally, Middle Swift Creek maintains its integrity as the culmination of an evolutionary cycle, nearly the whole of which was uncovered in seriation at the type site. Nevertheless, the fact remains that comparatively little is known as yet from intensive exploration regarding the character of Late Swift Creek variations.

In estimating the chronological position of Swift Creek, two important lacunae in the record must be noted. First in consideration is the relation of Swift Creek to Macon Plateau. At the outset it should be stated that this problem is still unsolved. The crucial data are being brought out in explorations still in progress on the Macon Plateau and on other key sites in the Ocmulgee in process of archeological survey.¹⁰ Four years of intensive study have yielded considerable information, however, and some intimations of what to expect which may be briefly sketched here in the hope that the suggestions made will not turn out to be too premature.

The implications of Stubbs' Mound and village site for Swift Creek-Macon Plateau chronology are not yet clearly perceived as material from this site is still undergoing analysis in the laboratory as these pages are being written. Stubbs' mound was explored by students of the Laboratory of Anthropology in the summer of 1936. Subsequently, Gordon R. Willey, one of the students who remained in Macon as archeological assistant, carried out work on the mound to completion. Only a tentative sampling of the field material by levels has been made. It must be understood that any appraisal of the data given at this time is preliminary, incomplete, and quite likely to be modified by further work.

The site of Stubbs' mound and village is located on the west bank of the Ocmulgee River just below the junction of Tobesofkee Creek, 11 miles from Macon. Topographically the area is low-lying river plain subject to periodic inundation. The surroundings suggest an environment similar to that found at Swift Creek and at Lamar.

As stated, the mound at Stubbs' was excavated completely. The surrounding village site, of undetermined extent due to cultivation, the widespread scattering of surface midden, and the proximity of the marshes on the river side, has not been trenched adequately. More survey work in the village will be carried out during the winter of 1937-38.

¹⁰ Stubbs' village site, Brown's Mount, the southeastern spurs of the Macon Plateau, Mossy Oak, Scott's Hill (a mound and village site adjoining the Monument property along the southeast boundary, on the side of Walnut Creek) give promise, either on the basis of impressions received from surface collections or from partial exploration, of affording pertinent data which might throw light on Swift Creek and Macon Plateau relations.

The mound is, or was, relatively small, not more than 60 feet in width. The present height is approximately 5 feet, but the summit had been cut away with slips to borrow dirt for filling in the field on the edge of the swamp. This operation, carried out by the tenants in recent years, was said to have resulted in the cutting away of several feet of the mound. The height at one time is stated to have been between 9 and 10 feet. Detailed investigation of the mound remnant soon substantiated this claim. The slopes and top of the mound had been covered to a depth of several feet by black midden accumulating over a preexisting mound structure. Although considerable masses of this midden remained on the lower slopes there was evidence that much material had been removed from the top and redistributed. The resulting confusion, intermixture of surface materials, was indicated by facts unearthed in exploration and preliminary study of the collections.

Analysis of field data show the following essential facts in regard to the construction and cultural history of Stubbs' mound. There had been an earlier village site occupation before any portion of the mound was built. Black midden deposited in situ on pink and white clay ("calico clay") of Eocene origin clearly represented the basal remains of human habitation. Over this earlier occupation level, a low, rectangular, ramped house mound of loam and red clay had been constructed. In size, shape, arrangement of house plan on the prepared platform, this small core mound was reminiscent of the core structure and mound envelope described at the McDougald site, as well as Mound D, on the Macon Plateau.

The contained house at Stubbs' had been burned. Over the burned clay floor was found a heap of charred pine timbers, a roof mesh of reeds, burned briquettes, and nearly a foot of fired clay considered to have been the roof sod. The supporting wall posts were easily charted in place where they had burned, permitting a good floor plan to be drawn as soon as the area was cleared. A fairly satisfactory collection of charcoal was made for dendrochronological study.

Subsequently, two other core houses were uncovered. Neither of these had been burned. One represented a submound rectangular structure not built on a prepared platform. The other resembled the first core house platform to be brought out. The absence of burning led to less structural detail being preserved but enough information was available to show the same fundamental house type as that previously troweled out.

The importance of these discoveries at the base of Stubbs' mound deserves emphasis. The essential features of a prepared rectangular platform utilized as the seat for the construction of a rectangular house exhibiting wall continuities of small vertical supports (diameter

5 to 8 inches), with or without hard-packed red loam floors, duplicate structures found only on the Macon Plateau.

The identification is strengthened by the remaining details of mound structure. Over the three basal house sites described at Stubbs' mound basket-laid sand was subsequently mounded. As at McDougald, Dunlap, and at Mound D (all of the Macon group), a plating of red clay was applied over the entire surface of the sand mound to act as a retaining or bonding material.

Finally, again as at Mound D, a house had been built on top of the red-clay plate. Only sections of the floor and a large domestic pit or hearth remained of this structure, due to destruction caused by the borrowing of mound soil. In places this uppermost house floor was mantled by black midden, which although confused by redistribution yet showed successive occupation. This midden continued down slope where thicker accumulations were found. The midden consisted of black soil, animal bones, river mollusk shells, charcoal and ash, potsherds, flint scrap and artifacts.

Some caution is necessary in referring to the sherd collections from the different stratigraphic levels at Stubbs' as indicated by mound features and the superficial mantle of midden accumulated in situ. Several facts are clear. The topmost midden contains predominantly the amorphous stamped or paddle-marked ware, and the characteristic incised which are site markers for the Lamar focus. The underlying midden on the slopes of the mound, separated from the above by outwash sheets of salmon-colored water-laid sand and loam from the mound, shows a strong percentage of stamped and plain sherds belonging to the Swift Creek complex. It may be significant that these Swift Creek criteria are also found in place on the occupation beneath the house platforms.

In the same basal midden and in the transitional zone into weathered Eocene clay diminishing sherd collections still show Swift Creek, more plain ware, and a marked occurrence of basket-imprinted sherds, some suggestive of coiled-basket impressions found on the Macon Plateau. The fiber-tempered ware with a vermiculated surface finish, which generally denotes an Early Swift Creek horizon in central Georgia, gives percentages increasing toward the bottom levels beneath the mound in which pottery is found.

These data are important since they imply a stratigraphic connection, indicated by structural mound features and superimposed midden accumulations, of three important cultural mileposts in Macon chronology—Lamar, Swift Creek, and Macon Plateau. Mound architecture itself at Stubbs' gives physical evidence that Macon Plateau mound-building traits might be subsequent to a Swift Creek occupation. The finding of specific pottery types found only in Early Macon Plateau, however, and not found in the Swift

Creek complex, may mean the interpolation of Swift Creek between two phases of plateau development.

The picture at Stubbs' is obscured by mound despoliation, as well as by much overturning of midden by the more recent Lamar inhabitants incident to the digging of graves and burial pits. Over 40 burials were found in the midden and in many instances the interments had been made in deep excavations through the midden. The inverting of midden is apparent in a number of instances. Under these circumstances it may be more advantageous to leave Stubbs' with only a tentative statement of results and proceed elsewhere for further information bearing on the subject of Swift Creek-Macon Plateau relations.

On the Macon Plateau proper the evidence seems clear at some points and ambiguous at others. Some of the most crucial discoveries have been made during the last months of 1937 and the field collections from these investigations have not yet been studied. Until the mass of data can be assembled, sorted, analyzed, checked statistically and graphically no final or categorical statements should be made. A progress summary on chronological implications to date follows.

The crux of the Macon Plateau situation, as regards Swift Creek, centers on explorations in process in the survey area between Mounds A and B at the south terminus of the plateau. Here for nearly 16 months profiling at 2½-foot intervals has been carried out with meticulous care in cataloging materials from a superimposed accumulation extending as sheet deposits to a depth of 9 feet over the old plateau surface. It has been demonstrated sufficiently by now that there had been a heavy deposition of midden on the plateau before any mound building or house construction took place. Materials from the old plateau levels will be cataloged from arbitrary 3-inch zones. There will be seven or eight of these old plateau midden zones as the deposits are frequently found in the weathered loam, sealed under the massed debris of successive occupation, to be 2 feet or more thick.

During August and September of 1937 exploration at Mounds A and B was undertaken by a combination of vertical profiling and horizontal slip removal to record the structure of four superimposed ceremonial earth lodges. These were built upon the abandoned, cleared or planed surfaces of preexisting structures, and each corresponds to a building platform or occupation in the stratified series now being worked out between the two mounds. Space does not permit of any adequate description of developments here. Moreover, changes in interpretation or in significance of new finds are so bewilderingly rapid that any statement which might be made while

the work is still in progress would need to be modified a month later.¹¹ Just now it must suffice to report on current progress.

It is definitely determined by the fall of 1937 that there is cultural differentiation between the occupations on the old plateau surface and the artificial accumulation of sand and clay filled soils, and hard-packed superimposed clay platforms covered with roof and wall debris, which mantle the plateau to varying depths, the thickest being 9 feet along the west slopes of the plateau.

Relatively little pottery has been cataloged from the platforms and floors of the ceremonial lodges. It seems almost certain that these houses were kept clean by the inhabitants or that they were systematically cleared of litter before new constructions were begun. The confluent occupation levels, coextensive with the respective lodge constructions, however, do yield strata box collections. Laboratory analysis of these is not yet possible. Certain conclusions are indicated from the field cataloging and handling of the sherds.

It is evident, for example, that the pottery from the superimposed building levels between the mounds has some generic distinctions from the pottery found in deep-lying levels on the north and middle sections of the Macon Plateau, and from the basal deposits of the prehistoric dugouts. In both cases the pottery is plain, red to orange in color, with a general resemblance in shape and size. Round-bottomed vessels, with globular sides, short, wide, relatively straight rims occur in all survey areas of the plateau. At Mounds A and B, however, in the upper building levels, it is apparent that the pottery tends to be tempered with a mixture of shell, vegetal, and grit, whereas the older plateau plain ware was over 90 percent grit-tempered. Moreover, in the north and middle sections of the plateau there were cataloged many pot rims with crude, conventionalized animal head modeling. The owl's head effigy was very prevalent but others suggestive of the bear, wolf, and raccoon were found. Also the rims from the north and middle sections of the plateau generally had loop handles bearing nodular protuberances of characteristic form and distribution on the handle. These specializations earlier noted in Macon Plateau pottery are almost completely modified or absent in the materials cataloged from the 9-foot level between Mounds A and B in the south end of the plateau.

The point to be stressed is that Swift Creek sherds are found as deposits in situ only on the surface of the old plateau, under the accumulated debris of successive building activities related to the construction of the ceremonial earth lodges. These are Early Swift Creek sherds for the most part with a smaller sprinkling of those determined to belong to Middle Swift Creek. Along with these Swift Creek materials on the old plateau surface are found the Vining

¹¹ The account given at the present writing will go to the printer in mid-October 1937.

simple stamp (simple, crisscross, or linear grooved stamps), Delta stamped sherds, fabric-impressed ware heretofore ascribed to Early Macon Plateau, and many plain hard, grit-tempered sherds. The difficulty of determining between Swift Creek and Early Plateau plain ware has already been mentioned. The presence of two parallel evolutionary trends in rim treatment in Swift Creek and Early Plateau helps occasionally to make distinctions in plain ware. Characteristic folded, notched, scalloped rims in Swift Creek; animal effigy rim modeling, handles with nodal protuberances in the plateau pottery complex—these are definitive.

In the month which elapsed between the preparation of the first and second drafts of this manuscript and the final going-over before it could be submitted for publication, the above developments have come out to demonstrate that the earth lodge ceremonials belong to the later phase of Macon Plateau occupation. It is also shown beyond controversy now that the mound-building activities were later and contemporaneous with the earth lodge constructions. This has been a difficult point to establish and presents some striking ethnological contrasts. If, as has been generally assumed, and as seems certain from field data at Macon, the large pyramidal mounds were constructed for elevation of important ceremonial buildings, it seems strange that a totally different type of ceremonial structure, the earth lodge, should have been coexisting and functionally significant in the culture of the plateau dwellers. The fault in logic may lie in the implicit assumption that the earth lodges were ceremonial. The problem cannot be tackled here except to state that no other view is tenable to the few trained observers of the ceremonial earth lodge on the Macon Plateau than that it must have been purely a religious structure. We are left with the tentative but seemingly inescapable conclusion that there are evidences of two types of ceremonial building on the plateau, which on architectural and evolutionary grounds would be considered to be at polar extremities from each other.

The important implications for chronology, with reference to Swift Creek and the plateau, are briefly epitomized. The evidence implies cultural differentiation in the Macon Plateau series not previously perceived. The indications point to an earlier and a later occupation of the plateau. The mound-building period is seen to be subsequent to the time interval when both Swift Creek and the beginning plateau flourished.

The results of extensive work thus far make possible a distinction between Early and Late Plateau. They also show the succession of Swift Creek by the late phase of Macon Plateau. But data adequate to determine the chronological relations of Early Swift Creek and Early

Plateau are either not at hand or the significance of some of the material has not yet been realized.

There is excellent promise that something will be forthcoming in relation to this part of Macon chronology in further explorations at Mounds A and B and in the methodical statistical analysis of pottery and artifacts taken from the eight occupation levels above the plateau and those cataloged by 3-inch levels from the preexisting plateau occupation. Enough has already come out to indicate as much. Until this information is available, it will be necessary to withhold further comment so far as the Macon mounds are concerned.

More recently in making a survey extension from control trenches laid out between Mounds A and B evidences of Swift Creek habitation were found on the lower west slopes of the plateau. Here a small hummocky rise on the edge of the river plain and at the foot of the plateau yielded midden in scattered lenses or generally confused in the profile due to modern disturbance. A brick manufacturing concern had cut away portions of the ground, subsequently refilling with refuse and brickbats. There was no discernible stratigraphy in the physical sense of superimposition. The area was profiled in 2½-foot vertical cuts and the material cataloged from five soil levels, distinguished by color, texture, or apparent constituency. From the lowest, more weathered portions of the profile panel in which sherds were found, both Swift Creek and plateau sherds were found. These occurred in approximately equal percentages. The Swift Creek sherds, found in conjunction with fiber-tempered ware, steatite, and a few cord-marked pieces, implied Early Swift Creek focus. Under soil creep and outwash soil sheets extending up the west slope of the Macon Plateau a special exploration trench uncovered only Macon Plateau pottery. Swift Creek habitation had apparently been narrowly confined to a small knoll or hummocky spur on the edge of the plain. The data indicated cultural discontinuity without definitely throwing light on Swift Creek-Macon Plateau relations.

Swift Creek complicated stamp does not occur except sporadically on the plateau in general trench exploration. Reference is made here to cataloged sherds from different soil zones in the open, exposed sections of the plateau where cultivation, erosion, and weathering have resulted in widespread soil changes and modifications of topography. Sherds and flint show the differential distribution noted in discussion of an early flint industry. There are no clear indications of buried middens or occupation levels subsequently covered over by some secular process of aggradation. Rather erosional scouring seems evident. The presence of sherds at depths of 30 to 40 inches in weathered loam in parts of the plateau surface seems correlated with the greater change of the soil in those places. The conclusion suggested is that there has been some factor of migration involved. The differential movement

of potsherds and flint has been remarked. Now comes the interesting conjecture regarding the differential migration of sherds belonging to different cultural horizons.

Effective, concise presentation of the essential facts will not permit of any extended digression. The apparent migration of potsherds through weathered loam presents a phenomenon unusual in the annals of archeological literature. Elsewhere the view has been advanced in this paper that the differential migration of pottery and flint is significant as one line of evidence for a prepottery flint industry. The fact or assumption of migration alone, as described, would not in itself be a logical basis of substantiation. The fact that the flints in the lowest portions of the weathered profile panels studied are also the most decomposed, and more important still the most primitive and specialized technologically, deserves more consideration.

Here we are concerned with the indications afforded that pottery of differing design and general morphological criteria appears to have migrated through weathered soils in the same differential manner. The evidence to support this view involves the presentation of a great mass of field data gleaned from extensive trench exploration on the Macon Plateau. The statistical tabulation of so much information will require much more ample space. Moreover, the studies of sherd class distribution on the Macon Plateau are not yet complete. Any statement given must be tentative as final analysis cannot be made until the field operations are closed and material included in seriation is totally represented.

Swift Creek sherds, in preliminary tabulations on strata box collections made from four 1-foot soil zones made arbitrarily in general trench exploration, show an increase in the second- and third-foot levels and a proportional decrease in the lowest or fourth zone. The total percentage of Swift Creek to the sherd population does not exceed 6 percent in any zone. The difficulty here in tabulating pottery complexes lies with the greater number of plain sherds. Since both Swift Creek and Macon Plateau have grit-tempered, plain, hard pottery, one can scarcely rely on general color criteria resulting from firing, or on paste characteristics which might hold for large collections made on different sites but would not be refined enough to permit of reliable judgments on individual sherds.

The indications are that Swift Creek habitations tended to be confined to the lower river terraces and intermediate slopes fronting or fingering out into the flood plain. Some ecological selectivity of sites has already been noted in discussing the Swift Creek complex. The importance of this implication is easily understood in trying to work out the position of Swift Creek to Macon Plateau as indicated by the stratigraphic position and percentage distribution of Swift Creek materials on the plateau itself. The fact that the Swift Creek people

seem to have avoided the main plateau section may be very pertinent. Particularly is this true when one considers that sherd aggregates are cataloged not from perceived occupation levels or floors but from scattered points in weathered loam. The hypothesis of differential sherd migration in friable, shifting weathered sandy loam soils projects into high relief a number of corollary problems of interpretation. The knowledge needed is primarily geological and few archeologists have the acquaintance with soil profile developments required to cope with the conditions observed.

A similar situation to that described from general exploration on the Macon Plateau, and in the confused west subterrace explorations, was found in general trench profiles cut through one of the spurs of fingering projections of the main plateau body to the southeast. These spurs run parallel toward a minor drainage channel of the Ocmulgee, Walnut Creek, which meanders through marshy land 300 yards from the plateau margins. Physiographically, they present the features observed in other Swift Creek sites.

Exploration incident to archeological survey of the Ocmulgee Basin, carried out under the direction of Gordon R. Willey, has included trenching of the southeastern spurs of the plateau. The details of field results will be given in a report on archeological survey to be prepared later. In connection with the preceding discussion of conditions uncovered in intensive plateau explorations, it will suffice now to indicate that the weathered soil mantles of the plateau spurs show scattered sherds occurring at depths of 20 to 30 inches. The weathered profiles in the spur tracts are not as deep as those on portions of the plateau proper.

At southeastern spur No. 1, as it was denominated in survey, top superficial soil or plowed ground gave significant percentage of pottery complexes related to the historic, Ocmulgee fields, horizon. Swift Creek and Lamar stamped sherds occurred in the same level. Swift Creek stamped increased in the lowest weathered soil zones from which pottery was cataloged in 3-inch levels. There was negligible evidence of Macon Plateau pottery. The absence of specialized plateau ware was regarded as peculiar as it was felt that that pottery complex might be expected on a topographic extension of the plateau.

Before attempting any comments or conclusions regarding Macon Plateau and Swift Creek, two other site situations should be briefly reviewed. First, in regard to the characteristics of the pottery cataloged from the prehistoric dugouts on the Macon Plateau. The basal deposits here yielded a predominantly plain ware, grit-tempered, coarse, hard, and poorly fired. There were specialized features of rim treatment noted. Swift Creek, and stamped techniques in general, were conspicuously absent. These by their rarity were of more than ordinary interest when found and generally were made "finds" to call

more particular attention to them. A review of the field diaries and field catalogs shows that these stamped sherds, now perceived to belong to the Swift Creek category, came from above the lowest pottery-bearing levels in the prehistoric dugouts. This comment seems significant in review of the dugout explorations which were carried out at a time when the full significance of Swift Creek was not realized; when, in fact, Swift Creek was still considered a more elaborate expression of Lamar.

At Brown's Mount, 9 miles away from the Macon Plateau, on the summit of another large erosional remnant rising 180 feet above the river plain, general trench exploration uncovered house sites resembling those found on the Macon Plateau and generous collections of sherds recalling the pottery complex described for the plateau. Plain, red-fired, hard, coarse, medium thick, grit-tempered ware with animal effigy rim modeling and specialized handles bearing the characteristic nodal protuberances, reappear to give the assemblage of types considered to be site markers for Early Plateau.

Swift Creek complicated stamp does not enter into the pottery morphology of Brown's Mount so far as the study of 2,000 sherds afford any indication. There is a small percentage of other stamped categories, grid bar or checker, Vining simple stamp, and a few irregular "indeterminate" stamped sherds not assignable to either Swift Creek or Lamar. Over 92 percent of the collection agrees in all particulars with a similar percentage of sherds, 3,000 of which have been studied, found in the basal deposits of the prehistoric dugouts.

Brown's Mount serves to show that there are at least two distinct periods of development in the Macon Plateau complex. Early and Late Plateau each have their individual peculiarities occurring in more than one archeological context to suggest a temporal division. Even now, however, the assumption of discontinuity of development seems weak. The conclusions permitted by results from an important site, geographically removed from the Macon Plateau, tend to strengthen chronological views obtained from the various fragmentary, more or less obscured, site situations examined elsewhere in the Ocmulgee Basin.

Summarizing, then, the best opinion to be had from the present data would point to temporal and cultural discontinuity as between Swift Creek and Macon Plateau. The evidence implies that there is a Late Plateau, represented by the mound-building activities, which came after Swift Creek manifestations, probably blanketing the immediate territory and forcing the Swift Creek people out at that point of cultural advance marked by a Middle stage of stylistic evolution in pottery stamping.

The finding of Early Swift Creek, Early Plateau, Vining simple stamp, cord-marked pottery, and Delta class stamped ware on the old

plateau levels at Mounds A and B on the Macon Plateau gives a confusing picture of plateau-Swift Creek relations during the earlier period of plateau occupation. The suggestion that Early Plateau and Early Swift Creek are coeval may not be borne out by the results of future exploration. Certainly it seems strange that plateau pottery complexes do not come out in Early Swift Creek sites, whereas Swift Creek site markers do crop out in plateau horizons. It is possible, of course, that there is not as much cultural discontinuity, or as wide temporal spans, separating these several manifestations as might be assumed. Macon Plateau might be early chronologically, as seems indicated; and so is Swift Creek, along with other classes of specialized stamped wares which come out at geographically far removed points in pure site aggregates.

The solution to these many problems may lie in the more refined analysis of material on hand, or in the exploration of other sites in the Macon area. It is hoped that enough information has been presented to report on progress in exploration to date with sufficient attention to chronology to afford some idea of the relationships obtaining between the more outstanding sites.

ADDITIONAL OBSERVATIONS ON THE DISTRIBUTION OF STAMPED POTTERY

On the basis of present data Swift Creek stands out in Macon chronology as an entity. A complete cycle of evolutionary change is comprehended in the seriations represented. The preceding pages have sought to plumb the relations of Swift Creek to early pottery levels in the Ocmulgee Basin. There remains to be considered such site exploration as would appear to give the terminal connections of Swift Creek.

A review of the Swift Creek sites located immediately in the Macon area has shown that Swift Creek appears to have been cut short at a point just beyond the middle stage of development. One Mile Track, Shell Rock Cave, southeastern spur No. 1, subterrace exploration west of Mound A (Macon Group), Tuft Springs, have been noted as Swift Creek manifestations which exhibit stylistic features of Early or Middle Swift Creek. At the Swift Creek type site stylistic changes in the midden presumed to have been plowed off the top of the mound (sixth occupation level) showed initial "degeneration" in the artistic treatment of design elements.

The same stylistic trends with loss of balance and skill in execution were observed in collections of Swift Creek pottery made on sites as far removed geographically from Macon as the Georgia coast and the lower Chattahoochee Valley, i. e., Evelyn plantation near Brunswick, Ga., and Kolomoki in Early County. Intermediate sites

between Macon and these peripheral expressions of Late Swift Creek were represented in collections from Keeling's Camp on Big Indian Creek, 40 miles south of Macon on the Ocmulgee, and several sites located near Talbotton, Ga., 50 miles west of Macon toward Columbus.

These data signify that Swift Creek development was cut short in the Macon area by the expansion of Macon Plateau culture which coincided with the mound-building period of occupation on the plateau. Information coming from recent exploration at Mounds A and B on the Macon Plateau gives further substantiation to this conclusion.

In discussing Swift Creek relations to Macon chronology considerable space was given to the relation of Swift Creek to Macon Plateau. The connection of Swift Creek to Late Plateau has been indicated. In regard to Early Plateau definitive information is still being sought.

The second gap in Macon chronology relates to the terminal development in the Ocmulgee Basin following after the Late Plateau period.

Here again, at the outset, it is best to confess that present data are inadequate to show the precise line of development followed in the further evolution of stamped pottery.

The essential point is to regard the art of pottery stamping as early and basic in southeastern pottery morphology. So much seems clear from field work carried out in Georgia during the last four years. It must be recognized, however, that there are several stamped pottery complexes which appear to be widespread at an early time interval in the region. In addition to Swift Creek, other outstanding stamping techniques are Vining simple stamp, Delta complicated stamp, and the checker or grid-bar stamp.¹²

These distinctive styles in pottery decoration come out in "pure site" occurrences at points relatively far removed in the area. Frequently they show as significant minor percentages, either singly or in combination, implying trade connections between different focal points or hearths. The caution is very strong to consider the possibility of several overlapping centers of stamped pottery origination.

In archeological synthesis, perhaps more than in ethnological reconstruction, there is great danger of being led astray by simple unilinear conceptions of evolutionary change. The best course, at present, would be to define the more obvious determinants in the cultural picture, maintaining the perspective of a broad canvass, without straining after continuity not now apparent.

¹² In a system of trinomial nomenclature just now projected among several workers in the Southeast these pottery type components would be recognized as follows: (1) Vining simple stamped, (2) Napier complicated stamped, (3) Deptford checker stamped. The first qualifying term signifies the type site.

EXPLORATION OF LAMAR MOUNDS AND VILLAGE SITE

Under C. W. A., beginning in December 1933 and continuing into March 1934, the Lamar mounds and village site were explored. Mr. James A. Ford, now an archeological associate of the Geological Department at Louisiana State University, was the field assistant in charge of the Lamar explorations.

The site is located $2\frac{1}{2}$ miles from Macon on the west bank of the Ocmulgee in the flood plain. The village site has been covered in recent years with 16 to 20 inches of river alluvium. At intervals small hummocks, supporting a more verdant and lush vegetation, indicate the sites of small house mounds located in the village between and around the two mounds.

Reconnaissance and exploration under Mr. Ford uncovered a number of house sites, produced some preliminary information about mound structure, and have resulted in the cataloging of thousands of study sherds from midden deposits. One of the house sites was completely uncovered and the construction made evident from the remains of charred timbers, reeds, and roof sod present under the mesh of supporting materials. A rectangular flat-topped mound about 3 feet high, with regular ramped sides, a prepared clay floor, with charred wall supports present in the basal portions, clay basins inset in the floor, burials on the ramps and in accumulating midden outside the walls of the house, refuse pits and debris or midden accumulations in heaps—these original deposits and structures serve to present a representative picture of the house type, burials, and material culture indices characteristic of the Lamar village.

Up to now the chronological summary of site exploration has emphasized pottery morphology. Mound-building traits, burials, flint artifacts, and other elements of material culture will play a prominent part in any ultimate schematic arrangements. At present, however, the pottery indices will be more useful in stating the implications of specific site exploration for a Macon chronology.

At the Lamar mound and village we have a distinctive change in the pottery complex from that noted in all previously recorded site exploration. The dominant ware, amounting to at least 75 percent of all sherd collections, is complicated stamp, but is of a different order from that described at Swift Creek and elsewhere. The stamp ware of Lamar is easily demarcated from the clearly cut complicated stamp designs at Swift Creek.¹³ At Lamar the stamped design ele-

¹³ As a result of laboratory studies at Macon it is now believed that the Swift Creek designs could not have been impressed by a carved paddle. The application of large panels of complicated design motifs, precisely and evenly laid out over a curving decorative surface having trough-like depressions on rim and shoulder, implies the use either of a rocker stamp or a carved roller stamp. The uniformly neat, precise, clean-cut stamp impressions, looking very much as if they had been made from metal dies, favor the idea of rocker or roller stamps. In contrast, in the Lamar series impressions are shallow and obscure to the extent that design elements can hardly be made out. Stylistically, there is a loss of technical skill in execution and in originality in composition which implies "degeneration." Technologically, one begins to suspect the use of carved paddles rather than the more effective stamps used during the peak of development (Swift Creek).

ments are hard to recognize as separate distinct patterns. The carved paddles were poorly cut and were applied in a very slipshod manner to an inadequately prepared decorative surface. The result was a confused blurring and overlapping of stamped impressions which gives to the majority of Lamar stamped vessels a characteristically non-descript stamping in contrast to the Swift Creek series, even the poor class of Swift Creek (Swift Creek C class of complicated stamp).

None of the Swift Creek stamped designs have been identified in the blurred, indistinct paddle marking at Lamar. Even Swift Creek complicated stamp, class C, the poorest from the point of execution, is easily distinguishable. More pertinently, the decadent Late period at Swift Creek does not produce on the type site examples of stamping which look like Lamar pottery decoration. A purely theoretical view might regard the stylistic trend in the "degenerate" Swift Creek as leading toward what is actually to be seen in Lamar collections. But neither at Swift Creek nor at Lamar is material found which fills in the evolutionary gap on the basis of above assumption. With regard to the question of stamped pottery evolution it is evident that there is a definite time interval separating Swift Creek and Lamar.¹⁴

A second point of comparison concerns the distribution of the so-called fossil sherd classes on the two sites. Prominent as a site marker at Swift Creek was a small but ubiquitous assemblage of specialized wares—fiber-tempered pottery with vermiculated finish in smoothing, grid bar or checker stamp, and steatite stoneware. It is significant that these do not occur in the Lamar horizon.

A noteworthy feature of the Lamar pottery complex is the sudden appearance of a strong minority representation of a very striking incised ware. The absence of incised pottery at Swift Creek and related sites has been remarked. At Lamar approximately 13 per cent of all the study sherds exhibit a bold incised technique figuring characteristic geometric designs. This incised ware has deep, broad, well-balanced lines, boldly executed in decorative panels extending around the upper circumference of the vessel. Circles, scrolls, hachures, meanders, and other frequently occurring compositions are done with a deftness and balance which strikes the eye in looking over the Lamar collections. Occasionally, punctating in association

¹⁴ That Lamar must be removed from Swift Creek both in point of time and as regards the character of the stamped ware has been generally conceded by those working in the area and most familiar with the material. Nevertheless, it would be too extreme to state that there are no signs of connection. Lamar must not be considered as a static complex. Even at the type site, in stratigraphic series, the material taken from test pits shows permutations in the pottery indeed of greatest value as site markers. The Lamar sherds taken from the basal midden show more clearly defined impressions, classifiable as a complicated stamp, whereas those from the upper midden generally show the amorphous features associated with a malleating technique and the use of carved paddles. Swift Creek motifs are occasionally recurrent but are much modified, and tend to be combined in simpler, less elaborated designs. Similarly, some Lamar patterns are vaguely reminiscent of Delta (Napier complicated stamp). In epitome, the ensemble impression of generalized Lamar is something very different from any of the classes of stamped ware regarded as early in the Ocmulgee Basin.

with incising forms both negative and positive designs, recalling styles peculiar to the historic and proto-historic sites in the lower Mississippi Valley.

We have, then, at Lamar two conflicting stylistic manifestations. These are distinctive on technological grounds. From the point of view of style, their contrasting treatment shows in the case of paddle marking much less skill in design composition and in fineness of execution than is exhibited in the incised ware. The artistic impression is created that here is found a full-blown or peak development.

Beginning exploration in the village site at Lamar, under C. W. A. auspices early in 1934, failed to produce definite evidence of stratigraphy. Theoretically, it was anticipated that in the deep midden accumulations might be found some evidence of physical superimposition of levels reflecting the merging of the two distinctive pottery types, Lamar complicated stamped and Lamar bold incised. It was apparent from the field data recorded by James A. Ford that there had been much disturbance of midden as the result of burial intrusion and the digging of many domestic pits. Tentative laboratory studies at that time showed a general admixture of stamped and incised sherds from top to bottom in the 16 stratified pits dug. The analysis by arbitrary levels showed no well-defined trends. The results were negative and hard to appraise, due to the marked churning of midden in successive occupation. The conception of Lamar village held then, and still maintained, was that probably several generations had lived on the site, heaping midden to varying levels at different points of the village area.

In August 1937, in connection with the undertaking of a stratified survey of the Ocmulgee Basin, Gordon Willey made 20 stratified pits into the Lamar village. Of these, 10 gave evidence of vertical stratigraphy, 5 were negligible so far as cataloged material was concerned, and 5 showed no change. Of the five which showed no change two were much confused by definite burial disturbances. Another was unreliable because of faulty excavation. The discrepancies in the remaining two could not be explained.

It should be remarked that the 1937 survey had superior opportunities in having a more advantageous set-up for both field work and laboratory study. Also, by then there was a clearer conception of the essential pottery complexes involved.

Briefly, the stratified indications at Lamar brought out by the 1937 survey are as follows:

First. The Lamar bold incised occurs in strongest percentage in the top 6 to 9 inches of the 2-foot midden, either decreasing to the bottom or disappearing altogether.

Second. Lamar complicated stamp shows definitely better execution in the lower level. The collections from the top midden give a mass impression of the amorphous, irregular designs, which can generally not be sketched as to design elements. These are the Lamar designs thought to have been impressed with carved wooden paddles. On the other hand, the more distinct Lamar patterns in the lower levels permit of the designation, Lamar complicated stamp, as these show less evidence of a slipshod malleating technique.

Third. There is a marked and consistent increase in semipolished or smoothed plain ware as one proceeds from top to bottom in the midden.

A more detailed and graphical presentation of the Lamar investigation will be given in a survey report now in preparation.

Interpretation of this data strengthens the views that there had been some stylistic degeneration going on in the stamping technique during the period of Lamar occupation. It follows, also, that the incised pottery came in during the period of decline. The correlated decrease, from bottom to top midden, in better stamped ware and in polished ware, is stratigraphically significant.

Finally, at Lamar in the upper levels are found pots which have both incised and stamped decoration on the same vessel. The incising in these "hybrid" specimens is generally confined to the rim or shoulder portions and is frequently set off from the stamped decorations on the body and base by lines of reed punctates. Here we have striking confirmation of the idea that Lamar is a refocalization of cultural elements coming from different areas, presumably the result of intermingling of trait complexes belonging to the lower Mississippi Basin and the native Southeast respectively.

Rim treatment at Lamar is highly specialized and may provide a clue to evolutionary connections, both in regard to the earlier stamped pottery and, as will be seen, in regard to later developments. In Swift Creek a complete seriation is afforded suggesting the evolution of a type of folded rim which first appears in the third level of Mound A (Swift Creek). In the bottom-most levels of the mound there were no folded rims but many of the rims did show an incidental extrusion of pottery paste brought about by the characteristic beveling and flattening of the lips of the pots. The indications were that this extruded paste came more and more to be smoothed out, at first casually, eventually becoming a deliberate shaping of the rim. Certainly the folding of the rims did become a permanent and characteristic feature in the rims cataloged from upper levels. In the fifth and sixth mound levels the fold becomes a smooth neat ribbon one-half to 1 inch wide. Some initial beveling or shaping of this exterior fold begins to be apparent.

At Late Swift Creek sites the surface of this enlarged folded rim comes to have many shapes, made by beveling, molding, excising, grooving, and other treatment. In addition to the specialized folded rims, Late Swift Creek sites exhibit some unusual forms of rim thickening which may be a further evolutionary outgrowth from the bizarre folded rim.

At the Lamar type site, and on many other Lamar-like sites reconnoitered, the folded rim occurs but with stylistic variations different from those observed in Late Swift Creek. Lamar rim treatment generally shows pinching or notching of the fold. Reed punctate impressions are characteristic. Frequently the rim may bear modeled human facial effigies with "coffee-bean eyes." Rosettes and teat-like nodes are other possibilities. The suggestion is made on less plausible grounds that a new rim specialization which becomes prominent at Lamar may be derived as an end product of the folded rim evolution. This is the luted rim strip which may be pinched, notched, "beaded," molded, or otherwise secondarily treated after having been pressed onto the rim of the pot. All of these are typical rim specializations and serve to show a morphological trend away from the Swift Creek complex. Implicit in the evidence at Lamar and at other sites surveyed in central Georgia is the tentative generalization that stamped pottery evolution may have pursued different courses subsequent to the Late Swift Creek phase. Lamar might be one end product pursuing an evolutionary trend which, as will be shown, culminated in a proto-historic or historic terminus. What happened in the degenerative Late Swift Creek cycle could only be conjectured.

In the foregoing discussion we have been interested in reviewing the information considered to bear on the evolution and decline of the stamped pottery technique. An important new factor comes in with the first appearance of characteristic incised pottery decoration at Lamar.

Refocalization at Lamar has been argued on the basis of data afforded by the type site. Other evidence to the same end comes from the analysis of mound features, the burial complex, and a study of other trait complexes. The idea of refocalization receives support from observations made on many other Lamar-like sites, some of them geographically removed from the Ocmulgee. The Lamar focus would appear to have been very widely distributed in the Southeast. Some of the more outstanding sites in Georgia are Neisler mound and village site on the Flint River, near Reynolds, Ga., about 40 miles southwest of Macon; the Shinholser site on the Oconee, near Milledgeville, 35 miles north of Macon; Nacoochee and Etowah, previously explored sites in north Georgia; Stalling's Island in the Savannah River, near Augusta, Ga.

In 1936 reconnaissance of documented historical Indian villages along the Chattahoochee River led to the investigation of an important site at Bull Creek, on the site of the airport at Columbus, Ga. Mrs. H. Wayne Patterson of that city, an enthusiastic student of De Soto's southern itinerary, collaborating with Dr. J. R. Swanton, cooperated generously in initiating the project. Frank Lester, an engineer trained in archeological field methods at Macon, had charge of exploration in the village and associated burial ground at Bull Creek. The importance of this site lies in the finding of a specialized funerary ware of painted effigy dog pots found with burials in the village midden. The domestic ware from the midden gave a typical Lamar pottery complex. The same conjunction of Lamar-like pottery traits with painted effigy dog pots had previously been noted for the Neisler site, on the Flint.

During October 1937 work was initiated at Irene Mound on the Savannah River, within the city limits, by Preston Holder. The work in Savannah is being undertaken to obtain information regarding the apparent stratification in Irene Mound previously observed in archeological reconnaissance. Abundant sherd collections obtained from exposed sections cut by tidal wash have identified Lamar complicated stamp as a prominent component in the cultural deposits of this site. It is hoped that explorations by Holder will check the interesting indications of vertical stratigraphy.

Separate reports will be prepared on the Bull Creek and Irene Mound investigations. Here it is desired simply to call attention to the widespread occurrence of Lamar-like sites. Until the details of field work and analysis of material are available from these explorations little comparison can be made. Enough is indicated from surface features to show the general complex of trait complexes described for Lamar. The geographical spread of these manifestations points toward refocalization as an explanation of conditions at the Lamar type site.¹⁵

THE TRADING POST CHRONOLOGY

The final chapter in Ocmulgee history is closely bound up with the uncovering of an historic structure on the middle section of the Macon Plateau. In the earlier account of plateau investigations

¹⁵ Investigation of the Lamar site is not complete. Intensive exploration has been concentrated on the Macon Plateau in order to clear that area in preparation for restoration, field exhibits, landscaping in the permanent development of the Ocmulgee National Monument. Archeological literature pertaining to Lamar-like sites is relatively more abundant. A review of past and present exploration, interpreted in terms of the Macon work, can soon be advantageously made. The discussion of the Lamar site complex will involve an analysis not only of the archeological data but also the mass of historical and ethnographic information relating to the ethnogeny of the Creeks in central Georgia. The archeological conclusions from Lamar investigations strongly support the conception of Creek Indian migrations, settlements, cultural assimilation of aboriginal tribes, recorded in such origin myths as the Chikili legend. In terms of tentative Macon chronology, the author has offered his view that the proto-historic movement and settlement of the early Creeks probably took place just before De Soto's journey through central Georgia in 1540. Dr. J. R. Swanton has considered that the De Soto narratives reflect some of the disturbance produced by tribal dislocation consequent upon these movements.

reference to this discovery was omitted, inasmuch as data pertained to a time interval and cultural sequence not related to the more prehistoric situations exposed on the plateau.

Early in 1936 general trench exploration made east and west through the whole length of the middle plateau section revealed in the profiles evidences of ditches averaging 18 to 24 inches deep, 10 to 14 inches wide at the top, showing in both sides of the trenches. The U-shaped cuts in the profile appeared in line in several trenches, suggesting an enclosure of some kind. It was decided to modify the method of exploration and to remove the soil overburden by horizontal troweling over the area rather than to resort to further profiling.

The U-shaped cuts when planed horizontally came out as ditches filled with disturbed or waterlaid sandy loam of darker color than the surrounding soil, evidently due to the decay of organic material or wood. A five-sided enclosure was worked out in its entirety. There was a broad base side, 140 feet long, facing the river toward the northwest. Two shorter sides or legs set at right angles to the base extended southeast 40 feet. The two remaining sides converged to form a triangle or gabled point directed southeast. The two sides forming the apex of the five-sided enclosure were 100 feet in length. The footing ditch, for such it was now perceived to be, had two breaks in its continuity in the base or front. One of these was 12 feet wide, the other 5 feet wide; they were apparently gates opening into the stockade from the river approach.

There were no remaining indications of decayed wood found except for the darker discolorations or black organic mold with thin discontinuous water-laid sand laminated between the darker soil areas. Vertical profiles through the footing ditch indicated horizontally laid logs probably pegged together. Early difficulties in planing the area to discover post molds were thus explained.

Inside the enclosure were rectangular areas of dark soil suggesting the decay of numerous logs. These were considered to be indications of what had once been cabins or storerooms.

Both in and around the enclosure were found burials of Indians of all ages and sexes associated with European trade artifacts and objects of Indian manufacture, including pottery. A number of burial traits not previously observed were encountered. The prevailing custom of primary flexed burials was noted, corresponding in this respect to burials at Lamar and other sites. However, the presence of artificial frontal deformation in a number of burials implied that this custom was much more prevalent in historic than in prehistoric times. Also several burials, again associated with European objects, were definitely cremated. The calcined bones had been heaped together and buried with guns, knives, axes, beads, iron ornaments, and other items. Again in three instances large pottery urns were found in-

verted at the base of shallow pits with rocks deliberately placed over the inverted pot or midden thrown in on top before the pits were filled with dirt. These very definitely suggested the possibility of urn burial but the absence of calcined bones or ashes did not give further significance.¹⁶

In addition to the burials in and around the enclosure there were numerous indications of house sites in the form of broad oval wall continuities traced out from post-hole alinements. The tendency for large domestic pits to be located in the center of these simple timber houses was noted in several instances and generous quantities of pottery, animal bones, flint scrap, and artifacts, scattered European objects, including some glassware and crockery, were taken from the fill. The houses were small, usually not exceeding 15 feet in diameter, and were sometimes smaller.

The implied construction consisted of light sapling wall timbers probably bent and tied to form the roof, with brush or reeds covering the whole. Sod might have been used also but this was not evidenced in the debris.

In addition to the house sites numerous refuse pits not definitely associated with post-hole indications of house floors were uncovered. Midden materials found in situ on the occupation level on which the houses were troweled out added to the data of exploration around the enclosures.

Another interesting feature was the profiled indication of a beaten trail terminating in front of the entrance to the trading post site. In profile the trail appeared as a ditch-like excavation 6 to 8 feet wide varying from 14 to 24 inches in depth. A bluish mucky clay fill in the bottom of the trail impression implied gradual deposition of clay sediments in stagnant water. The upper fill consisted mostly of water-laid or wind-blown sand.

The same trail indications had been followed at 50-foot intervals all the way across the plateau from a point at the extreme northeast rim margin beyond the outer dugout series north of Mound D to a point converging on the entrance of the trading post. The total extent of the trail thus surveyed was approximately three-quarters of a mile. Beyond the entrance to the enclosure the trail was picked up

¹⁶ Inverted pots in small pits have been found in three different cultural horizons at Macon. From the trading post come two outstanding examples. The pots were inverted, the base perforated suggesting "killing" of the vessel. In one trading post instance, loose stone rubble about the size of a man's fist was piled over the inverted pot. Another inverted pot at the trading post was covered over with midden, apparently dumped over the vessel after it had been placed in a shallow pit. No calcined bones, ashes, or charcoal have been found in conjunction with these inverted pots to indicate cremation. On top of Mound A (Macon group), in clearing away top humus to expose the thick yellow clay plate which mantles the summit and slopes of the mound, two inverted pots were found inset in small pits sunk into the yellow clay plate. One of these was a typical Lamar "hybrid" pot, showing both incised and complicated stamped decoration. The other was a plain, red-fired water bottle of Late Plateau classification. In these instances of inverted pots there is a suggestion of cultural conservatism extending some ceremonial usage through three cultural levels.

again in profile and carried southeast toward the river, dropping down from the plateau below the lower west slopes of Mound B. Beyond that point present explorations have not been attempted to trace the trail to its intersection with the river. In the plain below the plateau in all likelihood river erosion has destroyed any vestiges.

Another structural feature of importance was brought out in final exploration around the footing ditch. This was a moat-like ditch, separated by an average distance of 20 feet from the footing ditch, which indicated the line of the trading post stockade. The borrow ditch ran parallel to the footing ditch around four of the sides. It did not extend in front of the broadest or base side. The width averaged 10 feet with gently sloping sides; the depth varied from $2\frac{1}{2}$ to 3 feet. The fill showed a bluish mucky clay in the bottom with water-laid sands and loams in the top fill. Midden accumulations, refuse pits which had been cut through in the process of making the moat-like ditch, burials made in the floor after the excavations were made, all served to substantiate the view that the ditch was obviously related to the structure of the five-sided enclosure.

The quantity of European trade materials found in midden, house site accumulations, and definitely associated with burials, indicated a rather numerous population of historic Indians living around a trading post which seemed at a later date to have been partially fortified. The interpretation of the moat-like ditch is still in doubt, although five-sided wall enclosures with moat-like ditches surrounding the walls were a frequent construction in the seventeenth and eighteenth century colonial fortifications of the Southeast. The cataloged European materials exhibited a large number of finds which were weapons of war. In addition to the guns, knives, swords, and pistols found with burials, there were scores of gun flints, molded lead bullets, brass buckles, buttons, and other objects suggestive of military equipage. In contrast with these materials were many trade objects, such as beads, clay pipes, coiled iron wristlets, copper and brass sheets sometimes rolled into small funnels or into cylinders. Several burials of children and women with beads and other trade trinkets were cataloged from the area.

The field data previously summarized seem fairly conclusive to the effect that general exploratory trench explorations had come upon the site of a large and thriving trading post. The military character of many of the European finds seemed on first impressions to be too evident to suggest an ordinary establishment set up primarily for trade. The presence of 50 burials representing individuals of various ages and sexes denoted the existence of a stable population and probably a fairly sizable community, as these interments had been uncovered in only so much area as was represented in general trench exploration.

So much for the archeological indications. History offered immediately no specific answer as to what the meaning of the Macon trading post might be. The best authorities had stated that Fort Hawkins (established in 1806), located about a mile northeast on the opposite side of the river, was the only military outpost known in the region and that no trading post of earlier date had been noted.

History did record, however, that Col. James Moore in 1703 had recruited 1,000 Creek Indians on the Ocmulgee River and that he had proceeded from the Ocmulgee to Florida where he had decisively defeated a force of the Spanish and their Appalachi allies. Moreover, a map in the possession of Gen. Walter A. Harris at Macon, dated 1828, still shows a trail on the west side of the river, denoted in inscription as "Moore's Trail," about 2 miles below Macon Plateau and the site of the trading-post discovery. Finally, preliminary checking of historical data shows that there are a few vague references in unpublished documents to a trading post located on the Ocmulgee around 1700.¹⁷

The identification of glass beads, pipes, guns, copper or brass hawk bells, a brass weight marked with the date 1712 found in Ocmulgee fields some years ago by a visitor, and a Spanish coin, together concur in giving an approximate date for the Macon trading post of between 1675 and 1718.¹⁸

The Yamasee wars in Georgia beginning in 1715 resulted in a general exodus of hostile or frightened Indians from the interior. Most of the settlements along the Oconee and Ocmulgee were abandoned at that time. Such archeological and historical data as has been uncovered thus far strongly suggest that the Macon trading post was abandoned and possibly destroyed then.

In the exploration of the Macon trading post we have one of the rare instances in which archeology has produced substantial building structures with evidences of military occupation for which history has very little recorded data. From so much given it is probable that historical research will fill out many of the gaps in our knowledge.

For archeological purposes we have practical assurance that we have a large Indian site of known historic dating. In any event the Macon trading post gives a terminal point to the long series of site explorations recorded in the preceding pages.

How significant and important this definite or fixed terminus may be in line with chronological studies made on the Lamar site will be perceived from the following remarks.

¹⁷ The following authorities have assisted in the identification of historical objects: J. R. Swanton and David I. Bushnell, Jr., Smithsonian Institution; Arthur Woodward, Los Angeles Museum.

¹⁸ Gen. Walter A. Harris and Dr. C. C. Harrold, of Macon, Ga., members of the Society for Georgia Archaeology, have historical documentation bearing on the Macon trading post in the colonial records preserved at Columbia, S. C.

In the excellent collections of study sherds and other artifacts from the trading-post area on the Middle Plateau one fundamental fact emerged on first impression: that relates to the complete disappearance of paddle-marked or stamped pottery. All of the ware taken from house sites, midden heaps, the moat, the occupation level inside the enclosure and associated with burials, is either the plain, smoothed, and polished undecorated ware or exhibits only incised designs. The shapes of pottery vessels in this horizon are also characteristic. We may note two outstanding forms, carinated bowls, and another class of vessels with flat bottoms, straight sides inclined outward, without handles or lugs. Some evidence of painted ware, with the use of fugitive red paint inside the crudely incised lines, is observed. The tendency to continue the Lamar trait of luted pinched rim strips is also remarked. Other rim specializations found at Lamar tend to continue in the historic scene. A divergent trait of the trading-post ware, as compared with Lamar, is the change in pottery temper. Lamar pottery is grit-tempered. A heavy percentage of trading-post sherds shows shell temper.

In regard to the incising of designs of pottery vessels from the trading-post area a very noticeable feature is the marked decline in the size and the precision with which the geometrical patterns were cut. Incised patterns on pottery vessels at the trading post are thin, scraggly lines, weakly and ineffectually put on in sharp contrast to the deep, broad, and boldly executed incised ware seen at Lamar. Many of the same design elements continue, especially the use of scrolls, hachures, and incised bands of parallel lines. A marked decline in fineness of execution characterizes most of the decoration.

Finally, reconnaissance elsewhere along the Ocmulgee, particularly at Indian Springs about 40 miles distant from Macon and at Holton Shoals, 10 miles north on the Ocmulgee upstream from the site of the Macon trading post, has yielded sherd collections from the surface of plowed fields which show trade pipes, beads, and gun flints associated with plain, smoothed, or polished and incised ware of the same type found around the Macon trading post. Burials in a red clay knoll site of the entrance to Central City Park, Macon, found associated with trade objects, gave incised and plain sherds comparable to the other proto-historic or historic sites explored in Old Ocmulgee Fields.

The study of these collections has not been completed but the data coming from reconnaissance serve to strengthen the conclusions tentatively derived from an analysis of site collections at Macon. The indications are strong that subsequent to the Lamar occupation, which marked the first incoming of a characteristic incised pottery technique, two events took place as suggested by comparative pottery morphology: first, thereafter paddle-marked or stamped pottery

became gradually obsolete and finally disappeared entirely; second, concomitantly with the decline of stamping or paddle marking there was a gradual degeneration in the art of incised pottery decoration.

The implications of field data from several sites explored or reconnoitered further imply that the two perceived evolutionary trends, the disappearance of the long dominant paddle-marked or stamped techniques and the subsequent replacement and stylistic change in incised motifs, must have required an appreciable interval of time to take place. A generalized resemblance in incised pottery designs and other features of comparative morphology between the historic and proto-historic series in the Ocmulgee Basin and survey collections studied by James A. Ford in Louisiana and Mississippi has been noted.¹⁹

Thus far the author has not attempted to give time limits to any of the chronological developments described on the basis of stratigraphic and typological information. To do so in central Georgia would involve an exhaustive review of ethnographic references in conjunction with archeological findings.

At this time the opinion is stated, frankly as a hunch or impression, that the Lamar focus represents a pre-De Soto occupancy of the territory and that the permutation of pottery complexes incident to lower Mississippian influences soon led to the general replacement of the older techniques by the newcomers. The phase of ethnogeny represented here is considered to be the legendary movement of ancestral Muskogean tribes, particularly the Kawita and Kasihta, who preempted the territory, partially driving out, partially absorbing aboriginal elements of differing culture. Origin myths like the Chikili legend suggest just such a commingling of peoples and divergent culture traits as is exhibited archeologically at the Lamar site. The persistence of the site-marking traits of incised pottery decoration, rim treatment, and burial traits to the historic threshold helps to substantiate the view expressed.

From the foregoing remarks, however, it must not be gleaned that the archeological picture of cultural developments which links the Lamar focus to the demonstrably proto-historic or historic sites is complete. The Lamar type site, as well as the other Lamar-like sites explored, surveyed, or reconnoitered, all imply a horizon in which approximately similar components were being refocalized to produce a fusion of traits which serve everywhere to define this complex. The impression is given that the impact of trait complexes considered "Mississippian" in origin—to mention a few: pottery morphology, effigy pipes, burial customs, mound architecture, house construction,

¹⁹ Analysis of Indian Village site collections from Louisiana and Mississippi. Anthropological Study No. 2, Louisiana Department of Conservation, New Orleans, 1936.

square grounds and the presence of pottery or stone game pieces (chunky stones)—upon an aboriginal cultural complex site-indexed by stamped pottery, took place at one time interval and resulted in the same general product of refocalization. Laboratory studies of surface collections from Bull Creek on the Chattahoochee, Lamar on the Ocmulgee in central Georgia, Irene Mound on the Savannah River and Georgia coast, show slight permutations and differences which might argue some secular change of variation from the norm. It cannot be determined from the present data whether these discrepancies mean greater cultural resistance in some sections on the part of the native populations, whether a slight modification had taken place in point of time on the individual sites, or whether some ecological factor in diffusion is responsible. There is every reason to hope that an expanded archeological survey in Georgia, with more detailed analysis of site collections, made by stratigraphic test pits, will throw light on this problem.

GENERAL CONCLUSIONS

Several important generalizations may be made from the evidence at hand, evidence derived from crucial exploration on key sites. Space will not permit any discussion of these conclusions at present as each will require separate treatment in extended form.

The main points are enumerated as follows, with the few accompanying comments.

THE ANTIQUITY OF STAMPED POTTERY IN CENTRAL GEORGIA

One of the most striking facts gleaned from the Macon explorations is the antiquity of the stamping technique in pottery decoration as indicated by the presence of appreciable though small percentages of early stamped ware in the oldest pottery levels. It is significant that these beginning expressions of stamping are generically distinct from later forms at Swift Creek, Stubbs, Lamar, and other important sites yielding significant data on the evolution of stamped pottery. Moreover, some of the initial stamped designs and techniques show a fairly complex development. The implication is that even at that early date the stamping trends had reached a stage of complexity not to be associated with primitive or simple beginning. The assumption behind this fact would be that stamping of pottery was not only very early in the Ocmulgee Basin but that fairly elaborate styles and techniques were present either preceding or contemporaneous with the crude, fundamental plain ware which characterizes the agriculture-pottery base on the Macon Plateau. The exact implications coming from the perceived minority representations of these beginning expressions of pottery stamping at Macon are not clear at present.

Archeological reconnaissance undertaken along the river systems of Georgia, both north and south of the Ocmulgee, strongly suggest an increase in the specialized classes of early stamps toward the north, centering around the Oconee and the upper Chattahoochee.²⁰ Surface collections taken from numerous sites in that area show relatively high percentages, approaching "pure" site manifestations in some localities. Around Eatonton and Hillsboro, 40 miles north of Macon and interior to the fall line, these stamped pottery complexes seem to appear with increasing frequency and have associated characteristic forms of artifacts made generally from quartz or quartzite rather than flint. This point may be important as the deepest pottery level in the stratified village at Mound D showed a notable increase in Delta stamped pottery (Vining simple stamped) and an almost complete supplanting of flint by quartz or quartzite of the same smoky and honey-colored variety found around Eatonton. Preliminary reconnaissance thus implies a probable focus of still earlier stamping techniques developing 40 to 100 miles north of the Ocmulgee area. The stratigraphic position and percentage distribution of these sherd classes in the Macon series, and the implication that they come more in dribbles during successive time intervals in the early chronological development of pottery complexes in the Ocmulgee Basin, indicates that the Macon area is probably peripheral to the true southeastern stamped pottery horizon.²¹

Other evidence bearing on the antiquity of stamped ware in the region has to do with the reconnaissance in Georgia centering around the Savannah Basin and extending coastwise toward Brunswick. At the present writing indications point toward the existence of a strong predominance of early checker or grid-bar stamps concentrated in this area. Moreover, the trend seems to show a coastwise movement south along the coast to Florida where the same pottery complexes occur in relatively old stratigraphic context. Again the presence of grid-bar, cord-marked ware, and rouletted sherds which intergrade into others suggesting the use of a rocker stamp seem to tie up with these south Atlantic and coastal pottery complexes.²²

²⁰ Particularly the crisscross simple stamp (Vining simple stamp), Napier complicated stamp (so-called Delta in earlier laboratory studies), and grid-bar or checker stamps.

²¹ The Swift Creek sites on the Ocmulgee at Macon may have been somewhat nearer the center of diffusion. Recent survey information from the Georgia coast, southwest Georgia, and the knowledge that Swift Creek occurs on sites on the west coast of Florida, may indicate that this aspect of the southeastern early stamped pottery cultures had its hearth nearer the fall line and geographic center of the area, rather than farther north in the piedmont.

²² Cord marking in central Georgia deserves a special note. The general appearance of this ware, regarded in large representative site collections from various points on the Georgia coast and extending well upstream into the hinterland, assimilates closely the cord-marking complex of the northeastern woodland section of the United States. The trend of distribution in central Georgia, as made out from beginning reconnaissance, consistently points to a South Atlantic source of diffusion with the highest area of concentration at or near the Savannah Basin. Grid bar and various specialized denticulates seem to have a correlated distribution, geographically and chronologically, so far as present indications can be taken as a guide in the region. Against this view of cord-marked pottery distribution must be set the fact that cord marking also has a very widespread occurrence in the Mississippi Valley. Ford finds cord marking to be an important site-marking component of the Deasonville complex.

In regard to cord marking, we note the probability that the Macon area is peripheral to pottery site markers whose true center of diffusion was nearer the coast. Coming from the same quarter apparently were other classes occurring sporadically in the Macon stratigraphic series, notably the Theta pottery complex defined as fiber-tempered pottery extruded or pressed down in smoothing to give a vermicular surface finish;²³ also a steatite stoneware which seems to increase in surface collections northeast, culminating in the Savannah territory.²⁴

The real problem comes in ultimate determination of the chronological relationship of the early Macon Plateau occupancy associated with the prehistoric dugouts and very primitive houses enclosed within the dugout series and elsewhere evidenced by cataloged materials from fossil soils beneath earlier mound constructions. The dominant ware here has a characteristically primitive appearance from the purely technological point of view, consisting of plain, grit- or muck-tempered ware,²⁵ sometimes showing decomposed vegetal tempering, crudely prepared and overfired and exhibiting a general lack of refinement in surface finishing; associated with specialization in handles with numerous variations in nodal protuberances on the handle or lips of the rims.

The pottery complex of the Macon Plateau appears to be localized in the Ocmulgee Basin so far as present information goes. There are not lacking comparative series elsewhere in the Southeast, however, and a systematic archeological survey may do much to dispel the present impression of extremely localized development. Until careful study of the large collections from many archeological contexts on the plateau can be made, and pending the results of explorations contemplated or still in progress, the chronological perspective of Macon Plateau must remain more or less uncertain.

Whether or not the Macon Plateau pottery series, possibly associated with a most unusual type of underground house, and with early evidences of agriculture, represents an archaic horizon in the Southeast is likely to be a moot question for some time. It is possible, even probable, that definitive data bearing on this controversial point

²³ In the trinomial classification recently projected by workers in the area, this fiber-tempered ware has been designated St. Simon's fiber-tempered plain. The site reference is to rich shell midden accumulations explored in 1936 by Preston Holder on St. Simon's Island, Brunswick, Ga.

²⁴ Stoneware is considered along with general pottery morphology rather than the use of stone because the very characteristic stone vessels cataloged from Macon sites exhibit many morphological specializations found in the pottery. Also, fragments of steatite ware occurring in site collections help in the same way as do the "fossil sherd classes" in defining chronological level or site relationships.

²⁵ Muck-tempered pottery on the Macon Plateau probably deserves recognition as a separate pottery complex, distinct from the plain, coarse, grit or sand-tempered, orange to red to mottled ware which bulks so large (over 90 percent in all Macon Plateau archeological contexts). That muck-tempered pottery is generically related to the basic pottery of the plateau, however, is indicated by the occasional persistence of the same specialized rim features in both, i. e., use of crude animal effigy head modeling and loop handles bearing nodal protuberances. Muck temper increases in the upper levels of the Macon Plateau along with a mixed temper consisting of grit, vegetal, and shell tempers. The changes in pottery temper, paste, and tensile strength are beginning to be appreciated as important in distinguishing sherds from lower and upper strata in the plateau.

may not be forthcoming from the present investigations. There is good reason from preliminary survey of the Brown's Mount site to expect that a check may be had on Macon Plateau results. There seems to be lacking at Brown's Mount the complicating factors of superimposed culture levels and extensive disturbance so evident on the Macon site.

At this stage it might be of advantage to call attention to a number of features in the Macon Plateau situation which might be considered identifying traits of an archaic horizon exhibiting generalized resemblances at several points geographically as far removed as the southeastern United States, the Great Plains, and the Southwest.

1. Early agriculture.²⁶

2. Pottery complex: coarse, friable, grit-tempered ware, poorly fired; generally plain, red to orange to mottling from firing effects, sometimes showing cord roughening, netting or textile impressed patterns on exterior; coiled ware; globular, round-bottomed cooking vessels with wide mouths or slightly incurving rims; tendency to large loop handles bearing specialized protuberances.

3. Underground houses (?), continuous links or passage connections, occasionally separate and distinct units.

4. Earth lodge ceremonial structures with passage entrances.

It may be that the features mentioned are too generalized to have any more significance than that of superficial resemblance or convergence. At present hardly enough data is at hand in any quarter to proceed far with comparisons. Certainly the presence of these trait complexes on the Macon Plateau shows few parallels in the southeast proper. It is strange that the archeological analogues should be so far-flung. One is led to suspect that the pattern is archaic, the distribution peripheral to some center or hearth not yet delimited. Hypothetically one might seek for such a center of diffusion somewhere in the Mississippi Basin, if a logical explanation of such widespread cultural phenomena was to be had on ecological grounds.

MISSISSIPPIAN INFLUENCES ON THE OCMULGEE BASIN

In stating the problem concerning the antiquity of stamped pottery in central Georgia considerable attention has been given to the existence of archaic levels possibly derived from the Mississippi Basin and thus diffused later into the southeastern marginal area.

Even though central Georgia and the Southeast may be defined as an archeological area characterized by evolution of stamped pottery through remote prehistoric chronological sequences, the Macon field data suggest that the fall line and marginal piedmont territory of

²⁶ The arrangement of hillocks in rows broken up into small garden plots, as exhibited on the Macon Plateau, gives a different picture of maize cultivation from that recorded in descriptions and observations of early European ethnographers along the eastern coast of America. Cache pits, presumably for the storage of maize, have been found in the oldest submound occupation levels at Macon.

central Georgia are peripheral to influences coming in throughout the prehistoric and proto-historic intervals. In short, although the Southeast may be shown to be an area in which culture developed early with distinctive site markers in comparative pottery morphology, nevertheless the geographical relationship of the region to the Mississippi and the eastern woodlands makes it a periphery and essentially a marginal area which has received overlapping diffusions of cultural influences from more remote and interior points of origin. The tentative study of the large Macon collections shows many trait complexes reminiscent of archeological situations more completely worked out in the Mississippi and in the woodland section of the northeastern United States. This view of the Macon material offers a definite impression that the outside influences increase in number and in strength in the later phases culminating in the proto-historic and historic time period.

Mississippi influences have been suggested at Macon at two junctures. The earliest prehistoric movement from the Mississippi is represented in the period of mound building on the Macon Plateau. Whether or not the mound-building activities represent a natural cultural evolution as a continuous process or whether we have to do with an influx of new ideas coming from the Mississippi without marked cultural changes otherwise remains an unsolved problem.

Following a hiatus in Macon chronology subsequent to the evolutionary decline in pottery stamping at Swift Creek, the thread is picked up again at the Lamar type site. Paddle marking is then the vogue. Technologically and on the basis of specific design comparisons the changes which had taken place in Swift Creek hardly seem sufficiently in evidence to account for the wide differences observed at Lamar. Paddle marking is widely distinguished as a decorative scheme from the neat precise pottery stamping so characteristic of Swift Creek.

Lamar introduces the second mound-building period into Macon chronology. Mound architecture shows generalized resemblance to features observed in the Macon Plateau period. Moreover, Lamar exhibits for the first time a new technique of pottery decoration, incising, soon to supplant and completely dominate. Lamar specializations in rim shape and decoration are shown to persist into the historic horizon. Incised patterns increase in number and come to assimilate more closely decorative motifs known to have a wide distribution in the lower Mississippi Valley. The evidence for Mississippi influences operating in the Ocmulgee Basin becomes increasingly stronger as one proceeds from Lamar to the trading-post chronology.

A TABULATION OF SITE EXPLORATION WITH STATEMENT OF TENTATIVE CHRONOLOGICAL IMPLICATIONS—Continued

Site or component	Chronological interval	Distinguishing trait complexes with particular reference to pottery morphology
<ol style="list-style-type: none"> 1. Swift Creek. 2. Stubbs' Mound, submound and house floors. 3. Subterrace exploration, survey of marginal river plain at foot of plateau west of Mound A (Macon group). 4. One-Mile Track village site. 5. Shell Rock Cave. 	<p>Swift Creek series.</p> <p>Either interrupts and is interpolated between Macon I and Macon II or conceivably antedates Macon Plateau I and Macon II. Swift Creek pottery was cataloged from submound occupation, Mound A of Macon group.</p> <p>Stubbs' Mound and west subterrace exploration (Macon Plateau) might imply contemporaneity of Swift Creek and Late Plateau.</p>	<p>Distinctive technique of complicated stamped ware demonstrated in evolutionary series at Swift Creek, classes A, B, C; culmination of art of pottery stamping in sixth level at Mound A (Swift Creek Group); vessels conoidal, straight to slightly convex sides; seriation noted stratigraphically showing evolution of folded rim; complete absence of incised pottery; very few burials; aberrant (occupational) mounds with Mound Builder complex possibly absent; house type undetermined but suggested as simple sapling construction built on small unramped earth piles on edge of swamp or river margin.</p>
<p>Lamar, Horseshoe, Cowart's Landing and numerous others explored by reconnaissance in the Ocmulgee Basin. Sites of this classification apparently more numerous than any others so far as is indicated from initial reconnaissance of major drainage in Georgia.</p>	<p>Definitely subsequent to Macon Plateau and Swift Creek series with chronological hiatus indicated.</p>	<p>Comprises series of sites (Lamar type site), exhibiting predominantly paddle-marked pottery regarded as technologically and stylistically distinct from Swift Creek stamped pottery series; also includes important minority representation of incised curvilinear, scroll, and geometric designs; specialized rim treatment with pinched, reed cylinder impressed, molded or applique rim decorations; folded rims may show human effigy head modeling; pottery disks or game pieces (chunky); human head effigy pipes exhibiting specialized art; polished greenstone celts and discoidals; bone artifacts, shell ear pendants and plugs; burials in village midden, near house walls; mounds show generalized features related to Macon Plateau; houses rectangular, small timber walls and roof supports, reeds used extensively in covering, some briquettes and indicated sod covering, houses built on small regular ramped house mounds.</p>

1. Trading post, Macon Plateau.
2. Mound C village and intrusive cemetery.
3. Central City Park entrance; burials and domestic pits.
4. Intrusive burials in top level of stratified village on Mound D (north) plateau; also in pits intrusive into buried sod of Mound D.
5. Intrusive domestic pits at Lamar.
6. Holton Shoals east village (Tarver site).
7. Indian Springs village.

Demonstrably proto-historic or historic on basis of European trade material and established typology.

Perceived temporal span is proto-historic to historic, culminating circa 1700 in Macon trade post settlement. Pottery series shows disappearance of paddle marking or stamping with consequent stylistic degeneration in incised curvilinear geometric and linear patterns. Some painted pottery. Ware characteristics about same as Lamar except for disappearance of stamped ware. Persistence of Lamar specializations in rim treatment. No mounds found belonging to this period. New burial traits show tendency to artificial frontal deformation, some evidences of increasing cremation and possible cannibalism (?). Houses smaller, simpler, of lighter construction, round to beehive in shape, without special floor preparation or mound seats and with large, round domestic pits either inside or outside walls.

CLASSIFICATION AND TERMINOLOGY

In the preceding text frequent reference has been made to the Eastern Woodlands as an archeological area from which emanated a number of important pottery site indices, conspicuous among which is cord-marked pottery. The Mississippi Basin has also been recognized as the focal point of departure of many trait complexes which found ultimate expression in the Georgian peripheral area.

In the main, these pottery complexes and associated cultural traits, uncovered in recent southeastern archeological exploration, reflect

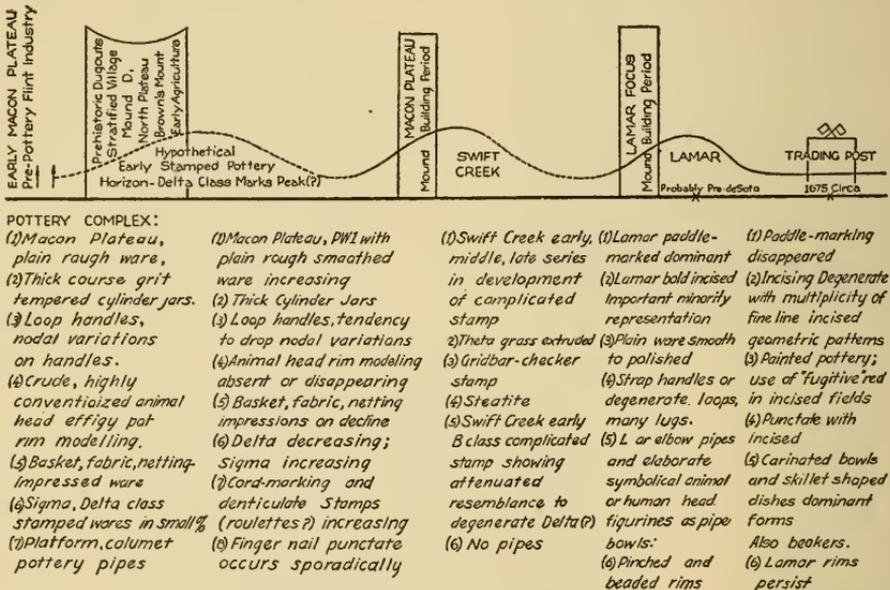


FIGURE 7.—Graphic chart summarizing text reference (p. 63) to site tabulation with tentative chronological implications.

the terminological connotations of systematists in defining units regarded as culturally significant in taxonomic classification. The author has been privileged to conduct archeological investigations in the central section and upper Mississippi and to participate in discussions leading up to the McKern formulation.²⁷ There is no doubt but that the early stamped pottery categories perceived to have stratified and typological distinctiveness, widespread ecological distribution, and consistent seriations in various associated traits, represent in toto assemblages clearly basic—reminiscent of a "Woodland" pattern. Pottery morphology, burial traits, mound features, flint artifacts, ornaments, implied physical environmental relations, all concur with such analysis in appraising cord-marked and the several stamped pottery complexes in Georgia.²⁸

²⁷ W. C. McKern, Certain Culture Classification Problems in Middle Western Archaeology, 1934.

²⁸ The determinant complexes of Woodland and Mississippian patterns as conceived by Thorn Deuel may be taken for reference; Fay-Cooper Cole and Thorn Deuel, Rediscovering Illinois, appendix I, pp 209 et seq.

Similarly, Macon Plateau, particularly in its later stage of development, manifests the broad definitive features of the Mississippian basic culture. A Mississippian influx of cultural traits has been remarked in Lamar-like sites in Georgia, with the correlated conclusion that refocalization was widespread and characteristic. In proto-historic and historic times the Ocmulgee settlements present archeological materials, especially in pottery morphology and decoration, duplicating almost identically many site markers familiar in the lower Mississippi. Ethnography and history afford explanatory support for the remarkable resemblances between the two regions.

However, when it comes to assessing the specific sites and constituent cultural elements on the individual sites, or related groups of sites, in terms of "phases," "aspects," "foci," "components," the problem of applying some such taxonomic device as that of McKern becomes extremely difficult and hazardous. In the first place, no archeological area in North America has been so little explored as the Southeast; or, at least, few regions show such a scarcity of published information on systematic archeological exploration. The work that has been done represents site investigation geographically far removed. The intervening areas are too large to permit of facile generalizations or assumptions concerning what might be found there.

Another extremely important factor in the Southeast is the indicated strength of many cultural impacts coming from afar and striking into the area at different time removes as peripheral spreads. Both in the piedmont and on the coast, the evidence points to isolation and cultural lag as complicating factors. Some of the complicated stamps have been shown to survive late, even to proto-historic times, under favoring conditions; others showed refocalization and rapid change. The rapidity of change and adjustment seems to have been greater in the piedmont than on the coast. The differential here may be a significant factor in future interpretation.

Finally, ethnography and archeology combine to suggest that there has been not only cultural replacement by preemption of territory, but that there were probably numerous reentry situations where ethnic groups returned after several generations, perhaps after appreciably longer intervals, as phyletic expatriates to reclaim a homeland still vaguely cherished in folk origin myths. These "backwashes" might well confuse the chronological picture of the archeologist beyond recognition. For example, the lacunae between different stages of stamped pottery development, each stage displaying "pure site" and "trade" appearances in minority representation—Swift Creek, Vining simple stamped, the checker stamped series, Napier complicated stamped, Lamar—may be due not altogether to simple disruption of evolutionary lines by the immigration of strange new peoples introducing a completely divergent cultural strain. There is

the strong possibility of repatriation by tribes whose earlier cultural pattern might have been so modified by later contacts received in their secular sojourn in other areas that the cultural indices of these on returning might be too tenuous for identification. Macon Plateau and the Deasonville complex in Louisiana and Mississippi may express some such permutation. The "Woodland" tradition persisted in the Ocmulgee up to proto-historic times in Lamar sites, howbeit the Mississippian features by then were definitely in the ascendancy.

In the earlier Macon Plateau occupation, the Mississippian features are weaker or neutralized by the presence of many traits regarded as "Woodland" by most students. Even in the Mound Builder period on the Plateau non-Mississippian factors persist in a very confusing manner. This is true at Mound C (Macon group) where a list of 60 or more traits show contrasting manifestations in such important complexes as mound architecture, burial treatment, and ceremonial constructions. Here the systematist might hesitate to assign even the basic pattern, much in the same fashion as there remains speculation regarding the taxonomic position of Adena in the chronology of the upper Mississippi.²⁹

The time is not yet ripe to attempt in the Southeast any ambitious project at cultural classification implying greater or less evolutionary relationship, with specific terms to indicate the degree of phyletic connection.

Nevertheless, it is felt that a beginning should be made in defining the criteria on which future judgments may be made. It is desirable, too, to provide a terminology of wide acceptance by those workers in the area interested in systematic interpretation of field data.

To this end, pottery morphological characters are regarded as the most practical indices which might first be reduced to some sort of order and precision in description. A system of binomial or trinomial nomenclature for pottery types perceived to have common occurrence over a wide area is suggested as a first step. The value and utility of such a scheme to define pottery criteria depends largely upon the degree of cooperation between investigators and the self-restraint imposed in the process of definition. At the outset this attempt to standardize pottery descriptions promises no more than a more precise and comprehensible system of terms applied to the fundamental morphological criteria of pottery classification.

Ultimately, as field data increase and conceptions of cultural relations become more clearly seen, a more complete and complex classification might be adopted.

²⁹ The discussions at the Indianapolis Archeological Conference (1935) indicate how much difference of opinion still exists as to the fundamental distinctions of even such basic cultural manifestations as Woodland and Mississippian. The controversy over Hopewellian affiliations promises to wax stronger. Some students regard Hopewell as a crucial development from early Woodland derivations. Others, and the author inclines to this view, would consider Hopewell to be a stabilized refocalization of elements coming from both archaic Woodland and Mississippian patterns.



a, View from photographic tower of prehistoric cultivated field uncovered by the removal of about half of Mound D. The rectangular house and house platform in the foreground had also been built over the cultivated plot of ground and was covered by the subsequent construction of Mound D. The photo was taken after a heavy rain.



b, Vertical profile cut through Mound D, Macon group, showing trough and crest indications of cultivated field under mound base.



a, Initial profiling and horizontal stripping to uncover prehistoric cultivated field beneath Mound D, North (Macon) Plateau.



b, Beginning exploration to uncover floor of ceremonial earth lodge near Mound D, North (Macon) Plateau. The entrance passage, U-shaped clay buttresses in the entrance, inner fired clay wall periphery, debris of charred supporting timbers, and collapsed clay roof mantle arc features exhibited at this stage.



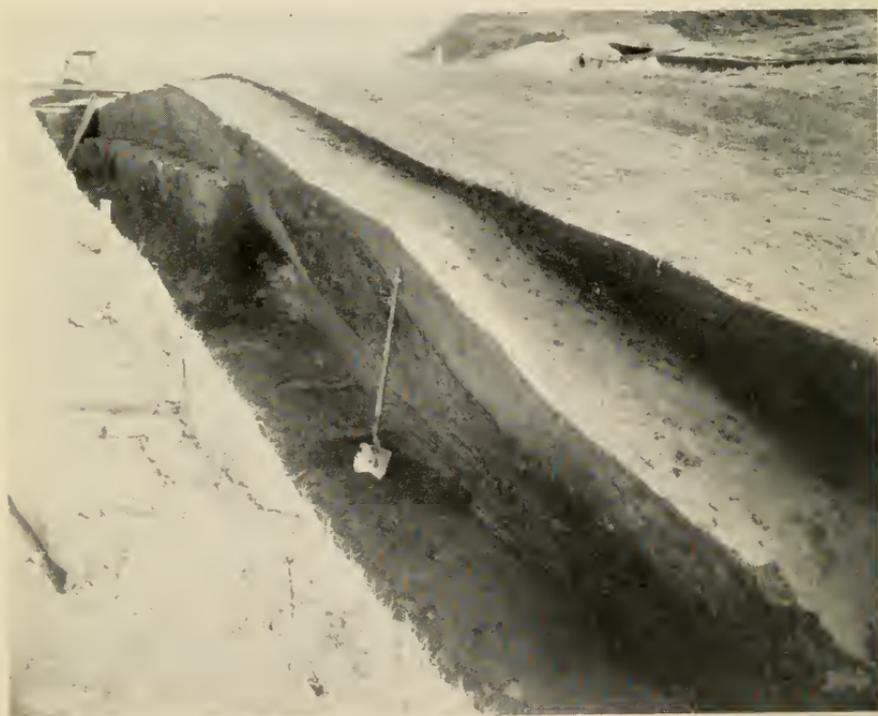
a, Students of the Laboratory of Anthropology, summer field training expedition, 1936, removing charred roof mesh and debris from floor of ceremonial earth lodge.



b, Profile freshly cut through fill to prehistoric dugout on North (Macon) Plateau. Note regular shape of dugout and contrast profile development with that exhibited in plate 7, *b*.



a, Section of survey of outer series of prehistoric dugouts showing shallow excavations or pits, postholes, and burials in the floor. Note that posthole indications of vertical supports increase in the shallower dugouts.



b, The 9-foot level between Mounds A and B on North (Macon) Plateau showing extension of plateau slopes by basket layers of fill bonded by clay plates. Four superimposed building levels occur in the upper 4 feet of the terrace.



a, Profile panel made through north face of Mound C exhibiting contorted and basket-laid fill under thick clay plates. Five separate and distinct mound constructions are superimposed, the uppermost showing as an eroded segment destroyed by a railroad excavation. Two submound core (first) mound log-tomb burial pits show in the foreground.



b, Profile section through east shoulder of Mound C, Macon Group, showing burial pits made intrusively through outwash sheets and clay plating of second and third, inclusive, mound constructions.



a, Exploration to uncover prehistoric spring site on top of Middle (Macon) Plateau.



b, Profile panels exposed in fill to prehistoric dugouts on South (Macon) Plateau near Mound A. Note the preservation of soil integrity as shown by the absence of normal profile development and the multiplicity of fill elements demarcated by fresh trowel marking.



a, Exploration of Swift Creek, Mound A. Right-angled exploratory trenches inset from base-line medians used with offsets to insure against slumping of friable sand, ash, and midden fill. The survey pilasters serve as an engineering backlog to previously explored ground.



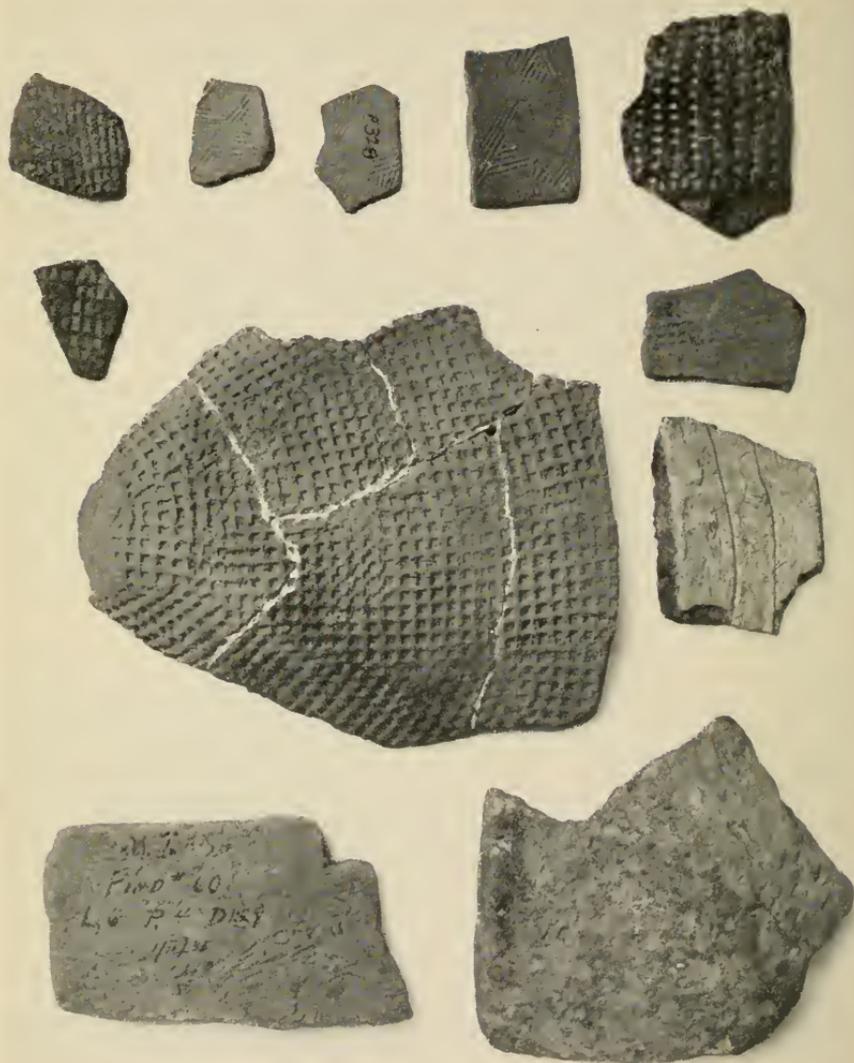
b, Explorations undertaken simultaneously on Mound A and nearby house sites at the Lamar site.



a, House site exploration at Lamar site showing charred wall (supporting) timbers on house platform (under temporary shelter), flexed burial troweled out in ramp to house platform, midden heap in situ at right foreground.



b, Cremated burial from Trading Post area, Middle (Macon) Plateau. Furniture consists of rusted rifle barrel with gunflint in place, iron wristlets, brass bell, glass beads, and conch-shell core necklace.



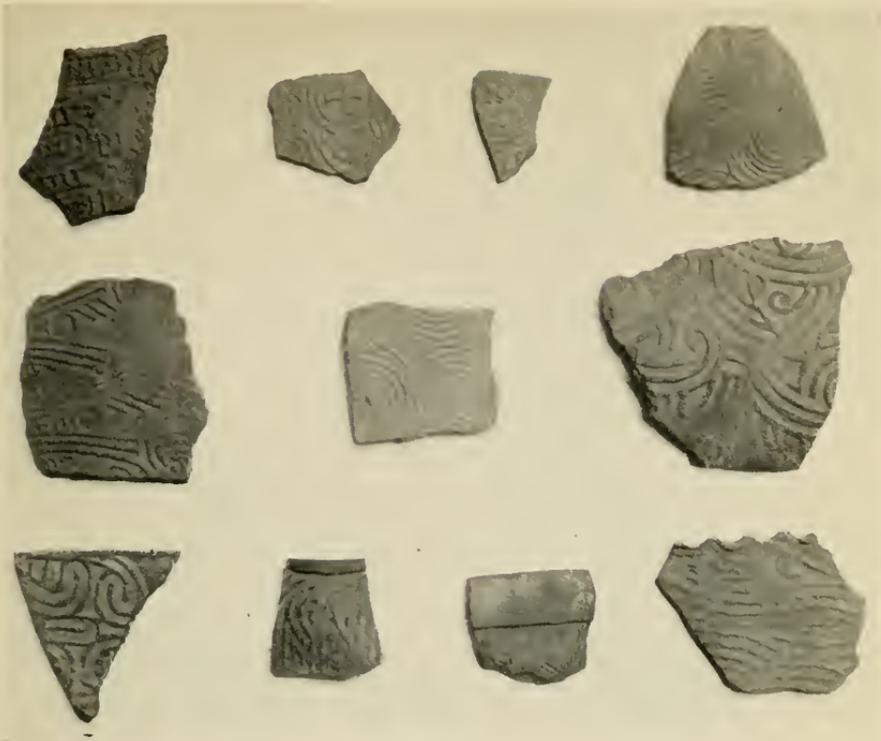
A group of sherds representing the important minority wares which act as site markers and help to establish relative chronological position in central Georgia.

Top: Two checker stamps and three sherds of Delta complicated ware.

Right, top to bottom: Fiber tempered with punctates in trailed incised lines; checker stamp; fiber tempered with simple trailing; piece of steatite bowl.

Center: A large side and basal sherd from a conical pot cataloged from Swift Creek.

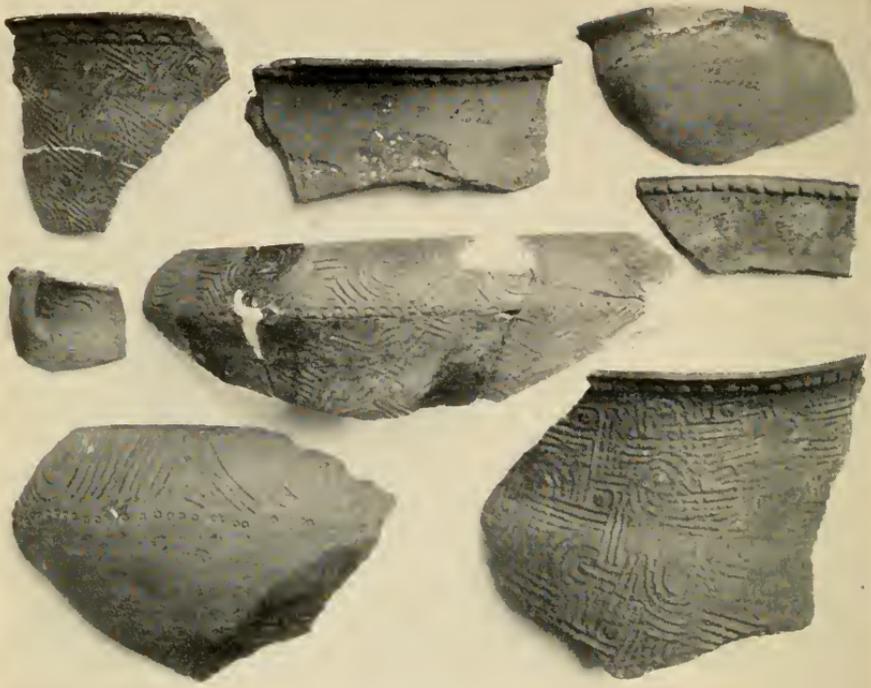
Lower left corner: A typical sherd of plain, fiber-tempered ware showing the vermiculated surface finish caused by smoothing over extruded fiber



a, A series of sherds showing design elements and characteristic rims from Swift Creek. The third rim sherd in the bottom row shows the stage of development attained in Middle to beginning Late Swift Creek.



b, Representative sherds from the Macon Plateau. Top row shows six variants of rim and handle with nodal protuberances. In middle row note crude animal head effigy rim modeling. Also one thick, plain rim from a cylinder jar. At the bottom, a simple stamp which occurs sporadically in small percentage. Two examples of basket or net-impressed ware, one twilled and one coiled, are given.



a, Sherds from Lamar Mound and village site, emphasizing the stamping technique so characteristic of this village site. Incised with reed punctate occurs frequently. Note the Lamar specialization of the rim.



b, Collection of representative sherds from historic or protohistoric levels. Old Ocmulgee Fields. "Degenerate" incised, plain, clay-wash smoothed, "fugitive red" paint in incised bands, beakers, weakly developed strap handles, luted rim strips beaded or pinched. The absence of any stamped pottery in this horizon is remarkable.